

Phase II Environmental Site Assessment

I-270 Corridor Improvements

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Acronyms and Abbreviations

Acronym or Abbreviation	Definition
%	percent
ACM	asbestos-containing material
AWQC	Ambient Water Quality Criteria
bgs	below ground surface
CABI	Certified Asbestos Building Inspector
CCR	Code of Colorado Regulations
CDOT	Colorado Department of Transportation
CDPHE	Colorado Department of Public Health and Environment
CGS	Colorado Groundwater Standard
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane
DRO	diesel range organics
DQO	data quality objective
EPA	U.S. Environmental Protection Agency
ESA	Environmental Site Assessment
GRO	gasoline range organics
I-25	Interstate 25
I-70	Interstate 70
I-270	Interstate 270
IDW	investigation derived waste
LEL	lower explosive limit
LUST	leaking underground storage tank
MCL	maximum contaminant level
mg/kg	milligrams per kilogram
msl	mean sea level
MTBE	methyl tert-butyl ether
NMOC	non-methane organic compounds
NRCS	Natural Resource Conservation Service
OPS	Office of Public Safety
ORO	oil range organics

Acronym or Abbreviation	Definition
OU	Operable Unit
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCE	perchloroethylene
PCS	petroleum-contaminated soil
PID	photoionization detector
Phase II ESA	Phase II Environmental Site Assessment
PMEA	Preliminary Modified Environmental Assessment
ppm	parts per million
project	Interstate 270 Corridor Project
QA/QC	quality assurance/quality control
RACS	regulated asbestos contaminated soil
RCRA	Resource Conservation and Recovery Act
REC	recognized environmental condition
RSL	Regional Screening Level
SB	soil boring
SSL	soil screening level
SVOC	semi-volatile organic compound
TPH	total petroleum hydrocarbons
US-36	U.S. Highway 36
VOC	volatile organic compound
WQC	Water Quality Criteria

1.0 Introduction

The Colorado Department of Transportation (CDOT) and the Federal Highway Administration (FHWA), in conjunction with local partners Adams County and Commerce City, are proposing improvements to 6 miles of Interstate 270 (I-270) in Adams County, Commerce City, and the City and County of Denver, Colorado, primarily between Interstate 25 (I-25) and Interstate 70 (I-70) (Figure 1). CDOT and FHWA are preparing an Environmental Assessment (EA) for this project, referred to as the I-270 Corridor Improvements project. Sections 1 and 2 of the EA and EA Appendix A contain the project setting and a detailed description of alternatives.

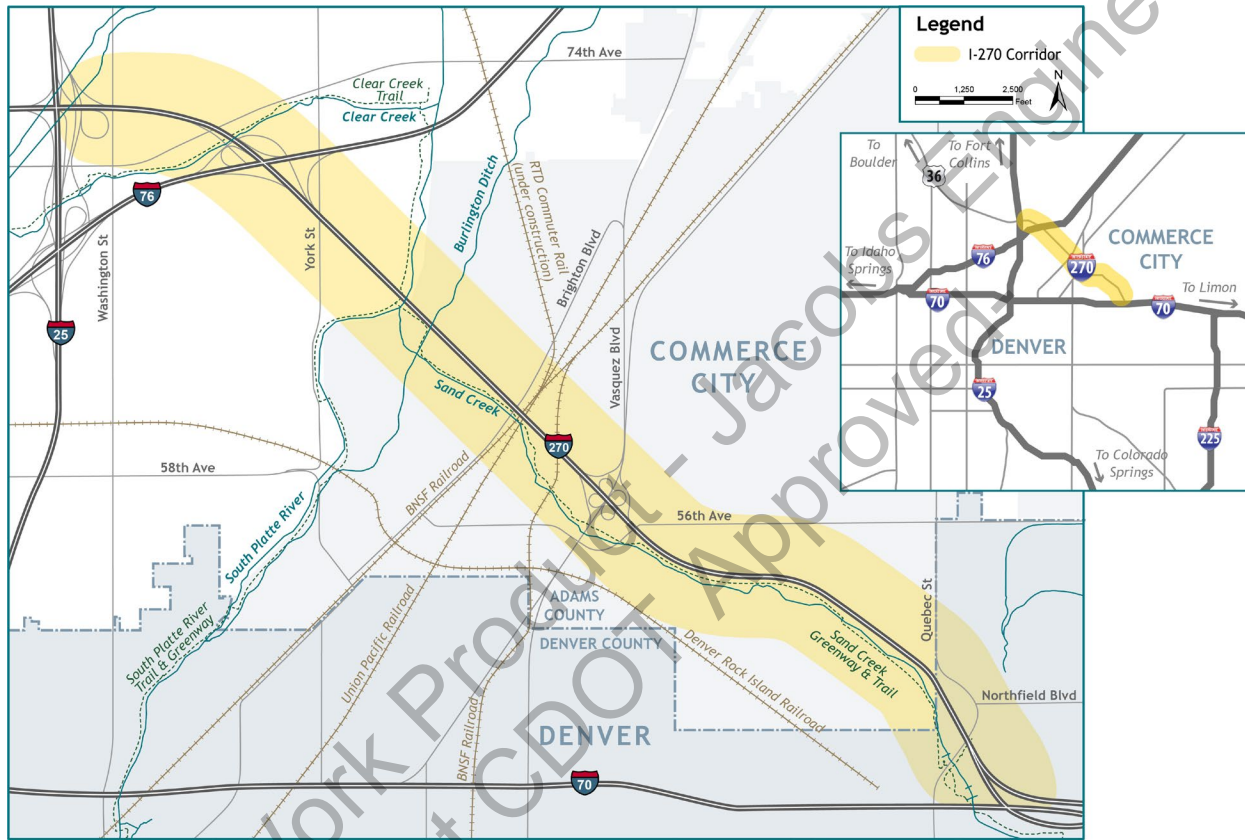


Figure 1. Project Location

A Preliminary Modified Environmental Assessment (PMEA) and this Phase II Environmental Site Assessment (Phase II ESA) have been completed to help CDOT identify potential existing hazardous materials concerns during the planning and environmental documentation stages of project development and to inform design and mitigation strategies (such as avoidance), where applicable.

The PMEA (2019) and Phase II ESA have identified sites that are known to be, or may potentially be, contaminated with hazardous materials. Thorough assessment of site histories in and near the study area for past or present soil and/or groundwater impacts is also an integral component of the planning process and evaluating project liability, to determine if regulated materials may be encountered during project activities, such as ground disturbance and excavation dewatering.

The objective of this report is to present the findings of the Phase II ESA completed in the spring, summer, and winter of 2020. This Phase II ESA incorporated the findings of the PMEA to identify 38 Phase II environmental locations requiring hazardous material assessment along the length of the project corridor. A total of 51 soil and 21 groundwater samples was collected from the 38 Phase II environmental boring locations.

2.0 Methods

This Phase II ESA involved evaluating the results of the PMEA (2019) regulatory research and records review, Oil and Public Safety petroleum release site data, National Priority List site data, and other historical environmental documentation to identify areas requiring additional hazardous material assessment. The Phase II ESA will be used to coordinate findings with project stakeholders and identify data gaps and compounds of concern for groundwater and soil.

Preparation of the Phase II ESA consisted of soil and, where encountered, groundwater collection and real-time monitoring and chemical analysis to identify the presence/absence of contaminated soil and groundwater and to determine their chemical concentrations in environmental media. Figure 2 shows the approximate study area, which is based on the approximate limits of temporary and permanent disturbance.

Soil boring locations were selected based on information obtained during the PMEA (2019), geologic review, and transportation corridor alignment considerations. Drilling activities for the Phase II ESA were completed, in concert with geotechnical investigations, to obtain soil and groundwater samples for chemical analysis as well as geotechnical and geologic data.

Continuous field screening was conducted at each Phase II ESA boring using a five-gas monitor that provided real-time airborne readings for volatile organic compounds (VOCs), methane (indicated by lower explosive limit monitoring), oxygen, hydrogen sulfide, and carbon monoxide. At borehole locations with photoionization detector (PID) detections for VOCs above background or olfactory/visual evidence of contamination, two soil samples were typically collected. One soil sample was collected from the location of suspected contamination, and a second soil sample was collected from the soil/groundwater interface to evaluate potential for leaching to groundwater. Environmental sample borings did not exceed 30 feet in depth. Where encountered, a groundwater sample to a depth of 20 feet below ground surface (bgs) was collected from boreholes.

Boring locations placed in areas of known historic landfills were identified. Boring depths in most landfill areas were limited to 15 feet bgs to minimize risk of puncturing a landfill containment liner. However, during the fall 2020 effort, two borings were drilled through a landfill to determine depth to bedrock in support of the final construction design. Borings were immediately grouted. A CDOT Certified Asbestos Building Inspector (CABI) was present at each boring location within the suspected footprint of a landfill. The CABI evaluated the soil from each boring for the presence of asbestos-containing material (ACM). Landfill debris encountered in these locations was noted as well as detected concentrations of VOCs, methane, oxygen, hydrogen sulfide, and carbon monoxide.

Analytical suite for collected soil and groundwater samples included VOCs, semi-volatile organic compounds (SVOCs), total petroleum hydrocarbon (TPH)—diesel range organics (DRO), TPH-gasoline range organics (GRO), TPH-oil range organics (ORO), Resource Conservation and Recovery Act (RCRA) metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver), and where necessary, polychlorinated biphenyls (PCB)/pesticides.

A total of 38 boring locations were identified in support of the Phase II ESA. A total of 51 primary soil samples (excluding quality assurance/quality control [QA/QC] samples) and 21 primary groundwater samples (excluding QA/QC samples) were collected from the boring locations.

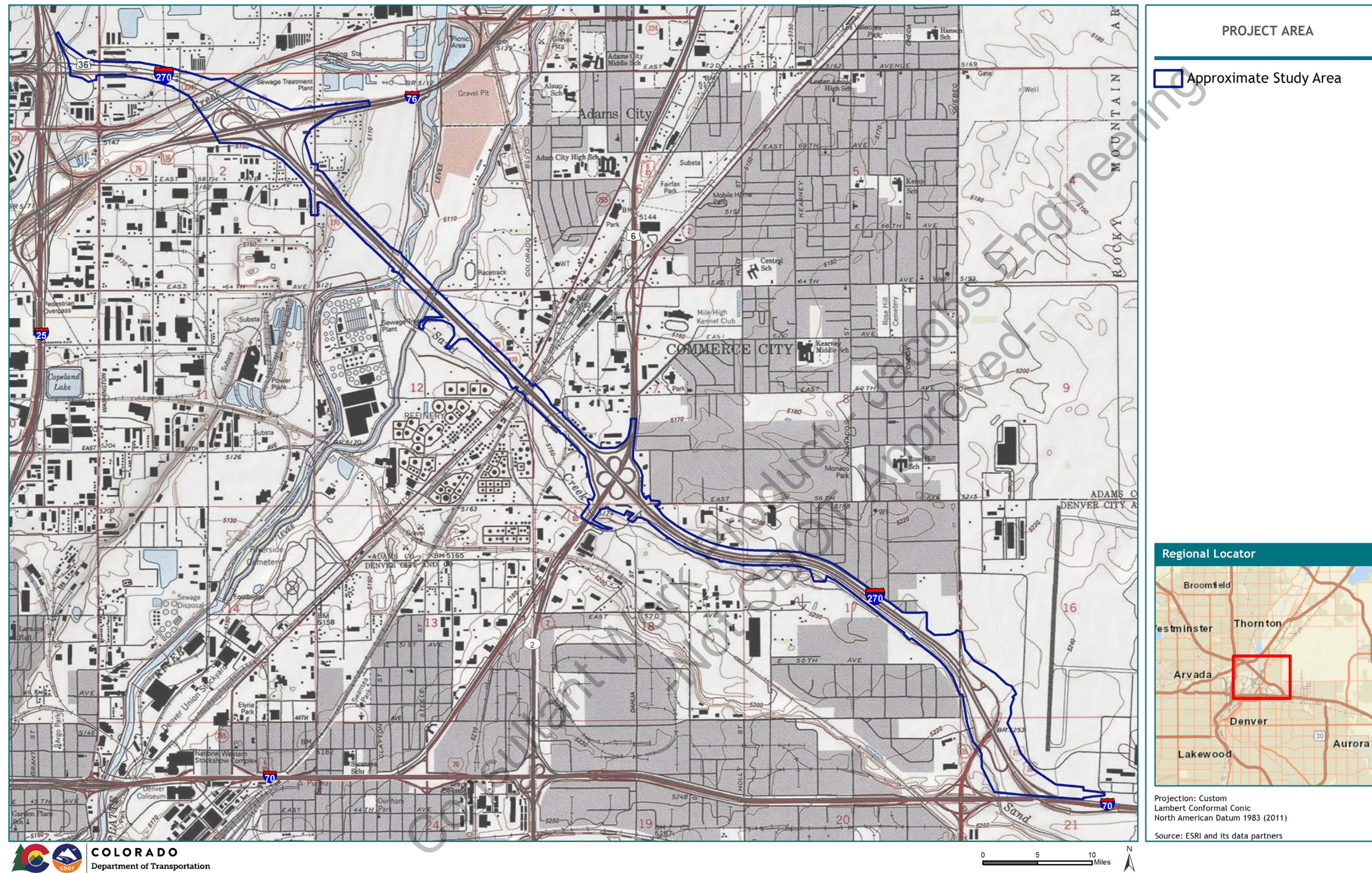


Figure 2. Study Area

3.0 General Site Environmental Description

3.1 Soil Conditions

Surficial soils within the study area consist of 12 different soil units present on interfluvies, plains, floodplains, terraces, drainage ways and gravel pits (NRCS 2019). The soils are alluvial and eolian deposits and are present in various combinations in the study area.

As mentioned, NRCS has not published detailed soil information for the southern part of the study area, to the south of Quebec Street in the City and County of Denver (NRCS 2019). However, during an investigation by others into a jet fuel leak at the former Stapleton International Airport, surficial soil in this area was characterized as being sands and silts 12 to 15 feet thick, overlain by silty clay and clayey silt (HWS 1988).

3.2 Surface Water

Sand Creek parallels I-270 from the southern end of the study area until it enters the South Platte River at mile marker 4 at an elevation of 5,110 feet above mean sea level (msl). The Burlington Ditch (elevation 5,130 feet above msl), also referred to as the O'Brien Canal, crosses I-270 and Sand Creek approximately 800 feet to the east of the South Platte River. Clear Creek crosses I-270 at East 70th Avenue at an elevation of 5,130 feet above msl. Welby Reservoir is located adjacent to the north of the intersection of I-270 and the South Platte River. Bambei-Walker Reservoir is located approximately 800 feet to the northeast of the intersection of I-270 and the South Platte River.

3.3 Hydrogeology

Water table conditions in the study area predominate in unconsolidated alluvial deposits. Soil borings completed in support of various investigations in the vicinity have confirmed that the groundwater elevation of shallow groundwater in the study area occurs between 5 to greater than 30 feet bgs.

Typically, shallow groundwater flow direction mimics topography and is influenced by adjacent waterways. In general, groundwater flow in the study area is to the north but locally may be to the northeast or northwest. Sand Creek, which parallels much of the study area to the south, is classified as a perennial stream; Sand Creek does not act as a hydrological barrier for groundwater movement, and groundwater has been shown to transport contaminants from the south side of Sand Creek across Sand Creek to the north (PMEA 2019).

4.0 Past Findings and Phase II Borings

The PME A (2019) evaluated the study area and vicinity, including parcels that may undergo impacts related to project ground disturbance activities, property acquisitions, or easements (if applicable). Only properties or facilities in the immediate vicinity of the study area were considered for liability as having a potential to be acquired or impacted due to project activities. For the purpose of evaluating project liability (that is, potential for encountering regulated materials during ground disturbance activities), the PME A (2019) categorized properties or facilities as having a low, medium, or high potential for contamination potentially impacting the study area.

Based on the criteria described in Section 1 of the PME A (2019), a total of eight property types were identified with a medium or high potential to impact the study area (PME A 2019). The PME A (2019) reviewed additional information for these listings and a discussion of this information was provided. A summary of the properties of concern identified in the PME A are presented below.

The Phase II ESA soil borings were identified and selected to address potential impacts from the former sites identified in the PME A. Table 1 presents the Phase II ESA soil borings and the former sites they were selected to represent.

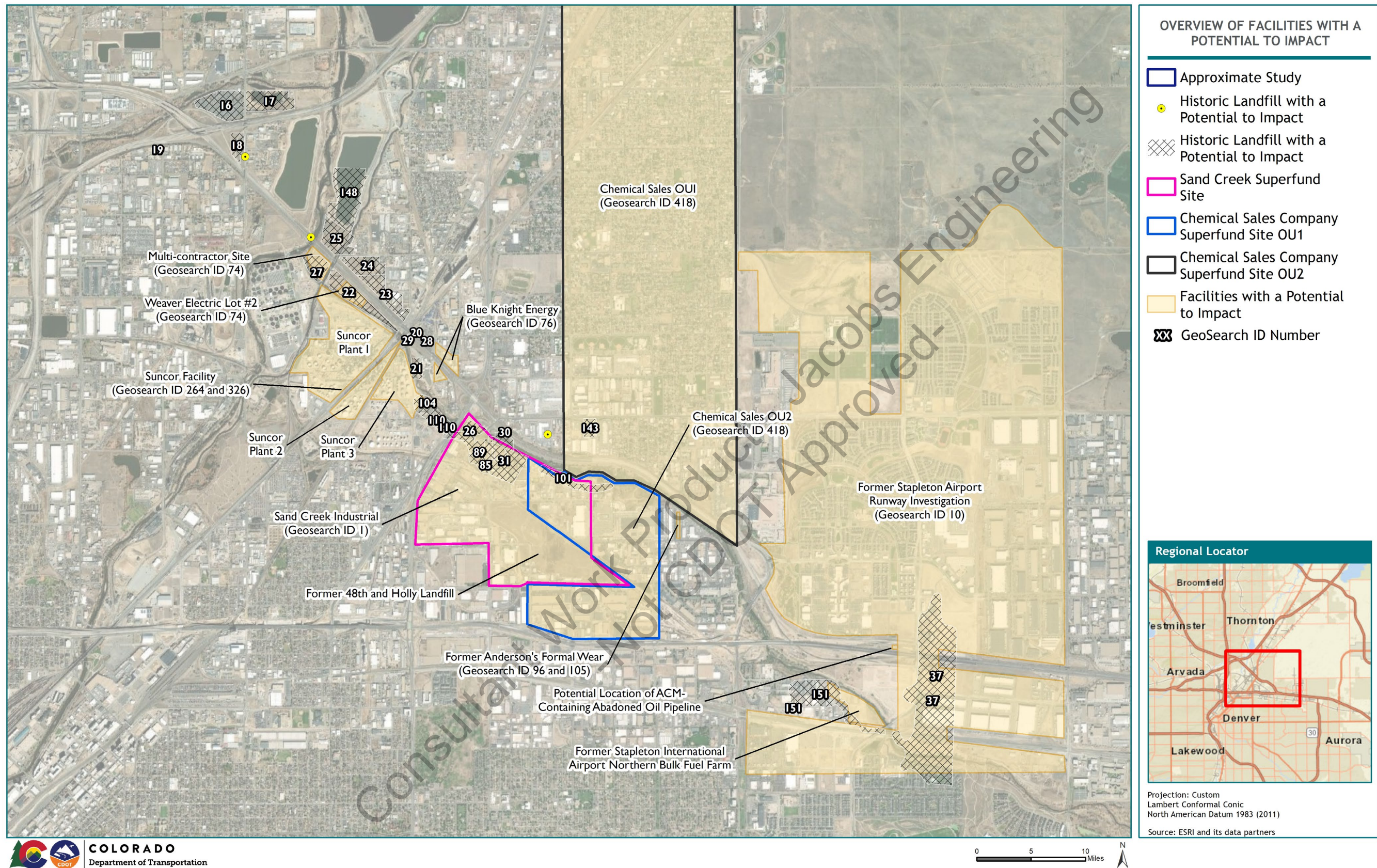


Figure 3. PMEA Identified Recognized Environmental Conditions

Table 1. Phase II ESA Environmental Soil and Groundwater Rationale and Phase II ESA Analytical Findings Summary

Soil Boring No.	Location Rationale	Requested Chemical Analyses	Samples Collected	PID Findings/Observations	Analytical Findings
SB-1	Former Stapleton Airport	VOCs, SVOCs (PAHs), MTBE, TPH-GRO, TPH-DRO, and RCRA metals	1 soil (10 to 12 feet bgs) and 1 groundwater collected. Groundwater at 13.2 feet bgs.	Multi-Rae/PID 0.1 ppm above background. Slight petroleum odor at 7 to 8 feet bgs and 15 to 17 feet bgs. No other odor or staining noted.	<ul style="list-style-type: none"> Soil (10 to 12 feet bgs) – arsenic, cadmium, and TPH-DRO were detected above EPA RSLs. Groundwater – TPH-DRO was detected above its EPA RSL.
SB-2	Travel America Denver East	VOCs, SVOCs (PAHs), MTBE, TPH-GRO, TPH-DRO, and RCRA metals	2 soil collected at 10 to 12 feet bgs and 20 to 22 feet bgs. 1 groundwater collected. Groundwater at 27.2 feet bgs.	PID maximum detection of 58 ppm above background at surface (2 to 3 feet bgs). Appears localized. No other elevated PID or staining noted. Biogenic material noted.	<ul style="list-style-type: none"> Soil (10 to 12 feet bgs) – arsenic, barium, lead, and TPH-DRO were detected above EPA RSLs. Soil (20 to 22 feet bgs) – arsenic, barium, and cadmium were detected above EPA RSLs. Groundwater – no compounds detected above EPA RSLs.
SB-3	Sapp Brothers LUST	VOCs, SVOCs (PAHs), MTBE, TPH-GRO, TPH-DRO, and RCRA metals	2 soil collected at 12 to 14 feet bgs and 27 to 29 feet bgs. Groundwater not encountered at 30 feet bgs.	Multi-Rae/PID 0.1 ppm above background. No odor or staining noted.	<ul style="list-style-type: none"> Soil (12 to 14 feet bgs) – arsenic was detected above its EPA RSL. Soil (27 to 29 feet bgs) – arsenic, barium, and lead were detected above EPA RSLs. Groundwater not collected.
SB-4	Travel America Denver East	VOCs, SVOCs (PAHs), MTBE, TPH-GRO, TPH-DRO, and RCRA metals	2 soil collected at 15 to 17 feet bgs and 25 to 27 feet bgs. Groundwater not encountered at 30 feet bgs.	Multi-Rae/PID 0.1 ppm above background. No odor or staining noted.	<ul style="list-style-type: none"> Soil (15 to 17 feet bgs) – arsenic, barium, lead, and TPH-DRO were detected above EPA RSLs. Soil (25 to 27 feet bgs) – arsenic, barium, and lead were detected above EPA RSLs. Groundwater not collected.
SB-5	Anderson Formal Wear Chemical Sales Superfund Site OU2	VOCs, SVOCs (PAHs), MTBE, TPH-GRO, TPH-DRO, RCRA metals, and 1,4-Dioxane	2 soil collected at 10 to 12 feet bgs and 28 to 29 feet bgs. Groundwater not encountered at 30 feet bgs.	Multi-Rae/PID 0.4 ppm above background. No odor or staining noted. Biogenic material noted.	<ul style="list-style-type: none"> Soil (10 to 12 feet bgs) – arsenic, barium, and TPH-DRO were detected above EPA RSLs. Soil (28 to 29 feet bgs) – arsenic and barium were detected above EPA RSLs. Groundwater not collected.
SB-6	Chemical Sales Superfund Site OU2	VOCs, SVOCs (PAHs), MTBE, TPH-GRO, TPH-DRO, RCRA metals, and 1,4-Dioxane	1 soil collected at 15 to 17 feet bgs. Groundwater not encountered at 27 feet bgs.	PID maximum detection of 2.3 ppm above background at 10 to 12 feet bgs. Slight solvent odor at 12 to 13 feet bgs and 22 to 23 feet bgs. No other elevated PID or staining noted.	<ul style="list-style-type: none"> Soil (15 to 17 feet bgs) – arsenic, barium, lead, and TPH-DRO were detected above EPA RSLs. Groundwater not collected.
SB-7	Chemical Sales Superfund Site OU2	VOCs, SVOCs (PAHs), MTBE, TPH-GRO, TPH-DRO, RCRA metals, and 1,4-Dioxane	1 soil (7 to 8 feet bgs) and 1 groundwater collected. Groundwater at 11.95 feet bgs.	Multi-Rae/PID 0.0 ppm above background. Heavy tar-like black material noted at 6.5 feet bgs to 8 feet bgs. No other odor or staining noted. Biogenic material noted.	<ul style="list-style-type: none"> Soil (7 to 8 feet bgs) – arsenic, barium, cadmium, silver, TPH-GRO, and TPH-DRO were detected above EPA RSLs. Groundwater – arsenic, barium, chromium, lead, and TPH-DRO were detected above EPA RSLs and/or AWQC.
SB-8	Chemical Sales Superfund Site OU1	VOCs, SVOCs (PAHs), MTBE, TPH-GRO, TPH-DRO, RCRA metals, and 1,4-Dioxane	2 soil collected at 8 to 10 feet bgs and 22 to 23 feet bgs. Groundwater not encountered at 30 feet bgs.	PID maximum detection of 6.7 ppm above background at 22 to 23 feet bgs. 2.1 ppm at 27 to 28 feet bgs. Slight solvent odor at 7 to 8 feet bgs and 27 to 28 feet bgs. No other elevated PID or staining noted.	<ul style="list-style-type: none"> Soil (8 to 10 feet bgs) – arsenic and barium were detected above EPA RSLs. Soil (22 to 23 feet bgs) – arsenic and barium were detected above EPA RSLs. Groundwater not collected.
SB-9	Chemical Sales Superfund Site OU1	VOCs, SVOCs (PAHs), MTBE, TPH-GRO, TPH-DRO, RCRA metals, and 1,4-Dioxane	1 soil (2 to 3 feet bgs) and 1 groundwater collected. Groundwater at 4.75 feet bgs.	Multi-Rae/PID 0.0 ppm above background. No odor or staining noted. Biogenic material noted.	<ul style="list-style-type: none"> Soil (2 to 3 feet bgs) – arsenic and TPH-DRO were detected above EPA RSLs. Groundwater – lead and TPH-DRO were detected above EPA RSLs and/or AWQC.
SB-10	Chemical Sales Superfund Site OU1	VOCs, SVOCs (PAHs), MTBE, TPH-GRO, TPH-DRO, RCRA metals, and 1,4-Dioxane	2 soil collected at 10 to 12 feet bgs and 25 to 27 feet bgs. Groundwater not encountered at 30 feet bgs.	Multi-Rae/PID 0.2 ppm above background. No odor or staining noted. Biogenic material noted.	<ul style="list-style-type: none"> Soil (10 to 12 feet bgs) – arsenic was detected above its EPA RSL. Soil (25 to 27 feet bgs) – arsenic and barium were detected above EPA RSLs. Groundwater not collected.

Soil Boring No.	Location Rationale	Requested Chemical Analyses	Samples Collected	PID Findings/Observations	Analytical Findings
SB-11	Chemical Sales Superfund Site OU2	VOCs, SVOCs (PAHs), MTBE, TPH-GRO, TPH-DRO, RCRA metals, and 1,4-Dioxane	1 soil (6.5 to 8 feet bgs) and 1 groundwater collected. Groundwater at 18.55 feet bgs.	Multi-Rae/PID 0.2 ppm above background. No odor or staining noted. Biogenic material noted.	<ul style="list-style-type: none"> Soil (6.5 to 8 feet bgs) – arsenic, barium, and TPH-DRO were detected above EPA RSLs. Groundwater – arsenic, lead, and TPH-DRO were detected above EPA RSLs and/or AWQC.
SB-12	Sand Creek Industrial Superfund Site Five historic landfills (Landfills #26, #30, #31, #85, and #89) (Pinyon PMEA 2019)	VOCs, SVOCs (PAHs), MTBE, TPH-GRO, TPH-DRO, RCRA metals and 1,4-Dioxane Asbestos-Containing Materials (visual observation)	1 soil (10 to 12 feet bgs). No groundwater observed or collected.	Boring depth to 12 feet bgs due to landfill. Multi-Rae/PID 1.2 ppm above background. No odor or staining noted. A piece of clay target was found in the boring. Clay targets have historically contained PAHs. Biogenic material noted.	<ul style="list-style-type: none"> Soil (10 to 12 feet bgs) – arsenic, barium, and TPH-DRO were detected above EPA RSLs. Groundwater not collected.
SB-13	Sand Creek Industrial Superfund Site Five historic Landfills (Landfills #26, #30, #31, #85, and #89) (Pinyon PMEA 2019)	VOCs, SVOCs (PAHs), MTBE, TPH-GRO, TPH-DRO, RCRA metals, and 1,4-Dioxane	1 soil (12 to 13 feet bgs) and 1 groundwater collected. Groundwater at 13.2 feet bgs.	Glass noted in boring at 7 to 8 feet bgs. Multi-Rae/PID 0.3 ppm above background. No odor or staining noted.	<ul style="list-style-type: none"> Soil (12 to 13 feet bgs) – arsenic, TPH-DRO, and motor oil were detected above EPA RSLs. Groundwater – arsenic, barium, cadmium, chromium, lead, and TPH-DRO were detected above EPA RSLs and/or AWQC.
SB-14	Sand Creek Industrial Superfund Site Five historic Landfills (Landfills #26, #30, #31, #85, and #89) (Pinyon PMEA 2019)	VOCs, SVOCs (PAHs), MTBE, TPH-GRO, TPH-DRO, RCRA metals, and 1,4-Dioxane Asbestos-Containing Materials (visual observation)	2 soil collected at 5 to 7 feet bgs and 10 to 12 feet bgs. Groundwater not encountered at 13 feet bgs. Boring no deeper due to landfill.	Black staining noted at 5 to 7 feet bgs. Construction debris noted starting at 7 to 8 feet bgs. Debris includes brick and glass. Multi-Rae readings at 12 to 13 feet bgs include PID (1.4 ppm), CO (6 ppm), and methane at >99% LEL. Methane detections started at 7 to 8 feet bgs.	<ul style="list-style-type: none"> Soil (5 to 7 feet bgs) – arsenic, barium, selenium, silver, TPH-DRO, and motor oil were detected above EPA RSLs. Soil (10 to 12 feet bgs) – arsenic, barium, cadmium, lead, selenium, TPH-DRO, and motor oil were detected above EPA RSLs. Groundwater not collected.
SB-15	Sand Creek Industrial Superfund Site Five historic Landfills (Landfills #26, #30, #31, #85, and #89) (Pinyon PMEA 2019)	VOCs, SVOCs (PAHs), MTBE, TPH-GRO, TPH-DRO, RCRA metals, and 1,4-Dioxane Asbestos-Containing Materials (visual observation)	1 soil collected at 10 to 12 feet bgs and 1 groundwater collected. Groundwater at 16.9 feet bgs.	No construction debris noted. Multi-Rae readings at 12 to 13 feet bgs include PID (1.9 ppm) and methane (25% LEL) at 12 to 13 feet bgs. Petroleum odor noted. Methane detections started at 8 to 10 feet bgs and stop at 13 feet bgs.	<ul style="list-style-type: none"> Soil (10 to 12 feet bgs) – arsenic, TPH-DRO, and motor oil were detected above EPA RSLs. Groundwater – arsenic, barium, TPH-DRO, and motor oil were detected above EPA RSLs. AWQC not exceeded.
SB-16	Suncor Plants 1, 2, and 3	VOCs, SVOCs (PAHs), MTBE, TPH-GRO, TPH-DRO, and RCRA metals	1 soil collected at 10 to 12 feet bgs and 1 groundwater collected. Groundwater at 15.6 feet bgs.	Multi-Rae/PID 0.0 ppm above background. No odor or staining noted. Biogenic material noted.	<ul style="list-style-type: none"> Soil (10 to 12 feet bgs) – arsenic, barium, mercury, and TPH-DRO were detected above EPA RSLs. Groundwater – Cadmium, lead and TPH-DRO detected above EPA RSL and AWQC for metals.
SB-17	Suncor Plants 1, 2, and 3	VOCs, SVOCs (PAHs), MTBE, TPH-GRO, TPH-DRO, and RCRA metals	1 soil collected at 10 to 12 feet bgs and 1 groundwater collected. Groundwater at 12.95 feet bgs.	Multi-Rae/PID 0.1 ppm above background. Slight odor at 0-2 feet bgs and 4 to 5 feet bgs. Staining noted at 2 feet bgs.	<ul style="list-style-type: none"> Soil (10 to 12 feet bgs) – arsenic, TPH-DRO, and motor oil were detected above EPA RSLs. Groundwater – Lead and TPH-DRO detected above EPA RSL and AWQC for lead.
SB-18	Suncor Plants 1, 2, and 3	VOCs, SVOCs (PAHs), MTBE, TPH-GRO, TPH-DRO, and RCRA metals	2 soil collected at 6 to 8 feet bgs and 18 to 20 feet bgs. 1 groundwater sample collected. Groundwater at 18.53 feet bgs.	Multi-Rae/PID 0.0 ppm above background. No odor or staining noted.	<ul style="list-style-type: none"> Soil (6 to 8 feet bgs) – arsenic was detected above EPA RSLs. Soil (18 to 20 feet bgs) – arsenic was detected above EPA RSLs. Groundwater – Arsenic, lead and TPH-DRO was detected above EPA RSL and/or AWQC for metals where available. However, the dissolved components of the same metals were less than EPA RSLs and AWQC in groundwater. TPH-DRO was detected above its EPA RSL.
SB-19	Suncor Plant 1	VOCs, SVOCs (PAHs), MTBE, TPH-GRO, TPH-DRO, and RCRA metals. Added PCB/Pesticides.	1 soil (10 to 12 feet bgs) and 1 groundwater collected. Groundwater at 20.1 feet bgs.	Black staining noted. Petroleum (diesel fuel) odor. Glass, plastic, cloth, wood debris, metal wire, and concrete observed in soil cores starting at 0 to 2 feet bgs. Radiator hose in cuttings. Maximum of 8.0 ppm on PID. Multi-Rae readings at 15 to 20 feet bgs include PID (2.0 ppm), carbon monoxide at 13 ppm, methane at LEL 2%, and oxygen levels down to 19.8%. Boring not in suspected landfill but adjacent to SB-20.	<ul style="list-style-type: none"> Soil (10 to 12 feet bgs) – arsenic, barium, lead, selenium, TPH-GRO, TPH-DRO, and motor oil were detected above EPA RSLs. Benzene, 1,4-dichlorobenzene, and ethylbenzene were detected above EPA RSLs. Soil is classified as PCS. Groundwater – arsenic, barium, chromium, lead, and TPH-DRO were detected above EPA RSLs and AWQC, where available.

Soil Boring No.	Location Rationale	Requested Chemical Analyses	Samples Collected	PID Findings/Observations	Analytical Findings
SB-20	Weaver Electric Lot #2 Suncor Plant 1 Historic Landfill (Landfill # 22) (Pinyon PMEA 2019)	PCB/Pesticides, VOCs, SVOCs (PAHs), MTBE, TPH-GRO, TPH-DRO, and RCRA metals Asbestos-Containing Materials (visual observation)	2 soil collected at 3 to 5 feet bgs and 8 to 10 feet bgs. 1 groundwater collected. Groundwater at 13 feet bgs.	Black staining noted at 5 feet bgs. PCB detected at site in past. Potential PCBs. Soil boring cuttings drummed for PCB analyses and augers decontaminated. Multi-Rae/PID 0.0 ppm above background. No other odor or staining noted.	<ul style="list-style-type: none"> Soil (3 to 5 feet bgs) – arsenic, lead, DRO, and motor oil were detected above EPA RSLs. DDD and dichlorodiphenyldichloroethylene were detected but are below and EPA RSL. PCBs not detected. Soil (8 to 10 feet bgs) – arsenic was detected above EPA RSLs. Groundwater – arsenic, barium, cadmium, chromium, lead, mercury, TPH-DRO, and motor oil were detected above EPA RSLs and where available AWQC.
SB-21	Historic Landfill (Landfill #24) (Pinyon PMEA 2019)	VOCs, SVOCs, TPH-GRO, TPH-DRO, and RCRA metals Asbestos-Containing Materials (visual observation)	1 soil collected at 2 to 3 feet bgs. 1 groundwater collected. Groundwater at 5.70 feet bgs.	PID maximum detection of 58 ppm above background at 5 to 7 feet bgs. PID at 31 ppm at 7 to 9 feet bgs. Petroleum odor and staining noted at 2 to 3 feet bgs and deeper. Soil boring cuttings drummed.	<ul style="list-style-type: none"> Soil (2 to 3 feet bgs) – arsenic was detected above its EPA RSL. Groundwater – TPH-DRO and motor oil were detected above their EPA RSLs.
SB-22	Historic Landfill (Landfills # 22 and #25) (Pinyon PMEA 2019)	VOCs, SVOCs, TPH-GRO, TPH-DRO, and RCRA metals Asbestos-Containing Materials (visual observation)	1 soil collected at 5 to 7 feet bgs. 1 groundwater collected. Groundwater at 7.6 feet bgs.	Multi-Rae/PID 0.0 ppm above background. No odor or staining noted. No debris noted.	<ul style="list-style-type: none"> Soil (5 to 7 feet bgs) – arsenic, barium, and selenium were detected above EPA RSLs. Groundwater – arsenic, cadmium, lead, TPH-DRO and motor oil were detected above EPA RSLs and AWQC where available.
SB-23	Historic Landfill (Landfills # 22 and #25) (Pinyon PMEA 2019)	VOCs, SVOCs, TPH-GRO, TPH-DRO, and RCRA metals Asbestos-Containing Materials (visual observation)	2 soil collected at 5 to 7 feet bgs and 20 to 22 feet bgs. Due to landfill liner concern, drilling stopped at 22 feet bgs. Groundwater estimated at 24 feet bgs based on adjacent property piezometer.	No odor or staining. Maximum PID at 0.9 ppm. Methane at various readings starting at 2 to 4 feet bgs through 5 to 7 feet bgs. Maximum of 27% LEL for methane at 5 to 7 feet bgs. No methane detections between 7 feet bgs and 17 feet bgs. Methane at 18% LEL at 19-20 feet bgs,	<ul style="list-style-type: none"> Soil (5 to 7 feet bgs) – arsenic, barium, lead, selenium, TPH-DRO, and motor oil were detected above EPA RSLs. Soil (20 to 22 feet bgs) – arsenic and TPH-DRO were detected above EPA RSLs. Groundwater not collected.
SB-24	Multi-Contractor Site Historic Landfill (Landfill # 27) (Pinyon PMEA 2019)	VOCs, SVOCs, TPH-GRO, TPH-DRO, and RCRA metals Asbestos-Containing Materials (visual observation)	1 soil collected at 7 to 9 feet bgs. Meet refusal at 12 to 14 feet bgs. Halt drilling at 14 feet bgs.	Limited black staining noted. Petroleum odor noted. Nails, brick, and wood debris noted starting at 7 to 9 feet bgs. Maximum PID reading of 31.5 ppm at 7 to 9 feet bgs. Oxygen level to 20.3% at 7 to 9 feet bgs. Glass, plastic, cloth, wood debris, metal wire, and concrete observed in soil cores starting at 0 to 2 feet bgs. Radiator hose in cuttings. Maximum of 8.0 ppm on PID.	<ul style="list-style-type: none"> Soil (7 to 9 feet bgs) – arsenic, barium, cadmium, lead, mercury, TPH-DRO, and motor oil were detected above EPA RSLs. The PAHs benzo(a)anthracene and benzo(b)fluoranthene were detected above EPA RSLs. Groundwater not collected.
SB-25	Historic Landfill (Landfill # 18) Pinyon PMEA 2019)	VOCs, SVOCs, TPH-GRO, TPH-DRO, and RCRA metals Asbestos-Containing Materials (visual observation)	1 soil (14 to 15 feet bgs). No groundwater observed or collected.	PID maximum detection of 17 ppm above background at 3 to 5 feet bgs. Appears to be ash (see boring logs to confirm) present at 8 to 10 feet bgs consistent with past landfill history. No debris noted. No odor or staining noted. Sandstone encountered and refusal at 17.5 feet bgs.	<ul style="list-style-type: none"> Soil (14 to 15 feet bgs) – arsenic and barium were detected above EPA RSLs. Groundwater was not collected.
SB-26	Historic Landfill (Landfill # 16) Pinyon PMEA 2019)	VOCs, SVOCs, TPH-GRO, TPH-DRO, and RCRA metals Asbestos-Containing Materials (visual observation)	Not collected	Not collected	Not collected
PV-06	Historic Landfill (Landfill # 22 and 25) Pinyon PMEA 2019)	VOCs, SVOCs, TPH-GRO, TPH-DRO, and RCRA metals Asbestos-Containing Materials (visual observation)	2 soil collected at 5 to 7 feet bgs and 20 to 22 feet bgs. Groundwater estimated at 38 feet bgs.	Slight solvent odor noted. No staining. No debris noted. Maximum PID at 2.6 ppm. Methane at various readings starting at 18 to 23 feet bgs with maximum methane at 8% LEL. Carbon monoxide at various readings starting at 18 feet bgs through 28 feet bgs with maximum CO at 35 ppm at 22 feet bgs. Oxygen levels as low as 20.4%.	<ul style="list-style-type: none"> Soil (5 to 7 feet bgs) – arsenic, barium, silver, TPH-DRO, and motor oil were detected above EPA RSLs. Soil (20 to 22 feet bgs) – arsenic, barium, cadmium, lead, selenium, mercury, and TPH-DRO were detected above EPA RSL. Benzene, benzo(a)anthracene, and benzo(a)pyrene were detected above EPA RSLs. Groundwater not collected.

Soil Boring No.	Location Rationale	Requested Chemical Analyses	Samples Collected	PID Findings/Observations	Analytical Findings
PV-09	Historic Landfill (Landfill # 24) Pinyon PMEA 2019)	VOCs, SVOCs, TPH-GRO, TPH-DRO, and RCRA metals. Added PCB/Pesticides due to location by SB-20 and former Weaver Electric Lot. Asbestos-Containing Materials (visual observation)	1 soil collected at 6 to 8 feet bgs and 1 groundwater collected. Groundwater at 13.4 feet bgs. Bedrock at 28 feet bgs.	No odor or staining. Maximum PID at 0.3 ppm. Methane not detected. Carbon monoxide at 2 to 3 feet bgs at 4 ppm. Oxygen levels as low as 20.3% at 2 to 3 feet bgs.	<ul style="list-style-type: none"> Soil (6 to 8 feet bgs) – 4,4'-DDD was detected above its EPA RSL. Groundwater – arsenic, barium, lead, mercury, and TPH-DRO were detected above EPA RSLs and AWQC where available.
W-01	Historic Landfill (Landfill #24) (Pinyon PMEA 2019)	VOCs, SVOCs, TPH-GRO, TPH-DRO, and RCRA metals Asbestos-Containing Materials (visual observation)	1 soil (5 to 7 feet bgs) collected. No groundwater observed or collected.	Maximum PID at 0.1 ppm. Glass, plastic, cloth/paper, and rubber noted in borings starting at 2 feet bgs and continuing to depth. Black staining and what appeared to be heavy-end petroleum noted from 5 feet bgs through 12 feet bgs. Drilling stopped at 12 feet bgs due to hammer bouncing off unknown subsurface material. Landfill liner concern. CABI does not suspect asbestos but recommends CABI be present during excavation or intrusive activities.	<ul style="list-style-type: none"> Soil (5 to 7 feet bgs) – arsenic, barium, cadmium, lead, selenium, and mercury were detected above EPA RSL. TPH-DRO, TPH-GRO, and motor oil were detected above EPA RSLs. Benzene, 1,4-dichlorobenzene, ethylbenzene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene, dibenzofuran, and naphthalene were detected above EPA RSLs. Soil is classified as PCS. Groundwater not collected.
SB-27	Historic Landfill (Landfill #24) (Pinyon PMEA 2019)	SB-27 not investigated	SB-27 not investigated	SB-27 not investigated	SB-27 not investigated
SB-28	Historic Landfill (Landfill #24) (Pinyon PMEA 2019)	SB-28 not investigated	SB-28 not investigated	SB-28 not investigated	SB-28 not investigated
SB-29	Historic Landfill (Landfill #24) (Pinyon PMEA 2019)	VOCs, SVOCs, TPH-GRO, TPH-DRO, and RCRA metals Asbestos-Containing Materials (visual observation)	1 soil collected at 10 to 12 feet bgs and 1 groundwater sample collected. Groundwater at 10.4 feet bgs.	Multi-Rae/PID 0.0 ppm above background. No odor or staining noted. No debris noted. Natural clay layer at 10.5 to 12 feet bgs.	<ul style="list-style-type: none"> Soil (10 to 12 feet bgs) – arsenic, barium, and TPH-GRO were detected above EPA RSLs. Groundwater – arsenic, barium, cadmium, chromium, lead, mercury, and selenium were detected above EPA RSLs and AWQC where available. However, the dissolved components of the same metals were less than EPA RSLs and AWQC in groundwater. TPH-GRO and TPH-DRO were detected above their respective EPA RSLs.
SB-30	Historic Landfill (Landfill #24) (Pinyon PMEA 2019)	VOCs, SVOCs, TPH-GRO, TPH-DRO, and RCRA metals Asbestos-Containing Materials (visual observation)	2 soil collected at 5 to 10 feet bgs and 10 to 15 feet bgs. No groundwater collected. Groundwater estimated at 15 feet bgs.	Maximum PID at 32.6 ppm. Aluminum, nails, glass, and wood noted in borings starting at 3 feet bgs and continuing to 15 feet bgs. Black staining and fuel odor noted (light- and heavy-end petroleum) to 15 feet bgs. Natural clay layer noted at 15 feet bgs. Clay layer is about 6 feet thick. CABI does not suspect asbestos but recommends CABI be present during excavation or intrusive activities.	<ul style="list-style-type: none"> Soil (5 to 10 feet bgs) – organic compounds exceeding EPA RSLs include benzene, ethylbenzene, 1-methylnaphthalene, 2-methylnaphthalene, benzo(a)anthracene, benzo(a)pyrene, naphthalene, TPH-GRO, TPH-DRO, and motor oil. Arsenic, barium, cadmium, chromium, lead, mercury, and selenium exceed RSLs. Soil is classified as PCS. Soil (10 to 15 feet bgs) – organic compounds exceeding EPA RSLs include 1,4-dichlorobenzene, 1-methylnaphthalene, 2-methylnaphthalene, naphthalene, TPH-GRO, TPH-DRO, and motor oil. Arsenic exceeds its RSL. Groundwater not collected.
SB-31	Historic Landfill (Landfill # 22 and #25) (Pinyon PMEA 2019)	VOCs, SVOCs, TPH-GRO, TPH-DRO, and RCRA metals Asbestos Containing Materials (visual evaluation)	2 soil collected at 9 to 11 feet bgs and 15 to 17 feet bgs and 1 groundwater sample collected. Groundwater at 17.75 feet bgs.	Maximum PID at 8.8 ppm. Glass, plastic, cloth/paper, metal, and copper tubing noted in borings starting at 4 feet bgs and continuing to 14 feet bgs. Black staining and heavy-end petroleum noted to 12 feet bgs and light-end petroleum noted from 12 to 19 feet bgs. CABI does not suspect asbestos but recommends CABI be present during excavation or intrusive activities.	<ul style="list-style-type: none"> Soil (9 to 11 feet bgs) – organic compounds exceeding EPA RSLs include benzene, ethylbenzene, 1,2-dichlorobenzene, 1,4-dichlorobenzene, TPH-GRO, TPH-DRO, and motor oil. Soil is classified as PCS. Soil (15 to 17 feet bgs) – 1,4-dichlorobenzene and arsenic exceed their EPA RSL. Groundwater – arsenic, barium, cadmium, chromium, lead, mercury, and silver were detected above EPA RSLs and AWQC where available. However, the dissolved components of the same metals were less than EPA RSLs and AWQC in groundwater. TPH-GRO, TPH-DRO, and motor oil were detected above their respective EPA RSLs.

Soil Boring No.	Location Rationale	Requested Chemical Analyses	Samples Collected	PID Findings/Observations	Analytical Findings
SB-32	Historic Landfill (Landfill # 22 and #25) (Pinyon PMEA 2019)	VOCs, SVOCs, TPH-GRO, TPH-DRO, and RCRA metals Asbestos Containing Materials (visual evaluation)	1 soil collected at 9 to 11 feet bgs and 1 groundwater sample collected. Groundwater at 12.15 feet bgs.	Maximum PID at 0.2 ppm. No odor or staining noted. Glass, plastic sheeting, rubber, wood, and other unknown debris noted between 4 and 13 feet bgs. No debris noted deeper than 13 feet bgs.	<ul style="list-style-type: none"> Soil (9 to 11 feet bgs) – benzo(a)anthracene, benzo(a)pyrene, TPH-DRO, and motor oil exceeded their RSLs. Arsenic and lead exceeded their RSLs. Groundwater – arsenic, barium, chromium, and lead were detected above EPA RSLs and AWQC where available. However, the dissolved components of the same metals were less than EPA RSLs and AWQC in groundwater. TPH-DRO and motor oil were detected above their respective EPA RSLs.
SB-33	Suncor Plant 1	VOCs, SVOCs, TPH-GRO, TPH-DRO, and RCRA metals	1 soil collected at 6 to 10 feet bgs and 1 groundwater sample collected. Groundwater at 16.4 feet bgs.	Multi-Rae/PID 0.0 ppm above background. No odor or staining noted. No debris noted.	<ul style="list-style-type: none"> Soil (6 to 10 feet bgs) – arsenic exceeded its EPA RSLs. Groundwater – arsenic, barium, chromium, and lead were detected above EPA RSLs and AWQC where available. However, the dissolved components of the same metals were less than EPA RSLs and AWQC in groundwater. TPH-DRO was detected above its EPA RSL.
SB-34	Sand Creek Industrial Superfund Site Five historic Landfills (Landfills #26, #30, #31, #85, and #89) (Pinyon PMEA 2019)	VOCs, SVOCs, TPH-GRO, TPH-DRO, and RCRA metals Asbestos Containing Materials (visual evaluation)	No samples collected. Groundwater at 25.5 feet bgs.	Multi-Rae/PID 0.0 ppm above background. No odor or staining noted. No debris noted.	No samples collected.
SB-35	Sand Creek Industrial Superfund Site Five historic Landfills (Landfills #26, #30, #31, #85, and #89) (Pinyon PMEA 2019)	VOCs, SVOCs (PAHs), MTBE, TPH-GRO, TPH-DRO, RCRA metals, and 1,4-Dioxane Asbestos Containing Materials (visual observation)	2 soil samples collected at 5 to 10 feet bgs and 10 to 15 feet bgs and 1 groundwater sample collected. Groundwater at 16.85 feet bgs.	Maximum PID at 20 ppm at 10 to 12 feet bgs. Slight odor of heavy-end petroleum noted at 5 to 10 feet bgs. Staining noted. Cardboard, glass, plastic, and metal debris noted at 10 to 12 feet bgs. Methane (% LEL) at various depths starting at 5 through 17 feet bgs with maximum methane at 28% LEL and oxygen levels at 20.3% from 10 to 12 feet bgs. No methane (% LEL) detections below 17 feet bgs. Natural clay layer at 15 feet bgs	<ul style="list-style-type: none"> Soil (5 to 10 feet bgs) – benzo(a)anthracene, benzo(a)pyrene, TPH-DRO, arsenic and lead exceeded their EPA RSLs. Soil (10'-15' bgs) – 1,4-dichlorobenzene, benzene, ethylbenzene, 1-methylnaphthalene, 2-methylnaphthalene, acenaphthene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzofuran, naphthalene, TPH-GRO, TPH-DRO, and motor oil exceeded their EPA RSLs. Arsenic, barium, cadmium, lead, mercury, selenium, and silver exceed their EPA RSLs. Soil is classified as PCS. Groundwater – arsenic, barium, cadmium, chromium, and lead were detected above EPA RSLs and AWQC where available. However, the dissolved components of the same metals were less than EPA RSLs and AWQC.
SB-36	Sand Creek Industrial Superfund Site Five historic Landfills (Landfills #26, #30, #31, #85, and #89) (Pinyon PMEA 2019)	VOCs, SVOCs (PAHs), MTBE, TPH-GRO, TPH-DRO, RCRA metals, and 1,4-Dioxane Asbestos Containing Materials (visual observation)	1 soil collected at 25 to 30 feet bgs. No groundwater sample collected. Groundwater at 44 feet bgs.	No odor or staining. Maximum PID at 0.1 ppm. Debris noted in borings intermittently but suspect not landfill-related. Asphalt/brick at 0 to 2 feet bgs. Glass, pieces of metal, brick, and rubber noted at 32 feet bgs; however, debris not in split-spoon but auger flights. Debris not believed to be associated with a landfill.	<ul style="list-style-type: none"> Soil (25 to 30 feet bgs) – TPH-GRO and arsenic exceed EPA RSLs. Groundwater not collected.
SB-37	Chemical Sales Superfund Site OU2	VOCs, SVOCs (PAHs), MTBE, TPH-GRO, TPH-DRO, RCRA metals, and 1,4-Dioxane	1 soil collected at 8 to 10 feet bgs. No groundwater sample collected. Groundwater not encountered at 27 feet bgs.	Multi-Rae/PID 0.0 ppm above background. No odor or staining noted. No debris noted. Clay layer encountered between 10 and 27 feet bgs.	<ul style="list-style-type: none"> Soil (8 to 10 feet bgs) – arsenic, barium, and TPH-GRO exceed their EPA RSLs. Groundwater not collected.
SB-38	Travel America Denver East	VOCs, SVOCs (PAHs), MTBE, TPH-GRO, TPH-DRO, and RCRA metals	1 soil collected at 13 to 15 feet bgs. No groundwater sample collected. Groundwater at 25.6 feet bgs.	Multi-Rae/PID 0.0 ppm above background. No odor or staining noted. No debris noted.	<ul style="list-style-type: none"> Soil (13 to 15 feet bgs) – lead exceeds its EPA RSL. Groundwater not collected.
YA-G-01	Real-time Air Monitoring Only	Real-time Air Monitoring Only	Real-time Air Monitoring Only. No samples collected.	Maximum PID 18 ppm at 5 to 6.5 feet bgs. No odor or staining noted. No debris noted. Groundwater at approximately 10 feet bgs. Bedrock at 17.5 feet bgs.	Real-time Air Monitoring Only. No samples collected.

Soil Boring No.	Location Rationale	Requested Chemical Analyses	Samples Collected	PID Findings/Observations	Analytical Findings
YA-G-02	Real-time Air Monitoring Only	Real-time Air Monitoring Only	Real-time Air Monitoring Only. No samples collected.	Maximum PID of 9.7 at 35 to 41.5 feet bgs. Stained fabric material with plastic, layered paper, cardboard, and petroleum odor noted at 35 to 41.5 feet bgs. Metal observed and 27% LEL detected on Multi-Rae but reading was from cutting shoe and suspect due to presence of organic matter. Groundwater at 43 feet bgs.	Real-time Air Monitoring Only. No samples collected.
YA-B-05	Real-time Air Monitoring Only	Real-time Air Monitoring Only	Real-time Air Monitoring Only. No samples collected.	Maximum PID of 104 ppm and 7% LEL at 41 feet bgs. Maximum PID detect of 12 ppm and 23% LEL detected from 45 to 46 feet bgs. Metal, glass, and plastic debris noted from 35 to 41 feet bgs. Petroleum odor also noted at these depths. Groundwater at 52 feet bgs.	Real-time Air Monitoring Only. No samples collected.
YA-B-09	Real-time Air Monitoring Only	Real-time Air Monitoring Only	Real-time Air Monitoring Only. No samples collected.	Multi-Rae/PID 0.0 ppm above background. No odor or staining noted. No debris noted. Groundwater at 21 feet bgs. Bedrock at approximately 23 feet bgs.	Real-time Air Monitoring Only. No samples collected.
YA-B-10	Real-time Air Monitoring Only	Real-time Air Monitoring Only	Real-time Air Monitoring Only. No samples collected.	Multi-Rae/PID 0.0 ppm above background. No odor or staining noted. No debris noted. Groundwater at 20 feet bgs. Bedrock at approximately 23 feet bgs.	Real-time Air Monitoring Only. No samples collected.
YA-B-11	No monitoring conducted	No monitoring conducted	No monitoring conducted	Geotechnical engineer reported strong petroleum odor and staining noted during drilling.	Real-time Air Monitoring Only. No samples collected.
YA-B-12	Real-time Air Monitoring Only	Real-time Air Monitoring Only	Real-time Air Monitoring Only. No samples collected.	Multi-Rae/PID 0.0 ppm above background. No odor or staining noted. Limited small brick debris found in cuttings but nothing widespread does not appear landfill associated.	Real-time Air Monitoring Only. No samples collected.

Notes:

% = percent

AWQC = Ambient Water Quality Criteria

bgs = below ground surface

CABI = Certified Asbestos Building Inspector

CO = carbon monoxide

DDD = dichlorodiphenyldichloroethane

DRO = diesel range organics

EPA = U.S. Environmental Protection Agency

GRO = gasoline range organics

LEL = lower explosive limit

LUST = leaking underground storage tank

MTBE = methyl tert-butyl ether

OU = Operable Unit

PAH = polynuclear aromatic hydrocarbon

PCB = polychlorinated biphenyl

PCE = perchloroethylene

PCS = petroleum-contaminated soil

PID = photoionization detector

PMEA = Preliminary Modified Environmental Assessment

ppm = parts per million

RCRA = Resource Conservation and Recovery Act

RSL = Regional Screening Level

SB = soil boring

SVOC = semi-volatile organic compound

TPH = total petroleum hydrocarbon

VOC = volatile organic compound

4.1 Identified Medium-and High-Risk Sites

Sand Creek Industrial Park, 33rd and Dahlia, Commerce City

The 350-acre Sand Creek Industrial Park is located south of Sand Creek, north of 48th Avenue, east of Colorado Boulevard, and west of Ivy Street, in Commerce City, Colorado. A former landfill, a former pesticide manufacturer, a closed-acid storage impoundment, and a former oil refinery are located within the boundaries of this former Superfund Site. The 48th and Holly Landfill accepted residential, commercial, and industrial solid waste from 1968 to 1975. The Colorado Organic Chemical Company manufactured pesticides until 1984. The LC Corporation acid neutralization impoundments operated from 1968 to 1972.

The hazardous substances that contaminated soil, surface water, and groundwater at the site were VOCs, SVOCs, pesticides, herbicides, and metals. The Remedial Action Completion Report was issued for the site in September 1995, and the site was deleted from the National Priorities List on December 20, 1996.

Phase II ESA soil borings identified to address this former release area are SB-12, SB-13, SB-14, SB-15, and SB-34 through SB-36.

4.2 Former Stapleton Airport, Interstate 70 and Central Park Boulevard

This area was previously a runway for the former Stapleton Airport. After the closure of Stapleton Airport, it was redeveloped as the interchange of I-70 and Central Park Boulevard. A Modified Environmental Site Assessment completed in 2009 for the facility reported VOC-impacted groundwater, asbestos-impacted soil, dumping and former industrial uses as recognized environmental conditions (RECs) (Pinyon 2009).

Soil and groundwater investigations were conducted in 2010 to evaluate these RECs (PMEA 2019). Groundwater samples were analyzed for methyl tert-butyl ether (MTBE), VOCs, DRO, and GRO. These analytes were reported as non-detect in the groundwater samples. Soils observed in the potholes generally were native soil overlain by fill material. Although some debris was observed, after analysis it was determined that asbestos-containing materials were not present.

A Phase II ESA soil boring identified to address this former release area is SB-1.

4.3 Weaver Electric Main Site I; Weaver Electric Lot 2, 3200 East 64th Avenue

Weaver Electric Lot #2 may have historically been mined for sand and gravel and was reportedly backfilled with solid and/or sanitary waste through the 1970s (PMEA 2019). After the landfill was capped, Weaver Electric stored transformers and other electrical equipment on the partially paved lot from the late 1970s until 2003.

During an investigation at this location in 1989, elevated levels of PCBs, toluene, and methylene chloride were reported in soils and shallow groundwater. An investigation in 2012 reported SVOCs, PCBs, pesticides, and metals in the shallow soils as well between 6 inches and 4 feet bgs.

A Phase II ESA soil boring identified to address this former release area is SB-20.

4.4 Multi-Contractor Site, 3200 East 64th Avenue

This property was formerly used as a landfill, dump, and contractor's yard (Terracon 2017). Elevated levels of SVOCs, TPHs, Resource Conservation and Recovery Act (RCRA) metals, and naphthalene were reported in soils at levels above EPA Industrial RSLs. Five groundwater samples were collected and analyzed for VOCs; VOCs were not reported in groundwater at levels above Colorado Groundwater Standard (CGS). As part of a Voluntary Cleanup Program application approved by the Colorado Department of Public Health and Environment (CDPHE) in 2014, the selected environmental remedy was

to construct an evapotranspirative cover on impacted portions of the site in 2017/2018; it is unknown if this remedy has been completed.

A Phase II ESA soil boring identified to address this former release area is SB-24.

4.5 Former Anderson's Formal Wear; Anderson's Formal Wear; UVAG Warehouse, 4661 Monaco Street

In 2002, an Integrated Corrective Action Plan was filed with the CDPHE to address PCE-impacted soil and groundwater from former dry-cleaning operations at this facility. Analytical results showed a decreasing trend of contaminant concentrations, and no additional remediation or monitoring was required. However, at the time of the last groundwater monitoring event in 2004, levels of PCE located along the northern site boundary and within 150 feet of the study area were above the CGS.

A Phase II ESA soil boring identified to address this former release area is SB-5.

4.6 Suncor Energy (USA) Inc. East Plant Colorado Refining Company, 5800 Brighton Boulevard

The present-day Suncor refinery was formerly multiple refining operations that have been in business since the 1930s. Multiple Administrative and Compliance Orders have been issued that identify work to be performed at the refineries to minimize or eliminate the releases of waste with hazardous constituents.

By 2005, Suncor had purchased both segments of the refinery, and in 2007, the CDPHE issued a combined Consent Order for the present-day Suncor Plants 1, 2, and 3. Additional Orders have been issued for the refinery to halt and address offsite impacts after Suncor reported measurable Light Non-Aqueous Phase Liquids in 32 offsite monitoring wells and concentrations above CGS for benzene in 50 offsite monitoring wells. As of 2017, 30 open release reports were being monitored, under recovery, or under investigation; additional releases have been reported since then.

Phase II ESA soil borings identified to address this former release area are SB-16, SB-17, SB-18, SB-19, SB-20, and SB-33.

4.7 Chemical Sales Company, 4661 Monaco Street

In 1962, a warehouse was constructed at 4661 Monaco Street. The building was occupied by Samsonite and the Gates Rubber Company until 1976, when the Chemical Sales Company took occupancy (PMEA 2019). In 1991, a groundwater contaminant plume originating at this facility was mapped, and the facility was designated as a Superfund Site.

The site consists of four OUs. OU1 refers to contaminated subsurface soils and groundwater south of Sand Creek, and OU2 addresses VOC-contaminated groundwater north of Sand Creek.

Phase II ESA soil borings identified to address this former release area are SB-5, SB-6, SB-7, SB-8, SB-9, SB-10, SB-11, and SB-37.

4.8 Former Landfill Facilities

Thirty-eight former landfill facilities were mapped within one-eighth mile of the study area. Additional mapping efforts to evaluate landfill boundaries were conducted through a review of aerial photographs from Colorado Aerial Photography. Twenty-nine landfills were identified with a medium or high potential to impact the study area (PMEA 2019).

Phase II ESA soil borings identified to address these former landfills are SB-12, 13, SB-14, SB-15, SB-20, SB-21 through SB-26, SB-29 through SB-31, PV-06, PV-09, and W-01.

5.0 Technical Approach

The geotechnical and Phase II ESA subsurface drilling was performed periodically between May 2020 and January 2021, using an 8.25-inch outside diameter hollow stem auger. Subsurface soil sampling was performed using either a 2-inch outside diameter (1.375-inch inside diameter) split-spoon sampler driven a distance of 24 inches or a 2.5-inch outside diameter lined with 2-inch diameter brass tubing modified California barrel sampler driven a distance of 12 inches. Continuous soil sampling was conducted starting at the ground surface and proceeded to groundwater or a maximum depth of 30 feet bgs. Several borings were halted due to bedrock refusal or encountering other materials associated with historic landfills. Soil sampling procedures are addressed further in Section 5.2.

Borings located in the footprint of suspected landfills were generally halted at a depth of 15 feet bgs to ensure landfill containment liners, if present, were not punctured, potentially causing release of landfill materials. However, during the fall 2020 effort, two borings were drilled through a landfill to determine depth to bedrock in support of the final construction design. Borings were immediately grouted with hydrated bentonite chips. Continuous soil sampling was conducted within the footprint of historic landfills, and a CDOT-provided CABI was present to visually assess each soil sample collected for the presence of ACM.

During drilling, worker breathing zones were monitored for organic vapors using a PID with a 10.6 electron-volt probe. Worker exposure was monitored at the breathing zone. PID measurements were also collected real-time at the borehole during drilling, and headspace measurements with the PID were completed during split-spoon sampling. Drill cuttings/spoils were also screened.

Groundwater samples were collected if groundwater was encountered before completion of borehole drilling to a maximum depth of 30 feet bgs. Temporary monitoring wells were placed for groundwater collection. Temporary monitoring wells were removed on completion of groundwater sample collection, and the boring was then abandoned with hydrated bentonite chips. Groundwater was collected through the casing using a peristaltic pump. Temporary monitoring wells were not developed or completed. Groundwater collection procedures are further addressed in Section 5.3.

Total sample numbers for soil and groundwater and their associated chemical analyses (excluding QA/QC samples) are summarized in Table 2.

Table 2. Sample Numbers and Analytical Methods

Analysis	Method	Soil Samples ^a	Groundwater Samples ^b
VOC	SW8260B	51	21
SVOC	SW8270D	51	21
TPH-GRO	SW8015C	51	21
TPH-DRO/ORO	SW8015C	51	21
PCB/Pesticides	SW8082A/8081B	2	2
RCRA 8 Metals	SW6020A/7470A/7471B	51	21

^a Sample numbers exclude QA/QC samples.

^b Groundwater sample was collected, if encountered.

5.1 Data Quality Objectives

The Phase II ESA was performed to identify the presence or absence of identified historical contaminants in the soil and groundwater potentially encountered during transportation corridor-related construction. The following is the primary Data Quality Objective (DQO) governing this Phase II ESA:

- Determine the presence or absence of potential contamination in soil and groundwater at the site with suspected RECs identified during the PMEA (2019). Collected data will be used to support transportation corridor design elements and evaluate appropriate materials management.

Jacobs conducted the Phase II ESA field investigation periodically between May 2020 and January 2021. Groundwater and soil data were collected at the site to address DQOs, as presented in Table 3. Field investigation tasks address the DQOs, and all site-related information is evaluated to support recommendations and conclusions. Field investigation tasks were performed in accordance with the decisions made during discussions with the project team in April 2020.

Table 3. Data Quality Objectives

Data Quality Objectives	Action
DQO #1	<p>Determine presence/absence of potential contaminants in soil and groundwater including:</p> <ul style="list-style-type: none"> • VOC – includes fuel constituents and solvents based on historical activities in the study area. • SVOC – includes impacts from herbicides, pesticides, fuel constituents, and other byproducts of combustion-related activities. • PCB – includes potential contamination from storage of electrical equipment and other activities that may have used PCB-contaminated oil. This is specific to the former Weaver Electric Storage Lot. • Metals – includes historic fuel constituents, metals with elevated background concentrations, and constituents associated with historic site activity (landfill areas). • TPH (C6-C28) – includes GRO (C6-C10), DRO (C10-C28), and ORO (C20-C38) based on historic site activity.
DQO #2	<p>Determine if detected chemicals of concern in soils are at concentrations exceeding regulatory detection criteria to:</p> <ul style="list-style-type: none"> • Evaluate if detected chemicals are characteristic RCRA hazardous substances/materials necessary for disposal. • Identify appropriate material handling and management requirements during construction phase. • Determine if transportation corridor design should be modified due to presence of contaminated materials.
DQO #3	<p>Determine if detected groundwater concentrations are at concentrations exceeding regulatory decision criteria to:</p> <ul style="list-style-type: none"> • Establish concentrations in groundwater to represent chemical concentrations in infiltration water within an excavation. Data will be used to determine if infiltration water can be discharged directly to an adjacent water body (for example, creek or stream) without treatment or if treatment is required. Groundwater samples were collected as totals (unfiltered) and dissolved (filtered) to support this DQO.

5.2 Soil Sampling

Soil boring locations were selected through review of the PMEA (Pinyon 2019); a review of former site activities; site reconnaissance observations; transportation corridor design; and the potential to identify contamination (Figure 3). Thirty-eight soil borings were completed at predetermined locations throughout the site.

Prior to drilling, utility locates were performed by Yeh and Associates to identify publicly owned subsurface utilities.

Environmental soil samples were collected for field screening analysis from predetermined borehole locations to identify intervals for laboratory sample submittal. Soil borings were advanced using an 8.25-inch outer diameter hollow stem auger to a depth of groundwater or to 30 feet bgs, whichever came first. Soil samples were collected in continuous sample tubes at 1-foot (California barrel sampler) or 2-foot intervals (split-spoon sampler), screened for potential contamination using a real-time multiple gas monitor, and used to identify up to two soil samples per borehole for laboratory analysis. Each collected soil interval was screened with a Multi-Rae Multiple Gas Monitor that provided real-time air concentrations for the following:

- Non-specific VOCs (ppm)
- Methane (percent lower explosive limit)
- Carbon monoxide (ppm)
- Hydrogen Sulfide (ppm)
- Oxygen (percent)

The onsite Environmental Professional recorded observations and the field screening data in the site logbook. Results of visual, olfactory, and multi-gas readings for each borehole are presented in Table 1.

A characterization soil sample was collected for laboratory analysis if there was a visual, olfactory, and/or multi-gas evidence of contamination. If elevated multi-gas readings were measured and/or there was visual or strong olfactory presence of contamination, a soil sample was collected from that boring interval. If an interval contained no evidence of contamination, a characterization sample was generally collected just above groundwater to evaluate potential leaching from soil to groundwater.

Each soil boring collected within a historic landfill location was visually inspected by a CDOT CABI for the presence of ACM.

Based on the field screening results, a total of 36 soil samples (plus 3 field QA/QC samples and 5 trip blanks in support of sample shipment) were collected from the 27 borings for laboratory analysis.

Laboratory analytical samples were submitted for the following chemical analyses:

- VOC
- SVOC
- RCRA metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver)
- TPH – DRO and ORO
- TPH – GRO
- PCBs/Pesticides (SB-20 and PV-09 only)

All soil samples were labeled with the primary soil boring number plus a suffix to denote the upper and lower interval of the sample collected. For example, SB-03-4-6 was collected at Soil Boring location SB-03 from a depth of 4 feet to 6 feet bgs.

After collection of samples, the soil samples were placed in laboratory-provided containers, placed on ice, and transported locally under standard chain-of-custody procedures directly to the laboratory. The samples were submitted to Eurofins/Test America in Arvada, Colorado, for analysis on a standard 21-day turnaround time. The Eurofins/Test America point of contact is:

Eurofins/Test America Analytical Laboratory
Analytical Laboratory Services
Darlene Bandy/Client Relations Manager
4955 Yarrow Street
Arvada, CO 80002
(303) 467-7396

Soil cuttings exhibiting potential contamination were placed in United States Department of Transportation-approved 55-gallon steel drums and staged for subsequent disposal. Soil boring cuttings exhibiting potential contamination were containerized from SB-20 (PCBs/Pesticides) and SB-21 (elevated TPH level suspected).

5.3 Groundwater Sampling

Groundwater samples were collected from temporary groundwater monitoring wells at 21 of the 38 boring locations. A temporary well was installed if groundwater was encountered before completion of an environmental borehole drilling to a maximum depth of 30 feet bgs. Groundwater samples were collected from the middle of the water column using a peristaltic pump and dedicated tubing. VOCs were collected prior to other analytes to limit volatilization.

Temporary monitoring wells were not developed or completed. Field measurements of pH, temperature, specific conductance, dissolved oxygen, oxidation/reduction potential, and turbidity were not collected. Temporary monitoring wells were removed immediately on completion of groundwater sample collection and the boring abandoned with bentonite chips and hydrated.

The objective of groundwater sampling was to establish concentrations in groundwater to represent chemical concentrations for infiltration water during construction. Data will be used to determine if infiltration water can be discharged directly to an adjacent water body (for example, creek or stream) without treatment or if treatment is required. For this reason, groundwater samples were collected as unfiltered (total) and filtered (dissolved).

Temporary groundwater wells were constructed of 2-inch Schedule 40 polyvinyl chloride with 0.010-inch (10-slot), either 5-foot or 10-foot screens. The temporary wells were inserted within the hollow-stem augers to the desired interval within the groundwater column, and then the augers were retracted for sampling. No filter pack or seal was installed for these temporary wells from which screening-level samples were collected.

A total of 21 groundwater samples were collected (excluding field QA/QC samples) from the 38 borings for laboratory analysis.

Laboratory analytical samples were submitted for the following chemical analyses:

- VOC
- SVOC
- RCRA metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver)
- TPH – DRO and ORO
- TPH – GRO
- PCBs/Pesticides (SB-20 and PV-09 only)

Samples were collected from the middle of the water column using a peristaltic pump and dedicated tubing. VOCs were collected prior to other analytes to limit volatilization.

Groundwater samples were placed in laboratory-provided sample containers, labeled, placed in a chilled cooler, and hand-delivered under chain-of-custody to Test America in Arvada, Colorado, for laboratory analysis.

5.4 Investigation Derived Waste

Potentially contaminated investigation derived waste (IDW) was segregated and containerized in approved containers and properly sealed. Each container was then labeled. The label included the accumulation start date, generator point of contact and phone number, and IDW type (for example, soil). Data from the associated soil boring will be used to determine final disposition of the IDW for that boring location.

Soil cuttings exhibiting potential contamination were placed in United States Department of Transportation-approved 55-gallon steel drums and staged for subsequent disposal. Soil boring cuttings exhibiting potential contamination were containerized from SB-20 (PCB/Pesticides) and SB-21 (elevated TPH level suspected). Both drums were transported to the CDOT storage yard on York Street pending analysis of the soil cuttings. CDOT is responsible for the management of the two drums upon receipt of chemical analysis.

6.0 Decision Criteria

Decision criteria for soils were identified from a review of the EPA RSLs protective of unrestricted use (residential) and the protection of migration to groundwater soil screening levels. The EPA RSLs are chemical-specific concentrations for individual contaminants in air, drinking water, and soil that may warrant further investigation or site cleanup.

Decision criteria for groundwater include EPA maximum contaminant levels (MCLs) for drinking water. Where an MCL does not exist for a site chemical in groundwater, EPA RSLs for drinking water (tap water) were applied.

To evaluate potential impacts from discharge of site-related waters to adjacent surface water bodies, groundwater data were compared to EPA National Recommended Water Quality Criteria (WQC) protective of aquatic life.

6.1 Comparison Screening Criteria for Soils

6.1.1 Environmental Protection Agency Regional Screening Levels for Soil that Are Protective of Unrestricted Use

The RSL for unrestricted use assumes a human resident spends most, if not all, of the day at home. Activities involve typical home making chores (cooking, cleaning, and laundering) as well as outdoor activities. The resident is assumed to be exposed to contaminants via the following pathways: incidental ingestion of soil, dermal contact with soil, and inhalation of volatiles and fugitive dust. The calculated RSL for the unrestricted use resident is protective of each of these pathways.

6.1.2 Environmental Protection Agency Regional Screening Levels Protective of Migration from Soil to Groundwater

The soil to groundwater RSLs were developed to identify concentrations in soil that have the potential to contaminate groundwater above risk-based RSLs or MCLs. Migration of contaminants from soil to groundwater can be envisioned as a two-stage process: (1) release of contaminant from soil to soil leachate, and (2) transport of the contaminant through the underlying soil and aquifer to a receptor well. The soil to groundwater scenario considers both of these fate and transport mechanisms.

Equations are used to calculate soil screening levels (SSLs) that are protective of groundwater. SSLs are either back-calculated from protective risk-based groundwater concentrations or based on MCLs. The SSLs were designed for use during the early stages of a site evaluation when information about subsurface conditions may be limited.

6.2 Comparison Screening Criteria for Groundwater

6.2.1 Environmental Protection Agency Regional Screening Levels for Groundwater that Are Protective of Unrestricted Use

Groundwater data were compared to MCLs and if not available, EPA RSL tap water criteria for drinking water were applied. The MCLs are standards that are set by the EPA for drinking water quality. An MCL is the legal threshold limit on the amount of a substance that is allowed in public water systems under the Safe Drinking Water Act.

The EPA tap water RSL is protective of human receptors that may be exposed to chemicals through the ingestion of water for drinking that is delivered to a residence from sources such as groundwater or surface water. Ingestion of drinking water is an appropriate pathway for all chemicals. The inhalation exposure route is only calculated for volatile compounds. Activities such as showering, laundering, and dish washing contribute to contaminants in the air for inhalation. Dermal contact with tap water is also considered for analytes.

6.2.2 National Recommended Water Quality Criteria-Aquatic Life Criteria

To evaluate potential impacts from discharge of site-related waters during construction activities to adjacent surface water bodies, groundwater data were also compared to EPA National Recommended WQC protective of aquatic life.

The EPA criteria selected for use in this screening are the most up-to-date criteria protective of aquatic life. The aquatic life criteria are the highest concentration of specific pollutants or parameters in water that are not expected to pose a risk to most species in a given environment. EPA bases aquatic life criteria on how much of a chemical can be present in surface water before it is likely to harm plant and animal life. EPA designs aquatic life criteria to protect freshwater organisms from short-term and long-term exposure.

If chemical concentrations do not exceed WQC, it is assumed that construction-related waters, such as infiltration water or other shallow groundwater encountered during construction, can be discharged into adjacent or nearby streams or surface water bodies.

7.0 Equipment Decontamination

Procedures were implemented to minimize cross-contamination between soil borings if the presence of gross environmental contamination was encountered. All drilling equipment was decontaminated prior to use, between locations as necessary, and prior to demobilization from the site if required.

8.0 Sample Documentation, Handling, and Custody Requirements

Data regarding each sample collected was documented in field logbooks or sample collection forms. Key information included the following:

- Date and time of sample collection
- Boring or well identification of sample collection site
- Sample depth
- Sampler's name
- Analyses requested
- Any special circumstances that influenced sample collection

Each sample was labeled with a unique sample number corresponding to the date and location. A chain-of-custody form accompanied every shipment of samples to the analytical laboratory. The purpose of the form is to establish the documentation necessary to trace possession from the time of collection to final disposal and to identify the type of analysis requested. Each chain-of-custody form included signatures of the appropriate individuals indicated on the form. The originals accompanied the samples to the laboratory, and copies documenting each custody change were recorded and kept on file.

Required paperwork, including sample container labels, chain-of-custody forms, custody seals, and shipping package labels were completed in ink prior to shipping of the samples to the laboratory.

9.0 Quality Assurance and Quality Control

Quality control soil samples were collected at a 10 percent frequency for field duplicates and a 5 percent frequency for matrix spike/matrix spike duplicates. Trip blanks, which were prepared by the laboratory and sealed for quality control, were included in each shipment of VOCs and GRO analyses to evaluate potential sample contamination from VOCs. The trip blanks accompanied the VOC and GRO samples from the point of collection to the point of receipt at the lab. Field duplicates were collected as two aliquots of the same sample; VOCs were collected for the primary and field duplicate sample first to minimize volatilization, and the remaining analytes were then collected from homogenized soil. One temperature blank was submitted in each cooler.

10.0 Sample Nomenclature

The sample nomenclature for the soil and groundwater samples are outlined here:

- Site name
- Date
- Soil boring location/number
- Depth of sample

11.0 Data Results

The Phase II ESA consisted of soil and groundwater collection and real-time and laboratory chemical analysis to identify the presence/absence of contaminated soil and groundwater to determine their chemical concentrations in environmental media.

Thirty-eight boring locations were identified in support of the Phase II ESA. A total of 51 primary soil samples (excluding QA/QC samples) and 21 primary groundwater samples (excluding QA/QC samples) were collected from the boring locations (Figures 4a through 4g). Most borings were extended to a maximum depth at approximately 30 feet bgs unless groundwater was encountered first.

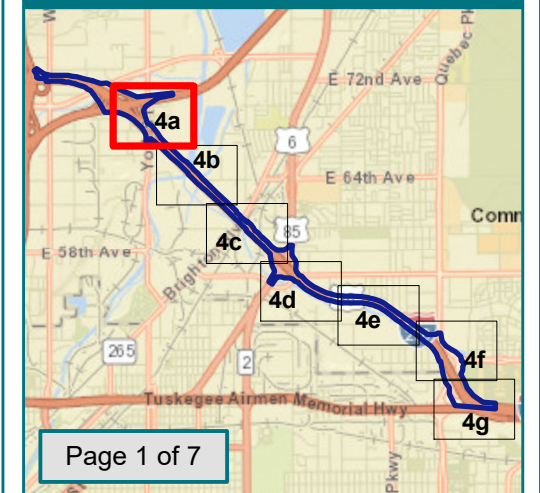


SOIL BORING RESULTS

- ▲ Soil Boring w/o Landfill Debris
- ▲ Soil Boring with Landfill Debris
- Approximate Study Area

Note: Listed chemicals exceed decision criteria.

Regional Locator

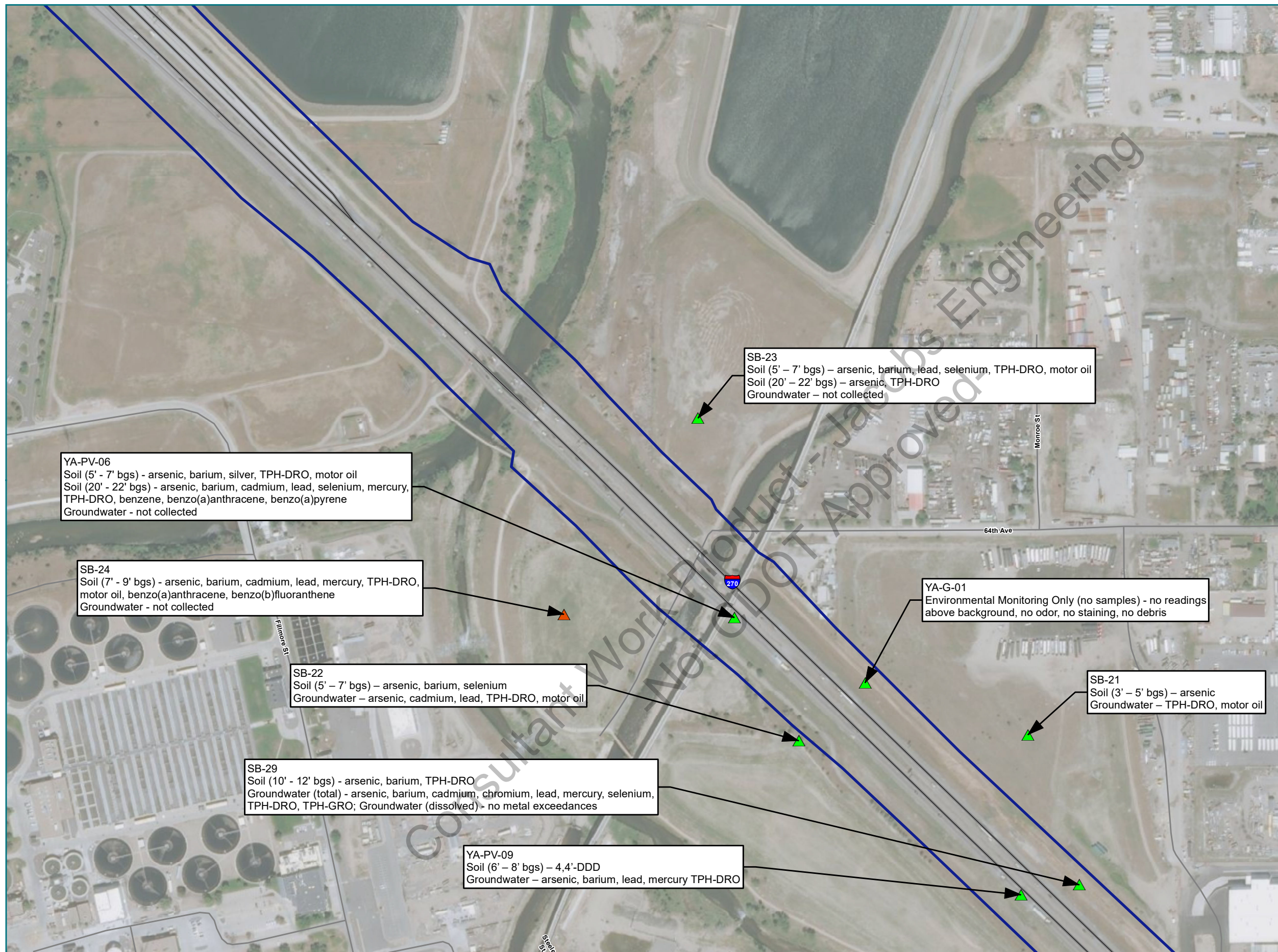


Projection: Custom
 Lambert Conformal Conic
 North American Datum 1983 (2011)
 Source: ESRI and its data partners

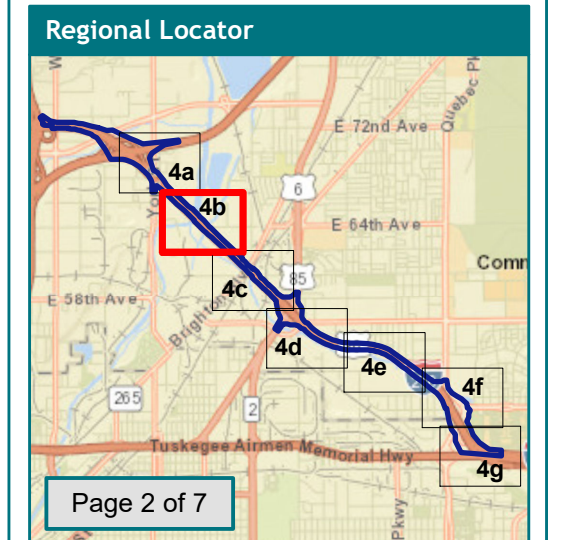
Figure 4. Soil Boring Results

SOIL BORING RESULTS

- ▲ Soil Boring w/o Landfill Debris
- ▲ Soil Boring with Landfill Debris
- Approximate Study Area

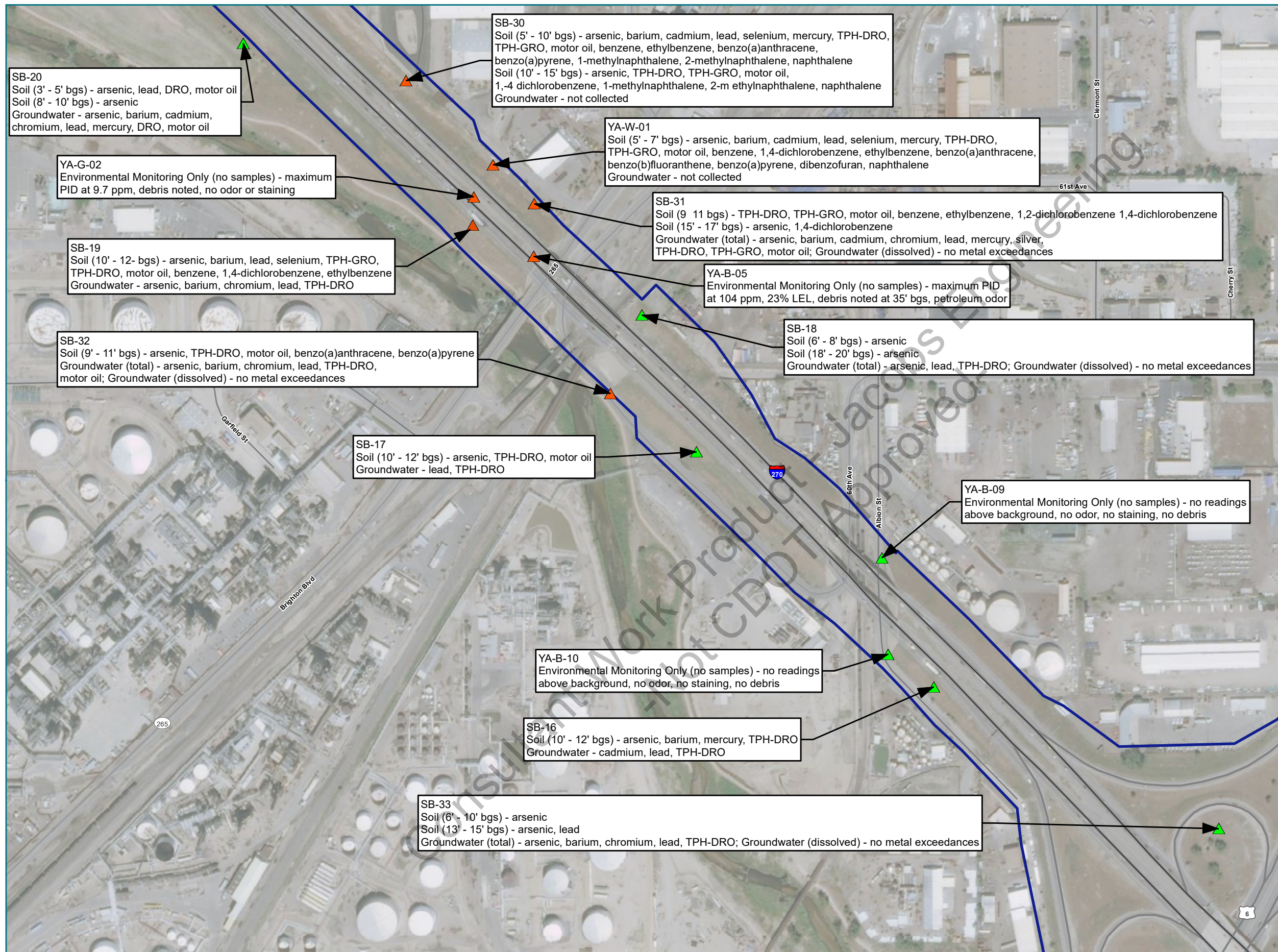


Note: Listed chemicals exceed decision criteria.



Projection: Custom
Lambert Conformal Conic
North American Datum 1983 (2011)
Source: ESRI and its data partners

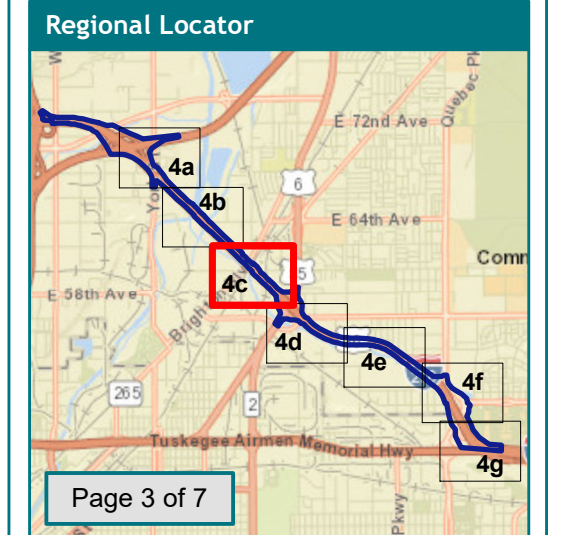
Figure 4. Soil Boring Results



SOIL BORING RESULTS

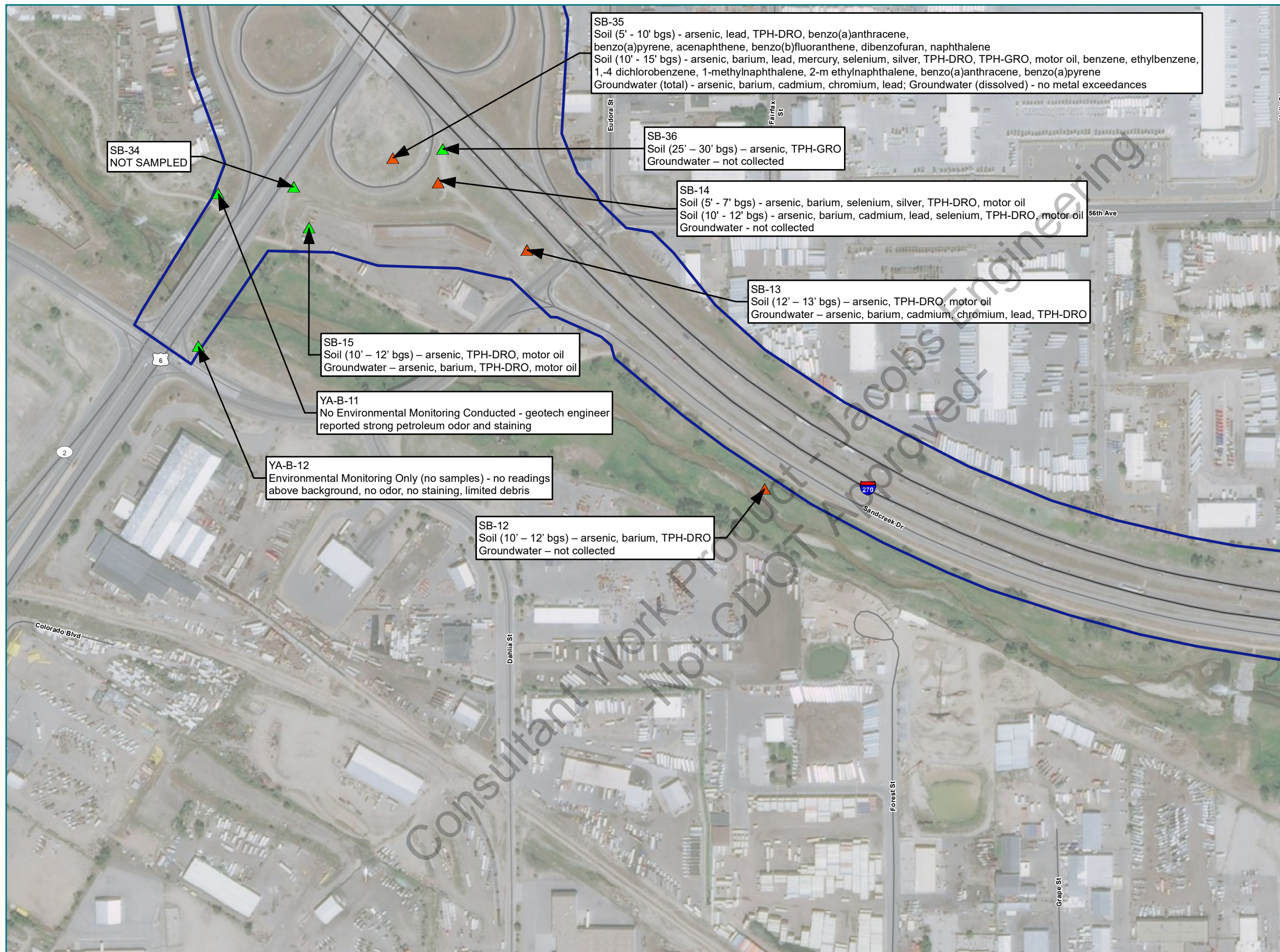
- ▲ Soil Boring w/o Landfill Debris
- ▲ Soil Boring with Landfill Debris
- Approximate Study Area

Note: Listed chemicals exceed decision criteria.



Projection: Custom
Lambert Conformal Conic
North American Datum 1983 (2011)
Source: ESRI and its data partners

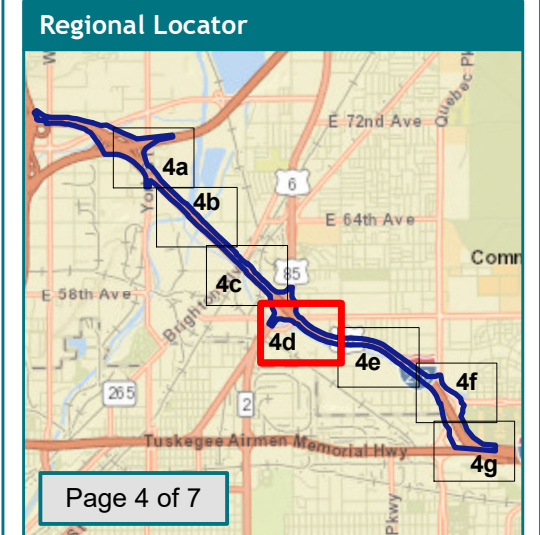
Figure 4. Soil Boring Results



SOIL BORING RESULTS

- ▲ Soil Boring w/o Landfill Debris
- ▲ Soil Boring with Landfill Debris
- Approximate Study Area

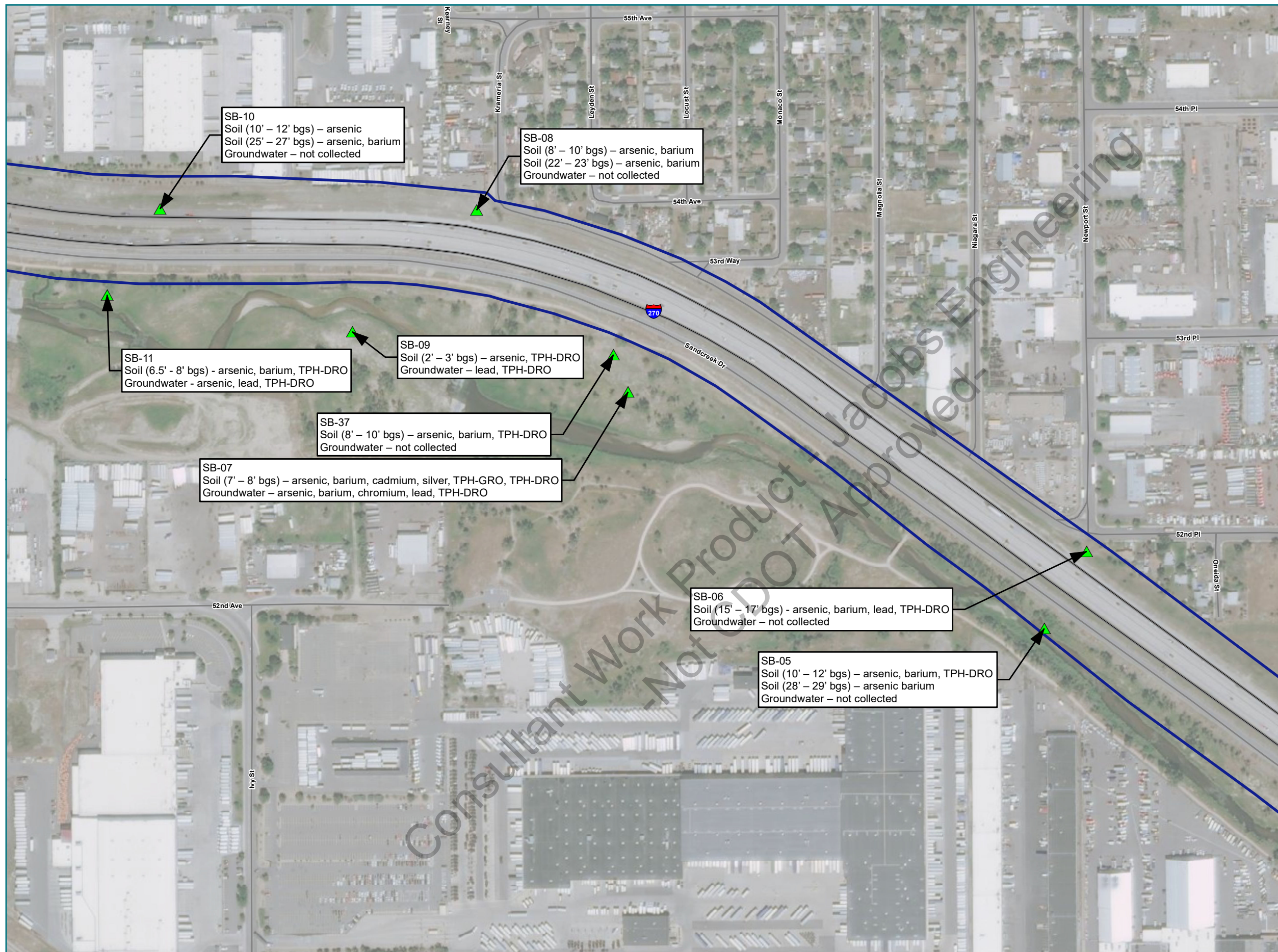
Note: Listed chemicals exceed decision criteria.



Projection: Custom
Lambert Conformal Conic
North American Datum 1983 (2011)

Source: ESRI and its data partners

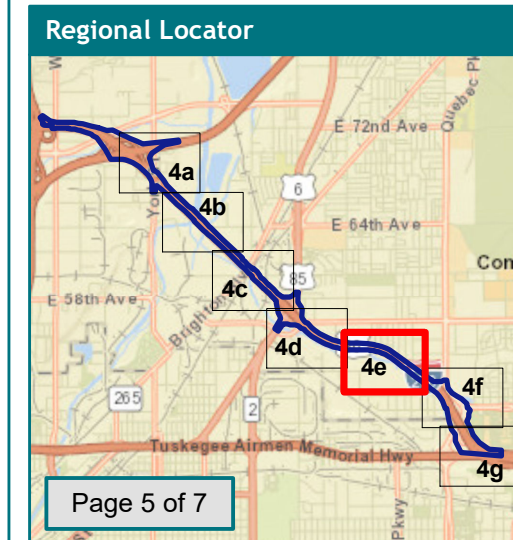
Figure 4. Soil Boring Results



SOIL BORING RESULTS

- ▲ Soil Boring w/o Landfill Debris
- ▲ Soil Boring with Landfill Debris
- Approximate Study Area

Note: Listed chemicals exceed decision criteria.

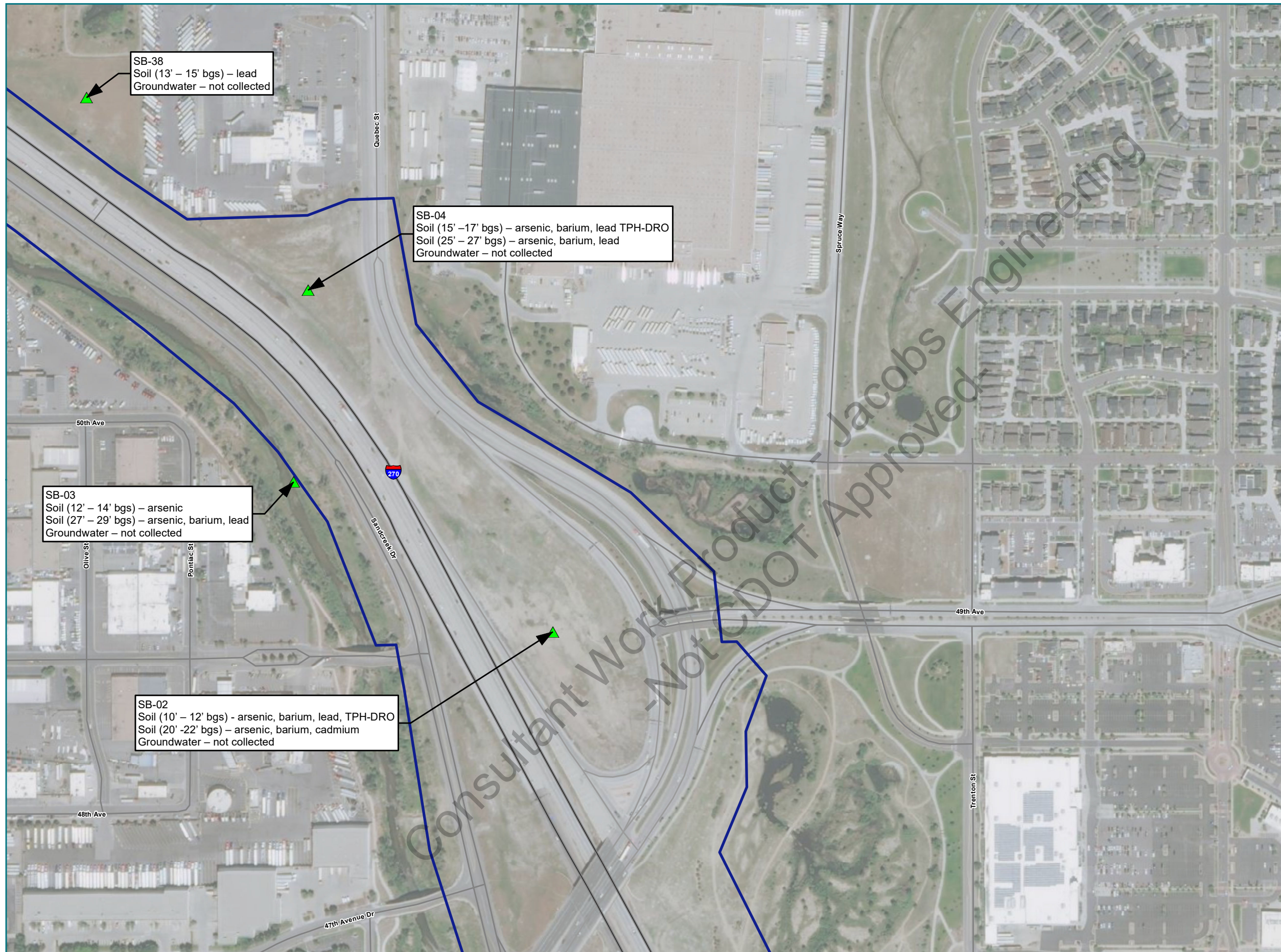


Projection: Custom
Lambert Conformal Conic
North American Datum 1983 (2011)
Source: ESRI and its data partners

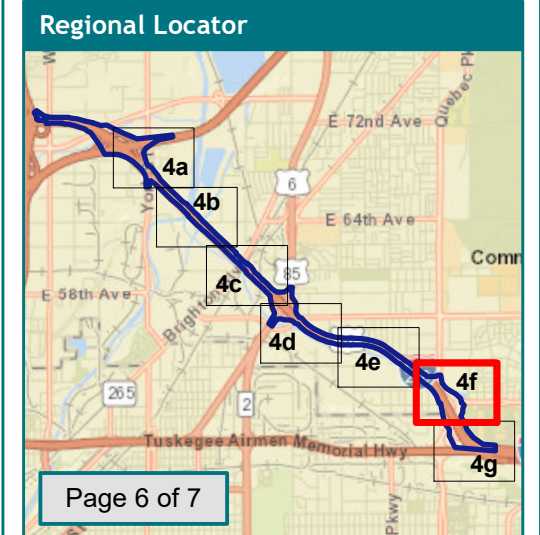
Figure 4. Soil Boring Results

SOIL BORING RESULTS

- ▲ Soil Boring w/o Landfill Debris
- ▲ Soil Boring with Landfill Debris
- Approximate Study Area

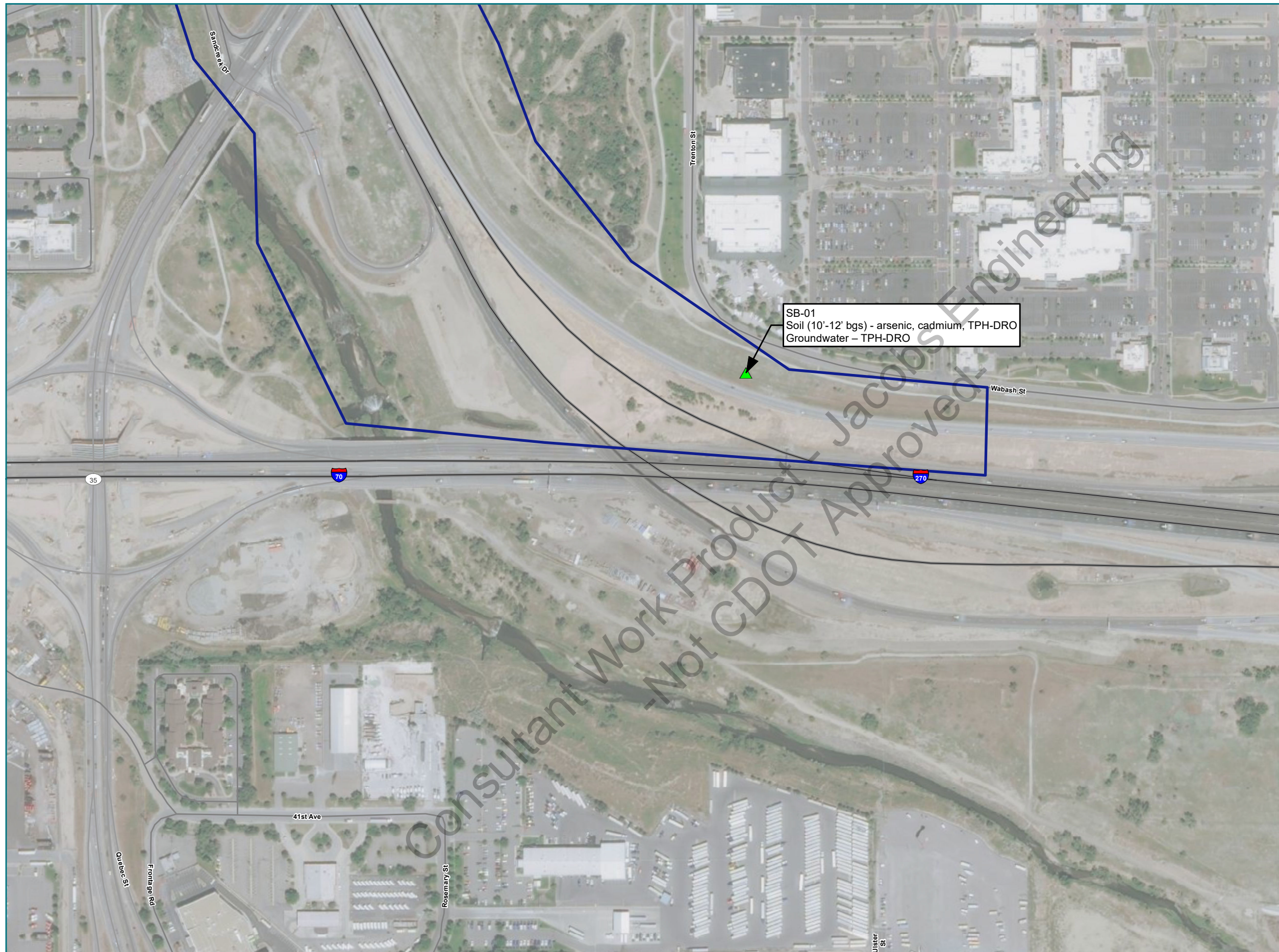


Note: Listed chemicals exceed decision criteria.



Projection: Custom
Lambert Conformal Conic
North American Datum 1983 (2011)
Source: ESRI and its data partners

Figure 4. Soil Boring Results

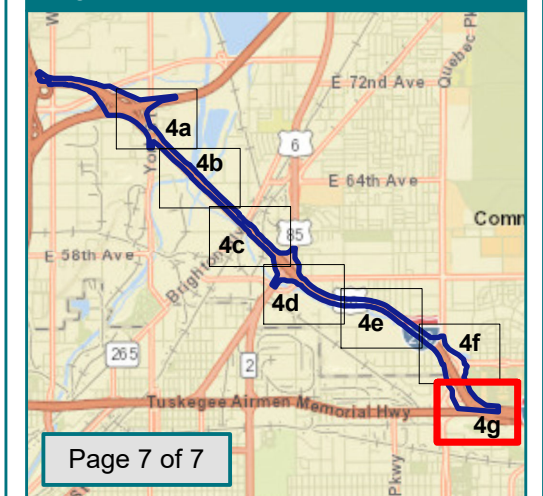


SOIL BORING RESULTS

- ▲ Soil Boring w/o Landfill Debris
- ▲ Soil Boring with Landfill Debris
- Approximate Study Area

Note: Listed chemicals exceed decision criteria.

Regional Locator



Projection: Custom
 Lambert Conformal Conic
 North American Datum 1983 (2011)
 Source: ESRI and its data partners

Figure 4. Soil Boring Results

The analytical suite for collected soil and groundwater samples included VOCs, SVOCs, TPHs–DRO, TPH-GRO, TPH-ORO, RCRA metals, and where applicable, PCBs/Pesticides.

Analytical data for soils and groundwater were compared to the decision criteria identified in Section 6.0. Laboratory Analytical Data Reports are presented in Appendix A.

Groundwater was typically encountered from 5.5 feet to 27 feet bgs. Not all borings encountered groundwater, so not all borings had temporary monitoring wells placed and groundwater sampled. Table 1 presents the boring locations where groundwater samples were collected.

Landfill debris including construction debris, glass, metal, plastics, cloth, paper, rubber, and similar were noted in the following borings:

- SB-12 through SB-14
- SB-19
- SB-24
- SB-30 through SB-32
- SB-35
- YA-G-02
- YA-B-05
- W-01

Borings that recorded real-time measurements of methane (percent lower explosive limit), carbon monoxide, and/or oxygen levels greater than ambient levels are as follows:

- SB-14 and SB-15
- SB-19
- SB-23 and SB-24
- SB-35
- YA-G-02
- YA-B-05
- PV-06
- PV-09

A CDOT CABI was present during borehole drilling at all identified historic landfills. The CABI visually inspected each soil boring interval for the presence of ACM. No observations of ACM were identified.

Elevated measurements above background were noted for VOCs using the Multi-Rae real-time gas monitor. Presented measurements are maximum deflections, not sustained readings. Soil borings with VOC measurements greater than 5 ppm above background were as follows:

- SB-02 (58 ppm)
- SB-08 (6.7 ppm)
- SB-21 (58 ppm)
- SB-24 (31 ppm)
- SB-25 (17 ppm)
- SB-30 (32.6 ppm) and SB-31 (8.8 ppm)
- SB-35 (20 ppm)
- YA-G-01 (18 ppm) and YA-G-02 (9.7 ppm)
- YA-B-05 (104 ppm)

At SB-25, a sandstone layer was encountered at 17.5 feet bgs causing refusal, so drilling was halted.

Black staining was observed in soil from several borings. Analytical results from soils collected within these borings indicate the presence of TPH-DRO, motor oils, and their associated constituents to include

PAHs. PCBs were not detected in the samples from the borings. Borings with observed black staining and associated TPH include the following:

- SB-07 (6.5 to 8 feet bgs)
- SB-14 (5 to 7 feet bgs)
- SB-19 (2 to 15 feet bgs)
- SB-20 (5 feet bgs)
- SB-24 (7 to 9 feet bgs)
- SB-30 (3 to 17 feet bgs)
- SB-31 (4 to 12 feet bgs)
- SB-35 (5 to 12 feet bgs)
- W-01 (5 to 12 feet bgs)

11.1 Decision Criteria Exceedances in Soils

Benzene, 1,4-dichlorobenzene, and ethylbenzene were detected in soils above their respective EPA RSLs at SB-19. SB-19 is located adjacent to the Suncor Facility.

Benzo(a)anthracene and benzo(b)fluoranthene were detected in soils above their EPA RSLs at SB-24. SB-24 was collected to characterize the former EPA Multi-Contractor Site.

Benzene, benzo(a)anthracene, and benzo(a)pyrene were detected in soil above their EPA RSLs at PV-06.

Benzene, 1,4-dichlorobenzene, ethylbenzene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene, dibenzofuran, and naphthalene were detected in soil above their EPA RSLs at W-01. W-01 is located adjacent to the Waste Management facility. W-01 is located within the footprint of a historic landfill.

Benzene, ethylbenzene, 1,4-dichlorobenzene, 1-methylnaphthalene, 2-methylnaphthalene, benzo(a)anthracene, benzo(a)pyrene, and naphthalene were detected in soil above their EPA RSLs at SB-30. SB-30 is located within the footprint of a historic landfill.

Benzene, ethylbenzene, 1,2-dichlorobenzene, and 1,4-dichlorobenzene were detected in soil above their EPA RSLs at SB-31. SB-31 is located within the footprint of a historic landfill.

Benzo(a)anthracene and benzo(a)pyrene were detected in soil above their EPA RSLs at SB-32. SB-32 is located within the footprint of a historic landfill.

Benzene, ethylbenzene, 1,4-dichlorobenzene, 1-methylnaphthalene, 2-methylnaphthalene, acenaphthene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzofuran, and naphthalene were detected in soil above their EPA RSLs at SB-35. SB-35 is located within the footprint of a historic landfill and adjacent to the Sand Creek Industrial Superfund Site.

11.1.1 Total Petroleum Hydrocarbons

The GRO fraction of TPH was detected in soils in 9 of 38 boring locations at concentrations that exceed the EPA RSL for protection of groundwater. Boring locations with TPH-GRO concentrations greater than EPA RSLs include the following:

- SB-07
- SB-19
- SB-29 through SB-31
- SB-35 through SB-37
- W-01

The DRO fraction of TPH was detected above its RSL of 89 milligrams per kilogram (mg/kg) for the protection of groundwater in 24 of 38 boring locations.

The oil fraction of TPH-ORO, referred to as motor oil for the report but can include other oils such as hydraulic fluid, was detected in 16 of 38 boring locations at concentrations exceeding the EPA RSL for the protection of groundwater. Borings with motor oil exceedances were generally associated with historic landfills and locations adjacent to the Suncor Facility as follows:

- SB-13 through SB-15
- SB-17
- SB-19
- SB-20 through SB-24
- PV-06
- W-01
- SB-30 through SB-32
- SB-35

Borings W-01, SB-19, SB-30, SB-31, SB-35 and PV-06 had the highest detected concentrations of TPH fractions exceeding the Colorado Office of Public Safety (OPS) threshold of 500 mg/kg with benzene, toluene, ethylbenzene, total xylenes and PAH concentrations greater than EPA RSLs for unrestricted use and protection of groundwater. Soils at these locations are petroleum-contaminated soils and should be managed and waste-profiled according to OPS guidance.

11.1.2 Organochlorine Pesticides and Polychlorinated Biphenyls

Samples from two locations (SB-20 and PV-09) were submitted for PCB and pesticides analyses based on prior site history. The pesticide DDD, which is an organochlorine pesticide that is a metabolite of dichlorodiphenyltrichloroethane (DDT), was detected above its RSL at PV-09. DDD and dichlorodiphenyldichloroethylene (DDE) were also detected at SB-20, but laboratory reported concentrations were less than their EPA RSL. PCBs were not detected in samples collected from SB-20 or PV-09.

11.1.3 Metals

Arsenic was detected in all soil samples above its RSL. Most of the detected arsenic concentrations were below the commonly accepted background concentration in the western United States. For reference, a regional study of the western U.S. documented arsenic concentrations in soil ranging from less than 0.10 to 97 mg/kg, with a mean value of 5.5 mg/kg (USGS 1984). However, soil borings SB-14, PV-06, SB-30, and SB-35 had detected arsenic concentrations exceeding both their EPA RSL and the mean background value of 5.5 mg/kg.

Barium was detected at concentrations above its RSL of 82 mg/kg for protection of groundwater in 22 of 38 boring locations. All but two of the detected barium concentrations are below its commonly accepted mean background concentration in the western U.S. of 580 mg/kg (USGS 1984). Only SB-25 and SB-35 had detected barium concentrations greater than the mean background value.

Lead was detected in soils at concentrations above its RSL of 14 mg/kg for protection of groundwater in 14 of 38 borings. All the detected concentrations for those 14 borings also exceeded the commonly accepted mean background concentration in the western U.S. of 17 mg/kg with the exceptions of SB-02 and SB-03.

Mercury was detected in soil at concentrations above its RSL of 0.10 mg/kg for the protection of groundwater in 6 of 38 boring locations. All detected mercury concentrations are below the commonly accepted mean background concentration in the western U.S. of 0.406 mg/kg (USGS 1984) except for SB-35, which reported a concentration of 1.1 mg/kg.

Selenium was detected in soil at concentrations above its RSL of 0.26 mg/kg for the protection of groundwater in 7 of 38 boring locations. None of the detected selenium concentrations exceeded its commonly accepted mean background concentration in the western U.S. of 0.90 mg/kg (USGS 1984).

11.2 Decision Criteria Exceedances in Groundwater

11.2.1 Organic Compounds (VOCs and SVOCs)

Organic compounds, VOCs and SVOCs, were not detected in groundwater at concentrations exceeding their respective MCLs or EPA RSLs. Three boring locations, SB-31, SB-32, and SB-35, have elevated VOC and/or SVOCs concentrations in soils, but corresponding groundwater samples from these locations are less than their respective MCLs or EPA RSLs indicating that organic compounds in soils are not leaching to groundwater at levels of concern.

11.2.2 Total Petroleum Hydrocarbons

The GRO fraction of TPH was detected at concentrations exceed the EPA RSL for groundwater at three locations: SB-18, SB-29, and SB-31.

DRO was detected above its EPA RSL protective of drinking water in all collected groundwater samples except for SB-02 and SB-35. A surface water quality standard is not available for TPH-DRO.

The oil fraction of TPH-ORO, referred to as motor oil for the report, was detected in three groundwater samples at concentrations exceeding the EPA RSL for drinking water including SB-15, SB-20, SB-21, SB-31, and SB-32. Like soils, the three groundwater samples with motor oil exceedances are associated with historic landfills.

11.2.3 Organochlorine Pesticides and Polychlorinated Biphenyls

The pesticides DDD and DDE, which are organochlorine pesticides that are metabolites of DDT, were detected in soils at PV-09 and SB-20. However, these compounds were not detected in associated groundwater samples at these two locations. PCBs were not detected in groundwater.

11.2.4 Metals

RCRA 8 Metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) were detected in all unfiltered (total) groundwater samples submitted for analyses. Metals data were compared to MCLs, EPA RSLs, and EPA National Recommended WQC protective of aquatic life. The WQC are the decision drivers because they are lower values and better represent end data decision making (that is, surface water standards protective of aquatic life).

National WQC values for freshwater environments are available for arsenic, cadmium, chromium, lead, mercury, and silver. No WQCs exist for barium or selenium, so only RSLs and MCLs were used for their assessment.

Total metals (unfiltered) were detected in all 21 groundwater samples with most of the detected metals exceeding their respective groundwater regulatory decision criteria. Dissolved (filtered) phase groundwater samples were collected from a limited number of locations. RCRA 8 metals were detected in all dissolved (filtered) phase groundwater samples, but none of the dissolved phase results exceed groundwater decision criteria.

12.0 Impacts

12.1 No Action Alternative

The No Action Alternative would have no impact to existing areas of contamination, including sites with RECs.

12.2 Proposed Action

Construction of the Proposed Action would require excavation and subsurface drilling for potential bridge/overpass construction, noise walls, and/or signs and lighting. Grading activities could range from 2 to 4 feet depth whereas drilling activities could extend to depths of up to 60 to 80 feet. Groundwater

may be encountered during bridge construction or in areas where deep foundations may be needed (for example, deep retaining wall and/or pedestrian bridge foundations). Depths to groundwater are highly variable throughout the study area but groundwater will likely be encountered during construction. Therefore, the Proposed Action would result in temporary impacts to existing areas of contamination, including sites with RECs.

Dewatering activities will be necessary during the installation of deep foundation systems for new bridge structures, retaining walls, or other features. Results of Phase II ESA sampling in various locations in the I-270 study area indicate that regional groundwater has been impacted by various contaminants to levels that exceed WQC surface water, MCLs, and EPA RSLs groundwater standards. Therefore, the water would require either treatment to meet those standards prior to discharge to State waters, or offsite disposal.

To the extent that contaminated soils and groundwater are treated on site or removed for safe treatment or disposal, the Proposed Action would result in permanent reduction of contaminated material in the study area.

13.0 Mitigation

During the Fall sampling event, groundwater samples were collected as filtered (dissolved) and unfiltered (total) to assist in evaluation and selection of remedial options. The objective was to determine if onsite treatment using a filtering system (e.g., sand followed by a 20 um fiber filter) to reduce metals prior to a granulated activated carbon (GAC) treatment for organics would be an option allowing for possible direct discharge to adjacent or nearby surface water bodies. Comparative groundwater results indicate that filtering the groundwater sample drops out the metals resulting in low levels of dissolved metals with remaining concentrations less than WQC surface water, MCLs, and EPA RSL groundwater standards (Table 4). Results indicate that on-site treatment or filtering of groundwater/infiltration water successfully reduces metals concentrations below regulatory standards allowing potential discharge to adjacent surface water bodies or to the ground. During the final design and construction phases, CDOT will ensure specific requirements are addressed as follows:

- Dewatering of groundwater/infiltration water in excavations will need to follow specific requirements per CDOT Section 107.25(b)(7), such as receiving a Construction Dewatering Permit from CDPHE for discharge of uncontaminated groundwater to State waters. A Remediation Permit for contaminated groundwater (CDOT Section 250, such as 250.05(c)), may also be needed that requires the Contractor to “prepare a dewatering plan proposing at least three types of treatment and/or disposal options of contaminated groundwater. One of the treatment options needs to include permitting and onsite treatment prior to discharge or disposal.” Discharge to State waters from dewatering is prohibited except in accordance with conditions under the permit.
- Dewatering of uncontaminated groundwater can be discharged to the ground if conditions under CDPHE’s “Low Risk Guidance Document for Discharges of Uncontaminated Groundwater to Land” are met. The general conditions include (1) it is solely uncontaminated groundwater that does not contain pollutants in concentrations that exceed water quality standards for groundwater, (2) it does not leave the project boundary limits, (3) it is conducted at a rate and location that does not pond (unless as an engineering control) or allow for any runoff into State waters, (4) no sheen develops, and (5) stormwater controls are implemented. Therefore, there are three possible scenarios for site-related groundwater/infiltration water:
 1. *Uncontaminated groundwater discharged to State waters that requires a CDPHE Construction Dewatering Permit*
 2. *Uncontaminated groundwater discharged to the ground and does not leave the site*
 3. *Contaminated groundwater discharged to State waters that requires a CDPHE remediation permit and dewatering plan with at least three treatment/disposal options*

Borings W-01, SB-19, SB-30, SB-31, SB-35, and PV-06 have elevated concentrations of TPH fractions exceeding the OPS threshold of 500 mg/kg with benzene, toluene, ethylbenzene, total xylenes, and PAH concentrations greater than EPA RSLs for unrestricted use and protection of groundwater. Soil at these locations are considered petroleum-contaminated, and soil removed from these areas will need waste profiles prepared for offsite transportation and disposal. Figure 5 presents the locations of borings with PCS.

The pesticide DDD, which is an organochlorine pesticide that is a metabolite of DDT, was detected above its RSL at PV-09. Discussions with local disposal facilities are recommended for the disposition of soils from PV-09.

CDOT will contact CDPHE for locations where historical landfills will be encountered and impacted by construction activities. CDPHE is the oversight agency for landfills and will likely provide input on design and mitigation strategies. Figure 6 presents the locations of borings where landfill debris was encountered.

Landfill gas is comprised of approximately 50 percent methane and 50 percent carbon dioxide with trace levels of other compounds, including nitrogen, oxygen, hydrogen, and non-methane organic compounds (NMOCs) such as ammonia and sulfides. NMOCs include hazardous air pollutants that can increase the risk of cancer, cause respiratory issues, and produce strong and unpleasant odors. Methane is highly flammable and can form explosive mixtures with air if it concentrates in an enclosed space with poor ventilation. The range of air concentrations at which methane levels are considered an explosion hazard is 5 to 15 percent of the total air volume. Landfill gas explosions are not common occurrences; however, methane was detected at multiple locations, and health and safety and engineering controls may be warranted. Figure 7 presents the locations with detectable concentrations of methane.

A Materials Management Plan will be prepared and implemented to specify characterization and management practices for contaminated soil, debris, impacted groundwater, and landfill gases that may be encountered during construction.

Due to the many unknowns associated with landfills, a health and safety plan should be completed by the selected construction contractor in accordance with the requirements of the Occupational Health and Safety Administration, *Code of Federal Regulations* Title 29, Part 1929.

ACM was not encountered during the boring investigations associated historic landfills. However, ACM may still be encountered with buried utilities or other areas of historic landfills not fully investigated within the study area. A licensed CDOT CABI will be on-site when excavation or construction occurs in the vicinity of historic landfills.

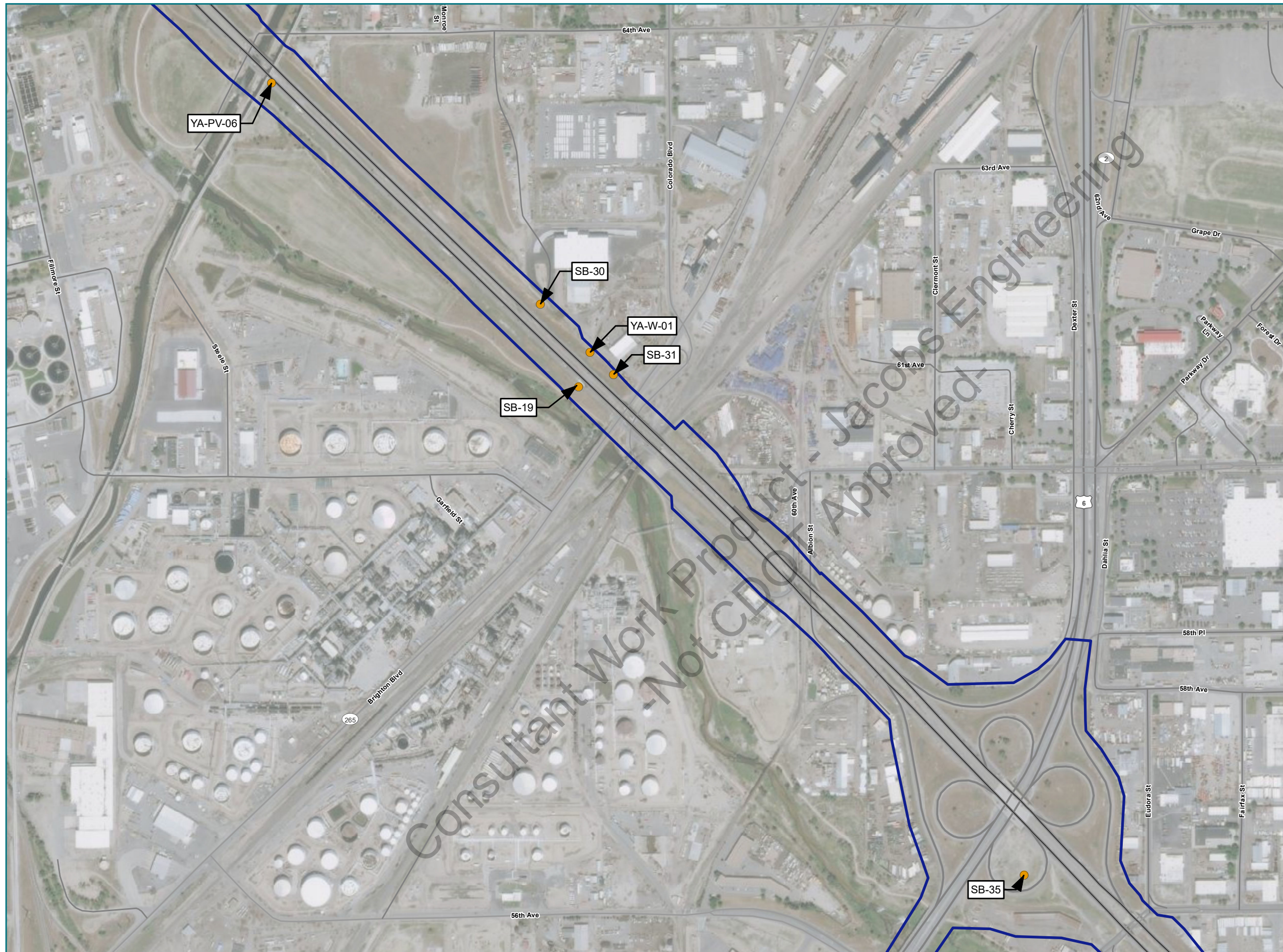
In the event suspected ACM is encountered, workers must follow CDOT Specification 250.07 – Asbestos-Containing Material Management and CDOT Regulated Asbestos-Contaminated Soil Management Standard Operating Procedure; CDPHE’s “Management of Regulated Asbestos Contaminated Soil Regulation;” and the requirements under Title 6 Code of Colorado Regulations (CCR) 1007-2, Section 5.5 including the Colorado Air Quality Control Commission Regulation No. 8 Part B-Asbestos. Plans for unexpected regulated asbestos contaminated soil (RACS) discovered during excavation include the following minimum requirements: immediate actions and interim controls to prevent migration (for example, to air and adjacent soils); assessment by a CDPHE CABI; soil characterization; worker asbestos awareness training; risk assessment and determination for further action; CDPHE 24-hour notification form upon discovery; and CDPHE 10-day notification form for RACS management. Impacts to existing wells in the study area, including monitoring wells, may not be avoidable. As a recommendation, CDOT should consider initiating discussions with well owners to discuss proper abandonment of existing wells, project phasing, and similar. Impacted wells would require proper abandonment per Colorado Division of Water Resources requirements. Mapped well locations are presented in the PMEA 2019. Well locations are recommended to be field verified.

Table 4. Mitigation Commitments

Activity Triggering Mitigation	Location of Activity	Impact	Mitigation Commitment	Responsible Branch	Timing/Phase that Mitigation will be Implemented
Dewatering of groundwater/infiltration water in excavations	All locations where groundwater/infiltration water is generated and dewatering is required.	Potential to encounter contaminated groundwater during construction dewatering	CDOT and the contractor will follow CDOT Standard Specifications for Road and Bridge Construction, Section 107.25	CDOT Engineering and construction contractor	Construction Phase
Construction/excavation activities in potentially contaminated areas	Southeast cloverleaf off Vasquez Boulevard; adjacent to Sand Creek and Suncor Plant 1; and areas adjacent to Waste Management Facility and Brighton Boulevard.	Potential to encounter subsurface contamination	Contractors and workers shall comply with CDOT's latest Revision of Section 250 (Environmental, Health and Safety Management) of the Standard Specifications for Road and Bridge Construction. Workers shall be alert during excavations for any visual or olfactory signs of contamination. If soil or groundwater contamination is encountered, work will stop immediately, and the procedures outlined in the CDOT Specification 250 and subsection 107.25.8 shall be followed."	CDOT Engineering and construction contractor	Construction Phase
Construction/excavation activities in petroleum contaminated areas	Adjacent to Sand Creek and Suncor Plant 1. Areas adjacent to Waste Management Facility and Brighton Boulevard.	Potential to encounter PCS	CDOT and the contractor will generate waste profiles for PCS and oversee transportation and disposal of PCS in conjunction in local landfill	CDOT Engineering and construction contractor	Construction Phase
Construction/excavation activities in potentially contaminated areas.	Landfill areas with debris and elevated methane adjacent to the Burlington Ditch; southeast cloverleaf off Vasquez Boulevard; and areas adjacent to Waste Management Facility and Brighton Boulevard.	Potential to encounter subsurface contamination associated with historic landfills	Perform real-time monitoring during construction for VOCs, methane, and ACM. Health and safety monitoring and ACM remediation may be necessary.	CDOT Engineering and construction contractor	Construction Phase

Table 4. Mitigation Commitments

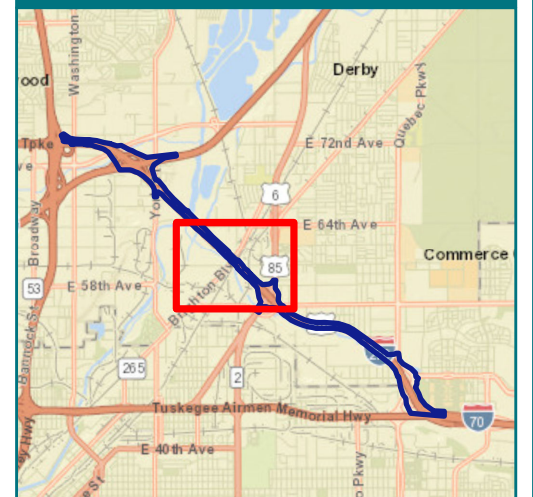
Activity Triggering Mitigation	Location of Activity	Impact	Mitigation Commitment	Responsible Branch	Timing/Phase that Mitigation will be Implemented
Construction/excavation activities in historic landfills.	Landfill areas with debris and elevated methane adjacent to the Burlington Ditch; southeast cloverleaf off Vasquez Boulevard; and areas adjacent to Waste Management Facility and Brighton Boulevard.	Potential to impacts historic landfills	CDOT will involve CDPHE where historic landfills may be encountered during construction activities	CDOT Engineering and construction contractor	Construction Phase
Construction/excavation activities in potentially contaminated areas with ACM	Landfill areas with debris in the southeast cloverleaf off Vasquez Boulevard and areas adjacent to Waste Management Facility and Brighton Boulevard.	Discovery of ACM in soil or landfill debris	If suspected ACM is encountered, workers will follow CDOT Specification 250.07 and CDOT Soil Management standard operating procedures and CDPHE's Soil Regulations and requirements under 6 CCR 1007-2, Section 5.5 may apply.	CDOT Engineering and construction contractor.	Construction Phase.



SOIL BORING RESULTS

- Boring Location with Petroleum Contaminated Soils
- Approximate Study Area

Regional Locator



Projection: Custom
 Lambert Conformal Conic
 North American Datum 1983 (2011)
 Source: ESRI and its data partners

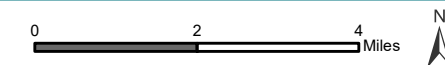
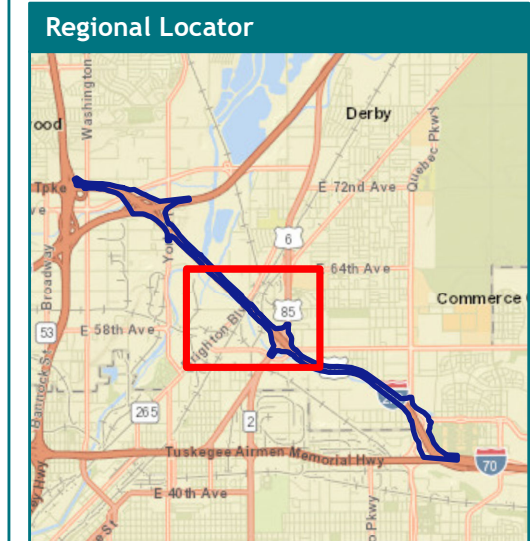
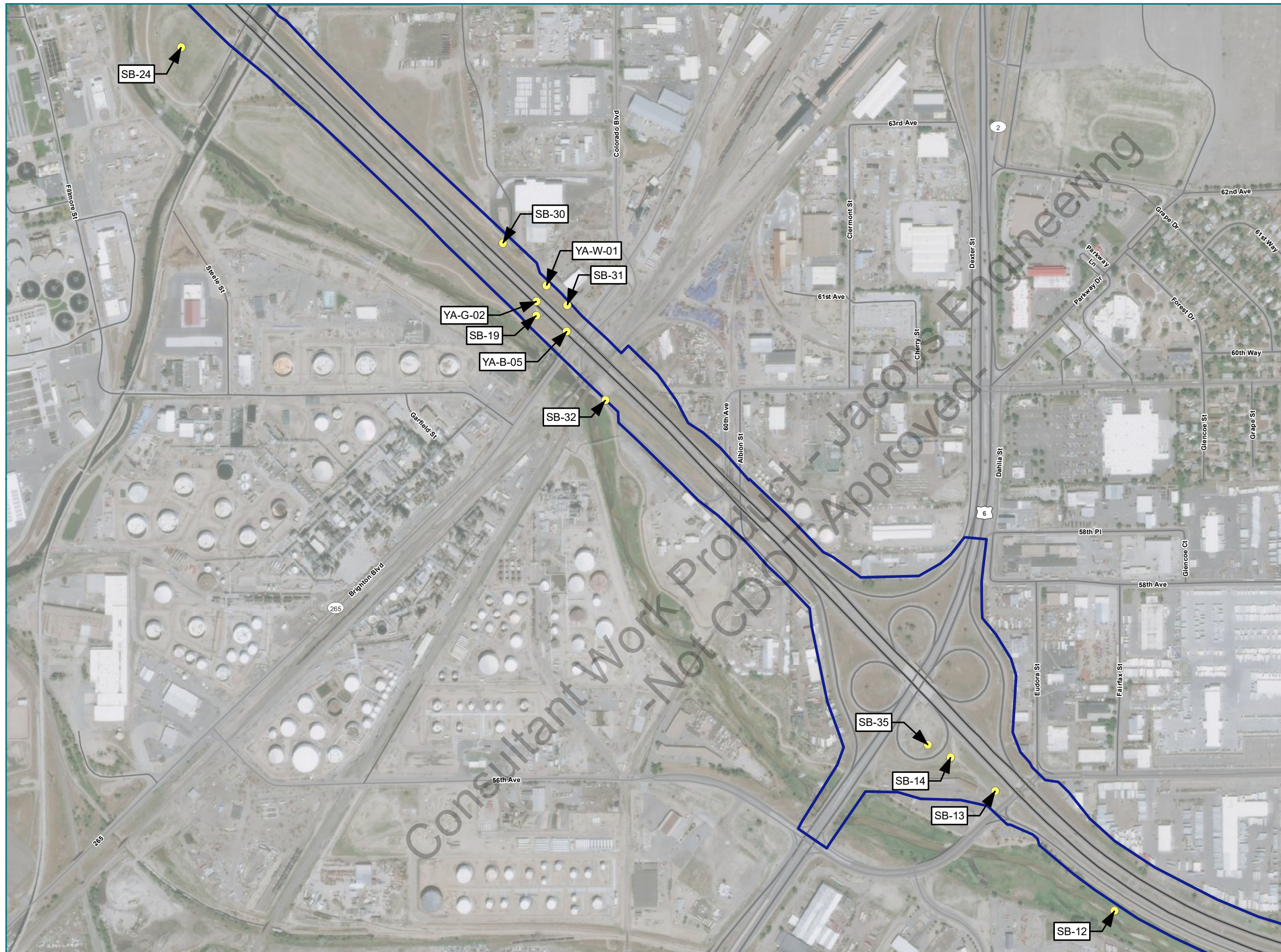


Figure 5. Soil Boring Results: Petroleum

SOIL BORING RESULTS

- Boring Location with Landfill Debris
- Approximate Study Area



Projection: Custom
Lambert Conformal Conic
North American Datum 1983 (2011)
Source: ESRI and its data partners

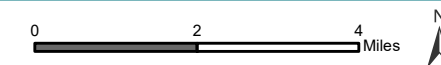
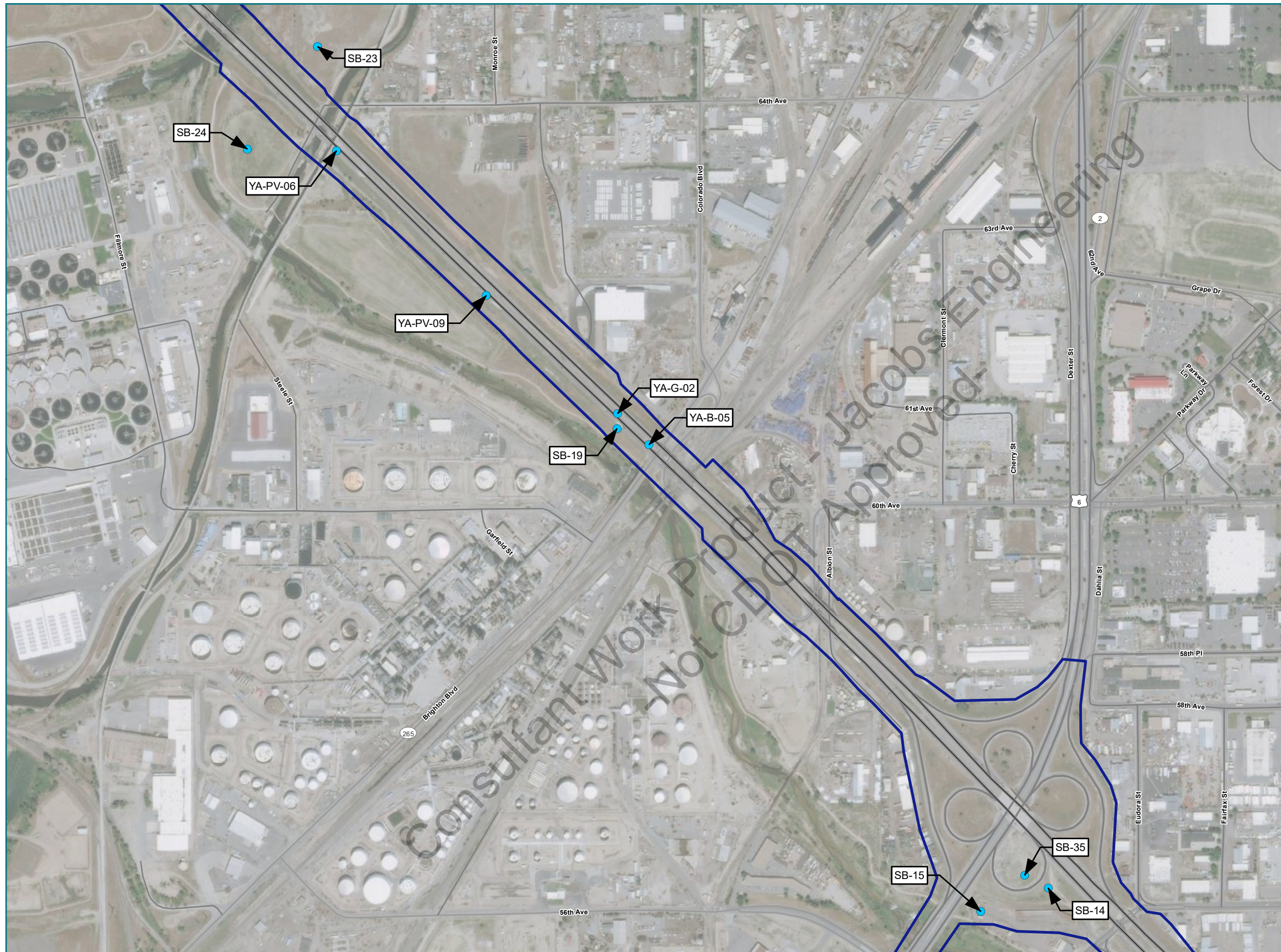


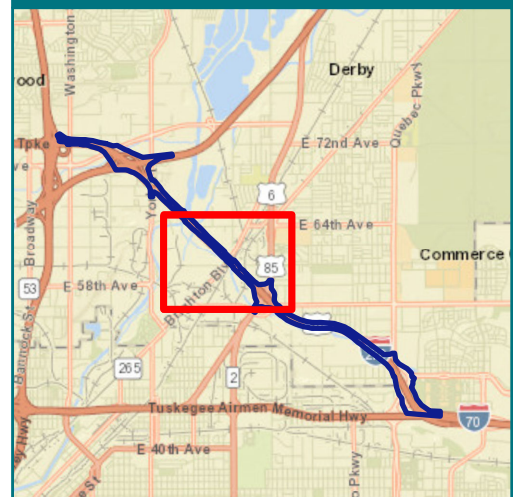
Figure 6. Soil Boring Results: Landfill Debris

SOIL BORING RESULTS

- Boring Location with Elevated Methane
- Approximate Study Area



Regional Locator



Projection: Custom Lambert Conformal Conic
North American Datum 1983 (2011)
Source: ESRI and its data partners

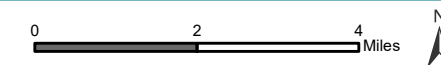


Figure 7. Soil Boring Results: Methane

14.0 References

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Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Appendix A
Laboratory Analytical Data Reports

ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-136963-1

Client Project/Site: CDOT I-270 Interchange Improvements

For:

Jacobs Engineering Group, Inc.
707 17th Street
Suite 2400
Denver, Colorado 80202

Attn: Mr. Jon Russ



Authorized for release by:
6/18/2020 10:42:11 PM

Darlene Bandy, Project Manager I
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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*1	LCS/LCSD RPD exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*1	LCS/LCSD RPD exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present

Eurofins TestAmerica, Denver

Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Job ID: 280-136963-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: Jacobs Engineering Group, Inc.

Project: CDOT I-270 Interchange Improvements

Report Number: 280-136963-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 5/27/2020 12:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 15.7° C, 15.7° C and 17.9° C.

Receipt Exceptions

3 of 3 coolers were received outside of the required temperature criteria of 6 degrees Celsius. It was observed that each cooler contained 1 small bag of ice that was isolated from the bag the samples were in; therefore, the samples were unable to sufficiently chill. It can be noted that the samples collected on 5/27 are acceptable as they were collected and submitted to the laboratory on the same day. The laboratory proceeded with analysis.

The Chain of Custody lists the following sample as a "solid"; however, both solid and water volume was provided: CDOT I270 Env-05/06_2020-TB-01-05272020 (280-136963-7) and CDOT I270 Env-05/06_2020-TB-01-05272020 (280-136963-8). The trip blank was logged twice per volume received- one sample as solid and the other as water.

VOLATILE ORGANIC COMPOUNDS (GC-MS) - Solid

Samples CDOT I270 Env-05/06_2020-SB-14-5'-7' (280-136963-1), CDOT I270 Env-05/06_2020-SB-14-10'-12' (280-136963-2), CDOT I270 Env-05/06_2020-SB-13-12-13' (280-136963-3), CDOT I270 Env-05/06_2020-SB-15-10-12' (280-136963-5), CDOT I270 Env-05/06_2020-TB-01-05272020 (280-136963-7) and CDOT I270 Env-05/06_2020-SB-01-10'-12' (280-136963-9) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 05/26/2020 and 05/27/2020 and analyzed on 06/04/2020 and 06/05/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GC-MS) - Water

Samples CDOT I270 Env-05/06_2020-SB-13-GW (280-136963-4), CDOT I270 Env-05/06_2020-SB-15-GW (280-136963-6), CDOT I270 Env-05/06_2020-TB-01-05272020 (280-136963-8) and CDOT I270 Env-05/06_2020-SB-01-GW (280-136963-10) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 06/05/2020 and 06/08/2020.

m-Xylene & p-Xylene was detected in method blank MB 280-497547/9 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Job ID: 280-136963-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

MDL and/or RL, the result has been flagged. Refer to the QC report for details.

1,2-Dichloroethane was detected in method blank MB 280-497740/11 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Bromomethane and Dichlorodifluoromethane failed the recovery criteria low for LCSD 280-497740/7. Bromomethane and Chloroethane exceeded the RPD limit. Refer to the QC report for details. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

Bromomethane 35% (limits 19-169%)

Dichlorodifluoromethane 38% (limits 10-173%)

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 280-497740. A duplicate LCS (LCSD) was performed.

Bromomethane(-56.9%D) was outside control limits (35%D) in the continuing calibration verification (CCV) associated with batch 280-497547. This compound is not classified as one of the Calibration Check Compounds (CCCs) and the reference method allows up to 6 non-CCCs to recover outside control limits. This compound was not detected in the associated samples. There is insufficient holding time remaining for re-analysis; therefore, the data have been qualified and reported for the following samples.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GC/MS) - Solid

Samples CDOT I270 Env-05/06_2020-SB-14-5'-7' (280-136963-1), CDOT I270 Env-05/06_2020-SB-14-10'-12' (280-136963-2), CDOT I270 Env-05/06_2020-SB-13-12-13' (280-136963-3), CDOT I270 Env-05/06_2020-SB-15-10-12' (280-136963-5) and CDOT I270 Env-05/06_2020-SB-01-10'-12' (280-136963-9) were analyzed for semivolatile organic compounds (GC/MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 06/02/2020 and 06/03/2020 and analyzed on 06/04/2020 and 06/05/2020.

The following samples could not be thoroughly homogenized before sub-sampling was performed due to sample matrix: CDOT I270 Env-05/06_2020-SB-14-10'-12' (280-136963-2). The samples contained rocks. This was in preparation batch 280-497218.

Batch preparation batch 280-497218 and analytical batch 280-497550 is reported without a matrix spike/matrix spike duplicate (MS/MSD) or laboratory control sample duplicate (LCSD). The batch MS/MSD was originally performed on another client's sample, but these MS/MSD results could not be reported by method 8270D. The associated laboratory control sample (LCS) met acceptance criteria. Samples 280-136963-2 and 280-136963-5 go out of holding time on 6/9. Sample 280-136963-9 goes out of the holding time on 6/10. PM, please advise if re-extraction is needed.

Affected samples: CDOT I270 Env-05/06_2020-SB-14-10'-12' (280-136963-2), CDOT I270 Env-05/06_2020-SB-15-10-12' (280-136963-5) and CDOT I270 Env-05/06_2020-SB-01-10'-12' (280-136963-9)

The continuing calibration verification (CCV) associated with batch 280-497355 recovered above the upper control limit (limit +20%D) for 2-Nitroaniline (+20.9%D) and 3,3'-Dichlorobenzidine (+21.1%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-14-5'-7' (280-136963-1), CDOT I270 Env-05/06_2020-SB-13-12-13' (280-136963-3), CDOT I270 Env-05/06_2020-SB-13-GW (280-136963-4), CDOT I270 Env-05/06_2020-SB-15-GW (280-136963-6), CDOT I270 Env-05/06_2020-SB-01-GW (280-136963-10) and (CCV 280-497355/3).

The continuing calibration verification (CCV) associated with batch 280-497355 recovered above the upper control limit (limit +20%D) for Famphur (+36.1%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-14-5'-7' (280-136963-1), CDOT I270 Env-05/06_2020-SB-13-12-13' (280-136963-3), CDOT I270 Env-05/06_2020-SB-13-GW (280-136963-4), CDOT I270 Env-05/06_2020-SB-15-GW (280-136963-6), CDOT I270 Env-05/06_2020-SB-01-GW (280-136963-10) and (CCV 280-497355/5).

The continuing calibration verification (CCV) associated with batch 280-497550 recovered above the upper control limit (limit +20%D) for 2-Nitroaniline (+23.6%D) and 3,3'-Dichlorobenzidine (+22.0%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-14-10'-12'

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Job ID: 280-136963-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

(280-136963-2), CDOT I270 Env-05/06_2020-SB-15-10-12' (280-136963-5), CDOT I270 Env-05/06_2020-SB-01-10'-12' (280-136963-9) and (CCV 280-497550/3).

The continuing calibration verification (CCV) associated with batch 280-497550 recovered above the upper control limit (limit +20%D) for Famphur (+40.3%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-14-10'-12' (280-136963-2), CDOT I270 Env-05/06_2020-SB-15-10-12' (280-136963-5), CDOT I270 Env-05/06_2020-SB-01-10'-12' (280-136963-9) and (CCV 280-497550/5).

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS) - Water

Samples CDOT I270 Env-05/06_2020-SB-13-GW (280-136963-4), CDOT I270 Env-05/06_2020-SB-15-GW (280-136963-6) and CDOT I270 Env-05/06_2020-SB-01-GW (280-136963-10) were analyzed for semivolatile organic compounds (GC-MS) in accordance with SW-846 8270D. The samples were prepared on 05/28/2020 and analyzed on 06/04/2020.

2-Nitroaniline failed the recovery criteria high for LCS 280-496496/2-A and LCSD 280-496496/3-A. 2-Nitroaniline was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported. The LCS/LCSD %RPD was in control for this analyte. The following samples are associated: CDOT I270 Env-05/06_2020-SB-13-GW (280-136963-4), CDOT I270 Env-05/06_2020-SB-15-GW (280-136963-6), CDOT I270 Env-05/06_2020-SB-01-GW (280-136963-10), (LCS 280-496496/2-A) and (LCSD 280-496496/3-A)

LCS 111% and LCSD 116%, limits 65-110%

For LCSD 280-496496/3-A, 1,2,4-Trichlorobenzene failed the recovery criteria low at 37% (limit 41-99%). Also, 1,2,4-Trichlorobenzene, Benzidine, Hexachlorobutadiene and Naphthalene exceeded the RPD limit. Refer to the QC report for details. The recovery of 1,2,4-Trichlorobenzene in the LCS (58%) was within the control limits. The holding time for the extraction had expired; therefore, as instructed by the client, the data have been qualified and reported. The following samples are associated: CDOT I270 Env-05/06_2020-SB-13-GW (280-136963-4), CDOT I270 Env-05/06_2020-SB-15-GW (280-136963-6), CDOT I270 Env-05/06_2020-SB-01-GW (280-136963-10), (LCS 280-496496/2-A) and (LCSD 280-496496/3-A).

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-496496. The following samples are associated: CDOT I270 Env-05/06_2020-SB-13-GW (280-136963-4), CDOT I270 Env-05/06_2020-SB-15-GW (280-136963-6) and CDOT I270 Env-05/06_2020-SB-01-GW (280-136963-10).

The continuing calibration verification (CCV) associated with batch 280-497355 recovered above the upper control limit (limit +20%D) for 2-Nitroaniline (+20.9%D) and 3,3'-Dichlorobenzidine (+21.1%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-14-5'-7' (280-136963-1), CDOT I270 Env-05/06_2020-SB-13-12-13' (280-136963-3), CDOT I270 Env-05/06_2020-SB-13-GW (280-136963-4), CDOT I270 Env-05/06_2020-SB-15-GW (280-136963-6), CDOT I270 Env-05/06_2020-SB-01-GW (280-136963-10) and (CCV 280-497355/3).

Method 8270D: The continuing calibration verification (CCV) associated with batch 280-497355 recovered above the upper control limit (limit +20%D) for Famphur (+36.1%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-14-5'-7' (280-136963-1), CDOT I270 Env-05/06_2020-SB-13-12-13' (280-136963-3), CDOT I270 Env-05/06_2020-SB-13-GW (280-136963-4), CDOT I270 Env-05/06_2020-SB-15-GW (280-136963-6), CDOT I270 Env-05/06_2020-SB-01-GW (280-136963-10) and (CCV 280-497355/5).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GASOLINE RANGE ORGANICS (GRO) - Solid

Samples CDOT I270 Env-05/06_2020-SB-14-5'-7' (280-136963-1), CDOT I270 Env-05/06_2020-SB-14-10'-12' (280-136963-2), CDOT I270 Env-05/06_2020-SB-13-12-13' (280-136963-3), CDOT I270 Env-05/06_2020-SB-15-10-12' (280-136963-5), CDOT I270 Env-05/06_2020-TB-01-05272020 (280-136963-7) and CDOT I270 Env-05/06_2020-SB-01-10'-12' (280-136963-9) were analyzed for Gasoline Range Organics (GRO) in accordance with EPA SW-846 Method 8015C - GRO. The samples were prepared on 05/26/2020 and 05/27/2020 and analyzed on 06/03/2020 and 06/04/2020.

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Job ID: 280-136963-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GASOLINE RANGE ORGANICS (GRO) - Water

Samples CDOT I270 Env-05/06_2020-SB-13-GW (280-136963-4), CDOT I270 Env-05/06_2020-SB-15-GW (280-136963-6), CDOT I270 Env-05/06_2020-TB-01-05272020 (280-136963-8) and CDOT I270 Env-05/06_2020-SB-01-GW (280-136963-10) were analyzed for Gasoline Range Organics (GRO) in accordance with EPA SW-846 Method 8015C - GRO. The samples were analyzed on 05/30/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DIESEL RANGE ORGANICS - Solid

Samples CDOT I270 Env-05/06_2020-SB-14-5'-7' (280-136963-1), CDOT I270 Env-05/06_2020-SB-14-10'-12' (280-136963-2), CDOT I270 Env-05/06_2020-SB-13-12-13' (280-136963-3), CDOT I270 Env-05/06_2020-SB-15-10-12' (280-136963-5) and CDOT I270 Env-05/06_2020-SB-01-10'-12' (280-136963-9) were analyzed for diesel range organics in accordance with EPA SW-846 Method 8015C - DRO. The samples were prepared on 06/01/2020 and 06/03/2020 and analyzed on 06/09/2020 and 06/12/2020.

Motor Oil (C20-C38) failed the recovery criteria low for the MS of sample CDOT I270 Env-05/06_2020-SB-01-10'-12'MS (280-136963-9) in batch 280-497831. Motor Oil (C20-C38) exceeded the RPD limit for the MSD of sample CDOT I270 Env-05/06_2020-SB-01-10'-12'MSD (280-136963-9) in batch 280-497831. Refer to the QC report for details. Sample matrix interference and/or non-homogeneity are suspected. The associated LCS met all acceptance criteria. The following samples are associated: CDOT I270 Env-05/06_2020-SB-01-10'-12' (280-136963-9), (280-136963-B-9-B MS) and (280-136963-B-9-C MSD).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DIESEL RANGE ORGANICS - Water

Samples CDOT I270 Env-05/06_2020-SB-13-GW (280-136963-4), CDOT I270 Env-05/06_2020-SB-15-GW (280-136963-6) and CDOT I270 Env-05/06_2020-SB-01-GW (280-136963-10) were analyzed for Diesel Range Organics in accordance with EPA SW-846 Method 8015C - DRO. The samples were prepared on 05/29/2020 and analyzed on 06/06/2020.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with RRO. This is for preparation batch 280-496681. The following samples are associated: CDOT I270 Env-05/06_2020-SB-13-GW (280-136963-4), CDOT I270 Env-05/06_2020-SB-15-GW (280-136963-6) and CDOT I270 Env-05/06_2020-SB-01-GW (280-136963-10).

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

METALS (ICPMS) - Solid

Samples CDOT I270 Env-05/06_2020-SB-14-5'-7' (280-136963-1), CDOT I270 Env-05/06_2020-SB-14-10'-12' (280-136963-2), CDOT I270 Env-05/06_2020-SB-13-12-13' (280-136963-3), CDOT I270 Env-05/06_2020-SB-15-10-12' (280-136963-5) and CDOT I270 Env-05/06_2020-SB-01-10'-12' (280-136963-9) were analyzed for metals (ICPMS) in accordance with SW 846 6020A. The samples were prepared on 06/01/2020 and analyzed on 06/03/2020 and 06/05/2020.

Sample CDOT I270 Env-05/06_2020-SB-14-10'-12' (280-136963-2)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Arsenic and Barium failed the recovery criteria low for the MS of sample CDOT I270 Env-05/06_2020-SB-14-5'-7'MS (280-136963-1) in batch 280-497365. Barium failed the recovery criteria low for the MSD of sample CDOT I270 Env-05/06_2020-SB-14-5'-7'MSD (280-136963-1) in batch 280-497365. The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount. Refer to the QC report for details. The acceptable LCS data indicate that the analytical system was operating within control.

The low level continuing calibration verification (CCVL) associated with batch 280-497703 recovered (618%&593%) above the upper control limit (130%) for Lead. The sample associated with this CCVL was >10x the level of the CCVL for the affected analytes; therefore, the data have been qualified and reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Job ID: 280-136963-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

TOTAL METALS (ICP/MS) Sb Prep for Silver - Solid

Samples CDOT I270 Env-05/06_2020-SB-14-5'-7' (280-136963-1), CDOT I270 Env-05/06_2020-SB-14-10'-12' (280-136963-2), CDOT I270 Env-05/06_2020-SB-13-12-13' (280-136963-3), CDOT I270 Env-05/06_2020-SB-15-10-12' (280-136963-5) and CDOT I270 Env-05/06_2020-SB-01-10'-12' (280-136963-9) were analyzed for Total Metals (ICP/MS) in accordance with 6020A. The samples were prepared on 06/02/2020 and analyzed on 06/03/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICPMS) - Water

Samples CDOT I270 Env-05/06_2020-SB-13-GW (280-136963-4), CDOT I270 Env-05/06_2020-SB-15-GW (280-136963-6) and CDOT I270 Env-05/06_2020-SB-01-GW (280-136963-10) were analyzed for total metals (ICPMS) in accordance with EPA SW-846 6020A. The samples were prepared on 05/30/2020 and analyzed on 06/02/2020 and 06/03/2020.

Barium, Chromium and Lead failed the recovery criteria high for the MS/MSD of sample CDOT I270 Env-05/06_2020-SB-13-GW (280-136963-4) in batch 280-497155. The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount. Refer to the QC report for details. The acceptable LCS data indicate that the analytical system was operating within control.

The low level continuing calibration verification (CCVL) associated with batch 280-497155 recovered (60%) below the lower control limit (70%) for Barium. The samples associated with this CCVL were >10x the level of the CCVL for the affected analytes; therefore, the data have been qualified and reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY - Water

Samples CDOT I270 Env-05/06_2020-SB-13-GW (280-136963-4), CDOT I270 Env-05/06_2020-SB-15-GW (280-136963-6) and CDOT I270 Env-05/06_2020-SB-01-GW (280-136963-10) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 06/09/2020 and analyzed on 06/10/2020.

Mercury was detected in method blank MB 280-4980471-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY (CVAA) - Solid

Samples CDOT I270 Env-05/06_2020-SB-14-5'-7' (280-136963-1), CDOT I270 Env-05/06_2020-SB-14-10'-12' (280-136963-2), CDOT I270 Env-05/06_2020-SB-13-12-13' (280-136963-3), CDOT I270 Env-05/06_2020-SB-15-10-12' (280-136963-5) and CDOT I270 Env-05/06_2020-SB-01-10'-12' (280-136963-9) were analyzed for total mercury (CVAA) in accordance with EPA SW-846 Method 7471B. The samples were prepared and analyzed on 06/10/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

Samples CDOT I270 Env-05/06_2020-SB-14-5'-7' (280-136963-1), CDOT I270 Env-05/06_2020-SB-14-10'-12' (280-136963-2), CDOT I270 Env-05/06_2020-SB-13-12-13' (280-136963-3), CDOT I270 Env-05/06_2020-SB-15-10-12' (280-136963-5) and CDOT I270 Env-05/06_2020-SB-01-10'-12' (280-136963-9) were analyzed for percent solids in accordance with ASTM D2216-90. The samples were analyzed on 05/27/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-5'-7'

Lab Sample ID: 280-136963-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	6.9	J	17	3.4	ug/Kg	1	☼	8260B	Total/NA
Acetone	37	J	63	31	ug/Kg	1	☼	8260B	Total/NA
Diesel Range Organics [C10-C28]	5.3	J	8.1	3.7	mg/Kg	1	☼	8015C	Total/NA
Motor Oil (C20-C38)	15	J	24	7.9	mg/Kg	1	☼	8015C	Total/NA
Arsenic	1.8	F1	0.58	0.049	mg/Kg	1	☼	6020A	Total/NA
Silver	36	J	91	7.1	ug/Kg	1	☼	6020A	Total/NA
Barium	81		0.39	0.068	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.090	J	0.096	0.0090	mg/Kg	1	☼	6020A	Total/NA
Chromium	6.2		0.19	0.073	mg/Kg	1	☼	6020A	Total/NA
Lead	7.2		0.14	0.018	mg/Kg	1	☼	6020A	Total/NA
Mercury	7.8	J	19	6.0	ug/Kg	1	☼	7471B	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-10'-12'

Lab Sample ID: 280-136963-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	6.3	J	18	3.5	ug/Kg	1	☼	8260B	Total/NA
Benzo[a]anthracene	32	J	350	21	ug/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	54	J	350	28	ug/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	31	J	350	17	ug/Kg	1	☼	8270D	Total/NA
Chrysene	44	J	350	29	ug/Kg	1	☼	8270D	Total/NA
Fluoranthene	51	J	350	38	ug/Kg	1	☼	8270D	Total/NA
Hexadecane	55	J	350	14	ug/Kg	1	☼	8270D	Total/NA
Phenanthrene	28	J	350	18	ug/Kg	1	☼	8270D	Total/NA
Pyrene	87	J	350	13	ug/Kg	1	☼	8270D	Total/NA
Gasoline Range Organics (GRO) -C6-C10	1.4	J	2.6	0.99	mg/Kg	1	☼	8015C	Total/NA
Diesel Range Organics [C10-C28]	96		8.2	3.7	mg/Kg	1	☼	8015C	Total/NA
Motor Oil (C20-C38)	210		25	8.0	mg/Kg	1	☼	8015C	Total/NA
Arsenic	6.0		0.60	0.051	mg/Kg	1	☼	6020A	Total/NA
Silver	270		81	6.3	ug/Kg	1	☼	6020A	Total/NA
Barium	230		0.40	0.070	mg/Kg	1	☼	6020A	Total/NA
Cadmium	1.6		0.10	0.0094	mg/Kg	1	☼	6020A	Total/NA
Chromium	16		0.20	0.076	mg/Kg	1	☼	6020A	Total/NA
Lead	200	^	1.5	0.18	mg/Kg	10	☼	6020A	Total/NA
Selenium	0.27	J	0.50	0.13	mg/Kg	1	☼	6020A	Total/NA
Mercury	100		22	7.1	ug/Kg	1	☼	7471B	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-13-12-13'

Lab Sample ID: 280-136963-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Hexadecane	17	J	330	13	ug/Kg	1	☼	8270D	Total/NA
Diesel Range Organics [C10-C28]	4.5	J	8.7	4.0	mg/Kg	1	☼	8015C	Total/NA
Motor Oil (C20-C38)	18	J	26	8.5	mg/Kg	1	☼	8015C	Total/NA
Arsenic	1.4		0.56	0.048	mg/Kg	1	☼	6020A	Total/NA
Silver	7.3	J	83	6.5	ug/Kg	1	☼	6020A	Total/NA
Barium	31		0.38	0.066	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.044	J	0.094	0.0088	mg/Kg	1	☼	6020A	Total/NA
Chromium	2.7		0.19	0.072	mg/Kg	1	☼	6020A	Total/NA
Lead	3.1		0.14	0.017	mg/Kg	1	☼	6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-13-GW

Lab Sample ID: 280-136963-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	2.0	J	10	1.9	ug/L	1		8260B	Total/NA
Chloroform	2.6		1.0	0.16	ug/L	1		8260B	Total/NA
Dichlorobromomethane	0.89	J	1.0	0.17	ug/L	1		8260B	Total/NA
Benzyl alcohol	0.27	J	9.9	0.23	ug/L	1		8270D	Total/NA
Diesel Range Organics [C10-C28]	0.11	J	0.24	0.031	mg/L	1		8015C	Total/NA
Motor Oil (C20-C38)	0.15	J	0.48	0.054	mg/L	1		8015C	Total/NA
Arsenic	33		5.0	0.33	ug/L	1		6020A	Total/NA
Barium	3000	^	1.0	0.29	ug/L	1		6020A	Total/NA
Cadmium	2.3		1.0	0.27	ug/L	1		6020A	Total/NA
Chromium	96	F1	2.0	0.50	ug/L	1		6020A	Total/NA
Lead	150	F1	1.0	0.18	ug/L	1		6020A	Total/NA
Selenium	2.5	J	5.0	0.37	ug/L	1		6020A	Total/NA
Silver	0.43	J	5.0	0.033	ug/L	1		6020A	Total/NA
Mercury	0.22	B	0.20	0.027	ug/L	1		7470A	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-15-10-12'

Lab Sample ID: 280-136963-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	6.8	J	20	3.8	ug/Kg	1	☼	8260B	Total/NA
Acetone	43	J	70	35	ug/Kg	1	☼	8260B	Total/NA
Hexadecane	22	J	330	13	ug/Kg	1	☼	8270D	Total/NA
Diesel Range Organics [C10-C28]	12		8.0	3.6	mg/Kg	1	☼	8015C	Total/NA
Motor Oil (C20-C38)	23	J	24	7.8	mg/Kg	1	☼	8015C	Total/NA
Arsenic	1.9		0.59	0.050	mg/Kg	1	☼	6020A	Total/NA
Silver	53	J	79	6.2	ug/Kg	1	☼	6020A	Total/NA
Barium	80		0.40	0.070	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.23		0.099	0.0093	mg/Kg	1	☼	6020A	Total/NA
Chromium	7.3		0.20	0.075	mg/Kg	1	☼	6020A	Total/NA
Lead	12	^	0.15	0.018	mg/Kg	1	☼	6020A	Total/NA
Mercury	10	J	22	7.1	ug/Kg	1	☼	7471B	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-15-GW

Lab Sample ID: 280-136963-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichlorobenzene	0.16	J	1.0	0.15	ug/L	1		8260B	Total/NA
1,4-Dichlorobenzene	1.1		1.0	0.16	ug/L	1		8260B	Total/NA
Acetone	2.7	J	10	1.9	ug/L	1		8260B	Total/NA
Benzene	1.2		1.0	0.16	ug/L	1		8260B	Total/NA
Methyl tert-butyl ether	0.62	J	5.0	0.25	ug/L	1		8260B	Total/NA
1,4-Dioxane	1.9	J	21	0.48	ug/L	1		8270D	Total/NA
1-Methylnaphthalene	4.6		4.3	0.25	ug/L	1		8270D	Total/NA
2-Methylnaphthalene	7.9		4.3	1.6	ug/L	1		8270D	Total/NA
Acenaphthene	0.86	J	4.3	0.30	ug/L	1		8270D	Total/NA
Acetophenone	0.38	J	11	0.26	ug/L	1		8270D	Total/NA
Benzyl alcohol	0.62	J	11	0.25	ug/L	1		8270D	Total/NA
Diethyl phthalate	0.85	J	4.3	0.41	ug/L	1		8270D	Total/NA
Fluorene	0.56	J	4.3	0.33	ug/L	1		8270D	Total/NA
Hexadecane	5.3	J	11	0.58	ug/L	1		8270D	Total/NA
Naphthalene	21	*1	4.3	0.31	ug/L	1		8270D	Total/NA
Gasoline Range Organics (GRO) -C6-C10	16	J	25	10	ug/L	1		8015C	Total/NA
Diesel Range Organics [C10-C28]	1.3		0.25	0.033	mg/L	1		8015C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-15-GW
(Continued)

Lab Sample ID: 280-136963-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Motor Oil (C20-C38)	0.83		0.51	0.057	mg/L	1		8015C	Total/NA
Arsenic	80		5.0	0.33	ug/L	1		6020A	Total/NA
Barium	3900	^	1.0	0.29	ug/L	1		6020A	Total/NA
Chromium	2.7		2.0	0.50	ug/L	1		6020A	Total/NA
Lead	2.6		1.0	0.18	ug/L	1		6020A	Total/NA
Selenium	1.8	J	5.0	0.37	ug/L	1		6020A	Total/NA
Silver	0.050	J	5.0	0.033	ug/L	1		6020A	Total/NA
Mercury	0.030	J B	0.20	0.027	ug/L	1		7470A	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-TB-01-05272020

Lab Sample ID: 280-136963-7

No Detections.

Client Sample ID: CDOT I270 Env-05/06_2020-TB-01-05272020

Lab Sample ID: 280-136963-8

No Detections.

Client Sample ID: CDOT I270 Env-05/06_2020-SB-01-10'-12'

Lab Sample ID: 280-136963-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Hexadecane	28	J	310	13	ug/Kg	1	*	8270D	Total/NA
Diesel Range Organics [C10-C28]	10		7.9	3.6	mg/Kg	1	*	8015C	Total/NA
Motor Oil (C20-C38)	36	F2 F1	24	7.7	mg/Kg	1	*	8015C	Total/NA
Arsenic	1.0		0.51	0.043	mg/Kg	1	*	6020A	Total/NA
Silver	8.7	J	87	6.8	ug/Kg	1	*	6020A	Total/NA
Barium	41		0.34	0.060	mg/Kg	1	*	6020A	Total/NA
Cadmium	0.057	J	0.085	0.0080	mg/Kg	1	*	6020A	Total/NA
Chromium	2.1		0.17	0.065	mg/Kg	1	*	6020A	Total/NA
Lead	2.8		0.13	0.015	mg/Kg	1	*	6020A	Total/NA
Mercury	5.9	J	18	5.7	ug/Kg	1	*	7471B	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-01-GW

Lab Sample ID: 280-136963-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzyl alcohol	0.27	J	11	0.25	ug/L	1		8270D	Total/NA
Diethyl phthalate	1.0	J	4.3	0.41	ug/L	1		8270D	Total/NA
Diesel Range Organics [C10-C28]	0.10	J	0.26	0.034	mg/L	1		8015C	Total/NA
Motor Oil (C20-C38)	0.13	J	0.52	0.059	mg/L	1		8015C	Total/NA
Arsenic	0.59	J	5.0	0.33	ug/L	1		6020A	Total/NA
Barium	340	^	1.0	0.29	ug/L	1		6020A	Total/NA
Chromium	2.6		2.0	0.50	ug/L	1		6020A	Total/NA
Lead	1.5		1.0	0.18	ug/L	1		6020A	Total/NA
Selenium	1.4	J	5.0	0.37	ug/L	1		6020A	Total/NA
Mercury	0.032	J B	0.20	0.027	ug/L	1		7470A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Method Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL DEN
8015C	Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)	SW846	TAL DEN
8015C	Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)	SW846	TAL DEN
6020A	Metals (ICP/MS)	SW846	TAL DEN
7470A	Mercury (CVAA)	SW846	TAL DEN
7471B	Mercury (CVAA)	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN
3020A	Preparation, Total Metals	SW846	TAL DEN
3050B	Preparation, Metals	SW846	TAL DEN
3050B-Sb	Preparation, Metals (Antimony)	SW846	TAL DEN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL DEN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL DEN
3546	Microwave Extraction	SW846	TAL DEN
3550C	Ultrasonic Extraction	SW846	TAL DEN
5030B	Purge and Trap	SW846	TAL DEN
5030C	Purge and Trap	SW846	TAL DEN
5035	Closed System Purge and Trap	SW846	TAL DEN
7470A	Preparation, Mercury	SW846	TAL DEN
7471B	Preparation, Mercury	SW846	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-136963-1	CDOT I270 Env-05/06_2020-SB-14-5'-7'	Solid	05/26/20 11:00	05/27/20 12:00	
280-136963-2	CDOT I270 Env-05/06_2020-SB-14-10'-12'	Solid	05/26/20 11:20	05/27/20 12:00	
280-136963-3	CDOT I270 Env-05/06_2020-SB-13-12-13'	Solid	05/26/20 12:30	05/27/20 12:00	
280-136963-4	CDOT I270 Env-05/06_2020-SB-13-GW	Water	05/26/20 12:50	05/27/20 12:00	
280-136963-5	CDOT I270 Env-05/06_2020-SB-15-10-12'	Solid	05/26/20 14:05	05/27/20 12:00	
280-136963-6	CDOT I270 Env-05/06_2020-SB-15-GW	Water	05/26/20 14:30	05/27/20 12:00	
280-136963-7	CDOT I270 Env-05/06_2020-TB-01-05272020	Solid	05/27/20 08:00	05/27/20 12:00	
280-136963-8	CDOT I270 Env-05/06_2020-TB-01-05272020	Water	05/27/20 08:00	05/27/20 12:00	
280-136963-9	CDOT I270 Env-05/06_2020-SB-01-10'-12'	Solid	05/27/20 10:30	05/27/20 12:00	
280-136963-10	CDOT I270 Env-05/06_2020-SB-01-GW	Water	05/27/20 11:00	05/27/20 12:00	

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-5'-7'

Lab Sample ID: 280-136963-1

Date Collected: 05/26/20 11:00

Matrix: Solid

Date Received: 05/27/20 12:00

Percent Solids: 91.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.4	1.7	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
1,1,2,2-Tetrachloroethane	ND		4.4	0.25	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
1,1,2-Trichloroethane	ND		4.4	0.77	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
1,1,2-Trichlorotrifluoroethane	ND		17	1.4	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
1,1-Dichloroethane	ND		4.4	0.18	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
1,1-Dichloroethene	ND		4.4	0.52	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
1,2,3-Trichlorobenzene	ND		4.4	0.71	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
1,2,4-Trichlorobenzene	ND		4.4	0.64	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
1,2-Dibromo-3-Chloropropane	ND		8.7	3.2	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
1,2-Dibromoethane	ND		4.4	0.45	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
1,2-Dichlorobenzene	ND		4.4	1.6	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
1,2-Dichloroethane	ND		4.4	0.61	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
1,2-Dichloropropane	ND		4.4	0.48	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
1,3-Dichlorobenzene	ND		4.4	0.42	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
1,4-Dichlorobenzene	ND		4.4	0.21	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
1,4-Dioxane	ND		440	49	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
2-Butanone (MEK)	6.9	J	17	3.4	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
2-Hexanone	ND		17	4.3	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
4-Methyl-2-pentanone (MIBK)	ND		17	3.8	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
Acetone	37	J	63	31	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
Benzene	ND		4.4	0.13	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
Bromoform	ND		4.5	2.2	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
Bromomethane	ND		8.7	1.2	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
Carbon disulfide	ND		4.4	1.4	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
Carbon tetrachloride	ND		4.4	1.8	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
Chlorobenzene	ND		4.4	1.8	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
Chlorobromomethane	ND		4.4	2.1	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
Chlorodibromomethane	ND		4.4	2.0	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
Chloroethane	ND		8.7	1.7	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
Chloroform	ND		8.7	0.25	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
Chloromethane	ND		8.7	0.67	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
cis-1,2-Dichloroethene	ND		2.2	0.18	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
cis-1,3-Dichloropropene	ND		4.4	0.087	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
Cyclohexane	ND		4.4	1.5	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
Dichlorobromomethane	ND		4.4	1.9	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
Dichlorodifluoromethane	ND		8.7	2.4	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
Ethylbenzene	ND		4.4	0.27	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
Isopropylbenzene	ND		4.4	2.1	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
Methyl acetate	ND		8.7	2.4	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
Methyl tert-butyl ether	ND		17	1.8	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
Methylcyclohexane	ND		4.4	0.37	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
Methylene Chloride	ND		4.4	1.4	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
m-Xylene & p-Xylene	ND		2.2	0.91	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
o-Xylene	ND		2.2	0.23	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
Styrene	ND		4.4	0.24	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
Tetrachloroethene	ND		4.4	1.7	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
Toluene	ND		4.4	0.20	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
trans-1,2-Dichloroethene	ND		2.2	0.34	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
trans-1,3-Dichloropropene	ND		4.4	0.072	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-5'-7'

Date Collected: 05/26/20 11:00

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-1

Matrix: Solid

Percent Solids: 91.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		4.4	1.7	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
Trichlorofluoromethane	ND		8.7	2.8	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
Vinyl chloride	ND		4.4	1.2	ug/Kg	☼	05/26/20 11:00	06/05/20 02:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		58 - 140				05/26/20 11:00	06/05/20 02:34	1
Toluene-d8 (Surr)	97		80 - 126				05/26/20 11:00	06/05/20 02:34	1
4-Bromofluorobenzene (Surr)	95		76 - 127				05/26/20 11:00	06/05/20 02:34	1
Dibromofluoromethane (Surr)	100		75 - 121				05/26/20 11:00	06/05/20 02:34	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-10'-12'

Date Collected: 05/26/20 11:20

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-2

Matrix: Solid

Percent Solids: 91.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.5	1.8	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
1,1,2,2-Tetrachloroethane	ND		4.5	0.26	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
1,1,2-Trichloroethane	ND		4.5	0.80	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
1,1,2-Trichlorotrifluoroethane	ND		18	1.5	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
1,1-Dichloroethane	ND		4.5	0.19	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
1,1-Dichloroethene	ND		4.5	0.53	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
1,2,3-Trichlorobenzene	ND		4.5	0.73	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
1,2,4-Trichlorobenzene	ND		4.5	0.66	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
1,2-Dibromo-3-Chloropropane	ND		9.0	3.3	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
1,2-Dibromoethane	ND		4.5	0.47	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
1,2-Dichlorobenzene	ND		4.5	1.7	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
1,2-Dichloroethane	ND		4.5	0.63	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
1,2-Dichloropropane	ND		4.5	0.50	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
1,3-Dichlorobenzene	ND		4.5	0.43	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
1,4-Dichlorobenzene	ND		4.5	0.22	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
1,4-Dioxane	ND		450	51	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
2-Butanone (MEK)	6.3	J	18	3.5	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
2-Hexanone	ND		18	4.4	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
4-Methyl-2-pentanone (MIBK)	ND		18	3.9	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
Acetone	ND		65	32	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
Benzene	ND		4.5	0.14	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
Bromoform	ND		4.6	2.3	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
Bromomethane	ND		9.0	1.2	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
Carbon disulfide	ND		4.5	1.5	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
Carbon tetrachloride	ND		4.5	1.8	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
Chlorobenzene	ND		4.5	1.9	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
Chlorobromomethane	ND		4.5	2.2	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
Chlorodibromomethane	ND		4.5	2.1	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
Chloroethane	ND		9.0	1.8	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
Chloroform	ND		9.0	0.26	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
Chloromethane	ND		9.0	0.70	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
cis-1,2-Dichloroethene	ND		2.3	0.18	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
cis-1,3-Dichloropropene	ND		4.5	0.090	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
Cyclohexane	ND		4.5	1.6	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
Dichlorobromomethane	ND		4.5	1.9	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
Dichlorodifluoromethane	ND		9.0	2.5	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-10'-12'

Date Collected: 05/26/20 11:20

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-2

Matrix: Solid

Percent Solids: 91.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		4.5	0.28	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
Isopropylbenzene	ND		4.5	2.2	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
Methyl acetate	ND		9.0	2.5	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
Methyl tert-butyl ether	ND		18	1.9	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
Methylcyclohexane	ND		4.5	0.38	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
Methylene Chloride	ND		4.5	1.4	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
m-Xylene & p-Xylene	ND		2.3	0.94	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
o-Xylene	ND		2.3	0.24	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
Styrene	ND		4.5	0.25	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
Tetrachloroethene	ND		4.5	1.7	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
Toluene	ND		4.5	0.21	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
trans-1,2-Dichloroethene	ND		2.3	0.35	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
trans-1,3-Dichloropropene	ND		4.5	0.075	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
Trichloroethene	ND		4.5	1.7	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
Trichlorofluoromethane	ND		9.0	2.9	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1
Vinyl chloride	ND		4.5	1.2	ug/Kg	☼	05/26/20 11:20	06/05/20 02:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		58 - 140	05/26/20 11:20	06/05/20 02:57	1
Toluene-d8 (Surr)	95		80 - 126	05/26/20 11:20	06/05/20 02:57	1
4-Bromofluorobenzene (Surr)	95		76 - 127	05/26/20 11:20	06/05/20 02:57	1
Dibromofluoromethane (Surr)	101		75 - 121	05/26/20 11:20	06/05/20 02:57	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-13-12-13'

Date Collected: 05/26/20 12:30

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-3

Matrix: Solid

Percent Solids: 90.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.1	2.0	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
1,1,2,2-Tetrachloroethane	ND		5.1	0.29	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
1,1,2-Trichloroethane	ND		5.1	0.90	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
1,1,2-Trichlorotrifluoroethane	ND		21	1.7	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
1,1-Dichloroethane	ND		5.1	0.22	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
1,1-Dichloroethene	ND		5.1	0.61	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
1,2,3-Trichlorobenzene	ND		5.1	0.83	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
1,2,4-Trichlorobenzene	ND		5.1	0.75	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
1,2-Dibromo-3-Chloropropane	ND		10	3.8	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
1,2-Dibromoethane	ND		5.1	0.53	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
1,2-Dichlorobenzene	ND		5.1	1.9	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
1,2-Dichloroethane	ND		5.1	0.72	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
1,2-Dichloropropane	ND		5.1	0.56	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
1,3-Dichlorobenzene	ND		5.1	0.49	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
1,4-Dichlorobenzene	ND		5.1	0.25	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
1,4-Dioxane	ND		510	58	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
2-Butanone (MEK)	ND		21	4.0	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
2-Hexanone	ND		21	5.0	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
4-Methyl-2-pentanone (MIBK)	ND		21	4.5	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
Acetone	ND		74	37	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
Benzene	ND		5.1	0.15	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
Bromoform	ND		5.2	2.6	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
Bromomethane	ND		10	1.4	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-13-12-13'

Date Collected: 05/26/20 12:30

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-3

Matrix: Solid

Percent Solids: 90.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		5.1	1.7	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
Carbon tetrachloride	ND		5.1	2.1	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
Chlorobenzene	ND		5.1	2.1	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
Chlorobromomethane	ND		5.1	2.5	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
Chlorodibromomethane	ND		5.1	2.3	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
Chloroethane	ND		10	2.0	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
Chloroform	ND		10	0.30	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
Chloromethane	ND		10	0.79	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
cis-1,2-Dichloroethene	ND		2.6	0.21	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
cis-1,3-Dichloropropene	ND		5.1	0.10	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
Cyclohexane	ND		5.1	1.8	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
Dichlorobromomethane	ND		5.1	2.2	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
Dichlorodifluoromethane	ND		10	2.8	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
Ethylbenzene	ND		5.1	0.31	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
Isopropylbenzene	ND		5.1	2.5	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
Methyl acetate	ND		10	2.8	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
Methyl tert-butyl ether	ND		21	2.2	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
Methylcyclohexane	ND		5.1	0.43	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
Methylene Chloride	ND		5.1	1.6	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
m-Xylene & p-Xylene	ND		2.6	1.1	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
o-Xylene	ND		2.6	0.27	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
Styrene	ND		5.1	0.29	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
Tetrachloroethene	ND		5.1	2.0	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
Toluene	ND		5.1	0.23	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
trans-1,2-Dichloroethene	ND		2.6	0.40	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
trans-1,3-Dichloropropene	ND		5.1	0.085	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
Trichloroethene	ND		5.1	2.0	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
Trichlorofluoromethane	ND		10	3.3	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1
Vinyl chloride	ND		5.1	1.4	ug/Kg	☼	05/26/20 12:30	06/05/20 03:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		58 - 140	05/26/20 12:30	06/05/20 03:20	1
Toluene-d8 (Surr)	97		80 - 126	05/26/20 12:30	06/05/20 03:20	1
4-Bromofluorobenzene (Surr)	96		76 - 127	05/26/20 12:30	06/05/20 03:20	1
Dibromofluoromethane (Surr)	99		75 - 121	05/26/20 12:30	06/05/20 03:20	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-13-GW

Date Collected: 05/26/20 12:50

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			06/05/20 17:17	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			06/05/20 17:17	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			06/05/20 17:17	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			06/05/20 17:17	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/05/20 17:17	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			06/05/20 17:17	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			06/05/20 17:17	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			06/05/20 17:17	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			06/05/20 17:17	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			06/05/20 17:17	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-13-GW

Lab Sample ID: 280-136963-4

Date Collected: 05/26/20 12:50

Matrix: Water

Date Received: 05/27/20 12:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			06/05/20 17:17	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			06/05/20 17:17	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/05/20 17:17	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			06/05/20 17:17	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			06/05/20 17:17	1
1,4-Dioxane	ND		200	19	ug/L			06/05/20 17:17	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			06/05/20 17:17	1
2-Hexanone	ND		5.0	1.7	ug/L			06/05/20 17:17	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			06/05/20 17:17	1
Acetone	2.0	J	10	1.9	ug/L			06/05/20 17:17	1
Benzene	ND		1.0	0.16	ug/L			06/05/20 17:17	1
Bromoform	ND		1.0	0.46	ug/L			06/05/20 17:17	1
Bromomethane	ND		2.0	0.21	ug/L			06/05/20 17:17	1
Carbon disulfide	ND		2.0	0.17	ug/L			06/05/20 17:17	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			06/05/20 17:17	1
Chlorobenzene	ND		1.0	0.17	ug/L			06/05/20 17:17	1
Chlorobromomethane	ND		1.0	0.10	ug/L			06/05/20 17:17	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			06/05/20 17:17	1
Chloroethane	ND		2.0	0.41	ug/L			06/05/20 17:17	1
Chloroform	2.6		1.0	0.16	ug/L			06/05/20 17:17	1
Chloromethane	ND		2.0	0.30	ug/L			06/05/20 17:17	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/05/20 17:17	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			06/05/20 17:17	1
Cyclohexane	ND		2.0	0.28	ug/L			06/05/20 17:17	1
Dichlorobromomethane	0.89	J	1.0	0.17	ug/L			06/05/20 17:17	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			06/05/20 17:17	1
Ethylbenzene	ND		1.0	0.16	ug/L			06/05/20 17:17	1
Isopropylbenzene	ND		1.0	0.19	ug/L			06/05/20 17:17	1
Methyl acetate	ND		5.0	1.6	ug/L			06/05/20 17:17	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			06/05/20 17:17	1
Methylcyclohexane	ND		1.0	0.10	ug/L			06/05/20 17:17	1
Methylene Chloride	ND		2.0	0.94	ug/L			06/05/20 17:17	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			06/05/20 17:17	1
o-Xylene	ND		1.0	0.19	ug/L			06/05/20 17:17	1
Styrene	ND		1.0	0.36	ug/L			06/05/20 17:17	1
Tetrachloroethene	ND		1.0	0.20	ug/L			06/05/20 17:17	1
Toluene	ND		1.0	0.17	ug/L			06/05/20 17:17	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/05/20 17:17	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			06/05/20 17:17	1
Trichloroethene	ND		1.0	0.16	ug/L			06/05/20 17:17	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			06/05/20 17:17	1
Vinyl chloride	ND		1.0	0.10	ug/L			06/05/20 17:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		70 - 127					06/05/20 17:17	1
Toluene-d8 (Surr)	102		80 - 125					06/05/20 17:17	1
4-Bromofluorobenzene (Surr)	105		78 - 120					06/05/20 17:17	1
Dibromofluoromethane (Surr)	99		77 - 120					06/05/20 17:17	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-15-10-12'

Lab Sample ID: 280-136963-5

Date Collected: 05/26/20 14:05

Matrix: Solid

Date Received: 05/27/20 12:00

Percent Solids: 92.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.9	1.9	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
1,1,2,2-Tetrachloroethane	ND		4.9	0.28	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
1,1,2-Trichloroethane	ND		4.9	0.86	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
1,1,2-Trichlorotrifluoroethane	ND		20	1.6	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
1,1-Dichloroethane	ND		4.9	0.21	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
1,1-Dichloroethene	ND		4.9	0.58	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
1,2,3-Trichlorobenzene	ND		4.9	0.79	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
1,2,4-Trichlorobenzene	ND		4.9	0.71	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
1,2-Dibromo-3-Chloropropane	ND		9.8	3.6	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
1,2-Dibromoethane	ND		4.9	0.51	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
1,2-Dichlorobenzene	ND		4.9	1.8	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
1,2-Dichloroethane	ND		4.9	0.68	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
1,2-Dichloropropane	ND		4.9	0.54	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
1,3-Dichlorobenzene	ND		4.9	0.47	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
1,4-Dichlorobenzene	ND		4.9	0.24	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
1,4-Dioxane	ND		490	55	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
2-Butanone (MEK)	6.8	J	20	3.8	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
2-Hexanone	ND		20	4.8	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.3	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
Acetone	43	J	70	35	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
Benzene	ND		4.9	0.15	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
Bromoform	ND		5.0	2.5	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
Bromomethane	ND		9.8	1.3	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
Carbon disulfide	ND		4.9	1.6	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
Carbon tetrachloride	ND		4.9	2.0	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
Chlorobenzene	ND		4.9	2.0	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
Chlorobromomethane	ND		4.9	2.4	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
Chlorodibromomethane	ND		4.9	2.2	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
Chloroethane	ND		9.8	1.9	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
Chloroform	ND		9.8	0.28	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
Chloromethane	ND		9.8	0.75	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
cis-1,2-Dichloroethene	ND		2.4	0.20	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
cis-1,3-Dichloropropene	ND		4.9	0.098	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
Cyclohexane	ND		4.9	1.7	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
Dichlorobromomethane	ND		4.9	2.1	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
Dichlorodifluoromethane	ND		9.8	2.7	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
Ethylbenzene	ND		4.9	0.30	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
Isopropylbenzene	ND		4.9	2.4	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
Methyl acetate	ND		9.8	2.7	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
Methyl tert-butyl ether	ND		20	2.1	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
Methylcyclohexane	ND		4.9	0.41	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
Methylene Chloride	ND		4.9	1.6	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
m-Xylene & p-Xylene	ND		2.4	1.0	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
o-Xylene	ND		2.4	0.26	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
Styrene	ND		4.9	0.27	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
Tetrachloroethene	ND		4.9	1.9	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
Toluene	ND		4.9	0.22	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
trans-1,2-Dichloroethene	ND		2.4	0.38	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
trans-1,3-Dichloropropene	ND		4.9	0.081	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-15-10-12'

Date Collected: 05/26/20 14:05

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-5

Matrix: Solid

Percent Solids: 92.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		4.9	1.9	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
Trichlorofluoromethane	ND		9.8	3.1	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
Vinyl chloride	ND		4.9	1.3	ug/Kg	☼	05/26/20 14:05	06/05/20 03:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		58 - 140				05/26/20 14:05	06/05/20 03:42	1
Toluene-d8 (Surr)	97		80 - 126				05/26/20 14:05	06/05/20 03:42	1
4-Bromofluorobenzene (Surr)	97		76 - 127				05/26/20 14:05	06/05/20 03:42	1
Dibromofluoromethane (Surr)	102		75 - 121				05/26/20 14:05	06/05/20 03:42	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-15-GW

Date Collected: 05/26/20 14:30

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			06/05/20 17:39	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			06/05/20 17:39	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			06/05/20 17:39	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			06/05/20 17:39	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/05/20 17:39	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			06/05/20 17:39	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			06/05/20 17:39	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			06/05/20 17:39	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			06/05/20 17:39	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			06/05/20 17:39	1
1,2-Dichlorobenzene	0.16	J	1.0	0.15	ug/L			06/05/20 17:39	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			06/05/20 17:39	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/05/20 17:39	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			06/05/20 17:39	1
1,4-Dichlorobenzene	1.1		1.0	0.16	ug/L			06/05/20 17:39	1
1,4-Dioxane	ND		200	19	ug/L			06/05/20 17:39	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			06/05/20 17:39	1
2-Hexanone	ND		5.0	1.7	ug/L			06/05/20 17:39	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			06/05/20 17:39	1
Acetone	2.7	J	10	1.9	ug/L			06/05/20 17:39	1
Benzene	1.2		1.0	0.16	ug/L			06/05/20 17:39	1
Bromoform	ND		1.0	0.46	ug/L			06/05/20 17:39	1
Bromomethane	ND		2.0	0.21	ug/L			06/05/20 17:39	1
Carbon disulfide	ND		2.0	0.17	ug/L			06/05/20 17:39	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			06/05/20 17:39	1
Chlorobenzene	ND		1.0	0.17	ug/L			06/05/20 17:39	1
Chlorobromomethane	ND		1.0	0.10	ug/L			06/05/20 17:39	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			06/05/20 17:39	1
Chloroethane	ND		2.0	0.41	ug/L			06/05/20 17:39	1
Chloroform	ND		1.0	0.16	ug/L			06/05/20 17:39	1
Chloromethane	ND		2.0	0.30	ug/L			06/05/20 17:39	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/05/20 17:39	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			06/05/20 17:39	1
Cyclohexane	ND		2.0	0.28	ug/L			06/05/20 17:39	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			06/05/20 17:39	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			06/05/20 17:39	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-15-GW

Date Collected: 05/26/20 14:30

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		1.0	0.16	ug/L			06/05/20 17:39	1
Isopropylbenzene	ND		1.0	0.19	ug/L			06/05/20 17:39	1
Methyl acetate	ND		5.0	1.6	ug/L			06/05/20 17:39	1
Methyl tert-butyl ether	0.62	J	5.0	0.25	ug/L			06/05/20 17:39	1
Methylcyclohexane	ND		1.0	0.10	ug/L			06/05/20 17:39	1
Methylene Chloride	ND		2.0	0.94	ug/L			06/05/20 17:39	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			06/05/20 17:39	1
o-Xylene	ND		1.0	0.19	ug/L			06/05/20 17:39	1
Styrene	ND		1.0	0.36	ug/L			06/05/20 17:39	1
Tetrachloroethene	ND		1.0	0.20	ug/L			06/05/20 17:39	1
Toluene	ND		1.0	0.17	ug/L			06/05/20 17:39	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/05/20 17:39	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			06/05/20 17:39	1
Trichloroethene	ND		1.0	0.16	ug/L			06/05/20 17:39	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			06/05/20 17:39	1
Vinyl chloride	ND		1.0	0.10	ug/L			06/05/20 17:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		70 - 127		06/05/20 17:39	1
Toluene-d8 (Surr)	102		80 - 125		06/05/20 17:39	1
4-Bromofluorobenzene (Surr)	104		78 - 120		06/05/20 17:39	1
Dibromofluoromethane (Surr)	98		77 - 120		06/05/20 17:39	1

Client Sample ID: CDOT I270 Env-05/06_2020-TB-01-05272020

Date Collected: 05/27/20 08:00

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-7

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	2.0	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.29	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
1,1,2-Trichloroethane	ND		5.0	0.88	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
1,1,2-Trichlorotrifluoroethane	ND		20	1.7	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
1,1-Dichloroethane	ND		5.0	0.21	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
1,1-Dichloroethene	ND		5.0	0.59	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
1,2,3-Trichlorobenzene	ND		5.0	0.81	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
1,2,4-Trichlorobenzene	ND		5.0	0.73	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
1,2-Dibromo-3-Chloropropane	ND		10	3.7	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
1,2-Dibromoethane	ND		5.0	0.52	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
1,2-Dichlorobenzene	ND		5.0	1.9	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
1,2-Dichloroethane	ND		5.0	0.70	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
1,2-Dichloropropane	ND		5.0	0.55	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
1,3-Dichlorobenzene	ND		5.0	0.48	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
1,4-Dichlorobenzene	ND		5.0	0.25	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
1,4-Dioxane	ND		500	56	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
2-Butanone (MEK)	ND		20	3.9	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
2-Hexanone	ND		20	4.9	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.4	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
Acetone	ND		72	36	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
Benzene	ND		5.0	0.15	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
Bromoform	ND		5.1	2.6	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
Bromomethane	ND		10	1.4	ug/Kg		05/27/20 08:00	06/04/20 22:25	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-TB-01-05272020

Lab Sample ID: 280-136963-7

Date Collected: 05/27/20 08:00

Matrix: Solid

Date Received: 05/27/20 12:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		5.0	1.7	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
Carbon tetrachloride	ND		5.0	2.0	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
Chlorobenzene	ND		5.0	2.1	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
Chlorobromomethane	ND		5.0	2.5	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
Chlorodibromomethane	ND		5.0	2.3	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
Chloroethane	ND		10	2.0	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
Chloroform	ND		10	0.29	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
Chloromethane	ND		10	0.77	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
cis-1,2-Dichloroethene	ND		2.5	0.20	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
cis-1,3-Dichloropropene	ND		5.0	0.10	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
Cyclohexane	ND		5.0	1.8	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
Dichlorobromomethane	ND		5.0	2.1	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
Dichlorodifluoromethane	ND		10	2.7	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
Ethylbenzene	ND		5.0	0.31	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
Isopropylbenzene	ND		5.0	2.4	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
Methyl acetate	ND		10	2.8	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
Methyl tert-butyl ether	ND		20	2.1	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
Methylcyclohexane	ND		5.0	0.42	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
Methylene Chloride	ND		5.0	1.6	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
m-Xylene & p-Xylene	ND		2.5	1.0	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
o-Xylene	ND		2.5	0.27	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
Styrene	ND		5.0	0.28	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
Tetrachloroethene	ND		5.0	1.9	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
Toluene	ND		5.0	0.23	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
trans-1,2-Dichloroethene	ND		2.5	0.39	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
trans-1,3-Dichloropropene	ND		5.0	0.083	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
Trichloroethene	ND		5.0	1.9	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
Trichlorofluoromethane	ND		10	3.2	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
Vinyl chloride	ND		5.0	1.3	ug/Kg		05/27/20 08:00	06/04/20 22:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		58 - 140				05/27/20 08:00	06/04/20 22:25	1
Toluene-d8 (Surr)	99		80 - 126				05/27/20 08:00	06/04/20 22:25	1
4-Bromofluorobenzene (Surr)	94		76 - 127				05/27/20 08:00	06/04/20 22:25	1
Dibromofluoromethane (Surr)	101		75 - 121				05/27/20 08:00	06/04/20 22:25	1

Client Sample ID: CDOT I270 Env-05/06_2020-TB-01-05272020

Lab Sample ID: 280-136963-8

Date Collected: 05/27/20 08:00

Matrix: Water

Date Received: 05/27/20 12:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			06/08/20 14:26	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			06/08/20 14:26	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			06/08/20 14:26	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			06/08/20 14:26	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/08/20 14:26	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			06/08/20 14:26	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			06/08/20 14:26	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			06/08/20 14:26	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			06/08/20 14:26	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			06/08/20 14:26	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-TB-01-05272020

Lab Sample ID: 280-136963-8

Date Collected: 05/27/20 08:00

Matrix: Water

Date Received: 05/27/20 12:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			06/08/20 14:26	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			06/08/20 14:26	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/08/20 14:26	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			06/08/20 14:26	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			06/08/20 14:26	1
1,4-Dioxane	ND		200	19	ug/L			06/08/20 14:26	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			06/08/20 14:26	1
2-Hexanone	ND		5.0	1.7	ug/L			06/08/20 14:26	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			06/08/20 14:26	1
Acetone	ND		10	1.9	ug/L			06/08/20 14:26	1
Benzene	ND		1.0	0.16	ug/L			06/08/20 14:26	1
Bromoform	ND		1.0	0.46	ug/L			06/08/20 14:26	1
Bromomethane	ND	* *1	2.0	0.21	ug/L			06/08/20 14:26	1
Carbon disulfide	ND		2.0	0.17	ug/L			06/08/20 14:26	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			06/08/20 14:26	1
Chlorobenzene	ND		1.0	0.17	ug/L			06/08/20 14:26	1
Chlorobromomethane	ND		1.0	0.10	ug/L			06/08/20 14:26	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			06/08/20 14:26	1
Chloroethane	ND	*1	2.0	0.41	ug/L			06/08/20 14:26	1
Chloroform	ND		1.0	0.16	ug/L			06/08/20 14:26	1
Chloromethane	ND		2.0	0.30	ug/L			06/08/20 14:26	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/08/20 14:26	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			06/08/20 14:26	1
Cyclohexane	ND		2.0	0.28	ug/L			06/08/20 14:26	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			06/08/20 14:26	1
Dichlorodifluoromethane	ND	*	2.0	0.31	ug/L			06/08/20 14:26	1
Ethylbenzene	ND		1.0	0.16	ug/L			06/08/20 14:26	1
Isopropylbenzene	ND		1.0	0.19	ug/L			06/08/20 14:26	1
Methyl acetate	ND		5.0	1.6	ug/L			06/08/20 14:26	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			06/08/20 14:26	1
Methylcyclohexane	ND		1.0	0.10	ug/L			06/08/20 14:26	1
Methylene Chloride	ND		2.0	0.94	ug/L			06/08/20 14:26	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			06/08/20 14:26	1
o-Xylene	ND		1.0	0.19	ug/L			06/08/20 14:26	1
Styrene	ND		1.0	0.36	ug/L			06/08/20 14:26	1
Tetrachloroethene	ND		1.0	0.20	ug/L			06/08/20 14:26	1
Toluene	ND		1.0	0.17	ug/L			06/08/20 14:26	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/08/20 14:26	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			06/08/20 14:26	1
Trichloroethene	ND		1.0	0.16	ug/L			06/08/20 14:26	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			06/08/20 14:26	1
Vinyl chloride	ND		1.0	0.10	ug/L			06/08/20 14:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		70 - 127					06/08/20 14:26	1
Toluene-d8 (Surr)	103		80 - 125					06/08/20 14:26	1
4-Bromofluorobenzene (Surr)	104		78 - 120					06/08/20 14:26	1
Dibromofluoromethane (Surr)	97		77 - 120					06/08/20 14:26	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-01-10'-12'

Date Collected: 05/27/20 10:30

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-9

Matrix: Solid

Percent Solids: 96.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.1	2.0	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
1,1,2,2-Tetrachloroethane	ND		5.1	0.29	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
1,1,2-Trichloroethane	ND		5.1	0.90	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
1,1,2-Trichlorotrifluoroethane	ND		21	1.7	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
1,1-Dichloroethane	ND		5.1	0.22	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
1,1-Dichloroethene	ND		5.1	0.61	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
1,2,3-Trichlorobenzene	ND		5.1	0.83	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
1,2,4-Trichlorobenzene	ND		5.1	0.75	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
1,2-Dibromo-3-Chloropropane	ND		10	3.8	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
1,2-Dibromoethane	ND		5.1	0.53	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
1,2-Dichlorobenzene	ND		5.1	1.9	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
1,2-Dichloroethane	ND		5.1	0.72	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
1,2-Dichloropropane	ND		5.1	0.57	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
1,3-Dichlorobenzene	ND		5.1	0.49	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
1,4-Dichlorobenzene	ND		5.1	0.25	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
1,4-Dioxane	ND		510	58	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
2-Butanone (MEK)	ND		21	4.0	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
2-Hexanone	ND		21	5.0	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
4-Methyl-2-pentanone (MIBK)	ND		21	4.5	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
Acetone	ND		74	37	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
Benzene	ND		5.1	0.16	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
Bromoform	ND		5.2	2.6	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
Bromomethane	ND		10	1.4	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
Carbon disulfide	ND		5.1	1.7	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
Carbon tetrachloride	ND		5.1	2.1	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
Chlorobenzene	ND		5.1	2.1	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
Chlorobromomethane	ND		5.1	2.5	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
Chlorodibromomethane	ND		5.1	2.3	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
Chloroethane	ND		10	2.0	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
Chloroform	ND		10	0.30	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
Chloromethane	ND		10	0.79	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
cis-1,2-Dichloroethene	ND		2.6	0.21	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
cis-1,3-Dichloropropene	ND		5.1	0.10	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
Cyclohexane	ND		5.1	1.8	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
Dichlorobromomethane	ND		5.1	2.2	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
Dichlorodifluoromethane	ND		10	2.8	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
Ethylbenzene	ND		5.1	0.31	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
Isopropylbenzene	ND		5.1	2.5	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
Methyl acetate	ND		10	2.8	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
Methyl tert-butyl ether	ND		21	2.2	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
Methylcyclohexane	ND		5.1	0.43	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
Methylene Chloride	ND		5.1	1.6	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
m-Xylene & p-Xylene	ND		2.6	1.1	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
o-Xylene	ND		2.6	0.27	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
Styrene	ND		5.1	0.29	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
Tetrachloroethene	ND		5.1	2.0	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
Toluene	ND		5.1	0.23	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
trans-1,2-Dichloroethene	ND		2.6	0.40	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
trans-1,3-Dichloropropene	ND		5.1	0.085	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-01-10'-12'

Date Collected: 05/27/20 10:30

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-9

Matrix: Solid

Percent Solids: 96.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		5.1	2.0	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
Trichlorofluoromethane	ND		10	3.3	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
Vinyl chloride	ND		5.1	1.4	ug/Kg	☼	05/27/20 10:30	06/05/20 04:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		58 - 140				05/27/20 10:30	06/05/20 04:05	1
Toluene-d8 (Surr)	96		80 - 126				05/27/20 10:30	06/05/20 04:05	1
4-Bromofluorobenzene (Surr)	97		76 - 127				05/27/20 10:30	06/05/20 04:05	1
Dibromofluoromethane (Surr)	102		75 - 121				05/27/20 10:30	06/05/20 04:05	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-01-GW

Date Collected: 05/27/20 11:00

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-10

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			06/08/20 14:47	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			06/08/20 14:47	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			06/08/20 14:47	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			06/08/20 14:47	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/08/20 14:47	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			06/08/20 14:47	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			06/08/20 14:47	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			06/08/20 14:47	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			06/08/20 14:47	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			06/08/20 14:47	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			06/08/20 14:47	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			06/08/20 14:47	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/08/20 14:47	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			06/08/20 14:47	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			06/08/20 14:47	1
1,4-Dioxane	ND		200	19	ug/L			06/08/20 14:47	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			06/08/20 14:47	1
2-Hexanone	ND		5.0	1.7	ug/L			06/08/20 14:47	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			06/08/20 14:47	1
Acetone	ND		10	1.9	ug/L			06/08/20 14:47	1
Benzene	ND		1.0	0.16	ug/L			06/08/20 14:47	1
Bromoform	ND		1.0	0.46	ug/L			06/08/20 14:47	1
Bromomethane	ND	**1	2.0	0.21	ug/L			06/08/20 14:47	1
Carbon disulfide	ND		2.0	0.17	ug/L			06/08/20 14:47	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			06/08/20 14:47	1
Chlorobenzene	ND		1.0	0.17	ug/L			06/08/20 14:47	1
Chlorobromomethane	ND		1.0	0.10	ug/L			06/08/20 14:47	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			06/08/20 14:47	1
Chloroethane	ND	*1	2.0	0.41	ug/L			06/08/20 14:47	1
Chloroform	ND		1.0	0.16	ug/L			06/08/20 14:47	1
Chloromethane	ND		2.0	0.30	ug/L			06/08/20 14:47	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/08/20 14:47	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			06/08/20 14:47	1
Cyclohexane	ND		2.0	0.28	ug/L			06/08/20 14:47	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			06/08/20 14:47	1
Dichlorodifluoromethane	ND	*	2.0	0.31	ug/L			06/08/20 14:47	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-01-GW

Lab Sample ID: 280-136963-10

Date Collected: 05/27/20 11:00

Matrix: Water

Date Received: 05/27/20 12:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		1.0	0.16	ug/L			06/08/20 14:47	1
Isopropylbenzene	ND		1.0	0.19	ug/L			06/08/20 14:47	1
Methyl acetate	ND		5.0	1.6	ug/L			06/08/20 14:47	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			06/08/20 14:47	1
Methylcyclohexane	ND		1.0	0.10	ug/L			06/08/20 14:47	1
Methylene Chloride	ND		2.0	0.94	ug/L			06/08/20 14:47	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			06/08/20 14:47	1
o-Xylene	ND		1.0	0.19	ug/L			06/08/20 14:47	1
Styrene	ND		1.0	0.36	ug/L			06/08/20 14:47	1
Tetrachloroethene	ND		1.0	0.20	ug/L			06/08/20 14:47	1
Toluene	ND		1.0	0.17	ug/L			06/08/20 14:47	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/08/20 14:47	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			06/08/20 14:47	1
Trichloroethene	ND		1.0	0.16	ug/L			06/08/20 14:47	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			06/08/20 14:47	1
Vinyl chloride	ND		1.0	0.10	ug/L			06/08/20 14:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		70 - 127		06/08/20 14:47	1
Toluene-d8 (Surr)	103		80 - 125		06/08/20 14:47	1
4-Bromofluorobenzene (Surr)	107		78 - 120		06/08/20 14:47	1
Dibromofluoromethane (Surr)	97		77 - 120		06/08/20 14:47	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-5'-7'

Lab Sample ID: 280-136963-1

Date Collected: 05/26/20 11:00

Matrix: Solid

Date Received: 05/27/20 12:00

Percent Solids: 91.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		330	24	ug/Kg	*	06/02/20 07:08	06/04/20 23:22	1
1,2,4,5-Tetrachlorobenzene	ND		330	49	ug/Kg	*	06/02/20 07:08	06/04/20 23:22	1
1,2,4-Trichlorobenzene	ND		330	28	ug/Kg	*	06/02/20 07:08	06/04/20 23:22	1
1,2-Dichlorobenzene	ND		330	22	ug/Kg	*	06/02/20 07:08	06/04/20 23:22	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		330	22	ug/Kg	*	06/02/20 07:08	06/04/20 23:22	1
1,3-Dichlorobenzene	ND		330	12	ug/Kg	*	06/02/20 07:08	06/04/20 23:22	1
1,3-Dinitrobenzene	ND		330	71	ug/Kg	*	06/02/20 07:08	06/04/20 23:22	1
1,4-Dichlorobenzene	ND		330	14	ug/Kg	*	06/02/20 07:08	06/04/20 23:22	1
1,4-Dioxane	ND		660	66	ug/Kg	*	06/02/20 07:08	06/04/20 23:22	1
1-Methylnaphthalene	ND		330	11	ug/Kg	*	06/02/20 07:08	06/04/20 23:22	1
2,2'-oxybis[1-chloropropane]	ND		330	23	ug/Kg	*	06/02/20 07:08	06/04/20 23:22	1
2,3,4,6-Tetrachlorophenol	ND		1600	140	ug/Kg	*	06/02/20 07:08	06/04/20 23:22	1
2,4,5-Trichlorophenol	ND		330	10	ug/Kg	*	06/02/20 07:08	06/04/20 23:22	1
2,4,6-Trichlorophenol	ND		330	10	ug/Kg	*	06/02/20 07:08	06/04/20 23:22	1
2,4-Dichlorophenol	ND		330	10	ug/Kg	*	06/02/20 07:08	06/04/20 23:22	1
2,4-Dimethylphenol	ND		330	66	ug/Kg	*	06/02/20 07:08	06/04/20 23:22	1
2,4-Dinitrophenol	ND		1600	330	ug/Kg	*	06/02/20 07:08	06/04/20 23:22	1
2,4-Dinitrotoluene	ND		330	66	ug/Kg	*	06/02/20 07:08	06/04/20 23:22	1
2,6-Dichlorophenol	ND		330	22	ug/Kg	*	06/02/20 07:08	06/04/20 23:22	1
2,6-Dinitrotoluene	ND		330	28	ug/Kg	*	06/02/20 07:08	06/04/20 23:22	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-5'-7'

Lab Sample ID: 280-136963-1

Date Collected: 05/26/20 11:00

Matrix: Solid

Date Received: 05/27/20 12:00

Percent Solids: 91.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloronaphthalene	ND		330	10	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
2-Chlorophenol	ND		330	21	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
2-Methylnaphthalene	ND		330	19	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
2-Methylphenol	ND		330	13	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
2-Nitroaniline	ND		1600	50	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
2-Nitrophenol	ND		330	10	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
3 & 4 Methylphenol	ND		330	33	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
3,3'-Dichlorobenzidine	ND		660	90	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
3-Methylphenol	ND		330	33	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
3-Nitroaniline	ND		1600	73	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
4,6-Dinitro-2-methylphenol	ND		1600	330	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
4-Bromophenyl phenyl ether	ND		330	19	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
4-Chloro-3-methylphenol	ND		330	25	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
4-Chloroaniline	ND		330	82	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
4-Chlorophenyl phenyl ether	ND		330	21	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
4-Methylphenol	ND		330	33	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
4-Nitroaniline	ND		1600	72	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
4-Nitrophenol	ND		1600	97	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Acenaphthene	ND		330	10	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Acenaphthylene	ND		330	82	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Acetophenone	ND		330	20	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Aniline	ND		330	130	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Anthracene	ND		330	17	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Azobenzene	ND		330	22	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Benzaldehyde	ND		330	67	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Benzidine	ND		3300	990	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Benzo[a]anthracene	ND		330	20	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Benzo[a]pyrene	ND		330	20	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Benzo[b]fluoranthene	ND		330	26	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Benzo[g,h,i]perylene	ND		330	16	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Benzo[k]fluoranthene	ND		330	40	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Benzoic acid	ND		1600	330	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Benzyl alcohol	ND		330	10	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Bis(2-chloroethoxy)methane	ND		330	23	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Bis(2-chloroethyl)ether	ND		330	17	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Bis(2-ethylhexyl) phthalate	ND		330	46	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Butyl benzyl phthalate	ND		330	43	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Caprolactam	ND		330	110	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Carbazole	ND		330	36	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Chrysene	ND		330	27	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Dibenz(a,h)anthracene	ND		330	19	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Dibenzofuran	ND		330	20	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Diethyl phthalate	ND		660	26	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Dimethyl phthalate	ND		330	23	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Di-n-butyl phthalate	ND		330	29	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Di-n-octyl phthalate	ND		330	40	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Diphenylamine	ND		330	44	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Famphur	ND		660	34	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Fluoranthene	ND		330	36	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-5'-7'

Date Collected: 05/26/20 11:00

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-1

Matrix: Solid

Percent Solids: 91.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	ND		330	18	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Hexachlorobenzene	ND		330	29	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Hexachlorobutadiene	ND		330	10	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Hexachlorocyclopentadiene	ND		1600	110	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Hexachloroethane	ND		330	21	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Hexadecane	ND		330	13	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Indeno[1,2,3-cd]pyrene	ND		330	22	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Isophorone	ND		330	17	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Naphthalene	ND		330	31	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Nitrobenzene	ND		330	22	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
N-Nitrosodimethylamine	ND		330	37	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
N-Nitrosodi-n-propylamine	ND		330	68	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
N-Nitrosodiphenylamine	ND		330	21	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Pentachlorophenol	ND		1600	330	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Phenanthrene	ND		330	17	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Phenol	ND		330	18	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Pyrene	ND		330	12	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1
Pyridine	ND		660	40	ug/Kg	☼	06/02/20 07:08	06/04/20 23:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	70		35 - 120	06/02/20 07:08	06/04/20 23:22	1
2-Fluorobiphenyl	64		46 - 120	06/02/20 07:08	06/04/20 23:22	1
2-Fluorophenol (Surr)	68		43 - 120	06/02/20 07:08	06/04/20 23:22	1
Nitrobenzene-d5 (Surr)	67		46 - 120	06/02/20 07:08	06/04/20 23:22	1
Phenol-d5 (Surr)	71		46 - 120	06/02/20 07:08	06/04/20 23:22	1
Terphenyl-d14 (Surr)	89		46 - 120	06/02/20 07:08	06/04/20 23:22	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-10'-12'

Date Collected: 05/26/20 11:20

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-2

Matrix: Solid

Percent Solids: 91.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		350	26	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
1,2,4,5-Tetrachlorobenzene	ND		350	52	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
1,2,4-Trichlorobenzene	ND		350	30	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
1,2-Dichlorobenzene	ND		350	23	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		350	23	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
1,3-Dichlorobenzene	ND		350	13	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
1,3-Dinitrobenzene	ND		350	75	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
1,4-Dichlorobenzene	ND		350	14	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
1,4-Dioxane	ND		700	70	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
1-Methylnaphthalene	ND		350	12	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
2,2'-oxybis[1-chloropropane]	ND		350	24	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
2,3,4,6-Tetrachlorophenol	ND		1700	140	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
2,4,5-Trichlorophenol	ND		350	11	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
2,4,6-Trichlorophenol	ND		350	11	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
2,4-Dichlorophenol	ND		350	11	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
2,4-Dimethylphenol	ND		350	70	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
2,4-Dinitrophenol	ND		1700	350	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
2,4-Dinitrotoluene	ND		350	70	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-10'-12'

Lab Sample ID: 280-136963-2

Date Collected: 05/26/20 11:20

Matrix: Solid

Date Received: 05/27/20 12:00

Percent Solids: 91.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dichlorophenol	ND		350	24	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
2,6-Dinitrotoluene	ND		350	30	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
2-Chloronaphthalene	ND		350	11	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
2-Chlorophenol	ND		350	22	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
2-Methylnaphthalene	ND		350	20	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
2-Methylphenol	ND		350	14	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
2-Nitroaniline	ND		1700	53	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
2-Nitrophenol	ND		350	11	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
3 & 4 Methylphenol	ND		350	35	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
3,3'-Dichlorobenzidine	ND		700	95	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
3-Methylphenol	ND		350	35	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
3-Nitroaniline	ND		1700	77	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
4,6-Dinitro-2-methylphenol	ND		1700	350	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
4-Bromophenyl phenyl ether	ND		350	20	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
4-Chloro-3-methylphenol	ND		350	26	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
4-Chloroaniline	ND		350	87	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
4-Chlorophenyl phenyl ether	ND		350	22	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
4-Methylphenol	ND		350	35	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
4-Nitroaniline	ND		1700	77	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
4-Nitrophenol	ND		1700	100	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Acenaphthene	ND		350	11	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Acenaphthylene	ND		350	87	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Acetophenone	ND		350	21	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Aniline	ND		350	140	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Anthracene	ND		350	18	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Azobenzene	ND		350	23	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Benzaldehyde	ND		350	71	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Benzidine	ND		3500	1000	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Benzo[a]anthracene	32 J		350	21	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Benzo[a]pyrene	ND		350	21	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Benzo[b]fluoranthene	54 J		350	28	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Benzo[g,h,i]perylene	31 J		350	17	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Benzo[k]fluoranthene	ND		350	42	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Benzoic acid	ND		1700	350	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Benzyl alcohol	ND		350	11	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Bis(2-chloroethoxy)methane	ND		350	24	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Bis(2-chloroethyl)ether	ND		350	18	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Bis(2-ethylhexyl) phthalate	ND		350	49	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Butyl benzyl phthalate	ND		350	46	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Caprolactam	ND		350	110	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Carbazole	ND		350	38	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Chrysene	44 J		350	29	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Dibenz(a,h)anthracene	ND		350	20	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Dibenzofuran	ND		350	21	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Diethyl phthalate	ND		700	28	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Dimethyl phthalate	ND		350	24	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Di-n-butyl phthalate	ND		350	31	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Di-n-octyl phthalate	ND		350	43	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Diphenylamine	ND		350	47	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-10'-12'

Date Collected: 05/26/20 11:20

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-2

Matrix: Solid

Percent Solids: 91.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Famphur	ND		700	36	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Fluoranthene	51	J	350	38	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Fluorene	ND		350	19	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Hexachlorobenzene	ND		350	31	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Hexachlorobutadiene	ND		350	11	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Hexachlorocyclopentadiene	ND		1700	120	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Hexachloroethane	ND		350	23	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Hexadecane	55	J	350	14	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Indeno[1,2,3-cd]pyrene	ND		350	23	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Isophorone	ND		350	18	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Naphthalene	ND		350	33	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Nitrobenzene	ND		350	23	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
N-Nitrosodimethylamine	ND		350	39	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
N-Nitrosodi-n-propylamine	ND		350	72	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
N-Nitrosodiphenylamine	ND		350	22	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Pentachlorophenol	ND		1700	350	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Phenanthrene	28	J	350	18	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Phenol	ND		350	19	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Pyrene	87	J	350	13	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1
Pyridine	ND		700	42	ug/Kg	☼	06/03/20 13:30	06/05/20 14:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	75		35 - 120	06/03/20 13:30	06/05/20 14:45	1
2-Fluorobiphenyl	72		46 - 120	06/03/20 13:30	06/05/20 14:45	1
2-Fluorophenol (Surr)	68		43 - 120	06/03/20 13:30	06/05/20 14:45	1
Nitrobenzene-d5 (Surr)	70		46 - 120	06/03/20 13:30	06/05/20 14:45	1
Phenol-d5 (Surr)	75		46 - 120	06/03/20 13:30	06/05/20 14:45	1
Terphenyl-d14 (Surr)	90		46 - 120	06/03/20 13:30	06/05/20 14:45	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-13-12-13'

Date Collected: 05/26/20 12:30

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-3

Matrix: Solid

Percent Solids: 90.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		330	24	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
1,2,4,5-Tetrachlorobenzene	ND		330	49	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
1,2,4-Trichlorobenzene	ND		330	28	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
1,2-Dichlorobenzene	ND		330	22	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		330	22	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
1,3-Dichlorobenzene	ND		330	12	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
1,3-Dinitrobenzene	ND		330	72	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
1,4-Dichlorobenzene	ND		330	14	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
1,4-Dioxane	ND		670	67	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
1-Methylnaphthalene	ND		330	11	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
2,2'-oxybis[1-chloropropane]	ND		330	23	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
2,3,4,6-Tetrachlorophenol	ND		1600	140	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
2,4,5-Trichlorophenol	ND		330	10	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
2,4,6-Trichlorophenol	ND		330	10	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
2,4-Dichlorophenol	ND		330	10	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
2,4-Dimethylphenol	ND		330	67	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-13-12-13'

Lab Sample ID: 280-136963-3

Date Collected: 05/26/20 12:30

Matrix: Solid

Date Received: 05/27/20 12:00

Percent Solids: 90.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrophenol	ND		1600	340	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
2,4-Dinitrotoluene	ND		330	67	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
2,6-Dichlorophenol	ND		330	23	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
2,6-Dinitrotoluene	ND		330	28	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
2-Chloronaphthalene	ND		330	10	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
2-Chlorophenol	ND		330	21	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
2-Methylnaphthalene	ND		330	19	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
2-Methylphenol	ND		330	13	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
2-Nitroaniline	ND		1600	50	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
2-Nitrophenol	ND		330	10	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
3 & 4 Methylphenol	ND		330	33	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
3,3'-Dichlorobenzidine	ND		670	91	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
3-Methylphenol	ND		330	33	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
3-Nitroaniline	ND		1600	74	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
4,6-Dinitro-2-methylphenol	ND		1600	330	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
4-Bromophenyl phenyl ether	ND		330	19	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
4-Chloro-3-methylphenol	ND		330	25	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
4-Chloroaniline	ND		330	83	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
4-Chlorophenyl phenyl ether	ND		330	21	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
4-Methylphenol	ND		330	33	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
4-Nitroaniline	ND		1600	73	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
4-Nitrophenol	ND		1600	98	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Acenaphthene	ND		330	10	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Acenaphthylene	ND		330	83	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Acetophenone	ND		330	20	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Aniline	ND		330	130	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Anthracene	ND		330	17	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Azobenzene	ND		330	22	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Benzaldehyde	ND		330	68	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Benzidine	ND		3300	1000	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Benzo[a]anthracene	ND		330	20	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Benzo[a]pyrene	ND		330	20	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Benzo[b]fluoranthene	ND		330	26	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Benzo[g,h,i]perylene	ND		330	16	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Benzo[k]fluoranthene	ND		330	40	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Benzoic acid	ND		1600	330	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Benzyl alcohol	ND		330	10	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Bis(2-chloroethoxy)methane	ND		330	23	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Bis(2-chloroethyl)ether	ND		330	17	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Bis(2-ethylhexyl) phthalate	ND		330	46	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Butyl benzyl phthalate	ND		330	43	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Caprolactam	ND		330	110	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Carbazole	ND		330	36	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Chrysene	ND		330	27	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Dibenz(a,h)anthracene	ND		330	19	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Dibenzofuran	ND		330	20	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Diethyl phthalate	ND		670	26	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Dimethyl phthalate	ND		330	23	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Di-n-butyl phthalate	ND		330	29	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-13-12-13'

Date Collected: 05/26/20 12:30

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-3

Matrix: Solid

Percent Solids: 90.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate	ND		330	41	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Diphenylamine	ND		330	44	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Famphur	ND		670	34	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Fluoranthene	ND		330	36	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Fluorene	ND		330	18	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Hexachlorobenzene	ND		330	29	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Hexachlorobutadiene	ND		330	10	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Hexachlorocyclopentadiene	ND		1600	110	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Hexachloroethane	ND		330	21	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Hexadecane	17	J	330	13	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Indeno[1,2,3-cd]pyrene	ND		330	22	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Isophorone	ND		330	17	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Naphthalene	ND		330	31	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Nitrobenzene	ND		330	22	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
N-Nitrosodimethylamine	ND		330	37	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
N-Nitrosodi-n-propylamine	ND		330	69	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
N-Nitrosodiphenylamine	ND		330	21	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Pentachlorophenol	ND		1600	330	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Phenanthrene	ND		330	17	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Phenol	ND		330	18	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Pyrene	ND		330	12	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1
Pyridine	ND		670	40	ug/Kg	☼	06/02/20 07:08	06/04/20 23:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	66		35 - 120	06/02/20 07:08	06/04/20 23:51	1
2-Fluorobiphenyl	61		46 - 120	06/02/20 07:08	06/04/20 23:51	1
2-Fluorophenol (Surr)	65		43 - 120	06/02/20 07:08	06/04/20 23:51	1
Nitrobenzene-d5 (Surr)	65		46 - 120	06/02/20 07:08	06/04/20 23:51	1
Phenol-d5 (Surr)	69		46 - 120	06/02/20 07:08	06/04/20 23:51	1
Terphenyl-d14 (Surr)	88		46 - 120	06/02/20 07:08	06/04/20 23:51	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-13-GW

Date Collected: 05/26/20 12:50

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		9.9	1.7	ug/L		05/28/20 12:21	06/04/20 20:28	1
1,2,4,5-Tetrachlorobenzene	ND		9.9	1.7	ug/L		05/28/20 12:21	06/04/20 20:28	1
1,2,4-Trichlorobenzene	ND	**1	3.9	0.58	ug/L		05/28/20 12:21	06/04/20 20:28	1
1,2-Dichlorobenzene	ND		3.9	0.23	ug/L		05/28/20 12:21	06/04/20 20:28	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		9.9	0.23	ug/L		05/28/20 12:21	06/04/20 20:28	1
1,3-Dichlorobenzene	ND		9.9	0.30	ug/L		05/28/20 12:21	06/04/20 20:28	1
1,3-Dinitrobenzene	ND		9.9	2.0	ug/L		05/28/20 12:21	06/04/20 20:28	1
1,4-Dichlorobenzene	ND		3.9	1.3	ug/L		05/28/20 12:21	06/04/20 20:28	1
1,4-Dioxane	ND		20	0.44	ug/L		05/28/20 12:21	06/04/20 20:28	1
1-Methylnaphthalene	ND		3.9	0.23	ug/L		05/28/20 12:21	06/04/20 20:28	1
2,2'-oxybis[1-chloropropane]	ND		9.9	0.28	ug/L		05/28/20 12:21	06/04/20 20:28	1
2,3,4,6-Tetrachlorophenol	ND		49	2.0	ug/L		05/28/20 12:21	06/04/20 20:28	1
2,4,5-Trichlorophenol	ND		9.9	2.0	ug/L		05/28/20 12:21	06/04/20 20:28	1
2,4,6-Trichlorophenol	ND		9.9	0.29	ug/L		05/28/20 12:21	06/04/20 20:28	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-13-GW

Lab Sample ID: 280-136963-4

Date Collected: 05/26/20 12:50

Matrix: Water

Date Received: 05/27/20 12:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND		9.9	0.63	ug/L		05/28/20 12:21	06/04/20 20:28	1
2,4-Dimethylphenol	ND		9.9	0.57	ug/L		05/28/20 12:21	06/04/20 20:28	1
2,4-Dinitrophenol	ND		30	9.9	ug/L		05/28/20 12:21	06/04/20 20:28	1
2,4-Dinitrotoluene	ND		9.9	1.6	ug/L		05/28/20 12:21	06/04/20 20:28	1
2,6-Dichlorophenol	ND		9.9	1.3	ug/L		05/28/20 12:21	06/04/20 20:28	1
2,6-Dinitrotoluene	ND		9.9	1.9	ug/L		05/28/20 12:21	06/04/20 20:28	1
2-Chloronaphthalene	ND		3.9	0.26	ug/L		05/28/20 12:21	06/04/20 20:28	1
2-Chlorophenol	ND		9.9	2.0	ug/L		05/28/20 12:21	06/04/20 20:28	1
2-Methylnaphthalene	ND		3.9	1.5	ug/L		05/28/20 12:21	06/04/20 20:28	1
2-Methylphenol	ND		9.9	0.97	ug/L		05/28/20 12:21	06/04/20 20:28	1
2-Nitroaniline	ND	*	9.9	1.7	ug/L		05/28/20 12:21	06/04/20 20:28	1
2-Nitrophenol	ND		9.9	0.38	ug/L		05/28/20 12:21	06/04/20 20:28	1
3 & 4 Methylphenol	ND		9.9	0.25	ug/L		05/28/20 12:21	06/04/20 20:28	1
3,3'-Dichlorobenzidine	ND		49	2.0	ug/L		05/28/20 12:21	06/04/20 20:28	1
3-Methylphenol	ND		9.9	0.25	ug/L		05/28/20 12:21	06/04/20 20:28	1
3-Nitroaniline	ND		9.9	2.0	ug/L		05/28/20 12:21	06/04/20 20:28	1
4,6-Dinitro-2-methylphenol	ND		49	3.9	ug/L		05/28/20 12:21	06/04/20 20:28	1
4-Bromophenyl phenyl ether	ND		9.9	0.42	ug/L		05/28/20 12:21	06/04/20 20:28	1
4-Chloro-3-methylphenol	ND		9.9	2.4	ug/L		05/28/20 12:21	06/04/20 20:28	1
4-Chloroaniline	ND		9.9	2.1	ug/L		05/28/20 12:21	06/04/20 20:28	1
4-Chlorophenyl phenyl ether	ND		9.9	1.6	ug/L		05/28/20 12:21	06/04/20 20:28	1
4-Methylphenol	ND		9.9	0.25	ug/L		05/28/20 12:21	06/04/20 20:28	1
4-Nitroaniline	ND		9.9	2.0	ug/L		05/28/20 12:21	06/04/20 20:28	1
4-Nitrophenol	ND		9.9	1.2	ug/L		05/28/20 12:21	06/04/20 20:28	1
Acenaphthene	ND		3.9	0.28	ug/L		05/28/20 12:21	06/04/20 20:28	1
Acenaphthylene	ND		3.9	0.48	ug/L		05/28/20 12:21	06/04/20 20:28	1
Acetophenone	ND		9.9	0.24	ug/L		05/28/20 12:21	06/04/20 20:28	1
Aniline	ND		9.9	2.0	ug/L		05/28/20 12:21	06/04/20 20:28	1
Anthracene	ND		3.9	0.41	ug/L		05/28/20 12:21	06/04/20 20:28	1
Azobenzene	ND		3.9	0.23	ug/L		05/28/20 12:21	06/04/20 20:28	1
Benzaldehyde	ND		4.9	2.0	ug/L		05/28/20 12:21	06/04/20 20:28	1
Benzidine	ND	*1	99	49	ug/L		05/28/20 12:21	06/04/20 20:28	1
Benzo[a]anthracene	ND		3.9	0.34	ug/L		05/28/20 12:21	06/04/20 20:28	1
Benzo[a]pyrene	ND		3.9	0.31	ug/L		05/28/20 12:21	06/04/20 20:28	1
Benzo[b]fluoranthene	ND		3.9	0.52	ug/L		05/28/20 12:21	06/04/20 20:28	1
Benzo[g,h,i]perylene	ND		3.9	0.49	ug/L		05/28/20 12:21	06/04/20 20:28	1
Benzo[k]fluoranthene	ND		3.9	0.45	ug/L		05/28/20 12:21	06/04/20 20:28	1
Benzoic acid	ND		25	9.9	ug/L		05/28/20 12:21	06/04/20 20:28	1
Benzyl alcohol	0.27	J	9.9	0.23	ug/L		05/28/20 12:21	06/04/20 20:28	1
Bis(2-chloroethoxy)methane	ND		9.9	0.96	ug/L		05/28/20 12:21	06/04/20 20:28	1
Bis(2-chloroethyl)ether	ND		9.9	0.82	ug/L		05/28/20 12:21	06/04/20 20:28	1
Bis(2-ethylhexyl) phthalate	ND		9.9	0.55	ug/L		05/28/20 12:21	06/04/20 20:28	1
Butyl benzyl phthalate	ND		3.9	0.99	ug/L		05/28/20 12:21	06/04/20 20:28	1
Caprolactam	ND		4.9	2.5	ug/L		05/28/20 12:21	06/04/20 20:28	1
Carbazole	ND		3.9	0.42	ug/L		05/28/20 12:21	06/04/20 20:28	1
Chrysene	ND		3.9	0.53	ug/L		05/28/20 12:21	06/04/20 20:28	1
Dibenz(a,h)anthracene	ND		3.9	0.50	ug/L		05/28/20 12:21	06/04/20 20:28	1
Dibenzofuran	ND		3.9	0.29	ug/L		05/28/20 12:21	06/04/20 20:28	1
Diethyl phthalate	ND		3.9	0.37	ug/L		05/28/20 12:21	06/04/20 20:28	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-13-GW

Date Collected: 05/26/20 12:50

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl phthalate	ND		3.9	0.21	ug/L		05/28/20 12:21	06/04/20 20:28	1
Di-n-butyl phthalate	ND		3.9	1.1	ug/L		05/28/20 12:21	06/04/20 20:28	1
Di-n-octyl phthalate	ND		3.9	0.34	ug/L		05/28/20 12:21	06/04/20 20:28	1
Diphenylamine	ND		9.9	1.0	ug/L		05/28/20 12:21	06/04/20 20:28	1
Famphur	ND		99	1.5	ug/L		05/28/20 12:21	06/04/20 20:28	1
Fluoranthene	ND		3.9	0.20	ug/L		05/28/20 12:21	06/04/20 20:28	1
Fluorene	ND		3.9	0.31	ug/L		05/28/20 12:21	06/04/20 20:28	1
Hexachlorobenzene	ND		9.9	0.65	ug/L		05/28/20 12:21	06/04/20 20:28	1
Hexachlorobutadiene	ND	*1	9.9	3.3	ug/L		05/28/20 12:21	06/04/20 20:28	1
Hexachlorocyclopentadiene	ND		49	3.1	ug/L		05/28/20 12:21	06/04/20 20:28	1
Hexachloroethane	ND		9.9	0.97	ug/L		05/28/20 12:21	06/04/20 20:28	1
Hexadecane	ND		9.9	0.53	ug/L		05/28/20 12:21	06/04/20 20:28	1
Indeno[1,2,3-cd]pyrene	ND		3.9	0.64	ug/L		05/28/20 12:21	06/04/20 20:28	1
Isophorone	ND		9.9	0.21	ug/L		05/28/20 12:21	06/04/20 20:28	1
Naphthalene	ND	*1	3.9	0.29	ug/L		05/28/20 12:21	06/04/20 20:28	1
Nitrobenzene	ND		9.9	0.80	ug/L		05/28/20 12:21	06/04/20 20:28	1
N-Nitrosodimethylamine	ND		9.9	0.29	ug/L		05/28/20 12:21	06/04/20 20:28	1
N-Nitrosodi-n-propylamine	ND		9.9	0.34	ug/L		05/28/20 12:21	06/04/20 20:28	1
N-Nitrosodiphenylamine	ND		9.9	0.43	ug/L		05/28/20 12:21	06/04/20 20:28	1
Pentachlorophenol	ND		49	20	ug/L		05/28/20 12:21	06/04/20 20:28	1
Phenanthrene	ND		3.9	0.26	ug/L		05/28/20 12:21	06/04/20 20:28	1
Phenol	ND		9.9	2.0	ug/L		05/28/20 12:21	06/04/20 20:28	1
Pyrene	ND		9.9	0.36	ug/L		05/28/20 12:21	06/04/20 20:28	1
Pyridine	ND		20	1.7	ug/L		05/28/20 12:21	06/04/20 20:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	64		48 - 120	05/28/20 12:21	06/04/20 20:28	1
2-Fluorophenol (Surr)	68		41 - 120	05/28/20 12:21	06/04/20 20:28	1
2,4,6-Tribromophenol (Surr)	74		42 - 131	05/28/20 12:21	06/04/20 20:28	1
Nitrobenzene-d5 (Surr)	82		42 - 120	05/28/20 12:21	06/04/20 20:28	1
Phenol-d5 (Surr)	72		45 - 124	05/28/20 12:21	06/04/20 20:28	1
Terphenyl-d14 (Surr)	53		20 - 130	05/28/20 12:21	06/04/20 20:28	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-15-10-12'

Date Collected: 05/26/20 14:05

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-5

Matrix: Solid

Percent Solids: 92.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		330	24	ug/Kg	✱	06/03/20 13:30	06/05/20 15:14	1
1,2,4,5-Tetrachlorobenzene	ND		330	49	ug/Kg	✱	06/03/20 13:30	06/05/20 15:14	1
1,2,4-Trichlorobenzene	ND		330	28	ug/Kg	✱	06/03/20 13:30	06/05/20 15:14	1
1,2-Dichlorobenzene	ND		330	22	ug/Kg	✱	06/03/20 13:30	06/05/20 15:14	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		330	22	ug/Kg	✱	06/03/20 13:30	06/05/20 15:14	1
1,3-Dichlorobenzene	ND		330	12	ug/Kg	✱	06/03/20 13:30	06/05/20 15:14	1
1,3-Dinitrobenzene	ND		330	71	ug/Kg	✱	06/03/20 13:30	06/05/20 15:14	1
1,4-Dichlorobenzene	ND		330	14	ug/Kg	✱	06/03/20 13:30	06/05/20 15:14	1
1,4-Dioxane	ND		660	66	ug/Kg	✱	06/03/20 13:30	06/05/20 15:14	1
1-Methylnaphthalene	ND		330	11	ug/Kg	✱	06/03/20 13:30	06/05/20 15:14	1
2,2'-oxybis[1-chloropropane]	ND		330	23	ug/Kg	✱	06/03/20 13:30	06/05/20 15:14	1
2,3,4,6-Tetrachlorophenol	ND		1600	140	ug/Kg	✱	06/03/20 13:30	06/05/20 15:14	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-15-10-12'

Lab Sample ID: 280-136963-5

Date Collected: 05/26/20 14:05

Matrix: Solid

Date Received: 05/27/20 12:00

Percent Solids: 92.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		330	10	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
2,4,6-Trichlorophenol	ND		330	10	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
2,4-Dichlorophenol	ND		330	10	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
2,4-Dimethylphenol	ND		330	66	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
2,4-Dinitrophenol	ND		1600	340	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
2,4-Dinitrotoluene	ND		330	66	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
2,6-Dichlorophenol	ND		330	23	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
2,6-Dinitrotoluene	ND		330	28	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
2-Chloronaphthalene	ND		330	10	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
2-Chlorophenol	ND		330	21	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
2-Methylnaphthalene	ND		330	19	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
2-Methylphenol	ND		330	13	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
2-Nitroaniline	ND		1600	50	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
2-Nitrophenol	ND		330	10	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
3 & 4 Methylphenol	ND		330	33	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
3,3'-Dichlorobenzidine	ND		660	91	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
3-Methylphenol	ND		330	33	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
3-Nitroaniline	ND		1600	73	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
4,6-Dinitro-2-methylphenol	ND		1600	330	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
4-Bromophenyl phenyl ether	ND		330	19	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
4-Chloro-3-methylphenol	ND		330	25	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
4-Chloroaniline	ND		330	82	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
4-Chlorophenyl phenyl ether	ND		330	21	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
4-Methylphenol	ND		330	33	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
4-Nitroaniline	ND		1600	73	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
4-Nitrophenol	ND		1600	98	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Acenaphthene	ND		330	10	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Acenaphthylene	ND		330	83	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Acetophenone	ND		330	20	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Aniline	ND		330	130	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Anthracene	ND		330	17	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Azobenzene	ND		330	22	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Benzaldehyde	ND		330	67	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Benzidine	ND		3300	1000	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Benzo[a]anthracene	ND		330	20	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Benzo[a]pyrene	ND		330	20	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Benzo[b]fluoranthene	ND		330	26	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Benzo[g,h,i]perylene	ND		330	16	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Benzo[k]fluoranthene	ND		330	40	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Benzoic acid	ND		1600	330	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Benzyl alcohol	ND		330	10	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Bis(2-chloroethoxy)methane	ND		330	23	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Bis(2-chloroethyl)ether	ND		330	17	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Bis(2-ethylhexyl) phthalate	ND		330	46	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Butyl benzyl phthalate	ND		330	43	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Caprolactam	ND		330	110	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Carbazole	ND		330	36	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Chrysene	ND		330	27	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Dibenz(a,h)anthracene	ND		330	19	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-15-10-12'

Lab Sample ID: 280-136963-5

Date Collected: 05/26/20 14:05

Matrix: Solid

Date Received: 05/27/20 12:00

Percent Solids: 92.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenzofuran	ND		330	20	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Diethyl phthalate	ND		660	26	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Dimethyl phthalate	ND		330	23	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Di-n-butyl phthalate	ND		330	29	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Di-n-octyl phthalate	ND		330	41	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Diphenylamine	ND		330	44	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Famphur	ND		660	34	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Fluoranthene	ND		330	36	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Fluorene	ND		330	18	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Hexachlorobenzene	ND		330	29	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Hexachlorobutadiene	ND		330	10	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Hexachlorocyclopentadiene	ND		1600	110	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Hexachloroethane	ND		330	21	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Hexadecane	22	J	330	13	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Indeno[1,2,3-cd]pyrene	ND		330	22	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Isophorone	ND		330	17	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Naphthalene	ND		330	31	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Nitrobenzene	ND		330	22	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
N-Nitrosodimethylamine	ND		330	37	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
N-Nitrosodi-n-propylamine	ND		330	68	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
N-Nitrosodiphenylamine	ND		330	21	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Pentachlorophenol	ND		1600	330	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Phenanthrene	ND		330	17	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Phenol	ND		330	18	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Pyrene	ND		330	12	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1
Pyridine	ND		660	40	ug/Kg	☼	06/03/20 13:30	06/05/20 15:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	68		35 - 120	06/03/20 13:30	06/05/20 15:14	1
2-Fluorobiphenyl	67		46 - 120	06/03/20 13:30	06/05/20 15:14	1
2-Fluorophenol (Surr)	70		43 - 120	06/03/20 13:30	06/05/20 15:14	1
Nitrobenzene-d5 (Surr)	71		46 - 120	06/03/20 13:30	06/05/20 15:14	1
Phenol-d5 (Surr)	75		46 - 120	06/03/20 13:30	06/05/20 15:14	1
Terphenyl-d14 (Surr)	86		46 - 120	06/03/20 13:30	06/05/20 15:14	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-15-GW

Lab Sample ID: 280-136963-6

Date Collected: 05/26/20 14:30

Matrix: Water

Date Received: 05/27/20 12:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		11	1.9	ug/L		05/28/20 12:21	06/04/20 20:57	1
1,2,4,5-Tetrachlorobenzene	ND		11	1.8	ug/L		05/28/20 12:21	06/04/20 20:57	1
1,2,4-Trichlorobenzene	ND	* *1	4.3	0.63	ug/L		05/28/20 12:21	06/04/20 20:57	1
1,2-Dichlorobenzene	ND		4.3	0.25	ug/L		05/28/20 12:21	06/04/20 20:57	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		11	0.25	ug/L		05/28/20 12:21	06/04/20 20:57	1
1,3-Dichlorobenzene	ND		11	0.32	ug/L		05/28/20 12:21	06/04/20 20:57	1
1,3-Dinitrobenzene	ND		11	2.1	ug/L		05/28/20 12:21	06/04/20 20:57	1
1,4-Dichlorobenzene	ND		4.3	1.4	ug/L		05/28/20 12:21	06/04/20 20:57	1
1,4-Dioxane	1.9	J	21	0.48	ug/L		05/28/20 12:21	06/04/20 20:57	1
1-Methylnaphthalene	4.6		4.3	0.25	ug/L		05/28/20 12:21	06/04/20 20:57	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-15-GW

Lab Sample ID: 280-136963-6

Date Collected: 05/26/20 14:30

Matrix: Water

Date Received: 05/27/20 12:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2'-oxybis[1-chloropropane]	ND		11	0.30	ug/L		05/28/20 12:21	06/04/20 20:57	1
2,3,4,6-Tetrachlorophenol	ND		53	2.1	ug/L		05/28/20 12:21	06/04/20 20:57	1
2,4,5-Trichlorophenol	ND		11	2.2	ug/L		05/28/20 12:21	06/04/20 20:57	1
2,4,6-Trichlorophenol	ND		11	0.31	ug/L		05/28/20 12:21	06/04/20 20:57	1
2,4-Dichlorophenol	ND		11	0.68	ug/L		05/28/20 12:21	06/04/20 20:57	1
2,4-Dimethylphenol	ND		11	0.62	ug/L		05/28/20 12:21	06/04/20 20:57	1
2,4-Dinitrophenol	ND		32	11	ug/L		05/28/20 12:21	06/04/20 20:57	1
2,4-Dinitrotoluene	ND		11	1.8	ug/L		05/28/20 12:21	06/04/20 20:57	1
2,6-Dichlorophenol	ND		11	1.4	ug/L		05/28/20 12:21	06/04/20 20:57	1
2,6-Dinitrotoluene	ND		11	2.0	ug/L		05/28/20 12:21	06/04/20 20:57	1
2-Chloronaphthalene	ND		4.3	0.28	ug/L		05/28/20 12:21	06/04/20 20:57	1
2-Chlorophenol	ND		11	2.1	ug/L		05/28/20 12:21	06/04/20 20:57	1
2-Methylnaphthalene	7.9		4.3	1.6	ug/L		05/28/20 12:21	06/04/20 20:57	1
2-Methylphenol	ND		11	1.0	ug/L		05/28/20 12:21	06/04/20 20:57	1
2-Nitroaniline	ND	*	11	1.8	ug/L		05/28/20 12:21	06/04/20 20:57	1
2-Nitrophenol	ND		11	0.42	ug/L		05/28/20 12:21	06/04/20 20:57	1
3 & 4 Methylphenol	ND		11	0.27	ug/L		05/28/20 12:21	06/04/20 20:57	1
3,3'-Dichlorobenzidine	ND		53	2.1	ug/L		05/28/20 12:21	06/04/20 20:57	1
3-Methylphenol	ND		11	0.27	ug/L		05/28/20 12:21	06/04/20 20:57	1
3-Nitroaniline	ND		11	2.1	ug/L		05/28/20 12:21	06/04/20 20:57	1
4,6-Dinitro-2-methylphenol	ND		53	4.3	ug/L		05/28/20 12:21	06/04/20 20:57	1
4-Bromophenyl phenyl ether	ND		11	0.46	ug/L		05/28/20 12:21	06/04/20 20:57	1
4-Chloro-3-methylphenol	ND		11	2.6	ug/L		05/28/20 12:21	06/04/20 20:57	1
4-Chloroaniline	ND		11	2.3	ug/L		05/28/20 12:21	06/04/20 20:57	1
4-Chlorophenyl phenyl ether	ND		11	1.8	ug/L		05/28/20 12:21	06/04/20 20:57	1
4-Methylphenol	ND		11	0.27	ug/L		05/28/20 12:21	06/04/20 20:57	1
4-Nitroaniline	ND		11	2.1	ug/L		05/28/20 12:21	06/04/20 20:57	1
4-Nitrophenol	ND		11	1.3	ug/L		05/28/20 12:21	06/04/20 20:57	1
Acenaphthene	0.86	J	4.3	0.30	ug/L		05/28/20 12:21	06/04/20 20:57	1
Acenaphthylene	ND		4.3	0.52	ug/L		05/28/20 12:21	06/04/20 20:57	1
Acetophenone	0.38	J	11	0.26	ug/L		05/28/20 12:21	06/04/20 20:57	1
Aniline	ND		11	2.1	ug/L		05/28/20 12:21	06/04/20 20:57	1
Anthracene	ND		4.3	0.45	ug/L		05/28/20 12:21	06/04/20 20:57	1
Azobenzene	ND		4.3	0.25	ug/L		05/28/20 12:21	06/04/20 20:57	1
Benzaldehyde	ND		5.3	2.1	ug/L		05/28/20 12:21	06/04/20 20:57	1
Benzidine	ND	*1	110	53	ug/L		05/28/20 12:21	06/04/20 20:57	1
Benzo[a]anthracene	ND		4.3	0.37	ug/L		05/28/20 12:21	06/04/20 20:57	1
Benzo[a]pyrene	ND		4.3	0.33	ug/L		05/28/20 12:21	06/04/20 20:57	1
Benzo[b]fluoranthene	ND		4.3	0.57	ug/L		05/28/20 12:21	06/04/20 20:57	1
Benzo[g,h,i]perylene	ND		4.3	0.53	ug/L		05/28/20 12:21	06/04/20 20:57	1
Benzo[k]fluoranthene	ND		4.3	0.49	ug/L		05/28/20 12:21	06/04/20 20:57	1
Benzoic acid	ND		27	11	ug/L		05/28/20 12:21	06/04/20 20:57	1
Benzyl alcohol	0.62	J	11	0.25	ug/L		05/28/20 12:21	06/04/20 20:57	1
Bis(2-chloroethoxy)methane	ND		11	1.0	ug/L		05/28/20 12:21	06/04/20 20:57	1
Bis(2-chloroethyl)ether	ND		11	0.89	ug/L		05/28/20 12:21	06/04/20 20:57	1
Bis(2-ethylhexyl) phthalate	ND		11	0.60	ug/L		05/28/20 12:21	06/04/20 20:57	1
Butyl benzyl phthalate	ND		4.3	1.1	ug/L		05/28/20 12:21	06/04/20 20:57	1
Caprolactam	ND		5.3	2.7	ug/L		05/28/20 12:21	06/04/20 20:57	1
Carbazole	ND		4.3	0.46	ug/L		05/28/20 12:21	06/04/20 20:57	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-15-GW

Lab Sample ID: 280-136963-6

Date Collected: 05/26/20 14:30

Matrix: Water

Date Received: 05/27/20 12:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	ND		4.3	0.58	ug/L		05/28/20 12:21	06/04/20 20:57	1
Dibenz(a,h)anthracene	ND		4.3	0.54	ug/L		05/28/20 12:21	06/04/20 20:57	1
Dibenzofuran	ND		4.3	0.31	ug/L		05/28/20 12:21	06/04/20 20:57	1
Diethyl phthalate	0.85	J	4.3	0.41	ug/L		05/28/20 12:21	06/04/20 20:57	1
Dimethyl phthalate	ND		4.3	0.22	ug/L		05/28/20 12:21	06/04/20 20:57	1
Di-n-butyl phthalate	ND		4.3	1.2	ug/L		05/28/20 12:21	06/04/20 20:57	1
Di-n-octyl phthalate	ND		4.3	0.37	ug/L		05/28/20 12:21	06/04/20 20:57	1
Diphenylamine	ND		11	1.1	ug/L		05/28/20 12:21	06/04/20 20:57	1
Famphur	ND		110	1.6	ug/L		05/28/20 12:21	06/04/20 20:57	1
Fluoranthene	ND		4.3	0.21	ug/L		05/28/20 12:21	06/04/20 20:57	1
Fluorene	0.56	J	4.3	0.33	ug/L		05/28/20 12:21	06/04/20 20:57	1
Hexachlorobenzene	ND		11	0.70	ug/L		05/28/20 12:21	06/04/20 20:57	1
Hexachlorobutadiene	ND	*1	11	3.5	ug/L		05/28/20 12:21	06/04/20 20:57	1
Hexachlorocyclopentadiene	ND		53	3.3	ug/L		05/28/20 12:21	06/04/20 20:57	1
Hexachloroethane	ND		11	1.0	ug/L		05/28/20 12:21	06/04/20 20:57	1
Hexadecane	5.3	J	11	0.58	ug/L		05/28/20 12:21	06/04/20 20:57	1
Indeno[1,2,3-cd]pyrene	ND		4.3	0.69	ug/L		05/28/20 12:21	06/04/20 20:57	1
Isophorone	ND		11	0.22	ug/L		05/28/20 12:21	06/04/20 20:57	1
Naphthalene	21	*1	4.3	0.31	ug/L		05/28/20 12:21	06/04/20 20:57	1
Nitrobenzene	ND		11	0.86	ug/L		05/28/20 12:21	06/04/20 20:57	1
N-Nitrosodimethylamine	ND		11	0.31	ug/L		05/28/20 12:21	06/04/20 20:57	1
N-Nitrosodi-n-propylamine	ND		11	0.37	ug/L		05/28/20 12:21	06/04/20 20:57	1
N-Nitrosodiphenylamine	ND		11	0.47	ug/L		05/28/20 12:21	06/04/20 20:57	1
Pentachlorophenol	ND		53	21	ug/L		05/28/20 12:21	06/04/20 20:57	1
Phenanthrene	ND		4.3	0.28	ug/L		05/28/20 12:21	06/04/20 20:57	1
Phenol	ND		11	2.1	ug/L		05/28/20 12:21	06/04/20 20:57	1
Pyrene	ND		11	0.39	ug/L		05/28/20 12:21	06/04/20 20:57	1
Pyridine	ND		21	1.8	ug/L		05/28/20 12:21	06/04/20 20:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	67		48 - 120	05/28/20 12:21	06/04/20 20:57	1
2-Fluorophenol (Surr)	72		41 - 120	05/28/20 12:21	06/04/20 20:57	1
2,4,6-Tribromophenol (Surr)	78		42 - 131	05/28/20 12:21	06/04/20 20:57	1
Nitrobenzene-d5 (Surr)	82		42 - 120	05/28/20 12:21	06/04/20 20:57	1
Phenol-d5 (Surr)	74		45 - 124	05/28/20 12:21	06/04/20 20:57	1
Terphenyl-d14 (Surr)	37		20 - 130	05/28/20 12:21	06/04/20 20:57	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-01-10'-12'

Lab Sample ID: 280-136963-9

Date Collected: 05/27/20 10:30

Matrix: Solid

Date Received: 05/27/20 12:00

Percent Solids: 96.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		310	23	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
1,2,4,5-Tetrachlorobenzene	ND		310	46	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
1,2,4-Trichlorobenzene	ND		310	27	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
1,2-Dichlorobenzene	ND		310	21	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		310	21	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
1,3-Dichlorobenzene	ND		310	11	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
1,3-Dinitrobenzene	ND		310	67	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
1,4-Dichlorobenzene	ND		310	13	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-01-10'-12'

Lab Sample ID: 280-136963-9

Date Collected: 05/27/20 10:30

Matrix: Solid

Date Received: 05/27/20 12:00

Percent Solids: 96.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		630	63	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
1-Methylnaphthalene	ND		310	11	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
2,2'-oxybis[1-chloropropane]	ND		310	22	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
2,3,4,6-Tetrachlorophenol	ND		1500	130	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
2,4,5-Trichlorophenol	ND		310	9.5	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
2,4,6-Trichlorophenol	ND		310	9.5	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
2,4-Dichlorophenol	ND		310	9.5	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
2,4-Dimethylphenol	ND		310	63	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
2,4-Dinitrophenol	ND		1500	320	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
2,4-Dinitrotoluene	ND		310	63	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
2,6-Dichlorophenol	ND		310	21	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
2,6-Dinitrotoluene	ND		310	27	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
2-Chloronaphthalene	ND		310	9.5	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
2-Chlorophenol	ND		310	20	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
2-Methylnaphthalene	ND		310	18	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
2-Methylphenol	ND		310	12	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
2-Nitroaniline	ND		1500	47	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
2-Nitrophenol	ND		310	9.5	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
3 & 4 Methylphenol	ND		310	31	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
3,3'-Dichlorobenzidine	ND		630	85	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
3-Methylphenol	ND		310	31	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
3-Nitroaniline	ND		1500	69	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
4,6-Dinitro-2-methylphenol	ND		1500	310	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
4-Bromophenyl phenyl ether	ND		310	18	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
4-Chloro-3-methylphenol	ND		310	24	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
4-Chloroaniline	ND		310	78	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
4-Chlorophenyl phenyl ether	ND		310	20	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
4-Methylphenol	ND		310	31	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
4-Nitroaniline	ND		1500	69	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
4-Nitrophenol	ND		1500	92	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Acenaphthene	ND		310	9.8	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Acenaphthylene	ND		310	78	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Acetophenone	ND		310	19	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Aniline	ND		310	120	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Anthracene	ND		310	16	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Azobenzene	ND		310	21	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Benzaldehyde	ND		310	64	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Benzidine	ND		3100	940	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Benzo[a]anthracene	ND		310	19	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Benzo[a]pyrene	ND		310	19	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Benzo[b]fluoranthene	ND		310	25	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Benzo[g,h,i]perylene	ND		310	15	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Benzo[k]fluoranthene	ND		310	38	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Benzoic acid	ND		1500	310	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Benzyl alcohol	ND		310	9.5	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Bis(2-chloroethoxy)methane	ND		310	22	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Bis(2-chloroethyl)ether	ND		310	16	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Bis(2-ethylhexyl) phthalate	ND		310	44	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Butyl benzyl phthalate	ND		310	41	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-01-10'-12'

Date Collected: 05/27/20 10:30

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-9

Matrix: Solid

Percent Solids: 96.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Caprolactam	ND		310	100	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Carbazole	ND		310	34	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Chrysene	ND		310	26	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Dibenz(a,h)anthracene	ND		310	18	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Dibenzofuran	ND		310	19	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Diethyl phthalate	ND		630	25	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Dimethyl phthalate	ND		310	22	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Di-n-butyl phthalate	ND		310	28	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Di-n-octyl phthalate	ND		310	38	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Diphenylamine	ND		310	42	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Famphur	ND		630	32	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Fluoranthene	ND		310	34	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Fluorene	ND		310	17	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Hexachlorobenzene	ND		310	28	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Hexachlorobutadiene	ND		310	9.5	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Hexachlorocyclopentadiene	ND		1500	110	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Hexachloroethane	ND		310	20	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Hexadecane	28	J	310	13	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Indeno[1,2,3-cd]pyrene	ND		310	21	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Isophorone	ND		310	16	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Naphthalene	ND		310	29	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Nitrobenzene	ND		310	21	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
N-Nitrosodimethylamine	ND		310	35	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
N-Nitrosodi-n-propylamine	ND		310	64	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
N-Nitrosodiphenylamine	ND		310	20	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Pentachlorophenol	ND		1500	310	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Phenanthrene	ND		310	16	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Phenol	ND		310	17	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Pyrene	ND		310	11	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1
Pyridine	ND		630	38	ug/Kg	☼	06/03/20 13:30	06/05/20 15:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	70		35 - 120	06/03/20 13:30	06/05/20 15:43	1
2-Fluorobiphenyl	71		46 - 120	06/03/20 13:30	06/05/20 15:43	1
2-Fluorophenol (Surr)	75		43 - 120	06/03/20 13:30	06/05/20 15:43	1
Nitrobenzene-d5 (Surr)	81		46 - 120	06/03/20 13:30	06/05/20 15:43	1
Phenol-d5 (Surr)	83		46 - 120	06/03/20 13:30	06/05/20 15:43	1
Terphenyl-d14 (Surr)	90		46 - 120	06/03/20 13:30	06/05/20 15:43	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-01-GW

Date Collected: 05/27/20 11:00

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-10

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		11	1.9	ug/L		05/28/20 12:21	06/04/20 21:26	1
1,2,4,5-Tetrachlorobenzene	ND		11	1.9	ug/L		05/28/20 12:21	06/04/20 21:26	1
1,2,4-Trichlorobenzene	ND	* *1	4.3	0.64	ug/L		05/28/20 12:21	06/04/20 21:26	1
1,2-Dichlorobenzene	ND		4.3	0.25	ug/L		05/28/20 12:21	06/04/20 21:26	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		11	0.25	ug/L		05/28/20 12:21	06/04/20 21:26	1
1,3-Dichlorobenzene	ND		11	0.32	ug/L		05/28/20 12:21	06/04/20 21:26	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-01-GW

Lab Sample ID: 280-136963-10

Date Collected: 05/27/20 11:00

Matrix: Water

Date Received: 05/27/20 12:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dinitrobenzene	ND		11	2.2	ug/L		05/28/20 12:21	06/04/20 21:26	1
1,4-Dichlorobenzene	ND		4.3	1.4	ug/L		05/28/20 12:21	06/04/20 21:26	1
1,4-Dioxane	ND		22	0.48	ug/L		05/28/20 12:21	06/04/20 21:26	1
1-Methylnaphthalene	ND		4.3	0.25	ug/L		05/28/20 12:21	06/04/20 21:26	1
2,2'-oxybis[1-chloropropane]	ND		11	0.30	ug/L		05/28/20 12:21	06/04/20 21:26	1
2,3,4,6-Tetrachlorophenol	ND		54	2.2	ug/L		05/28/20 12:21	06/04/20 21:26	1
2,4,5-Trichlorophenol	ND		11	2.2	ug/L		05/28/20 12:21	06/04/20 21:26	1
2,4,6-Trichlorophenol	ND		11	0.31	ug/L		05/28/20 12:21	06/04/20 21:26	1
2,4-Dichlorophenol	ND		11	0.69	ug/L		05/28/20 12:21	06/04/20 21:26	1
2,4-Dimethylphenol	ND		11	0.63	ug/L		05/28/20 12:21	06/04/20 21:26	1
2,4-Dinitrophenol	ND		32	11	ug/L		05/28/20 12:21	06/04/20 21:26	1
2,4-Dinitrotoluene	ND		11	1.8	ug/L		05/28/20 12:21	06/04/20 21:26	1
2,6-Dichlorophenol	ND		11	1.5	ug/L		05/28/20 12:21	06/04/20 21:26	1
2,6-Dinitrotoluene	ND		11	2.0	ug/L		05/28/20 12:21	06/04/20 21:26	1
2-Chloronaphthalene	ND		4.3	0.28	ug/L		05/28/20 12:21	06/04/20 21:26	1
2-Chlorophenol	ND		11	2.2	ug/L		05/28/20 12:21	06/04/20 21:26	1
2-Methylnaphthalene	ND		4.3	1.6	ug/L		05/28/20 12:21	06/04/20 21:26	1
2-Methylphenol	ND		11	1.1	ug/L		05/28/20 12:21	06/04/20 21:26	1
2-Nitroaniline	ND *		11	1.9	ug/L		05/28/20 12:21	06/04/20 21:26	1
2-Nitrophenol	ND		11	0.42	ug/L		05/28/20 12:21	06/04/20 21:26	1
3 & 4 Methylphenol	ND		11	0.27	ug/L		05/28/20 12:21	06/04/20 21:26	1
3,3'-Dichlorobenzidine	ND		54	2.2	ug/L		05/28/20 12:21	06/04/20 21:26	1
3-Methylphenol	ND		11	0.27	ug/L		05/28/20 12:21	06/04/20 21:26	1
3-Nitroaniline	ND		11	2.2	ug/L		05/28/20 12:21	06/04/20 21:26	1
4,6-Dinitro-2-methylphenol	ND		54	4.3	ug/L		05/28/20 12:21	06/04/20 21:26	1
4-Bromophenyl phenyl ether	ND		11	0.46	ug/L		05/28/20 12:21	06/04/20 21:26	1
4-Chloro-3-methylphenol	ND		11	2.6	ug/L		05/28/20 12:21	06/04/20 21:26	1
4-Chloroaniline	ND		11	2.3	ug/L		05/28/20 12:21	06/04/20 21:26	1
4-Chlorophenyl phenyl ether	ND		11	1.8	ug/L		05/28/20 12:21	06/04/20 21:26	1
4-Methylphenol	ND		11	0.27	ug/L		05/28/20 12:21	06/04/20 21:26	1
4-Nitroaniline	ND		11	2.2	ug/L		05/28/20 12:21	06/04/20 21:26	1
4-Nitrophenol	ND		11	1.3	ug/L		05/28/20 12:21	06/04/20 21:26	1
Acenaphthene	ND		4.3	0.30	ug/L		05/28/20 12:21	06/04/20 21:26	1
Acenaphthylene	ND		4.3	0.53	ug/L		05/28/20 12:21	06/04/20 21:26	1
Acetophenone	ND		11	0.26	ug/L		05/28/20 12:21	06/04/20 21:26	1
Aniline	ND		11	2.2	ug/L		05/28/20 12:21	06/04/20 21:26	1
Anthracene	ND		4.3	0.45	ug/L		05/28/20 12:21	06/04/20 21:26	1
Azobenzene	ND		4.3	0.25	ug/L		05/28/20 12:21	06/04/20 21:26	1
Benzaldehyde	ND		5.4	2.2	ug/L		05/28/20 12:21	06/04/20 21:26	1
Benzidine	ND *1		110	54	ug/L		05/28/20 12:21	06/04/20 21:26	1
Benzo[a]anthracene	ND		4.3	0.38	ug/L		05/28/20 12:21	06/04/20 21:26	1
Benzo[a]pyrene	ND		4.3	0.33	ug/L		05/28/20 12:21	06/04/20 21:26	1
Benzo[b]fluoranthene	ND		4.3	0.57	ug/L		05/28/20 12:21	06/04/20 21:26	1
Benzo[g,h,i]perylene	ND		4.3	0.54	ug/L		05/28/20 12:21	06/04/20 21:26	1
Benzo[k]fluoranthene	ND		4.3	0.50	ug/L		05/28/20 12:21	06/04/20 21:26	1
Benzoic acid	ND		27	11	ug/L		05/28/20 12:21	06/04/20 21:26	1
Benzyl alcohol	0.27	J	11	0.25	ug/L		05/28/20 12:21	06/04/20 21:26	1
Bis(2-chloroethoxy)methane	ND		11	1.0	ug/L		05/28/20 12:21	06/04/20 21:26	1
Bis(2-chloroethyl)ether	ND		11	0.90	ug/L		05/28/20 12:21	06/04/20 21:26	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-01-GW

Lab Sample ID: 280-136963-10

Date Collected: 05/27/20 11:00

Matrix: Water

Date Received: 05/27/20 12:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	ND		11	0.60	ug/L		05/28/20 12:21	06/04/20 21:26	1
Butyl benzyl phthalate	ND		4.3	1.1	ug/L		05/28/20 12:21	06/04/20 21:26	1
Caprolactam	ND		5.4	2.7	ug/L		05/28/20 12:21	06/04/20 21:26	1
Carbazole	ND		4.3	0.46	ug/L		05/28/20 12:21	06/04/20 21:26	1
Chrysene	ND		4.3	0.58	ug/L		05/28/20 12:21	06/04/20 21:26	1
Dibenz(a,h)anthracene	ND		4.3	0.55	ug/L		05/28/20 12:21	06/04/20 21:26	1
Dibenzofuran	ND		4.3	0.31	ug/L		05/28/20 12:21	06/04/20 21:26	1
Diethyl phthalate	1.0	J	4.3	0.41	ug/L		05/28/20 12:21	06/04/20 21:26	1
Dimethyl phthalate	ND		4.3	0.23	ug/L		05/28/20 12:21	06/04/20 21:26	1
Di-n-butyl phthalate	ND		4.3	1.3	ug/L		05/28/20 12:21	06/04/20 21:26	1
Di-n-octyl phthalate	ND		4.3	0.38	ug/L		05/28/20 12:21	06/04/20 21:26	1
Diphenylamine	ND		11	1.1	ug/L		05/28/20 12:21	06/04/20 21:26	1
Famphur	ND		110	1.7	ug/L		05/28/20 12:21	06/04/20 21:26	1
Fluoranthene	ND		4.3	0.22	ug/L		05/28/20 12:21	06/04/20 21:26	1
Fluorene	ND		4.3	0.33	ug/L		05/28/20 12:21	06/04/20 21:26	1
Hexachlorobenzene	ND		11	0.71	ug/L		05/28/20 12:21	06/04/20 21:26	1
Hexachlorobutadiene	ND	*1	11	3.6	ug/L		05/28/20 12:21	06/04/20 21:26	1
Hexachlorocyclopentadiene	ND		54	3.3	ug/L		05/28/20 12:21	06/04/20 21:26	1
Hexachloroethane	ND		11	1.1	ug/L		05/28/20 12:21	06/04/20 21:26	1
Hexadecane	ND		11	0.58	ug/L		05/28/20 12:21	06/04/20 21:26	1
Indeno[1,2,3-cd]pyrene	ND		4.3	0.70	ug/L		05/28/20 12:21	06/04/20 21:26	1
Isophorone	ND		11	0.23	ug/L		05/28/20 12:21	06/04/20 21:26	1
Naphthalene	ND	*1	4.3	0.31	ug/L		05/28/20 12:21	06/04/20 21:26	1
Nitrobenzene	ND		11	0.88	ug/L		05/28/20 12:21	06/04/20 21:26	1
N-Nitrosodimethylamine	ND		11	0.31	ug/L		05/28/20 12:21	06/04/20 21:26	1
N-Nitrosodi-n-propylamine	ND		11	0.38	ug/L		05/28/20 12:21	06/04/20 21:26	1
N-Nitrosodiphenylamine	ND		11	0.48	ug/L		05/28/20 12:21	06/04/20 21:26	1
Pentachlorophenol	ND		54	22	ug/L		05/28/20 12:21	06/04/20 21:26	1
Phenanthrene	ND		4.3	0.28	ug/L		05/28/20 12:21	06/04/20 21:26	1
Phenol	ND		11	2.2	ug/L		05/28/20 12:21	06/04/20 21:26	1
Pyrene	ND		11	0.40	ug/L		05/28/20 12:21	06/04/20 21:26	1
Pyridine	ND		22	1.8	ug/L		05/28/20 12:21	06/04/20 21:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	75		48 - 120	05/28/20 12:21	06/04/20 21:26	1
2-Fluorophenol (Surr)	81		41 - 120	05/28/20 12:21	06/04/20 21:26	1
2,4,6-Tribromophenol (Surr)	79		42 - 131	05/28/20 12:21	06/04/20 21:26	1
Nitrobenzene-d5 (Surr)	90		42 - 120	05/28/20 12:21	06/04/20 21:26	1
Phenol-d5 (Surr)	88		45 - 124	05/28/20 12:21	06/04/20 21:26	1
Terphenyl-d14 (Surr)	80		20 - 130	05/28/20 12:21	06/04/20 21:26	1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-5'-7'

Lab Sample ID: 280-136963-1

Date Collected: 05/26/20 11:00

Matrix: Solid

Date Received: 05/27/20 12:00

Percent Solids: 91.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		1.9	0.71	mg/Kg	☼	05/26/20 11:00	06/03/20 18:14	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
a,a,a-Trifluorotoluene	83		77 - 123	05/26/20 11:00	06/03/20 18:14	1			
Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-10'-12'			Lab Sample ID: 280-136963-2						
Date Collected: 05/26/20 11:20			Matrix: Solid						
Date Received: 05/27/20 12:00			Percent Solids: 91.7						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	1.4	J	2.6	0.99	mg/Kg	☼	05/26/20 11:20	06/03/20 18:38	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
a,a,a-Trifluorotoluene	85		77 - 123	05/26/20 11:20	06/03/20 18:38	1			
Client Sample ID: CDOT I270 Env-05/06_2020-SB-13-12-13'			Lab Sample ID: 280-136963-3						
Date Collected: 05/26/20 12:30			Matrix: Solid						
Date Received: 05/27/20 12:00			Percent Solids: 90.9						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.5	0.94	mg/Kg	☼	05/26/20 12:30	06/03/20 19:01	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
a,a,a-Trifluorotoluene	83		77 - 123	05/26/20 12:30	06/03/20 19:01	1			
Client Sample ID: CDOT I270 Env-05/06_2020-SB-13-GW			Lab Sample ID: 280-136963-4						
Date Collected: 05/26/20 12:50			Matrix: Water						
Date Received: 05/27/20 12:00									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		25	10	ug/L	-		05/30/20 01:39	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
a,a,a-Trifluorotoluene	83		82 - 110		05/30/20 01:39	1			
Client Sample ID: CDOT I270 Env-05/06_2020-SB-15-10-12'			Lab Sample ID: 280-136963-5						
Date Collected: 05/26/20 14:05			Matrix: Solid						
Date Received: 05/27/20 12:00			Percent Solids: 92.0						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.7	1.0	mg/Kg	☼	05/26/20 14:05	06/04/20 05:12	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
a,a,a-Trifluorotoluene	86		77 - 123	05/26/20 14:05	06/04/20 05:12	1			
Client Sample ID: CDOT I270 Env-05/06_2020-SB-15-GW			Lab Sample ID: 280-136963-6						
Date Collected: 05/26/20 14:30			Matrix: Water						
Date Received: 05/27/20 12:00									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	16	J	25	10	ug/L	-		05/30/20 02:02	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
a,a,a-Trifluorotoluene	85		82 - 110		05/30/20 02:02	1			

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Client Sample ID: CDOT I270 Env-05/06_2020-TB-01-05272020

Lab Sample ID: 280-136963-7

Date Collected: 05/27/20 08:00

Matrix: Solid

Date Received: 05/27/20 12:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.0	0.76	mg/Kg		05/27/20 08:00	06/04/20 05:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	83		77 - 123				05/27/20 08:00	06/04/20 05:36	1

Client Sample ID: CDOT I270 Env-05/06_2020-TB-01-05272020

Lab Sample ID: 280-136963-8

Date Collected: 05/27/20 08:00

Matrix: Water

Date Received: 05/27/20 12:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		25	10	ug/L			05/30/20 06:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	84		82 - 110					05/30/20 06:21	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-01-10'-12'

Lab Sample ID: 280-136963-9

Date Collected: 05/27/20 10:30

Matrix: Solid

Date Received: 05/27/20 12:00

Percent Solids: 96.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.7	1.0	mg/Kg	☒	05/27/20 10:30	06/04/20 05:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	84		77 - 123				05/27/20 10:30	06/04/20 05:59	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-01-GW

Lab Sample ID: 280-136963-10

Date Collected: 05/27/20 11:00

Matrix: Water

Date Received: 05/27/20 12:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		25	10	ug/L			05/30/20 06:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	85		82 - 110					05/30/20 06:44	1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-5'-7'

Lab Sample ID: 280-136963-1

Date Collected: 05/26/20 11:00

Matrix: Solid

Date Received: 05/27/20 12:00

Percent Solids: 91.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	5.3	J	8.1	3.7	mg/Kg	☒	06/01/20 07:09	06/12/20 06:42	1
Motor Oil (C20-C38)	15	J	24	7.9	mg/Kg	☒	06/01/20 07:09	06/12/20 06:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	66		49 - 115				06/01/20 07:09	06/12/20 06:42	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-10'-12'

Lab Sample ID: 280-136963-2

Date Collected: 05/26/20 11:20

Matrix: Solid

Date Received: 05/27/20 12:00

Percent Solids: 91.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	96		8.2	3.7	mg/Kg	☒	06/01/20 07:09	06/12/20 07:03	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-10'-12'

Date Collected: 05/26/20 11:20

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-2

Matrix: Solid

Percent Solids: 91.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil (C20-C38)	210		25	8.0	mg/Kg	☼	06/01/20 07:09	06/12/20 07:03	1
Surrogate	%Recovery	Qualifier	Limits						
<i>o</i> -Terphenyl (Surr)	61		49 - 115						
							Prepared	Analyzed	Dil Fac
							06/01/20 07:09	06/12/20 07:03	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-13-12-13'

Date Collected: 05/26/20 12:30

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-3

Matrix: Solid

Percent Solids: 90.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	4.5	J	8.7	4.0	mg/Kg	☼	06/01/20 07:09	06/12/20 07:25	1
Motor Oil (C20-C38)	18	J	26	8.5	mg/Kg	☼	06/01/20 07:09	06/12/20 07:25	1
Surrogate	%Recovery	Qualifier	Limits						
<i>o</i> -Terphenyl (Surr)	64		49 - 115						
							Prepared	Analyzed	Dil Fac
							06/01/20 07:09	06/12/20 07:25	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-13-GW

Date Collected: 05/26/20 12:50

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	0.11	J	0.24	0.031	mg/L		05/29/20 11:37	06/06/20 00:58	1
Motor Oil (C20-C38)	0.15	J	0.48	0.054	mg/L		05/29/20 11:37	06/06/20 00:58	1
Surrogate	%Recovery	Qualifier	Limits						
<i>o</i> -Terphenyl (Surr)	76		50 - 115						
							Prepared	Analyzed	Dil Fac
							05/29/20 11:37	06/06/20 00:58	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-15-10-12'

Date Collected: 05/26/20 14:05

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-5

Matrix: Solid

Percent Solids: 92.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	12		8.0	3.6	mg/Kg	☼	06/01/20 07:09	06/12/20 07:47	1
Motor Oil (C20-C38)	23	J	24	7.8	mg/Kg	☼	06/01/20 07:09	06/12/20 07:47	1
Surrogate	%Recovery	Qualifier	Limits						
<i>o</i> -Terphenyl (Surr)	69		49 - 115						
							Prepared	Analyzed	Dil Fac
							06/01/20 07:09	06/12/20 07:47	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-15-GW

Date Collected: 05/26/20 14:30

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	1.3		0.25	0.033	mg/L		05/29/20 11:37	06/06/20 01:20	1
Motor Oil (C20-C38)	0.83		0.51	0.057	mg/L		05/29/20 11:37	06/06/20 01:20	1
Surrogate	%Recovery	Qualifier	Limits						
<i>o</i> -Terphenyl (Surr)	82		50 - 115						
							Prepared	Analyzed	Dil Fac
							05/29/20 11:37	06/06/20 01:20	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-01-10'-12'

Date Collected: 05/27/20 10:30

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-9

Matrix: Solid

Percent Solids: 96.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	10		7.9	3.6	mg/Kg	☼	06/03/20 11:57	06/09/20 01:22	1
Motor Oil (C20-C38)	36	F2 F1	24	7.7	mg/Kg	☼	06/03/20 11:57	06/09/20 01:22	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	78		49 - 115	06/03/20 11:57	06/09/20 01:22	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-01-GW

Date Collected: 05/27/20 11:00

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-10

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	0.10	J	0.26	0.034	mg/L		05/29/20 11:37	06/06/20 01:42	1
Motor Oil (C20-C38)	0.13	J	0.52	0.059	mg/L		05/29/20 11:37	06/06/20 01:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	77		50 - 115	05/29/20 11:37	06/06/20 01:42	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-5'-7'

Date Collected: 05/26/20 11:00

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-1

Matrix: Solid

Percent Solids: 91.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.8	F1	0.58	0.049	mg/Kg	☼	06/01/20 14:55	06/03/20 21:36	1
Silver	36	J	91	7.1	ug/Kg	☼	06/02/20 12:10	06/03/20 18:33	1
Barium	81		0.39	0.068	mg/Kg	☼	06/01/20 14:55	06/03/20 21:36	1
Cadmium	0.090	J	0.096	0.0090	mg/Kg	☼	06/01/20 14:55	06/03/20 21:36	1
Chromium	6.2		0.19	0.073	mg/Kg	☼	06/01/20 14:55	06/03/20 21:36	1
Lead	7.2		0.14	0.018	mg/Kg	☼	06/01/20 14:55	06/05/20 00:17	1
Selenium	ND		0.48	0.13	mg/Kg	☼	06/01/20 14:55	06/03/20 21:36	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-10'-12'

Date Collected: 05/26/20 11:20

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-2

Matrix: Solid

Percent Solids: 91.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.0		0.60	0.051	mg/Kg	☼	06/01/20 14:55	06/03/20 22:05	1
Silver	270		81	6.3	ug/Kg	☼	06/02/20 12:10	06/03/20 19:01	1
Barium	230		0.40	0.070	mg/Kg	☼	06/01/20 14:55	06/03/20 22:05	1
Cadmium	1.6		0.10	0.0094	mg/Kg	☼	06/01/20 14:55	06/03/20 22:05	1
Chromium	16		0.20	0.076	mg/Kg	☼	06/01/20 14:55	06/03/20 22:05	1
Lead	200	^	1.5	0.18	mg/Kg	☼	06/01/20 14:55	06/05/20 14:34	10
Selenium	0.27	J	0.50	0.13	mg/Kg	☼	06/01/20 14:55	06/03/20 22:05	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-13-12-13'

Date Collected: 05/26/20 12:30

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-3

Matrix: Solid

Percent Solids: 90.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.4		0.56	0.048	mg/Kg	☼	06/01/20 14:55	06/03/20 22:09	1
Silver	7.3	J	83	6.5	ug/Kg	☼	06/02/20 12:10	06/03/20 19:05	1
Barium	31		0.38	0.066	mg/Kg	☼	06/01/20 14:55	06/03/20 22:09	1
Cadmium	0.044	J	0.094	0.0088	mg/Kg	☼	06/01/20 14:55	06/03/20 22:09	1
Chromium	2.7		0.19	0.072	mg/Kg	☼	06/01/20 14:55	06/03/20 22:09	1
Lead	3.1		0.14	0.017	mg/Kg	☼	06/01/20 14:55	06/05/20 00:50	1
Selenium	ND		0.47	0.13	mg/Kg	☼	06/01/20 14:55	06/03/20 22:09	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-13-GW

Date Collected: 05/26/20 12:50

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	33		5.0	0.33	ug/L		05/30/20 09:15	06/02/20 18:56	1
Barium	3000	^	1.0	0.29	ug/L		05/30/20 09:15	06/02/20 18:56	1
Cadmium	2.3		1.0	0.27	ug/L		05/30/20 09:15	06/03/20 18:58	1
Chromium	96	F1	2.0	0.50	ug/L		05/30/20 09:15	06/02/20 18:56	1
Lead	150	F1	1.0	0.18	ug/L		05/30/20 09:15	06/02/20 18:56	1
Selenium	2.5	J	5.0	0.37	ug/L		05/30/20 09:15	06/02/20 18:56	1
Silver	0.43	J	5.0	0.033	ug/L		05/30/20 09:15	06/02/20 18:56	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-15-10-12'

Date Collected: 05/26/20 14:05

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-5

Matrix: Solid

Percent Solids: 92.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.9		0.59	0.050	mg/Kg	☼	06/01/20 14:55	06/03/20 22:12	1
Silver	53	J	79	6.2	ug/Kg	☼	06/02/20 12:10	06/03/20 19:08	1
Barium	80		0.40	0.070	mg/Kg	☼	06/01/20 14:55	06/03/20 22:12	1
Cadmium	0.23		0.099	0.0093	mg/Kg	☼	06/01/20 14:55	06/03/20 22:12	1
Chromium	7.3		0.20	0.075	mg/Kg	☼	06/01/20 14:55	06/03/20 22:12	1
Lead	12	^	0.15	0.018	mg/Kg	☼	06/01/20 14:55	06/05/20 00:54	1
Selenium	ND		0.49	0.13	mg/Kg	☼	06/01/20 14:55	06/03/20 22:12	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-15-GW

Date Collected: 05/26/20 14:30

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	80		5.0	0.33	ug/L		05/30/20 09:15	06/02/20 19:14	1
Barium	3900	^	1.0	0.29	ug/L		05/30/20 09:15	06/02/20 19:14	1
Cadmium	ND		1.0	0.27	ug/L		05/30/20 09:15	06/03/20 19:16	1
Chromium	2.7		2.0	0.50	ug/L		05/30/20 09:15	06/02/20 19:14	1
Lead	2.6		1.0	0.18	ug/L		05/30/20 09:15	06/02/20 19:14	1
Selenium	1.8	J	5.0	0.37	ug/L		05/30/20 09:15	06/02/20 19:14	1
Silver	0.050	J	5.0	0.033	ug/L		05/30/20 09:15	06/02/20 19:14	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-01-10'-12'

Date Collected: 05/27/20 10:30

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-9

Matrix: Solid

Percent Solids: 96.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.0		0.51	0.043	mg/Kg	☼	06/01/20 14:55	06/03/20 22:16	1
Silver	8.7	J	87	6.8	ug/Kg	☼	06/02/20 12:10	06/03/20 19:12	1
Barium	41		0.34	0.060	mg/Kg	☼	06/01/20 14:55	06/03/20 22:16	1
Cadmium	0.057	J	0.085	0.0080	mg/Kg	☼	06/01/20 14:55	06/03/20 22:16	1
Chromium	2.1		0.17	0.065	mg/Kg	☼	06/01/20 14:55	06/03/20 22:16	1
Lead	2.8		0.13	0.015	mg/Kg	☼	06/01/20 14:55	06/05/20 00:58	1
Selenium	ND		0.43	0.11	mg/Kg	☼	06/01/20 14:55	06/03/20 22:16	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-01-GW

Date Collected: 05/27/20 11:00

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-10

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.59	J	5.0	0.33	ug/L		05/30/20 09:15	06/02/20 19:18	1
Barium	340	^	1.0	0.29	ug/L		05/30/20 09:15	06/02/20 19:18	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 6020A - Metals (ICP/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-01-GW

Lab Sample ID: 280-136963-10

Date Collected: 05/27/20 11:00

Matrix: Water

Date Received: 05/27/20 12:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.27	ug/L		05/30/20 09:15	06/03/20 19:19	1
Chromium	2.6		2.0	0.50	ug/L		05/30/20 09:15	06/02/20 19:18	1
Lead	1.5		1.0	0.18	ug/L		05/30/20 09:15	06/02/20 19:18	1
Selenium	1.4	J	5.0	0.37	ug/L		05/30/20 09:15	06/02/20 19:18	1
Silver	ND		5.0	0.033	ug/L		05/30/20 09:15	06/02/20 19:18	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-13-GW

Lab Sample ID: 280-136963-4

Date Collected: 05/26/20 12:50

Matrix: Water

Date Received: 05/27/20 12:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.22	B	0.20	0.027	ug/L		06/09/20 16:00	06/10/20 13:43	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-15-GW

Lab Sample ID: 280-136963-6

Date Collected: 05/26/20 14:30

Matrix: Water

Date Received: 05/27/20 12:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.030	J B	0.20	0.027	ug/L		06/09/20 16:00	06/10/20 13:45	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-01-GW

Lab Sample ID: 280-136963-10

Date Collected: 05/27/20 11:00

Matrix: Water

Date Received: 05/27/20 12:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.032	J B	0.20	0.027	ug/L		06/09/20 16:00	06/10/20 13:48	1

Method: 7471B - Mercury (CVAA)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-5'-7'

Lab Sample ID: 280-136963-1

Date Collected: 05/26/20 11:00

Matrix: Solid

Date Received: 05/27/20 12:00

Percent Solids: 91.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	7.8	J	19	6.0	ug/Kg	☼	06/10/20 13:30	06/10/20 17:30	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-10'-12'

Lab Sample ID: 280-136963-2

Date Collected: 05/26/20 11:20

Matrix: Solid

Date Received: 05/27/20 12:00

Percent Solids: 91.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	100		22	7.1	ug/Kg	☼	06/10/20 13:30	06/10/20 17:32	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-13-12-13'

Lab Sample ID: 280-136963-3

Date Collected: 05/26/20 12:30

Matrix: Solid

Date Received: 05/27/20 12:00

Percent Solids: 90.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		21	6.8	ug/Kg	☼	06/10/20 13:30	06/10/20 17:35	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-15-10-12'

Lab Sample ID: 280-136963-5

Date Collected: 05/26/20 14:05

Matrix: Solid

Date Received: 05/27/20 12:00

Percent Solids: 92.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	10	J	22	7.1	ug/Kg	☼	06/10/20 13:30	06/10/20 17:37	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 7471B - Mercury (CVAA)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-01-10'-12'

Date Collected: 05/27/20 10:30

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-9

Matrix: Solid

Percent Solids: 96.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	5.9	J	18	5.7	ug/Kg	☼	06/10/20 13:30	06/10/20 17:39	1

General Chemistry

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-5'-7'

Date Collected: 05/26/20 11:00

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-1

Matrix: Solid

Percent Solids: 91.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	8.4		0.1	0.1	%			05/27/20 17:12	1
Percent Solids	91.6		0.1	0.1	%			05/27/20 17:12	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-10'-12'

Date Collected: 05/26/20 11:20

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-2

Matrix: Solid

Percent Solids: 91.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	8.3		0.1	0.1	%			05/27/20 17:12	1
Percent Solids	91.7		0.1	0.1	%			05/27/20 17:12	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-13-12-13'

Date Collected: 05/26/20 12:30

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-3

Matrix: Solid

Percent Solids: 90.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	9.1		0.1	0.1	%			05/27/20 17:12	1
Percent Solids	90.9		0.1	0.1	%			05/27/20 17:12	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-15-10-12'

Date Collected: 05/26/20 14:05

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-5

Matrix: Solid

Percent Solids: 92.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	8.0		0.1	0.1	%			05/27/20 17:12	1
Percent Solids	92.0		0.1	0.1	%			05/27/20 17:12	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-01-10'-12'

Date Collected: 05/27/20 10:30

Date Received: 05/27/20 12:00

Lab Sample ID: 280-136963-9

Matrix: Solid

Percent Solids: 96.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.3		0.1	0.1	%			05/27/20 17:12	1
Percent Solids	96.7		0.1	0.1	%			05/27/20 17:12	1

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (58-140)	TOL (80-126)	BFB (76-127)	DBFM (75-121)
280-136963-1	CDOT I270 Env-05/06_2020-SB	103	97	95	100
280-136963-2	CDOT I270 Env-05/06_2020-SB-14-10'-12'	103	95	95	101
280-136963-3	CDOT I270 Env-05/06_2020-SB-13-12-13'	102	97	96	99
280-136963-5	CDOT I270 Env-05/06_2020-SB-15-10-12'	102	97	97	102
280-136963-7	CDOT I270 Env-05/06_2020-TB-01-052720 20	100	99	94	101
280-136963-9	CDOT I270 Env-05/06_2020-SB-01-10'-12'	102	96	97	102
LCS 280-497513/1-A	Lab Control Sample	99	97	95	101
LCSD 280-497513/2-A	Lab Control Sample Dup	100	97	96	102
MB 280-497513/3-A	Method Blank	101	97	95	100

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
 TOL = Toluene-d8 (Surr)
 BFB = 4-Bromofluorobenzene (Surr)
 DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (70-127)	TOL (80-125)	BFB (78-120)	DBFM (77-120)
280-136963-4	CDOT I270 Env-05/06_2020-SB	100	102	105	99
280-136963-6	CDOT I270 Env-05/06_2020-SB-15-GW	100	102	104	98
280-136963-8	CDOT I270 Env-05/06_2020-TB-01-052720 20	104	103	104	97
280-136963-10	CDOT I270 Env-05/06_2020-SB-01-GW	105	103	107	97
LCS 280-497547/4	Lab Control Sample	101	102	102	99
LCS 280-497740/6	Lab Control Sample	101	105	105	96
LCSD 280-497547/5	Lab Control Sample Dup	101	101	102	100
LCSD 280-497740/7	Lab Control Sample Dup	102	103	105	98
MB 280-497547/9	Method Blank	101	102	103	98
MB 280-497740/11	Method Blank	103	103	104	96

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
 TOL = Toluene-d8 (Surr)
 BFB = 4-Bromofluorobenzene (Surr)
 DBFM = Dibromofluoromethane (Surr)

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (35-120)	FBP (46-120)	2FP (43-120)	NBZ (46-120)	PHL (46-120)	TPHL (46-120)
280-136963-1	CDOT I270 Env-05/06_2020-SB	70	64	68	67	71	89
280-136963-2	CDOT I270	75	72	68	70	75	90
280-136963-3	Env-05/06_2020-SB-14-10'-12'						
	CDOT I270	66	61	65	65	69	88
280-136963-5	Env-05/06_2020-SB-13-12-13'						
	CDOT I270	68	67	70	71	75	86
280-136963-9	Env-05/06_2020-SB-15-10-12'						
	CDOT I270	70	71	75	81	83	90
	Env-05/06_2020-SB-01-10'-12'						
LCS 280-496992/2-A	Lab Control Sample	81	73	74	78	80	90
LCS 280-497218/2-A	Lab Control Sample	83	75	77	84	83	93
LCSD 280-496992/3-A	Lab Control Sample Dup	75	71	74	79	78	88
MB 280-496992/1-A	Method Blank	65	63	67	68	72	92
MB 280-497218/1-A	Method Blank	72	71	75	81	81	95

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
 FBP = 2-Fluorobiphenyl
 2FP = 2-Fluorophenol (Surr)
 NBZ = Nitrobenzene-d5 (Surr)
 PHL = Phenol-d5 (Surr)
 TPHL = Terphenyl-d14 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (48-120)	2FP (41-120)	TBP (42-131)	NBZ (42-120)	PHL (45-124)	TPHL (20-130)
280-136963-4	CDOT I270 Env-05/06_2020-SB	64	68	74	82	72	53
280-136963-6	CDOT I270	67	72	78	82	74	37
	Env-05/06_2020-SB-15-GW						
280-136963-10	CDOT I270	75	81	79	90	88	80
	Env-05/06_2020-SB-01-GW						
LCS 280-496496/2-A	Lab Control Sample	79	81	88	90	88	99
LCSD 280-496496/3-A	Lab Control Sample Dup	77	79	90	90	84	99
MB 280-496496/1-A	Method Blank	63	80	80	87	85	110

Surrogate Legend

FBP = 2-Fluorobiphenyl
 2FP = 2-Fluorophenol (Surr)
 TBP = 2,4,6-Tribromophenol (Surr)
 NBZ = Nitrobenzene-d5 (Surr)
 PHL = Phenol-d5 (Surr)
 TPHL = Terphenyl-d14 (Surr)

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TFT1 (77-123)					
280-136963-1	CDOT I270 Env-05/06_2020-SB	83					

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Surrogate Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

(Continued)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	TFT1 (77-123)
280-136963-2	CDOT I270 Env-05/06_2020-SB	85
280-136963-3	CDOT I270	83
280-136963-5	Env-05/06_2020-SB-13-12-13' CDOT I270	86
280-136963-7	Env-05/06_2020-SB-15-10-12' CDOT I270	83
280-136963-9	Env-05/06_2020-TB-01-052720 20 CDOT I270	84
LCS 280-497195/1-A	Env-05/06_2020-SB-01-10'-12' Lab Control Sample	87
LCS 280-497267/1-A	Lab Control Sample	83
LCSD 280-497195/2-A	Lab Control Sample Dup	85
LCSD 280-497267/2-A	Lab Control Sample Dup	83
MB 280-497195/3-A	Method Blank	86
MB 280-497267/3-A	Method Blank	83
Surrogate Legend		
TFT = a,a,a-Trifluorotoluene		

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	TFT1 (82-110)
280-136963-4	CDOT I270 Env-05/06_2020-SB	83
280-136963-6	CDOT I270	85
280-136963-8	Env-05/06_2020-SB-15-GW CDOT I270	84
280-136963-10	Env-05/06_2020-TB-01-052720 20 CDOT I270	85
LCS 280-496761/61	Env-05/06_2020-SB-01-GW Lab Control Sample	82
LCSD 280-496761/62	Lab Control Sample Dup	83
MB 280-496761/45	Method Blank	82
Surrogate Legend		
TFT = a,a,a-Trifluorotoluene		

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	OTPH1 (49-115)
280-136963-1	CDOT I270 Env-05/06_2020-SB	66
280-136963-2	CDOT I270	61
280-136963-3	Env-05/06_2020-SB-14-10'-12' CDOT I270	64
	Env-05/06_2020-SB-13-12-13'	

Eurofins TestAmerica, Denver

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

(Continued)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	OTPH1 (49-115)
280-136963-5	CDOT I270 Env-05/06_2020-SB	69
280-136963-9	CDOT I270	78
280-136963-9 MS	Env-05/06_2020-SB-01-10'-12'	53
280-136963-9 MSD	CDOT I270	79
	Env-05/06_2020-SB-01-10'-12'	
LCS 280-496856/2-A	Lab Control Sample	72
LCS 280-496856/3-A	Lab Control Sample	76
LCS 280-497160/2-A	Lab Control Sample	85
LCS 280-497160/3-A	Lab Control Sample	87
MB 280-496856/1-A	Method Blank	69
MB 280-497160/1-A	Method Blank	80
Surrogate Legend		
OTPH = o-Terphenyl (Surr)		

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	OTPH1 (50-115)
280-136963-4	CDOT I270 Env-05/06_2020-SB	76
280-136963-6	CDOT I270	82
280-136963-10	Env-05/06_2020-SB-15-GW	77
	CDOT I270	
	Env-05/06_2020-SB-01-GW	
LCS 280-496681/2-A	Lab Control Sample	84
LCS 280-496681/3-A	Lab Control Sample	86
LCSD 280-496681/4-A	Lab Control Sample Dup	89
MB 280-496681/1-A	Method Blank	77
Surrogate Legend		
OTPH = o-Terphenyl (Surr)		

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-497513/3-A

Matrix: Solid

Analysis Batch: 497516

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 497513

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1-Trichloroethane	ND		5.0	2.0	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.29	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
1,1,2-Trichloroethane	ND		5.0	0.88	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
1,1,2-Trichlorotrifluoroethane	ND		20	1.7	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
1,1-Dichloroethane	ND		5.0	0.21	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
1,1-Dichloroethene	ND		5.0	0.59	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
1,2,3-Trichlorobenzene	ND		5.0	0.81	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
1,2,4-Trichlorobenzene	ND		5.0	0.73	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
1,2-Dibromo-3-Chloropropane	ND		10	3.7	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
1,2-Dibromoethane	ND		5.0	0.52	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
1,2-Dichlorobenzene	ND		5.0	1.9	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
1,2-Dichloroethane	ND		5.0	0.70	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
1,2-Dichloropropane	ND		5.0	0.55	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
1,3-Dichlorobenzene	ND		5.0	0.48	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
1,4-Dichlorobenzene	ND		5.0	0.25	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
1,4-Dioxane	ND		500	56	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
2-Butanone (MEK)	ND		20	3.9	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
2-Hexanone	ND		20	4.9	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.4	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
Acetone	ND		72	36	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
Benzene	ND		5.0	0.15	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
Bromoform	ND		5.1	2.6	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
Bromomethane	ND		10	1.4	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
Carbon disulfide	ND		5.0	1.7	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
Carbon tetrachloride	ND		5.0	2.0	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
Chlorobenzene	ND		5.0	2.1	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
Chlorobromomethane	ND		5.0	2.5	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
Chlorodibromomethane	ND		5.0	2.3	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
Chloroethane	ND		10	2.0	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
Chloroform	ND		10	0.29	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
Chloromethane	ND		10	0.77	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
cis-1,2-Dichloroethene	ND		2.5	0.20	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
cis-1,3-Dichloropropene	ND		5.0	0.10	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
Cyclohexane	ND		5.0	1.8	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
Dichlorobromomethane	ND		5.0	2.1	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
Dichlorodifluoromethane	ND		10	2.7	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
Ethylbenzene	ND		5.0	0.31	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
Isopropylbenzene	ND		5.0	2.4	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
Methyl acetate	ND		10	2.8	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
Methyl tert-butyl ether	ND		20	2.1	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
Methylcyclohexane	ND		5.0	0.42	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
Methylene Chloride	ND		5.0	1.6	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
m-Xylene & p-Xylene	ND		2.5	1.0	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
o-Xylene	ND		2.5	0.27	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
Styrene	ND		5.0	0.28	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
Tetrachloroethene	ND		5.0	1.9	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
Toluene	ND		5.0	0.23	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
trans-1,2-Dichloroethene	ND		2.5	0.39	ug/Kg		06/04/20 18:24	06/04/20 20:32	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-497513/3-A
Matrix: Solid
Analysis Batch: 497516

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 497513

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
trans-1,3-Dichloropropene	ND		5.0	0.083	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
Trichloroethene	ND		5.0	1.9	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
Trichlorofluoromethane	ND		10	3.2	ug/Kg		06/04/20 18:24	06/04/20 20:32	1
Vinyl chloride	ND		5.0	1.3	ug/Kg		06/04/20 18:24	06/04/20 20:32	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	101		58 - 140	06/04/20 18:24	06/04/20 20:32	1
Toluene-d8 (Surr)	97		80 - 126	06/04/20 18:24	06/04/20 20:32	1
4-Bromofluorobenzene (Surr)	95		76 - 127	06/04/20 18:24	06/04/20 20:32	1
Dibromofluoromethane (Surr)	100		75 - 121	06/04/20 18:24	06/04/20 20:32	1

Lab Sample ID: LCS 280-497513/1-A
Matrix: Solid
Analysis Batch: 497516

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497513

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
		Result	Qualifier					
1,1,1-Trichloroethane	50.0	43.4		ug/Kg		87		70 - 135
1,1,1,2-Tetrachloroethane	50.0	37.3		ug/Kg		75		65 - 135
1,1,2-Trichloroethane	50.0	39.3		ug/Kg		79		78 - 135
1,1,2-Trichlorotrifluoroethane	50.0	45.0		ug/Kg		90		50 - 150
1,1-Dichloroethane	50.0	42.3		ug/Kg		85		70 - 135
1,1-Dichloroethene	50.0	44.5		ug/Kg		89		79 - 135
1,2,3-Trichlorobenzene	50.0	43.6		ug/Kg		87		62 - 135
1,2,4-Trichlorobenzene	50.0	43.7		ug/Kg		87		65 - 135
1,2-Dibromo-3-Chloropropane	50.0	40.5		ug/Kg		81		66 - 150
1,2-Dibromoethane	50.0	40.8		ug/Kg		82		76 - 135
1,2-Dichlorobenzene	50.0	42.5		ug/Kg		85		73 - 135
1,2-Dichloroethane	50.0	40.0		ug/Kg		80		69 - 135
1,2-Dichloropropane	50.0	42.2		ug/Kg		84		72 - 121
1,3-Dichlorobenzene	50.0	43.4		ug/Kg		87		69 - 135
1,4-Dichlorobenzene	50.0	43.0		ug/Kg		86		73 - 135
1,4-Dioxane	1000	839		ug/Kg		84		52 - 135
2-Butanone (MEK)	200	161		ug/Kg		81		45 - 177
2-Hexanone	200	151		ug/Kg		75		67 - 150
4-Methyl-2-pentanone (MIBK)	200	163		ug/Kg		81		69 - 150
Acetone	200	168		ug/Kg		84		65 - 150
Benzene	50.0	41.4		ug/Kg		83		75 - 135
Bromoform	50.0	39.1		ug/Kg		78		77 - 135
Bromomethane	50.0	49.2		ug/Kg		98		52 - 135
Carbon disulfide	50.0	43.7		ug/Kg		87		45 - 150
Carbon tetrachloride	50.0	42.8		ug/Kg		86		69 - 138
Chlorobenzene	50.0	42.2		ug/Kg		84		78 - 135
Chlorobromomethane	50.0	43.2		ug/Kg		86		74 - 135
Chlorodibromomethane	50.0	41.0		ug/Kg		82		77 - 135
Chloroethane	50.0	46.4		ug/Kg		93		51 - 145
Chloroform	50.0	41.6		ug/Kg		83		73 - 123
Chloromethane	50.0	43.9		ug/Kg		88		41 - 138
cis-1,2-Dichloroethene	50.0	43.4		ug/Kg		87		76 - 135

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-497513/1-A
Matrix: Solid
Analysis Batch: 497516

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497513

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,3-Dichloropropene	50.0	40.0		ug/Kg		80	71 - 135
Cyclohexane	50.0	42.0		ug/Kg		84	50 - 150
Dichlorobromomethane	50.0	39.9		ug/Kg		80	73 - 135
Dichlorodifluoromethane	50.0	41.5		ug/Kg		83	32 - 152
Ethylbenzene	50.0	42.1		ug/Kg		84	73 - 125
Isopropylbenzene	50.0	42.7		ug/Kg		85	74 - 137
Methyl acetate	100	81.2		ug/Kg		81	50 - 150
Methyl tert-butyl ether	50.0	41.1		ug/Kg		82	71 - 141
Methylcyclohexane	50.0	40.0		ug/Kg		80	50 - 150
Methylene Chloride	50.0	42.2		ug/Kg		84	76 - 136
m-Xylene & p-Xylene	50.0	41.2		ug/Kg		82	77 - 135
o-Xylene	50.0	42.5		ug/Kg		85	75 - 135
Styrene	50.0	41.8		ug/Kg		84	76 - 135
Tetrachloroethene	50.0	44.4		ug/Kg		89	76 - 135
Toluene	50.0	42.3		ug/Kg		85	77 - 122
trans-1,2-Dichloroethene	50.0	44.5		ug/Kg		89	77 - 135
trans-1,3-Dichloropropene	50.0	40.2		ug/Kg		80	71 - 135
Trichloroethene	50.0	41.9		ug/Kg		84	77 - 135
Trichlorofluoromethane	50.0	45.2		ug/Kg		90	48 - 150
Vinyl chloride	50.0	47.8		ug/Kg		96	43 - 145

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		58 - 140
Toluene-d8 (Surr)	97		80 - 126
4-Bromofluorobenzene (Surr)	95		76 - 127
Dibromofluoromethane (Surr)	101		75 - 121

Lab Sample ID: LCSD 280-497513/2-A
Matrix: Solid
Analysis Batch: 497516

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 497513

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
1,1,1-Trichloroethane	50.0	42.6		ug/Kg		85	70 - 135	2	20
1,1,2,2-Tetrachloroethane	50.0	37.4		ug/Kg		75	65 - 135	0	21
1,1,2-Trichloroethane	50.0	39.5		ug/Kg		79	78 - 135	0	20
1,1,2-Trichlorotrifluoroethane	50.0	42.3		ug/Kg		85	50 - 150	6	20
1,1-Dichloroethane	50.0	41.2		ug/Kg		82	70 - 135	3	20
1,1-Dichloroethene	50.0	42.9		ug/Kg		86	79 - 135	4	20
1,2,3-Trichlorobenzene	50.0	43.5		ug/Kg		87	62 - 135	0	31
1,2,4-Trichlorobenzene	50.0	45.1		ug/Kg		90	65 - 135	3	26
1,2-Dibromo-3-Chloropropane	50.0	37.9		ug/Kg		76	66 - 150	7	28
1,2-Dibromoethane	50.0	40.7		ug/Kg		81	76 - 135	0	20
1,2-Dichlorobenzene	50.0	41.5		ug/Kg		83	73 - 135	2	20
1,2-Dichloroethane	50.0	40.7		ug/Kg		81	69 - 135	2	20
1,2-Dichloropropane	50.0	41.3		ug/Kg		83	72 - 121	2	20
1,3-Dichlorobenzene	50.0	43.6		ug/Kg		87	69 - 135	0	20
1,4-Dichlorobenzene	50.0	43.7		ug/Kg		87	73 - 135	2	22
1,4-Dioxane	1000	780		ug/Kg		78	52 - 135	7	30

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-497513/2-A
Matrix: Solid
Analysis Batch: 497516

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 497513

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Butanone (MEK)	200	149		ug/Kg		75	45 - 177	8	32
2-Hexanone	200	143		ug/Kg		72	67 - 150	5	29
4-Methyl-2-pentanone (MIBK)	200	156		ug/Kg		78	69 - 150	4	25
Acetone	200	163		ug/Kg		81	65 - 150	3	28
Benzene	50.0	41.1		ug/Kg		82	75 - 135	1	20
Bromoform	50.0	38.7		ug/Kg		77	77 - 135	1	20
Bromomethane	50.0	50.5		ug/Kg		101	52 - 135	3	22
Carbon disulfide	50.0	42.1		ug/Kg		84	45 - 150	4	24
Carbon tetrachloride	50.0	41.9		ug/Kg		84	69 - 138	2	20
Chlorobenzene	50.0	41.9		ug/Kg		84	78 - 135	1	20
Chlorobromomethane	50.0	42.7		ug/Kg		85	74 - 135	1	21
Chlorodibromomethane	50.0	41.0		ug/Kg		82	77 - 135	0	20
Chloroethane	50.0	47.7		ug/Kg		95	51 - 145	3	22
Chloroform	50.0	40.6		ug/Kg		81	73 - 123	2	20
Chloromethane	50.0	41.1		ug/Kg		82	41 - 138	7	25
cis-1,2-Dichloroethene	50.0	42.4		ug/Kg		85	76 - 135	2	20
cis-1,3-Dichloropropene	50.0	40.0		ug/Kg		80	71 - 135	0	20
Cyclohexane	50.0	39.9		ug/Kg		80	50 - 150	5	30
Dichlorobromomethane	50.0	39.8		ug/Kg		80	73 - 135	0	20
Dichlorodifluoromethane	50.0	42.5		ug/Kg		85	32 - 152	2	28
Ethylbenzene	50.0	41.0		ug/Kg		82	73 - 125	3	20
Isopropylbenzene	50.0	42.5		ug/Kg		85	74 - 137	1	20
Methyl acetate	100	78.0		ug/Kg		78	50 - 150	4	30
Methyl tert-butyl ether	50.0	41.0		ug/Kg		82	71 - 141	0	20
Methylcyclohexane	50.0	38.5		ug/Kg		77	50 - 150	4	30
Methylene Chloride	50.0	41.2		ug/Kg		82	76 - 136	2	21
m-Xylene & p-Xylene	50.0	42.2		ug/Kg		84	77 - 135	2	20
o-Xylene	50.0	41.8		ug/Kg		84	75 - 135	2	20
Styrene	50.0	41.4		ug/Kg		83	76 - 135	1	20
Tetrachloroethene	50.0	44.7		ug/Kg		89	76 - 135	1	20
Toluene	50.0	41.5		ug/Kg		83	77 - 122	2	20
trans-1,2-Dichloroethene	50.0	43.4		ug/Kg		87	77 - 135	3	20
trans-1,3-Dichloropropene	50.0	39.8		ug/Kg		80	71 - 135	1	20
Trichloroethene	50.0	40.7		ug/Kg		81	77 - 135	3	20
Trichlorofluoromethane	50.0	47.4		ug/Kg		95	48 - 150	5	33
Vinyl chloride	50.0	49.6		ug/Kg		99	43 - 145	4	24

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	100		58 - 140
Toluene-d8 (Surr)	97		80 - 126
4-Bromofluorobenzene (Surr)	96		76 - 127
Dibromofluoromethane (Surr)	102		75 - 121

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-497547/9
Matrix: Water
Analysis Batch: 497547

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			06/05/20 11:15	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			06/05/20 11:15	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			06/05/20 11:15	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			06/05/20 11:15	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/05/20 11:15	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			06/05/20 11:15	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			06/05/20 11:15	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			06/05/20 11:15	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			06/05/20 11:15	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			06/05/20 11:15	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			06/05/20 11:15	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			06/05/20 11:15	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/05/20 11:15	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			06/05/20 11:15	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			06/05/20 11:15	1
1,4-Dioxane	ND		200	19	ug/L			06/05/20 11:15	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			06/05/20 11:15	1
2-Hexanone	ND		5.0	1.7	ug/L			06/05/20 11:15	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			06/05/20 11:15	1
Acetone	ND		10	1.9	ug/L			06/05/20 11:15	1
Benzene	ND		1.0	0.16	ug/L			06/05/20 11:15	1
Bromoform	ND		1.0	0.46	ug/L			06/05/20 11:15	1
Bromomethane	ND		2.0	0.21	ug/L			06/05/20 11:15	1
Carbon disulfide	ND		2.0	0.17	ug/L			06/05/20 11:15	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			06/05/20 11:15	1
Chlorobenzene	ND		1.0	0.17	ug/L			06/05/20 11:15	1
Chlorobromomethane	ND		1.0	0.10	ug/L			06/05/20 11:15	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			06/05/20 11:15	1
Chloroethane	ND		2.0	0.41	ug/L			06/05/20 11:15	1
Chloroform	ND		1.0	0.16	ug/L			06/05/20 11:15	1
Chloromethane	ND		2.0	0.30	ug/L			06/05/20 11:15	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/05/20 11:15	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			06/05/20 11:15	1
Cyclohexane	ND		2.0	0.28	ug/L			06/05/20 11:15	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			06/05/20 11:15	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			06/05/20 11:15	1
Ethylbenzene	ND		1.0	0.16	ug/L			06/05/20 11:15	1
Isopropylbenzene	ND		1.0	0.19	ug/L			06/05/20 11:15	1
Methyl acetate	ND		5.0	1.6	ug/L			06/05/20 11:15	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			06/05/20 11:15	1
Methylcyclohexane	ND		1.0	0.10	ug/L			06/05/20 11:15	1
Methylene Chloride	ND		2.0	0.94	ug/L			06/05/20 11:15	1
m-Xylene & p-Xylene	0.158	J	2.0	0.15	ug/L			06/05/20 11:15	1
o-Xylene	ND		1.0	0.19	ug/L			06/05/20 11:15	1
Styrene	ND		1.0	0.36	ug/L			06/05/20 11:15	1
Tetrachloroethene	ND		1.0	0.20	ug/L			06/05/20 11:15	1
Toluene	ND		1.0	0.17	ug/L			06/05/20 11:15	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/05/20 11:15	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-497547/9
Matrix: Water
Analysis Batch: 497547

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			06/05/20 11:15	1
Trichloroethene	ND		1.0	0.16	ug/L			06/05/20 11:15	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			06/05/20 11:15	1
Vinyl chloride	ND		1.0	0.10	ug/L			06/05/20 11:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		70 - 127		06/05/20 11:15	1
Toluene-d8 (Surr)	102		80 - 125		06/05/20 11:15	1
4-Bromofluorobenzene (Surr)	103		78 - 120		06/05/20 11:15	1
Dibromofluoromethane (Surr)	98		77 - 120		06/05/20 11:15	1

Lab Sample ID: LCS 280-497547/4
Matrix: Water
Analysis Batch: 497547

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	24.4		ug/L		98	65 - 135
1,1,1,2-Tetrachloroethane	25.0	25.8		ug/L		103	58 - 135
1,1,2-Trichloroethane	25.0	25.5		ug/L		102	64 - 135
1,1,2-Trichlorotrifluoroethane	25.0	21.1		ug/L		84	65 - 140
1,1-Dichloroethane	25.0	24.7		ug/L		99	65 - 135
1,1-Dichloroethene	25.0	23.9		ug/L		95	65 - 136
1,2,3-Trichlorobenzene	25.0	23.8		ug/L		95	60 - 135
1,2,4-Trichlorobenzene	25.0	23.3		ug/L		93	58 - 135
1,2-Dibromo-3-Chloropropane	25.0	26.4		ug/L		106	57 - 135
1,2-Dibromoethane	25.0	24.4		ug/L		98	65 - 135
1,2-Dichlorobenzene	25.0	23.1		ug/L		92	65 - 135
1,2-Dichloroethane	25.0	25.5		ug/L		102	65 - 135
1,2-Dichloropropane	25.0	26.0		ug/L		104	64 - 135
1,3-Dichlorobenzene	25.0	24.2		ug/L		97	65 - 135
1,4-Dichlorobenzene	25.0	24.0		ug/L		96	65 - 135
1,4-Dioxane	500	584		ug/L		117	31 - 147
2-Butanone (MEK)	100	112		ug/L		112	44 - 177
2-Hexanone	100	116		ug/L		116	57 - 139
4-Methyl-2-pentanone (MIBK)	100	114		ug/L		114	60 - 150
Acetone	100	110		ug/L		110	39 - 156
Benzene	25.0	24.7		ug/L		99	65 - 135
Bromoform	25.0	25.4		ug/L		102	62 - 135
Bromomethane	25.0	20.7		ug/L		83	45 - 135
Carbon disulfide	25.0	22.9		ug/L		91	55 - 143
Carbon tetrachloride	25.0	24.6		ug/L		98	65 - 135
Chlorobenzene	25.0	24.0		ug/L		96	65 - 135
Chlorobromomethane	25.0	23.8		ug/L		95	65 - 135
Chlorodibromomethane	25.0	25.8		ug/L		103	65 - 135
Chloroethane	25.0	24.3		ug/L		97	46 - 136
Chloroform	25.0	24.2		ug/L		97	65 - 135
Chloromethane	25.0	22.2		ug/L		89	34 - 145
cis-1,2-Dichloroethene	25.0	24.5		ug/L		98	65 - 135

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-497547/4
Matrix: Water
Analysis Batch: 497547

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,3-Dichloropropene	25.0	25.5		ug/L		102	65 - 135
Cyclohexane	25.0	24.9		ug/L		100	62 - 135
Dichlorobromomethane	25.0	25.1		ug/L		100	65 - 135
Dichlorodifluoromethane	25.0	29.6		ug/L		118	43 - 142
Ethylbenzene	25.0	24.6		ug/L		99	65 - 135
Isopropylbenzene	25.0	25.6		ug/L		103	65 - 135
Methyl acetate	50.0	55.1		ug/L		110	52 - 135
Methyl tert-butyl ether	25.0	25.8		ug/L		103	54 - 135
Methylcyclohexane	25.0	24.8		ug/L		99	63 - 135
Methylene Chloride	25.0	26.2		ug/L		105	54 - 141
m-Xylene & p-Xylene	25.0	25.0		ug/L		100	65 - 135
o-Xylene	25.0	25.2		ug/L		101	65 - 135
Styrene	25.0	25.8		ug/L		103	65 - 135
Tetrachloroethene	25.0	23.8		ug/L		95	65 - 135
Toluene	25.0	24.6		ug/L		98	65 - 135
trans-1,2-Dichloroethene	25.0	23.8		ug/L		95	65 - 135
trans-1,3-Dichloropropene	25.0	23.6		ug/L		95	65 - 135
Trichloroethene	25.0	23.6		ug/L		94	65 - 135
Trichlorofluoromethane	25.0	24.1		ug/L		97	53 - 137
Vinyl chloride	25.0	22.7		ug/L		91	40 - 137

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		70 - 127
Toluene-d8 (Surr)	102		80 - 125
4-Bromofluorobenzene (Surr)	102		78 - 120
Dibromofluoromethane (Surr)	99		77 - 120

Lab Sample ID: LCSD 280-497547/5
Matrix: Water
Analysis Batch: 497547

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	25.0	25.0		ug/L		100	65 - 135	3	20
1,1,2,2-Tetrachloroethane	25.0	26.5		ug/L		106	58 - 135	3	20
1,1,2-Trichloroethane	25.0	26.6		ug/L		107	64 - 135	5	27
1,1,2-Trichlorotrifluoroethane	25.0	20.7		ug/L		83	65 - 140	2	20
1,1-Dichloroethane	25.0	25.3		ug/L		101	65 - 135	2	21
1,1-Dichloroethene	25.0	24.0		ug/L		96	65 - 136	0	20
1,2,3-Trichlorobenzene	25.0	24.4		ug/L		97	60 - 135	2	36
1,2,4-Trichlorobenzene	25.0	23.7		ug/L		95	58 - 135	2	25
1,2-Dibromo-3-Chloropropane	25.0	26.8		ug/L		107	57 - 135	2	22
1,2-Dibromoethane	25.0	25.2		ug/L		101	65 - 135	3	27
1,2-Dichlorobenzene	25.0	23.9		ug/L		96	65 - 135	3	20
1,2-Dichloroethane	25.0	26.2		ug/L		105	65 - 135	3	20
1,2-Dichloropropane	25.0	26.6		ug/L		107	64 - 135	2	20
1,3-Dichlorobenzene	25.0	24.5		ug/L		98	65 - 135	1	20
1,4-Dichlorobenzene	25.0	24.8		ug/L		99	65 - 135	3	23
1,4-Dioxane	500	572		ug/L		114	31 - 147	2	30

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-497547/5
Matrix: Water
Analysis Batch: 497547

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Butanone (MEK)	100	113		ug/L		113	44 - 177	2	32
2-Hexanone	100	120		ug/L		120	57 - 139	3	25
4-Methyl-2-pentanone (MIBK)	100	117		ug/L		117	60 - 150	3	22
Acetone	100	112		ug/L		112	39 - 156	1	23
Benzene	25.0	25.2		ug/L		101	65 - 135	2	20
Bromoform	25.0	25.8		ug/L		103	62 - 135	1	27
Bromomethane	25.0	17.6		ug/L		70	45 - 135	16	33
Carbon disulfide	25.0	23.0		ug/L		92	55 - 143	1	20
Carbon tetrachloride	25.0	24.5		ug/L		98	65 - 135	0	21
Chlorobenzene	25.0	24.4		ug/L		98	65 - 135	2	20
Chlorobromomethane	25.0	24.0		ug/L		96	65 - 135	1	29
Chlorodibromomethane	25.0	26.0		ug/L		104	65 - 135	1	20
Chloroethane	25.0	22.5		ug/L		90	46 - 136	7	25
Chloroform	25.0	24.8		ug/L		99	65 - 135	3	20
Chloromethane	25.0	21.1		ug/L		84	34 - 145	5	24
cis-1,2-Dichloroethene	25.0	25.0		ug/L		100	65 - 135	2	20
cis-1,3-Dichloropropene	25.0	26.3		ug/L		105	65 - 135	3	26
Cyclohexane	25.0	25.0		ug/L		100	62 - 135	1	20
Dichlorobromomethane	25.0	25.8		ug/L		103	65 - 135	3	20
Dichlorodifluoromethane	25.0	25.6		ug/L		102	43 - 142	14	30
Ethylbenzene	25.0	25.1		ug/L		100	65 - 135	2	20
Isopropylbenzene	25.0	26.0		ug/L		104	65 - 135	2	20
Methyl acetate	50.0	56.9		ug/L		114	52 - 135	3	27
Methyl tert-butyl ether	25.0	26.7		ug/L		107	54 - 135	4	21
Methylcyclohexane	25.0	25.1		ug/L		100	63 - 135	1	20
Methylene Chloride	25.0	26.7		ug/L		107	54 - 141	2	26
m-Xylene & p-Xylene	25.0	25.7		ug/L		103	65 - 135	3	20
o-Xylene	25.0	25.6		ug/L		102	65 - 135	1	20
Styrene	25.0	26.3		ug/L		105	65 - 135	2	26
Tetrachloroethene	25.0	23.6		ug/L		94	65 - 135	1	20
Toluene	25.0	25.3		ug/L		101	65 - 135	3	20
trans-1,2-Dichloroethene	25.0	24.0		ug/L		96	65 - 135	1	24
trans-1,3-Dichloropropene	25.0	24.4		ug/L		98	65 - 135	3	26
Trichloroethene	25.0	23.9		ug/L		96	65 - 135	1	20
Trichlorofluoromethane	25.0	21.1		ug/L		84	53 - 137	13	27
Vinyl chloride	25.0	20.7		ug/L		83	40 - 137	9	24

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	101		70 - 127
Toluene-d8 (Surr)	101		80 - 125
4-Bromofluorobenzene (Surr)	102		78 - 120
Dibromofluoromethane (Surr)	100		77 - 120

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-497740/11
Matrix: Water
Analysis Batch: 497740

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			06/08/20 10:09	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			06/08/20 10:09	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			06/08/20 10:09	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			06/08/20 10:09	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/08/20 10:09	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			06/08/20 10:09	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			06/08/20 10:09	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			06/08/20 10:09	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			06/08/20 10:09	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			06/08/20 10:09	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			06/08/20 10:09	1
1,2-Dichloroethane	0.228	J	1.0	0.13	ug/L			06/08/20 10:09	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/08/20 10:09	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			06/08/20 10:09	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			06/08/20 10:09	1
1,4-Dioxane	ND		200	19	ug/L			06/08/20 10:09	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			06/08/20 10:09	1
2-Hexanone	ND		5.0	1.7	ug/L			06/08/20 10:09	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			06/08/20 10:09	1
Acetone	ND		10	1.9	ug/L			06/08/20 10:09	1
Benzene	ND		1.0	0.16	ug/L			06/08/20 10:09	1
Bromoform	ND		1.0	0.46	ug/L			06/08/20 10:09	1
Bromomethane	ND		2.0	0.21	ug/L			06/08/20 10:09	1
Carbon disulfide	ND		2.0	0.17	ug/L			06/08/20 10:09	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			06/08/20 10:09	1
Chlorobenzene	ND		1.0	0.17	ug/L			06/08/20 10:09	1
Chlorobromomethane	ND		1.0	0.10	ug/L			06/08/20 10:09	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			06/08/20 10:09	1
Chloroethane	ND		2.0	0.41	ug/L			06/08/20 10:09	1
Chloroform	ND		1.0	0.16	ug/L			06/08/20 10:09	1
Chloromethane	ND		2.0	0.30	ug/L			06/08/20 10:09	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/08/20 10:09	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			06/08/20 10:09	1
Cyclohexane	ND		2.0	0.28	ug/L			06/08/20 10:09	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			06/08/20 10:09	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			06/08/20 10:09	1
Ethylbenzene	ND		1.0	0.16	ug/L			06/08/20 10:09	1
Isopropylbenzene	ND		1.0	0.19	ug/L			06/08/20 10:09	1
Methyl acetate	ND		5.0	1.6	ug/L			06/08/20 10:09	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			06/08/20 10:09	1
Methylcyclohexane	ND		1.0	0.10	ug/L			06/08/20 10:09	1
Methylene Chloride	ND		2.0	0.94	ug/L			06/08/20 10:09	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			06/08/20 10:09	1
o-Xylene	ND		1.0	0.19	ug/L			06/08/20 10:09	1
Styrene	ND		1.0	0.36	ug/L			06/08/20 10:09	1
Tetrachloroethene	ND		1.0	0.20	ug/L			06/08/20 10:09	1
Toluene	ND		1.0	0.17	ug/L			06/08/20 10:09	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/08/20 10:09	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-497740/11
Matrix: Water
Analysis Batch: 497740

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			06/08/20 10:09	1
Trichloroethene	ND		1.0	0.16	ug/L			06/08/20 10:09	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			06/08/20 10:09	1
Vinyl chloride	ND		1.0	0.10	ug/L			06/08/20 10:09	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	103		70 - 127		06/08/20 10:09	1
Toluene-d8 (Surr)	103		80 - 125		06/08/20 10:09	1
4-Bromofluorobenzene (Surr)	104		78 - 120		06/08/20 10:09	1
Dibromofluoromethane (Surr)	96		77 - 120		06/08/20 10:09	1

Lab Sample ID: LCS 280-497740/6
Matrix: Water
Analysis Batch: 497740

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
1,1,1-Trichloroethane	25.0	18.8		ug/L		75	65 - 135
1,1,1,2-Tetrachloroethane	25.0	23.9		ug/L		96	58 - 135
1,1,2-Trichloroethane	25.0	22.5		ug/L		90	64 - 135
1,1,2-Trichlorotrifluoroethane	25.0	20.3		ug/L		81	65 - 140
1,1-Dichloroethane	25.0	22.9		ug/L		92	65 - 135
1,1-Dichloroethene	25.0	21.8		ug/L		87	65 - 136
1,2,3-Trichlorobenzene	25.0	21.1		ug/L		85	60 - 135
1,2,4-Trichlorobenzene	25.0	19.9		ug/L		80	58 - 135
1,2-Dibromo-3-Chloropropane	25.0	19.4		ug/L		78	57 - 135
1,2-Dibromoethane	25.0	21.7		ug/L		87	65 - 135
1,2-Dichlorobenzene	25.0	22.0		ug/L		88	65 - 135
1,2-Dichloroethane	25.0	23.1		ug/L		92	65 - 135
1,2-Dichloropropane	25.0	22.5		ug/L		90	64 - 135
1,3-Dichlorobenzene	25.0	22.0		ug/L		88	65 - 135
1,4-Dichlorobenzene	25.0	22.2		ug/L		89	65 - 135
1,4-Dioxane	500	452		ug/L		90	31 - 147
2-Butanone (MEK)	100	107		ug/L		107	44 - 177
2-Hexanone	100	109		ug/L		109	57 - 139
4-Methyl-2-pentanone (MIBK)	100	95.9		ug/L		96	60 - 150
Acetone	100	91.7		ug/L		92	39 - 156
Benzene	25.0	22.0		ug/L		88	65 - 135
Bromoform	25.0	17.8		ug/L		71	62 - 135
Bromomethane	25.0	16.3		ug/L		65	45 - 135
Carbon disulfide	25.0	20.9		ug/L		83	55 - 143
Carbon tetrachloride	25.0	19.3		ug/L		77	65 - 135
Chlorobenzene	25.0	22.0		ug/L		88	65 - 135
Chlorobromomethane	25.0	20.1		ug/L		81	65 - 135
Chlorodibromomethane	25.0	19.4		ug/L		78	65 - 135
Chloroethane	25.0	21.5		ug/L		86	46 - 136
Chloroform	25.0	21.4		ug/L		85	65 - 135
Chloromethane	25.0	17.2		ug/L		69	34 - 145
cis-1,2-Dichloroethene	25.0	22.3		ug/L		89	65 - 135

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-497740/6
Matrix: Water
Analysis Batch: 497740

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,3-Dichloropropene	25.0	21.9		ug/L		87	65 - 135
Cyclohexane	25.0	24.8		ug/L		99	62 - 135
Dichlorobromomethane	25.0	22.4		ug/L		90	65 - 135
Dichlorodifluoromethane	25.0	11.0		ug/L		44	43 - 142
Ethylbenzene	25.0	23.8		ug/L		95	65 - 135
Isopropylbenzene	25.0	22.7		ug/L		91	65 - 135
Methyl acetate	50.0	53.0		ug/L		106	52 - 135
Methyl tert-butyl ether	25.0	21.8		ug/L		87	54 - 135
Methylcyclohexane	25.0	23.8		ug/L		95	63 - 135
Methylene Chloride	25.0	22.0		ug/L		88	54 - 141
m-Xylene & p-Xylene	25.0	21.2		ug/L		85	65 - 135
o-Xylene	25.0	21.5		ug/L		86	65 - 135
Styrene	25.0	23.7		ug/L		95	65 - 135
Tetrachloroethene	25.0	19.2		ug/L		77	65 - 135
Toluene	25.0	21.4		ug/L		86	65 - 135
trans-1,2-Dichloroethene	25.0	22.4		ug/L		90	65 - 135
trans-1,3-Dichloropropene	25.0	18.2		ug/L		73	65 - 135
Trichloroethene	25.0	21.3		ug/L		85	65 - 135
Trichlorofluoromethane	25.0	21.1		ug/L		84	53 - 137
Vinyl chloride	25.0	19.1		ug/L		76	40 - 137

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		70 - 127
Toluene-d8 (Surr)	105		80 - 125
4-Bromofluorobenzene (Surr)	105		78 - 120
Dibromofluoromethane (Surr)	96		77 - 120

Lab Sample ID: LCSD 280-497740/7
Matrix: Water
Analysis Batch: 497740

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	25.0	20.0		ug/L		80	65 - 135	6	20
1,1,2,2-Tetrachloroethane	25.0	24.5		ug/L		98	58 - 135	2	20
1,1,2-Trichloroethane	25.0	24.0		ug/L		96	64 - 135	6	27
1,1,2-Trichlorotrifluoroethane	25.0	21.5		ug/L		86	65 - 140	6	20
1,1-Dichloroethane	25.0	25.2		ug/L		101	65 - 135	9	21
1,1-Dichloroethene	25.0	23.1		ug/L		92	65 - 136	6	20
1,2,3-Trichlorobenzene	25.0	22.7		ug/L		91	60 - 135	7	36
1,2,4-Trichlorobenzene	25.0	22.0		ug/L		88	58 - 135	10	25
1,2-Dibromo-3-Chloropropane	25.0	20.5		ug/L		82	57 - 135	6	22
1,2-Dibromoethane	25.0	22.4		ug/L		90	65 - 135	4	27
1,2-Dichlorobenzene	25.0	23.9		ug/L		96	65 - 135	9	20
1,2-Dichloroethane	25.0	24.7		ug/L		99	65 - 135	7	20
1,2-Dichloropropane	25.0	24.1		ug/L		96	64 - 135	7	20
1,3-Dichlorobenzene	25.0	23.6		ug/L		95	65 - 135	7	20
1,4-Dichlorobenzene	25.0	23.9		ug/L		95	65 - 135	7	23
1,4-Dioxane	500	492		ug/L		98	31 - 147	8	30

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-497740/7
Matrix: Water
Analysis Batch: 497740

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Butanone (MEK)	100	113		ug/L		113	44 - 177	6	32
2-Hexanone	100	112		ug/L		112	57 - 139	2	25
4-Methyl-2-pentanone (MIBK)	100	100		ug/L		100	60 - 150	4	22
Acetone	100	93.8		ug/L		94	39 - 156	2	23
Benzene	25.0	23.4		ug/L		93	65 - 135	6	20
Bromoform	25.0	17.1		ug/L		68	62 - 135	4	27
Bromomethane	25.0	8.80	**1	ug/L		35	45 - 135	60	33
Carbon disulfide	25.0	21.5		ug/L		86	55 - 143	3	20
Carbon tetrachloride	25.0	20.1		ug/L		80	65 - 135	4	21
Chlorobenzene	25.0	23.4		ug/L		94	65 - 135	6	20
Chlorobromomethane	25.0	22.6		ug/L		90	65 - 135	11	29
Chlorodibromomethane	25.0	19.0		ug/L		76	65 - 135	2	20
Chloroethane	25.0	15.8	*1	ug/L		63	46 - 136	31	25
Chloroform	25.0	23.0		ug/L		92	65 - 135	7	20
Chloromethane	25.0	17.4		ug/L		70	34 - 145	1	24
cis-1,2-Dichloroethene	25.0	24.8		ug/L		99	65 - 135	11	20
cis-1,3-Dichloropropene	25.0	22.6		ug/L		90	65 - 135	3	26
Cyclohexane	25.0	26.0		ug/L		104	62 - 135	5	20
Dichlorobromomethane	25.0	23.1		ug/L		92	65 - 135	3	20
Dichlorodifluoromethane	25.0	9.50	*	ug/L		38	43 - 142	15	30
Ethylbenzene	25.0	25.6		ug/L		102	65 - 135	7	20
Isopropylbenzene	25.0	24.6		ug/L		98	65 - 135	8	20
Methyl acetate	50.0	57.4		ug/L		115	52 - 135	8	27
Methyl tert-butyl ether	25.0	23.0		ug/L		92	54 - 135	6	21
Methylcyclohexane	25.0	25.3		ug/L		101	63 - 135	6	20
Methylene Chloride	25.0	23.8		ug/L		95	54 - 141	8	26
m-Xylene & p-Xylene	25.0	22.6		ug/L		90	65 - 135	6	20
o-Xylene	25.0	23.1		ug/L		92	65 - 135	7	20
Styrene	25.0	25.2		ug/L		101	65 - 135	6	26
Tetrachloroethene	25.0	20.6		ug/L		82	65 - 135	7	20
Toluene	25.0	23.3		ug/L		93	65 - 135	8	20
trans-1,2-Dichloroethene	25.0	24.0		ug/L		96	65 - 135	7	24
trans-1,3-Dichloropropene	25.0	18.6		ug/L		74	65 - 135	2	26
Trichloroethene	25.0	23.0		ug/L		92	65 - 135	8	20
Trichlorofluoromethane	25.0	18.7		ug/L		75	53 - 137	12	27
Vinyl chloride	25.0	17.8		ug/L		71	40 - 137	7	24

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	102		70 - 127
Toluene-d8 (Surr)	103		80 - 125
4-Bromofluorobenzene (Surr)	105		78 - 120
Dibromofluoromethane (Surr)	98		77 - 120

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-496496/1-A
Matrix: Water
Analysis Batch: 497355

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 496496

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1'-Biphenyl	ND		10	1.8	ug/L		05/28/20 12:21	06/04/20 19:02	1
1,2,4,5-Tetrachlorobenzene	ND		10	1.7	ug/L		05/28/20 12:21	06/04/20 19:02	1
1,2,4-Trichlorobenzene	ND		4.0	0.59	ug/L		05/28/20 12:21	06/04/20 19:02	1
1,2-Dichlorobenzene	ND		4.0	0.23	ug/L		05/28/20 12:21	06/04/20 19:02	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		10	0.23	ug/L		05/28/20 12:21	06/04/20 19:02	1
1,3-Dichlorobenzene	ND		10	0.30	ug/L		05/28/20 12:21	06/04/20 19:02	1
1,3-Dinitrobenzene	ND		10	2.0	ug/L		05/28/20 12:21	06/04/20 19:02	1
1,4-Dichlorobenzene	ND		4.0	1.3	ug/L		05/28/20 12:21	06/04/20 19:02	1
1,4-Dioxane	ND		20	0.45	ug/L		05/28/20 12:21	06/04/20 19:02	1
1-Methylnaphthalene	ND		4.0	0.23	ug/L		05/28/20 12:21	06/04/20 19:02	1
2,2'-oxybis[1-chloropropane]	ND		10	0.28	ug/L		05/28/20 12:21	06/04/20 19:02	1
2,3,4,6-Tetrachlorophenol	ND		50	2.0	ug/L		05/28/20 12:21	06/04/20 19:02	1
2,4,5-Trichlorophenol	ND		10	2.1	ug/L		05/28/20 12:21	06/04/20 19:02	1
2,4,6-Trichlorophenol	ND		10	0.29	ug/L		05/28/20 12:21	06/04/20 19:02	1
2,4-Dichlorophenol	ND		10	0.64	ug/L		05/28/20 12:21	06/04/20 19:02	1
2,4-Dimethylphenol	ND		10	0.58	ug/L		05/28/20 12:21	06/04/20 19:02	1
2,4-Dinitrophenol	ND		30	10	ug/L		05/28/20 12:21	06/04/20 19:02	1
2,4-Dinitrotoluene	ND		10	1.7	ug/L		05/28/20 12:21	06/04/20 19:02	1
2,6-Dichlorophenol	ND		10	1.4	ug/L		05/28/20 12:21	06/04/20 19:02	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		05/28/20 12:21	06/04/20 19:02	1
2-Chloronaphthalene	ND		4.0	0.26	ug/L		05/28/20 12:21	06/04/20 19:02	1
2-Chlorophenol	ND		10	2.0	ug/L		05/28/20 12:21	06/04/20 19:02	1
2-Methylnaphthalene	ND		4.0	1.5	ug/L		05/28/20 12:21	06/04/20 19:02	1
2-Methylphenol	ND		10	0.98	ug/L		05/28/20 12:21	06/04/20 19:02	1
2-Nitroaniline	ND		10	1.7	ug/L		05/28/20 12:21	06/04/20 19:02	1
2-Nitrophenol	ND		10	0.39	ug/L		05/28/20 12:21	06/04/20 19:02	1
3 & 4 Methylphenol	ND		10	0.25	ug/L		05/28/20 12:21	06/04/20 19:02	1
3,3'-Dichlorobenzidine	ND		50	2.0	ug/L		05/28/20 12:21	06/04/20 19:02	1
3-Methylphenol	ND		10	0.25	ug/L		05/28/20 12:21	06/04/20 19:02	1
3-Nitroaniline	ND		10	2.0	ug/L		05/28/20 12:21	06/04/20 19:02	1
4,6-Dinitro-2-methylphenol	ND		50	4.0	ug/L		05/28/20 12:21	06/04/20 19:02	1
4-Bromophenyl phenyl ether	ND		10	0.43	ug/L		05/28/20 12:21	06/04/20 19:02	1
4-Chloro-3-methylphenol	ND		10	2.4	ug/L		05/28/20 12:21	06/04/20 19:02	1
4-Chloroaniline	ND		10	2.1	ug/L		05/28/20 12:21	06/04/20 19:02	1
4-Chlorophenyl phenyl ether	ND		10	1.7	ug/L		05/28/20 12:21	06/04/20 19:02	1
4-Methylphenol	ND		10	0.25	ug/L		05/28/20 12:21	06/04/20 19:02	1
4-Nitroaniline	ND		10	2.0	ug/L		05/28/20 12:21	06/04/20 19:02	1
4-Nitrophenol	ND		10	1.2	ug/L		05/28/20 12:21	06/04/20 19:02	1
Acenaphthene	ND		4.0	0.28	ug/L		05/28/20 12:21	06/04/20 19:02	1
Acenaphthylene	ND		4.0	0.49	ug/L		05/28/20 12:21	06/04/20 19:02	1
Acetophenone	ND		10	0.24	ug/L		05/28/20 12:21	06/04/20 19:02	1
Aniline	ND		10	2.0	ug/L		05/28/20 12:21	06/04/20 19:02	1
Anthracene	ND		4.0	0.42	ug/L		05/28/20 12:21	06/04/20 19:02	1
Azobenzene	ND		4.0	0.23	ug/L		05/28/20 12:21	06/04/20 19:02	1
Benzaldehyde	ND		5.0	2.0	ug/L		05/28/20 12:21	06/04/20 19:02	1
Benzidine	ND		100	50	ug/L		05/28/20 12:21	06/04/20 19:02	1
Benzo[a]anthracene	ND		4.0	0.35	ug/L		05/28/20 12:21	06/04/20 19:02	1
Benzo[a]pyrene	ND		4.0	0.31	ug/L		05/28/20 12:21	06/04/20 19:02	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-496496/1-A
Matrix: Water
Analysis Batch: 497355

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 496496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND		4.0	0.53	ug/L		05/28/20 12:21	06/04/20 19:02	1
Benzo[g,h,i]perylene	ND		4.0	0.50	ug/L		05/28/20 12:21	06/04/20 19:02	1
Benzo[k]fluoranthene	ND		4.0	0.46	ug/L		05/28/20 12:21	06/04/20 19:02	1
Benzoic acid	ND		25	10	ug/L		05/28/20 12:21	06/04/20 19:02	1
Benzyl alcohol	ND		10	0.23	ug/L		05/28/20 12:21	06/04/20 19:02	1
Bis(2-chloroethoxy)methane	ND		10	0.97	ug/L		05/28/20 12:21	06/04/20 19:02	1
Bis(2-chloroethyl)ether	ND		10	0.83	ug/L		05/28/20 12:21	06/04/20 19:02	1
Bis(2-ethylhexyl) phthalate	ND		10	0.56	ug/L		05/28/20 12:21	06/04/20 19:02	1
Butyl benzyl phthalate	ND		4.0	1.0	ug/L		05/28/20 12:21	06/04/20 19:02	1
Caprolactam	ND		5.0	2.5	ug/L		05/28/20 12:21	06/04/20 19:02	1
Carbazole	ND		4.0	0.43	ug/L		05/28/20 12:21	06/04/20 19:02	1
Chrysene	ND		4.0	0.54	ug/L		05/28/20 12:21	06/04/20 19:02	1
Dibenz(a,h)anthracene	ND		4.0	0.51	ug/L		05/28/20 12:21	06/04/20 19:02	1
Dibenzofuran	ND		4.0	0.29	ug/L		05/28/20 12:21	06/04/20 19:02	1
Diethyl phthalate	ND		4.0	0.38	ug/L		05/28/20 12:21	06/04/20 19:02	1
Dimethyl phthalate	ND		4.0	0.21	ug/L		05/28/20 12:21	06/04/20 19:02	1
Di-n-butyl phthalate	ND		4.0	1.2	ug/L		05/28/20 12:21	06/04/20 19:02	1
Di-n-octyl phthalate	ND		4.0	0.35	ug/L		05/28/20 12:21	06/04/20 19:02	1
Diphenylamine	ND		10	1.1	ug/L		05/28/20 12:21	06/04/20 19:02	1
Famphur	ND		100	1.5	ug/L		05/28/20 12:21	06/04/20 19:02	1
Fluoranthene	ND		4.0	0.20	ug/L		05/28/20 12:21	06/04/20 19:02	1
Fluorene	ND		4.0	0.31	ug/L		05/28/20 12:21	06/04/20 19:02	1
Hexachlorobenzene	ND		10	0.66	ug/L		05/28/20 12:21	06/04/20 19:02	1
Hexachlorobutadiene	ND		10	3.3	ug/L		05/28/20 12:21	06/04/20 19:02	1
Hexachlorocyclopentadiene	ND		50	3.1	ug/L		05/28/20 12:21	06/04/20 19:02	1
Hexachloroethane	ND		10	0.98	ug/L		05/28/20 12:21	06/04/20 19:02	1
Hexadecane	ND		10	0.54	ug/L		05/28/20 12:21	06/04/20 19:02	1
Indeno[1,2,3-cd]pyrene	ND		4.0	0.65	ug/L		05/28/20 12:21	06/04/20 19:02	1
Isophorone	ND		10	0.21	ug/L		05/28/20 12:21	06/04/20 19:02	1
Naphthalene	ND		4.0	0.29	ug/L		05/28/20 12:21	06/04/20 19:02	1
Nitrobenzene	ND		10	0.81	ug/L		05/28/20 12:21	06/04/20 19:02	1
N-Nitrosodimethylamine	ND		10	0.29	ug/L		05/28/20 12:21	06/04/20 19:02	1
N-Nitrosodi-n-propylamine	ND		10	0.35	ug/L		05/28/20 12:21	06/04/20 19:02	1
N-Nitrosodiphenylamine	ND		10	0.44	ug/L		05/28/20 12:21	06/04/20 19:02	1
Pentachlorophenol	ND		50	20	ug/L		05/28/20 12:21	06/04/20 19:02	1
Phenanthrene	ND		4.0	0.26	ug/L		05/28/20 12:21	06/04/20 19:02	1
Phenol	ND		10	2.0	ug/L		05/28/20 12:21	06/04/20 19:02	1
Pyrene	ND		10	0.37	ug/L		05/28/20 12:21	06/04/20 19:02	1
Pyridine	ND		20	1.7	ug/L		05/28/20 12:21	06/04/20 19:02	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	80		42 - 131	05/28/20 12:21	06/04/20 19:02	1
2-Fluorobiphenyl	63		48 - 120	05/28/20 12:21	06/04/20 19:02	1
2-Fluorophenol (Surr)	80		41 - 120	05/28/20 12:21	06/04/20 19:02	1
Nitrobenzene-d5 (Surr)	87		42 - 120	05/28/20 12:21	06/04/20 19:02	1
Phenol-d5 (Surr)	85		45 - 124	05/28/20 12:21	06/04/20 19:02	1
Terphenyl-d14 (Surr)	110		20 - 130	05/28/20 12:21	06/04/20 19:02	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-496496/2-A
Matrix: Water
Analysis Batch: 497355

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 496496
%Rec. Limits

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1'-Biphenyl	80.0	66.8		ug/L		83	63 - 99
1,2,4,5-Tetrachlorobenzene	80.0	61.6		ug/L		77	57 - 100
1,2,4-Trichlorobenzene	80.0	46.6		ug/L		58	41 - 99
1,2-Dichlorobenzene	80.0	39.4		ug/L		49	37 - 97
1,2-Diphenylhydrazine(as Azobenzene)	80.9	75.4		ug/L		93	66 - 104
1,3-Dichlorobenzene	80.0	35.4		ug/L		44	34 - 96
1,3-Dinitrobenzene	80.0	79.9		ug/L		100	72 - 114
1,4-Dichlorobenzene	80.0	36.3		ug/L		45	35 - 96
1,4-Dioxane	80.0	60.1		ug/L		75	46 - 94
1-Methylnaphthalene	80.0	63.5		ug/L		79	56 - 102
2,2'-oxybis[1-chloropropane]	80.0	69.6		ug/L		87	52 - 108
2,3,4,6-Tetrachlorophenol	80.0	71.1		ug/L		89	71 - 111
2,4,5-Trichlorophenol	80.0	74.3		ug/L		93	70 - 109
2,4,6-Trichlorophenol	80.0	76.0		ug/L		95	71 - 113
2,4-Dichlorophenol	80.0	70.3		ug/L		88	65 - 109
2,4-Dimethylphenol	80.0	65.5		ug/L		82	46 - 100
2,4-Dinitrophenol	160	160		ug/L		100	60 - 110
2,4-Dinitrotoluene	80.0	75.0		ug/L		94	72 - 110
2,6-Dichlorophenol	80.0	69.5		ug/L		87	64 - 109
2,6-Dinitrotoluene	80.0	74.9		ug/L		94	70 - 109
2-Chloronaphthalene	80.0	64.6		ug/L		81	61 - 98
2-Chlorophenol	80.0	67.6		ug/L		85	59 - 107
2-Methylnaphthalene	80.0	60.2		ug/L		75	55 - 100
2-Methylphenol	80.0	69.9		ug/L		87	61 - 105
2-Nitroaniline	80.0	88.6	*	ug/L		111	65 - 110
2-Nitrophenol	80.0	72.0		ug/L		90	63 - 108
3 & 4 Methylphenol	80.0	75.0		ug/L		94	58 - 107
3,3'-Dichlorobenzidine	160	166		ug/L		103	39 - 105
3-Methylphenol	80.0	75.0		ug/L		94	58 - 107
3-Nitroaniline	80.0	73.5		ug/L		92	37 - 94
4,6-Dinitro-2-methylphenol	160	149		ug/L		93	67 - 109
4-Bromophenyl phenyl ether	80.0	72.0		ug/L		90	67 - 105
4-Chloro-3-methylphenol	80.0	74.5		ug/L		93	68 - 110
4-Chloroaniline	80.0	62.4		ug/L		78	34 - 97
4-Chlorophenyl phenyl ether	80.0	69.1		ug/L		86	69 - 100
4-Methylphenol	80.0	75.0		ug/L		94	58 - 107
4-Nitroaniline	80.0	80.1		ug/L		100	64 - 103
4-Nitrophenol	160	150		ug/L		94	60 - 120
Acenaphthene	80.0	69.8		ug/L		87	63 - 99
Acenaphthylene	80.0	68.5		ug/L		86	66 - 98
Acetophenone	80.0	69.5		ug/L		87	59 - 106
Aniline	80.0	57.7		ug/L		72	40 - 96
Anthracene	80.0	73.8		ug/L		92	65 - 105
Azobenzene	80.0	74.6		ug/L		93	66 - 104
Benzaldehyde	80.0	47.5		ug/L		59	10 - 89
Benzidine	160	79.2	J	ug/L		49	10 - 52
Benzo[a]anthracene	80.0	71.1		ug/L		89	68 - 104
Benzo[a]pyrene	80.0	70.3		ug/L		88	66 - 102

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-496496/2-A
Matrix: Water
Analysis Batch: 497355

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 496496

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[b]fluoranthene	80.0	76.1		ug/L		95	67 - 107
Benzo[g,h,i]perylene	80.0	73.6		ug/L		92	65 - 106
Benzo[k]fluoranthene	80.0	74.9		ug/L		94	71 - 109
Benzoic acid	80.0	66.0		ug/L		82	29 - 120
Benzyl alcohol	80.0	72.8		ug/L		91	61 - 107
Bis(2-chloroethoxy)methane	80.0	73.3		ug/L		92	62 - 106
Bis(2-chloroethyl)ether	80.0	71.2		ug/L		89	59 - 110
Bis(2-ethylhexyl) phthalate	80.0	77.9		ug/L		97	65 - 106
Butyl benzyl phthalate	80.0	76.5		ug/L		96	66 - 107
Caprolactam	80.0	77.7		ug/L		97	60 - 107
Carbazole	80.0	74.5		ug/L		93	66 - 109
Chrysene	80.0	71.5		ug/L		89	70 - 105
Dibenz(a,h)anthracene	80.0	74.4		ug/L		93	64 - 106
Dibenzofuran	80.0	68.3		ug/L		85	68 - 99
Diethyl phthalate	80.0	72.2		ug/L		90	71 - 105
Dimethyl phthalate	80.0	72.1		ug/L		90	70 - 107
Di-n-butyl phthalate	80.0	72.7		ug/L		91	75 - 120
Di-n-octyl phthalate	80.0	73.6		ug/L		92	71 - 120
Diphenylamine	68.0	60.1		ug/L		88	67 - 103
Fluoranthene	80.0	71.9		ug/L		90	66 - 107
Fluorene	80.0	69.7		ug/L		87	67 - 100
Hexachlorobenzene	80.0	70.8		ug/L		88	66 - 106
Hexachlorobutadiene	80.0	38.3		ug/L		48	33 - 98
Hexachlorocyclopentadiene	160	70.9		ug/L		44	10 - 67
Hexachloroethane	80.0	32.9		ug/L		41	24 - 98
Hexadecane	80.0	75.3		ug/L		94	50 - 150
Indeno[1,2,3-cd]pyrene	80.0	68.1		ug/L		85	56 - 104
Isophorone	80.0	69.8		ug/L		87	59 - 102
Naphthalene	80.0	54.8		ug/L		69	39 - 120
Nitrobenzene	80.0	71.0		ug/L		89	58 - 108
N-Nitrosodimethylamine	80.0	68.1		ug/L		85	53 - 106
N-Nitrosodi-n-propylamine	80.0	75.2		ug/L		94	57 - 106
N-Nitrosodiphenylamine	80.0	75.5		ug/L		94	65 - 104
Pentachlorophenol	160	156		ug/L		97	55 - 109
Phenanthrene	80.0	73.9		ug/L		92	67 - 106
Phenol	80.0	67.6		ug/L		85	60 - 108
Pyrene	80.0	73.6		ug/L		92	69 - 105
Pyridine	160	123		ug/L		77	46 - 88

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	88		42 - 131
2-Fluorobiphenyl	79		48 - 120
2-Fluorophenol (Surr)	81		41 - 120
Nitrobenzene-d5 (Surr)	90		42 - 120
Phenol-d5 (Surr)	88		45 - 124
Terphenyl-d14 (Surr)	99		20 - 130

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-496496/3-A

Matrix: Water

Analysis Batch: 497355

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 496496

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD	
									Limit	Limit
1,1'-Biphenyl	80.0	62.3		ug/L		78	63 - 99	7		30
1,2,4,5-Tetrachlorobenzene	80.0	52.4		ug/L		65	57 - 100	16		30
1,2,4-Trichlorobenzene	80.0	30.0	**1	ug/L		37	41 - 99	43		30
1,2-Dichlorobenzene	80.0	30.5		ug/L		38	37 - 97	25		30
1,2-Diphenylhydrazine(as Azobenzene)	80.9	76.8		ug/L		95	66 - 104	2		30
1,3-Dichlorobenzene	80.0	28.8		ug/L		36	34 - 96	20		30
1,3-Dinitrobenzene	80.0	84.7		ug/L		106	72 - 114	6		30
1,4-Dichlorobenzene	80.0	29.4		ug/L		37	35 - 96	21		30
1,4-Dioxane	80.0	58.2		ug/L		73	46 - 94	3		30
1-Methylnaphthalene	80.0	49.9		ug/L		62	56 - 102	24		30
2,2'-oxybis[1-chloropropane]	80.0	59.4		ug/L		74	52 - 108	16		30
2,3,4,6-Tetrachlorophenol	80.0	73.3		ug/L		92	71 - 111	3		30
2,4,5-Trichlorophenol	80.0	76.5		ug/L		96	70 - 109	3		30
2,4,6-Trichlorophenol	80.0	75.3		ug/L		94	71 - 113	1		30
2,4-Dichlorophenol	80.0	70.7		ug/L		88	65 - 109	1		30
2,4-Dimethylphenol	80.0	64.5		ug/L		81	46 - 100	2		30
2,4-Dinitrophenol	160	169		ug/L		105	60 - 110	5		30
2,4-Dinitrotoluene	80.0	79.6		ug/L		100	72 - 110	6		30
2,6-Dichlorophenol	80.0	69.9		ug/L		87	64 - 109	1		50
2,6-Dinitrotoluene	80.0	78.6		ug/L		98	70 - 109	5		30
2-Chloronaphthalene	80.0	56.3		ug/L		70	61 - 98	14		30
2-Chlorophenol	80.0	65.3		ug/L		82	59 - 107	3		30
2-Methylnaphthalene	80.0	46.8		ug/L		59	55 - 100	25		30
2-Methylphenol	80.0	70.0		ug/L		88	61 - 105	0		30
2-Nitroaniline	80.0	93.0	*	ug/L		116	65 - 110	5		30
2-Nitrophenol	80.0	68.1		ug/L		85	63 - 108	5		30
3 & 4 Methylphenol	80.0	74.5		ug/L		93	58 - 107	1		30
3,3'-Dichlorobenzidine	160	165		ug/L		103	39 - 105	0		30
3-Methylphenol	80.0	74.5		ug/L		93	58 - 107	1		30
3-Nitroaniline	80.0	72.7		ug/L		91	37 - 94	1		30
4,6-Dinitro-2-methylphenol	160	149		ug/L		93	67 - 109	0		30
4-Bromophenyl phenyl ether	80.0	69.2		ug/L		87	67 - 105	4		30
4-Chloro-3-methylphenol	80.0	78.0		ug/L		97	68 - 110	5		30
4-Chloroaniline	80.0	59.7		ug/L		75	34 - 97	4		30
4-Chlorophenyl phenyl ether	80.0	68.1		ug/L		85	69 - 100	1		30
4-Methylphenol	80.0	74.5		ug/L		93	58 - 107	1		30
4-Nitroaniline	80.0	79.5		ug/L		99	64 - 103	1		30
4-Nitrophenol	160	154		ug/L		96	60 - 120	2		30
Acenaphthene	80.0	65.5		ug/L		82	63 - 99	6		30
Acenaphthylene	80.0	64.2		ug/L		80	66 - 98	6		30
Acetophenone	80.0	67.6		ug/L		84	59 - 106	3		30
Aniline	80.0	49.3		ug/L		62	40 - 96	16		30
Anthracene	80.0	68.5		ug/L		86	65 - 105	7		30
Azobenzene	80.0	75.9		ug/L		95	66 - 104	2		30
Benzaldehyde	80.0	55.1		ug/L		69	10 - 89	15		50
Benzidine	160	ND	*1	ug/L		19	10 - 52	87		50
Benzo[a]anthracene	80.0	71.0		ug/L		89	68 - 104	0		30
Benzo[a]pyrene	80.0	69.6		ug/L		87	66 - 102	1		30

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-496496/3-A
Matrix: Water
Analysis Batch: 497355

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 496496

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[b]fluoranthene	80.0	74.9		ug/L		94	67 - 107	2	30
Benzo[g,h,i]perylene	80.0	73.2		ug/L		92	65 - 106	0	30
Benzo[k]fluoranthene	80.0	74.0		ug/L		93	71 - 109	1	30
Benzoic acid	80.0	75.4		ug/L		94	29 - 120	13	30
Benzyl alcohol	80.0	76.3		ug/L		95	61 - 107	5	30
Bis(2-chloroethoxy)methane	80.0	73.2		ug/L		91	62 - 106	0	30
Bis(2-chloroethyl)ether	80.0	67.6		ug/L		85	59 - 110	5	30
Bis(2-ethylhexyl) phthalate	80.0	78.2		ug/L		98	65 - 106	0	30
Butyl benzyl phthalate	80.0	77.7		ug/L		97	66 - 107	1	30
Caprolactam	80.0	82.7		ug/L		103	60 - 107	6	30
Carbazole	80.0	71.2		ug/L		89	66 - 109	5	30
Chrysene	80.0	70.2		ug/L		88	70 - 105	2	30
Dibenz(a,h)anthracene	80.0	72.9		ug/L		91	64 - 106	2	30
Dibenzofuran	80.0	67.3		ug/L		84	68 - 99	2	30
Diethyl phthalate	80.0	75.5		ug/L		94	71 - 105	4	30
Dimethyl phthalate	80.0	76.1		ug/L		95	70 - 107	5	30
Di-n-butyl phthalate	80.0	70.9		ug/L		89	75 - 120	3	30
Di-n-octyl phthalate	80.0	75.4		ug/L		94	71 - 120	2	30
Diphenylamine	68.0	62.0		ug/L		91	67 - 103	3	50
Fluoranthene	80.0	68.8		ug/L		86	66 - 107	4	30
Fluorene	80.0	69.8		ug/L		87	67 - 100	0	30
Hexachlorobenzene	80.0	67.2		ug/L		84	66 - 106	5	30
Hexachlorobutadiene	80.0	26.0	*1	ug/L		33	33 - 98	38	30
Hexachlorocyclopentadiene	160	44.7	J	ug/L		28	10 - 67	45	50
Hexachloroethane	80.0	26.7		ug/L		33	24 - 98	21	30
Hexadecane	80.0	72.1		ug/L		90	50 - 150	4	30
Indeno[1,2,3-cd]pyrene	80.0	68.8		ug/L		86	56 - 104	1	30
Isophorone	80.0	71.3		ug/L		89	59 - 102	2	30
Naphthalene	80.0	36.6	*1	ug/L		46	39 - 120	40	30
Nitrobenzene	80.0	70.4		ug/L		88	58 - 108	1	30
N-Nitrosodimethylamine	80.0	68.3		ug/L		85	53 - 106	0	34
N-Nitrosodi-n-propylamine	80.0	75.9		ug/L		95	57 - 106	1	30
N-Nitrosodiphenylamine	80.0	73.2		ug/L		91	65 - 104	3	30
Pentachlorophenol	160	149		ug/L		93	55 - 109	5	30
Phenanthrene	80.0	70.2		ug/L		88	67 - 106	5	30
Phenol	80.0	66.6		ug/L		83	60 - 108	2	30
Pyrene	80.0	73.5		ug/L		92	69 - 105	0	30
Pyridine	160	111		ug/L		70	46 - 88	10	41

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2,4,6-Tribromophenol (Surr)	90		42 - 131
2-Fluorobiphenyl	77		48 - 120
2-Fluorophenol (Surr)	79		41 - 120
Nitrobenzene-d5 (Surr)	90		42 - 120
Phenol-d5 (Surr)	84		45 - 124
Terphenyl-d14 (Surr)	99		20 - 130

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-496992/1-A
Matrix: Solid
Analysis Batch: 497355

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 496992

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1'-Biphenyl	ND		310	22	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
1,2,4,5-Tetrachlorobenzene	ND		310	46	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
1,2,4-Trichlorobenzene	ND		310	26	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
1,2-Dichlorobenzene	ND		310	20	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		310	20	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
1,3-Dichlorobenzene	ND		310	11	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
1,3-Dinitrobenzene	ND		310	66	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
1,4-Dichlorobenzene	ND		310	13	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
1,4-Dioxane	ND		610	61	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
1-Methylnaphthalene	ND		310	10	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
2,2'-oxybis[1-chloropropane]	ND		310	21	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
2,3,4,6-Tetrachlorophenol	ND		1500	130	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
2,4,5-Trichlorophenol	ND		310	9.3	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
2,4,6-Trichlorophenol	ND		310	9.3	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
2,4-Dichlorophenol	ND		310	9.3	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
2,4-Dimethylphenol	ND		310	61	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
2,4-Dinitrophenol	ND		1500	310	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
2,4-Dinitrotoluene	ND		310	61	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
2,6-Dichlorophenol	ND		310	21	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
2,6-Dinitrotoluene	ND		310	26	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
2-Chloronaphthalene	ND		310	9.3	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
2-Chlorophenol	ND		310	20	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
2-Methylnaphthalene	ND		310	18	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
2-Methylphenol	ND		310	12	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
2-Nitroaniline	ND		1500	47	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
2-Nitrophenol	ND		310	9.3	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
3 & 4 Methylphenol	ND		310	31	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
3,3'-Dichlorobenzidine	ND		610	84	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
3-Methylphenol	ND		310	31	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
3-Nitroaniline	ND		1500	68	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
4,6-Dinitro-2-methylphenol	ND		1500	310	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
4-Bromophenyl phenyl ether	ND		310	18	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
4-Chloro-3-methylphenol	ND		310	23	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
4-Chloroaniline	ND		310	76	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
4-Chlorophenyl phenyl ether	ND		310	20	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
4-Methylphenol	ND		310	31	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
4-Nitroaniline	ND		1500	68	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
4-Nitrophenol	ND		1500	90	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Acenaphthene	ND		310	9.6	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Acenaphthylene	ND		310	76	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Acetophenone	ND		310	19	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Aniline	ND		310	120	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Anthracene	ND		310	16	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Azobenzene	ND		310	20	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Benzaldehyde	ND		310	62	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Benzidine	ND		3100	920	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Benzo[a]anthracene	ND		310	19	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Benzo[a]pyrene	ND		310	19	ug/Kg		06/02/20 07:08	06/04/20 21:55	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-496992/1-A
Matrix: Solid
Analysis Batch: 497355

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 496992

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND		310	24	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Benzo[g,h,i]perylene	ND		310	15	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Benzo[k]fluoranthene	ND		310	37	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Benzoic acid	ND		1500	310	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Benzyl alcohol	ND		310	9.3	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Bis(2-chloroethoxy)methane	ND		310	21	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Bis(2-chloroethyl)ether	ND		310	15	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Bis(2-ethylhexyl) phthalate	ND		310	43	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Butyl benzyl phthalate	ND		310	40	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Caprolactam	ND		310	99	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Carbazole	ND		310	34	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Chrysene	ND		310	25	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Dibenz(a,h)anthracene	ND		310	18	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Dibenzofuran	ND		310	19	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Diethyl phthalate	ND		610	24	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Dimethyl phthalate	ND		310	21	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Di-n-butyl phthalate	ND		310	27	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Di-n-octyl phthalate	ND		310	38	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Diphenylamine	ND		310	41	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Famphur	ND		610	32	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Fluoranthene	ND		310	34	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Fluorene	ND		310	17	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Hexachlorobenzene	ND		310	27	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Hexachlorobutadiene	ND		310	9.3	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Hexachlorocyclopentadiene	ND		1500	100	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Hexachloroethane	ND		310	20	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Hexadecane	ND		310	12	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Indeno[1,2,3-cd]pyrene	ND		310	20	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Isophorone	ND		310	16	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Naphthalene	ND		310	29	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Nitrobenzene	ND		310	20	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
N-Nitrosodimethylamine	ND		310	34	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
N-Nitrosodi-n-propylamine	ND		310	63	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
N-Nitrosodiphenylamine	ND		310	20	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Pentachlorophenol	ND		1500	310	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Phenanthrene	ND		310	16	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Phenol	ND		310	17	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Pyrene	ND		310	11	ug/Kg		06/02/20 07:08	06/04/20 21:55	1
Pyridine	ND		610	37	ug/Kg		06/02/20 07:08	06/04/20 21:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	65		35 - 120	06/02/20 07:08	06/04/20 21:55	1
2-Fluorobiphenyl	63		46 - 120	06/02/20 07:08	06/04/20 21:55	1
2-Fluorophenol (Surr)	67		43 - 120	06/02/20 07:08	06/04/20 21:55	1
Nitrobenzene-d5 (Surr)	68		46 - 120	06/02/20 07:08	06/04/20 21:55	1
Phenol-d5 (Surr)	72		46 - 120	06/02/20 07:08	06/04/20 21:55	1
Terphenyl-d14 (Surr)	92		46 - 120	06/02/20 07:08	06/04/20 21:55	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-496992/2-A
Matrix: Solid
Analysis Batch: 497355

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 496992
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1'-Biphenyl	2520	2010		ug/Kg		80	60 - 120
1,2,4,5-Tetrachlorobenzene	2520	1920		ug/Kg		76	60 - 120
1,2,4-Trichlorobenzene	2520	1860		ug/Kg		74	59 - 120
1,2-Dichlorobenzene	2520	1830		ug/Kg		73	57 - 120
1,2-Diphenylhydrazine(as Azobenzene)	2540	2260		ug/Kg		89	60 - 120
1,3-Dichlorobenzene	2520	1750		ug/Kg		70	56 - 120
1,3-Dinitrobenzene	2520	2330		ug/Kg		93	66 - 120
1,4-Dichlorobenzene	2520	1810		ug/Kg		72	57 - 120
1,4-Dioxane	2520	984		ug/Kg		39	28 - 120
1-Methylnaphthalene	2520	2010		ug/Kg		80	57 - 120
2,2'-oxybis[1-chloropropane]	2520	2110		ug/Kg		84	46 - 120
2,3,4,6-Tetrachlorophenol	2520	2160		ug/Kg		86	63 - 120
2,4,5-Trichlorophenol	2520	2130		ug/Kg		85	65 - 120
2,4,6-Trichlorophenol	2520	2110		ug/Kg		84	64 - 120
2,4-Dichlorophenol	2520	2050		ug/Kg		81	64 - 120
2,4-Dimethylphenol	2520	2070		ug/Kg		82	60 - 120
2,4-Dinitrophenol	5030	4520		ug/Kg		90	52 - 120
2,4-Dinitrotoluene	2520	2270		ug/Kg		90	68 - 120
2,6-Dichlorophenol	2520	2000		ug/Kg		79	30 - 150
2,6-Dinitrotoluene	2520	2210		ug/Kg		88	68 - 120
2-Chloronaphthalene	2520	2010		ug/Kg		80	61 - 120
2-Chlorophenol	2520	2000		ug/Kg		79	62 - 120
2-Methylnaphthalene	2520	1940		ug/Kg		77	60 - 120
2-Methylphenol	2520	2050		ug/Kg		82	61 - 120
2-Nitroaniline	2520	2560		ug/Kg		102	63 - 120
2-Nitrophenol	2520	2030		ug/Kg		81	61 - 120
3 & 4 Methylphenol	2520	2170		ug/Kg		86	62 - 120
3,3'-Dichlorobenzidine	5030	4680		ug/Kg		93	22 - 120
3-Methylphenol	2520	2170		ug/Kg		86	62 - 120
3-Nitroaniline	2520	2090		ug/Kg		83	40 - 120
4,6-Dinitro-2-methylphenol	5030	4160		ug/Kg		83	60 - 120
4-Bromophenyl phenyl ether	2520	2100		ug/Kg		83	66 - 120
4-Chloro-3-methylphenol	2520	2210		ug/Kg		88	62 - 120
4-Chloroaniline	2520	1700		ug/Kg		68	33 - 120
4-Chlorophenyl phenyl ether	2520	2090		ug/Kg		83	63 - 120
4-Methylphenol	2520	2170		ug/Kg		86	62 - 120
4-Nitroaniline	2520	2370		ug/Kg		94	58 - 120
4-Nitrophenol	5030	4420		ug/Kg		88	67 - 120
Acenaphthene	2520	2070		ug/Kg		82	62 - 120
Acenaphthylene	2520	2050		ug/Kg		81	64 - 120
Acetophenone	2520	1610		ug/Kg		64	48 - 120
Aniline	2520	1530		ug/Kg		61	21 - 120
Anthracene	2520	2120		ug/Kg		84	66 - 120
Azobenzene	2520	2230		ug/Kg		89	59 - 120
Benzaldehyde	2520	1700		ug/Kg		67	30 - 150
Benzidine	5030	1930	J	ug/Kg		38	5 - 120
Benzo[a]anthracene	2520	2120		ug/Kg		84	64 - 120
Benzo[a]pyrene	2520	2070		ug/Kg		82	65 - 120

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-496992/2-A
Matrix: Solid
Analysis Batch: 497355

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 496992

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[b]fluoranthene	2520	2150		ug/Kg		86	58 - 120
Benzo[g,h,i]perylene	2520	2150		ug/Kg		85	58 - 120
Benzo[k]fluoranthene	2520	2190		ug/Kg		87	62 - 120
Benzoic acid	2520	1880		ug/Kg		75	51 - 120
Benzyl alcohol	2520	2110		ug/Kg		84	61 - 120
Bis(2-chloroethoxy)methane	2520	2050		ug/Kg		82	58 - 120
Bis(2-chloroethyl)ether	2520	2020		ug/Kg		80	57 - 120
Bis(2-ethylhexyl) phthalate	2520	2350		ug/Kg		93	65 - 120
Butyl benzyl phthalate	2520	2290		ug/Kg		91	65 - 120
Caprolactam	2520	2300		ug/Kg		92	20 - 138
Carbazole	2520	2140		ug/Kg		85	65 - 120
Chrysene	2520	2100		ug/Kg		83	65 - 120
Dibenz(a,h)anthracene	2520	2150		ug/Kg		86	56 - 120
Dibenzofuran	2520	2050		ug/Kg		82	65 - 120
Diethyl phthalate	2520	2130		ug/Kg		85	68 - 120
Dimethyl phthalate	2520	2080		ug/Kg		83	66 - 120
Di-n-butyl phthalate	2520	2180		ug/Kg		87	66 - 120
Di-n-octyl phthalate	2520	2300		ug/Kg		91	55 - 120
Diphenylamine	2140	1790		ug/Kg		84	30 - 150
Fluoranthene	2520	2080		ug/Kg		83	64 - 120
Fluorene	2520	2110		ug/Kg		84	66 - 120
Hexachlorobenzene	2520	2010		ug/Kg		80	65 - 120
Hexachlorobutadiene	2520	1780		ug/Kg		71	58 - 120
Hexachlorocyclopentadiene	5030	3370		ug/Kg		67	43 - 120
Hexachloroethane	2520	1830		ug/Kg		73	56 - 120
Hexadecane	2520	2250		ug/Kg		89	45 - 135
Indeno[1,2,3-cd]pyrene	2520	2100		ug/Kg		83	46 - 120
Isophorone	2520	1960		ug/Kg		78	56 - 120
Naphthalene	2520	1920		ug/Kg		76	59 - 120
Nitrobenzene	2520	2040		ug/Kg		81	55 - 120
N-Nitrosodimethylamine	2520	1840		ug/Kg		73	50 - 120
N-Nitrosodi-n-propylamine	2520	2230		ug/Kg		89	52 - 120
N-Nitrosodiphenylamine	2520	2090		ug/Kg		83	65 - 120
Pentachlorophenol	5030	4050		ug/Kg		81	50 - 120
Phenanthrene	2520	2110		ug/Kg		84	67 - 120
Phenol	2520	1960		ug/Kg		78	63 - 120
Pyrene	2520	2170		ug/Kg		86	66 - 120
Pyridine	5030	2780		ug/Kg		55	37 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	81		35 - 120
2-Fluorobiphenyl	73		46 - 120
2-Fluorophenol (Surr)	74		43 - 120
Nitrobenzene-d5 (Surr)	78		46 - 120
Phenol-d5 (Surr)	80		46 - 120
Terphenyl-d14 (Surr)	90		46 - 120

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-496992/3-A

Matrix: Solid

Analysis Batch: 497355

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 496992

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD	
									%Rec.	Limit
1,1'-Biphenyl	2560	2010		ug/Kg		79	60 - 120	0		30
1,2,4,5-Tetrachlorobenzene	2560	1920		ug/Kg		75	60 - 120	0		30
1,2,4-Trichlorobenzene	2560	1860		ug/Kg		73	59 - 120	0		30
1,2-Dichlorobenzene	2560	1860		ug/Kg		73	57 - 120	2		30
1,2-Diphenylhydrazine(as Azobenzene)	2580	2180		ug/Kg		84	60 - 120	4		30
1,3-Dichlorobenzene	2560	1800		ug/Kg		70	56 - 120	3		30
1,3-Dinitrobenzene	2560	2220		ug/Kg		87	66 - 120	5		30
1,4-Dichlorobenzene	2560	1820		ug/Kg		71	57 - 120	1		30
1,4-Dioxane	2560	1120		ug/Kg		44	28 - 120	13		30
1-Methylnaphthalene	2560	2040		ug/Kg		80	57 - 120	2		30
2,2'-oxybis[1-chloropropane]	2560	2120		ug/Kg		83	46 - 120	1		30
2,3,4,6-Tetrachlorophenol	2560	2000		ug/Kg		78	63 - 120	8		30
2,4,5-Trichlorophenol	2560	2060		ug/Kg		81	65 - 120	3		30
2,4,6-Trichlorophenol	2560	2070		ug/Kg		81	64 - 120	2		30
2,4-Dichlorophenol	2560	2070		ug/Kg		81	64 - 120	1		30
2,4-Dimethylphenol	2560	2020		ug/Kg		79	60 - 120	3		30
2,4-Dinitrophenol	5110	4340		ug/Kg		85	52 - 120	4		30
2,4-Dinitrotoluene	2560	2120		ug/Kg		83	68 - 120	7		30
2,6-Dichlorophenol	2560	1990		ug/Kg		78	30 - 150	0		30
2,6-Dinitrotoluene	2560	2130		ug/Kg		83	68 - 120	4		30
2-Chloronaphthalene	2560	1970		ug/Kg		77	61 - 120	2		30
2-Chlorophenol	2560	1980		ug/Kg		78	62 - 120	1		30
2-Methylnaphthalene	2560	1960		ug/Kg		77	60 - 120	1		30
2-Methylphenol	2560	2070		ug/Kg		81	61 - 120	1		30
2-Nitroaniline	2560	2490		ug/Kg		98	63 - 120	3		30
2-Nitrophenol	2560	2080		ug/Kg		81	61 - 120	2		30
3 & 4 Methylphenol	2560	2180		ug/Kg		85	62 - 120	1		30
3,3'-Dichlorobenzidine	5110	4600		ug/Kg		90	22 - 120	2		30
3-Methylphenol	2560	2180		ug/Kg		85	62 - 120	1		30
3-Nitroaniline	2560	2060		ug/Kg		81	40 - 120	1		30
4,6-Dinitro-2-methylphenol	5110	4030		ug/Kg		79	60 - 120	3		30
4-Bromophenyl phenyl ether	2560	2040		ug/Kg		80	66 - 120	3		30
4-Chloro-3-methylphenol	2560	2130		ug/Kg		83	62 - 120	4		30
4-Chloroaniline	2560	1720		ug/Kg		67	33 - 120	1		30
4-Chlorophenyl phenyl ether	2560	2020		ug/Kg		79	63 - 120	3		30
4-Methylphenol	2560	2180		ug/Kg		85	62 - 120	1		30
4-Nitroaniline	2560	2200		ug/Kg		86	58 - 120	7		30
4-Nitrophenol	5110	4050		ug/Kg		79	67 - 120	9		30
Acenaphthene	2560	2040		ug/Kg		80	62 - 120	2		30
Acenaphthylene	2560	2000		ug/Kg		78	64 - 120	2		30
Acetophenone	2560	1630		ug/Kg		64	48 - 120	1		30
Aniline	2560	1540		ug/Kg		60	21 - 120	0		30
Anthracene	2560	2100		ug/Kg		82	66 - 120	1		30
Azobenzene	2560	2150		ug/Kg		84	59 - 120	4		30
Benzaldehyde	2560	1680		ug/Kg		66	30 - 150	1		50
Benzidine	5110	1990	J	ug/Kg		39	5 - 120	3		50
Benzo[a]anthracene	2560	2080		ug/Kg		81	64 - 120	2		30
Benzo[a]pyrene	2560	2020		ug/Kg		79	65 - 120	3		30

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-496992/3-A
Matrix: Solid
Analysis Batch: 497355

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 496992

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[b]fluoranthene	2560	2130		ug/Kg		83	58 - 120	1	30
Benzo[g,h,i]perylene	2560	2090		ug/Kg		82	58 - 120	3	30
Benzo[k]fluoranthene	2560	2130		ug/Kg		83	62 - 120	3	30
Benzoic acid	2560	1950		ug/Kg		76	51 - 120	4	30
Benzyl alcohol	2560	2160		ug/Kg		84	61 - 120	2	30
Bis(2-chloroethoxy)methane	2560	2110		ug/Kg		83	58 - 120	3	30
Bis(2-chloroethyl)ether	2560	2040		ug/Kg		80	57 - 120	1	30
Bis(2-ethylhexyl) phthalate	2560	2290		ug/Kg		90	65 - 120	2	30
Butyl benzyl phthalate	2560	2250		ug/Kg		88	65 - 120	2	30
Caprolactam	2560	2280		ug/Kg		89	20 - 138	1	30
Carbazole	2560	2100		ug/Kg		82	65 - 120	2	30
Chrysene	2560	2070		ug/Kg		81	65 - 120	1	30
Dibenz(a,h)anthracene	2560	2150		ug/Kg		84	56 - 120	0	30
Dibenzofuran	2560	2010		ug/Kg		79	65 - 120	2	30
Diethyl phthalate	2560	2010		ug/Kg		79	68 - 120	6	30
Dimethyl phthalate	2560	1990		ug/Kg		78	66 - 120	5	30
Di-n-butyl phthalate	2560	2080		ug/Kg		81	66 - 120	5	30
Di-n-octyl phthalate	2560	2240		ug/Kg		88	55 - 120	3	30
Diphenylamine	2170	1760		ug/Kg		81	30 - 150	2	50
Fluoranthene	2560	2020		ug/Kg		79	64 - 120	3	30
Fluorene	2560	2030		ug/Kg		80	66 - 120	4	30
Hexachlorobenzene	2560	2030		ug/Kg		79	65 - 120	1	30
Hexachlorobutadiene	2560	1810		ug/Kg		71	58 - 120	1	30
Hexachlorocyclopentadiene	5110	3550		ug/Kg		70	43 - 120	5	30
Hexachloroethane	2560	1850		ug/Kg		72	56 - 120	1	30
Hexadecane	2560	2210		ug/Kg		87	45 - 135	2	30
Indeno[1,2,3-cd]pyrene	2560	2050		ug/Kg		80	46 - 120	3	30
Isophorone	2560	1970		ug/Kg		77	56 - 120	1	30
Naphthalene	2560	1940		ug/Kg		76	59 - 120	1	30
Nitrobenzene	2560	2060		ug/Kg		81	55 - 120	1	30
N-Nitrosodimethylamine	2560	1870		ug/Kg		73	50 - 120	1	30
N-Nitrosodi-n-propylamine	2560	2230		ug/Kg		87	52 - 120	0	30
N-Nitrosodiphenylamine	2560	2160		ug/Kg		85	65 - 120	3	30
Pentachlorophenol	5110	4030		ug/Kg		79	50 - 120	1	30
Phenanthrene	2560	2060		ug/Kg		80	67 - 120	3	30
Phenol	2560	1970		ug/Kg		77	63 - 120	1	30
Pyrene	2560	2160		ug/Kg		84	66 - 120	1	30
Pyridine	5110	2920		ug/Kg		57	37 - 120	5	30

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2,4,6-Tribromophenol (Surr)	75		35 - 120
2-Fluorobiphenyl	71		46 - 120
2-Fluorophenol (Surr)	74		43 - 120
Nitrobenzene-d5 (Surr)	79		46 - 120
Phenol-d5 (Surr)	78		46 - 120
Terphenyl-d14 (Surr)	88		46 - 120

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-497218/1-A

Matrix: Solid

Analysis Batch: 497550

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 497218

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1'-Biphenyl	ND		330	24	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
1,2,4,5-Tetrachlorobenzene	ND		330	49	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
1,2,4-Trichlorobenzene	ND		330	28	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
1,2-Dichlorobenzene	ND		330	22	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		330	22	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
1,3-Dichlorobenzene	ND		330	12	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
1,3-Dinitrobenzene	ND		330	71	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
1,4-Dichlorobenzene	ND		330	14	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
1,4-Dioxane	ND		660	66	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
1-Methylnaphthalene	ND		330	11	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
2,2'-oxybis[1-chloropropane]	ND		330	23	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
2,3,4,6-Tetrachlorophenol	ND		1600	140	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
2,4,5-Trichlorophenol	ND		330	10	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
2,4,6-Trichlorophenol	ND		330	10	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
2,4-Dichlorophenol	ND		330	10	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
2,4-Dimethylphenol	ND		330	66	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
2,4-Dinitrophenol	ND		1600	330	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
2,4-Dinitrotoluene	ND		330	66	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
2,6-Dichlorophenol	ND		330	22	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
2,6-Dinitrotoluene	ND		330	28	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
2-Chloronaphthalene	ND		330	10	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
2-Chlorophenol	ND		330	21	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
2-Methylnaphthalene	ND		330	19	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
2-Methylphenol	ND		330	13	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
2-Nitroaniline	ND		1600	50	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
2-Nitrophenol	ND		330	10	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
3 & 4 Methylphenol	ND		330	33	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
3,3'-Dichlorobenzidine	ND		660	90	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
3-Methylphenol	ND		330	33	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
3-Nitroaniline	ND		1600	73	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
4,6-Dinitro-2-methylphenol	ND		1600	330	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
4-Bromophenyl phenyl ether	ND		330	19	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
4-Chloro-3-methylphenol	ND		330	25	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
4-Chloroaniline	ND		330	82	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
4-Chlorophenyl phenyl ether	ND		330	21	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
4-Methylphenol	ND		330	33	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
4-Nitroaniline	ND		1600	73	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
4-Nitrophenol	ND		1600	97	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Acenaphthene	ND		330	10	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Acenaphthylene	ND		330	82	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Acetophenone	ND		330	20	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Aniline	ND		330	130	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Anthracene	ND		330	17	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Azobenzene	ND		330	22	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Benzaldehyde	ND		330	67	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Benzidine	ND		3300	990	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Benzo[a]anthracene	ND		330	20	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Benzo[a]pyrene	ND		330	20	ug/Kg		06/03/20 13:30	06/05/20 13:47	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-497218/1-A
Matrix: Solid
Analysis Batch: 497550

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 497218

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND		330	26	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Benzo[g,h,i]perylene	ND		330	16	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Benzo[k]fluoranthene	ND		330	40	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Benzoic acid	ND		1600	330	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Benzyl alcohol	ND		330	10	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Bis(2-chloroethoxy)methane	ND		330	23	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Bis(2-chloroethyl)ether	ND		330	17	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Bis(2-ethylhexyl) phthalate	ND		330	46	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Butyl benzyl phthalate	ND		330	43	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Caprolactam	ND		330	110	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Carbazole	ND		330	36	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Chrysene	ND		330	27	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Dibenz(a,h)anthracene	ND		330	19	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Dibenzofuran	ND		330	20	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Diethyl phthalate	ND		660	26	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Dimethyl phthalate	ND		330	23	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Di-n-butyl phthalate	ND		330	29	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Di-n-octyl phthalate	ND		330	41	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Diphenylamine	ND		330	44	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Famphur	ND		660	34	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Fluoranthene	ND		330	36	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Fluorene	ND		330	18	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Hexachlorobenzene	ND		330	29	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Hexachlorobutadiene	ND		330	10	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Hexachlorocyclopentadiene	ND		1600	110	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Hexachloroethane	ND		330	21	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Hexadecane	ND		330	13	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Indeno[1,2,3-cd]pyrene	ND		330	22	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Isophorone	ND		330	17	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Naphthalene	ND		330	31	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Nitrobenzene	ND		330	22	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
N-Nitrosodimethylamine	ND		330	37	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
N-Nitrosodi-n-propylamine	ND		330	68	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
N-Nitrosodiphenylamine	ND		330	21	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Pentachlorophenol	ND		1600	330	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Phenanthrene	ND		330	17	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Phenol	ND		330	18	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Pyrene	ND		330	12	ug/Kg		06/03/20 13:30	06/05/20 13:47	1
Pyridine	ND		660	40	ug/Kg		06/03/20 13:30	06/05/20 13:47	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	72		35 - 120	06/03/20 13:30	06/05/20 13:47	1
2-Fluorobiphenyl	71		46 - 120	06/03/20 13:30	06/05/20 13:47	1
2-Fluorophenol (Surr)	75		43 - 120	06/03/20 13:30	06/05/20 13:47	1
Nitrobenzene-d5 (Surr)	81		46 - 120	06/03/20 13:30	06/05/20 13:47	1
Phenol-d5 (Surr)	81		46 - 120	06/03/20 13:30	06/05/20 13:47	1
Terphenyl-d14 (Surr)	95		46 - 120	06/03/20 13:30	06/05/20 13:47	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-497218/2-A
Matrix: Solid
Analysis Batch: 497550

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497218
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1'-Biphenyl	2670	2170		ug/Kg		82	60 - 120
1,2,4,5-Tetrachlorobenzene	2670	2120		ug/Kg		79	60 - 120
1,2,4-Trichlorobenzene	2670	2080		ug/Kg		78	59 - 120
1,2-Dichlorobenzene	2670	2070		ug/Kg		78	57 - 120
1,2-Diphenylhydrazine(as Azobenzene)	2700	2510		ug/Kg		93	60 - 120
1,3-Dichlorobenzene	2670	2030		ug/Kg		76	56 - 120
1,3-Dinitrobenzene	2670	2550		ug/Kg		95	66 - 120
1,4-Dichlorobenzene	2670	2050		ug/Kg		77	57 - 120
1,4-Dioxane	2670	1250		ug/Kg		47	28 - 120
1-Methylnaphthalene	2670	2270		ug/Kg		85	57 - 120
2,2'-oxybis[1-chloropropane]	2670	2340		ug/Kg		88	46 - 120
2,3,4,6-Tetrachlorophenol	2670	2250		ug/Kg		84	63 - 120
2,4,5-Trichlorophenol	2670	2300		ug/Kg		86	65 - 120
2,4,6-Trichlorophenol	2670	2280		ug/Kg		86	64 - 120
2,4-Dichlorophenol	2670	2240		ug/Kg		84	64 - 120
2,4-Dimethylphenol	2670	2290		ug/Kg		86	60 - 120
2,4-Dinitrophenol	5330	5350		ug/Kg		100	52 - 120
2,4-Dinitrotoluene	2670	2490		ug/Kg		93	68 - 120
2,6-Dichlorophenol	2670	2230		ug/Kg		84	30 - 150
2,6-Dinitrotoluene	2670	2390		ug/Kg		90	68 - 120
2-Chloronaphthalene	2670	2200		ug/Kg		83	61 - 120
2-Chlorophenol	2670	2180		ug/Kg		82	62 - 120
2-Methylnaphthalene	2670	2200		ug/Kg		82	60 - 120
2-Methylphenol	2670	2230		ug/Kg		84	61 - 120
2-Nitroaniline	2670	2860		ug/Kg		107	63 - 120
2-Nitrophenol	2670	2280		ug/Kg		86	61 - 120
3 & 4 Methylphenol	2670	2360		ug/Kg		89	62 - 120
3,3'-Dichlorobenzidine	5330	5110		ug/Kg		96	22 - 120
3-Methylphenol	2670	2360		ug/Kg		89	62 - 120
3-Nitroaniline	2670	2190		ug/Kg		82	40 - 120
4,6-Dinitro-2-methylphenol	5330	4620		ug/Kg		87	60 - 120
4-Bromophenyl phenyl ether	2670	2250		ug/Kg		85	66 - 120
4-Chloro-3-methylphenol	2670	2400		ug/Kg		90	62 - 120
4-Chloroaniline	2670	1740		ug/Kg		65	33 - 120
4-Chlorophenyl phenyl ether	2670	2260		ug/Kg		85	63 - 120
4-Methylphenol	2670	2360		ug/Kg		89	62 - 120
4-Nitroaniline	2670	2570		ug/Kg		96	58 - 120
4-Nitrophenol	5330	4920		ug/Kg		92	67 - 120
Acenaphthene	2670	2280		ug/Kg		85	62 - 120
Acenaphthylene	2670	2240		ug/Kg		84	64 - 120
Acetophenone	2670	1790		ug/Kg		67	48 - 120
Aniline	2670	1580		ug/Kg		59	21 - 120
Anthracene	2670	2310		ug/Kg		87	66 - 120
Azobenzene	2670	2490		ug/Kg		93	59 - 120
Benzaldehyde	2670	1700		ug/Kg		64	30 - 150
Benzidine	5330	1920	J	ug/Kg		36	5 - 120
Benzo[a]anthracene	2670	2290		ug/Kg		86	64 - 120
Benzo[a]pyrene	2670	2220		ug/Kg		83	65 - 120

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-497218/2-A
Matrix: Solid
Analysis Batch: 497550

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497218

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[b]fluoranthene	2670	2350		ug/Kg		88	58 - 120
Benzo[g,h,i]perylene	2670	2260		ug/Kg		85	58 - 120
Benzo[k]fluoranthene	2670	2320		ug/Kg		87	62 - 120
Benzoic acid	2670	2360		ug/Kg		89	51 - 120
Benzyl alcohol	2670	2310		ug/Kg		87	61 - 120
Bis(2-chloroethoxy)methane	2670	2340		ug/Kg		88	58 - 120
Bis(2-chloroethyl)ether	2670	2270		ug/Kg		85	57 - 120
Bis(2-ethylhexyl) phthalate	2670	2540		ug/Kg		95	65 - 120
Butyl benzyl phthalate	2670	2500		ug/Kg		94	65 - 120
Caprolactam	2670	2580		ug/Kg		97	20 - 138
Carbazole	2670	2340		ug/Kg		88	65 - 120
Chrysene	2670	2290		ug/Kg		86	65 - 120
Dibenz(a,h)anthracene	2670	2290		ug/Kg		86	56 - 120
Dibenzofuran	2670	2270		ug/Kg		85	65 - 120
Diethyl phthalate	2670	2330		ug/Kg		87	68 - 120
Dimethyl phthalate	2670	2310		ug/Kg		86	66 - 120
Di-n-butyl phthalate	2670	2370		ug/Kg		89	66 - 120
Di-n-octyl phthalate	2670	2490		ug/Kg		93	55 - 120
Diphenylamine	2270	2000		ug/Kg		88	30 - 150
Fluoranthene	2670	2300		ug/Kg		86	64 - 120
Fluorene	2670	2320		ug/Kg		87	66 - 120
Hexachlorobenzene	2670	2210		ug/Kg		83	65 - 120
Hexachlorobutadiene	2670	2090		ug/Kg		78	58 - 120
Hexachlorocyclopentadiene	5330	3860		ug/Kg		72	43 - 120
Hexachloroethane	2670	2100		ug/Kg		79	56 - 120
Hexadecane	2670	2470		ug/Kg		92	45 - 135
Indeno[1,2,3-cd]pyrene	2670	2240		ug/Kg		84	46 - 120
Isophorone	2670	2170		ug/Kg		81	56 - 120
Naphthalene	2670	2180		ug/Kg		82	59 - 120
Nitrobenzene	2670	2330		ug/Kg		87	55 - 120
N-Nitrosodimethylamine	2670	2140		ug/Kg		80	50 - 120
N-Nitrosodi-n-propylamine	2670	2490		ug/Kg		93	52 - 120
N-Nitrosodiphenylamine	2670	2320		ug/Kg		87	65 - 120
Pentachlorophenol	5330	4490		ug/Kg		84	50 - 120
Phenanthrene	2670	2310		ug/Kg		87	67 - 120
Phenol	2670	2120		ug/Kg		80	63 - 120
Pyrene	2670	2350		ug/Kg		88	66 - 120
Pyridine	5330	3290		ug/Kg		62	37 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	83		35 - 120
2-Fluorobiphenyl	75		46 - 120
2-Fluorophenol (Surr)	77		43 - 120
Nitrobenzene-d5 (Surr)	84		46 - 120
Phenol-d5 (Surr)	83		46 - 120
Terphenyl-d14 (Surr)	93		46 - 120

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Lab Sample ID: MB 280-496761/45
Matrix: Water
Analysis Batch: 496761

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		25	10	ug/L			05/30/20 04:47	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	82		82 - 110					05/30/20 04:47	1

Lab Sample ID: LCS 280-496761/61
Matrix: Water
Analysis Batch: 496761

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C6-C10	76.9	70.3		ug/L		91	79 - 149
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
a,a,a-Trifluorotoluene	82		82 - 110				

Lab Sample ID: LCSD 280-496761/62
Matrix: Water
Analysis Batch: 496761

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C10	76.9	75.5		ug/L		98	79 - 149	7	27
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
a,a,a-Trifluorotoluene	83		82 - 110						

Lab Sample ID: MB 280-497195/3-A
Matrix: Solid
Analysis Batch: 497219

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 497195

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.0	0.76	mg/Kg		06/03/20 09:45	06/03/20 11:24	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	86		77 - 123				06/03/20 09:45	06/03/20 11:24	1

Lab Sample ID: LCS 280-497195/1-A
Matrix: Solid
Analysis Batch: 497219

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497195

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C6-C10	4.27	4.55		mg/Kg		107	75 - 135

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics) (Continued)

Lab Sample ID: LCS 280-497195/1-A
Matrix: Solid
Analysis Batch: 497219

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497195

Surrogate	LCS %Recovery	LCS Qualifier	Limits
a,a,a-Trifluorotoluene	87		77 - 123

Lab Sample ID: LCSD 280-497195/2-A
Matrix: Solid
Analysis Batch: 497219

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 497195

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C10	4.27	3.92		mg/Kg		92	75 - 135	15	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
a,a,a-Trifluorotoluene	85		77 - 123

Lab Sample ID: MB 280-497267/3-A
Matrix: Solid
Analysis Batch: 497277

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 497267

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.0	0.76	mg/Kg		06/03/20 14:49	06/03/20 22:56	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	83		77 - 123	06/03/20 14:49	06/03/20 22:56	1

Lab Sample ID: LCS 280-497267/1-A
Matrix: Solid
Analysis Batch: 497277

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497267

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C6-C10	4.27	4.03		mg/Kg		94	75 - 135

Surrogate	LCS %Recovery	LCS Qualifier	Limits
a,a,a-Trifluorotoluene	83		77 - 123

Lab Sample ID: LCSD 280-497267/2-A
Matrix: Solid
Analysis Batch: 497277

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 497267

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C10	4.27	3.41		mg/Kg		80	75 - 135	17	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
a,a,a-Trifluorotoluene	83		77 - 123

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Lab Sample ID: MB 280-496681/1-A
Matrix: Water
Analysis Batch: 497610

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 496681

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Diesel Range Organics [C10-C28]	ND		0.25	0.033	mg/L		05/29/20 11:37	06/05/20 16:48	1
Motor Oil (C20-C38)	ND		0.50	0.056	mg/L		05/29/20 11:37	06/05/20 16:48	1
Surrogate	MB	MB	Limits			Prepared	Analyzed	Dil Fac	
	%Recovery	Qualifier							
<i>o</i> -Terphenyl (Surr)	77		50 - 115			05/29/20 11:37	06/05/20 16:48	1	

Lab Sample ID: LCS 280-496681/2-A
Matrix: Water
Analysis Batch: 497610

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 496681

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	Limits
		Result	Qualifier				
Diesel Range Organics [C10-C28]	1.98	1.68		mg/L		85	54 - 115
Surrogate	LCS	LCS	Limits				
	%Recovery	Qualifier					
<i>o</i> -Terphenyl (Surr)	84		50 - 115				

Lab Sample ID: LCS 280-496681/3-A
Matrix: Water
Analysis Batch: 497610

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 496681

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	Limits
		Result	Qualifier				
Motor Oil (C20-C38)	5.02	4.46		mg/L		89	54 - 115
Surrogate	LCS	LCS	Limits				
	%Recovery	Qualifier					
<i>o</i> -Terphenyl (Surr)	86		50 - 115				

Lab Sample ID: LCSD 280-496681/4-A
Matrix: Water
Analysis Batch: 497831

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 496681

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	Limits	RPD	Limit
		Result	Qualifier						
Motor Oil (C20-C38)	5.02	4.65		mg/L		93	54 - 115	4	31
Surrogate	LCSD	LCSD	Limits						
	%Recovery	Qualifier							
<i>o</i> -Terphenyl (Surr)	89		50 - 115						

Lab Sample ID: MB 280-496856/1-A
Matrix: Solid
Analysis Batch: 498417

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 496856

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Diesel Range Organics [C10-C28]	ND		7.3	3.3	mg/Kg		06/01/20 07:09	06/11/20 19:27	1
Motor Oil (C20-C38)	ND		22	7.1	mg/Kg		06/01/20 07:09	06/11/20 19:27	1
Surrogate	MB	MB	Limits			Prepared	Analyzed	Dil Fac	
	%Recovery	Qualifier							
<i>o</i> -Terphenyl (Surr)	69		49 - 115			06/01/20 07:09	06/11/20 19:27	1	

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Lab Sample ID: LCS 280-496856/2-A
Matrix: Solid
Analysis Batch: 498417

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 496856

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	127	98.4		mg/Kg		77	53 - 115
Surrogate	%Recovery	LCS Qualifier	Limits				
<i>o-Terphenyl (Surr)</i>	72		49 - 115				

Lab Sample ID: LCS 280-496856/3-A
Matrix: Solid
Analysis Batch: 498417

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 496856

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Motor Oil (C20-C38)	315	238		mg/Kg		75	57 - 115
Surrogate	%Recovery	LCS Qualifier	Limits				
<i>o-Terphenyl (Surr)</i>	76		49 - 115				

Lab Sample ID: MB 280-497160/1-A
Matrix: Solid
Analysis Batch: 497831

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 497160

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		8.0	3.6	mg/Kg		06/03/20 11:57	06/08/20 23:12	1
Motor Oil (C20-C38)	ND		24	7.8	mg/Kg		06/03/20 11:57	06/08/20 23:12	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o-Terphenyl (Surr)</i>	80		49 - 115				06/03/20 11:57	06/08/20 23:12	1

Lab Sample ID: LCS 280-497160/2-A
Matrix: Solid
Analysis Batch: 497831

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497160

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	132	114		mg/Kg		86	53 - 115
Surrogate	%Recovery	LCS Qualifier	Limits				
<i>o-Terphenyl (Surr)</i>	85		49 - 115				

Lab Sample ID: LCS 280-497160/3-A
Matrix: Solid
Analysis Batch: 497831

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497160

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Motor Oil (C20-C38)	334	293		mg/Kg		88	57 - 115

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Lab Sample ID: LCS 280-497160/3-A
Matrix: Solid
Analysis Batch: 497831

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497160

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl (Surr)	87		49 - 115

Lab Sample ID: 280-136963-9 MS
Matrix: Solid
Analysis Batch: 497831

Client Sample ID: CDOT I270 Env-05/06_2020-SB-01-10'-12'
Prep Type: Total/NA
Prep Batch: 497160

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	Limits
				Result	Qualifier				
Motor Oil (C20-C38)	36	F2 F1	309	194	F1	mg/Kg	☼	51	57 - 115
Surrogate	MS %Recovery	MS Qualifier	Limits						
o-Terphenyl (Surr)	53		49 - 115						

Lab Sample ID: 280-136963-9 MSD
Matrix: Solid
Analysis Batch: 497831

Client Sample ID: CDOT I270 Env-05/06_2020-SB-01-10'-12'
Prep Type: Total/NA
Prep Batch: 497160

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	Limits	RPD	Limit
				Result	Qualifier						
Motor Oil (C20-C38)	36	F2 F1	312	277	F2	mg/Kg	☼	77	57 - 115	35	30
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
o-Terphenyl (Surr)	79		49 - 115								

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-496540/1-A
Matrix: Solid
Analysis Batch: 497338

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 496540

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Silver	ND		100	7.8	ug/Kg		06/02/20 12:10	06/03/20 18:26	1

Lab Sample ID: LCS 280-496540/2-A
Matrix: Solid
Analysis Batch: 497338

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 496540

Analyte	Spike Added	LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
Silver	20000	20100		ug/Kg		101	83 - 113

Lab Sample ID: 280-136963-1 MS
Matrix: Solid
Analysis Batch: 497338

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-5'-7'
Prep Type: Total/NA
Prep Batch: 496540

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	Limits
				Result	Qualifier				
Silver	36	J	17500	17900		ug/Kg	☼	102	83 - 113

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 280-136963-1 MSD

Matrix: Solid
 Analysis Batch: 497338

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-5'-7'

Prep Type: Total/NA
 Prep Batch: 496540

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Silver	36	J	17900	17600		ug/Kg	☼	98	83 - 113	1	20

Lab Sample ID: MB 280-496542/1-A

Matrix: Solid
 Analysis Batch: 497365

Client Sample ID: Method Blank

Prep Type: Total/NA
 Prep Batch: 496542

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.60	0.051	mg/Kg		06/01/20 14:55	06/03/20 21:28	1
Barium	ND		0.40	0.071	mg/Kg		06/01/20 14:55	06/03/20 21:28	1
Cadmium	ND		0.10	0.0094	mg/Kg		06/01/20 14:55	06/03/20 21:28	1
Chromium	ND		0.20	0.076	mg/Kg		06/01/20 14:55	06/03/20 21:28	1
Selenium	ND		0.50	0.13	mg/Kg		06/01/20 14:55	06/03/20 21:28	1

Lab Sample ID: MB 280-496542/1-A

Matrix: Solid
 Analysis Batch: 497535

Client Sample ID: Method Blank

Prep Type: Total/NA
 Prep Batch: 496542

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.15	0.018	mg/Kg		06/01/20 14:55	06/05/20 00:10	1

Lab Sample ID: LCS 280-496542/2-A

Matrix: Solid
 Analysis Batch: 497365

Client Sample ID: Lab Control Sample

Prep Type: Total/NA
 Prep Batch: 496542

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	20.0	17.4		mg/Kg		87	83 - 111
Barium	20.0	18.0		mg/Kg		90	86 - 120
Cadmium	20.0	17.9		mg/Kg		89	85 - 109
Chromium	20.0	17.8		mg/Kg		89	87 - 121
Selenium	20.0	17.3		mg/Kg		87	78 - 108

Lab Sample ID: LCS 280-496542/2-A

Matrix: Solid
 Analysis Batch: 497535

Client Sample ID: Lab Control Sample

Prep Type: Total/NA
 Prep Batch: 496542

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Lead	20.0	18.4		mg/Kg		92	81 - 125

Lab Sample ID: 280-136963-1 MS

Matrix: Solid
 Analysis Batch: 497365

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-5'-7'

Prep Type: Total/NA
 Prep Batch: 496542

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	1.8	F1	19.0	17.1	F1	mg/Kg	☼	81	83 - 111
Barium	81		19.0	83.7	4	mg/Kg	☼	13	86 - 120
Cadmium	0.090	J	19.0	16.8		mg/Kg	☼	88	85 - 109
Chromium	6.2		19.0	23.0		mg/Kg	☼	89	87 - 121
Selenium	ND		19.0	16.0		mg/Kg	☼	84	78 - 108

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 280-136963-1 MS
Matrix: Solid
Analysis Batch: 497535

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-5'-7'
Prep Type: Total/NA
Prep Batch: 496542
%Rec. Limits

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Lead	7.2		19.0	23.0		mg/Kg	☼	83	81 - 125

Lab Sample ID: 280-136963-1 MSD
Matrix: Solid
Analysis Batch: 497365

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-5'-7'
Prep Type: Total/NA
Prep Batch: 496542
%Rec. RPD

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	1.8	F1	19.3	18.4		mg/Kg	☼	86	83 - 111	7	20
Barium	81		19.3	97.2	4	mg/Kg	☼	82	86 - 120	15	20
Cadmium	0.090	J	19.3	18.1		mg/Kg	☼	93	85 - 109	7	20
Chromium	6.2		19.3	24.7		mg/Kg	☼	96	87 - 121	7	20
Selenium	ND		19.3	16.8		mg/Kg	☼	87	78 - 108	5	20

Lab Sample ID: 280-136963-1 MSD
Matrix: Solid
Analysis Batch: 497535

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-5'-7'
Prep Type: Total/NA
Prep Batch: 496542
%Rec. RPD

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Lead	7.2		19.3	24.3		mg/Kg	☼	88	81 - 125	6	20

Lab Sample ID: MB 280-496547/1-A
Matrix: Water
Analysis Batch: 497155

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 496547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.33	ug/L		05/30/20 09:15	06/02/20 18:48	1
Barium	ND		1.0	0.29	ug/L		05/30/20 09:15	06/02/20 18:48	1
Chromium	ND		2.0	0.50	ug/L		05/30/20 09:15	06/02/20 18:48	1
Lead	ND		1.0	0.18	ug/L		05/30/20 09:15	06/02/20 18:48	1
Selenium	ND		5.0	0.37	ug/L		05/30/20 09:15	06/02/20 18:48	1
Silver	ND		5.0	0.033	ug/L		05/30/20 09:15	06/02/20 18:48	1

Lab Sample ID: MB 280-496547/1-A
Matrix: Water
Analysis Batch: 497337

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 496547

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.27	ug/L		05/30/20 09:15	06/03/20 18:50	1

Lab Sample ID: LCS 280-496547/2-A
Matrix: Water
Analysis Batch: 497155

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 496547
%Rec. Limits

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	40.0	40.1		ug/L		100	85 - 117
Barium	40.0	41.9	^	ug/L		105	85 - 118
Chromium	40.0	41.4		ug/L		104	84 - 121
Lead	40.0	41.4		ug/L		104	85 - 118
Selenium	40.0	39.5		ug/L		99	77 - 122
Silver	40.0	41.8		ug/L		105	85 - 115

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: LCS 280-496547/2-A
Matrix: Water
Analysis Batch: 497337

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 496547
%Rec. Limits

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Cadmium	40.0	39.0		ug/L		97	85 - 115

Lab Sample ID: 280-136963-4 MS
Matrix: Water
Analysis Batch: 497155

Client Sample ID: CDOT I270 Env-05/06_2020-SB-13-GW
Prep Type: Total/NA
Prep Batch: 496547
%Rec. Limits

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	33		40.0	71.1		ug/L		96	85 - 117
Barium	3000	^	40.0	3430	^ 4	ug/L		967	85 - 118
Chromium	96	F1	40.0	149	F1	ug/L		132	84 - 121
Lead	150	F1	40.0	205	F1	ug/L		139	85 - 118
Selenium	2.5	J	40.0	33.5		ug/L		78	77 - 122
Silver	0.43	J	40.0	40.7		ug/L		101	85 - 115

Lab Sample ID: 280-136963-4 MS
Matrix: Water
Analysis Batch: 497337

Client Sample ID: CDOT I270 Env-05/06_2020-SB-13-GW
Prep Type: Total/NA
Prep Batch: 496547
%Rec. Limits

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cadmium	2.3		40.0	40.5		ug/L		95	85 - 115

Lab Sample ID: 280-136963-4 MSD
Matrix: Water
Analysis Batch: 497155

Client Sample ID: CDOT I270 Env-05/06_2020-SB-13-GW
Prep Type: Total/NA
Prep Batch: 496547
%Rec. RPD Limit

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	33		40.0	72.6		ug/L		99	85 - 117	2	20
Barium	3000	^	40.0	3710	^ 4	ug/L		1672	85 - 118	8	20
Chromium	96	F1	40.0	154	F1	ug/L		146	84 - 121	4	20
Lead	150	F1	40.0	215	F1	ug/L		164	85 - 118	5	20
Selenium	2.5	J	40.0	35.3		ug/L		82	77 - 122	5	20
Silver	0.43	J	40.0	42.0		ug/L		104	85 - 115	3	20

Lab Sample ID: 280-136963-4 MSD
Matrix: Water
Analysis Batch: 497337

Client Sample ID: CDOT I270 Env-05/06_2020-SB-13-GW
Prep Type: Total/NA
Prep Batch: 496547
%Rec. RPD Limit

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Cadmium	2.3		40.0	42.9		ug/L		102	85 - 115	6	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 280-498047/1-A
Matrix: Water
Analysis Batch: 498245

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498047

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0300	J	0.20	0.027	ug/L		06/09/20 16:00	06/10/20 12:54	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 280-498047/2-A
Matrix: Water
Analysis Batch: 498245

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498047
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	5.00	5.17		ug/L		103	84 - 120

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 280-498180/1-A
Matrix: Solid
Analysis Batch: 498319

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498180

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		17	5.5	ug/Kg		06/10/20 13:30	06/10/20 17:23	1

Lab Sample ID: LCS 280-498180/2-A
Matrix: Solid
Analysis Batch: 498319

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498180
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	333	341		ug/Kg		102	87 - 111

Lab Sample ID: LCSD 280-498180/3-A
Matrix: Solid
Analysis Batch: 498319

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 498180
%Rec.

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	333	342		ug/Kg		103	87 - 111	0	20

Consultant Work Product - Jacobs Engineering
 -Not CDOT Approved-

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QC Association Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

GC/MS VOA

Prep Batch: 497513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-1	CDOT I270 Env-05/06_2020-SB-14-5'-7'	Total/NA	Solid	5035	
280-136963-2	CDOT I270 Env-05/06_2020-SB-14-10'-12'	Total/NA	Solid	5035	
280-136963-3	CDOT I270 Env-05/06_2020-SB-13-12-13'	Total/NA	Solid	5035	
280-136963-5	CDOT I270 Env-05/06_2020-SB-15-10-12'	Total/NA	Solid	5035	
280-136963-7	CDOT I270 Env-05/06_2020-TB-01-05272020	Total/NA	Solid	5035	
280-136963-9	CDOT I270 Env-05/06_2020-SB-01-10'-12'	Total/NA	Solid	5035	
MB 280-497513/3-A	Method Blank	Total/NA	Solid	5035	
LCS 280-497513/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-497513/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 497516

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-1	CDOT I270 Env-05/06_2020-SB-14-5'-7'	Total/NA	Solid	8260B	497513
280-136963-2	CDOT I270 Env-05/06_2020-SB-14-10'-12'	Total/NA	Solid	8260B	497513
280-136963-3	CDOT I270 Env-05/06_2020-SB-13-12-13'	Total/NA	Solid	8260B	497513
280-136963-5	CDOT I270 Env-05/06_2020-SB-15-10-12'	Total/NA	Solid	8260B	497513
280-136963-7	CDOT I270 Env-05/06_2020-TB-01-05272020	Total/NA	Solid	8260B	497513
280-136963-9	CDOT I270 Env-05/06_2020-SB-01-10'-12'	Total/NA	Solid	8260B	497513
MB 280-497513/3-A	Method Blank	Total/NA	Solid	8260B	497513
LCS 280-497513/1-A	Lab Control Sample	Total/NA	Solid	8260B	497513
LCSD 280-497513/2-A	Lab Control Sample Dup	Total/NA	Solid	8260B	497513

Analysis Batch: 497547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-4	CDOT I270 Env-05/06_2020-SB-13-GW	Total/NA	Water	8260B	
280-136963-6	CDOT I270 Env-05/06_2020-SB-15-GW	Total/NA	Water	8260B	
MB 280-497547/9	Method Blank	Total/NA	Water	8260B	
LCS 280-497547/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 280-497547/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 497740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-8	CDOT I270 Env-05/06_2020-TB-01-05272020	Total/NA	Water	8260B	
280-136963-10	CDOT I270 Env-05/06_2020-SB-01-GW	Total/NA	Water	8260B	
MB 280-497740/11	Method Blank	Total/NA	Water	8260B	
LCS 280-497740/6	Lab Control Sample	Total/NA	Water	8260B	
LCSD 280-497740/7	Lab Control Sample Dup	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 496496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-4	CDOT I270 Env-05/06_2020-SB-13-GW	Total/NA	Water	3520C	
280-136963-6	CDOT I270 Env-05/06_2020-SB-15-GW	Total/NA	Water	3520C	
280-136963-10	CDOT I270 Env-05/06_2020-SB-01-GW	Total/NA	Water	3520C	
MB 280-496496/1-A	Method Blank	Total/NA	Water	3520C	
LCS 280-496496/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 280-496496/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

GC/MS Semi VOA

Prep Batch: 496992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-1	CDOT I270 Env-05/06_2020-SB-14-5'-7'	Total/NA	Solid	3550C	
280-136963-3	CDOT I270 Env-05/06_2020-SB-13-12-13'	Total/NA	Solid	3550C	
MB 280-496992/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 280-496992/2-A	Lab Control Sample	Total/NA	Solid	3550C	
LCSD 280-496992/3-A	Lab Control Sample Dup	Total/NA	Solid	3550C	

Prep Batch: 497218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-2	CDOT I270 Env-05/06_2020-SB-14-10'-12'	Total/NA	Solid	3550C	
280-136963-5	CDOT I270 Env-05/06_2020-SB-15-10-12'	Total/NA	Solid	3550C	
280-136963-9	CDOT I270 Env-05/06_2020-SB-01-10'-12'	Total/NA	Solid	3550C	
MB 280-497218/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 280-497218/2-A	Lab Control Sample	Total/NA	Solid	3550C	

Analysis Batch: 497355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-1	CDOT I270 Env-05/06_2020-SB-14-5'-7'	Total/NA	Solid	8270D	496992
280-136963-3	CDOT I270 Env-05/06_2020-SB-13-12-13'	Total/NA	Solid	8270D	496992
280-136963-4	CDOT I270 Env-05/06_2020-SB-13-GW	Total/NA	Water	8270D	496496
280-136963-6	CDOT I270 Env-05/06_2020-SB-15-GW	Total/NA	Water	8270D	496496
280-136963-10	CDOT I270 Env-05/06_2020-SB-01-GW	Total/NA	Water	8270D	496496
MB 280-496496/1-A	Method Blank	Total/NA	Water	8270D	496496
MB 280-496992/1-A	Method Blank	Total/NA	Solid	8270D	496992
LCS 280-496496/2-A	Lab Control Sample	Total/NA	Water	8270D	496496
LCS 280-496992/2-A	Lab Control Sample	Total/NA	Solid	8270D	496992
LCSD 280-496496/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	496496
LCSD 280-496992/3-A	Lab Control Sample Dup	Total/NA	Solid	8270D	496992

Analysis Batch: 497550

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-2	CDOT I270 Env-05/06_2020-SB-14-10'-12'	Total/NA	Solid	8270D	497218
280-136963-5	CDOT I270 Env-05/06_2020-SB-15-10-12'	Total/NA	Solid	8270D	497218
280-136963-9	CDOT I270 Env-05/06_2020-SB-01-10'-12'	Total/NA	Solid	8270D	497218
MB 280-497218/1-A	Method Blank	Total/NA	Solid	8270D	497218
LCS 280-497218/2-A	Lab Control Sample	Total/NA	Solid	8270D	497218

GC VOA

Analysis Batch: 496761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-4	CDOT I270 Env-05/06_2020-SB-13-GW	Total/NA	Water	8015C	
280-136963-6	CDOT I270 Env-05/06_2020-SB-15-GW	Total/NA	Water	8015C	
280-136963-8	CDOT I270 Env-05/06_2020-TB-01-05272020	Total/NA	Water	8015C	
280-136963-10	CDOT I270 Env-05/06_2020-SB-01-GW	Total/NA	Water	8015C	
MB 280-496761/45	Method Blank	Total/NA	Water	8015C	
LCS 280-496761/61	Lab Control Sample	Total/NA	Water	8015C	
LCSD 280-496761/62	Lab Control Sample Dup	Total/NA	Water	8015C	

Prep Batch: 497195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-1	CDOT I270 Env-05/06_2020-SB-14-5'-7'	Total/NA	Solid	5035	

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QC Association Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

GC VOA (Continued)

Prep Batch: 497195 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-2	CDOT I270 Env-05/06_2020-SB-14-10'-12'	Total/NA	Solid	5035	
280-136963-3	CDOT I270 Env-05/06_2020-SB-13-12-13'	Total/NA	Solid	5035	
MB 280-497195/3-A	Method Blank	Total/NA	Solid	5035	
LCS 280-497195/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-497195/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 497219

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-1	CDOT I270 Env-05/06_2020-SB-14-5'-7'	Total/NA	Solid	8015C	497195
280-136963-2	CDOT I270 Env-05/06_2020-SB-14-10'-12'	Total/NA	Solid	8015C	497195
280-136963-3	CDOT I270 Env-05/06_2020-SB-13-12-13'	Total/NA	Solid	8015C	497195
MB 280-497195/3-A	Method Blank	Total/NA	Solid	8015C	497195
LCS 280-497195/1-A	Lab Control Sample	Total/NA	Solid	8015C	497195
LCSD 280-497195/2-A	Lab Control Sample Dup	Total/NA	Solid	8015C	497195

Prep Batch: 497267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-5	CDOT I270 Env-05/06_2020-SB-15-10-12'	Total/NA	Solid	5035	
280-136963-7	CDOT I270 Env-05/06_2020-TB-01-05272020	Total/NA	Solid	5035	
280-136963-9	CDOT I270 Env-05/06_2020-SB-01-10'-12'	Total/NA	Solid	5035	
MB 280-497267/3-A	Method Blank	Total/NA	Solid	5035	
LCS 280-497267/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-497267/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 497277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-5	CDOT I270 Env-05/06_2020-SB-15-10-12'	Total/NA	Solid	8015C	497267
280-136963-7	CDOT I270 Env-05/06_2020-TB-01-05272020	Total/NA	Solid	8015C	497267
280-136963-9	CDOT I270 Env-05/06_2020-SB-01-10'-12'	Total/NA	Solid	8015C	497267
MB 280-497267/3-A	Method Blank	Total/NA	Solid	8015C	497267
LCS 280-497267/1-A	Lab Control Sample	Total/NA	Solid	8015C	497267
LCSD 280-497267/2-A	Lab Control Sample Dup	Total/NA	Solid	8015C	497267

GC Semi VOA

Prep Batch: 496681

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-4	CDOT I270 Env-05/06_2020-SB-13-GW	Total/NA	Water	3510C	
280-136963-6	CDOT I270 Env-05/06_2020-SB-15-GW	Total/NA	Water	3510C	
280-136963-10	CDOT I270 Env-05/06_2020-SB-01-GW	Total/NA	Water	3510C	
MB 280-496681/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-496681/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCS 280-496681/3-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 280-496681/4-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Prep Batch: 496856

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-1	CDOT I270 Env-05/06_2020-SB-14-5'-7'	Total/NA	Solid	3546	
280-136963-2	CDOT I270 Env-05/06_2020-SB-14-10'-12'	Total/NA	Solid	3546	
280-136963-3	CDOT I270 Env-05/06_2020-SB-13-12-13'	Total/NA	Solid	3546	
280-136963-5	CDOT I270 Env-05/06_2020-SB-15-10-12'	Total/NA	Solid	3546	

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

GC Semi VOA (Continued)

Prep Batch: 496856 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-496856/1-A	Method Blank	Total/NA	Solid	3546	
LCS 280-496856/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCS 280-496856/3-A	Lab Control Sample	Total/NA	Solid	3546	

Prep Batch: 497160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-9	CDOT I270 Env-05/06_2020-SB-01-10'-12'	Total/NA	Solid	3546	
MB 280-497160/1-A	Method Blank	Total/NA	Solid	3546	
LCS 280-497160/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCS 280-497160/3-A	Lab Control Sample	Total/NA	Solid	3546	
280-136963-9 MS	CDOT I270 Env-05/06_2020-SB-01-10'-12'	Total/NA	Solid	3546	
280-136963-9 MSD	CDOT I270 Env-05/06_2020-SB-01-10'-12'	Total/NA	Solid	3546	

Analysis Batch: 497610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-4	CDOT I270 Env-05/06_2020-SB-13-GW	Total/NA	Water	8015C	496681
280-136963-6	CDOT I270 Env-05/06_2020-SB-15-GW	Total/NA	Water	8015C	496681
280-136963-10	CDOT I270 Env-05/06_2020-SB-01-GW	Total/NA	Water	8015C	496681
MB 280-496681/1-A	Method Blank	Total/NA	Water	8015C	496681
LCS 280-496681/2-A	Lab Control Sample	Total/NA	Water	8015C	496681
LCS 280-496681/3-A	Lab Control Sample	Total/NA	Water	8015C	496681

Analysis Batch: 497831

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-9	CDOT I270 Env-05/06_2020-SB-01-10'-12'	Total/NA	Solid	8015C	497160
MB 280-497160/1-A	Method Blank	Total/NA	Solid	8015C	497160
LCS 280-497160/2-A	Lab Control Sample	Total/NA	Solid	8015C	497160
LCS 280-497160/3-A	Lab Control Sample	Total/NA	Solid	8015C	497160
LCSD 280-496681/4-A	Lab Control Sample Dup	Total/NA	Water	8015C	496681
280-136963-9 MS	CDOT I270 Env-05/06_2020-SB-01-10'-12'	Total/NA	Solid	8015C	497160
280-136963-9 MSD	CDOT I270 Env-05/06_2020-SB-01-10'-12'	Total/NA	Solid	8015C	497160

Analysis Batch: 498417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-1	CDOT I270 Env-05/06_2020-SB-14-5'-7'	Total/NA	Solid	8015C	496856
280-136963-2	CDOT I270 Env-05/06_2020-SB-14-10'-12'	Total/NA	Solid	8015C	496856
280-136963-3	CDOT I270 Env-05/06_2020-SB-13-12-13'	Total/NA	Solid	8015C	496856
280-136963-5	CDOT I270 Env-05/06_2020-SB-15-10-12'	Total/NA	Solid	8015C	496856
MB 280-496856/1-A	Method Blank	Total/NA	Solid	8015C	496856
LCS 280-496856/2-A	Lab Control Sample	Total/NA	Solid	8015C	496856
LCS 280-496856/3-A	Lab Control Sample	Total/NA	Solid	8015C	496856

Metals

Prep Batch: 496540

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-1	CDOT I270 Env-05/06_2020-SB-14-5'-7'	Total/NA	Solid	3050B-Sb	
280-136963-2	CDOT I270 Env-05/06_2020-SB-14-10'-12'	Total/NA	Solid	3050B-Sb	
280-136963-3	CDOT I270 Env-05/06_2020-SB-13-12-13'	Total/NA	Solid	3050B-Sb	
280-136963-5	CDOT I270 Env-05/06_2020-SB-15-10-12'	Total/NA	Solid	3050B-Sb	
280-136963-9	CDOT I270 Env-05/06_2020-SB-01-10'-12'	Total/NA	Solid	3050B-Sb	

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QC Association Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Metals (Continued)

Prep Batch: 496540 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-496540/1-A	Method Blank	Total/NA	Solid	3050B-Sb	
LCS 280-496540/2-A	Lab Control Sample	Total/NA	Solid	3050B-Sb	
280-136963-1 MS	CDOT I270 Env-05/06_2020-SB-14-5'-7'	Total/NA	Solid	3050B-Sb	
280-136963-1 MSD	CDOT I270 Env-05/06_2020-SB-14-5'-7'	Total/NA	Solid	3050B-Sb	

Prep Batch: 496542

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-1	CDOT I270 Env-05/06_2020-SB-14-5'-7'	Total/NA	Solid	3050B	
280-136963-2	CDOT I270 Env-05/06_2020-SB-14-10'-12'	Total/NA	Solid	3050B	
280-136963-3	CDOT I270 Env-05/06_2020-SB-13-12-13'	Total/NA	Solid	3050B	
280-136963-5	CDOT I270 Env-05/06_2020-SB-15-10-12'	Total/NA	Solid	3050B	
280-136963-9	CDOT I270 Env-05/06_2020-SB-01-10'-12'	Total/NA	Solid	3050B	
MB 280-496542/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-496542/2-A	Lab Control Sample	Total/NA	Solid	3050B	
280-136963-1 MS	CDOT I270 Env-05/06_2020-SB-14-5'-7'	Total/NA	Solid	3050B	
280-136963-1 MSD	CDOT I270 Env-05/06_2020-SB-14-5'-7'	Total/NA	Solid	3050B	

Prep Batch: 496547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-4	CDOT I270 Env-05/06_2020-SB-13-GW	Total/NA	Water	3020A	
280-136963-6	CDOT I270 Env-05/06_2020-SB-15-GW	Total/NA	Water	3020A	
280-136963-10	CDOT I270 Env-05/06_2020-SB-01-GW	Total/NA	Water	3020A	
MB 280-496547/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-496547/2-A	Lab Control Sample	Total/NA	Water	3020A	
280-136963-4 MS	CDOT I270 Env-05/06_2020-SB-13-GW	Total/NA	Water	3020A	
280-136963-4 MSD	CDOT I270 Env-05/06_2020-SB-13-GW	Total/NA	Water	3020A	

Analysis Batch: 497155

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-4	CDOT I270 Env-05/06_2020-SB-13-GW	Total/NA	Water	6020A	496547
280-136963-6	CDOT I270 Env-05/06_2020-SB-15-GW	Total/NA	Water	6020A	496547
280-136963-10	CDOT I270 Env-05/06_2020-SB-01-GW	Total/NA	Water	6020A	496547
MB 280-496547/1-A	Method Blank	Total/NA	Water	6020A	496547
LCS 280-496547/2-A	Lab Control Sample	Total/NA	Water	6020A	496547
280-136963-4 MS	CDOT I270 Env-05/06_2020-SB-13-GW	Total/NA	Water	6020A	496547
280-136963-4 MSD	CDOT I270 Env-05/06_2020-SB-13-GW	Total/NA	Water	6020A	496547

Analysis Batch: 497337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-4	CDOT I270 Env-05/06_2020-SB-13-GW	Total/NA	Water	6020A	496547
280-136963-6	CDOT I270 Env-05/06_2020-SB-15-GW	Total/NA	Water	6020A	496547
280-136963-10	CDOT I270 Env-05/06_2020-SB-01-GW	Total/NA	Water	6020A	496547
MB 280-496547/1-A	Method Blank	Total/NA	Water	6020A	496547
LCS 280-496547/2-A	Lab Control Sample	Total/NA	Water	6020A	496547
280-136963-4 MS	CDOT I270 Env-05/06_2020-SB-13-GW	Total/NA	Water	6020A	496547
280-136963-4 MSD	CDOT I270 Env-05/06_2020-SB-13-GW	Total/NA	Water	6020A	496547

Analysis Batch: 497338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-1	CDOT I270 Env-05/06_2020-SB-14-5'-7'	Total/NA	Solid	6020A	496540
280-136963-2	CDOT I270 Env-05/06_2020-SB-14-10'-12'	Total/NA	Solid	6020A	496540

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Metals (Continued)

Analysis Batch: 497338 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-3	CDOT I270 Env-05/06_2020-SB-13-12-13'	Total/NA	Solid	6020A	496540
280-136963-5	CDOT I270 Env-05/06_2020-SB-15-10-12'	Total/NA	Solid	6020A	496540
280-136963-9	CDOT I270 Env-05/06_2020-SB-01-10'-12'	Total/NA	Solid	6020A	496540
MB 280-496540/1-A	Method Blank	Total/NA	Solid	6020A	496540
LCS 280-496540/2-A	Lab Control Sample	Total/NA	Solid	6020A	496540
280-136963-1 MS	CDOT I270 Env-05/06_2020-SB-14-5'-7'	Total/NA	Solid	6020A	496540
280-136963-1 MSD	CDOT I270 Env-05/06_2020-SB-14-5'-7'	Total/NA	Solid	6020A	496540

Analysis Batch: 497365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-1	CDOT I270 Env-05/06_2020-SB-14-5'-7'	Total/NA	Solid	6020A	496542
280-136963-2	CDOT I270 Env-05/06_2020-SB-14-10'-12'	Total/NA	Solid	6020A	496542
280-136963-3	CDOT I270 Env-05/06_2020-SB-13-12-13'	Total/NA	Solid	6020A	496542
280-136963-5	CDOT I270 Env-05/06_2020-SB-15-10-12'	Total/NA	Solid	6020A	496542
280-136963-9	CDOT I270 Env-05/06_2020-SB-01-10'-12'	Total/NA	Solid	6020A	496542
MB 280-496542/1-A	Method Blank	Total/NA	Solid	6020A	496542
LCS 280-496542/2-A	Lab Control Sample	Total/NA	Solid	6020A	496542
280-136963-1 MS	CDOT I270 Env-05/06_2020-SB-14-5'-7'	Total/NA	Solid	6020A	496542
280-136963-1 MSD	CDOT I270 Env-05/06_2020-SB-14-5'-7'	Total/NA	Solid	6020A	496542

Analysis Batch: 497535

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-1	CDOT I270 Env-05/06_2020-SB-14-5'-7'	Total/NA	Solid	6020A	496542
280-136963-3	CDOT I270 Env-05/06_2020-SB-13-12-13'	Total/NA	Solid	6020A	496542
280-136963-5	CDOT I270 Env-05/06_2020-SB-15-10-12'	Total/NA	Solid	6020A	496542
280-136963-9	CDOT I270 Env-05/06_2020-SB-01-10'-12'	Total/NA	Solid	6020A	496542
MB 280-496542/1-A	Method Blank	Total/NA	Solid	6020A	496542
LCS 280-496542/2-A	Lab Control Sample	Total/NA	Solid	6020A	496542
280-136963-1 MS	CDOT I270 Env-05/06_2020-SB-14-5'-7'	Total/NA	Solid	6020A	496542
280-136963-1 MSD	CDOT I270 Env-05/06_2020-SB-14-5'-7'	Total/NA	Solid	6020A	496542

Analysis Batch: 497703

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-2	CDOT I270 Env-05/06_2020-SB-14-10'-12'	Total/NA	Solid	6020A	496542

Prep Batch: 498047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-4	CDOT I270 Env-05/06_2020-SB-13-GW	Total/NA	Water	7470A	
280-136963-6	CDOT I270 Env-05/06_2020-SB-15-GW	Total/NA	Water	7470A	
280-136963-10	CDOT I270 Env-05/06_2020-SB-01-GW	Total/NA	Water	7470A	
MB 280-498047/1-A	Method Blank	Total/NA	Water	7470A	
LCS 280-498047/2-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 498180

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-1	CDOT I270 Env-05/06_2020-SB-14-5'-7'	Total/NA	Solid	7471B	
280-136963-2	CDOT I270 Env-05/06_2020-SB-14-10'-12'	Total/NA	Solid	7471B	
280-136963-3	CDOT I270 Env-05/06_2020-SB-13-12-13'	Total/NA	Solid	7471B	
280-136963-5	CDOT I270 Env-05/06_2020-SB-15-10-12'	Total/NA	Solid	7471B	
280-136963-9	CDOT I270 Env-05/06_2020-SB-01-10'-12'	Total/NA	Solid	7471B	
MB 280-498180/1-A	Method Blank	Total/NA	Solid	7471B	

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Metals (Continued)

Prep Batch: 498180 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-498180/2-A	Lab Control Sample	Total/NA	Solid	7471B	
LCSD 280-498180/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	

Analysis Batch: 498245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-4	CDOT I270 Env-05/06_2020-SB-13-GW	Total/NA	Water	7470A	498047
280-136963-6	CDOT I270 Env-05/06_2020-SB-15-GW	Total/NA	Water	7470A	498047
280-136963-10	CDOT I270 Env-05/06_2020-SB-01-GW	Total/NA	Water	7470A	498047
MB 280-498047/1-A	Method Blank	Total/NA	Water	7470A	498047
LCS 280-498047/2-A	Lab Control Sample	Total/NA	Water	7470A	498047

Analysis Batch: 498319

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-1	CDOT I270 Env-05/06_2020-SB-14-5'-7'	Total/NA	Solid	7471B	498180
280-136963-2	CDOT I270 Env-05/06_2020-SB-14-10'-12'	Total/NA	Solid	7471B	498180
280-136963-3	CDOT I270 Env-05/06_2020-SB-13-12-13'	Total/NA	Solid	7471B	498180
280-136963-5	CDOT I270 Env-05/06_2020-SB-15-10-12'	Total/NA	Solid	7471B	498180
280-136963-9	CDOT I270 Env-05/06_2020-SB-01-10'-12'	Total/NA	Solid	7471B	498180
MB 280-498180/1-A	Method Blank	Total/NA	Solid	7471B	498180
LCS 280-498180/2-A	Lab Control Sample	Total/NA	Solid	7471B	498180
LCSD 280-498180/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	498180

General Chemistry

Analysis Batch: 496433

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-136963-1	CDOT I270 Env-05/06_2020-SB-14-5'-7'	Total/NA	Solid	Moisture	
280-136963-2	CDOT I270 Env-05/06_2020-SB-14-10'-12'	Total/NA	Solid	Moisture	
280-136963-3	CDOT I270 Env-05/06_2020-SB-13-12-13'	Total/NA	Solid	Moisture	
280-136963-5	CDOT I270 Env-05/06_2020-SB-15-10-12'	Total/NA	Solid	Moisture	
280-136963-9	CDOT I270 Env-05/06_2020-SB-01-10'-12'	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-5'-7'

Lab Sample ID: 280-136963-1

Date Collected: 05/26/20 11:00

Matrix: Solid

Date Received: 05/27/20 12:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			496433	05/27/20 17:12	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-5'-7'

Lab Sample ID: 280-136963-1

Date Collected: 05/26/20 11:00

Matrix: Solid

Date Received: 05/27/20 12:00

Percent Solids: 91.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.251 g	5 mL	497513	05/26/20 11:00	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497516	06/05/20 02:34	GPM	TAL DEN
Total/NA	Prep	3550C			32.9 g	1 mL	496992	06/02/20 07:08	JT	TAL DEN
Total/NA	Analysis	8270D		1			497355	06/04/20 23:22	RDP	TAL DEN
Total/NA	Prep	5035			6.439 g	5 mL	497195	05/26/20 11:00	CAS	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	497219	06/03/20 18:14	CAS	TAL DEN
Total/NA	Prep	3546			16.2 g	1 mL	496856	06/01/20 07:09	JT	TAL DEN
Total/NA	Analysis	8015C		1			498417	06/12/20 06:42	MAM	TAL DEN
Total/NA	Prep	3050B			1.132 g	100 mL	496542	06/01/20 14:55	EC	TAL DEN
Total/NA	Analysis	6020A		1			497365	06/03/20 21:36	LMT	TAL DEN
Total/NA	Prep	3050B			1.132 g	100 mL	496542	06/01/20 14:55	EC	TAL DEN
Total/NA	Analysis	6020A		1			497535	06/05/20 00:17	LMT	TAL DEN
Total/NA	Prep	3050B-Sb			1.196 g	100 mL	496540	06/02/20 12:10	NK	TAL DEN
Total/NA	Analysis	6020A		1			497338	06/03/20 18:33	LMT	TAL DEN
Total/NA	Prep	7471B			0.6 g	50 mL	498180	06/10/20 13:30	AL	TAL DEN
Total/NA	Analysis	7471B		1			498319	06/10/20 17:30	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-10'-12'

Lab Sample ID: 280-136963-2

Date Collected: 05/26/20 11:20

Matrix: Solid

Date Received: 05/27/20 12:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			496433	05/27/20 17:12	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-10'-12'

Lab Sample ID: 280-136963-2

Date Collected: 05/26/20 11:20

Matrix: Solid

Date Received: 05/27/20 12:00

Percent Solids: 91.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.027 g	5 mL	497513	05/26/20 11:20	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497516	06/05/20 02:57	GPM	TAL DEN
Total/NA	Prep	3550C			30.9 g	1 mL	497218	06/03/20 13:30	DCL	TAL DEN
Total/NA	Analysis	8270D		1			497550	06/05/20 14:45	RDP	TAL DEN
Total/NA	Prep	5035			4.465 g	5 mL	497195	05/26/20 11:20	CAS	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	497219	06/03/20 18:38	CAS	TAL DEN
Total/NA	Prep	3546			16.0 g	1 mL	496856	06/01/20 07:09	JT	TAL DEN
Total/NA	Analysis	8015C		1			498417	06/12/20 07:03	MAM	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-14-10'-12'

Lab Sample ID: 280-136963-2

Date Collected: 05/26/20 11:20

Matrix: Solid

Date Received: 05/27/20 12:00

Percent Solids: 91.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.091 g	100 mL	496542	06/01/20 14:55	EC	TAL DEN
Total/NA	Analysis	6020A		1			497365	06/03/20 22:05	LMT	TAL DEN
Total/NA	Prep	3050B			1.091 g	100 mL	496542	06/01/20 14:55	EC	TAL DEN
Total/NA	Analysis	6020A		10			497703	06/05/20 14:34	LMT	TAL DEN
Total/NA	Prep	3050B-Sb			1.346 g	100 mL	496540	06/02/20 12:10	NK	TAL DEN
Total/NA	Analysis	6020A		1			497338	06/03/20 19:01	LMT	TAL DEN
Total/NA	Prep	7471B			0.51 g	50 mL	498180	06/10/20 13:30	AL	TAL DEN
Total/NA	Analysis	7471B		1			498319	06/10/20 17:32	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-13-12-13'

Lab Sample ID: 280-136963-3

Date Collected: 05/26/20 12:30

Matrix: Solid

Date Received: 05/27/20 12:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			496433	05/27/20 17:12	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-13-12-13'

Lab Sample ID: 280-136963-3

Date Collected: 05/26/20 12:30

Matrix: Solid

Date Received: 05/27/20 12:00

Percent Solids: 90.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.362 g	5 mL	497513	05/26/20 12:30	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497516	06/05/20 03:20	GPM	TAL DEN
Total/NA	Prep	3550C			32.7 g	1 mL	496992	06/02/20 07:08	JT	TAL DEN
Total/NA	Analysis	8270D		1			497355	06/04/20 23:51	RDP	TAL DEN
Total/NA	Prep	5035			4.814 g	5 mL	497195	05/26/20 12:30	CAS	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	497219	06/03/20 19:01	CAS	TAL DEN
Total/NA	Prep	3546			15.2 g	1 mL	496856	06/01/20 07:09	JT	TAL DEN
Total/NA	Analysis	8015C		1			498417	06/12/20 07:25	MAM	TAL DEN
Total/NA	Prep	3050B			1.169 g	100 mL	496542	06/01/20 14:55	EC	TAL DEN
Total/NA	Analysis	6020A		1			497365	06/03/20 22:09	LMT	TAL DEN
Total/NA	Prep	3050B			1.169 g	100 mL	496542	06/01/20 14:55	EC	TAL DEN
Total/NA	Analysis	6020A		1			497535	06/05/20 00:50	LMT	TAL DEN
Total/NA	Prep	3050B-Sb			1.333 g	100 mL	496540	06/02/20 12:10	NK	TAL DEN
Total/NA	Analysis	6020A		1			497338	06/03/20 19:05	LMT	TAL DEN
Total/NA	Prep	7471B			0.54 g	50 mL	498180	06/10/20 13:30	AL	TAL DEN
Total/NA	Analysis	7471B		1			498319	06/10/20 17:35	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-13-GW

Lab Sample ID: 280-136963-4

Date Collected: 05/26/20 12:50

Matrix: Water

Date Received: 05/27/20 12:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	497547	06/05/20 17:17	JLS	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-13-GW

Lab Sample ID: 280-136963-4

Date Collected: 05/26/20 12:50

Matrix: Water

Date Received: 05/27/20 12:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1014.6 mL	1 mL	496496	05/28/20 12:21	JNM	TAL DEN
Total/NA	Analysis	8270D		1			497355	06/04/20 20:28	RDP	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	496761	05/30/20 01:39	CAS	TAL DEN
Total/NA	Prep	3510C			1035.7 mL	1 mL	496681	05/29/20 11:37	NK	TAL DEN
Total/NA	Analysis	8015C		1			497610	06/06/20 00:58	MAM	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	496547	05/30/20 09:15	NK	TAL DEN
Total/NA	Analysis	6020A		1			497155	06/02/20 18:56	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	496547	05/30/20 09:15	NK	TAL DEN
Total/NA	Analysis	6020A		1			497337	06/03/20 18:58	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	498047	06/09/20 16:00	AL	TAL DEN
Total/NA	Analysis	7470A		1			498245	06/10/20 13:43	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-15-10-12'

Lab Sample ID: 280-136963-5

Date Collected: 05/26/20 14:05

Matrix: Solid

Date Received: 05/27/20 12:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			496433	05/27/20 17:12	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-15-10-12'

Lab Sample ID: 280-136963-5

Date Collected: 05/26/20 14:05

Matrix: Solid

Date Received: 05/27/20 12:00

Percent Solids: 92.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.558 g	5 mL	497513	05/26/20 14:05	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497516	06/05/20 03:42	GPM	TAL DEN
Total/NA	Prep	3550C			32.4 g	1 mL	497218	06/03/20 13:30	DCL	TAL DEN
Total/NA	Analysis	8270D		1			497550	06/05/20 15:14	RDP	TAL DEN
Total/NA	Prep	5035			4.341 g	5 mL	497267	05/26/20 14:05	CAS	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	497277	06/04/20 05:12	CAS	TAL DEN
Total/NA	Prep	3546			16.3 g	1 mL	496856	06/01/20 07:09	JT	TAL DEN
Total/NA	Analysis	8015C		1			498417	06/12/20 07:47	MAM	TAL DEN
Total/NA	Prep	3050B			1.099 g	100 mL	496542	06/01/20 14:55	EC	TAL DEN
Total/NA	Analysis	6020A		1			497365	06/03/20 22:12	LMT	TAL DEN
Total/NA	Prep	3050B			1.099 g	100 mL	496542	06/01/20 14:55	EC	TAL DEN
Total/NA	Analysis	6020A		1			497535	06/05/20 00:54	LMT	TAL DEN
Total/NA	Prep	3050B-Sb			1.383 g	100 mL	496540	06/02/20 12:10	NK	TAL DEN
Total/NA	Analysis	6020A		1			497338	06/03/20 19:08	LMT	TAL DEN
Total/NA	Prep	7471B			0.51 g	50 mL	498180	06/10/20 13:30	AL	TAL DEN
Total/NA	Analysis	7471B		1			498319	06/10/20 17:37	AL	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-15-GW

Lab Sample ID: 280-136963-6

Date Collected: 05/26/20 14:30

Matrix: Water

Date Received: 05/27/20 12:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	497547	06/05/20 17:39	JLS	TAL DEN
Total/NA	Prep	3520C			938 mL	1 mL	496496	05/28/20 12:21	JNM	TAL DEN
Total/NA	Analysis	8270D		1			497355	06/04/20 20:57	RDP	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	496761	05/30/20 02:02	CAS	TAL DEN
Total/NA	Prep	3510C			982.9 mL	1 mL	496681	05/29/20 11:37	NK	TAL DEN
Total/NA	Analysis	8015C		1			497610	06/06/20 01:20	MAM	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	496547	05/30/20 09:15	NK	TAL DEN
Total/NA	Analysis	6020A		1			497155	06/02/20 19:14	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	496547	05/30/20 09:15	NK	TAL DEN
Total/NA	Analysis	6020A		1			497337	06/03/20 19:16	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	498047	06/09/20 16:00	AL	TAL DEN
Total/NA	Analysis	7470A		1			498245	06/10/20 13:45	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-TB-01-05272020

Lab Sample ID: 280-136963-7

Date Collected: 05/27/20 08:00

Matrix: Solid

Date Received: 05/27/20 12:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	497513	05/27/20 08:00	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497516	06/04/20 22:25	GPM	TAL DEN
Total/NA	Prep	5035			5 g	5 mL	497267	05/27/20 08:00	CAS	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	497277	06/04/20 05:36	CAS	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-TB-01-05272020

Lab Sample ID: 280-136963-8

Date Collected: 05/27/20 08:00

Matrix: Water

Date Received: 05/27/20 12:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	497740	06/08/20 14:26	AJP	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	496761	05/30/20 06:21	CAS	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-01-10'-12'

Lab Sample ID: 280-136963-9

Date Collected: 05/27/20 10:30

Matrix: Solid

Date Received: 05/27/20 12:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			496433	05/27/20 17:12	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-01-10'-12'

Lab Sample ID: 280-136963-9

Date Collected: 05/27/20 10:30

Matrix: Solid

Date Received: 05/27/20 12:00

Percent Solids: 96.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	497513	05/27/20 10:30	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497516	06/05/20 04:05	GPM	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-01-10'-12'

Lab Sample ID: 280-136963-9

Date Collected: 05/27/20 10:30

Matrix: Solid

Date Received: 05/27/20 12:00

Percent Solids: 96.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			32.7 g	1 mL	497218	06/03/20 13:30	DCL	TAL DEN
Total/NA	Analysis	8270D		1			497550	06/05/20 15:43	RDP	TAL DEN
Total/NA	Prep	5035			3.931 g	5 mL	497267	05/27/20 10:30	CAS	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	497277	06/04/20 05:59	CAS	TAL DEN
Total/NA	Prep	3546			15.7 g	1 mL	497160	06/03/20 11:57	MB	TAL DEN
Total/NA	Analysis	8015C		1			497831	06/09/20 01:22	MAM	TAL DEN
Total/NA	Prep	3050B			1.215 g	100 mL	496542	06/01/20 14:55	EC	TAL DEN
Total/NA	Analysis	6020A		1			497365	06/03/20 22:16	LMT	TAL DEN
Total/NA	Prep	3050B			1.215 g	100 mL	496542	06/01/20 14:55	EC	TAL DEN
Total/NA	Analysis	6020A		1			497535	06/05/20 00:58	LMT	TAL DEN
Total/NA	Prep	3050B-Sb			1.189 g	100 mL	496540	06/02/20 12:10	NK	TAL DEN
Total/NA	Analysis	6020A		1			497338	06/03/20 19:12	LMT	TAL DEN
Total/NA	Prep	7471B			0.60 g	50 mL	498180	06/10/20 13:30	AL	TAL DEN
Total/NA	Analysis	7471B		1			498319	06/10/20 17:39	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-01-GW

Lab Sample ID: 280-136963-10

Date Collected: 05/27/20 11:00

Matrix: Water

Date Received: 05/27/20 12:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	497740	06/08/20 14:47	AJP	TAL DEN
Total/NA	Prep	3520C			925.7 mL	1 mL	496496	05/28/20 12:21	JNM	TAL DEN
Total/NA	Analysis	8270D		1			497355	06/04/20 21:26	RDP	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	496761	05/30/20 06:44	CAS	TAL DEN
Total/NA	Prep	3510C			952.9 mL	1 mL	496681	05/29/20 11:37	NK	TAL DEN
Total/NA	Analysis	8015C		1			497610	06/06/20 01:42	MAM	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	496547	05/30/20 09:15	NK	TAL DEN
Total/NA	Analysis	6020A		1			497155	06/02/20 19:18	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	496547	05/30/20 09:15	NK	TAL DEN
Total/NA	Analysis	6020A		1			497337	06/03/20 19:19	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	498047	06/09/20 16:00	AL	TAL DEN
Total/NA	Analysis	7470A		1			498245	06/10/20 13:48	AL	TAL DEN

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-136963-1

Laboratory: Eurofins TestAmerica, Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21
A2LA	ISO/IEC 17025	2907.01	10-31-21
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	02-08-21
Arizona	State	AZ0713	12-20-20
Arkansas DEQ	State	19-047-0	06-01-21
California	State	2513	01-08-21
Connecticut	State	PH-0686	09-30-20
Florida	NELAP	E87667-57	06-30-20
Georgia	State	4025-011	01-09-21
Illinois	NELAP	2000172019-1	04-30-21
Iowa	State	IA#370	12-01-20
Kansas	NELAP	E-10166	04-30-21
Louisiana	NELAP	30785	06-30-20
Maine	State	2019011 (231)	03-03-21
Minnesota	NELAP	1788752	12-31-20
Nevada	State	CO000262020-1	07-31-20
New Hampshire	NELAP	205319	04-29-21
New Jersey	NELAP	190002	06-30-20
New York	NELAP	59923	04-01-21
North Carolina (WW/SW)	State	358	12-31-20
North Dakota	State	R-034	01-08-21
Oklahoma	State	2018-006	08-31-20
Oregon	NELAP	4025-011	01-08-21
Pennsylvania	NELAP	013	08-01-20
South Carolina	State	72002001	01-08-21
Texas	NELAP	T104704183-19-17	09-30-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-18-00099	03-26-21
Utah	NELAP	CO000262019-11	07-31-20
Virginia	NELAP	10490	06-14-20
Washington	State	C583-19	08-05-20
West Virginia DEP	State	354	11-30-20
Wisconsin	State	999615430	08-31-20
Wyoming (UST)	A2LA	2907.01	10-31-21

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Client Information		Lab PM: Bandy, Darlene F		Carrier Tracking No(s):	
Client Contact: Mr. Jon Russ		Phone: 720 286 3385		COC No: 280-99270-29871.6	
Company: Jacobs Engineering Group, Inc.		E-Mail: darlene.bandy@testamericainc.com		Page: _____	
Address: 707 17th Street, Suite 2400		City: Denver		Job #: _____	
State: CO, Zip: 80202		Due Date Requested:		Preservation Codes:	
Phone: 720 286 3385		TAT Requested (days): 5		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Email: jon.russ@jacobs.com		PO #: Purchase Order not required		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Project Name: CDOT I-270 Interchange Improvements		WO #:		Special Instructions/Note:	
Site:		Project #: 28020733			
		SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Gas, etc.)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B - VOCs - Soils	8015C GRO - TPH - GRO - Soils	8260B - VOCs - Waters	8015C GRO - TPH - GRO - Waters	8270D - SVOCs Waters	8015C DRO - TPH - DRO/ORO	6020A, 747B RCRA Metals	8082A - PCBs - Waters	8082A - PCBs - Soils	8082A - PCBs - Soils	8015C TPH-DRO/ORDRO, 8270D SVOCs - Soils	6020A, 747B RCRA Metals, Moisture	8082A - PCBs - Soils	8082A - PCBs - Soils	8082A - PCBs - Soils	8082A - PCBs - Soils	8082A - PCBs - Waters	8082A - PCBs - Waters	Total Number of Containers	Special Instructions/Note:	
CDOT I270 Env-05/06_2020-SB-14-5'-7'	5/26/20	1100	C/B	Solid		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		GW Sample
CDOT I270 Env-05/06_2020-SB-14-10'-12'	5/26/20	1120	C/B	Solid		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		GW Sample
CDOT I270 Env-05/06_2020-SB-13-12-13'	5/26/20	1230	C/B	Solid		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		Trip Blank (9 to 40)
CDOT I270 Env-05/06_2020-SB-13-6-W	5/26/20	1250	G	Solid		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		GW Sample
CDOT I270 Env-05/06_2020-SB-15-10-12'	5/26/20	1405	C/B	Solid		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		GW Sample
CDOT I270 Env-05/06_2020-SB-15-6-W	5/26/20	1430	G	Solid		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		GW Sample
CDOT I270 Env-05/06_2020-SB-15-6-W	5/27/20	0800	G	Solid		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		GW Sample
CDOT I270 Env-05/06_2020-SB-15-6-W	5/27/20	1030	C/B	Solid		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		GW Sample
CDOT I270 Env-05/06_2020-SB-15-6-W	5/27/20	1100	C/B	Solid		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		GW Sample
CDOT I270 Env-05/06_2020-SB-15-6-W	5/27/20	1100	C/B	Solid		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		GW Sample

Possible Hazard Identification		Date: _____	
<input checked="" type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Radiological
Deliverable Requested: I, II, III, IV, Other (specify)		Time: _____	
Empty Kit Relinquished by: _____		Date: _____	
Relinquished by: _____		Date: 5/27/20 1200	
Relinquished by: _____		Date: _____	
Relinquished by: _____		Date: _____	
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.: 1305145, 1305146, 1305147	
Cooler Temperature(s) °C and Other Remarks: 15.1, 15.1, 17.3, 18.4 +0.6		Company: ERM	

Sample Disposal (A Fee)		Date: _____	
<input type="checkbox"/> Return To Client	<input type="checkbox"/> Special Instructions/QC I	Date: _____	
Special Instructions/QC I: 280-136963 Chain of Custody		Date: _____	
Time: _____		Date: _____	
Company: _____		Date: _____	
Company: _____		Date: _____	
Company: _____		Date: _____	



TestAmerica Denver
Priority Form

Log-in Number: 136963

Project Manager: Bonny, Norwe

Client: Jacobs

Time Zone:

EDT/EST	CDT/CST	MDT/MST	PDT/PST
Other:			

	Initials:	Date/Time:
Receiving	<u>JL</u>	<u>5-27-20 1530</u>
Dept. Rep. / Analyst	<u>CAS</u>	<u>5-27-20 15:55</u>

HT	Analysis	Min Volume needed (mL)	Method	Sample(s)	MS/MSD Required
Cr+6	Chromium (VI) (24 h) [Circle Method]	100	3500-Cr B/D or 7196A		
Priority I	Turbidity	50	180.1		
	Biological Oxygen Demand	1000	5210 B		
	Carbonaceous BOD (cBOD)	1000	5210 B		
	Cyanide Preservation	100	335.4 / 4500-CN		
	Color	100	2120 B		
	Nitrite by Spec (COC May Only list Nitrate)	100	353.2 / 4500-NO ₂ B		
	Orthophosphate by Spec.	50	365.1*		
	Nitrate by IC	50	300.0 / 9056		
	Nitrite by IC	50	300.0 / 9056		
	Orthophosphate by IC	50	300.0 / 9056*		
Settleable Solids	1000	SM2540F			
VOA 624 Unpreserved (A/A/2C)	00040	624 5mL UP or 624 5mL UP 3d			
Priority II	Dissolved Oxygen	100	4500-O G		
	Free Carbon Dioxide (CO ₂)	100	4500-CO ₂		
	Sulfite (SO ₃ ²⁻)	100	4500-SO ₃ B		
	pH (water)	100	4500-H B / 9040 / 9045		
	pH (soil Hanford)	5g	9045C		
	Ferrous Iron	100	3500-FE D		
8260 Encore Terracores	<input type="checkbox"/> Check if required: Coring device un-extruded requires extrusion and freezing within 48 hours. <input checked="" type="checkbox"/> Check if required: A plug of dirt in an empty vial -- place in the freezer within 48 hours for preservation				

Preserve:	<input type="checkbox"/>
Preserve:	<input type="checkbox"/>
Filter:	<input type="checkbox"/>
Split:	<input type="checkbox"/>
Composite:	<input type="checkbox"/>

7 Day Holds - Delayed by FedEx or Held by Client

<input type="checkbox"/> TSS 2540D	<input type="checkbox"/> Sulfide 9030B	<input type="checkbox"/> 8081 / 608 (H ₂ O)	<input type="checkbox"/> 8270 / 625 (H ₂ O)
<input type="checkbox"/> TDS 2540C	<input type="checkbox"/> Sulfide 9034	<input type="checkbox"/> 8082 / 608 (H ₂ O)	<input type="checkbox"/> 8015 DRO (H ₂ O)
<input type="checkbox"/> VOA 524.2	<input type="checkbox"/> Total Solids 2540B	<input type="checkbox"/> 8141 (H ₂ O)	
<input type="checkbox"/> VSS 160.4	<input type="checkbox"/> Sulfide 4500 S2	<input type="checkbox"/> 8151 (H ₂ O)	

Tests	Samples				Other:
		Rapidly Expiring	24 TAT	48 TAT	72 TAT

*Orthophosphate by methods 300.0 and 365.1 require field filtration within 15 minutes of collection.

Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 280-136963-1

Login Number: 136963

List Source: Eurofins TestAmerica, Denver

List Number: 1

Creator: Lubin, Julius C

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	Limited ice in each cooler.
Cooler Temperature is acceptable.	False	Cooler temperature outside required temperature criteria.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Consultant Work Product - Not CDOT Approved - Jacobs Engineering

ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-137073-1

Client Project/Site: CDOT I-270 Interchange Improvements

For:

Jacobs Engineering Group, Inc.
707 17th Street
Suite 2400
Denver, Colorado 80202

Attn: Mr. Jon Russ



Authorized for release by:
7/13/2020 9:29:07 PM

Darlene Bandy, Project Manager I
(303)736-0188
Darlene.Bandy@Eurofinset.com

LINKS

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results through
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www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate recovery exceeds control limits

GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent

Eurofins TestAmerica, Denver

Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Job ID: 280-137073-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: Jacobs Engineering Group, Inc.

Project: CDOT I-270 Interchange Improvements

Report Number: 280-137073-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 5/29/2020 3:50 PM; the samples arrived in good condition except as noted below, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 13.0° C, 17.1° C and 25.4° C.

Receipt Exceptions

The Terracore vials submitted with the solid samples were received with smudged writing on the labels. The collection times and part of the sample IDs were still legible; therefore, the laboratory was able to accurately identify the containers to their samples.

2 x 8oz soil jars for sample CDOT I270 Env-05/06_2020-SB-02-10-12 (280-137073-9) were received without a collection time documented on the container labels. The sample was logged per the collection time on the COC.

1 x 1L unpreserved amber glass container requesting DRO for sample CDOT I270 Env-05/06_2020-SB-21-GW (280-137073-13) was received filled with ~300mL. This is insufficient volume for analysis; therefore, the laboratory proceeded with analysis with a lower initial volume. Reporting Limits were adjusted accordingly.

The container labels for the following sample did not match the information listed on the Chain-of-Custody (COC): CDOT I270 Env-05/06_2020-SB-22-5-7 (280-137073-7). The container labels list ID "CDOT I270 Env-05/06_2020-SB-22", while the COC lists "CDOT I270 Env-05/06_2020-SB-22-5-7". Though there was also no collection time listed on the labels, the laboratory was able to accurately identify the containers to their sample as all other volume for every other sample was labeled and accounted for.

1 x 500mL Nitric Acid plastic container submitted for sample CDOT I270 Env-05/06_2020-SB-20-GW (280-137073-6) was received filled with ~400mL of volume. Sufficient volume is available for the requested analyses.

The lab received both water and soil trip blanks; each matrix must be logged as a separate sample. The water trip blank was logged as CDOT I270 Env-05/06_2020-SB-TB02 (280-137073-14). The soil trip blank was logged as CDOT I270 Env-05/06_2020-SB-TB02 (280-137073-16).

VOLATILE ORGANIC COMPOUNDS (GC-MS) - Soil

Samples CDOT I270 Env-05/06_2020-SB-06-15-17 (280-137073-1), CDOT I270 Env-05/06_2020-SB-08-8-10 (280-137073-2), CDOT I270 Env-05/06_2020-SB-08-22-23 (280-137073-3), CDOT I270 Env-05/06_2020-SB-20-3-5 (280-137073-4), CDOT I270 Env-05/06_2020-SB-20-8-10 (280-137073-5), CDOT I270 Env-05/06_2020-SB-22-5-7 (280-137073-7), CDOT I270

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Job ID: 280-137073-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Env-05/06_2020-SB-02-10-12 (280-137073-9), CDOT I270 Env-05/06_2020-SB-02-20-22 (280-137073-10), CDOT I270 Env-05/06_2020-SB-21-2-3 (280-137073-12), CDOT I270 Env-05/06_2020-SB-25-14-15 (280-137073-15) and CDOT I270 Env-05/06_2020-SB-TB02 (280-137073-16) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 05/28/2020 and 05/29/2020 and analyzed on 06/05/2020, 06/06/2020 and 06/10/2020.

Samples CDOT I270 Env-05/06_2020-SB-06-15-17 (280-137073-1) and CDOT I270 Env-05/06_2020-SB-TB02 (280-137073-16)[50X] required dilution prior to analysis. The reporting limits have been adjusted accordingly. The trip blank required the dilution so the Methanol preserved trip blank vial could be analyzed as the trip blank for the Methanol preserved vial for sample CDOT I270 Env-05/06_2020-SB-06-15-17 (280-137073-1); Acetone was over the calibration range in the low level analysis for this sample.

Several analytes failed the recovery criteria low for the MS of sample CDOT I270 Env-05/06_2020-SB-02-10-12MS (280-137073-9) in batch 280-497779. 1,2,3-Trichlorobenzene failed the recovery criteria low for the MSD. Refer to the QC report for details. The acceptable LCS data indicate that the analytical system was operating within control.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-498148 and analytical batch 280-498147.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GC-MS) - Water

Samples CDOT I270 Env-05/06_2020-SB-20-GW (280-137073-6), CDOT I270 Env-05/06_2020-SB-22-GW (280-137073-8), CDOT I270 Env-05/06_2020-SB-02-GW (280-137073-11), CDOT I270 Env-05/06_2020-SB-21-GW (280-137073-13) and CDOT I270 Env-05/06_2020-SB-TB02 (280-137073-14) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 06/09/2020.

The following sample(s) was collected in a properly preserved vial; however, the pH was outside the required criteria when verified by the laboratory. The sample was analyzed within the 7-day holding time specified for unpreserved samples: CDOT I270 Env-05/06_2020-SB-21-GW (280-137073-13). pH=3

Samples CDOT I270 Env-05/06_2020-SB-02-GW (280-137073-11)[100X] and CDOT I270 Env-05/06_2020-SB-21-GW (280-137073-13) [100X] required dilution prior to analysis due to the nature of the sample matrix. The reporting limits have been adjusted accordingly.

1,2-Dichloroethane was detected in method blank MB 280-497959/10 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GC/MS) - Soil

Samples CDOT I270 Env-05/06_2020-SB-06-15-17 (280-137073-1), CDOT I270 Env-05/06_2020-SB-08-8-10 (280-137073-2), CDOT I270 Env-05/06_2020-SB-08-22-23 (280-137073-3), CDOT I270 Env-05/06_2020-SB-20-3-5 (280-137073-4), CDOT I270 Env-05/06_2020-SB-20-8-10 (280-137073-5), CDOT I270 Env-05/06_2020-SB-22-5-7 (280-137073-7), CDOT I270 Env-05/06_2020-SB-02-10-12 (280-137073-9), CDOT I270 Env-05/06_2020-SB-02-20-22 (280-137073-10), CDOT I270 Env-05/06_2020-SB-21-2-3 (280-137073-12) and CDOT I270 Env-05/06_2020-SB-25-14-15 (280-137073-15) were analyzed for semivolatile organic compounds (GC/MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 06/10/2020 and analyzed on 06/12/2020.

Several analytes failed the recovery criteria low for the MS/MSD of sample CDOT I270 Env-05/06_2020-SB-02-10-12 (280-137073-9) in batch 280-498836. Refer to the QC report for details. The acceptable LCS data indicate that the analytical system was operating within control.

The continuing calibration verification (CCV) associated with batch 280-498836 recovered above the upper control limit for Famphur (+50.4%D, limit +20%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-06-15-17 (280-137073-1), CDOT I270 Env-05/06_2020-SB-08-8-10 (280-137073-2), CDOT I270 Env-05/06_2020-SB-08-22-23 (280-137073-3), CDOT I270

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Client: Jacobs Engineering Group, Inc.
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Job ID: 280-137073-1

Job ID: 280-137073-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Env-05/06_2020-SB-20-3-5 (280-137073-4), CDOT I270 Env-05/06_2020-SB-20-8-10 (280-137073-5), CDOT I270 Env-05/06_2020-SB-22-5-7 (280-137073-7), CDOT I270 Env-05/06_2020-SB-02-10-12 (280-137073-9), CDOT I270 Env-05/06_2020-SB-02-20-22 (280-137073-10), CDOT I270 Env-05/06_2020-SB-21-2-3 (280-137073-12), CDOT I270 Env-05/06_2020-SB-25-14-15 (280-137073-15) and (CCV 280-498836/5).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS) - Water

Samples CDOT I270 Env-05/06_2020-SB-20-GW (280-137073-6) and CDOT I270 Env-05/06_2020-SB-22-GW (280-137073-8) were analyzed for semivolatile organic compounds (GC-MS) in accordance with SW-846 8270D. The samples were prepared on 06/01/2020 and analyzed on 06/05/2020.

2,4,6-Tribromophenol (Surr) failed the surrogate recovery criteria low for CDOT I270 Env-05/06_2020-SB-20-GW (280-137073-6). 2,4,6-Tribromophenol (Surr), 2-Fluorophenol (Surr) and Phenol-d5 (Surr) failed the surrogate recovery criteria low for CDOT I270 Env-05/06_2020-SB-22-GW (280-137073-8). 2-Fluorobiphenyl failed the surrogate recovery criteria low for MB 280-496919/1-A. Refer to the QC report for details. Evidence of matrix interferences in the samples was not obvious in evaluating the chromatograms for this analysis; however, matrix was noted for sample CDOT I270 Env-05/06_2020-SB-20-GW (280-137073-6) for another analysis, and it was noted that sample CDOT I270 Env-05/06_2020-SB-22-GW (280-137073-8) contained muddy sediment. This was for preparation batch 280-496919 and analytical batch 280-497550. The samples were outside of the extraction holding time; therefore, re-extraction was not performed.

MB 280-496919: 2-Fluorobiphenyl: 43% (limit 48-120%)
280-137073-6: 2,4,6-Tribromophenol: 31% (limit 42-131%)
280-137073-8: 2-Fluorophenol: 10% (limit 41-120%)
2,4,6-Tribromophenol: 3% (limit 42-131%)
Phenol-d5: 18% (limit 45-124%)

The laboratory control sample and the laboratory control sample duplicate (LCS/LCSD) for preparation batch 280-496919 and analytical batch 280-497550 recovered outside control limits (limit 10-52%) for the following analyte: Benzidine (LCS: 3%, LCSD: 0%). Benzidine has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. Batch precision also exceeded control limits (200% RPD, limit 50% RPD) for this analyte. These results have been reported and qualified. Associated samples: CDOT I270 Env-05/06_2020-SB-20-GW (280-137073-6), CDOT I270 Env-05/06_2020-SB-22-GW (280-137073-8), (LCS 280-496919/2-A) and (LCSD 280-496919/3-A)

The laboratory control sample duplicate (LCSD) for preparation batch 280-496919 and analytical batch 280-497550 recovered outside control limits for the following analytes: 2-Nitroaniline (111%, limit 65-110%). These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported. The LCS/LCSD %RPD was in control for this analyte. Associated samples: CDOT I270 Env-05/06_2020-SB-20-GW (280-137073-6), CDOT I270 Env-05/06_2020-SB-22-GW (280-137073-8) and (LCSD 280-496919/3-A).

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-496919. Associated samples: CDOT I270 Env-05/06_2020-SB-20-GW (280-137073-6) and CDOT I270 Env-05/06_2020-SB-22-GW (280-137073-8).

The continuing calibration verification (CCV) associated with batch 280-497550 recovered above the upper control limit (limit +20%D) for 2-Nitroaniline (+23.6%D) and 3,3'-Dichlorobenzidine (+22.0%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-20-GW (280-137073-6), CDOT I270 Env-05/06_2020-SB-22-GW (280-137073-8) and (CCV 280-497550/3).

The continuing calibration verification (CCV) associated with batch 280-497550 recovered above the upper control limit (limit +20%D) for Famphur (+40.3%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-20-GW (280-137073-6), CDOT I270 Env-05/06_2020-SB-22-GW (280-137073-8) and (CCV 280-497550/5).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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Client: Jacobs Engineering Group, Inc.
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Job ID: 280-137073-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

GASOLINE RANGE ORGANICS (GRO) - Soil

Samples CDOT I270 Env-05/06_2020-SB-06-15-17 (280-137073-1), CDOT I270 Env-05/06_2020-SB-08-8-10 (280-137073-2), CDOT I270 Env-05/06_2020-SB-08-22-23 (280-137073-3), CDOT I270 Env-05/06_2020-SB-20-3-5 (280-137073-4), CDOT I270 Env-05/06_2020-SB-20-8-10 (280-137073-5), CDOT I270 Env-05/06_2020-SB-22-5-7 (280-137073-7), CDOT I270 Env-05/06_2020-SB-02-10-12 (280-137073-9), CDOT I270 Env-05/06_2020-SB-02-20-22 (280-137073-10), CDOT I270 Env-05/06_2020-SB-21-2-3 (280-137073-12), CDOT I270 Env-05/06_2020-SB-25-14-15 (280-137073-15) and CDOT I270 Env-05/06_2020-SB-TB02 (280-137073-16) were analyzed for Gasoline Range Organics (GRO) in accordance with EPA SW-846 Method 8015C - GRO. The samples were prepared on 05/28/2020 and 05/29/2020 and analyzed on 06/10/2020 and 06/11/2020.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-498014 and analytical batch 280-498073.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GASOLINE RANGE ORGANICS (GRO) - Water

Samples CDOT I270 Env-05/06_2020-SB-20-GW (280-137073-6), CDOT I270 Env-05/06_2020-SB-22-GW (280-137073-8), CDOT I270 Env-05/06_2020-SB-02-GW (280-137073-11), CDOT I270 Env-05/06_2020-SB-21-GW (280-137073-13) and CDOT I270 Env-05/06_2020-SB-TB02 (280-137073-14) were analyzed for Gasoline Range Organics (GRO) in accordance with EPA SW-846 Method 8015C - GRO. The samples were analyzed on 06/10/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DIESEL RANGE ORGANICS - Soil

Samples CDOT I270 Env-05/06_2020-SB-06-15-17 (280-137073-1), CDOT I270 Env-05/06_2020-SB-08-8-10 (280-137073-2), CDOT I270 Env-05/06_2020-SB-08-22-23 (280-137073-3), CDOT I270 Env-05/06_2020-SB-20-3-5 (280-137073-4), CDOT I270 Env-05/06_2020-SB-20-8-10 (280-137073-5), CDOT I270 Env-05/06_2020-SB-22-5-7 (280-137073-7), CDOT I270 Env-05/06_2020-SB-02-10-12 (280-137073-9), CDOT I270 Env-05/06_2020-SB-02-20-22 (280-137073-10), CDOT I270 Env-05/06_2020-SB-21-2-3 (280-137073-12) and CDOT I270 Env-05/06_2020-SB-25-14-15 (280-137073-15) were analyzed for diesel range organics in accordance with EPA SW-846 Method 8015C - DRO. The samples were prepared on 06/11/2020 and analyzed on 06/22/2020, 06/23/2020, 06/25/2020 and 06/29/2020.

The following samples could not be thoroughly homogenized before sub-sampling was performed due to sample matrix: CDOT I270 Env-05/06_2020-SB-22-5-7 (280-137073-7), CDOT I270 Env-05/06_2020-SB-02-10-12 (280-137073-9), CDOT I270 Env-05/06_2020-SB-02-10-12 (280-137073-9[MSJ]), CDOT I270 Env-05/06_2020-SB-02-10-12 (280-137073-9[MSD]) and CDOT I270 Env-05/06_2020-SB-02-20-22 (280-137073-10). The samples were wet clay-like.

The continuing calibration verification (CCV) associated with batch 280-499134 recovered above the upper control limit (+/-20%D) for Motor Oil (C20-C38) The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are associated: CDOT I270 Env-05/06_2020-SB-08-8-10 (280-137073-2), CDOT I270 Env-05/06_2020-SB-20-8-10 (280-137073-5), CDOT I270 Env-05/06_2020-SB-02-10-12 (280-137073-9[MSJ]), CDOT I270 Env-05/06_2020-SB-21-2-3 (280-137073-12), (CCV 280-499134/28), (CCV 280-499134/29), (CCV 280-499134/42) and (CCV 280-499134/43).

Sequence is as follows:

- CCV (DRO) in control
- CCV (RRO) in control
- 280-137073-1,2,3,4,5,7,9
- MB,LCS,LCS
- CCV (DRO) in control
- CCV (RRO) +23.4%D Motor Oil (C20-C38)
- 280-137073-9MS/MSD, 10, 12,15
- CCV (DRO) in control
- CCV (RRO) +23%D

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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Job ID: 280-137073-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

DIESEL RANGE ORGANICS - Water

Samples CDOT I270 Env-05/06_2020-SB-20-GW (280-137073-6), CDOT I270 Env-05/06_2020-SB-22-GW (280-137073-8) and CDOT I270 Env-05/06_2020-SB-21-GW (280-137073-13) were analyzed for Diesel Range Organics in accordance with EPA SW-846 Method 8015C - DRO. The samples were prepared on 06/02/2020 and analyzed on 06/10/2020.

Elevated reporting limits are provided for the following sample due to limited sample volume provided for preparation: CDOT I270 Env-05/06_2020-SB-21-GW (280-137073-13).

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-497026. The following samples are associated: CDOT I270 Env-05/06_2020-SB-20-GW (280-137073-6), CDOT I270 Env-05/06_2020-SB-22-GW (280-137073-8) and CDOT I270 Env-05/06_2020-SB-21-GW (280-137073-13).

It was noted that the following samples contained muddy sediment: CDOT I270 Env-05/06_2020-SB-22-GW (280-137073-8) and CDOT I270 Env-05/06_2020-SB-21-GW (280-137073-13)

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

CHLORINATED PESTICIDES - Soil

Samples CDOT I270 Env-05/06_2020-SB-20-3-5 (280-137073-4) and CDOT I270 Env-05/06_2020-SB-20-8-10 (280-137073-5) were analyzed for chlorinated pesticides in accordance with EPA SW-846 Method 8081B. The samples were prepared on 06/09/2020 and analyzed on 06/11/2020.

For Method 8081B, the laboratory control sample (LCS) for preparation batch 280-497995 and analytical batch 280-498397 recovered outside control limits high for the following analytes: Heptachlor epoxide, Dieldrin, Aldrin, Methoxychlor, alpha-BHC, delta-BHC, gamma-BHC (Lindane), trans-Chlordane, 4,4'-DDD, 4,4'-DDE, Endrin aldehyde, Endrin ketone, Endosulfan I, Endosulfan II, Endosulfan sulfate and cis-Chlordane. These analytes were biased high in the LCS, and associated sample results were either non-detect or were below the reporting limit. The extraction holding time had expired; therefore, samples were not re-extracted, and the data have been qualified and reported. The following samples are associated: CDOT I270 Env-05/06_2020-SB-20-3-5 (280-137073-4) and CDOT I270 Env-05/06_2020-SB-20-8-10 (280-137073-5).

For Method 8081B, the continuing calibration verification (CCV) associated with batch 280-498397 recovered outside of the control limits (20%) low on the back column for Toxaphene, Toxaphene Peak 1, Toxaphene Peak 2, Toxaphene Peak 3, Toxaphene Peak 4 and Toxaphene Peak 5 but was reported from the front column, which had the average for Toxaphene within control limits. The front column was outside limits low for Toxaphene Peak 1 and Toxaphene Peak 4 and high for Toxaphene Peak 5 but the average of the five peaks of Toxaphene was within limits and sample results were reported as non-detect. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-20-3-5 (280-137073-4), CDOT I270 Env-05/06_2020-SB-20-8-10 (280-137073-5), (CCV 280-498397/17) and (CCV 280-498397/4).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ORGANOCHLORINE PESTICIDES (GC) - Water

Sample CDOT I270 Env-05/06_2020-SB-20-GW (280-137073-6) was analyzed for Organochlorine Pesticides (GC) in accordance with SW 846 8081B. The samples were prepared on 06/02/2020 and analyzed on 06/08/2020.

alpha-BHC failed the recovery criteria high for LCS 280-497041/2-A. alpha-BHC and gamma-BHC (Lindane) failed the recovery criteria high for LCSD 280-497041/3-A. Refer to the QC report for details. alpha-BHC (limits 49%-117%) recovered at 121% in the LCS and at 127% in the LCSD, and gamma-BHC (Lindane) (limits 51%-117%) recovered at 120% in the LCSD. These analytes were biased high in the LCS/LCSD and were not detected in the associated samples; therefore, the data have been qualified and reported.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-497041. The following sample is associated: CDOT I270 Env-05/06_2020-SB-20-GW (280-137073-6).

For the Method 8081B, the continuing calibration verification (CCV) associated with batch 280-497743 recovered outside of the control limits (20%) low on the back column for DCB Decachlorobiphenyl at -25.2% but the surrogate was reported from the front column. The

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samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-20-GW (280-137073-6) and (CCVIS 280-497743/5).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS) - Soil

Samples CDOT I270 Env-05/06_2020-SB-20-3-5 (280-137073-4) and CDOT I270 Env-05/06_2020-SB-20-8-10 (280-137073-5) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082A. The samples were prepared on 06/09/2020 and analyzed on 06/12/2020.

The following samples required a sulfuric acid clean-up, via EPA Method 3665A, to reduce matrix interferences: CDOT I270 Env-05/06_2020-SB-20-3-5 (280-137073-4), CDOT I270 Env-05/06_2020-SB-20-8-10 (280-137073-5).

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS) - Water

Sample CDOT I270 Env-05/06_2020-SB-20-GW (280-137073-6) was analyzed for polychlorinated biphenyls (PCBs) in accordance with SW 846 8082A. The samples were prepared on 06/02/2020 and analyzed on 06/13/2020.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-497041. The following sample is associated: CDOT I270 Env-05/06_2020-SB-20-GW (280-137073-6)

The following samples required a sulfuric acid clean-up, via EPA Method 3665A, to reduce matrix interferences: CDOT I270 Env-05/06_2020-SB-20-GW (280-137073-6).

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

METALS (ICPMS) - Soil

Samples CDOT I270 Env-05/06_2020-SB-06-15-17 (280-137073-1), CDOT I270 Env-05/06_2020-SB-08-8-10 (280-137073-2), CDOT I270 Env-05/06_2020-SB-08-22-23 (280-137073-3), CDOT I270 Env-05/06_2020-SB-20-3-5 (280-137073-4), CDOT I270 Env-05/06_2020-SB-20-8-10 (280-137073-5), CDOT I270 Env-05/06_2020-SB-22-5-7 (280-137073-7), CDOT I270 Env-05/06_2020-SB-02-10-12 (280-137073-9), CDOT I270 Env-05/06_2020-SB-02-20-22 (280-137073-10), CDOT I270 Env-05/06_2020-SB-21-2-3 (280-137073-12) and CDOT I270 Env-05/06_2020-SB-25-14-15 (280-137073-15) were analyzed for metals (ICPMS) in accordance with SW 846 6020A. The samples were prepared on 06/04/2020 and analyzed on 06/08/2020 and 06/09/2020.

Sample CDOT I270 Env-05/06_2020-SB-25-14-15 (280-137073-15)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Barium was detected in method blank MB 280-496985/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Lead failed the recovery criteria low for the MS of sample CDOT I270 Env-05/06_2020-SB-02-10-12MS (280-137073-9) in batch 280-497991. Barium and Chromium failed the recovery criteria high. Barium and Lead failed the recovery criteria low for the MSD of sample CDOT I270 Env-05/06_2020-SB-02-10-12MSD (280-137073-9) in batch 280-497991. Barium and Selenium exceeded the RPD limit. The presence of the '4' qualifier on Barium indicates that the concentration in the unspiked sample exceeded four times the spiking amount. Refer to the QC report for details. The acceptable LCS data indicate that the analytical system was operating within control.

The low level continuing calibration verification (CCVL) associated with batch 280-498028 recovered at 64%, below the lower control limit (70%) for Barium. The samples associated with this CCVL was >10x the level of the CCVL for the affected analytes; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP/MS) - Soil (Sb prep for Silver)

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Job ID: 280-137073-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Samples CDOT I270 Env-05/06_2020-SB-06-15-17 (280-137073-1), CDOT I270 Env-05/06_2020-SB-08-8-10 (280-137073-2), CDOT I270 Env-05/06_2020-SB-08-22-23 (280-137073-3), CDOT I270 Env-05/06_2020-SB-20-3-5 (280-137073-4), CDOT I270 Env-05/06_2020-SB-20-8-10 (280-137073-5), CDOT I270 Env-05/06_2020-SB-22-5-7 (280-137073-7), CDOT I270 Env-05/06_2020-SB-02-10-12 (280-137073-9), CDOT I270 Env-05/06_2020-SB-02-20-22 (280-137073-10), CDOT I270 Env-05/06_2020-SB-21-2-3 (280-137073-12) and CDOT I270 Env-05/06_2020-SB-25-14-15 (280-137073-15) were analyzed for Total Metals (ICP/MS) in accordance with 6020A. The samples were prepared on 06/04/2020 and analyzed on 06/08/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICPMS) - Water

Samples CDOT I270 Env-05/06_2020-SB-20-GW (280-137073-6) and CDOT I270 Env-05/06_2020-SB-22-GW (280-137073-8) were analyzed for total metals (ICPMS) in accordance with EPA SW-846 6020A. The samples were prepared on 06/02/2020 and analyzed on 06/03/2020 and 06/04/2020.

Sample CDOT I270 Env-05/06_2020-SB-20-GW (280-137073-6)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY - Water

Samples CDOT I270 Env-05/06_2020-SB-20-GW (280-137073-6) and CDOT I270 Env-05/06_2020-SB-22-GW (280-137073-8) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 06/12/2020.

Mercury was detected in method blank MB 280-498532/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY (CVAA) - Soil

Samples CDOT I270 Env-05/06_2020-SB-06-15-17 (280-137073-1), CDOT I270 Env-05/06_2020-SB-08-8-10 (280-137073-2), CDOT I270 Env-05/06_2020-SB-08-22-23 (280-137073-3), CDOT I270 Env-05/06_2020-SB-20-3-5 (280-137073-4), CDOT I270 Env-05/06_2020-SB-20-8-10 (280-137073-5), CDOT I270 Env-05/06_2020-SB-22-5-7 (280-137073-7), CDOT I270 Env-05/06_2020-SB-02-10-12 (280-137073-9), CDOT I270 Env-05/06_2020-SB-02-20-22 (280-137073-10), CDOT I270 Env-05/06_2020-SB-21-2-3 (280-137073-12) and CDOT I270 Env-05/06_2020-SB-25-14-15 (280-137073-15) were analyzed for total mercury (CVAA) in accordance with EPA SW-846 Method 7471B. The samples were prepared and analyzed on 06/11/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

Samples CDOT I270 Env-05/06_2020-SB-06-15-17 (280-137073-1), CDOT I270 Env-05/06_2020-SB-08-8-10 (280-137073-2), CDOT I270 Env-05/06_2020-SB-08-22-23 (280-137073-3), CDOT I270 Env-05/06_2020-SB-20-3-5 (280-137073-4), CDOT I270 Env-05/06_2020-SB-20-8-10 (280-137073-5), CDOT I270 Env-05/06_2020-SB-22-5-7 (280-137073-7), CDOT I270 Env-05/06_2020-SB-02-10-12 (280-137073-9), CDOT I270 Env-05/06_2020-SB-02-20-22 (280-137073-10), CDOT I270 Env-05/06_2020-SB-21-2-3 (280-137073-12) and CDOT I270 Env-05/06_2020-SB-25-14-15 (280-137073-15) were analyzed for percent solids in accordance with ASTM D2216-90. The samples were analyzed on 06/01/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-06-15-17

Lab Sample ID: 280-137073-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylcyclohexane	2.1	J	4.2	0.35	ug/Kg	1	☼	8260B	Total/NA
Acetone - DL	8400		4000	2000	ug/Kg	50	☼	8260B	Total/NA
Diesel Range Organics [C10-C28]	4.3	J	8.8	4.0	mg/Kg	1	☼	8015C	Total/NA
Motor Oil (C20-C38)	14	J	26	8.6	mg/Kg	1	☼	8015C	Total/NA
Arsenic	2.5		0.59	0.050	mg/Kg	1	☼	6020A	Total/NA
Silver	40	J	92	7.2	ug/Kg	1	☼	6020A	Total/NA
Barium	140	B	0.39	0.070	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.21		0.099	0.0093	mg/Kg	1	☼	6020A	Total/NA
Chromium	13		0.20	0.075	mg/Kg	1	☼	6020A	Total/NA
Lead	19		0.15	0.018	mg/Kg	1	☼	6020A	Total/NA
Selenium	0.23	J	0.49	0.13	mg/Kg	1	☼	6020A	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-08-8-10

Lab Sample ID: 280-137073-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.7		0.60	0.050	mg/Kg	1	☼	6020A	Total/NA
Silver	36	J	76	6.0	ug/Kg	1	☼	6020A	Total/NA
Barium	130	B	0.40	0.070	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.062	J	0.10	0.0093	mg/Kg	1	☼	6020A	Total/NA
Chromium	7.7		0.20	0.076	mg/Kg	1	☼	6020A	Total/NA
Lead	7.0		0.15	0.018	mg/Kg	1	☼	6020A	Total/NA
Selenium	0.14	J	0.50	0.13	mg/Kg	1	☼	6020A	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-08-22-23

Lab Sample ID: 280-137073-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	45	J	74	36	ug/Kg	1	☼	8260B	Total/NA
Hexadecane	21	J	330	13	ug/Kg	1	☼	8270D	Total/NA
Arsenic	1.4		0.58	0.049	mg/Kg	1	☼	6020A	Total/NA
Silver	8.6	J	85	6.7	ug/Kg	1	☼	6020A	Total/NA
Barium	86	B	0.39	0.068	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.059	J	0.096	0.0090	mg/Kg	1	☼	6020A	Total/NA
Chromium	4.4		0.19	0.073	mg/Kg	1	☼	6020A	Total/NA
Lead	4.6		0.14	0.018	mg/Kg	1	☼	6020A	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-3-5

Lab Sample ID: 280-137073-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	5.0	J	8.6	3.9	mg/Kg	1	☼	8015C	Total/NA
Motor Oil (C20-C38)	15	J	26	8.4	mg/Kg	1	☼	8015C	Total/NA
4,4'-DDD	1.7	J*	3.7	1.2	ug/Kg	1	☼	8081B	Total/NA
4,4'-DDE	1.9	J*	3.7	0.51	ug/Kg	1	☼	8081B	Total/NA
Arsenic	1.4		0.66	0.056	mg/Kg	1	☼	6020A	Total/NA
Silver	12	J	98	7.7	ug/Kg	1	☼	6020A	Total/NA
Barium	55	B	0.44	0.077	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.21		0.11	0.010	mg/Kg	1	☼	6020A	Total/NA
Chromium	5.6		0.22	0.083	mg/Kg	1	☼	6020A	Total/NA
Lead	22		0.16	0.020	mg/Kg	1	☼	6020A	Total/NA
Mercury	9.7	J	20	6.5	ug/Kg	1	☼	7471B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-8-10

Lab Sample ID: 280-137073-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.77		0.52	0.044	mg/Kg	1	☼	6020A	Total/NA
Silver	11	J	93	7.2	ug/Kg	1	☼	6020A	Total/NA
Barium	30	B	0.35	0.062	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.047	J	0.087	0.0082	mg/Kg	1	☼	6020A	Total/NA
Chromium	3.4		0.17	0.066	mg/Kg	1	☼	6020A	Total/NA
Lead	3.3		0.13	0.016	mg/Kg	1	☼	6020A	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-GW

Lab Sample ID: 280-137073-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.4	J	10	1.9	ug/L	1		8260B	Total/NA
Methyl tert-butyl ether	0.34	J	5.0	0.25	ug/L	1		8260B	Total/NA
Bis(2-ethylhexyl) phthalate	0.95	J	9.9	0.56	ug/L	1		8270D	Total/NA
Diesel Range Organics [C10-C28]	0.27		0.25	0.032	mg/L	1		8015C	Total/NA
Motor Oil (C20-C38)	0.20	J	0.49	0.056	mg/L	1		8015C	Total/NA
Arsenic	210		5.0	0.33	ug/L	1		6020A	Total/NA
Barium	5000		10	2.9	ug/L	10		6020A	Total/NA
Cadmium	9.9		1.0	0.27	ug/L	1		6020A	Total/NA
Chromium	300		2.0	0.50	ug/L	1		6020A	Total/NA
Lead	520		10	1.8	ug/L	10		6020A	Total/NA
Selenium	7.4		5.0	0.37	ug/L	1		6020A	Total/NA
Silver	1.1	J	5.0	0.033	ug/L	1		6020A	Total/NA
Mercury	1.2	B	0.20	0.027	ug/L	1		7470A	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-22-5-7

Lab Sample ID: 280-137073-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.6		0.58	0.049	mg/Kg	1	☼	6020A	Total/NA
Silver	19	J	100	7.9	ug/Kg	1	☼	6020A	Total/NA
Barium	260	B	0.39	0.068	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.12		0.097	0.0091	mg/Kg	1	☼	6020A	Total/NA
Chromium	13		0.19	0.074	mg/Kg	1	☼	6020A	Total/NA
Lead	14		0.15	0.018	mg/Kg	1	☼	6020A	Total/NA
Selenium	0.33	J	0.48	0.13	mg/Kg	1	☼	6020A	Total/NA
Mercury	19	J	21	7.0	ug/Kg	1	☼	7471B	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-22-GW

Lab Sample ID: 280-137073-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	0.32	J	5.0	0.25	ug/L	1		8260B	Total/NA
Diesel Range Organics [C10-C28]	0.17	J	0.25	0.033	mg/L	1		8015C	Total/NA
Motor Oil (C20-C38)	0.16	J	0.51	0.057	mg/L	1		8015C	Total/NA
Arsenic	31		5.0	0.33	ug/L	1		6020A	Total/NA
Barium	1400		1.0	0.29	ug/L	1		6020A	Total/NA
Cadmium	1.7		1.0	0.27	ug/L	1		6020A	Total/NA
Chromium	48		2.0	0.50	ug/L	1		6020A	Total/NA
Lead	82		1.0	0.18	ug/L	1		6020A	Total/NA
Selenium	2.2	J	5.0	0.37	ug/L	1		6020A	Total/NA
Silver	0.30	J	5.0	0.033	ug/L	1		6020A	Total/NA
Mercury	0.19	J B	0.20	0.027	ug/L	1		7470A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12

Lab Sample ID: 280-137073-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Hexadecane	19	J	360	14	ug/Kg	1	☼	8270D	Total/NA
Pyrene	18	J	360	13	ug/Kg	1	☼	8270D	Total/NA
Diesel Range Organics [C10-C28]	6.3	J	8.6	3.9	mg/Kg	1	☼	8015C	Total/NA
Motor Oil (C20-C38)	20	J	26	8.4	mg/Kg	1	☼	8015C	Total/NA
Arsenic	1.6		0.58	0.049	mg/Kg	1	☼	6020A	Total/NA
Silver	27	J	85	6.6	ug/Kg	1	☼	6020A	Total/NA
Barium	100	F2 B	0.39	0.068	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.14		0.097	0.0091	mg/Kg	1	☼	6020A	Total/NA
Chromium	7.5	F1	0.19	0.074	mg/Kg	1	☼	6020A	Total/NA
Lead	16	F1	0.15	0.018	mg/Kg	1	☼	6020A	Total/NA
Selenium	0.14	J F2	0.48	0.13	mg/Kg	1	☼	6020A	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-20-22

Lab Sample ID: 280-137073-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Motor Oil (C20-C38)	12	J	25	8.3	mg/Kg	1	☼	8015C	Total/NA
Arsenic	1.7		0.65	0.055	mg/Kg	1	☼	6020A	Total/NA
Silver	15	J	84	6.6	ug/Kg	1	☼	6020A	Total/NA
Barium	130	B	0.43	0.077	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.11		0.11	0.010	mg/Kg	1	☼	6020A	Total/NA
Chromium	11		0.22	0.083	mg/Kg	1	☼	6020A	Total/NA
Lead	9.2		0.16	0.020	mg/Kg	1	☼	6020A	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-GW

Lab Sample ID: 280-137073-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	200	J	1000	190	ug/L	100		8260B	Total/NA
Chloroform	45	J	100	16	ug/L	100		8260B	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-21-2-3

Lab Sample ID: 280-137073-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.55		0.46	0.039	mg/Kg	1	☼	6020A	Total/NA
Silver	6.8	J	81	6.3	ug/Kg	1	☼	6020A	Total/NA
Barium	31	B	0.30	0.054	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.054	J	0.076	0.0072	mg/Kg	1	☼	6020A	Total/NA
Chromium	1.9		0.15	0.058	mg/Kg	1	☼	6020A	Total/NA
Lead	2.7		0.11	0.014	mg/Kg	1	☼	6020A	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-21-GW

Lab Sample ID: 280-137073-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3000		1000	190	ug/L	100		8260B	Total/NA
Carbon disulfide	18	J	200	17	ug/L	100		8260B	Total/NA
Chloroform	48	J	100	16	ug/L	100		8260B	Total/NA
Gasoline Range Organics (GRO) -C6-C10	12	J	25	10	ug/L	1		8015C	Total/NA
Diesel Range Organics [C10-C28]	1.2		1.0	0.14	mg/L	1		8015C	Total/NA
Motor Oil (C20-C38)	1.7	J	2.1	0.23	mg/L	1		8015C	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB02

Lab Sample ID: 280-137073-14

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-25-14-15

Lab Sample ID: 280-137073-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	59	J	69	34	ug/Kg	1	☼	8260B	Total/NA
Arsenic	1.9		0.64	0.054	mg/Kg	1	☼	6020A	Total/NA
Silver	29	J	100	8.0	ug/Kg	1	☼	6020A	Total/NA
Barium	1200	B ^	4.3	0.76	mg/Kg	10	☼	6020A	Total/NA
Cadmium	0.044	J	0.11	0.010	mg/Kg	1	☼	6020A	Total/NA
Chromium	8.7		0.21	0.082	mg/Kg	1	☼	6020A	Total/NA
Lead	6.9		0.16	0.020	mg/Kg	1	☼	6020A	Total/NA
Selenium	0.16	J	0.54	0.14	mg/Kg	1	☼	6020A	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB02

Lab Sample ID: 280-137073-16

No Detections.

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver



Method Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL DEN
8015C	Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)	SW846	TAL DEN
8015C	Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)	SW846	TAL DEN
8081B	Organochlorine Pesticides (GC)	SW846	TAL DEN
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL DEN
6020A	Metals (ICP/MS)	SW846	TAL DEN
7470A	Mercury (CVAA)	SW846	TAL DEN
7471B	Mercury (CVAA)	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN
3020A	Preparation, Total Metals	SW846	TAL DEN
3050B	Preparation, Metals	SW846	TAL DEN
3050B-Sb	Preparation, Metals (Antimony)	SW846	TAL DEN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL DEN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL DEN
3546	Microwave Extraction	SW846	TAL DEN
3550C	Ultrasonic Extraction	SW846	TAL DEN
5030B	Purge and Trap	SW846	TAL DEN
5030C	Purge and Trap	SW846	TAL DEN
5035	Closed System Purge and Trap	SW846	TAL DEN
7470A	Preparation, Mercury	SW846	TAL DEN
7471B	Preparation, Mercury	SW846	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Consultant Work Product - Jacobs Engineering
 -Not CDOT Approved-

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Sample Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-137073-1	CDOT I270 Env-05/06_2020-SB-06-15-17	Solid	05/28/20 09:30	05/29/20 15:50	
280-137073-2	CDOT I270 Env-05/06_2020-SB-08-8-10	Solid	05/28/20 10:55	05/29/20 15:50	
280-137073-3	CDOT I270 Env-05/06_2020-SB-08-22-23	Solid	05/28/20 11:25	05/29/20 15:50	
280-137073-4	CDOT I270 Env-05/06_2020-SB-20-3-5	Solid	05/28/20 12:45	05/29/20 15:50	
280-137073-5	CDOT I270 Env-05/06_2020-SB-20-8-10	Solid	05/28/20 13:05	05/29/20 15:50	
280-137073-6	CDOT I270 Env-05/06_2020-SB-20-GW	Water	05/28/20 13:40	05/29/20 15:50	
280-137073-7	CDOT I270 Env-05/06_2020-SB-22-5-7	Solid	05/28/20 15:00	05/29/20 15:50	
280-137073-8	CDOT I270 Env-05/06_2020-SB-22-GW	Water	05/28/20 15:10	05/29/20 15:50	
280-137073-9	CDOT I270 Env-05/06_2020-SB-02-10-12	Solid	05/29/20 08:50	05/29/20 15:50	
280-137073-10	CDOT I270 Env-05/06_2020-SB-02-20-22	Solid	05/29/20 09:15	05/29/20 15:50	
280-137073-11	CDOT I270 Env-05/06_2020-SB-02-GW	Water	05/29/20 10:15	05/29/20 15:50	
280-137073-12	CDOT I270 Env-05/06_2020-SB-21-2-3	Solid	05/29/20 11:40	05/29/20 15:50	
280-137073-13	CDOT I270 Env-05/06_2020-SB-21-GW	Water	05/29/20 12:15	05/29/20 15:50	
280-137073-14	CDOT I270 Env-05/06_2020-SB-TB02	Water	05/28/20 08:00	05/29/20 15:50	
280-137073-15	CDOT I270 Env-05/06_2020-SB-25-14-15	Solid	05/29/20 14:50	05/29/20 15:50	
280-137073-16	CDOT I270 Env-05/06_2020-SB-TB02	Solid	05/28/20 08:00	05/29/20 15:50	

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-06-15-17

Date Collected: 05/28/20 09:30

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-1

Matrix: Solid

Percent Solids: 90.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.2	1.7	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
1,1,2,2-Tetrachloroethane	ND		4.2	0.24	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
1,1,2-Trichloroethane	ND		4.2	0.74	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
1,1,2-Trichlorotrifluoroethane	ND		17	1.4	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
1,1-Dichloroethane	ND		4.2	0.18	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
1,1-Dichloroethene	ND		4.2	0.50	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
1,2,3-Trichlorobenzene	ND		4.2	0.68	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
1,2,4-Trichlorobenzene	ND		4.2	0.61	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
1,2-Dibromo-3-Chloropropane	ND		8.4	3.1	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
1,2-Dibromoethane	ND		4.2	0.44	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
1,2-Dichlorobenzene	ND		4.2	1.6	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
1,2-Dichloroethane	ND		4.2	0.59	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
1,2-Dichloropropane	ND		4.2	0.46	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
1,3-Dichlorobenzene	ND		4.2	0.40	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
1,4-Dichlorobenzene	ND		4.2	0.21	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
1,4-Dioxane	ND		420	47	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
2-Butanone (MEK)	ND		17	3.3	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
2-Hexanone	ND		17	4.1	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
4-Methyl-2-pentanone (MIBK)	ND		17	3.7	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
Benzene	ND		4.2	0.13	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
Bromoform	ND		4.3	2.1	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
Bromomethane	ND		8.4	1.1	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
Carbon disulfide	ND		4.2	1.4	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
Carbon tetrachloride	ND		4.2	1.7	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
Chlorobenzene	ND		4.2	1.7	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
Chlorobromomethane	ND		4.2	2.1	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
Chlorodibromomethane	ND		4.2	1.9	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
Chloroethane	ND		8.4	1.7	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
Chloroform	ND		8.4	0.24	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
Chloromethane	ND		8.4	0.65	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
cis-1,2-Dichloroethene	ND		2.1	0.17	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
cis-1,3-Dichloropropene	ND		4.2	0.084	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
Cyclohexane	ND		4.2	1.5	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
Dichlorobromomethane	ND		4.2	1.8	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
Dichlorodifluoromethane	ND		8.4	2.3	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
Ethylbenzene	ND		4.2	0.26	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
Isopropylbenzene	ND		4.2	2.0	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
Methyl acetate	ND		8.4	2.3	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
Methyl tert-butyl ether	ND		17	1.8	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
Methylcyclohexane	2.1	J	4.2	0.35	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
Methylene Chloride	ND		4.2	1.3	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
m-Xylene & p-Xylene	ND		2.1	0.87	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
o-Xylene	ND		2.1	0.22	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
Styrene	ND		4.2	0.24	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
Tetrachloroethene	ND		4.2	1.6	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
Toluene	ND		4.2	0.19	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
trans-1,2-Dichloroethene	ND		2.1	0.33	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
trans-1,3-Dichloropropene	ND		4.2	0.070	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
Trichloroethene	ND		4.2	1.6	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-06-15-17

Date Collected: 05/28/20 09:30

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-1

Matrix: Solid

Percent Solids: 90.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		8.4	2.7	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
Vinyl chloride	ND		4.2	1.1	ug/Kg	☼	05/28/20 09:30	06/05/20 14:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		58 - 140				05/28/20 09:30	06/05/20 14:22	1
4-Bromofluorobenzene (Surr)	97		76 - 127				05/28/20 09:30	06/05/20 14:22	1
Dibromofluoromethane (Surr)	102		75 - 121				05/28/20 09:30	06/05/20 14:22	1
Toluene-d8 (Surr)	97		80 - 126				05/28/20 09:30	06/05/20 14:22	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-08-8-10

Date Collected: 05/28/20 10:55

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-2

Matrix: Solid

Percent Solids: 96.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.7	1.9	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
1,1,2,2-Tetrachloroethane	ND		4.7	0.27	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
1,1,2-Trichloroethane	ND		4.7	0.83	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
1,1,2-Trichlorotrifluoroethane	ND		19	1.6	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
1,1-Dichloroethane	ND		4.7	0.20	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
1,1-Dichloroethene	ND		4.7	0.55	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
1,2,3-Trichlorobenzene	ND		4.7	0.76	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
1,2,4-Trichlorobenzene	ND		4.7	0.69	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
1,2-Dibromo-3-Chloropropane	ND		9.4	3.4	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
1,2-Dibromoethane	ND		4.7	0.49	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
1,2-Dichlorobenzene	ND		4.7	1.8	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
1,2-Dichloroethane	ND		4.7	0.66	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
1,2-Dichloropropane	ND		4.7	0.52	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
1,3-Dichlorobenzene	ND		4.7	0.45	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
1,4-Dichlorobenzene	ND		4.7	0.23	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
1,4-Dioxane	ND		470	53	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
2-Butanone (MEK)	ND		19	3.7	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
2-Hexanone	ND		19	4.6	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
4-Methyl-2-pentanone (MIBK)	ND		19	4.1	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
Acetone	ND		68	33	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
Benzene	ND		4.7	0.14	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
Bromoform	ND		4.8	2.4	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
Bromomethane	ND		9.4	1.3	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
Carbon disulfide	ND		4.7	1.6	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
Carbon tetrachloride	ND		4.7	1.9	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
Chlorobenzene	ND		4.7	1.9	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
Chlorobromomethane	ND		4.7	2.3	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
Chlorodibromomethane	ND		4.7	2.1	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
Chloroethane	ND		9.4	1.9	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
Chloroform	ND		9.4	0.27	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
Chloromethane	ND		9.4	0.72	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
cis-1,2-Dichloroethene	ND		2.3	0.19	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
cis-1,3-Dichloropropene	ND		4.7	0.094	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
Cyclohexane	ND		4.7	1.7	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
Dichlorobromomethane	ND		4.7	2.0	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
Dichlorodifluoromethane	ND		9.4	2.6	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
Ethylbenzene	ND		4.7	0.29	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-08-8-10

Date Collected: 05/28/20 10:55

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-2

Matrix: Solid

Percent Solids: 96.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		4.7	2.3	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
Methyl acetate	ND		9.4	2.6	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
Methyl tert-butyl ether	ND		19	2.0	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
Methylcyclohexane	ND		4.7	0.39	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
Methylene Chloride	ND		4.7	1.5	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
m-Xylene & p-Xylene	ND		2.3	0.98	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
o-Xylene	ND		2.3	0.25	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
Styrene	ND		4.7	0.26	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
Tetrachloroethene	ND		4.7	1.8	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
Toluene	ND		4.7	0.21	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
trans-1,2-Dichloroethene	ND		2.3	0.37	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
trans-1,3-Dichloropropene	ND		4.7	0.078	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
Trichloroethene	ND		4.7	1.8	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
Trichlorofluoromethane	ND		9.4	3.0	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
Vinyl chloride	ND		4.7	1.3	ug/Kg	☼	05/28/20 10:55	06/10/20 12:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		58 - 140				05/28/20 10:55	06/10/20 12:45	1
4-Bromofluorobenzene (Surr)	96		76 - 127				05/28/20 10:55	06/10/20 12:45	1
Dibromofluoromethane (Surr)	103		75 - 121				05/28/20 10:55	06/10/20 12:45	1
Toluene-d8 (Surr)	96		80 - 126				05/28/20 10:55	06/10/20 12:45	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-08-22-23

Date Collected: 05/28/20 11:25

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-3

Matrix: Solid

Percent Solids: 95.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.1	2.0	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
1,1,2,2-Tetrachloroethane	ND		5.1	0.29	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
1,1,2-Trichloroethane	ND		5.1	0.90	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
1,1,2-Trichlorotrifluoroethane	ND		20	1.7	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
1,1-Dichloroethane	ND		5.1	0.21	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
1,1-Dichloroethene	ND		5.1	0.60	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
1,2,3-Trichlorobenzene	ND		5.1	0.83	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
1,2,4-Trichlorobenzene	ND		5.1	0.75	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
1,2-Dibromo-3-Chloropropane	ND		10	3.7	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
1,2-Dibromoethane	ND		5.1	0.53	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
1,2-Dichlorobenzene	ND		5.1	1.9	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
1,2-Dichloroethane	ND		5.1	0.72	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
1,2-Dichloropropane	ND		5.1	0.56	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
1,3-Dichlorobenzene	ND		5.1	0.49	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
1,4-Dichlorobenzene	ND		5.1	0.25	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
1,4-Dioxane	ND		510	57	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
2-Butanone (MEK)	ND		20	4.0	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
2-Hexanone	ND		20	5.0	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.5	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
Acetone	45	J	74	36	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
Benzene	ND		5.1	0.15	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
Bromoform	ND		5.2	2.6	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
Bromomethane	ND		10	1.4	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
Carbon disulfide	ND		5.1	1.7	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-08-22-23

Date Collected: 05/28/20 11:25

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-3

Matrix: Solid

Percent Solids: 95.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		5.1	2.1	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
Chlorobenzene	ND		5.1	2.1	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
Chlorobromomethane	ND		5.1	2.5	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
Chlorodibromomethane	ND		5.1	2.3	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
Chloroethane	ND		10	2.0	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
Chloroform	ND		10	0.30	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
Chloromethane	ND		10	0.79	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
cis-1,2-Dichloroethene	ND		2.6	0.21	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
cis-1,3-Dichloropropene	ND		5.1	0.10	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
Cyclohexane	ND		5.1	1.8	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
Dichlorobromomethane	ND		5.1	2.2	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
Dichlorodifluoromethane	ND		10	2.8	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
Ethylbenzene	ND		5.1	0.31	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
Isopropylbenzene	ND		5.1	2.5	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
Methyl acetate	ND		10	2.8	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
Methyl tert-butyl ether	ND		20	2.2	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
Methylcyclohexane	ND		5.1	0.43	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
Methylene Chloride	ND		5.1	1.6	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
m-Xylene & p-Xylene	ND		2.6	1.1	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
o-Xylene	ND		2.6	0.27	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
Styrene	ND		5.1	0.29	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
Tetrachloroethene	ND		5.1	2.0	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
Toluene	ND		5.1	0.23	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
trans-1,2-Dichloroethene	ND		2.6	0.40	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
trans-1,3-Dichloropropene	ND		5.1	0.085	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
Trichloroethene	ND		5.1	2.0	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
Trichlorofluoromethane	ND		10	3.3	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1
Vinyl chloride	ND		5.1	1.4	ug/Kg	☼	05/28/20 11:25	06/05/20 15:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		58 - 140	05/28/20 11:25	06/05/20 15:08	1
4-Bromofluorobenzene (Surr)	97		76 - 127	05/28/20 11:25	06/05/20 15:08	1
Dibromofluoromethane (Surr)	104		75 - 121	05/28/20 11:25	06/05/20 15:08	1
Toluene-d8 (Surr)	97		80 - 126	05/28/20 11:25	06/05/20 15:08	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-3-5

Date Collected: 05/28/20 12:45

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-4

Matrix: Solid

Percent Solids: 89.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.2	1.7	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
1,1,2,2-Tetrachloroethane	ND		4.2	0.24	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
1,1,2-Trichloroethane	ND		4.2	0.74	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
1,1,2-Trichlorotrifluoroethane	ND		17	1.4	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
1,1-Dichloroethane	ND		4.2	0.18	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
1,1-Dichloroethene	ND		4.2	0.49	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
1,2,3-Trichlorobenzene	ND		4.2	0.68	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
1,2,4-Trichlorobenzene	ND		4.2	0.61	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
1,2-Dibromo-3-Chloropropane	ND		8.4	3.1	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
1,2-Dibromoethane	ND		4.2	0.43	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
1,2-Dichlorobenzene	ND		4.2	1.6	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-3-5

Date Collected: 05/28/20 12:45

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-4

Matrix: Solid

Percent Solids: 89.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		4.2	0.59	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
1,2-Dichloropropane	ND		4.2	0.46	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
1,3-Dichlorobenzene	ND		4.2	0.40	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
1,4-Dichlorobenzene	ND		4.2	0.20	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
1,4-Dioxane	ND		420	47	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
2-Butanone (MEK)	ND		17	3.3	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
2-Hexanone	ND		17	4.1	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
4-Methyl-2-pentanone (MIBK)	ND		17	3.6	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
Acetone	ND		60	30	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
Benzene	ND		4.2	0.13	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
Bromoform	ND		4.3	2.1	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
Bromomethane	ND		8.4	1.1	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
Carbon disulfide	ND		4.2	1.4	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
Carbon tetrachloride	ND		4.2	1.7	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
Chlorobenzene	ND		4.2	1.7	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
Chlorobromomethane	ND		4.2	2.1	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
Chlorodibromomethane	ND		4.2	1.9	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
Chloroethane	ND		8.4	1.7	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
Chloroform	ND		8.4	0.24	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
Chloromethane	ND		8.4	0.64	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
cis-1,2-Dichloroethene	ND		2.1	0.17	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
cis-1,3-Dichloropropene	ND		4.2	0.084	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
Cyclohexane	ND		4.2	1.5	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
Dichlorobromomethane	ND		4.2	1.8	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
Dichlorodifluoromethane	ND		8.4	2.3	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
Ethylbenzene	ND		4.2	0.25	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
Isopropylbenzene	ND		4.2	2.0	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
Methyl acetate	ND		8.4	2.3	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
Methyl tert-butyl ether	ND		17	1.8	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
Methylcyclohexane	ND		4.2	0.35	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
Methylene Chloride	ND		4.2	1.3	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
m-Xylene & p-Xylene	ND		2.1	0.87	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
o-Xylene	ND		2.1	0.22	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
Styrene	ND		4.2	0.23	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
Tetrachloroethene	ND		4.2	1.6	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
Toluene	ND		4.2	0.19	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
trans-1,2-Dichloroethene	ND		2.1	0.33	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
trans-1,3-Dichloropropene	ND		4.2	0.069	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
Trichloroethene	ND		4.2	1.6	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
Trichlorofluoromethane	ND		8.4	2.7	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1
Vinyl chloride	ND		4.2	1.1	ug/Kg	☼	05/28/20 12:45	06/05/20 15:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		58 - 140	05/28/20 12:45	06/05/20 15:30	1
Toluene-d8 (Surr)	100		80 - 126	05/28/20 12:45	06/05/20 15:30	1
4-Bromofluorobenzene (Surr)	103		76 - 127	05/28/20 12:45	06/05/20 15:30	1
Dibromofluoromethane (Surr)	103		75 - 121	05/28/20 12:45	06/05/20 15:30	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-8-10

Date Collected: 05/28/20 13:05

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-5

Matrix: Solid

Percent Solids: 91.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.6	1.8	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
1,1,2,2-Tetrachloroethane	ND		4.6	0.26	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
1,1,2-Trichloroethane	ND		4.6	0.82	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
1,1,2-Trichlorotrifluoroethane	ND		19	1.5	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
1,1-Dichloroethane	ND		4.6	0.19	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
1,1-Dichloroethene	ND		4.6	0.55	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
1,2,3-Trichlorobenzene	ND		4.6	0.75	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
1,2,4-Trichlorobenzene	ND		4.6	0.68	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
1,2-Dibromo-3-Chloropropane	ND		9.3	3.4	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
1,2-Dibromoethane	ND		4.6	0.48	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
1,2-Dichlorobenzene	ND		4.6	1.7	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
1,2-Dichloroethane	ND		4.6	0.65	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
1,2-Dichloropropane	ND		4.6	0.51	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
1,3-Dichlorobenzene	ND		4.6	0.45	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
1,4-Dichlorobenzene	ND		4.6	0.23	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
1,4-Dioxane	ND		460	52	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
2-Butanone (MEK)	ND		19	3.6	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
2-Hexanone	ND		19	4.5	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
4-Methyl-2-pentanone (MIBK)	ND		19	4.0	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
Acetone	ND		67	33	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
Benzene	ND		4.6	0.14	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
Bromoform	ND		4.7	2.4	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
Bromomethane	ND		9.3	1.3	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
Carbon disulfide	ND		4.6	1.5	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
Carbon tetrachloride	ND		4.6	1.9	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
Chlorobenzene	ND		4.6	1.9	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
Chlorobromomethane	ND		4.6	2.3	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
Chlorodibromomethane	ND		4.6	2.1	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
Chloroethane	ND		9.3	1.8	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
Chloroform	ND		9.3	0.27	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
Chloromethane	ND		9.3	0.71	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
cis-1,2-Dichloroethene	ND		2.3	0.19	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
cis-1,3-Dichloropropene	ND		4.6	0.093	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
Cyclohexane	ND		4.6	1.6	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
Dichlorobromomethane	ND		4.6	2.0	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
Dichlorodifluoromethane	ND		9.3	2.5	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
Ethylbenzene	ND		4.6	0.28	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
Isopropylbenzene	ND		4.6	2.2	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
Methyl acetate	ND		9.3	2.6	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
Methyl tert-butyl ether	ND		19	2.0	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
Methylcyclohexane	ND		4.6	0.39	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
Methylene Chloride	ND		4.6	1.5	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
m-Xylene & p-Xylene	ND		2.3	0.97	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
o-Xylene	ND		2.3	0.25	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
Styrene	ND		4.6	0.26	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
Tetrachloroethene	ND		4.6	1.8	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
Toluene	ND		4.6	0.21	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
trans-1,2-Dichloroethene	ND		2.3	0.36	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
trans-1,3-Dichloropropene	ND		4.6	0.077	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-8-10

Date Collected: 05/28/20 13:05

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-5

Matrix: Solid

Percent Solids: 91.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		4.6	1.8	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
Trichlorofluoromethane	ND		9.3	3.0	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
Vinyl chloride	ND		4.6	1.2	ug/Kg	☼	05/28/20 13:05	06/05/20 15:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		58 - 140				05/28/20 13:05	06/05/20 15:53	1
Toluene-d8 (Surr)	97		80 - 126				05/28/20 13:05	06/05/20 15:53	1
4-Bromofluorobenzene (Surr)	96		76 - 127				05/28/20 13:05	06/05/20 15:53	1
Dibromofluoromethane (Surr)	103		75 - 121				05/28/20 13:05	06/05/20 15:53	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-GW

Date Collected: 05/28/20 13:40

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			06/09/20 18:47	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			06/09/20 18:47	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			06/09/20 18:47	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			06/09/20 18:47	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/09/20 18:47	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			06/09/20 18:47	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			06/09/20 18:47	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			06/09/20 18:47	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			06/09/20 18:47	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			06/09/20 18:47	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			06/09/20 18:47	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			06/09/20 18:47	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/09/20 18:47	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			06/09/20 18:47	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			06/09/20 18:47	1
1,4-Dioxane	ND		200	19	ug/L			06/09/20 18:47	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			06/09/20 18:47	1
2-Hexanone	ND		5.0	1.7	ug/L			06/09/20 18:47	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			06/09/20 18:47	1
Acetone	3.4	J	10	1.9	ug/L			06/09/20 18:47	1
Benzene	ND		1.0	0.16	ug/L			06/09/20 18:47	1
Bromoform	ND		1.0	0.46	ug/L			06/09/20 18:47	1
Bromomethane	ND		2.0	0.21	ug/L			06/09/20 18:47	1
Carbon disulfide	ND		2.0	0.17	ug/L			06/09/20 18:47	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			06/09/20 18:47	1
Chlorobenzene	ND		1.0	0.17	ug/L			06/09/20 18:47	1
Chlorobromomethane	ND		1.0	0.10	ug/L			06/09/20 18:47	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			06/09/20 18:47	1
Chloroethane	ND		2.0	0.41	ug/L			06/09/20 18:47	1
Chloroform	ND		1.0	0.16	ug/L			06/09/20 18:47	1
Chloromethane	ND		2.0	0.30	ug/L			06/09/20 18:47	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/09/20 18:47	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			06/09/20 18:47	1
Cyclohexane	ND		2.0	0.28	ug/L			06/09/20 18:47	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			06/09/20 18:47	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			06/09/20 18:47	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-GW

Date Collected: 05/28/20 13:40

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		1.0	0.16	ug/L			06/09/20 18:47	1
Isopropylbenzene	ND		1.0	0.19	ug/L			06/09/20 18:47	1
Methyl acetate	ND		5.0	1.6	ug/L			06/09/20 18:47	1
Methyl tert-butyl ether	0.34	J	5.0	0.25	ug/L			06/09/20 18:47	1
Methylcyclohexane	ND		1.0	0.10	ug/L			06/09/20 18:47	1
Methylene Chloride	ND		2.0	0.94	ug/L			06/09/20 18:47	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			06/09/20 18:47	1
o-Xylene	ND		1.0	0.19	ug/L			06/09/20 18:47	1
Styrene	ND		1.0	0.36	ug/L			06/09/20 18:47	1
Tetrachloroethene	ND		1.0	0.20	ug/L			06/09/20 18:47	1
Toluene	ND		1.0	0.17	ug/L			06/09/20 18:47	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/09/20 18:47	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			06/09/20 18:47	1
Trichloroethene	ND		1.0	0.16	ug/L			06/09/20 18:47	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			06/09/20 18:47	1
Vinyl chloride	ND		1.0	0.10	ug/L			06/09/20 18:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		70 - 127		06/09/20 18:47	1
Toluene-d8 (Surr)	104		80 - 125		06/09/20 18:47	1
4-Bromofluorobenzene (Surr)	106		78 - 120		06/09/20 18:47	1
Dibromofluoromethane (Surr)	98		77 - 120		06/09/20 18:47	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-22-5-7

Date Collected: 05/28/20 15:00

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-7

Matrix: Solid

Percent Solids: 79.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.1	2.0	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
1,1,2,2-Tetrachloroethane	ND		5.1	0.29	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
1,1,2-Trichloroethane	ND		5.1	0.90	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
1,1,2-Trichlorotrifluoroethane	ND		20	1.7	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
1,1-Dichloroethane	ND		5.1	0.21	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
1,1-Dichloroethene	ND		5.1	0.60	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
1,2,3-Trichlorobenzene	ND		5.1	0.82	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
1,2,4-Trichlorobenzene	ND		5.1	0.74	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
1,2-Dibromo-3-Chloropropane	ND		10	3.7	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
1,2-Dibromoethane	ND		5.1	0.53	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
1,2-Dichlorobenzene	ND		5.1	1.9	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
1,2-Dichloroethane	ND		5.1	0.71	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
1,2-Dichloropropane	ND		5.1	0.56	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
1,3-Dichlorobenzene	ND		5.1	0.49	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
1,4-Dichlorobenzene	ND		5.1	0.25	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
1,4-Dioxane	ND		510	57	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
2-Butanone (MEK)	ND		20	4.0	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
2-Hexanone	ND		20	5.0	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.4	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
Acetone	ND		73	36	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
Benzene	ND		5.1	0.15	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
Bromoform	ND		5.2	2.6	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
Bromomethane	ND		10	1.4	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-22-5-7

Date Collected: 05/28/20 15:00

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-7

Matrix: Solid

Percent Solids: 79.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		5.1	1.7	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
Carbon tetrachloride	ND		5.1	2.0	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
Chlorobenzene	ND		5.1	2.1	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
Chlorobromomethane	ND		5.1	2.5	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
Chlorodibromomethane	ND		5.1	2.3	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
Chloroethane	ND		10	2.0	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
Chloroform	ND		10	0.30	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
Chloromethane	ND		10	0.78	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
cis-1,2-Dichloroethene	ND		2.5	0.20	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
cis-1,3-Dichloropropene	ND		5.1	0.10	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
Cyclohexane	ND		5.1	1.8	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
Dichlorobromomethane	ND		5.1	2.2	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
Dichlorodifluoromethane	ND		10	2.8	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
Ethylbenzene	ND		5.1	0.31	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
Isopropylbenzene	ND		5.1	2.5	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
Methyl acetate	ND		10	2.8	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
Methyl tert-butyl ether	ND		20	2.1	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
Methylcyclohexane	ND		5.1	0.43	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
Methylene Chloride	ND		5.1	1.6	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
m-Xylene & p-Xylene	ND		2.5	1.1	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
o-Xylene	ND		2.5	0.27	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
Styrene	ND		5.1	0.28	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
Tetrachloroethene	ND		5.1	1.9	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
Toluene	ND		5.1	0.23	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
trans-1,2-Dichloroethene	ND		2.5	0.40	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
trans-1,3-Dichloropropene	ND		5.1	0.084	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
Trichloroethene	ND		5.1	1.9	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
Trichlorofluoromethane	ND		10	3.3	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
Vinyl chloride	ND		5.1	1.4	ug/Kg	☼	05/28/20 15:00	06/05/20 16:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		58 - 140				05/28/20 15:00	06/05/20 16:16	1
4-Bromofluorobenzene (Surr)	97		76 - 127				05/28/20 15:00	06/05/20 16:16	1
Dibromofluoromethane (Surr)	103		75 - 121				05/28/20 15:00	06/05/20 16:16	1
Toluene-d8 (Surr)	96		80 - 126				05/28/20 15:00	06/05/20 16:16	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-22-GW

Date Collected: 05/28/20 15:10

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			06/09/20 19:08	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			06/09/20 19:08	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			06/09/20 19:08	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			06/09/20 19:08	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/09/20 19:08	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			06/09/20 19:08	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			06/09/20 19:08	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			06/09/20 19:08	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			06/09/20 19:08	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			06/09/20 19:08	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-22-GW

Lab Sample ID: 280-137073-8

Date Collected: 05/28/20 15:10

Matrix: Water

Date Received: 05/29/20 15:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			06/09/20 19:08	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			06/09/20 19:08	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/09/20 19:08	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			06/09/20 19:08	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			06/09/20 19:08	1
1,4-Dioxane	ND		200	19	ug/L			06/09/20 19:08	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			06/09/20 19:08	1
2-Hexanone	ND		5.0	1.7	ug/L			06/09/20 19:08	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			06/09/20 19:08	1
Acetone	ND		10	1.9	ug/L			06/09/20 19:08	1
Benzene	ND		1.0	0.16	ug/L			06/09/20 19:08	1
Bromoform	ND		1.0	0.46	ug/L			06/09/20 19:08	1
Bromomethane	ND		2.0	0.21	ug/L			06/09/20 19:08	1
Carbon disulfide	ND		2.0	0.17	ug/L			06/09/20 19:08	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			06/09/20 19:08	1
Chlorobenzene	ND		1.0	0.17	ug/L			06/09/20 19:08	1
Chlorobromomethane	ND		1.0	0.10	ug/L			06/09/20 19:08	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			06/09/20 19:08	1
Chloroethane	ND		2.0	0.41	ug/L			06/09/20 19:08	1
Chloroform	ND		1.0	0.16	ug/L			06/09/20 19:08	1
Chloromethane	ND		2.0	0.30	ug/L			06/09/20 19:08	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/09/20 19:08	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			06/09/20 19:08	1
Cyclohexane	ND		2.0	0.28	ug/L			06/09/20 19:08	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			06/09/20 19:08	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			06/09/20 19:08	1
Ethylbenzene	ND		1.0	0.16	ug/L			06/09/20 19:08	1
Isopropylbenzene	ND		1.0	0.19	ug/L			06/09/20 19:08	1
Methyl acetate	ND		5.0	1.6	ug/L			06/09/20 19:08	1
Methyl tert-butyl ether	0.32	J	5.0	0.25	ug/L			06/09/20 19:08	1
Methylcyclohexane	ND		1.0	0.10	ug/L			06/09/20 19:08	1
Methylene Chloride	ND		2.0	0.94	ug/L			06/09/20 19:08	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			06/09/20 19:08	1
o-Xylene	ND		1.0	0.19	ug/L			06/09/20 19:08	1
Styrene	ND		1.0	0.36	ug/L			06/09/20 19:08	1
Tetrachloroethene	ND		1.0	0.20	ug/L			06/09/20 19:08	1
Toluene	ND		1.0	0.17	ug/L			06/09/20 19:08	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/09/20 19:08	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			06/09/20 19:08	1
Trichloroethene	ND		1.0	0.16	ug/L			06/09/20 19:08	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			06/09/20 19:08	1
Vinyl chloride	ND		1.0	0.10	ug/L			06/09/20 19:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		70 - 127					06/09/20 19:08	1
Toluene-d8 (Surr)	105		80 - 125					06/09/20 19:08	1
4-Bromofluorobenzene (Surr)	107		78 - 120					06/09/20 19:08	1
Dibromofluoromethane (Surr)	96		77 - 120					06/09/20 19:08	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12

Date Collected: 05/29/20 08:50

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-9

Matrix: Solid

Percent Solids: 89.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.6	1.8	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
1,1,2,2-Tetrachloroethane	ND		4.6	0.26	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
1,1,2-Trichloroethane	ND		4.6	0.81	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
1,1,2-Trichlorotrifluoroethane	ND		18	1.5	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
1,1-Dichloroethane	ND		4.6	0.19	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
1,1-Dichloroethene	ND		4.6	0.54	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
1,2,3-Trichlorobenzene	ND	F1	4.6	0.75	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
1,2,4-Trichlorobenzene	ND	F1	4.6	0.67	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
1,2-Dibromo-3-Chloropropane	ND		9.2	3.4	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
1,2-Dibromoethane	ND		4.6	0.48	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
1,2-Dichlorobenzene	ND	F1	4.6	1.7	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
1,2-Dichloroethane	ND		4.6	0.64	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
1,2-Dichloropropane	ND		4.6	0.51	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
1,3-Dichlorobenzene	ND		4.6	0.44	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
1,4-Dichlorobenzene	ND	F1	4.6	0.23	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
1,4-Dioxane	ND		460	52	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
2-Butanone (MEK)	ND		18	3.6	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
2-Hexanone	ND		18	4.5	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
4-Methyl-2-pentanone (MIBK)	ND		18	4.0	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
Acetone	ND		66	33	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
Benzene	ND		4.6	0.14	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
Bromoform	ND	F1	4.7	2.3	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
Bromomethane	ND		9.2	1.2	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
Carbon disulfide	ND		4.6	1.5	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
Carbon tetrachloride	ND		4.6	1.8	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
Chlorobenzene	ND		4.6	1.9	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
Chlorobromomethane	ND		4.6	2.3	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
Chlorodibromomethane	ND		4.6	2.1	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
Chloroethane	ND		9.2	1.8	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
Chloroform	ND		9.2	0.27	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
Chloromethane	ND		9.2	0.71	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
cis-1,2-Dichloroethene	ND		2.3	0.18	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
cis-1,3-Dichloropropene	ND		4.6	0.092	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
Cyclohexane	ND		4.6	1.6	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
Dichlorobromomethane	ND		4.6	2.0	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
Dichlorodifluoromethane	ND		9.2	2.5	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
Ethylbenzene	ND		4.6	0.28	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
Isopropylbenzene	ND		4.6	2.2	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
Methyl acetate	ND		9.2	2.5	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
Methyl tert-butyl ether	ND		18	1.9	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
Methylcyclohexane	ND		4.6	0.39	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
Methylene Chloride	ND		4.6	1.5	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
m-Xylene & p-Xylene	ND		2.3	0.96	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
o-Xylene	ND		2.3	0.24	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
Styrene	ND		4.6	0.26	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
Tetrachloroethene	ND		4.6	1.8	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
Toluene	ND		4.6	0.21	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
trans-1,2-Dichloroethene	ND		2.3	0.36	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
trans-1,3-Dichloropropene	ND		4.6	0.076	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12

Date Collected: 05/29/20 08:50

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-9

Matrix: Solid

Percent Solids: 89.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		4.6	1.8	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
Trichlorofluoromethane	ND		9.2	2.9	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
Vinyl chloride	ND		4.6	1.2	ug/Kg	☼	05/29/20 08:50	06/05/20 09:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		58 - 140				05/29/20 08:50	06/05/20 09:27	1
4-Bromofluorobenzene (Surr)	99		76 - 127				05/29/20 08:50	06/05/20 09:27	1
Dibromofluoromethane (Surr)	103		75 - 121				05/29/20 08:50	06/05/20 09:27	1
Toluene-d8 (Surr)	98		80 - 126				05/29/20 08:50	06/05/20 09:27	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-20-22

Date Collected: 05/29/20 09:15

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-10

Matrix: Solid

Percent Solids: 90.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.2	1.7	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
1,1,2,2-Tetrachloroethane	ND		4.2	0.24	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
1,1,2-Trichloroethane	ND		4.2	0.74	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
1,1,2-Trichlorotrifluoroethane	ND		17	1.4	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
1,1-Dichloroethane	ND		4.2	0.18	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
1,1-Dichloroethene	ND		4.2	0.49	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
1,2,3-Trichlorobenzene	ND		4.2	0.68	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
1,2,4-Trichlorobenzene	ND		4.2	0.61	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
1,2-Dibromo-3-Chloropropane	ND		8.4	3.1	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
1,2-Dibromoethane	ND		4.2	0.44	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
1,2-Dichlorobenzene	ND		4.2	1.6	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
1,2-Dichloroethane	ND		4.2	0.59	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
1,2-Dichloropropane	ND		4.2	0.46	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
1,3-Dichlorobenzene	ND		4.2	0.40	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
1,4-Dichlorobenzene	ND		4.2	0.21	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
1,4-Dioxane	ND		420	47	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
2-Butanone (MEK)	ND		17	3.3	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
2-Hexanone	ND		17	4.1	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
4-Methyl-2-pentanone (MIBK)	ND		17	3.7	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
Acetone	ND		60	30	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
Benzene	ND		4.2	0.13	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
Bromoform	ND		4.3	2.1	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
Bromomethane	ND		8.4	1.1	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
Carbon disulfide	ND		4.2	1.4	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
Carbon tetrachloride	ND		4.2	1.7	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
Chlorobenzene	ND		4.2	1.7	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
Chlorobromomethane	ND		4.2	2.1	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
Chlorodibromomethane	ND		4.2	1.9	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
Chloroethane	ND		8.4	1.7	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
Chloroform	ND		8.4	0.24	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
Chloromethane	ND		8.4	0.65	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
cis-1,2-Dichloroethene	ND		2.1	0.17	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
cis-1,3-Dichloropropene	ND		4.2	0.084	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
Cyclohexane	ND		4.2	1.5	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
Dichlorobromomethane	ND		4.2	1.8	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
Dichlorodifluoromethane	ND		8.4	2.3	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-20-22

Date Collected: 05/29/20 09:15

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-10

Matrix: Solid

Percent Solids: 90.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		4.2	0.26	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
Isopropylbenzene	ND		4.2	2.0	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
Methyl acetate	ND		8.4	2.3	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
Methyl tert-butyl ether	ND		17	1.8	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
Methylcyclohexane	ND		4.2	0.35	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
Methylene Chloride	ND		4.2	1.3	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
m-Xylene & p-Xylene	ND		2.1	0.87	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
o-Xylene	ND		2.1	0.22	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
Styrene	ND		4.2	0.23	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
Tetrachloroethene	ND		4.2	1.6	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
Toluene	ND		4.2	0.19	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
trans-1,2-Dichloroethene	ND		2.1	0.33	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
trans-1,3-Dichloropropene	ND		4.2	0.070	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
Trichloroethene	ND		4.2	1.6	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
Trichlorofluoromethane	ND		8.4	2.7	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1
Vinyl chloride	ND		4.2	1.1	ug/Kg	☼	05/29/20 09:15	06/05/20 16:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		58 - 140	05/29/20 09:15	06/05/20 16:38	1
4-Bromofluorobenzene (Surr)	96		76 - 127	05/29/20 09:15	06/05/20 16:38	1
Dibromofluoromethane (Surr)	104		75 - 121	05/29/20 09:15	06/05/20 16:38	1
Toluene-d8 (Surr)	97		80 - 126	05/29/20 09:15	06/05/20 16:38	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-GW

Date Collected: 05/29/20 10:15

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-11

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		100	16	ug/L			06/09/20 21:59	100
1,1,1,2-Tetrachloroethane	ND		100	21	ug/L			06/09/20 21:59	100
1,1,2-Trichloroethane	ND		100	27	ug/L			06/09/20 21:59	100
1,1,2-Trichlorotrifluoroethane	ND		300	18	ug/L			06/09/20 21:59	100
1,1-Dichloroethane	ND		100	22	ug/L			06/09/20 21:59	100
1,1-Dichloroethene	ND		100	23	ug/L			06/09/20 21:59	100
1,2,3-Trichlorobenzene	ND		100	21	ug/L			06/09/20 21:59	100
1,2,4-Trichlorobenzene	ND		100	21	ug/L			06/09/20 21:59	100
1,2-Dibromo-3-Chloropropane	ND		500	47	ug/L			06/09/20 21:59	100
1,2-Dibromoethane	ND		100	18	ug/L			06/09/20 21:59	100
1,2-Dichlorobenzene	ND		100	15	ug/L			06/09/20 21:59	100
1,2-Dichloroethane	ND		100	13	ug/L			06/09/20 21:59	100
1,2-Dichloropropane	ND		100	18	ug/L			06/09/20 21:59	100
1,3-Dichlorobenzene	ND		100	13	ug/L			06/09/20 21:59	100
1,4-Dichlorobenzene	ND		100	16	ug/L			06/09/20 21:59	100
1,4-Dioxane	ND		20000	1900	ug/L			06/09/20 21:59	100
2-Butanone (MEK)	ND		600	200	ug/L			06/09/20 21:59	100
2-Hexanone	ND		500	170	ug/L			06/09/20 21:59	100
4-Methyl-2-pentanone (MIBK)	ND		500	98	ug/L			06/09/20 21:59	100
Acetone	200	J	1000	190	ug/L			06/09/20 21:59	100
Benzene	ND		100	16	ug/L			06/09/20 21:59	100
Bromoform	ND		100	46	ug/L			06/09/20 21:59	100
Bromomethane	ND		200	21	ug/L			06/09/20 21:59	100

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-GW

Date Collected: 05/29/20 10:15

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-11

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		200	17	ug/L			06/09/20 21:59	100
Carbon tetrachloride	ND		100	19	ug/L			06/09/20 21:59	100
Chlorobenzene	ND		100	17	ug/L			06/09/20 21:59	100
Chlorobromomethane	ND		100	10	ug/L			06/09/20 21:59	100
Chlorodibromomethane	ND		100	17	ug/L			06/09/20 21:59	100
Chloroethane	ND		200	41	ug/L			06/09/20 21:59	100
Chloroform	45	J	100	16	ug/L			06/09/20 21:59	100
Chloromethane	ND		200	30	ug/L			06/09/20 21:59	100
cis-1,2-Dichloroethene	ND		100	15	ug/L			06/09/20 21:59	100
cis-1,3-Dichloropropene	ND		100	16	ug/L			06/09/20 21:59	100
Cyclohexane	ND		200	28	ug/L			06/09/20 21:59	100
Dichlorobromomethane	ND		100	17	ug/L			06/09/20 21:59	100
Dichlorodifluoromethane	ND		200	31	ug/L			06/09/20 21:59	100
Ethylbenzene	ND		100	16	ug/L			06/09/20 21:59	100
Isopropylbenzene	ND		100	19	ug/L			06/09/20 21:59	100
Methyl acetate	ND		500	160	ug/L			06/09/20 21:59	100
Methyl tert-butyl ether	ND		500	25	ug/L			06/09/20 21:59	100
Methylcyclohexane	ND		100	10	ug/L			06/09/20 21:59	100
Methylene Chloride	ND		200	94	ug/L			06/09/20 21:59	100
m-Xylene & p-Xylene	ND		200	15	ug/L			06/09/20 21:59	100
o-Xylene	ND		100	19	ug/L			06/09/20 21:59	100
Styrene	ND		100	36	ug/L			06/09/20 21:59	100
Tetrachloroethene	ND		100	20	ug/L			06/09/20 21:59	100
Toluene	ND		100	17	ug/L			06/09/20 21:59	100
trans-1,2-Dichloroethene	ND		100	15	ug/L			06/09/20 21:59	100
trans-1,3-Dichloropropene	ND		300	19	ug/L			06/09/20 21:59	100
Trichloroethene	ND		100	16	ug/L			06/09/20 21:59	100
Trichlorofluoromethane	ND		200	29	ug/L			06/09/20 21:59	100
Vinyl chloride	ND		100	10	ug/L			06/09/20 21:59	100
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		70 - 127					06/09/20 21:59	100
Toluene-d8 (Surr)	102		80 - 125					06/09/20 21:59	100
4-Bromofluorobenzene (Surr)	111		78 - 120					06/09/20 21:59	100
Dibromofluoromethane (Surr)	103		77 - 120					06/09/20 21:59	100

Client Sample ID: CDOT I270 Env-05/06_2020-SB-21-2-3

Date Collected: 05/29/20 11:40

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-12

Matrix: Solid

Percent Solids: 89.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.8	1.9	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
1,1,2,2-Tetrachloroethane	ND		4.8	0.27	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
1,1,2-Trichloroethane	ND		4.8	0.84	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
1,1,2-Trichlorotrifluoroethane	ND		19	1.6	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
1,1-Dichloroethane	ND		4.8	0.20	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
1,1-Dichloroethene	ND		4.8	0.56	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
1,2,3-Trichlorobenzene	ND		4.8	0.77	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
1,2,4-Trichlorobenzene	ND		4.8	0.70	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
1,2-Dibromo-3-Chloropropane	ND		9.5	3.5	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
1,2-Dibromoethane	ND		4.8	0.50	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-21-2-3

Date Collected: 05/29/20 11:40

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-12

Matrix: Solid

Percent Solids: 89.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		4.8	1.8	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
1,2-Dichloroethane	ND		4.8	0.67	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
1,2-Dichloropropane	ND		4.8	0.52	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
1,3-Dichlorobenzene	ND		4.8	0.46	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
1,4-Dichlorobenzene	ND		4.8	0.23	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
1,4-Dioxane	ND		480	53	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
2-Butanone (MEK)	ND		19	3.7	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
2-Hexanone	ND		19	4.7	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
4-Methyl-2-pentanone (MIBK)	ND		19	4.2	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
Acetone	ND		69	34	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
Benzene	ND		4.8	0.14	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
Bromoform	ND		4.9	2.4	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
Bromomethane	ND		9.5	1.3	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
Carbon disulfide	ND		4.8	1.6	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
Carbon tetrachloride	ND		4.8	1.9	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
Chlorobenzene	ND		4.8	2.0	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
Chlorobromomethane	ND		4.8	2.3	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
Chlorodibromomethane	ND		4.8	2.2	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
Chloroethane	ND		9.5	1.9	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
Chloroform	ND		9.5	0.28	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
Chloromethane	ND		9.5	0.73	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
cis-1,2-Dichloroethene	ND		2.4	0.19	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
cis-1,3-Dichloropropene	ND		4.8	0.095	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
Cyclohexane	ND		4.8	1.7	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
Dichlorobromomethane	ND		4.8	2.0	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
Dichlorodifluoromethane	ND		9.5	2.6	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
Ethylbenzene	ND		4.8	0.29	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
Isopropylbenzene	ND		4.8	2.3	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
Methyl acetate	ND		9.5	2.6	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
Methyl tert-butyl ether	ND		19	2.0	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
Methylcyclohexane	ND		4.8	0.40	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
Methylene Chloride	ND		4.8	1.5	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
m-Xylene & p-Xylene	ND		2.4	0.99	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
o-Xylene	ND		2.4	0.25	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
Styrene	ND		4.8	0.27	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
Tetrachloroethene	ND		4.8	1.8	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
Toluene	ND		4.8	0.22	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
trans-1,2-Dichloroethene	ND		2.4	0.37	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
trans-1,3-Dichloropropene	ND		4.8	0.079	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
Trichloroethene	ND		4.8	1.8	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
Trichlorofluoromethane	ND		9.5	3.0	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1
Vinyl chloride	ND		4.8	1.3	ug/Kg	☼	05/29/20 11:40	06/05/20 17:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		58 - 140	05/29/20 11:40	06/05/20 17:01	1
4-Bromofluorobenzene (Surr)	99		76 - 127	05/29/20 11:40	06/05/20 17:01	1
Dibromofluoromethane (Surr)	102		75 - 121	05/29/20 11:40	06/05/20 17:01	1
Toluene-d8 (Surr)	97		80 - 126	05/29/20 11:40	06/05/20 17:01	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-21-GW

Lab Sample ID: 280-137073-13

Date Collected: 05/29/20 12:15

Matrix: Water

Date Received: 05/29/20 15:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		100	16	ug/L			06/09/20 22:20	100
1,1,2,2-Tetrachloroethane	ND		100	21	ug/L			06/09/20 22:20	100
1,1,2-Trichloroethane	ND		100	27	ug/L			06/09/20 22:20	100
1,1,2-Trichlorotrifluoroethane	ND		300	18	ug/L			06/09/20 22:20	100
1,1-Dichloroethane	ND		100	22	ug/L			06/09/20 22:20	100
1,1-Dichloroethene	ND		100	23	ug/L			06/09/20 22:20	100
1,2,3-Trichlorobenzene	ND		100	21	ug/L			06/09/20 22:20	100
1,2,4-Trichlorobenzene	ND		100	21	ug/L			06/09/20 22:20	100
1,2-Dibromo-3-Chloropropane	ND		500	47	ug/L			06/09/20 22:20	100
1,2-Dibromoethane	ND		100	18	ug/L			06/09/20 22:20	100
1,2-Dichlorobenzene	ND		100	15	ug/L			06/09/20 22:20	100
1,2-Dichloroethane	ND		100	13	ug/L			06/09/20 22:20	100
1,2-Dichloropropane	ND		100	18	ug/L			06/09/20 22:20	100
1,3-Dichlorobenzene	ND		100	13	ug/L			06/09/20 22:20	100
1,4-Dichlorobenzene	ND		100	16	ug/L			06/09/20 22:20	100
1,4-Dioxane	ND		20000	1900	ug/L			06/09/20 22:20	100
2-Butanone (MEK)	ND		600	200	ug/L			06/09/20 22:20	100
2-Hexanone	ND		500	170	ug/L			06/09/20 22:20	100
4-Methyl-2-pentanone (MIBK)	ND		500	98	ug/L			06/09/20 22:20	100
Acetone	3000		1000	190	ug/L			06/09/20 22:20	100
Benzene	ND		100	16	ug/L			06/09/20 22:20	100
Bromoform	ND		100	46	ug/L			06/09/20 22:20	100
Bromomethane	ND		200	21	ug/L			06/09/20 22:20	100
Carbon disulfide	18 J		200	17	ug/L			06/09/20 22:20	100
Carbon tetrachloride	ND		100	19	ug/L			06/09/20 22:20	100
Chlorobenzene	ND		100	17	ug/L			06/09/20 22:20	100
Chlorobromomethane	ND		100	10	ug/L			06/09/20 22:20	100
Chlorodibromomethane	ND		100	17	ug/L			06/09/20 22:20	100
Chloroethane	ND		200	41	ug/L			06/09/20 22:20	100
Chloroform	48 J		100	16	ug/L			06/09/20 22:20	100
Chloromethane	ND		200	30	ug/L			06/09/20 22:20	100
cis-1,2-Dichloroethene	ND		100	15	ug/L			06/09/20 22:20	100
cis-1,3-Dichloropropene	ND		100	16	ug/L			06/09/20 22:20	100
Cyclohexane	ND		200	28	ug/L			06/09/20 22:20	100
Dichlorobromomethane	ND		100	17	ug/L			06/09/20 22:20	100
Dichlorodifluoromethane	ND		200	31	ug/L			06/09/20 22:20	100
Ethylbenzene	ND		100	16	ug/L			06/09/20 22:20	100
Isopropylbenzene	ND		100	19	ug/L			06/09/20 22:20	100
Methyl acetate	ND		500	160	ug/L			06/09/20 22:20	100
Methyl tert-butyl ether	ND		500	25	ug/L			06/09/20 22:20	100
Methylcyclohexane	ND		100	10	ug/L			06/09/20 22:20	100
Methylene Chloride	ND		200	94	ug/L			06/09/20 22:20	100
m-Xylene & p-Xylene	ND		200	15	ug/L			06/09/20 22:20	100
o-Xylene	ND		100	19	ug/L			06/09/20 22:20	100
Styrene	ND		100	36	ug/L			06/09/20 22:20	100
Tetrachloroethene	ND		100	20	ug/L			06/09/20 22:20	100
Toluene	ND		100	17	ug/L			06/09/20 22:20	100
trans-1,2-Dichloroethene	ND		100	15	ug/L			06/09/20 22:20	100
trans-1,3-Dichloropropene	ND		300	19	ug/L			06/09/20 22:20	100

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-21-GW

Date Collected: 05/29/20 12:15

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-13

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		100	16	ug/L			06/09/20 22:20	100
Trichlorofluoromethane	ND		200	29	ug/L			06/09/20 22:20	100
Vinyl chloride	ND		100	10	ug/L			06/09/20 22:20	100
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		70 - 127					06/09/20 22:20	100
Toluene-d8 (Surr)	103		80 - 125					06/09/20 22:20	100
4-Bromofluorobenzene (Surr)	110		78 - 120					06/09/20 22:20	100
Dibromofluoromethane (Surr)	103		77 - 120					06/09/20 22:20	100

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB02

Date Collected: 05/28/20 08:00

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-14

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			06/09/20 19:29	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			06/09/20 19:29	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			06/09/20 19:29	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			06/09/20 19:29	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/09/20 19:29	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			06/09/20 19:29	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			06/09/20 19:29	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			06/09/20 19:29	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			06/09/20 19:29	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			06/09/20 19:29	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			06/09/20 19:29	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			06/09/20 19:29	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/09/20 19:29	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			06/09/20 19:29	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			06/09/20 19:29	1
1,4-Dioxane	ND		200	19	ug/L			06/09/20 19:29	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			06/09/20 19:29	1
2-Hexanone	ND		5.0	1.7	ug/L			06/09/20 19:29	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			06/09/20 19:29	1
Acetone	ND		10	1.9	ug/L			06/09/20 19:29	1
Benzene	ND		1.0	0.16	ug/L			06/09/20 19:29	1
Bromoform	ND		1.0	0.46	ug/L			06/09/20 19:29	1
Bromomethane	ND		2.0	0.21	ug/L			06/09/20 19:29	1
Carbon disulfide	ND		2.0	0.17	ug/L			06/09/20 19:29	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			06/09/20 19:29	1
Chlorobenzene	ND		1.0	0.17	ug/L			06/09/20 19:29	1
Chlorobromomethane	ND		1.0	0.10	ug/L			06/09/20 19:29	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			06/09/20 19:29	1
Chloroethane	ND		2.0	0.41	ug/L			06/09/20 19:29	1
Chloroform	ND		1.0	0.16	ug/L			06/09/20 19:29	1
Chloromethane	ND		2.0	0.30	ug/L			06/09/20 19:29	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/09/20 19:29	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			06/09/20 19:29	1
Cyclohexane	ND		2.0	0.28	ug/L			06/09/20 19:29	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			06/09/20 19:29	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			06/09/20 19:29	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB02

Date Collected: 05/28/20 08:00

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-14

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		1.0	0.16	ug/L			06/09/20 19:29	1
Isopropylbenzene	ND		1.0	0.19	ug/L			06/09/20 19:29	1
Methyl acetate	ND		5.0	1.6	ug/L			06/09/20 19:29	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			06/09/20 19:29	1
Methylcyclohexane	ND		1.0	0.10	ug/L			06/09/20 19:29	1
Methylene Chloride	ND		2.0	0.94	ug/L			06/09/20 19:29	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			06/09/20 19:29	1
o-Xylene	ND		1.0	0.19	ug/L			06/09/20 19:29	1
Styrene	ND		1.0	0.36	ug/L			06/09/20 19:29	1
Tetrachloroethene	ND		1.0	0.20	ug/L			06/09/20 19:29	1
Toluene	ND		1.0	0.17	ug/L			06/09/20 19:29	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/09/20 19:29	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			06/09/20 19:29	1
Trichloroethene	ND		1.0	0.16	ug/L			06/09/20 19:29	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			06/09/20 19:29	1
Vinyl chloride	ND		1.0	0.10	ug/L			06/09/20 19:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		70 - 127		06/09/20 19:29	1
Toluene-d8 (Surr)	103		80 - 125		06/09/20 19:29	1
4-Bromofluorobenzene (Surr)	106		78 - 120		06/09/20 19:29	1
Dibromofluoromethane (Surr)	99		77 - 120		06/09/20 19:29	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-25-14-15

Date Collected: 05/29/20 14:50

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-15

Matrix: Solid

Percent Solids: 88.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.8	1.9	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
1,1,2,2-Tetrachloroethane	ND		4.8	0.27	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
1,1,2-Trichloroethane	ND		4.8	0.84	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
1,1,2-Trichlorotrifluoroethane	ND		19	1.6	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
1,1-Dichloroethane	ND		4.8	0.20	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
1,1-Dichloroethene	ND		4.8	0.57	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
1,2,3-Trichlorobenzene	ND		4.8	0.78	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
1,2,4-Trichlorobenzene	ND		4.8	0.70	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
1,2-Dibromo-3-Chloropropane	ND		9.6	3.5	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
1,2-Dibromoethane	ND		4.8	0.50	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
1,2-Dichlorobenzene	ND		4.8	1.8	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
1,2-Dichloroethane	ND		4.8	0.67	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
1,2-Dichloropropane	ND		4.8	0.53	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
1,3-Dichlorobenzene	ND		4.8	0.46	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
1,4-Dichlorobenzene	ND		4.8	0.23	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
1,4-Dioxane	ND		480	54	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
2-Butanone (MEK)	ND		19	3.7	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
2-Hexanone	ND		19	4.7	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
4-Methyl-2-pentanone (MIBK)	ND		19	4.2	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
Acetone	59	J	69	34	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
Benzene	ND		4.8	0.14	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
Bromoform	ND		4.9	2.4	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
Bromomethane	ND		9.6	1.3	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-25-14-15

Date Collected: 05/29/20 14:50

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-15

Matrix: Solid

Percent Solids: 88.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		4.8	1.6	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
Carbon tetrachloride	ND		4.8	1.9	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
Chlorobenzene	ND		4.8	2.0	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
Chlorobromomethane	ND		4.8	2.4	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
Chlorodibromomethane	ND		4.8	2.2	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
Chloroethane	ND		9.6	1.9	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
Chloroform	ND		9.6	0.28	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
Chloromethane	ND		9.6	0.74	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
cis-1,2-Dichloroethene	ND		2.4	0.19	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
cis-1,3-Dichloropropene	ND		4.8	0.096	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
Cyclohexane	ND		4.8	1.7	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
Dichlorobromomethane	ND		4.8	2.0	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
Dichlorodifluoromethane	ND		9.6	2.6	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
Ethylbenzene	ND		4.8	0.29	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
Isopropylbenzene	ND		4.8	2.3	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
Methyl acetate	ND		9.6	2.6	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
Methyl tert-butyl ether	ND		19	2.0	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
Methylcyclohexane	ND		4.8	0.40	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
Methylene Chloride	ND		4.8	1.5	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
m-Xylene & p-Xylene	ND		2.4	1.0	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
o-Xylene	ND		2.4	0.26	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
Styrene	ND		4.8	0.27	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
Tetrachloroethene	ND		4.8	1.8	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
Toluene	ND		4.8	0.22	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
trans-1,2-Dichloroethene	ND		2.4	0.37	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
trans-1,3-Dichloropropene	ND		4.8	0.080	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
Trichloroethene	ND		4.8	1.8	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
Trichlorofluoromethane	ND		9.6	3.1	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
Vinyl chloride	ND		4.8	1.3	ug/Kg	☼	05/29/20 14:50	06/05/20 17:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		58 - 140				05/29/20 14:50	06/05/20 17:23	1
4-Bromofluorobenzene (Surr)	96		76 - 127				05/29/20 14:50	06/05/20 17:23	1
Dibromofluoromethane (Surr)	102		75 - 121				05/29/20 14:50	06/05/20 17:23	1
Toluene-d8 (Surr)	98		80 - 126				05/29/20 14:50	06/05/20 17:23	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB02

Date Collected: 05/28/20 08:00

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-16

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	2.0	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.29	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
1,1,2-Trichloroethane	ND		5.0	0.88	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
1,1,2-Trichlorotrifluoroethane	ND		20	1.7	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
1,1-Dichloroethane	ND		5.0	0.21	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
1,1-Dichloroethene	ND		5.0	0.59	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
1,2,3-Trichlorobenzene	ND		5.0	0.81	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
1,2,4-Trichlorobenzene	ND		5.0	0.73	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
1,2-Dibromo-3-Chloropropane	ND		10	3.7	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
1,2-Dibromoethane	ND		5.0	0.52	ug/Kg		05/28/20 08:00	06/05/20 09:04	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB02

Lab Sample ID: 280-137073-16

Date Collected: 05/28/20 08:00

Matrix: Solid

Date Received: 05/29/20 15:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		5.0	1.9	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
1,2-Dichloroethane	ND		5.0	0.70	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
1,2-Dichloropropane	ND		5.0	0.55	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
1,3-Dichlorobenzene	ND		5.0	0.48	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
1,4-Dichlorobenzene	ND		5.0	0.25	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
1,4-Dioxane	ND		500	56	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
2-Butanone (MEK)	ND		20	3.9	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
2-Hexanone	ND		20	4.9	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.4	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
Acetone	ND		72	36	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
Benzene	ND		5.0	0.15	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
Bromoform	ND		5.1	2.6	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
Bromomethane	ND		10	1.4	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
Carbon disulfide	ND		5.0	1.7	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
Carbon tetrachloride	ND		5.0	2.0	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
Chlorobenzene	ND		5.0	2.1	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
Chlorobromomethane	ND		5.0	2.5	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
Chlorodibromomethane	ND		5.0	2.3	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
Chloroethane	ND		10	2.0	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
Chloroform	ND		10	0.29	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
Chloromethane	ND		10	0.77	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
cis-1,2-Dichloroethene	ND		2.5	0.20	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
cis-1,3-Dichloropropene	ND		5.0	0.10	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
Cyclohexane	ND		5.0	1.8	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
Dichlorobromomethane	ND		5.0	2.1	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
Dichlorodifluoromethane	ND		10	2.7	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
Ethylbenzene	ND		5.0	0.31	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
Isopropylbenzene	ND		5.0	2.4	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
Methyl acetate	ND		10	2.8	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
Methyl tert-butyl ether	ND		20	2.1	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
Methylcyclohexane	ND		5.0	0.42	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
Methylene Chloride	ND		5.0	1.6	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
m-Xylene & p-Xylene	ND		2.5	1.0	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
o-Xylene	ND		2.5	0.27	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
Styrene	ND		5.0	0.28	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
Tetrachloroethene	ND		5.0	1.9	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
Toluene	ND		5.0	0.23	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
trans-1,2-Dichloroethene	ND		2.5	0.39	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
trans-1,3-Dichloropropene	ND		5.0	0.083	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
Trichloroethene	ND		5.0	1.9	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
Trichlorofluoromethane	ND		10	3.2	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
Vinyl chloride	ND		5.0	1.3	ug/Kg		05/28/20 08:00	06/05/20 09:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		58 - 140				05/28/20 08:00	06/05/20 09:04	1
Toluene-d8 (Surr)	98		80 - 126				05/28/20 08:00	06/05/20 09:04	1
4-Bromofluorobenzene (Surr)	98		76 - 127				05/28/20 08:00	06/05/20 09:04	1
Dibromofluoromethane (Surr)	101		75 - 121				05/28/20 08:00	06/05/20 09:04	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Client Sample ID: CDOT I270 Env-05/06_2020-SB-06-15-17

Date Collected: 05/28/20 09:30

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-1

Matrix: Solid

Percent Solids: 90.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	8400		4000	2000	ug/Kg	☼	05/28/20 09:30	06/06/20 17:52	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		58 - 140				05/28/20 09:30	06/06/20 17:52	50
4-Bromofluorobenzene (Surr)	98		76 - 127				05/28/20 09:30	06/06/20 17:52	50
Dibromofluoromethane (Surr)	98		75 - 121				05/28/20 09:30	06/06/20 17:52	50
Toluene-d8 (Surr)	99		80 - 126				05/28/20 09:30	06/06/20 17:52	50

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB02

Date Collected: 05/28/20 08:00

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-16

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		250	99	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
1,1,2,2-Tetrachloroethane	ND		250	14	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
1,1,2-Trichloroethane	ND		250	44	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
1,1,2-Trichlorotrifluoroethane	ND		1000	83	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
1,1-Dichloroethane	ND		250	11	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
1,1-Dichloroethene	ND		250	30	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
1,2,3-Trichlorobenzene	ND		250	41	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
1,2,4-Trichlorobenzene	ND		250	37	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
1,2-Dibromo-3-Chloropropane	ND		500	180	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
1,2-Dibromoethane	ND		250	26	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
1,2-Dichlorobenzene	ND		250	94	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
1,2-Dichloroethane	ND		250	35	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
1,2-Dichloropropane	ND		250	28	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
1,3-Dichlorobenzene	ND		250	24	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
1,4-Dichlorobenzene	ND		250	12	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
1,4-Dioxane	ND		25000	2800	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
2-Butanone (MEK)	ND		1000	190	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
2-Hexanone	ND		1000	240	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
4-Methyl-2-pentanone (MIBK)	ND		1000	220	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
Acetone	ND		3600	1800	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
Benzene	ND		250	7.6	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
Bromoform	ND		260	130	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
Bromomethane	ND		500	68	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
Carbon disulfide	ND		250	83	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
Carbon tetrachloride	ND		250	100	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
Chlorobenzene	ND		250	100	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
Chlorobromomethane	ND		250	120	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
Chlorodibromomethane	ND		250	110	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
Chloroethane	ND		500	100	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
Chloroform	ND		500	15	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
Chloromethane	ND		500	39	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
cis-1,2-Dichloroethene	ND		130	10	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
cis-1,3-Dichloropropene	ND		250	5.0	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
Cyclohexane	ND		250	88	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
Dichlorobromomethane	ND		250	110	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
Dichlorodifluoromethane	ND		500	140	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
Ethylbenzene	ND		250	15	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
Isopropylbenzene	ND		250	120	ug/Kg		05/28/20 08:00	06/10/20 12:00	50

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB02

Date Collected: 05/28/20 08:00

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-16

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl acetate	ND		500	140	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
Methyl tert-butyl ether	ND		1000	110	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
Methylcyclohexane	ND		250	21	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
Methylene Chloride	ND		250	80	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
m-Xylene & p-Xylene	ND		130	52	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
o-Xylene	ND		130	13	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
Styrene	ND		250	14	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
Tetrachloroethene	ND		250	96	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
Toluene	ND		250	11	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
trans-1,2-Dichloroethene	ND		130	20	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
trans-1,3-Dichloropropene	ND		250	4.2	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
Trichloroethene	ND		250	96	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
Trichlorofluoromethane	ND		500	160	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
Vinyl chloride	ND		250	67	ug/Kg		05/28/20 08:00	06/10/20 12:00	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		58 - 140				05/28/20 08:00	06/10/20 12:00	50
Toluene-d8 (Surr)	97		80 - 126				05/28/20 08:00	06/10/20 12:00	50
4-Bromofluorobenzene (Surr)	96		76 - 127				05/28/20 08:00	06/10/20 12:00	50
Dibromofluoromethane (Surr)	100		75 - 121				05/28/20 08:00	06/10/20 12:00	50

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-06-15-17

Date Collected: 05/28/20 09:30

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-1

Matrix: Solid

Percent Solids: 90.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		360	26	ug/Kg	*	06/10/20 13:55	06/12/20 12:50	1
1,2,4,5-Tetrachlorobenzene	ND		360	54	ug/Kg	*	06/10/20 13:55	06/12/20 12:50	1
1,2,4-Trichlorobenzene	ND		360	31	ug/Kg	*	06/10/20 13:55	06/12/20 12:50	1
1,2-Dichlorobenzene	ND		360	24	ug/Kg	*	06/10/20 13:55	06/12/20 12:50	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		360	24	ug/Kg	*	06/10/20 13:55	06/12/20 12:50	1
1,3-Dichlorobenzene	ND		360	13	ug/Kg	*	06/10/20 13:55	06/12/20 12:50	1
1,3-Dinitrobenzene	ND		360	78	ug/Kg	*	06/10/20 13:55	06/12/20 12:50	1
1,4-Dichlorobenzene	ND		360	15	ug/Kg	*	06/10/20 13:55	06/12/20 12:50	1
1,4-Dioxane	ND		720	72	ug/Kg	*	06/10/20 13:55	06/12/20 12:50	1
1-Methylnaphthalene	ND		360	12	ug/Kg	*	06/10/20 13:55	06/12/20 12:50	1
2,2'-oxybis[1-chloropropane]	ND		360	25	ug/Kg	*	06/10/20 13:55	06/12/20 12:50	1
2,3,4,6-Tetrachlorophenol	ND		1800	150	ug/Kg	*	06/10/20 13:55	06/12/20 12:50	1
2,4,5-Trichlorophenol	ND		360	11	ug/Kg	*	06/10/20 13:55	06/12/20 12:50	1
2,4,6-Trichlorophenol	ND		360	11	ug/Kg	*	06/10/20 13:55	06/12/20 12:50	1
2,4-Dichlorophenol	ND		360	11	ug/Kg	*	06/10/20 13:55	06/12/20 12:50	1
2,4-Dimethylphenol	ND		360	72	ug/Kg	*	06/10/20 13:55	06/12/20 12:50	1
2,4-Dinitrophenol	ND		1800	360	ug/Kg	*	06/10/20 13:55	06/12/20 12:50	1
2,4-Dinitrotoluene	ND		360	72	ug/Kg	*	06/10/20 13:55	06/12/20 12:50	1
2,6-Dichlorophenol	ND		360	25	ug/Kg	*	06/10/20 13:55	06/12/20 12:50	1
2,6-Dinitrotoluene	ND		360	31	ug/Kg	*	06/10/20 13:55	06/12/20 12:50	1
2-Chloronaphthalene	ND		360	11	ug/Kg	*	06/10/20 13:55	06/12/20 12:50	1
2-Chlorophenol	ND		360	23	ug/Kg	*	06/10/20 13:55	06/12/20 12:50	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-06-15-17

Lab Sample ID: 280-137073-1

Date Collected: 05/28/20 09:30

Matrix: Solid

Date Received: 05/29/20 15:50

Percent Solids: 90.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		360	21	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
2-Methylphenol	ND		360	14	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
2-Nitroaniline	ND		1800	55	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
2-Nitrophenol	ND		360	11	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
3 & 4 Methylphenol	ND		360	36	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
3,3'-Dichlorobenzidine	ND		720	99	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
3-Methylphenol	ND		360	36	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
3-Nitroaniline	ND		1800	80	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
4,6-Dinitro-2-methylphenol	ND		1800	360	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
4-Bromophenyl phenyl ether	ND		360	21	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
4-Chloro-3-methylphenol	ND		360	27	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
4-Chloroaniline	ND		360	90	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
4-Chlorophenyl phenyl ether	ND		360	23	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
4-Methylphenol	ND		360	36	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
4-Nitroaniline	ND		1800	79	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
4-Nitrophenol	ND		1800	110	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Acenaphthene	ND		360	11	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Acenaphthylene	ND		360	90	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Acetophenone	ND		360	22	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Aniline	ND		360	140	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Anthracene	ND		360	19	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Azobenzene	ND		360	24	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Benzaldehyde	ND		360	73	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Benzidine	ND		3600	1100	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Benzo[a]anthracene	ND		360	22	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Benzo[a]pyrene	ND		360	22	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Benzo[b]fluoranthene	ND		360	29	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Benzo[g,h,i]perylene	ND		360	18	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Benzo[k]fluoranthene	ND		360	44	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Benzoic acid	ND		1800	360	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Benzyl alcohol	ND		360	11	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Bis(2-chloroethoxy)methane	ND		360	25	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Bis(2-chloroethyl)ether	ND		360	18	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Bis(2-ethylhexyl) phthalate	ND		360	50	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Butyl benzyl phthalate	ND		360	47	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Caprolactam	ND		360	120	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Carbazole	ND		360	39	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Chrysene	ND		360	30	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Dibenz(a,h)anthracene	ND		360	21	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Dibenzofuran	ND		360	22	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Diethyl phthalate	ND		720	28	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Dimethyl phthalate	ND		360	25	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Di-n-butyl phthalate	ND		360	32	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Di-n-octyl phthalate	ND		360	44	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Diphenylamine	ND		360	48	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Famphur	ND		720	37	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Fluoranthene	ND		360	39	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Fluorene	ND		360	20	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Hexachlorobenzene	ND		360	32	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-06-15-17

Date Collected: 05/28/20 09:30

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-1

Matrix: Solid

Percent Solids: 90.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	ND		360	11	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Hexachlorocyclopentadiene	ND		1800	120	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Hexachloroethane	ND		360	23	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Hexadecane	ND		360	15	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Indeno[1,2,3-cd]pyrene	ND		360	24	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Isophorone	ND		360	19	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Naphthalene	ND		360	34	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Nitrobenzene	ND		360	24	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
N-Nitrosodimethylamine	ND		360	41	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
N-Nitrosodi-n-propylamine	ND		360	75	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
N-Nitrosodiphenylamine	ND		360	23	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Pentachlorophenol	ND		1800	360	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Phenanthrene	ND		360	19	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Phenol	ND		360	20	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Pyrene	ND		360	13	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1
Pyridine	ND		720	44	ug/Kg	☼	06/10/20 13:55	06/12/20 12:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	84		35 - 120	06/10/20 13:55	06/12/20 12:50	1
2-Fluorobiphenyl	60		46 - 120	06/10/20 13:55	06/12/20 12:50	1
2-Fluorophenol (Surr)	51		43 - 120	06/10/20 13:55	06/12/20 12:50	1
Nitrobenzene-d5 (Surr)	48		46 - 120	06/10/20 13:55	06/12/20 12:50	1
Phenol-d5 (Surr)	59		46 - 120	06/10/20 13:55	06/12/20 12:50	1
Terphenyl-d14 (Surr)	89		46 - 120	06/10/20 13:55	06/12/20 12:50	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-08-8-10

Date Collected: 05/28/20 10:55

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-2

Matrix: Solid

Percent Solids: 96.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		320	24	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
1,2,4,5-Tetrachlorobenzene	ND		320	48	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
1,2,4-Trichlorobenzene	ND		320	27	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
1,2-Dichlorobenzene	ND		320	21	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		320	21	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
1,3-Dichlorobenzene	ND		320	12	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
1,3-Dinitrobenzene	ND		320	69	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
1,4-Dichlorobenzene	ND		320	13	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
1,4-Dioxane	ND		640	64	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
1-Methylnaphthalene	ND		320	11	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
2,2'-oxybis[1-chloropropane]	ND		320	22	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
2,3,4,6-Tetrachlorophenol	ND		1600	130	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
2,4,5-Trichlorophenol	ND		320	9.8	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
2,4,6-Trichlorophenol	ND		320	9.8	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
2,4-Dichlorophenol	ND		320	9.8	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
2,4-Dimethylphenol	ND		320	64	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
2,4-Dinitrophenol	ND		1600	330	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
2,4-Dinitrotoluene	ND		320	64	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
2,6-Dichlorophenol	ND		320	22	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
2,6-Dinitrotoluene	ND		320	27	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-08-8-10

Date Collected: 05/28/20 10:55

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-2

Matrix: Solid

Percent Solids: 96.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloronaphthalene	ND		320	9.8	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
2-Chlorophenol	ND		320	21	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
2-Methylnaphthalene	ND		320	19	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
2-Methylphenol	ND		320	13	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
2-Nitroaniline	ND		1600	49	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
2-Nitrophenol	ND		320	9.8	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
3 & 4 Methylphenol	ND		320	32	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
3,3'-Dichlorobenzidine	ND		640	88	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
3-Methylphenol	ND		320	32	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
3-Nitroaniline	ND		1600	71	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
4,6-Dinitro-2-methylphenol	ND		1600	320	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
4-Bromophenyl phenyl ether	ND		320	19	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
4-Chloro-3-methylphenol	ND		320	24	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
4-Chloroaniline	ND		320	80	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
4-Chlorophenyl phenyl ether	ND		320	21	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
4-Methylphenol	ND		320	32	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
4-Nitroaniline	ND		1600	71	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
4-Nitrophenol	ND		1600	95	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Acenaphthene	ND		320	10	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Acenaphthylene	ND		320	80	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Acetophenone	ND		320	20	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Aniline	ND		320	130	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Anthracene	ND		320	17	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Azobenzene	ND		320	21	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Benzaldehyde	ND		320	65	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Benzidine	ND		3200	970	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Benzo[a]anthracene	ND		320	20	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Benzo[a]pyrene	ND		320	20	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Benzo[b]fluoranthene	ND		320	26	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Benzo[g,h,i]perylene	ND		320	16	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Benzo[k]fluoranthene	ND		320	39	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Benzoic acid	ND		1600	320	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Benzyl alcohol	ND		320	9.8	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Bis(2-chloroethoxy)methane	ND		320	22	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Bis(2-chloroethyl)ether	ND		320	16	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Bis(2-ethylhexyl) phthalate	ND		320	45	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Butyl benzyl phthalate	ND		320	42	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Caprolactam	ND		320	100	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Carbazole	ND		320	35	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Chrysene	ND		320	26	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Dibenz(a,h)anthracene	ND		320	19	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Dibenzofuran	ND		320	20	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Diethyl phthalate	ND		640	25	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Dimethyl phthalate	ND		320	22	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Di-n-butyl phthalate	ND		320	28	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Di-n-octyl phthalate	ND		320	40	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Diphenylamine	ND		320	43	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Famphur	ND		640	33	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Fluoranthene	ND		320	35	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-08-8-10

Date Collected: 05/28/20 10:55

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-2

Matrix: Solid

Percent Solids: 96.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	ND		320	18	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Hexachlorobenzene	ND		320	28	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Hexachlorobutadiene	ND		320	9.8	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Hexachlorocyclopentadiene	ND		1600	110	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Hexachloroethane	ND		320	21	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Hexadecane	ND		320	13	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Indeno[1,2,3-cd]pyrene	ND		320	21	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Isophorone	ND		320	17	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Naphthalene	ND		320	30	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Nitrobenzene	ND		320	21	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
N-Nitrosodimethylamine	ND		320	36	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
N-Nitrosodi-n-propylamine	ND		320	66	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
N-Nitrosodiphenylamine	ND		320	21	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Pentachlorophenol	ND		1600	320	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Phenanthrene	ND		320	17	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Phenol	ND		320	18	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Pyrene	ND		320	12	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1
Pyridine	ND		640	39	ug/Kg	☼	06/10/20 13:55	06/12/20 13:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	80		35 - 120	06/10/20 13:55	06/12/20 13:18	1
2-Fluorobiphenyl	67		46 - 120	06/10/20 13:55	06/12/20 13:18	1
2-Fluorophenol (Surr)	70		43 - 120	06/10/20 13:55	06/12/20 13:18	1
Nitrobenzene-d5 (Surr)	66		46 - 120	06/10/20 13:55	06/12/20 13:18	1
Phenol-d5 (Surr)	71		46 - 120	06/10/20 13:55	06/12/20 13:18	1
Terphenyl-d14 (Surr)	90		46 - 120	06/10/20 13:55	06/12/20 13:18	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-08-22-23

Date Collected: 05/28/20 11:25

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-3

Matrix: Solid

Percent Solids: 95.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		330	24	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
1,2,4,5-Tetrachlorobenzene	ND		330	49	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
1,2,4-Trichlorobenzene	ND		330	28	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
1,2-Dichlorobenzene	ND		330	22	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		330	22	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
1,3-Dichlorobenzene	ND		330	12	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
1,3-Dinitrobenzene	ND		330	71	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
1,4-Dichlorobenzene	ND		330	14	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
1,4-Dioxane	ND		660	66	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
1-Methylnaphthalene	ND		330	11	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
2,2'-oxybis[1-chloropropane]	ND		330	23	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
2,3,4,6-Tetrachlorophenol	ND		1600	140	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
2,4,5-Trichlorophenol	ND		330	10	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
2,4,6-Trichlorophenol	ND		330	10	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
2,4-Dichlorophenol	ND		330	10	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
2,4-Dimethylphenol	ND		330	66	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
2,4-Dinitrophenol	ND		1600	330	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
2,4-Dinitrotoluene	ND		330	66	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-08-22-23

Lab Sample ID: 280-137073-3

Date Collected: 05/28/20 11:25

Matrix: Solid

Date Received: 05/29/20 15:50

Percent Solids: 95.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dichlorophenol	ND		330	22	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
2,6-Dinitrotoluene	ND		330	28	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
2-Chloronaphthalene	ND		330	10	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
2-Chlorophenol	ND		330	21	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
2-Methylnaphthalene	ND		330	19	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
2-Methylphenol	ND		330	13	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
2-Nitroaniline	ND		1600	50	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
2-Nitrophenol	ND		330	10	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
3 & 4 Methylphenol	ND		330	33	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
3,3'-Dichlorobenzidine	ND		660	90	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
3-Methylphenol	ND		330	33	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
3-Nitroaniline	ND		1600	73	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
4,6-Dinitro-2-methylphenol	ND		1600	330	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
4-Bromophenyl phenyl ether	ND		330	19	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
4-Chloro-3-methylphenol	ND		330	25	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
4-Chloroaniline	ND		330	82	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
4-Chlorophenyl phenyl ether	ND		330	21	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
4-Methylphenol	ND		330	33	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
4-Nitroaniline	ND		1600	73	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
4-Nitrophenol	ND		1600	97	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Acenaphthene	ND		330	10	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Acenaphthylene	ND		330	82	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Acetophenone	ND		330	20	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Aniline	ND		330	130	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Anthracene	ND		330	17	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Azobenzene	ND		330	22	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Benzaldehyde	ND		330	67	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Benzidine	ND		3300	990	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Benzo[a]anthracene	ND		330	20	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Benzo[a]pyrene	ND		330	20	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Benzo[b]fluoranthene	ND		330	26	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Benzo[g,h,i]perylene	ND		330	16	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Benzo[k]fluoranthene	ND		330	40	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Benzoic acid	ND		1600	330	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Benzyl alcohol	ND		330	10	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Bis(2-chloroethoxy)methane	ND		330	23	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Bis(2-chloroethyl)ether	ND		330	17	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Bis(2-ethylhexyl) phthalate	ND		330	46	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Butyl benzyl phthalate	ND		330	43	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Caprolactam	ND		330	110	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Carbazole	ND		330	36	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Chrysene	ND		330	27	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Dibenz(a,h)anthracene	ND		330	19	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Dibenzofuran	ND		330	20	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Diethyl phthalate	ND		660	26	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Dimethyl phthalate	ND		330	23	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Di-n-butyl phthalate	ND		330	29	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Di-n-octyl phthalate	ND		330	41	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Diphenylamine	ND		330	44	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-08-22-23

Date Collected: 05/28/20 11:25

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-3

Matrix: Solid

Percent Solids: 95.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Famphur	ND		660	34	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Fluoranthene	ND		330	36	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Fluorene	ND		330	18	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Hexachlorobenzene	ND		330	29	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Hexachlorobutadiene	ND		330	10	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Hexachlorocyclopentadiene	ND		1600	110	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Hexachloroethane	ND		330	21	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Hexadecane	21	J	330	13	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Indeno[1,2,3-cd]pyrene	ND		330	22	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Isophorone	ND		330	17	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Naphthalene	ND		330	31	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Nitrobenzene	ND		330	22	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
N-Nitrosodimethylamine	ND		330	37	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
N-Nitrosodi-n-propylamine	ND		330	68	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
N-Nitrosodiphenylamine	ND		330	21	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Pentachlorophenol	ND		1600	330	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Phenanthrene	ND		330	17	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Phenol	ND		330	18	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Pyrene	ND		330	12	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1
Pyridine	ND		660	40	ug/Kg	☼	06/10/20 13:55	06/12/20 13:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	80		35 - 120	06/10/20 13:55	06/12/20 13:45	1
2-Fluorobiphenyl	63		46 - 120	06/10/20 13:55	06/12/20 13:45	1
2-Fluorophenol (Surr)	64		43 - 120	06/10/20 13:55	06/12/20 13:45	1
Nitrobenzene-d5 (Surr)	62		46 - 120	06/10/20 13:55	06/12/20 13:45	1
Phenol-d5 (Surr)	68		46 - 120	06/10/20 13:55	06/12/20 13:45	1
Terphenyl-d14 (Surr)	94		46 - 120	06/10/20 13:55	06/12/20 13:45	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-3-5

Date Collected: 05/28/20 12:45

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-4

Matrix: Solid

Percent Solids: 89.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		350	25	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
1,2,4,5-Tetrachlorobenzene	ND		350	51	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
1,2,4-Trichlorobenzene	ND		350	29	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
1,2-Dichlorobenzene	ND		350	23	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		350	23	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
1,3-Dichlorobenzene	ND		350	13	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
1,3-Dinitrobenzene	ND		350	74	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
1,4-Dichlorobenzene	ND		350	14	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
1,4-Dioxane	ND		690	69	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
1-Methylnaphthalene	ND		350	12	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
2,2'-oxybis[1-chloropropane]	ND		350	24	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
2,3,4,6-Tetrachlorophenol	ND		1700	140	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
2,4,5-Trichlorophenol	ND		350	10	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
2,4,6-Trichlorophenol	ND		350	10	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
2,4-Dichlorophenol	ND		350	10	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
2,4-Dimethylphenol	ND		350	69	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-3-5

Lab Sample ID: 280-137073-4

Date Collected: 05/28/20 12:45

Matrix: Solid

Date Received: 05/29/20 15:50

Percent Solids: 89.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrophenol	ND		1700	350	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
2,4-Dinitrotoluene	ND		350	69	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
2,6-Dichlorophenol	ND		350	23	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
2,6-Dinitrotoluene	ND		350	29	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
2-Chloronaphthalene	ND		350	10	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
2-Chlorophenol	ND		350	22	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
2-Methylnaphthalene	ND		350	20	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
2-Methylphenol	ND		350	14	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
2-Nitroaniline	ND		1700	52	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
2-Nitrophenol	ND		350	10	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
3 & 4 Methylphenol	ND		350	35	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
3,3'-Dichlorobenzidine	ND		690	94	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
3-Methylphenol	ND		350	35	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
3-Nitroaniline	ND		1700	76	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
4,6-Dinitro-2-methylphenol	ND		1700	350	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
4-Bromophenyl phenyl ether	ND		350	20	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
4-Chloro-3-methylphenol	ND		350	26	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
4-Chloroaniline	ND		350	86	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
4-Chlorophenyl phenyl ether	ND		350	22	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
4-Methylphenol	ND		350	35	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
4-Nitroaniline	ND		1700	76	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
4-Nitrophenol	ND		1700	100	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Acenaphthene	ND		350	11	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Acenaphthylene	ND		350	86	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Acetophenone	ND		350	21	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Aniline	ND		350	140	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Anthracene	ND		350	18	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Azobenzene	ND		350	23	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Benzaldehyde	ND		350	70	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Benzidine	ND		3500	1000	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Benzo[a]anthracene	ND		350	21	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Benzo[a]pyrene	ND		350	21	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Benzo[b]fluoranthene	ND		350	27	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Benzo[g,h,i]perylene	ND		350	17	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Benzo[k]fluoranthene	ND		350	42	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Benzoic acid	ND		1700	350	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Benzyl alcohol	ND		350	10	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Bis(2-chloroethoxy)methane	ND		350	24	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Bis(2-chloroethyl)ether	ND		350	17	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Bis(2-ethylhexyl) phthalate	ND		350	48	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Butyl benzyl phthalate	ND		350	45	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Caprolactam	ND		350	110	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Carbazole	ND		350	38	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Chrysene	ND		350	28	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Dibenz(a,h)anthracene	ND		350	20	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Dibenzofuran	ND		350	21	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Diethyl phthalate	ND		690	27	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Dimethyl phthalate	ND		350	24	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Di-n-butyl phthalate	ND		350	30	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-3-5

Date Collected: 05/28/20 12:45

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-4

Matrix: Solid

Percent Solids: 89.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate	ND		350	42	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Diphenylamine	ND		350	46	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Famphur	ND		690	36	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Fluoranthene	ND		350	38	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Fluorene	ND		350	19	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Hexachlorobenzene	ND		350	30	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Hexachlorobutadiene	ND		350	10	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Hexachlorocyclopentadiene	ND		1700	120	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Hexachloroethane	ND		350	22	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Hexadecane	ND		350	14	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Indeno[1,2,3-cd]pyrene	ND		350	23	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Isophorone	ND		350	18	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Naphthalene	ND		350	32	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Nitrobenzene	ND		350	23	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
N-Nitrosodimethylamine	ND		350	39	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
N-Nitrosodi-n-propylamine	ND		350	71	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
N-Nitrosodiphenylamine	ND		350	22	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Pentachlorophenol	ND		1700	350	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Phenanthrene	ND		350	18	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Phenol	ND		350	19	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Pyrene	ND		350	13	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1
Pyridine	ND		690	42	ug/Kg	☼	06/10/20 13:55	06/12/20 14:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	69		46 - 120	06/10/20 13:55	06/12/20 14:12	1
2-Fluorophenol (Surr)	73		43 - 120	06/10/20 13:55	06/12/20 14:12	1
2,4,6-Tribromophenol (Surr)	78		35 - 120	06/10/20 13:55	06/12/20 14:12	1
Nitrobenzene-d5 (Surr)	67		46 - 120	06/10/20 13:55	06/12/20 14:12	1
Phenol-d5 (Surr)	75		46 - 120	06/10/20 13:55	06/12/20 14:12	1
Terphenyl-d14 (Surr)	90		46 - 120	06/10/20 13:55	06/12/20 14:12	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-8-10

Date Collected: 05/28/20 13:05

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-5

Matrix: Solid

Percent Solids: 91.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		340	25	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
1,2,4,5-Tetrachlorobenzene	ND		340	51	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
1,2,4-Trichlorobenzene	ND		340	29	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
1,2-Dichlorobenzene	ND		340	23	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		340	23	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
1,3-Dichlorobenzene	ND		340	12	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
1,3-Dinitrobenzene	ND		340	73	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
1,4-Dichlorobenzene	ND		340	14	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
1,4-Dioxane	ND		680	68	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
1-Methylnaphthalene	ND		340	12	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
2,2'-oxybis[1-chloropropane]	ND		340	24	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
2,3,4,6-Tetrachlorophenol	ND		1700	140	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
2,4,5-Trichlorophenol	ND		340	10	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
2,4,6-Trichlorophenol	ND		340	10	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-8-10

Date Collected: 05/28/20 13:05

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-5

Matrix: Solid

Percent Solids: 91.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND		340	10	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
2,4-Dimethylphenol	ND		340	68	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
2,4-Dinitrophenol	ND		1700	340	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
2,4-Dinitrotoluene	ND		340	68	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
2,6-Dichlorophenol	ND		340	23	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
2,6-Dinitrotoluene	ND		340	29	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
2-Chloronaphthalene	ND		340	10	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
2-Chlorophenol	ND		340	22	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
2-Methylnaphthalene	ND		340	20	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
2-Methylphenol	ND		340	13	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
2-Nitroaniline	ND		1700	52	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
2-Nitrophenol	ND		340	10	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
3 & 4 Methylphenol	ND		340	34	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
3,3'-Dichlorobenzidine	ND		680	93	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
3-Methylphenol	ND		340	34	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
3-Nitroaniline	ND		1700	75	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
4,6-Dinitro-2-methylphenol	ND		1700	340	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
4-Bromophenyl phenyl ether	ND		340	20	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
4-Chloro-3-methylphenol	ND		340	26	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
4-Chloroaniline	ND		340	85	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
4-Chlorophenyl phenyl ether	ND		340	22	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
4-Methylphenol	ND		340	34	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
4-Nitroaniline	ND		1700	75	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
4-Nitrophenol	ND		1700	100	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Acenaphthene	ND		340	11	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Acenaphthylene	ND		340	85	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Acetophenone	ND		340	21	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Aniline	ND		340	130	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Anthracene	ND		340	18	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Azobenzene	ND		340	23	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Benzaldehyde	ND		340	69	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Benzidine	ND		3400	1000	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Benzo[a]anthracene	ND		340	21	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Benzo[a]pyrene	ND		340	21	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Benzo[b]fluoranthene	ND		340	27	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Benzo[g,h,i]perylene	ND		340	17	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Benzo[k]fluoranthene	ND		340	41	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Benzoic acid	ND		1700	340	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Benzyl alcohol	ND		340	10	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Bis(2-chloroethoxy)methane	ND		340	24	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Bis(2-chloroethyl)ether	ND		340	17	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Bis(2-ethylhexyl) phthalate	ND		340	48	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Butyl benzyl phthalate	ND		340	44	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Caprolactam	ND		340	110	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Carbazole	ND		340	37	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Chrysene	ND		340	28	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Dibenz(a,h)anthracene	ND		340	20	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Dibenzofuran	ND		340	21	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Diethyl phthalate	ND		680	27	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-8-10

Date Collected: 05/28/20 13:05

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-5

Matrix: Solid

Percent Solids: 91.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl phthalate	ND		340	24	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Di-n-butyl phthalate	ND		340	30	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Di-n-octyl phthalate	ND		340	42	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Diphenylamine	ND		340	45	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Famphur	ND		680	35	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Fluoranthene	ND		340	37	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Fluorene	ND		340	19	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Hexachlorobenzene	ND		340	30	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Hexachlorobutadiene	ND		340	10	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Hexachlorocyclopentadiene	ND		1700	110	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Hexachloroethane	ND		340	22	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Hexadecane	ND		340	14	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Indeno[1,2,3-cd]pyrene	ND		340	23	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Isophorone	ND		340	18	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Naphthalene	ND		340	32	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Nitrobenzene	ND		340	23	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
N-Nitrosodimethylamine	ND		340	38	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
N-Nitrosodi-n-propylamine	ND		340	70	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
N-Nitrosodiphenylamine	ND		340	22	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Pentachlorophenol	ND		1700	340	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Phenanthrene	ND		340	18	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Phenol	ND		340	19	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Pyrene	ND		340	13	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1
Pyridine	ND		680	41	ug/Kg	☼	06/10/20 13:55	06/12/20 14:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	60		46 - 120	06/10/20 13:55	06/12/20 14:40	1
2-Fluorophenol (Surr)	63		43 - 120	06/10/20 13:55	06/12/20 14:40	1
2,4,6-Tribromophenol (Surr)	73		35 - 120	06/10/20 13:55	06/12/20 14:40	1
Nitrobenzene-d5 (Surr)	59		46 - 120	06/10/20 13:55	06/12/20 14:40	1
Phenol-d5 (Surr)	64		46 - 120	06/10/20 13:55	06/12/20 14:40	1
Terphenyl-d14 (Surr)	90		46 - 120	06/10/20 13:55	06/12/20 14:40	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-GW

Date Collected: 05/28/20 13:40

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		9.9	1.7	ug/L		06/01/20 15:05	06/05/20 12:20	1
1,2,4,5-Tetrachlorobenzene	ND		9.9	1.7	ug/L		06/01/20 15:05	06/05/20 12:20	1
1,2,4-Trichlorobenzene	ND		4.0	0.59	ug/L		06/01/20 15:05	06/05/20 12:20	1
1,2-Dichlorobenzene	ND		4.0	0.23	ug/L		06/01/20 15:05	06/05/20 12:20	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		9.9	0.23	ug/L		06/01/20 15:05	06/05/20 12:20	1
1,3-Dichlorobenzene	ND		9.9	0.30	ug/L		06/01/20 15:05	06/05/20 12:20	1
1,3-Dinitrobenzene	ND		9.9	2.0	ug/L		06/01/20 15:05	06/05/20 12:20	1
1,4-Dichlorobenzene	ND		4.0	1.3	ug/L		06/01/20 15:05	06/05/20 12:20	1
1,4-Dioxane	ND		20	0.44	ug/L		06/01/20 15:05	06/05/20 12:20	1
1-Methylnaphthalene	ND		4.0	0.23	ug/L		06/01/20 15:05	06/05/20 12:20	1
2,2'-oxybis[1-chloropropane]	ND		9.9	0.28	ug/L		06/01/20 15:05	06/05/20 12:20	1
2,3,4,6-Tetrachlorophenol	ND		50	2.0	ug/L		06/01/20 15:05	06/05/20 12:20	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-GW

Lab Sample ID: 280-137073-6

Date Collected: 05/28/20 13:40

Matrix: Water

Date Received: 05/29/20 15:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		9.9	2.0	ug/L		06/01/20 15:05	06/05/20 12:20	1
2,4,6-Trichlorophenol	ND		9.9	0.29	ug/L		06/01/20 15:05	06/05/20 12:20	1
2,4-Dichlorophenol	ND		9.9	0.64	ug/L		06/01/20 15:05	06/05/20 12:20	1
2,4-Dimethylphenol	ND		9.9	0.58	ug/L		06/01/20 15:05	06/05/20 12:20	1
2,4-Dinitrophenol	ND		30	9.9	ug/L		06/01/20 15:05	06/05/20 12:20	1
2,4-Dinitrotoluene	ND		9.9	1.6	ug/L		06/01/20 15:05	06/05/20 12:20	1
2,6-Dichlorophenol	ND		9.9	1.3	ug/L		06/01/20 15:05	06/05/20 12:20	1
2,6-Dinitrotoluene	ND		9.9	1.9	ug/L		06/01/20 15:05	06/05/20 12:20	1
2-Chloronaphthalene	ND		4.0	0.26	ug/L		06/01/20 15:05	06/05/20 12:20	1
2-Chlorophenol	ND		9.9	2.0	ug/L		06/01/20 15:05	06/05/20 12:20	1
2-Methylnaphthalene	ND		4.0	1.5	ug/L		06/01/20 15:05	06/05/20 12:20	1
2-Methylphenol	ND		9.9	0.97	ug/L		06/01/20 15:05	06/05/20 12:20	1
2-Nitroaniline	ND	*	9.9	1.7	ug/L		06/01/20 15:05	06/05/20 12:20	1
2-Nitrophenol	ND		9.9	0.39	ug/L		06/01/20 15:05	06/05/20 12:20	1
3 & 4 Methylphenol	ND		9.9	0.25	ug/L		06/01/20 15:05	06/05/20 12:20	1
3,3'-Dichlorobenzidine	ND		50	2.0	ug/L		06/01/20 15:05	06/05/20 12:20	1
3-Methylphenol	ND		9.9	0.25	ug/L		06/01/20 15:05	06/05/20 12:20	1
3-Nitroaniline	ND		9.9	2.0	ug/L		06/01/20 15:05	06/05/20 12:20	1
4,6-Dinitro-2-methylphenol	ND		50	4.0	ug/L		06/01/20 15:05	06/05/20 12:20	1
4-Bromophenyl phenyl ether	ND		9.9	0.43	ug/L		06/01/20 15:05	06/05/20 12:20	1
4-Chloro-3-methylphenol	ND		9.9	2.4	ug/L		06/01/20 15:05	06/05/20 12:20	1
4-Chloroaniline	ND		9.9	2.1	ug/L		06/01/20 15:05	06/05/20 12:20	1
4-Chlorophenyl phenyl ether	ND		9.9	1.6	ug/L		06/01/20 15:05	06/05/20 12:20	1
4-Methylphenol	ND		9.9	0.25	ug/L		06/01/20 15:05	06/05/20 12:20	1
4-Nitroaniline	ND		9.9	2.0	ug/L		06/01/20 15:05	06/05/20 12:20	1
4-Nitrophenol	ND		9.9	1.2	ug/L		06/01/20 15:05	06/05/20 12:20	1
Acenaphthene	ND		4.0	0.28	ug/L		06/01/20 15:05	06/05/20 12:20	1
Acenaphthylene	ND		4.0	0.49	ug/L		06/01/20 15:05	06/05/20 12:20	1
Acetophenone	ND		9.9	0.24	ug/L		06/01/20 15:05	06/05/20 12:20	1
Aniline	ND		9.9	2.0	ug/L		06/01/20 15:05	06/05/20 12:20	1
Anthracene	ND		4.0	0.42	ug/L		06/01/20 15:05	06/05/20 12:20	1
Azobenzene	ND		4.0	0.23	ug/L		06/01/20 15:05	06/05/20 12:20	1
Benzaldehyde	ND		5.0	2.0	ug/L		06/01/20 15:05	06/05/20 12:20	1
Benzenidine	ND	**1	99	50	ug/L		06/01/20 15:05	06/05/20 12:20	1
Benzo[a]anthracene	ND		4.0	0.35	ug/L		06/01/20 15:05	06/05/20 12:20	1
Benzo[a]pyrene	ND		4.0	0.31	ug/L		06/01/20 15:05	06/05/20 12:20	1
Benzo[b]fluoranthene	ND		4.0	0.53	ug/L		06/01/20 15:05	06/05/20 12:20	1
Benzo[g,h,i]perylene	ND		4.0	0.50	ug/L		06/01/20 15:05	06/05/20 12:20	1
Benzo[k]fluoranthene	ND		4.0	0.46	ug/L		06/01/20 15:05	06/05/20 12:20	1
Benzoic acid	ND		25	9.9	ug/L		06/01/20 15:05	06/05/20 12:20	1
Benzyl alcohol	ND		9.9	0.23	ug/L		06/01/20 15:05	06/05/20 12:20	1
Bis(2-chloroethoxy)methane	ND		9.9	0.96	ug/L		06/01/20 15:05	06/05/20 12:20	1
Bis(2-chloroethyl)ether	ND		9.9	0.83	ug/L		06/01/20 15:05	06/05/20 12:20	1
Bis(2-ethylhexyl) phthalate	0.95	J	9.9	0.56	ug/L		06/01/20 15:05	06/05/20 12:20	1
Butyl benzyl phthalate	ND		4.0	0.99	ug/L		06/01/20 15:05	06/05/20 12:20	1
Caprolactam	ND		5.0	2.5	ug/L		06/01/20 15:05	06/05/20 12:20	1
Carbazole	ND		4.0	0.43	ug/L		06/01/20 15:05	06/05/20 12:20	1
Chrysene	ND		4.0	0.54	ug/L		06/01/20 15:05	06/05/20 12:20	1
Dibenz(a,h)anthracene	ND		4.0	0.51	ug/L		06/01/20 15:05	06/05/20 12:20	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-GW

Lab Sample ID: 280-137073-6

Date Collected: 05/28/20 13:40

Matrix: Water

Date Received: 05/29/20 15:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenzofuran	ND		4.0	0.29	ug/L		06/01/20 15:05	06/05/20 12:20	1
Diethyl phthalate	ND		4.0	0.38	ug/L		06/01/20 15:05	06/05/20 12:20	1
Dimethyl phthalate	ND		4.0	0.21	ug/L		06/01/20 15:05	06/05/20 12:20	1
Di-n-butyl phthalate	ND		4.0	1.2	ug/L		06/01/20 15:05	06/05/20 12:20	1
Di-n-octyl phthalate	ND		4.0	0.35	ug/L		06/01/20 15:05	06/05/20 12:20	1
Diphenylamine	ND		9.9	1.1	ug/L		06/01/20 15:05	06/05/20 12:20	1
Famphur	ND		99	1.5	ug/L		06/01/20 15:05	06/05/20 12:20	1
Fluoranthene	ND		4.0	0.20	ug/L		06/01/20 15:05	06/05/20 12:20	1
Fluorene	ND		4.0	0.31	ug/L		06/01/20 15:05	06/05/20 12:20	1
Hexachlorobenzene	ND		9.9	0.66	ug/L		06/01/20 15:05	06/05/20 12:20	1
Hexachlorobutadiene	ND		9.9	3.3	ug/L		06/01/20 15:05	06/05/20 12:20	1
Hexachlorocyclopentadiene	ND		50	3.1	ug/L		06/01/20 15:05	06/05/20 12:20	1
Hexachloroethane	ND		9.9	0.98	ug/L		06/01/20 15:05	06/05/20 12:20	1
Hexadecane	ND		9.9	0.54	ug/L		06/01/20 15:05	06/05/20 12:20	1
Indeno[1,2,3-cd]pyrene	ND		4.0	0.65	ug/L		06/01/20 15:05	06/05/20 12:20	1
Isophorone	ND		9.9	0.21	ug/L		06/01/20 15:05	06/05/20 12:20	1
Naphthalene	ND		4.0	0.29	ug/L		06/01/20 15:05	06/05/20 12:20	1
Nitrobenzene	ND		9.9	0.80	ug/L		06/01/20 15:05	06/05/20 12:20	1
N-Nitrosodimethylamine	ND		9.9	0.29	ug/L		06/01/20 15:05	06/05/20 12:20	1
N-Nitrosodi-n-propylamine	ND		9.9	0.35	ug/L		06/01/20 15:05	06/05/20 12:20	1
N-Nitrosodiphenylamine	ND		9.9	0.44	ug/L		06/01/20 15:05	06/05/20 12:20	1
Pentachlorophenol	ND		50	20	ug/L		06/01/20 15:05	06/05/20 12:20	1
Phenanthrene	ND		4.0	0.26	ug/L		06/01/20 15:05	06/05/20 12:20	1
Phenol	ND		9.9	2.0	ug/L		06/01/20 15:05	06/05/20 12:20	1
Pyrene	ND		9.9	0.37	ug/L		06/01/20 15:05	06/05/20 12:20	1
Pyridine	ND		20	1.7	ug/L		06/01/20 15:05	06/05/20 12:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	58		48 - 120	06/01/20 15:05	06/05/20 12:20	1
2-Fluorophenol (Surr)	44		41 - 120	06/01/20 15:05	06/05/20 12:20	1
2,4,6-Tribromophenol (Surr)	31	X	42 - 131	06/01/20 15:05	06/05/20 12:20	1
Nitrobenzene-d5 (Surr)	75		42 - 120	06/01/20 15:05	06/05/20 12:20	1
Phenol-d5 (Surr)	58		45 - 124	06/01/20 15:05	06/05/20 12:20	1
Terphenyl-d14 (Surr)	29		20 - 130	06/01/20 15:05	06/05/20 12:20	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-22-5-7

Lab Sample ID: 280-137073-7

Date Collected: 05/28/20 15:00

Matrix: Solid

Date Received: 05/29/20 15:50

Percent Solids: 79.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		410	30	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
1,2,4,5-Tetrachlorobenzene	ND		410	61	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
1,2,4-Trichlorobenzene	ND		410	35	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
1,2-Dichlorobenzene	ND		410	27	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		410	27	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
1,3-Dichlorobenzene	ND		410	15	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
1,3-Dinitrobenzene	ND		410	88	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
1,4-Dichlorobenzene	ND		410	17	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
1,4-Dioxane	ND		820	82	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
1-Methylnaphthalene	ND		410	14	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-22-5-7

Lab Sample ID: 280-137073-7

Date Collected: 05/28/20 15:00

Matrix: Solid

Date Received: 05/29/20 15:50

Percent Solids: 79.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2'-oxybis[1-chloropropane]	ND		410	28	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
2,3,4,6-Tetrachlorophenol	ND		2000	170	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
2,4,5-Trichlorophenol	ND		410	12	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
2,4,6-Trichlorophenol	ND		410	12	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
2,4-Dichlorophenol	ND		410	12	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
2,4-Dimethylphenol	ND		410	82	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
2,4-Dinitrophenol	ND		2000	410	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
2,4-Dinitrotoluene	ND		410	82	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
2,6-Dichlorophenol	ND		410	28	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
2,6-Dinitrotoluene	ND		410	35	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
2-Chloronaphthalene	ND		410	12	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
2-Chlorophenol	ND		410	26	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
2-Methylnaphthalene	ND		410	23	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
2-Methylphenol	ND		410	16	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
2-Nitroaniline	ND		2000	62	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
2-Nitrophenol	ND		410	12	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
3 & 4 Methylphenol	ND		410	41	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
3,3'-Dichlorobenzidine	ND		820	110	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
3-Methylphenol	ND		410	41	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
3-Nitroaniline	ND		2000	90	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
4,6-Dinitro-2-methylphenol	ND		2000	410	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
4-Bromophenyl phenyl ether	ND		410	23	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
4-Chloro-3-methylphenol	ND		410	31	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
4-Chloroaniline	ND		410	100	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
4-Chlorophenyl phenyl ether	ND		410	26	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
4-Methylphenol	ND		410	41	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
4-Nitroaniline	ND		2000	90	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
4-Nitrophenol	ND		2000	120	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Acenaphthene	ND		410	13	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Acenaphthylene	ND		410	100	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Acetophenone	ND		410	25	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Aniline	ND		410	160	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Anthracene	ND		410	21	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Azobenzene	ND		410	27	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Benzaldehyde	ND		410	83	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Benzidine	ND		4100	1200	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Benzo[a]anthracene	ND		410	25	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Benzo[a]pyrene	ND		410	25	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Benzo[b]fluoranthene	ND		410	32	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Benzo[g,h,i]perylene	ND		410	20	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Benzo[k]fluoranthene	ND		410	49	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Benzoic acid	ND		2000	410	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Benzyl alcohol	ND		410	12	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Bis(2-chloroethoxy)methane	ND		410	28	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Bis(2-chloroethyl)ether	ND		410	21	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Bis(2-ethylhexyl) phthalate	ND		410	57	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Butyl benzyl phthalate	ND		410	53	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Caprolactam	ND		410	130	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Carbazole	ND		410	44	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-22-5-7

Date Collected: 05/28/20 15:00

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-7

Matrix: Solid

Percent Solids: 79.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	ND		410	33	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Dibenz(a,h)anthracene	ND		410	23	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Dibenzofuran	ND		410	25	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Diethyl phthalate	ND		820	32	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Dimethyl phthalate	ND		410	28	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Di-n-butyl phthalate	ND		410	36	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Di-n-octyl phthalate	ND		410	50	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Diphenylamine	ND		410	54	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Famphur	ND		820	42	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Fluoranthene	ND		410	44	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Fluorene	ND		410	22	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Hexachlorobenzene	ND		410	36	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Hexachlorobutadiene	ND		410	12	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Hexachlorocyclopentadiene	ND		2000	140	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Hexachloroethane	ND		410	26	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Hexadecane	ND		410	16	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Indeno[1,2,3-cd]pyrene	ND		410	27	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Isophorone	ND		410	21	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Naphthalene	ND		410	38	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Nitrobenzene	ND		410	27	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
N-Nitrosodimethylamine	ND		410	46	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
N-Nitrosodi-n-propylamine	ND		410	84	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
N-Nitrosodiphenylamine	ND		410	26	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Pentachlorophenol	ND		2000	410	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Phenanthrene	ND		410	21	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Phenol	ND		410	22	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Pyrene	ND		410	15	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1
Pyridine	ND		820	49	ug/Kg	☼	06/10/20 13:55	06/12/20 15:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	76		35 - 120	06/10/20 13:55	06/12/20 15:07	1
2-Fluorobiphenyl	51		46 - 120	06/10/20 13:55	06/12/20 15:07	1
2-Fluorophenol (Surr)	53		43 - 120	06/10/20 13:55	06/12/20 15:07	1
Nitrobenzene-d5 (Surr)	48		46 - 120	06/10/20 13:55	06/12/20 15:07	1
Phenol-d5 (Surr)	56		46 - 120	06/10/20 13:55	06/12/20 15:07	1
Terphenyl-d14 (Surr)	87		46 - 120	06/10/20 13:55	06/12/20 15:07	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-22-GW

Date Collected: 05/28/20 15:10

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		9.6	1.7	ug/L		06/01/20 15:05	06/05/20 12:49	1
1,2,4,5-Tetrachlorobenzene	ND		9.6	1.7	ug/L		06/01/20 15:05	06/05/20 12:49	1
1,2,4-Trichlorobenzene	ND		3.8	0.56	ug/L		06/01/20 15:05	06/05/20 12:49	1
1,2-Dichlorobenzene	ND		3.8	0.22	ug/L		06/01/20 15:05	06/05/20 12:49	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		9.6	0.22	ug/L		06/01/20 15:05	06/05/20 12:49	1
1,3-Dichlorobenzene	ND		9.6	0.29	ug/L		06/01/20 15:05	06/05/20 12:49	1
1,3-Dinitrobenzene	ND		9.6	1.9	ug/L		06/01/20 15:05	06/05/20 12:49	1
1,4-Dichlorobenzene	ND		3.8	1.2	ug/L		06/01/20 15:05	06/05/20 12:49	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-22-GW

Lab Sample ID: 280-137073-8

Date Collected: 05/28/20 15:10

Matrix: Water

Date Received: 05/29/20 15:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		19	0.43	ug/L		06/01/20 15:05	06/05/20 12:49	1
1-Methylnaphthalene	ND		3.8	0.22	ug/L		06/01/20 15:05	06/05/20 12:49	1
2,2'-oxybis[1-chloropropane]	ND		9.6	0.27	ug/L		06/01/20 15:05	06/05/20 12:49	1
2,3,4,6-Tetrachlorophenol	ND		48	1.9	ug/L		06/01/20 15:05	06/05/20 12:49	1
2,4,5-Trichlorophenol	ND		9.6	2.0	ug/L		06/01/20 15:05	06/05/20 12:49	1
2,4,6-Trichlorophenol	ND		9.6	0.28	ug/L		06/01/20 15:05	06/05/20 12:49	1
2,4-Dichlorophenol	ND		9.6	0.61	ug/L		06/01/20 15:05	06/05/20 12:49	1
2,4-Dimethylphenol	ND		9.6	0.55	ug/L		06/01/20 15:05	06/05/20 12:49	1
2,4-Dinitrophenol	ND		29	9.6	ug/L		06/01/20 15:05	06/05/20 12:49	1
2,4-Dinitrotoluene	ND		9.6	1.6	ug/L		06/01/20 15:05	06/05/20 12:49	1
2,6-Dichlorophenol	ND		9.6	1.3	ug/L		06/01/20 15:05	06/05/20 12:49	1
2,6-Dinitrotoluene	ND		9.6	1.8	ug/L		06/01/20 15:05	06/05/20 12:49	1
2-Chloronaphthalene	ND		3.8	0.25	ug/L		06/01/20 15:05	06/05/20 12:49	1
2-Chlorophenol	ND		9.6	1.9	ug/L		06/01/20 15:05	06/05/20 12:49	1
2-Methylnaphthalene	ND		3.8	1.4	ug/L		06/01/20 15:05	06/05/20 12:49	1
2-Methylphenol	ND		9.6	0.94	ug/L		06/01/20 15:05	06/05/20 12:49	1
2-Nitroaniline	ND	*	9.6	1.7	ug/L		06/01/20 15:05	06/05/20 12:49	1
2-Nitrophenol	ND		9.6	0.37	ug/L		06/01/20 15:05	06/05/20 12:49	1
3 & 4 Methylphenol	ND		9.6	0.24	ug/L		06/01/20 15:05	06/05/20 12:49	1
3,3'-Dichlorobenzidine	ND		48	1.9	ug/L		06/01/20 15:05	06/05/20 12:49	1
3-Methylphenol	ND		9.6	0.24	ug/L		06/01/20 15:05	06/05/20 12:49	1
3-Nitroaniline	ND		9.6	1.9	ug/L		06/01/20 15:05	06/05/20 12:49	1
4,6-Dinitro-2-methylphenol	ND		48	3.8	ug/L		06/01/20 15:05	06/05/20 12:49	1
4-Bromophenyl phenyl ether	ND		9.6	0.41	ug/L		06/01/20 15:05	06/05/20 12:49	1
4-Chloro-3-methylphenol	ND		9.6	2.3	ug/L		06/01/20 15:05	06/05/20 12:49	1
4-Chloroaniline	ND		9.6	2.0	ug/L		06/01/20 15:05	06/05/20 12:49	1
4-Chlorophenyl phenyl ether	ND		9.6	1.6	ug/L		06/01/20 15:05	06/05/20 12:49	1
4-Methylphenol	ND		9.6	0.24	ug/L		06/01/20 15:05	06/05/20 12:49	1
4-Nitroaniline	ND		9.6	1.9	ug/L		06/01/20 15:05	06/05/20 12:49	1
4-Nitrophenol	ND		9.6	1.2	ug/L		06/01/20 15:05	06/05/20 12:49	1
Acenaphthene	ND		3.8	0.27	ug/L		06/01/20 15:05	06/05/20 12:49	1
Acenaphthylene	ND		3.8	0.47	ug/L		06/01/20 15:05	06/05/20 12:49	1
Acetophenone	ND		9.6	0.23	ug/L		06/01/20 15:05	06/05/20 12:49	1
Aniline	ND		9.6	1.9	ug/L		06/01/20 15:05	06/05/20 12:49	1
Anthracene	ND		3.8	0.40	ug/L		06/01/20 15:05	06/05/20 12:49	1
Azobenzene	ND		3.8	0.22	ug/L		06/01/20 15:05	06/05/20 12:49	1
Benzaldehyde	ND		4.8	1.9	ug/L		06/01/20 15:05	06/05/20 12:49	1
Benzidine	ND	**1	96	48	ug/L		06/01/20 15:05	06/05/20 12:49	1
Benzo[a]anthracene	ND		3.8	0.33	ug/L		06/01/20 15:05	06/05/20 12:49	1
Benzo[a]pyrene	ND		3.8	0.30	ug/L		06/01/20 15:05	06/05/20 12:49	1
Benzo[b]fluoranthene	ND		3.8	0.51	ug/L		06/01/20 15:05	06/05/20 12:49	1
Benzo[g,h,i]perylene	ND		3.8	0.48	ug/L		06/01/20 15:05	06/05/20 12:49	1
Benzo[k]fluoranthene	ND		3.8	0.44	ug/L		06/01/20 15:05	06/05/20 12:49	1
Benzoic acid	ND		24	9.6	ug/L		06/01/20 15:05	06/05/20 12:49	1
Benzyl alcohol	ND		9.6	0.22	ug/L		06/01/20 15:05	06/05/20 12:49	1
Bis(2-chloroethoxy)methane	ND		9.6	0.93	ug/L		06/01/20 15:05	06/05/20 12:49	1
Bis(2-chloroethyl)ether	ND		9.6	0.79	ug/L		06/01/20 15:05	06/05/20 12:49	1
Bis(2-ethylhexyl) phthalate	ND		9.6	0.54	ug/L		06/01/20 15:05	06/05/20 12:49	1
Butyl benzyl phthalate	ND		3.8	0.96	ug/L		06/01/20 15:05	06/05/20 12:49	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-22-GW

Date Collected: 05/28/20 15:10

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Caprolactam	ND		4.8	2.4	ug/L		06/01/20 15:05	06/05/20 12:49	1
Carbazole	ND		3.8	0.41	ug/L		06/01/20 15:05	06/05/20 12:49	1
Chrysene	ND		3.8	0.52	ug/L		06/01/20 15:05	06/05/20 12:49	1
Dibenz(a,h)anthracene	ND		3.8	0.49	ug/L		06/01/20 15:05	06/05/20 12:49	1
Dibenzofuran	ND		3.8	0.28	ug/L		06/01/20 15:05	06/05/20 12:49	1
Diethyl phthalate	ND		3.8	0.36	ug/L		06/01/20 15:05	06/05/20 12:49	1
Dimethyl phthalate	ND		3.8	0.20	ug/L		06/01/20 15:05	06/05/20 12:49	1
Di-n-butyl phthalate	ND		3.8	1.1	ug/L		06/01/20 15:05	06/05/20 12:49	1
Di-n-octyl phthalate	ND		3.8	0.33	ug/L		06/01/20 15:05	06/05/20 12:49	1
Diphenylamine	ND		9.6	1.0	ug/L		06/01/20 15:05	06/05/20 12:49	1
Famphur	ND		96	1.5	ug/L		06/01/20 15:05	06/05/20 12:49	1
Fluoranthene	ND		3.8	0.19	ug/L		06/01/20 15:05	06/05/20 12:49	1
Fluorene	ND		3.8	0.30	ug/L		06/01/20 15:05	06/05/20 12:49	1
Hexachlorobenzene	ND		9.6	0.63	ug/L		06/01/20 15:05	06/05/20 12:49	1
Hexachlorobutadiene	ND		9.6	3.2	ug/L		06/01/20 15:05	06/05/20 12:49	1
Hexachlorocyclopentadiene	ND		48	3.0	ug/L		06/01/20 15:05	06/05/20 12:49	1
Hexachloroethane	ND		9.6	0.94	ug/L		06/01/20 15:05	06/05/20 12:49	1
Hexadecane	ND		9.6	0.52	ug/L		06/01/20 15:05	06/05/20 12:49	1
Indeno[1,2,3-cd]pyrene	ND		3.8	0.62	ug/L		06/01/20 15:05	06/05/20 12:49	1
Isophorone	ND		9.6	0.20	ug/L		06/01/20 15:05	06/05/20 12:49	1
Naphthalene	ND		3.8	0.28	ug/L		06/01/20 15:05	06/05/20 12:49	1
Nitrobenzene	ND		9.6	0.77	ug/L		06/01/20 15:05	06/05/20 12:49	1
N-Nitrosodimethylamine	ND		9.6	0.28	ug/L		06/01/20 15:05	06/05/20 12:49	1
N-Nitrosodi-n-propylamine	ND		9.6	0.33	ug/L		06/01/20 15:05	06/05/20 12:49	1
N-Nitrosodiphenylamine	ND		9.6	0.42	ug/L		06/01/20 15:05	06/05/20 12:49	1
Pentachlorophenol	ND		48	19	ug/L		06/01/20 15:05	06/05/20 12:49	1
Phenanthrene	ND		3.8	0.25	ug/L		06/01/20 15:05	06/05/20 12:49	1
Phenol	ND		9.6	1.9	ug/L		06/01/20 15:05	06/05/20 12:49	1
Pyrene	ND		9.6	0.35	ug/L		06/01/20 15:05	06/05/20 12:49	1
Pyridine	ND		19	1.6	ug/L		06/01/20 15:05	06/05/20 12:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	55		48 - 120	06/01/20 15:05	06/05/20 12:49	1
2-Fluorophenol (Surr)	10	X	41 - 120	06/01/20 15:05	06/05/20 12:49	1
2,4,6-Tribromophenol (Surr)	3	X	42 - 131	06/01/20 15:05	06/05/20 12:49	1
Nitrobenzene-d5 (Surr)	75		42 - 120	06/01/20 15:05	06/05/20 12:49	1
Phenol-d5 (Surr)	18	X	45 - 124	06/01/20 15:05	06/05/20 12:49	1
Terphenyl-d14 (Surr)	29		20 - 130	06/01/20 15:05	06/05/20 12:49	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12

Date Collected: 05/29/20 08:50

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-9

Matrix: Solid

Percent Solids: 89.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		360	26	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
1,2,4,5-Tetrachlorobenzene	ND		360	53	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
1,2,4-Trichlorobenzene	ND		360	30	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
1,2-Dichlorobenzene	ND	F1	360	24	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		360	24	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
1,3-Dichlorobenzene	ND	F1	360	13	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12

Lab Sample ID: 280-137073-9

Date Collected: 05/29/20 08:50

Matrix: Solid

Date Received: 05/29/20 15:50

Percent Solids: 89.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dinitrobenzene	ND		360	77	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
1,4-Dichlorobenzene	ND	F1	360	15	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
1,4-Dioxane	ND	F1	710	71	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
1-Methylnaphthalene	ND		360	12	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
2,2'-oxybis[1-chloropropane]	ND		360	25	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
2,3,4,6-Tetrachlorophenol	ND		1700	150	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
2,4,5-Trichlorophenol	ND		360	11	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
2,4,6-Trichlorophenol	ND		360	11	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
2,4-Dichlorophenol	ND		360	11	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
2,4-Dimethylphenol	ND		360	71	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
2,4-Dinitrophenol	ND		1700	360	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
2,4-Dinitrotoluene	ND		360	71	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
2,6-Dichlorophenol	ND		360	24	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
2,6-Dinitrotoluene	ND		360	30	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
2-Chloronaphthalene	ND		360	11	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
2-Chlorophenol	ND		360	23	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
2-Methylnaphthalene	ND		360	21	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
2-Methylphenol	ND		360	14	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
2-Nitroaniline	ND		1700	54	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
2-Nitrophenol	ND		360	11	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
3 & 4 Methylphenol	ND		360	36	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
3,3'-Dichlorobenzidine	ND		710	97	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
3-Methylphenol	ND		360	36	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
3-Nitroaniline	ND		1700	79	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
4,6-Dinitro-2-methylphenol	ND		1700	360	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
4-Bromophenyl phenyl ether	ND		360	21	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
4-Chloro-3-methylphenol	ND		360	27	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
4-Chloroaniline	ND		360	88	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
4-Chlorophenyl phenyl ether	ND		360	23	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
4-Methylphenol	ND		360	36	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
4-Nitroaniline	ND		1700	78	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
4-Nitrophenol	ND		1700	100	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Acenaphthene	ND		360	11	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Acenaphthylene	ND		360	89	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Acetophenone	ND		360	22	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Aniline	ND		360	140	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Anthracene	ND		360	18	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Azobenzene	ND		360	24	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Benzaldehyde	ND		360	72	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Benzidine	ND	F1	3600	1100	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Benzo[a]anthracene	ND		360	22	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Benzo[a]pyrene	ND		360	22	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Benzo[b]fluoranthene	ND		360	28	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Benzo[g,h,i]perylene	ND		360	17	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Benzo[k]fluoranthene	ND		360	43	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Benzoic acid	ND		1700	360	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Benzyl alcohol	ND		360	11	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Bis(2-chloroethoxy)methane	ND		360	25	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Bis(2-chloroethyl)ether	ND	F1	360	18	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12

Date Collected: 05/29/20 08:50

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-9

Matrix: Solid

Percent Solids: 89.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	ND		360	50	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Butyl benzyl phthalate	ND		360	46	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Caprolactam	ND		360	110	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Carbazole	ND		360	39	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Chrysene	ND		360	29	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Dibenz(a,h)anthracene	ND		360	21	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Dibenzofuran	ND		360	22	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Diethyl phthalate	ND		710	28	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Dimethyl phthalate	ND		360	25	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Di-n-butyl phthalate	ND		360	31	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Di-n-octyl phthalate	ND		360	44	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Diphenylamine	ND		360	48	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Famphur	ND		710	37	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Fluoranthene	ND		360	39	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Fluorene	ND		360	19	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Hexachlorobenzene	ND		360	31	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Hexachlorobutadiene	ND		360	11	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Hexachlorocyclopentadiene	ND		1700	120	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Hexachloroethane	ND	F1	360	23	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Hexadecane	19	J	360	14	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Indeno[1,2,3-cd]pyrene	ND		360	24	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Isophorone	ND		360	18	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Naphthalene	ND		360	33	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Nitrobenzene	ND		360	24	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
N-Nitrosodimethylamine	ND	F1	360	40	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
N-Nitrosodi-n-propylamine	ND		360	73	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
N-Nitrosodiphenylamine	ND		360	23	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Pentachlorophenol	ND		1700	360	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Phenanthrene	ND		360	18	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Phenol	ND		360	19	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Pyrene	18	J	360	13	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1
Pyridine	ND		710	43	ug/Kg	☼	06/10/20 13:55	06/12/20 15:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	80		35 - 120	06/10/20 13:55	06/12/20 15:34	1
2-Fluorobiphenyl	72		46 - 120	06/10/20 13:55	06/12/20 15:34	1
2-Fluorophenol (Surr)	69		43 - 120	06/10/20 13:55	06/12/20 15:34	1
Nitrobenzene-d5 (Surr)	61		46 - 120	06/10/20 13:55	06/12/20 15:34	1
Phenol-d5 (Surr)	76		46 - 120	06/10/20 13:55	06/12/20 15:34	1
Terphenyl-d14 (Surr)	90		46 - 120	06/10/20 13:55	06/12/20 15:34	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-20-22

Date Collected: 05/29/20 09:15

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-10

Matrix: Solid

Percent Solids: 90.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		350	25	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
1,2,4,5-Tetrachlorobenzene	ND		350	51	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
1,2,4-Trichlorobenzene	ND		350	29	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
1,2-Dichlorobenzene	ND		350	23	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-20-22

Lab Sample ID: 280-137073-10

Date Collected: 05/29/20 09:15

Matrix: Solid

Date Received: 05/29/20 15:50

Percent Solids: 90.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Diphenylhydrazine(as Azobenzene)	ND		350	23	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
1,3-Dichlorobenzene	ND		350	13	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
1,3-Dinitrobenzene	ND		350	74	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
1,4-Dichlorobenzene	ND		350	14	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
1,4-Dioxane	ND		690	69	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
1-Methylnaphthalene	ND		350	12	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
2,2'-oxybis[1-chloropropane]	ND		350	24	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
2,3,4,6-Tetrachlorophenol	ND		1700	140	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
2,4,5-Trichlorophenol	ND		350	10	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
2,4,6-Trichlorophenol	ND		350	10	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
2,4-Dichlorophenol	ND		350	10	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
2,4-Dimethylphenol	ND		350	69	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
2,4-Dinitrophenol	ND		1700	350	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
2,4-Dinitrotoluene	ND		350	69	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
2,6-Dichlorophenol	ND		350	23	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
2,6-Dinitrotoluene	ND		350	29	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
2-Chloronaphthalene	ND		350	10	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
2-Chlorophenol	ND		350	22	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
2-Methylnaphthalene	ND		350	20	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
2-Methylphenol	ND		350	14	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
2-Nitroaniline	ND		1700	52	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
2-Nitrophenol	ND		350	10	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
3 & 4 Methylphenol	ND		350	35	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
3,3'-Dichlorobenzidine	ND		690	94	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
3-Methylphenol	ND		350	35	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
3-Nitroaniline	ND		1700	76	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
4,6-Dinitro-2-methylphenol	ND		1700	350	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
4-Bromophenyl phenyl ether	ND		350	20	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
4-Chloro-3-methylphenol	ND		350	26	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
4-Chloroaniline	ND		350	86	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
4-Chlorophenyl phenyl ether	ND		350	22	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
4-Methylphenol	ND		350	35	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
4-Nitroaniline	ND		1700	76	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
4-Nitrophenol	ND		1700	100	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Acenaphthene	ND		350	11	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Acenaphthylene	ND		350	86	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Acetophenone	ND		350	21	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Aniline	ND		350	140	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Anthracene	ND		350	18	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Azobenzene	ND		350	23	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Benzaldehyde	ND		350	70	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Benzidine	ND		3500	1000	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Benzo[a]anthracene	ND		350	21	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Benzo[a]pyrene	ND		350	21	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Benzo[b]fluoranthene	ND		350	27	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Benzo[g,h,i]perylene	ND		350	17	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Benzo[k]fluoranthene	ND		350	42	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Benzoic acid	ND		1700	350	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Benzyl alcohol	ND		350	10	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-20-22

Date Collected: 05/29/20 09:15

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-10

Matrix: Solid

Percent Solids: 90.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethoxy)methane	ND		350	24	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Bis(2-chloroethyl)ether	ND		350	17	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Bis(2-ethylhexyl) phthalate	ND		350	48	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Butyl benzyl phthalate	ND		350	45	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Caprolactam	ND		350	110	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Carbazole	ND		350	38	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Chrysene	ND		350	28	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Dibenz(a,h)anthracene	ND		350	20	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Dibenzofuran	ND		350	21	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Diethyl phthalate	ND		690	27	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Dimethyl phthalate	ND		350	24	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Di-n-butyl phthalate	ND		350	30	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Di-n-octyl phthalate	ND		350	42	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Diphenylamine	ND		350	46	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Famphur	ND		690	36	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Fluoranthene	ND		350	38	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Fluorene	ND		350	19	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Hexachlorobenzene	ND		350	30	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Hexachlorobutadiene	ND		350	10	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Hexachlorocyclopentadiene	ND		1700	120	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Hexachloroethane	ND		350	22	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Hexadecane	ND		350	14	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Indeno[1,2,3-cd]pyrene	ND		350	23	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Isophorone	ND		350	18	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Naphthalene	ND		350	32	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Nitrobenzene	ND		350	23	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
N-Nitrosodimethylamine	ND		350	39	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
N-Nitrosodi-n-propylamine	ND		350	71	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
N-Nitrosodiphenylamine	ND		350	22	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Pentachlorophenol	ND		1700	350	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Phenanthrene	ND		350	18	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Phenol	ND		350	19	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Pyrene	ND		350	13	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1
Pyridine	ND		690	42	ug/Kg	☼	06/10/20 13:55	06/12/20 16:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	86		35 - 120	06/10/20 13:55	06/12/20 16:56	1
2-Fluorobiphenyl	70		46 - 120	06/10/20 13:55	06/12/20 16:56	1
2-Fluorophenol (Surr)	67		43 - 120	06/10/20 13:55	06/12/20 16:56	1
Nitrobenzene-d5 (Surr)	62		46 - 120	06/10/20 13:55	06/12/20 16:56	1
Phenol-d5 (Surr)	75		46 - 120	06/10/20 13:55	06/12/20 16:56	1
Terphenyl-d14 (Surr)	96		46 - 120	06/10/20 13:55	06/12/20 16:56	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-21-2-3

Date Collected: 05/29/20 11:40

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-12

Matrix: Solid

Percent Solids: 89.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		350	26	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
1,2,4,5-Tetrachlorobenzene	ND		350	52	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
1,2,4-Trichlorobenzene	ND		350	30	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-21-2-3

Lab Sample ID: 280-137073-12

Date Collected: 05/29/20 11:40

Matrix: Solid

Date Received: 05/29/20 15:50

Percent Solids: 89.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		350	24	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		350	24	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
1,3-Dichlorobenzene	ND		350	13	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
1,3-Dinitrobenzene	ND		350	76	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
1,4-Dichlorobenzene	ND		350	15	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
1,4-Dioxane	ND		710	71	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
1-Methylnaphthalene	ND		350	12	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
2,2'-oxybis[1-chloropropane]	ND		350	25	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
2,3,4,6-Tetrachlorophenol	ND		1700	150	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
2,4,5-Trichlorophenol	ND		350	11	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
2,4,6-Trichlorophenol	ND		350	11	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
2,4-Dichlorophenol	ND		350	11	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
2,4-Dimethylphenol	ND		350	71	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
2,4-Dinitrophenol	ND		1700	360	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
2,4-Dinitrotoluene	ND		350	71	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
2,6-Dichlorophenol	ND		350	24	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
2,6-Dinitrotoluene	ND		350	30	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
2-Chloronaphthalene	ND		350	11	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
2-Chlorophenol	ND		350	22	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
2-Methylnaphthalene	ND		350	20	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
2-Methylphenol	ND		350	14	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
2-Nitroaniline	ND		1700	54	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
2-Nitrophenol	ND		350	11	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
3 & 4 Methylphenol	ND		350	35	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
3,3'-Dichlorobenzidine	ND		710	96	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
3-Methylphenol	ND		350	35	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
3-Nitroaniline	ND		1700	78	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
4,6-Dinitro-2-methylphenol	ND		1700	350	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
4-Bromophenyl phenyl ether	ND		350	20	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
4-Chloro-3-methylphenol	ND		350	27	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
4-Chloroaniline	ND		350	88	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
4-Chlorophenyl phenyl ether	ND		350	22	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
4-Methylphenol	ND		350	35	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
4-Nitroaniline	ND		1700	78	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
4-Nitrophenol	ND		1700	100	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Acenaphthene	ND		350	11	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Acenaphthylene	ND		350	88	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Acetophenone	ND		350	21	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Aniline	ND		350	140	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Anthracene	ND		350	18	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Azobenzene	ND		350	24	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Benzaldehyde	ND		350	72	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Benzidine	ND		3500	1100	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Benzo[a]anthracene	ND		350	21	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Benzo[a]pyrene	ND		350	21	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Benzo[b]fluoranthene	ND		350	28	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Benzo[g,h,i]perylene	ND		350	17	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Benzo[k]fluoranthene	ND		350	43	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Benzoic acid	ND		1700	350	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-21-2-3

Date Collected: 05/29/20 11:40

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-12

Matrix: Solid

Percent Solids: 89.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzyl alcohol	ND		350	11	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Bis(2-chloroethoxy)methane	ND		350	25	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Bis(2-chloroethyl)ether	ND		350	18	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Bis(2-ethylhexyl) phthalate	ND		350	49	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Butyl benzyl phthalate	ND		350	46	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Caprolactam	ND		350	110	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Carbazole	ND		350	39	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Chrysene	ND		350	29	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Dibenz(a,h)anthracene	ND		350	20	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Dibenzofuran	ND		350	21	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Diethyl phthalate	ND		710	28	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Dimethyl phthalate	ND		350	25	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Di-n-butyl phthalate	ND		350	31	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Di-n-octyl phthalate	ND		350	43	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Diphenylamine	ND		350	47	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Famphur	ND		710	36	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Fluoranthene	ND		350	39	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Fluorene	ND		350	19	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Hexachlorobenzene	ND		350	31	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Hexachlorobutadiene	ND		350	11	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Hexachlorocyclopentadiene	ND		1700	120	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Hexachloroethane	ND		350	23	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Hexadecane	ND		350	14	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Indeno[1,2,3-cd]pyrene	ND		350	24	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Isophorone	ND		350	18	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Naphthalene	ND		350	33	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Nitrobenzene	ND		350	24	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
N-Nitrosodimethylamine	ND		350	40	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
N-Nitrosodi-n-propylamine	ND		350	73	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
N-Nitrosodiphenylamine	ND		350	22	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Pentachlorophenol	ND		1700	350	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Phenanthrene	ND		350	18	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Phenol	ND		350	19	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Pyrene	ND		350	13	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1
Pyridine	ND		710	43	ug/Kg	☼	06/10/20 13:55	06/12/20 17:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	81		35 - 120	06/10/20 13:55	06/12/20 17:23	1
2-Fluorobiphenyl	63		46 - 120	06/10/20 13:55	06/12/20 17:23	1
2-Fluorophenol (Surr)	62		43 - 120	06/10/20 13:55	06/12/20 17:23	1
Nitrobenzene-d5 (Surr)	60		46 - 120	06/10/20 13:55	06/12/20 17:23	1
Phenol-d5 (Surr)	66		46 - 120	06/10/20 13:55	06/12/20 17:23	1
Terphenyl-d14 (Surr)	93		46 - 120	06/10/20 13:55	06/12/20 17:23	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-25-14-15

Date Collected: 05/29/20 14:50

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-15

Matrix: Solid

Percent Solids: 88.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		370	27	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
1,2,4,5-Tetrachlorobenzene	ND		370	54	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-25-14-15

Lab Sample ID: 280-137073-15

Date Collected: 05/29/20 14:50

Matrix: Solid

Date Received: 05/29/20 15:50

Percent Solids: 88.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		370	31	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
1,2-Dichlorobenzene	ND		370	24	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		370	24	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
1,3-Dichlorobenzene	ND		370	13	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
1,3-Dinitrobenzene	ND		370	79	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
1,4-Dichlorobenzene	ND		370	15	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
1,4-Dioxane	ND		730	73	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
1-Methylnaphthalene	ND		370	12	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
2,2'-oxybis[1-chloropropane]	ND		370	26	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
2,3,4,6-Tetrachlorophenol	ND		1800	150	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
2,4,5-Trichlorophenol	ND		370	11	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
2,4,6-Trichlorophenol	ND		370	11	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
2,4-Dichlorophenol	ND		370	11	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
2,4-Dimethylphenol	ND		370	73	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
2,4-Dinitrophenol	ND		1800	370	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
2,4-Dinitrotoluene	ND		370	73	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
2,6-Dichlorophenol	ND		370	25	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
2,6-Dinitrotoluene	ND		370	31	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
2-Chloronaphthalene	ND		370	11	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
2-Chlorophenol	ND		370	23	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
2-Methylnaphthalene	ND		370	21	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
2-Methylphenol	ND		370	14	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
2-Nitroaniline	ND		1800	56	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
2-Nitrophenol	ND		370	11	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
3 & 4 Methylphenol	ND		370	37	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
3,3'-Dichlorobenzidine	ND		730	100	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
3-Methylphenol	ND		370	37	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
3-Nitroaniline	ND		1800	81	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
4,6-Dinitro-2-methylphenol	ND		1800	370	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
4-Bromophenyl phenyl ether	ND		370	21	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
4-Chloro-3-methylphenol	ND		370	28	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
4-Chloroaniline	ND		370	91	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
4-Chlorophenyl phenyl ether	ND		370	23	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
4-Methylphenol	ND		370	37	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
4-Nitroaniline	ND		1800	81	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
4-Nitrophenol	ND		1800	110	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Acenaphthene	ND		370	11	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Acenaphthylene	ND		370	91	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Acetophenone	ND		370	22	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Aniline	ND		370	140	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Anthracene	ND		370	19	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Azobenzene	ND		370	24	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Benzaldehyde	ND		370	74	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Benzidine	ND		3700	1100	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Benzo[a]anthracene	ND		370	22	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Benzo[a]pyrene	ND		370	22	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Benzo[b]fluoranthene	ND		370	29	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Benzo[g,h,i]perylene	ND		370	18	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Benzo[k]fluoranthene	ND		370	44	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-25-14-15

Lab Sample ID: 280-137073-15

Date Collected: 05/29/20 14:50

Matrix: Solid

Date Received: 05/29/20 15:50

Percent Solids: 88.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzoic acid	ND		1800	370	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Benzyl alcohol	ND		370	11	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Bis(2-chloroethoxy)methane	ND		370	26	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Bis(2-chloroethyl)ether	ND		370	18	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Bis(2-ethylhexyl) phthalate	ND		370	51	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Butyl benzyl phthalate	ND		370	48	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Caprolactam	ND		370	120	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Carbazole	ND		370	40	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Chrysene	ND		370	30	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Dibenz(a,h)anthracene	ND		370	21	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Dibenzofuran	ND		370	22	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Diethyl phthalate	ND		730	29	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Dimethyl phthalate	ND		370	26	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Di-n-butyl phthalate	ND		370	32	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Di-n-octyl phthalate	ND		370	45	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Diphenylamine	ND		370	49	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Famphur	ND		730	38	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Fluoranthene	ND		370	40	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Fluorene	ND		370	20	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Hexachlorobenzene	ND		370	32	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Hexachlorobutadiene	ND		370	11	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Hexachlorocyclopentadiene	ND		1800	120	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Hexachloroethane	ND		370	24	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Hexadecane	ND		370	15	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Indeno[1,2,3-cd]pyrene	ND		370	24	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Isophorone	ND		370	19	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Naphthalene	ND		370	34	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Nitrobenzene	ND		370	24	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
N-Nitrosodimethylamine	ND		370	41	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
N-Nitrosodi-n-propylamine	ND		370	76	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
N-Nitrosodiphenylamine	ND		370	23	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Pentachlorophenol	ND		1800	370	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Phenanthrene	ND		370	19	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Phenol	ND		370	20	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Pyrene	ND		370	13	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1
Pyridine	ND		730	44	ug/Kg	☼	06/10/20 13:55	06/12/20 17:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	76		35 - 120	06/10/20 13:55	06/12/20 17:51	1
2-Fluorobiphenyl	67		46 - 120	06/10/20 13:55	06/12/20 17:51	1
2-Fluorophenol (Surr)	70		43 - 120	06/10/20 13:55	06/12/20 17:51	1
Nitrobenzene-d5 (Surr)	66		46 - 120	06/10/20 13:55	06/12/20 17:51	1
Phenol-d5 (Surr)	72		46 - 120	06/10/20 13:55	06/12/20 17:51	1
Terphenyl-d14 (Surr)	89		46 - 120	06/10/20 13:55	06/12/20 17:51	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-06-15-17

Date Collected: 05/28/20 09:30

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-1

Matrix: Solid

Percent Solids: 90.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.2	0.84	mg/Kg	☼	05/28/20 09:30	06/10/20 01:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	82		77 - 123				05/28/20 09:30	06/10/20 01:05	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-08-8-10

Date Collected: 05/28/20 10:55

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-2

Matrix: Solid

Percent Solids: 96.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.1	0.81	mg/Kg	☼	05/28/20 10:55	06/10/20 01:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	83		77 - 123				05/28/20 10:55	06/10/20 01:28	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-08-22-23

Date Collected: 05/28/20 11:25

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-3

Matrix: Solid

Percent Solids: 95.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.1	0.80	mg/Kg	☼	05/28/20 11:25	06/11/20 11:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	87		77 - 123				05/28/20 11:25	06/11/20 11:25	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-3-5

Date Collected: 05/28/20 12:45

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-4

Matrix: Solid

Percent Solids: 89.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.0	0.76	mg/Kg	☼	05/28/20 12:45	06/11/20 11:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	90		77 - 123				05/28/20 12:45	06/11/20 11:49	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-8-10

Date Collected: 05/28/20 13:05

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-5

Matrix: Solid

Percent Solids: 91.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.4	0.91	mg/Kg	☼	05/28/20 13:05	06/11/20 12:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	92		77 - 123				05/28/20 13:05	06/11/20 12:13	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-GW

Date Collected: 05/28/20 13:40

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		25	10	ug/L	-		06/10/20 16:28	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics) (Continued)

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	99		82 - 110					06/10/20 16:28	1
Client Sample ID: CDOT I270 Env-05/06_2020-SB-22-5-7 Date Collected: 05/28/20 15:00 Date Received: 05/29/20 15:50				Lab Sample ID: 280-137073-7 Matrix: Solid Percent Solids: 79.1					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.7	1.0	mg/Kg	☼	05/28/20 15:00	06/11/20 12:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	92		77 - 123				05/28/20 15:00	06/11/20 12:37	1
Client Sample ID: CDOT I270 Env-05/06_2020-SB-22-GW Date Collected: 05/28/20 15:10 Date Received: 05/29/20 15:50				Lab Sample ID: 280-137073-8 Matrix: Water					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		25	10	ug/L			06/10/20 16:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	104		82 - 110				05/28/20 15:00	06/11/20 12:37	1
Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12 Date Collected: 05/29/20 08:50 Date Received: 05/29/20 15:50				Lab Sample ID: 280-137073-9 Matrix: Solid Percent Solids: 89.6					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.3	0.85	mg/Kg	☼	05/29/20 08:50	06/11/20 13:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	82		77 - 123				05/29/20 08:50	06/11/20 13:00	1
Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-20-22 Date Collected: 05/29/20 09:15 Date Received: 05/29/20 15:50				Lab Sample ID: 280-137073-10 Matrix: Solid Percent Solids: 90.1					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.5	0.95	mg/Kg	☼	05/29/20 09:15	06/11/20 14:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	83		77 - 123				05/29/20 09:15	06/11/20 14:12	1
Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-GW Date Collected: 05/29/20 10:15 Date Received: 05/29/20 15:50				Lab Sample ID: 280-137073-11 Matrix: Water					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		25	10	ug/L			06/10/20 18:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	98		82 - 110				06/10/20 18:50	06/11/20 18:50	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-21-2-3

Date Collected: 05/29/20 11:40

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-12

Matrix: Solid

Percent Solids: 89.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.4	0.91	mg/Kg	☼	05/29/20 11:40	06/11/20 14:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	83		77 - 123				05/29/20 11:40	06/11/20 14:36	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-21-GW

Date Collected: 05/29/20 12:15

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-13

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	12	J	25	10	ug/L			06/10/20 19:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	100		82 - 110					06/10/20 19:13	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB02

Date Collected: 05/28/20 08:00

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-14

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		25	10	ug/L			06/10/20 12:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	103		82 - 110					06/10/20 12:08	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-25-14-15

Date Collected: 05/29/20 14:50

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-15

Matrix: Solid

Percent Solids: 88.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.3	0.88	mg/Kg	☼	05/29/20 14:50	06/11/20 15:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	83		77 - 123				05/29/20 14:50	06/11/20 15:00	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB02

Date Collected: 05/28/20 08:00

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-16

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.0	0.76	mg/Kg		05/28/20 08:00	06/11/20 11:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	88		77 - 123				05/28/20 08:00	06/11/20 11:02	1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-06-15-17

Date Collected: 05/28/20 09:30

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-1

Matrix: Solid

Percent Solids: 90.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	4.3	J	8.8	4.0	mg/Kg	☼	06/11/20 10:33	06/29/20 07:12	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-06-15-17

Date Collected: 05/28/20 09:30

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-1

Matrix: Solid

Percent Solids: 90.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil (C20-C38)	14	J	26	8.6	mg/Kg	☼	06/11/20 10:33	06/29/20 07:12	1
Surrogate	%Recovery	Qualifier	Limits						
<i>o</i> -Terphenyl (Surr)	70		49 - 115						
							Prepared	Analyzed	Dil Fac
							06/11/20 10:33	06/29/20 07:12	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-08-8-10

Date Collected: 05/28/20 10:55

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-2

Matrix: Solid

Percent Solids: 96.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		7.6	3.5	mg/Kg	☼	06/11/20 10:33	06/22/20 21:49	1
Motor Oil (C20-C38)	ND		23	7.5	mg/Kg	☼	06/11/20 10:33	06/22/20 21:49	1
Surrogate	%Recovery	Qualifier	Limits						
<i>o</i> -Terphenyl (Surr)	77		49 - 115						
							Prepared	Analyzed	Dil Fac
							06/11/20 10:33	06/22/20 21:49	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-08-22-23

Date Collected: 05/28/20 11:25

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-3

Matrix: Solid

Percent Solids: 95.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		7.7	3.5	mg/Kg	☼	06/11/20 10:33	06/22/20 22:11	1
Motor Oil (C20-C38)	ND		23	7.5	mg/Kg	☼	06/11/20 10:33	06/22/20 22:11	1
Surrogate	%Recovery	Qualifier	Limits						
<i>o</i> -Terphenyl (Surr)	79		49 - 115						
							Prepared	Analyzed	Dil Fac
							06/11/20 10:33	06/22/20 22:11	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-3-5

Date Collected: 05/28/20 12:45

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-4

Matrix: Solid

Percent Solids: 89.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	5.0	J	8.6	3.9	mg/Kg	☼	06/11/20 10:33	06/29/20 07:34	1
Motor Oil (C20-C38)	15	J	26	8.4	mg/Kg	☼	06/11/20 10:33	06/29/20 07:34	1
Surrogate	%Recovery	Qualifier	Limits						
<i>o</i> -Terphenyl (Surr)	71		49 - 115						
							Prepared	Analyzed	Dil Fac
							06/11/20 10:33	06/29/20 07:34	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-8-10

Date Collected: 05/28/20 13:05

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-5

Matrix: Solid

Percent Solids: 91.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		7.9	3.6	mg/Kg	☼	06/11/20 10:33	06/22/20 22:55	1
Motor Oil (C20-C38)	ND		24	7.8	mg/Kg	☼	06/11/20 10:33	06/22/20 22:55	1
Surrogate	%Recovery	Qualifier	Limits						
<i>o</i> -Terphenyl (Surr)	66		49 - 115						
							Prepared	Analyzed	Dil Fac
							06/11/20 10:33	06/22/20 22:55	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-GW

Date Collected: 05/28/20 13:40

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	0.27		0.25	0.032	mg/L		06/02/20 14:36	06/10/20 02:38	1
Motor Oil (C20-C38)	0.20	J	0.49	0.056	mg/L		06/02/20 14:36	06/10/20 02:38	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	75		50 - 115	06/02/20 14:36	06/10/20 02:38	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-22-5-7

Lab Sample ID: 280-137073-7

Date Collected: 05/28/20 15:00

Matrix: Solid

Date Received: 05/29/20 15:50

Percent Solids: 79.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.6	4.4	mg/Kg	☼	06/11/20 10:33	06/22/20 23:17	1
Motor Oil (C20-C38)	ND		29	9.4	mg/Kg	☼	06/11/20 10:33	06/22/20 23:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	67		49 - 115	06/11/20 10:33	06/22/20 23:17	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-22-GW

Lab Sample ID: 280-137073-8

Date Collected: 05/28/20 15:10

Matrix: Water

Date Received: 05/29/20 15:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	0.17	J	0.25	0.033	mg/L	☼	06/02/20 14:36	06/10/20 03:22	1
Motor Oil (C20-C38)	0.16	J	0.51	0.057	mg/L	☼	06/02/20 14:36	06/10/20 03:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	79		50 - 115	06/02/20 14:36	06/10/20 03:22	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12

Lab Sample ID: 280-137073-9

Date Collected: 05/29/20 08:50

Matrix: Solid

Date Received: 05/29/20 15:50

Percent Solids: 89.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	6.3	J	8.6	3.9	mg/Kg	☼	06/11/20 10:33	06/29/20 07:55	1
Motor Oil (C20-C38)	20	J	26	8.4	mg/Kg	☼	06/11/20 10:33	06/29/20 07:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	71		49 - 115	06/11/20 10:33	06/29/20 07:55	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-20-22

Lab Sample ID: 280-137073-10

Date Collected: 05/29/20 09:15

Matrix: Solid

Date Received: 05/29/20 15:50

Percent Solids: 90.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		8.5	3.9	mg/Kg	☼	06/11/20 10:33	06/25/20 02:13	1
Motor Oil (C20-C38)	12	J	25	8.3	mg/Kg	☼	06/11/20 10:33	06/25/20 02:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	65		49 - 115	06/11/20 10:33	06/25/20 02:13	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-21-2-3

Lab Sample ID: 280-137073-12

Date Collected: 05/29/20 11:40

Matrix: Solid

Date Received: 05/29/20 15:50

Percent Solids: 89.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		8.6	3.9	mg/Kg	☼	06/11/20 10:33	06/23/20 03:38	1
Motor Oil (C20-C38)	ND		26	8.4	mg/Kg	☼	06/11/20 10:33	06/23/20 03:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	71		49 - 115	06/11/20 10:33	06/23/20 03:38	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-21-GW

Date Collected: 05/29/20 12:15

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-13

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	1.2		1.0	0.14	mg/L		06/02/20 14:36	06/10/20 03:00	1
Motor Oil (C20-C38)	1.7	J	2.1	0.23	mg/L		06/02/20 14:36	06/10/20 03:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	69		50 - 115				06/02/20 14:36	06/10/20 03:00	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-25-14-15

Date Collected: 05/29/20 14:50

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-15

Matrix: Solid

Percent Solids: 88.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		8.2	3.7	mg/Kg	☼	06/11/20 10:33	06/23/20 04:00	1
Motor Oil (C20-C38)	ND		25	8.0	mg/Kg	☼	06/11/20 10:33	06/23/20 04:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	73		49 - 115				06/11/20 10:33	06/23/20 04:00	1

Method: 8081B - Organochlorine Pesticides (GC)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-3-5

Date Collected: 05/28/20 12:45

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-4

Matrix: Solid

Percent Solids: 89.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan I	ND	*	3.7	0.38	ug/Kg	☼	06/09/20 13:05	06/11/20 17:34	1
Endosulfan II	ND	*	3.7	0.62	ug/Kg	☼	06/09/20 13:05	06/11/20 17:34	1
Endosulfan sulfate	ND	*	3.7	0.59	ug/Kg	☼	06/09/20 13:05	06/11/20 17:34	1
Endrin	ND	*	3.7	0.66	ug/Kg	☼	06/09/20 13:05	06/11/20 17:34	1
Endrin aldehyde	ND	*	3.7	1.2	ug/Kg	☼	06/09/20 13:05	06/11/20 17:34	1
Endrin ketone	ND	*	3.7	0.43	ug/Kg	☼	06/09/20 13:05	06/11/20 17:34	1
beta-BHC	ND	*	3.7	1.4	ug/Kg	☼	06/09/20 13:05	06/11/20 17:34	1
alpha-BHC	ND	*	3.7	0.46	ug/Kg	☼	06/09/20 13:05	06/11/20 17:34	1
delta-BHC	ND	*	3.7	0.86	ug/Kg	☼	06/09/20 13:05	06/11/20 17:34	1
gamma-BHC (Lindane)	ND	*	3.7	0.42	ug/Kg	☼	06/09/20 13:05	06/11/20 17:34	1
trans-Chlordane	ND	*	3.7	0.57	ug/Kg	☼	06/09/20 13:05	06/11/20 17:34	1
Dieldrin	ND	*	3.7	0.45	ug/Kg	☼	06/09/20 13:05	06/11/20 17:34	1
Heptachlor epoxide	ND	*	3.7	0.92	ug/Kg	☼	06/09/20 13:05	06/11/20 17:34	1
Heptachlor	ND	*	3.7	0.46	ug/Kg	☼	06/09/20 13:05	06/11/20 17:34	1
Aldrin	ND	*	3.7	0.54	ug/Kg	☼	06/09/20 13:05	06/11/20 17:34	1
4,4'-DDD	1.7	J *	3.7	1.2	ug/Kg	☼	06/09/20 13:05	06/11/20 17:34	1
4,4'-DDE	1.9	J *	3.7	0.51	ug/Kg	☼	06/09/20 13:05	06/11/20 17:34	1
4,4'-DDT	ND		3.7	1.3	ug/Kg	☼	06/09/20 13:05	06/11/20 17:34	1
Methoxychlor	ND	*	7.1	0.97	ug/Kg	☼	06/09/20 13:05	06/11/20 17:34	1
Toxaphene	ND		140	34	ug/Kg	☼	06/09/20 13:05	06/11/20 17:34	1
cis-Chlordane	ND	*	3.7	0.69	ug/Kg	☼	06/09/20 13:05	06/11/20 17:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	88		59 - 115				06/09/20 13:05	06/11/20 17:34	1
DCB Decachlorobiphenyl	92		63 - 124				06/09/20 13:05	06/11/20 17:34	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8081B - Organochlorine Pesticides (GC)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-8-10

Date Collected: 05/28/20 13:05

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-5

Matrix: Solid

Percent Solids: 91.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan I	ND	*	3.6	0.37	ug/Kg	☼	06/09/20 13:05	06/11/20 17:52	1
Endosulfan II	ND	*	3.6	0.60	ug/Kg	☼	06/09/20 13:05	06/11/20 17:52	1
Endosulfan sulfate	ND	*	3.6	0.58	ug/Kg	☼	06/09/20 13:05	06/11/20 17:52	1
Endrin	ND		3.6	0.64	ug/Kg	☼	06/09/20 13:05	06/11/20 17:52	1
Endrin aldehyde	ND	*	3.6	1.1	ug/Kg	☼	06/09/20 13:05	06/11/20 17:52	1
Endrin ketone	ND	*	3.6	0.42	ug/Kg	☼	06/09/20 13:05	06/11/20 17:52	1
beta-BHC	ND		3.6	1.4	ug/Kg	☼	06/09/20 13:05	06/11/20 17:52	1
alpha-BHC	ND	*	3.6	0.45	ug/Kg	☼	06/09/20 13:05	06/11/20 17:52	1
delta-BHC	ND	*	3.6	0.84	ug/Kg	☼	06/09/20 13:05	06/11/20 17:52	1
gamma-BHC (Lindane)	ND	*	3.6	0.41	ug/Kg	☼	06/09/20 13:05	06/11/20 17:52	1
trans-Chlordane	ND	*	3.6	0.56	ug/Kg	☼	06/09/20 13:05	06/11/20 17:52	1
Dieldrin	ND	*	3.6	0.44	ug/Kg	☼	06/09/20 13:05	06/11/20 17:52	1
Heptachlor epoxide	ND	*	3.6	0.89	ug/Kg	☼	06/09/20 13:05	06/11/20 17:52	1
Heptachlor	ND		3.6	0.45	ug/Kg	☼	06/09/20 13:05	06/11/20 17:52	1
Aldrin	ND	*	3.6	0.53	ug/Kg	☼	06/09/20 13:05	06/11/20 17:52	1
4,4'-DDD	ND	*	3.6	1.1	ug/Kg	☼	06/09/20 13:05	06/11/20 17:52	1
4,4'-DDE	ND	*	3.6	0.50	ug/Kg	☼	06/09/20 13:05	06/11/20 17:52	1
4,4'-DDT	ND		3.6	1.2	ug/Kg	☼	06/09/20 13:05	06/11/20 17:52	1
Methoxychlor	ND	*	6.9	0.94	ug/Kg	☼	06/09/20 13:05	06/11/20 17:52	1
Toxaphene	ND		140	33	ug/Kg	☼	06/09/20 13:05	06/11/20 17:52	1
cis-Chlordane	ND	*	3.6	0.68	ug/Kg	☼	06/09/20 13:05	06/11/20 17:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	95		59 - 115	06/09/20 13:05	06/11/20 17:52	1
DCB Decachlorobiphenyl	100		63 - 124	06/09/20 13:05	06/11/20 17:52	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-GW

Date Collected: 05/28/20 13:40

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan I	ND		0.050	0.0058	ug/L		06/02/20 16:13	06/08/20 11:27	1
Endosulfan II	ND		0.050	0.0066	ug/L		06/02/20 16:13	06/08/20 11:27	1
Endosulfan sulfate	ND		0.050	0.0049	ug/L		06/02/20 16:13	06/08/20 11:27	1
Endrin	ND		0.050	0.0086	ug/L		06/02/20 16:13	06/08/20 11:27	1
Endrin aldehyde	ND		0.050	0.0087	ug/L		06/02/20 16:13	06/08/20 11:27	1
Endrin ketone	ND		0.050	0.013	ug/L		06/02/20 16:13	06/08/20 11:27	1
beta-BHC	ND		0.050	0.0091	ug/L		06/02/20 16:13	06/08/20 11:27	1
alpha-BHC	ND	*	0.050	0.0097	ug/L		06/02/20 16:13	06/08/20 11:27	1
delta-BHC	ND		0.050	0.0078	ug/L		06/02/20 16:13	06/08/20 11:27	1
gamma-BHC (Lindane)	ND	*	0.050	0.010	ug/L		06/02/20 16:13	06/08/20 11:27	1
trans-Chlordane	ND		0.050	0.0072	ug/L		06/02/20 16:13	06/08/20 11:27	1
Dieldrin	ND		0.050	0.0046	ug/L		06/02/20 16:13	06/08/20 11:27	1
Heptachlor epoxide	ND		0.050	0.0032	ug/L		06/02/20 16:13	06/08/20 11:27	1
Heptachlor	ND		0.050	0.010	ug/L		06/02/20 16:13	06/08/20 11:27	1
Aldrin	ND		0.050	0.0062	ug/L		06/02/20 16:13	06/08/20 11:27	1
4,4'-DDD	ND		0.050	0.0042	ug/L		06/02/20 16:13	06/08/20 11:27	1
4,4'-DDE	ND		0.050	0.0042	ug/L		06/02/20 16:13	06/08/20 11:27	1
4,4'-DDT	ND		0.050	0.024	ug/L		06/02/20 16:13	06/08/20 11:27	1
Methoxychlor	ND		0.10	0.014	ug/L		06/02/20 16:13	06/08/20 11:27	1
Toxaphene	ND		3.0	1.5	ug/L		06/02/20 16:13	06/08/20 11:27	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-GW

Date Collected: 05/28/20 13:40

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-Chlordane	ND		0.050	0.0088	ug/L		06/02/20 16:13	06/08/20 11:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	79		28 - 115				06/02/20 16:13	06/08/20 11:27	1
DCB Decachlorobiphenyl	47		34 - 122				06/02/20 16:13	06/08/20 11:27	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-3-5

Date Collected: 05/28/20 12:45

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-4

Matrix: Solid

Percent Solids: 89.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND		100	34	ug/Kg	☼	06/09/20 13:05	06/12/20 04:52	1
PCB-1016	ND		71	11	ug/Kg	☼	06/09/20 13:05	06/12/20 04:52	1
PCB-1232	ND		71	11	ug/Kg	☼	06/09/20 13:05	06/12/20 04:52	1
PCB-1242	ND		71	20	ug/Kg	☼	06/09/20 13:05	06/12/20 04:52	1
PCB-1248	ND		71	5.1	ug/Kg	☼	06/09/20 13:05	06/12/20 04:52	1
PCB-1254	ND		71	12	ug/Kg	☼	06/09/20 13:05	06/12/20 04:52	1
PCB-1260	ND		71	2.5	ug/Kg	☼	06/09/20 13:05	06/12/20 04:52	1
PCB-1262	ND		71	5.9	ug/Kg	☼	06/09/20 13:05	06/12/20 04:52	1
PCB-1268	ND		71	2.9	ug/Kg	☼	06/09/20 13:05	06/12/20 04:52	1
Polychlorinated biphenyls, Total	ND		71	5.7	ug/Kg	☼	06/09/20 13:05	06/12/20 04:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	68		53 - 128				06/09/20 13:05	06/12/20 04:52	1
DCB Decachlorobiphenyl	83		59 - 130				06/09/20 13:05	06/12/20 04:52	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-8-10

Date Collected: 05/28/20 13:05

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-5

Matrix: Solid

Percent Solids: 91.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND		99	33	ug/Kg	☼	06/09/20 13:05	06/12/20 05:15	1
PCB-1016	ND		69	11	ug/Kg	☼	06/09/20 13:05	06/12/20 05:15	1
PCB-1232	ND		69	11	ug/Kg	☼	06/09/20 13:05	06/12/20 05:15	1
PCB-1242	ND		69	19	ug/Kg	☼	06/09/20 13:05	06/12/20 05:15	1
PCB-1248	ND		69	5.0	ug/Kg	☼	06/09/20 13:05	06/12/20 05:15	1
PCB-1254	ND		69	12	ug/Kg	☼	06/09/20 13:05	06/12/20 05:15	1
PCB-1260	ND		69	2.4	ug/Kg	☼	06/09/20 13:05	06/12/20 05:15	1
PCB-1262	ND		69	5.7	ug/Kg	☼	06/09/20 13:05	06/12/20 05:15	1
PCB-1268	ND		69	2.9	ug/Kg	☼	06/09/20 13:05	06/12/20 05:15	1
Polychlorinated biphenyls, Total	ND		69	5.6	ug/Kg	☼	06/09/20 13:05	06/12/20 05:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	78		53 - 128				06/09/20 13:05	06/12/20 05:15	1
DCB Decachlorobiphenyl	90		59 - 130				06/09/20 13:05	06/12/20 05:15	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-GW

Date Collected: 05/28/20 13:40

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND		1.0	0.18	ug/L		06/02/20 16:13	06/13/20 23:27	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-GW

Date Collected: 05/28/20 13:40

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		1.0	0.17	ug/L		06/02/20 16:13	06/13/20 23:27	1
PCB-1232	ND		1.0	0.13	ug/L		06/02/20 16:13	06/13/20 23:27	1
PCB-1242	ND		1.0	0.10	ug/L		06/02/20 16:13	06/13/20 23:27	1
PCB-1248	ND		1.0	0.17	ug/L		06/02/20 16:13	06/13/20 23:27	1
PCB-1254	ND		1.0	0.14	ug/L		06/02/20 16:13	06/13/20 23:27	1
PCB-1260	ND		1.0	0.089	ug/L		06/02/20 16:13	06/13/20 23:27	1
PCB-1262	ND		1.0	0.094	ug/L		06/02/20 16:13	06/13/20 23:27	1
PCB-1268	ND		1.0	0.37	ug/L		06/02/20 16:13	06/13/20 23:27	1
Polychlorinated biphenyls, Total	ND		1.0	0.073	ug/L		06/02/20 16:13	06/13/20 23:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	71		29 - 115				06/02/20 16:13	06/13/20 23:27	1
DCB Decachlorobiphenyl	51		26 - 135				06/02/20 16:13	06/13/20 23:27	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-06-15-17

Date Collected: 05/28/20 09:30

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-1

Matrix: Solid

Percent Solids: 90.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.5		0.59	0.050	mg/Kg	☼	06/04/20 15:20	06/08/20 21:10	1
Silver	40	J	92	7.2	ug/Kg	☼	06/04/20 17:00	06/08/20 16:54	1
Barium	140	B	0.39	0.070	mg/Kg	☼	06/04/20 15:20	06/08/20 21:10	1
Cadmium	0.21		0.099	0.0093	mg/Kg	☼	06/04/20 15:20	06/08/20 21:10	1
Chromium	13		0.20	0.075	mg/Kg	☼	06/04/20 15:20	06/08/20 21:10	1
Lead	19		0.15	0.018	mg/Kg	☼	06/04/20 15:20	06/08/20 21:10	1
Selenium	0.23	J	0.49	0.13	mg/Kg	☼	06/04/20 15:20	06/08/20 21:10	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-08-8-10

Date Collected: 05/28/20 10:55

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-2

Matrix: Solid

Percent Solids: 96.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.7		0.60	0.050	mg/Kg	☼	06/04/20 15:20	06/08/20 21:13	1
Silver	36	J	76	6.0	ug/Kg	☼	06/04/20 17:00	06/08/20 16:57	1
Barium	130	B	0.40	0.070	mg/Kg	☼	06/04/20 15:20	06/08/20 21:13	1
Cadmium	0.062	J	0.10	0.0093	mg/Kg	☼	06/04/20 15:20	06/08/20 21:13	1
Chromium	7.7		0.20	0.076	mg/Kg	☼	06/04/20 15:20	06/08/20 21:13	1
Lead	7.0		0.15	0.018	mg/Kg	☼	06/04/20 15:20	06/08/20 21:13	1
Selenium	0.14	J	0.50	0.13	mg/Kg	☼	06/04/20 15:20	06/08/20 21:13	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-08-22-23

Date Collected: 05/28/20 11:25

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-3

Matrix: Solid

Percent Solids: 95.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.4		0.58	0.049	mg/Kg	☼	06/04/20 15:20	06/08/20 21:28	1
Silver	8.6	J	85	6.7	ug/Kg	☼	06/04/20 17:00	06/08/20 17:01	1
Barium	86	B	0.39	0.068	mg/Kg	☼	06/04/20 15:20	06/08/20 21:28	1
Cadmium	0.059	J	0.096	0.0090	mg/Kg	☼	06/04/20 15:20	06/08/20 21:28	1
Chromium	4.4		0.19	0.073	mg/Kg	☼	06/04/20 15:20	06/08/20 21:28	1
Lead	4.6		0.14	0.018	mg/Kg	☼	06/04/20 15:20	06/08/20 21:28	1
Selenium	ND		0.48	0.13	mg/Kg	☼	06/04/20 15:20	06/08/20 21:28	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-3-5

Date Collected: 05/28/20 12:45

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-4

Matrix: Solid

Percent Solids: 89.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.4		0.66	0.056	mg/Kg	☼	06/04/20 15:20	06/08/20 21:32	1
Silver	12	J	98	7.7	ug/Kg	☼	06/04/20 17:00	06/08/20 17:05	1
Barium	55	B	0.44	0.077	mg/Kg	☼	06/04/20 15:20	06/08/20 21:32	1
Cadmium	0.21		0.11	0.010	mg/Kg	☼	06/04/20 15:20	06/08/20 21:32	1
Chromium	5.6		0.22	0.083	mg/Kg	☼	06/04/20 15:20	06/08/20 21:32	1
Lead	22		0.16	0.020	mg/Kg	☼	06/04/20 15:20	06/08/20 21:32	1
Selenium	ND		0.55	0.15	mg/Kg	☼	06/04/20 15:20	06/08/20 21:32	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-8-10

Date Collected: 05/28/20 13:05

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-5

Matrix: Solid

Percent Solids: 91.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.77		0.52	0.044	mg/Kg	☼	06/04/20 15:20	06/08/20 21:35	1
Silver	11	J	93	7.2	ug/Kg	☼	06/04/20 17:00	06/08/20 17:08	1
Barium	30	B	0.35	0.062	mg/Kg	☼	06/04/20 15:20	06/08/20 21:35	1
Cadmium	0.047	J	0.087	0.0082	mg/Kg	☼	06/04/20 15:20	06/08/20 21:35	1
Chromium	3.4		0.17	0.066	mg/Kg	☼	06/04/20 15:20	06/08/20 21:35	1
Lead	3.3		0.13	0.016	mg/Kg	☼	06/04/20 15:20	06/08/20 21:35	1
Selenium	ND		0.44	0.12	mg/Kg	☼	06/04/20 15:20	06/08/20 21:35	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-GW

Date Collected: 05/28/20 13:40

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	210		5.0	0.33	ug/L		06/02/20 15:45	06/03/20 21:10	1
Barium	5000		10	2.9	ug/L		06/02/20 15:45	06/04/20 23:52	10
Cadmium	9.9		1.0	0.27	ug/L		06/02/20 15:45	06/03/20 21:10	1
Chromium	300		2.0	0.50	ug/L		06/02/20 15:45	06/03/20 21:10	1
Lead	520		10	1.8	ug/L		06/02/20 15:45	06/04/20 23:52	10
Selenium	7.4		5.0	0.37	ug/L		06/02/20 15:45	06/03/20 21:10	1
Silver	1.1	J	5.0	0.033	ug/L		06/02/20 15:45	06/03/20 21:10	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-22-5-7

Date Collected: 05/28/20 15:00

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-7

Matrix: Solid

Percent Solids: 79.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.6		0.58	0.049	mg/Kg	☼	06/04/20 15:20	06/08/20 21:39	1
Silver	19	J	100	7.9	ug/Kg	☼	06/04/20 17:00	06/08/20 17:12	1
Barium	260	B	0.39	0.068	mg/Kg	☼	06/04/20 15:20	06/08/20 21:39	1
Cadmium	0.12		0.097	0.0091	mg/Kg	☼	06/04/20 15:20	06/08/20 21:39	1
Chromium	13		0.19	0.074	mg/Kg	☼	06/04/20 15:20	06/08/20 21:39	1
Lead	14		0.15	0.018	mg/Kg	☼	06/04/20 15:20	06/08/20 21:39	1
Selenium	0.33	J	0.48	0.13	mg/Kg	☼	06/04/20 15:20	06/08/20 21:39	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-22-GW

Date Collected: 05/28/20 15:10

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	31		5.0	0.33	ug/L		06/02/20 15:45	06/03/20 21:14	1
Barium	1400		1.0	0.29	ug/L		06/02/20 15:45	06/03/20 21:14	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 6020A - Metals (ICP/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-22-GW

Date Collected: 05/28/20 15:10

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	1.7		1.0	0.27	ug/L		06/02/20 15:45	06/03/20 21:14	1
Chromium	48		2.0	0.50	ug/L		06/02/20 15:45	06/03/20 21:14	1
Lead	82		1.0	0.18	ug/L		06/02/20 15:45	06/04/20 23:55	1
Selenium	2.2	J	5.0	0.37	ug/L		06/02/20 15:45	06/03/20 21:14	1
Silver	0.30	J	5.0	0.033	ug/L		06/02/20 15:45	06/03/20 21:14	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12

Date Collected: 05/29/20 08:50

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-9

Matrix: Solid

Percent Solids: 89.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.6		0.58	0.049	mg/Kg	☼	06/04/20 15:20	06/08/20 20:51	1
Silver	27	J	85	6.6	ug/Kg	☼	06/04/20 17:00	06/08/20 16:22	1
Barium	100	F2 B	0.39	0.068	mg/Kg	☼	06/04/20 15:20	06/08/20 20:51	1
Cadmium	0.14		0.097	0.0091	mg/Kg	☼	06/04/20 15:20	06/08/20 20:51	1
Chromium	7.5	F1	0.19	0.074	mg/Kg	☼	06/04/20 15:20	06/08/20 20:51	1
Lead	16	F1	0.15	0.018	mg/Kg	☼	06/04/20 15:20	06/08/20 20:51	1
Selenium	0.14	J F2	0.48	0.13	mg/Kg	☼	06/04/20 15:20	06/08/20 20:51	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-20-22

Date Collected: 05/29/20 09:15

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-10

Matrix: Solid

Percent Solids: 90.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.7		0.65	0.055	mg/Kg	☼	06/04/20 15:20	06/08/20 21:43	1
Silver	15	J	84	6.6	ug/Kg	☼	06/04/20 17:00	06/08/20 17:16	1
Barium	130	B	0.43	0.077	mg/Kg	☼	06/04/20 15:20	06/08/20 21:43	1
Cadmium	0.11		0.11	0.010	mg/Kg	☼	06/04/20 15:20	06/08/20 21:43	1
Chromium	11		0.22	0.083	mg/Kg	☼	06/04/20 15:20	06/08/20 21:43	1
Lead	9.2		0.16	0.020	mg/Kg	☼	06/04/20 15:20	06/08/20 21:43	1
Selenium	ND		0.54	0.14	mg/Kg	☼	06/04/20 15:20	06/08/20 21:43	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-21-2-3

Date Collected: 05/29/20 11:40

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-12

Matrix: Solid

Percent Solids: 89.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.55		0.46	0.039	mg/Kg	☼	06/04/20 15:20	06/08/20 21:46	1
Silver	6.8	J	81	6.3	ug/Kg	☼	06/04/20 17:00	06/08/20 17:19	1
Barium	31	B	0.30	0.054	mg/Kg	☼	06/04/20 15:20	06/08/20 21:46	1
Cadmium	0.054	J	0.076	0.0072	mg/Kg	☼	06/04/20 15:20	06/08/20 21:46	1
Chromium	1.9		0.15	0.058	mg/Kg	☼	06/04/20 15:20	06/08/20 21:46	1
Lead	2.7		0.11	0.014	mg/Kg	☼	06/04/20 15:20	06/08/20 21:46	1
Selenium	ND		0.38	0.10	mg/Kg	☼	06/04/20 15:20	06/08/20 21:46	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-25-14-15

Date Collected: 05/29/20 14:50

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-15

Matrix: Solid

Percent Solids: 88.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.9		0.64	0.054	mg/Kg	☼	06/04/20 15:20	06/08/20 21:50	1
Silver	29	J	100	8.0	ug/Kg	☼	06/04/20 17:00	06/08/20 17:23	1
Barium	1200	B ^	4.3	0.76	mg/Kg	☼	06/04/20 15:20	06/09/20 11:57	10
Cadmium	0.044	J	0.11	0.010	mg/Kg	☼	06/04/20 15:20	06/08/20 21:50	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 6020A - Metals (ICP/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-25-14-15

Date Collected: 05/29/20 14:50

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-15

Matrix: Solid

Percent Solids: 88.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	8.7		0.21	0.082	mg/Kg	☼	06/04/20 15:20	06/08/20 21:50	1
Lead	6.9		0.16	0.020	mg/Kg	☼	06/04/20 15:20	06/08/20 21:50	1
Selenium	0.16	J	0.54	0.14	mg/Kg	☼	06/04/20 15:20	06/08/20 21:50	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-GW

Date Collected: 05/28/20 13:40

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	1.2	B	0.20	0.027	ug/L		06/12/20 13:55	06/12/20 19:10	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-22-GW

Date Collected: 05/28/20 15:10

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.19	J B	0.20	0.027	ug/L		06/12/20 13:55	06/12/20 19:12	1

Method: 7471B - Mercury (CVAA)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-06-15-17

Date Collected: 05/28/20 09:30

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-1

Matrix: Solid

Percent Solids: 90.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		19	6.1	ug/Kg	☼	06/11/20 13:20	06/11/20 17:43	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-08-8-10

Date Collected: 05/28/20 10:55

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-2

Matrix: Solid

Percent Solids: 96.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		18	6.0	ug/Kg	☼	06/11/20 13:20	06/11/20 17:45	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-08-22-23

Date Collected: 05/28/20 11:25

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-3

Matrix: Solid

Percent Solids: 95.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		18	6.0	ug/Kg	☼	06/11/20 13:20	06/11/20 17:48	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-3-5

Date Collected: 05/28/20 12:45

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-4

Matrix: Solid

Percent Solids: 89.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	9.7	J	20	6.5	ug/Kg	☼	06/11/20 13:20	06/11/20 17:50	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-8-10

Date Collected: 05/28/20 13:05

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-5

Matrix: Solid

Percent Solids: 91.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		21	7.0	ug/Kg	☼	06/11/20 13:20	06/11/20 17:52	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 7471B - Mercury (CVAA)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-22-5-7

Date Collected: 05/28/20 15:00

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-7

Matrix: Solid

Percent Solids: 79.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	19	J	21	7.0	ug/Kg	☼	06/11/20 13:20	06/11/20 17:57	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12

Date Collected: 05/29/20 08:50

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-9

Matrix: Solid

Percent Solids: 89.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		22	7.3	ug/Kg	☼	06/11/20 13:20	06/11/20 18:04	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-20-22

Date Collected: 05/29/20 09:15

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-10

Matrix: Solid

Percent Solids: 90.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		21	6.9	ug/Kg	☼	06/11/20 13:20	06/11/20 18:11	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-21-2-3

Date Collected: 05/29/20 11:40

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-12

Matrix: Solid

Percent Solids: 89.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		19	6.2	ug/Kg	☼	06/11/20 13:20	06/11/20 18:13	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-25-14-15

Date Collected: 05/29/20 14:50

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-15

Matrix: Solid

Percent Solids: 88.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		20	6.4	ug/Kg	☼	06/11/20 13:20	06/11/20 18:15	1

General Chemistry

Client Sample ID: CDOT I270 Env-05/06_2020-SB-06-15-17

Date Collected: 05/28/20 09:30

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-1

Matrix: Solid

Percent Solids: 90.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	9.3		0.1	0.1	%			06/01/20 10:09	1
Percent Solids	90.7		0.1	0.1	%			06/01/20 10:09	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-08-8-10

Date Collected: 05/28/20 10:55

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-2

Matrix: Solid

Percent Solids: 96.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.0		0.1	0.1	%			06/01/20 10:09	1
Percent Solids	96.0		0.1	0.1	%			06/01/20 10:09	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-08-22-23

Date Collected: 05/28/20 11:25

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-3

Matrix: Solid

Percent Solids: 95.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.3		0.1	0.1	%			06/01/20 10:09	1
Percent Solids	95.7		0.1	0.1	%			06/01/20 10:09	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

General Chemistry

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-3-5

Date Collected: 05/28/20 12:45

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-4

Matrix: Solid

Percent Solids: 89.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	10.5		0.1	0.1	%			06/01/20 10:09	1
Percent Solids	89.5		0.1	0.1	%			06/01/20 10:09	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-8-10

Date Collected: 05/28/20 13:05

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-5

Matrix: Solid

Percent Solids: 91.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	8.4		0.1	0.1	%			06/01/20 10:09	1
Percent Solids	91.6		0.1	0.1	%			06/01/20 10:09	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-22-5-7

Date Collected: 05/28/20 15:00

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-7

Matrix: Solid

Percent Solids: 79.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	20.9		0.1	0.1	%			06/01/20 10:09	1
Percent Solids	79.1		0.1	0.1	%			06/01/20 10:09	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12

Date Collected: 05/29/20 08:50

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-9

Matrix: Solid

Percent Solids: 89.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	10.4		0.1	0.1	%			06/01/20 10:09	1
Percent Solids	89.6		0.1	0.1	%			06/01/20 10:09	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-20-22

Date Collected: 05/29/20 09:15

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-10

Matrix: Solid

Percent Solids: 90.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	9.9		0.1	0.1	%			06/01/20 10:09	1
Percent Solids	90.1		0.1	0.1	%			06/01/20 10:09	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-21-2-3

Date Collected: 05/29/20 11:40

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-12

Matrix: Solid

Percent Solids: 89.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	10.5		0.1	0.1	%			06/01/20 10:09	1
Percent Solids	89.5		0.1	0.1	%			06/01/20 10:09	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-25-14-15

Date Collected: 05/29/20 14:50

Date Received: 05/29/20 15:50

Lab Sample ID: 280-137073-15

Matrix: Solid

Percent Solids: 88.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	11.8		0.1	0.1	%			06/01/20 10:09	1
Percent Solids	88.2		0.1	0.1	%			06/01/20 10:09	1

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Surrogate Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (58-140)	BFB (76-127)	DBFM (75-121)	TOL (80-126)
280-137073-1	CDOT I270 Env-05/06_2020-SB	105	97	102	97
280-137073-1 - DL	CDOT I270 Env-05/06_2020-SB-06-15-17	99	98	98	99
280-137073-2	CDOT I270 Env-05/06_2020-SB-08-8-10	106	96	103	96
280-137073-3	CDOT I270 Env-05/06_2020-SB-08-22-23	108	97	104	97
280-137073-4	CDOT I270 Env-05/06_2020-SB-20-3-5	105	103	103	100
280-137073-5	CDOT I270 Env-05/06_2020-SB-20-8-10	106	96	103	97
280-137073-7	CDOT I270 Env-05/06_2020-SB-22-5-7	106	97	103	96
280-137073-9	CDOT I270 Env-05/06_2020-SB-02-10-12	105	99	103	98
280-137073-9 MS	CDOT I270 Env-05/06_2020-SB-02-10-12	104	97	103	96
280-137073-9 MSD	CDOT I270 Env-05/06_2020-SB-02-10-12	104	97	103	97
280-137073-10	CDOT I270 Env-05/06_2020-SB-02-20-22	108	96	104	97
280-137073-12	CDOT I270 Env-05/06_2020-SB-21-2-3	106	99	102	97
280-137073-15	CDOT I270 Env-05/06_2020-SB-25-14-15	107	96	102	98
280-137073-16	CDOT I270 Env-05/06_2020-SB-TB02	101	98	101	98
280-137073-16 - DL	CDOT I270 Env-05/06_2020-SB-TB02	101	96	100	97
LCS 280-497531/1-A	Lab Control Sample	100	96	101	97
LCS 280-497664/1-A	Lab Control Sample	102	97	102	97
LCS 280-498148/1-A	Lab Control Sample	105	95	104	94
LCSD 280-497664/2-A	Lab Control Sample Dup	98	96	101	98
LCSD 280-498148/2-A	Lab Control Sample Dup	103	95	103	95
MB 280-497531/2-A	Method Blank	103	97	101	98
MB 280-497664/3-A	Method Blank	98	99	98	99
MB 280-498148/3-A	Method Blank	106	97	104	96
MB 280-498148/4-A	Method Blank	100	95	100	96

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
 BFB = 4-Bromofluorobenzene (Surr)
 DBFM = Dibromofluoromethane (Surr)
 TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (70-127)	TOL (80-125)	BFB (78-120)	DBFM (77-120)
280-137073-6	CDOT I270 Env-05/06_2020-SB	105	104	106	98
280-137073-8	CDOT I270 Env-05/06_2020-SB-22-GW	103	105	107	96

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Surrogate Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (70-127)	TOL (80-125)	BFB (78-120)	DBFM (77-120)
280-137073-11	CDOT I270 Env-05/06_2020-SB	108	102	111	103
280-137073-13	CDOT I270	107	103	110	103
280-137073-14	Env-05/06_2020-SB-21-GW				
	CDOT I270	106	103	106	99
LCS 280-497959/5	Env-05/06_2020-SB-TB02				
	Lab Control Sample	101	103	105	96
LCS 280-498109/4	Lab Control Sample	104	102	112	100
LCS 280-497959/6	Lab Control Sample Dup	102	102	106	97
LCS 280-498109/5	Lab Control Sample Dup	102	106	109	102
MB 280-497959/10	Method Blank	102	102	106	97
MB 280-498109/9	Method Blank	106	100	108	103

Surrogate Legend
 DCA = 1,2-Dichloroethane-d4 (Surr)
 TOL = Toluene-d8 (Surr)
 BFB = 4-Bromofluorobenzene (Surr)
 DBFM = Dibromofluoromethane (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (35-120)	FBP (46-120)	2FP (43-120)	NBZ (46-120)	PHL (46-120)	TPHL (46-120)
280-137073-1	CDOT I270 Env-05/06_2020-SB	84	60	51	48	59	89
280-137073-2	CDOT I270	80	67	70	66	71	90
	Env-05/06_2020-SB-08-8-10						
280-137073-3	CDOT I270	80	63	64	62	68	94
	Env-05/06_2020-SB-08-22-23						
280-137073-4	CDOT I270	78	69	73	67	75	90
	Env-05/06_2020-SB-20-3-5						
280-137073-5	CDOT I270	73	60	63	59	64	90
	Env-05/06_2020-SB-20-8-10						
280-137073-7	CDOT I270	76	51	53	48	56	87
	Env-05/06_2020-SB-22-5-7						
280-137073-9	CDOT I270	80	72	69	61	76	90
	Env-05/06_2020-SB-02-10-12						
280-137073-9 MS	CDOT I270	78	68	57	54	69	91
	Env-05/06_2020-SB-02-10-12						
280-137073-9 MSD	CDOT I270	80	70	58	56	68	94
	Env-05/06_2020-SB-02-10-12						
280-137073-10	CDOT I270	86	70	67	62	75	96
	Env-05/06_2020-SB-02-20-22						
280-137073-12	CDOT I270	81	63	62	60	66	93
	Env-05/06_2020-SB-21-2-3						
280-137073-15	CDOT I270	76	67	70	66	72	89
	Env-05/06_2020-SB-25-14-15						
LCS 280-498186/2-A	Lab Control Sample	91	78	75	74	78	102
MB 280-498186/1-A	Method Blank	73	67	69	68	70	97

Surrogate Legend
 TBP = 2,4,6-Tribromophenol (Surr)
 FBP = 2-Fluorobiphenyl
 2FP = 2-Fluorophenol (Surr)
 NBZ = Nitrobenzene-d5 (Surr)

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Surrogate Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements
 PHL = Phenol-d5 (Surr)
 TPHL = Terphenyl-d14 (Surr)

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (48-120)	2FP (41-120)	TBP (42-131)	NBZ (42-120)	PHL (45-124)	TPHL (20-130)
280-137073-6	CDOT I270 Env-05/06_2020-SB	58	44	31 X	75	58	29
280-137073-8	CDOT I270 Env-05/06_2020-SB-22-GW	55	10 X	3 X	75	18 X	29
LCS 280-496919/2-A	Lab Control Sample	71	81	87	89	87	98
LCSD 280-496919/3-A	Lab Control Sample Dup	74	76	84	87	85	92
MB 280-496919/1-A	Method Blank	43 X	80	76	83	86	102

Surrogate Legend

FBP = 2-Fluorobiphenyl
 2FP = 2-Fluorophenol (Surr)
 TBP = 2,4,6-Tribromophenol (Surr)
 NBZ = Nitrobenzene-d5 (Surr)
 PHL = Phenol-d5 (Surr)
 TPHL = Terphenyl-d14 (Surr)

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		TFT1 (77-123)
280-137073-1	CDOT I270 Env-05/06_2020-SB	82
280-137073-2	CDOT I270	83
280-137073-3	Env-05/06_2020-SB-08-8-10 CDOT I270	87
280-137073-4	Env-05/06_2020-SB-08-22-23 CDOT I270	90
280-137073-5	Env-05/06_2020-SB-20-3-5 CDOT I270	92
280-137073-7	Env-05/06_2020-SB-20-8-10 CDOT I270	92
280-137073-9	Env-05/06_2020-SB-22-5-7 CDOT I270	82
280-137073-9 MS	Env-05/06_2020-SB-02-10-12 CDOT I270	83
280-137073-9 MSD	Env-05/06_2020-SB-02-10-12 CDOT I270	84
280-137073-10	Env-05/06_2020-SB-02-10-12 CDOT I270	83
280-137073-12	Env-05/06_2020-SB-02-20-22 CDOT I270	83
280-137073-15	Env-05/06_2020-SB-21-2-3 CDOT I270	83
280-137073-16	Env-05/06_2020-SB-25-14-15 CDOT I270	88
LCS 280-498014/1-A	Lab Control Sample	89
LCS 280-498230/1-A	Lab Control Sample	85
LCSD 280-498014/2-A	Lab Control Sample Dup	85
LCSD 280-498230/2-A	Lab Control Sample Dup	86
MB 280-498014/3-A	Method Blank	85
MB 280-498230/3-A	Method Blank	86

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Surrogate Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Surrogate Legend

TFT = a,a,a-Trifluorotoluene

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TFT1 (82-110)
280-137073-6	CDOT I270 Env-05/06_2020-SB	99
280-137073-8	CDOT I270	104
280-137073-11	Env-05/06_2020-SB-22-GW CDOT I270	98
280-137073-13	Env-05/06_2020-SB-02-GW CDOT I270	100
280-137073-14	Env-05/06_2020-SB-21-GW CDOT I270	103
LCS 280-498159/3	Env-05/06_2020-SB-TB02 Lab Control Sample	99
LCS 280-498159/4	Lab Control Sample Dup	98
MB 280-498159/5	Method Blank	100

Surrogate Legend

TFT = a,a,a-Trifluorotoluene

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTPH1 (49-115)
280-137073-1	CDOT I270 Env-05/06_2020-SB	70
280-137073-2	CDOT I270	77
280-137073-3	Env-05/06_2020-SB-08-8-10 CDOT I270	79
280-137073-4	Env-05/06_2020-SB-08-22-23 CDOT I270	71
280-137073-5	Env-05/06_2020-SB-20-3-5 CDOT I270	66
280-137073-7	Env-05/06_2020-SB-20-8-10 CDOT I270	67
280-137073-9	Env-05/06_2020-SB-22-5-7 CDOT I270	71
280-137073-9 MS	Env-05/06_2020-SB-02-10-12 CDOT I270	73
280-137073-9 MS	Env-05/06_2020-SB-02-10-12 CDOT I270	67
280-137073-9 MSD	Env-05/06_2020-SB-02-10-12 CDOT I270	73
280-137073-9 MSD	Env-05/06_2020-SB-02-10-12 CDOT I270	73
280-137073-10	Env-05/06_2020-SB-02-10-12 CDOT I270	65
280-137073-12	Env-05/06_2020-SB-02-20-22 CDOT I270	71
280-137073-15	Env-05/06_2020-SB-21-2-3 CDOT I270	73
LCS 280-498302/2-A	Env-05/06_2020-SB-25-14-15 Lab Control Sample	81
LCS 280-498302/3-A	Lab Control Sample	90
MB 280-498302/1-A	Method Blank	80

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Surrogate Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Surrogate Legend

OTPH = o-Terphenyl (Surr)

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTPH1 (50-115)
280-137073-6	CDOT I270 Env-05/06_2020-SB	75
280-137073-8	CDOT I270	79
280-137073-13	Env-05/06_2020-SB-22-GW	69
	CDOT I270	
LCS 280-497026/2-A	Env-05/06_2020-SB-21-GW	82
	Lab Control Sample	
LCS 280-497026/4-A	Lab Control Sample	88
LCS 280-497026/3-A	Lab Control Sample Dup	85
LCS 280-497026/5-A	Lab Control Sample Dup	90
MB 280-497026/1-A	Method Blank	78

Surrogate Legend

OTPH = o-Terphenyl (Surr)

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCX1 (59-115)	DCBP1 (63-124)
280-137073-4	CDOT I270 Env-05/06_2020-SB	88	92
280-137073-5	CDOT I270	95	100
	Env-05/06_2020-SB-20-8-10		
LCS 280-497995/2-A	Lab Control Sample	89	97
MB 280-497995/1-A	Method Blank	91	101

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCX1 (28-115)	DCBP1 (34-122)
280-137073-6	CDOT I270 Env-05/06_2020-SB	79	47
LCS 280-497041/2-A	Lab Control Sample	84	94
LCS 280-497041/3-A	Lab Control Sample Dup	86	96
MB 280-497041/1-A	Method Blank	94	86

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCX1 (53-128)	DCBP1 (59-130)
280-137073-4	CDOT I270 Env-05/06_2020-SB	68	83
280-137073-5	CDOT I270	78	90
LCS 280-497995/3-A	Env-05/06_2020-SB-20-8-10 Lab Control Sample	77	85
MB 280-497995/1-A	Method Blank	74	77

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCX1 (29-115)	DCBP1 (26-135)
280-137073-6	CDOT I270 Env-05/06_2020-SB	71	51
LCS 280-497041/4-A	Lab Control Sample	86	108
LCSD 280-497041/5-A	Lab Control Sample Dup	88	102
MB 280-497041/1-A	Method Blank	87	111

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-497531/2-A

Matrix: Solid

Analysis Batch: 497779

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 497531

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1-Trichloroethane	ND		5.0	2.0	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.29	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
1,1,2-Trichloroethane	ND		5.0	0.88	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
1,1,2-Trichlorotrifluoroethane	ND		20	1.7	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
1,1-Dichloroethane	ND		5.0	0.21	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
1,1-Dichloroethene	ND		5.0	0.59	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
1,2,3-Trichlorobenzene	ND		5.0	0.81	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
1,2,4-Trichlorobenzene	ND		5.0	0.73	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
1,2-Dibromo-3-Chloropropane	ND		10	3.7	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
1,2-Dibromoethane	ND		5.0	0.52	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
1,2-Dichlorobenzene	ND		5.0	1.9	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
1,2-Dichloroethane	ND		5.0	0.70	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
1,2-Dichloropropane	ND		5.0	0.55	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
1,3-Dichlorobenzene	ND		5.0	0.48	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
1,4-Dichlorobenzene	ND		5.0	0.25	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
1,4-Dioxane	ND		500	56	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
2-Butanone (MEK)	ND		20	3.9	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
2-Hexanone	ND		20	4.9	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.4	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
Acetone	ND		72	36	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
Benzene	ND		5.0	0.15	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
Bromoform	ND		5.1	2.6	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
Bromomethane	ND		10	1.4	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
Carbon disulfide	ND		5.0	1.7	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
Carbon tetrachloride	ND		5.0	2.0	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
Chlorobenzene	ND		5.0	2.1	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
Chlorobromomethane	ND		5.0	2.5	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
Chlorodibromomethane	ND		5.0	2.3	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
Chloroethane	ND		10	2.0	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
Chloroform	ND		10	0.29	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
Chloromethane	ND		10	0.77	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
cis-1,2-Dichloroethene	ND		2.5	0.20	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
cis-1,3-Dichloropropene	ND		5.0	0.10	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
Cyclohexane	ND		5.0	1.8	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
Dichlorobromomethane	ND		5.0	2.1	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
Dichlorodifluoromethane	ND		10	2.7	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
Ethylbenzene	ND		5.0	0.31	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
Isopropylbenzene	ND		5.0	2.4	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
Methyl acetate	ND		10	2.8	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
Methyl tert-butyl ether	ND		20	2.1	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
Methylcyclohexane	ND		5.0	0.42	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
Methylene Chloride	ND		5.0	1.6	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
m-Xylene & p-Xylene	ND		2.5	1.0	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
o-Xylene	ND		2.5	0.27	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
Styrene	ND		5.0	0.28	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
Tetrachloroethene	ND		5.0	1.9	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
Toluene	ND		5.0	0.23	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
trans-1,2-Dichloroethene	ND		2.5	0.39	ug/Kg		06/05/20 06:00	06/05/20 08:19	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-497531/2-A
Matrix: Solid
Analysis Batch: 497779

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 497531

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
trans-1,3-Dichloropropene	ND		5.0	0.083	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
Trichloroethene	ND		5.0	1.9	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
Trichlorofluoromethane	ND		10	3.2	ug/Kg		06/05/20 06:00	06/05/20 08:19	1
Vinyl chloride	ND		5.0	1.3	ug/Kg		06/05/20 06:00	06/05/20 08:19	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	103		58 - 140	06/05/20 06:00	06/05/20 08:19	1
4-Bromofluorobenzene (Surr)	97		76 - 127	06/05/20 06:00	06/05/20 08:19	1
Dibromofluoromethane (Surr)	101		75 - 121	06/05/20 06:00	06/05/20 08:19	1
Toluene-d8 (Surr)	98		80 - 126	06/05/20 06:00	06/05/20 08:19	1

Lab Sample ID: LCS 280-497531/1-A
Matrix: Solid
Analysis Batch: 497779

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497531

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
		Result	Qualifier					
1,1,1-Trichloroethane	50.0	45.4		ug/Kg		91		70 - 135
1,1,1,2-Tetrachloroethane	50.0	40.4		ug/Kg		81		65 - 135
1,1,2-Trichloroethane	50.0	41.8		ug/Kg		84		78 - 135
1,1,2-Trichlorotrifluoroethane	50.0	46.2		ug/Kg		92		50 - 150
1,1-Dichloroethane	50.0	44.2		ug/Kg		88		70 - 135
1,1-Dichloroethene	50.0	46.0		ug/Kg		92		79 - 135
1,2,3-Trichlorobenzene	50.0	47.6		ug/Kg		95		62 - 135
1,2,4-Trichlorobenzene	50.0	48.6		ug/Kg		97		65 - 135
1,2-Dibromo-3-Chloropropane	50.0	41.5		ug/Kg		83		66 - 150
1,2-Dibromoethane	50.0	43.4		ug/Kg		87		76 - 135
1,2-Dichlorobenzene	50.0	44.8		ug/Kg		90		73 - 135
1,2-Dichloroethane	50.0	42.4		ug/Kg		85		69 - 135
1,2-Dichloropropane	50.0	44.9		ug/Kg		90		72 - 121
1,3-Dichlorobenzene	50.0	46.3		ug/Kg		93		69 - 135
1,4-Dichlorobenzene	50.0	46.0		ug/Kg		92		73 - 135
1,4-Dioxane	1000	834		ug/Kg		83		52 - 135
2-Butanone (MEK)	200	174		ug/Kg		87		45 - 177
2-Hexanone	200	164		ug/Kg		82		67 - 150
4-Methyl-2-pentanone (MIBK)	200	178		ug/Kg		89		69 - 150
Acetone	200	180		ug/Kg		90		65 - 150
Benzene	50.0	44.1		ug/Kg		88		75 - 135
Bromoform	50.0	41.3		ug/Kg		83		77 - 135
Bromomethane	50.0	49.6		ug/Kg		99		52 - 135
Carbon disulfide	50.0	45.0		ug/Kg		90		45 - 150
Carbon tetrachloride	50.0	44.5		ug/Kg		89		69 - 138
Chlorobenzene	50.0	44.4		ug/Kg		89		78 - 135
Chlorobromomethane	50.0	44.5		ug/Kg		89		74 - 135
Chlorodibromomethane	50.0	43.5		ug/Kg		87		77 - 135
Chloroethane	50.0	47.3		ug/Kg		95		51 - 145
Chloroform	50.0	44.1		ug/Kg		88		73 - 123
Chloromethane	50.0	44.6		ug/Kg		89		41 - 138
cis-1,2-Dichloroethene	50.0	45.7		ug/Kg		91		76 - 135

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-497531/1-A
Matrix: Solid
Analysis Batch: 497779

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497531

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
cis-1,3-Dichloropropene	50.0	43.6		ug/Kg		87	71 - 135
Cyclohexane	50.0	43.5		ug/Kg		87	50 - 150
Dichlorobromomethane	50.0	43.0		ug/Kg		86	73 - 135
Dichlorodifluoromethane	50.0	41.6		ug/Kg		83	32 - 152
Ethylbenzene	50.0	44.3		ug/Kg		89	73 - 125
Isopropylbenzene	50.0	45.1		ug/Kg		90	74 - 137
Methyl acetate	100	86.9		ug/Kg		87	50 - 150
Methyl tert-butyl ether	50.0	43.7		ug/Kg		87	71 - 141
Methylcyclohexane	50.0	41.8		ug/Kg		84	50 - 150
Methylene Chloride	50.0	44.0		ug/Kg		88	76 - 136
m-Xylene & p-Xylene	50.0	44.2		ug/Kg		88	77 - 135
o-Xylene	50.0	44.4		ug/Kg		89	75 - 135
Styrene	50.0	44.2		ug/Kg		88	76 - 135
Tetrachloroethene	50.0	46.2		ug/Kg		92	76 - 135
Toluene	50.0	44.7		ug/Kg		89	77 - 122
trans-1,2-Dichloroethene	50.0	46.5		ug/Kg		93	77 - 135
trans-1,3-Dichloropropene	50.0	42.7		ug/Kg		85	71 - 135
Trichloroethene	50.0	44.0		ug/Kg		88	77 - 135
Trichlorofluoromethane	50.0	45.2		ug/Kg		90	48 - 150
Vinyl chloride	50.0	49.0		ug/Kg		98	43 - 145

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		58 - 140
4-Bromofluorobenzene (Surr)	96		76 - 127
Dibromofluoromethane (Surr)	101		75 - 121
Toluene-d8 (Surr)	97		80 - 126

Lab Sample ID: 280-137073-9 MS
Matrix: Solid
Analysis Batch: 497779

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12
Prep Type: Total/NA
Prep Batch: 497531

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
1,1,1-Trichloroethane	ND		47.9	42.0		ug/Kg	☼	88	70 - 135
1,1,2,2-Tetrachloroethane	ND		47.9	37.4		ug/Kg	☼	78	65 - 135
1,1,2-Trichloroethane	ND		47.9	38.6		ug/Kg	☼	81	78 - 135
1,1,2-Trichlorotrifluoroethane	ND		47.9	43.8		ug/Kg	☼	91	50 - 150
1,1-Dichloroethane	ND		47.9	41.9		ug/Kg	☼	88	70 - 135
1,1-Dichloroethene	ND		47.9	43.4		ug/Kg	☼	91	79 - 135
1,2,3-Trichlorobenzene	ND	F1	47.9	25.5	F1	ug/Kg	☼	53	62 - 135
1,2,4-Trichlorobenzene	ND	F1	47.9	27.2	F1	ug/Kg	☼	57	65 - 135
1,2-Dibromo-3-Chloropropane	ND		47.9	37.4		ug/Kg	☼	78	66 - 150
1,2-Dibromoethane	ND		47.9	39.8		ug/Kg	☼	83	76 - 135
1,2-Dichlorobenzene	ND	F1	47.9	32.8	F1	ug/Kg	☼	69	73 - 135
1,2-Dichloroethane	ND		47.9	39.2		ug/Kg	☼	82	69 - 135
1,2-Dichloropropane	ND		47.9	41.1		ug/Kg	☼	86	72 - 121
1,3-Dichlorobenzene	ND		47.9	34.5		ug/Kg	☼	72	69 - 135
1,4-Dichlorobenzene	ND	F1	47.9	34.4	F1	ug/Kg	☼	72	73 - 135
1,4-Dioxane	ND		958	1090		ug/Kg	☼	114	52 - 135

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-137073-9 MS

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 497779

Prep Batch: 497531

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
2-Butanone (MEK)	ND		192	268		ug/Kg	☼	140		45 - 177
2-Hexanone	ND		192	165		ug/Kg	☼	86		67 - 150
4-Methyl-2-pentanone (MIBK)	ND		192	173		ug/Kg	☼	90		69 - 150
Acetone	ND		192	151		ug/Kg	☼	79		65 - 150
Benzene	ND		47.9	41.0		ug/Kg	☼	86		75 - 135
Bromoform	ND	F1	47.9	36.1	F1	ug/Kg	☼	75		77 - 135
Bromomethane	ND		47.9	43.1		ug/Kg	☼	90		52 - 135
Carbon disulfide	ND		47.9	41.4		ug/Kg	☼	86		45 - 150
Carbon tetrachloride	ND		47.9	41.1		ug/Kg	☼	86		69 - 138
Chlorobenzene	ND		47.9	38.6		ug/Kg	☼	81		78 - 135
Chlorobromomethane	ND		47.9	41.8		ug/Kg	☼	87		74 - 135
Chlorodibromomethane	ND		47.9	38.5		ug/Kg	☼	80		77 - 135
Chloroethane	ND		47.9	41.3		ug/Kg	☼	86		51 - 145
Chloroform	ND		47.9	40.4		ug/Kg	☼	84		73 - 123
Chloromethane	ND		47.9	40.0		ug/Kg	☼	84		41 - 138
cis-1,2-Dichloroethene	ND		47.9	42.5		ug/Kg	☼	89		76 - 135
cis-1,3-Dichloropropene	ND		47.9	38.9		ug/Kg	☼	81		71 - 135
Cyclohexane	ND		47.9	40.3		ug/Kg	☼	84		50 - 150
Dichlorobromomethane	ND		47.9	38.8		ug/Kg	☼	81		73 - 135
Dichlorodifluoromethane	ND		47.9	38.1		ug/Kg	☼	80		32 - 152
Ethylbenzene	ND		47.9	38.7		ug/Kg	☼	81		73 - 125
Isopropylbenzene	ND		47.9	38.3		ug/Kg	☼	80		74 - 137
Methyl acetate	ND		95.8	107		ug/Kg	☼	112		50 - 150
Methyl tert-butyl ether	ND		47.9	39.6		ug/Kg	☼	83		71 - 141
Methylcyclohexane	ND		47.9	37.0		ug/Kg	☼	77		50 - 150
Methylene Chloride	ND		47.9	40.6		ug/Kg	☼	85		76 - 136
m-Xylene & p-Xylene	ND		47.9	38.5		ug/Kg	☼	80		77 - 135
o-Xylene	ND		47.9	38.0		ug/Kg	☼	79		75 - 135
Styrene	ND		47.9	36.9		ug/Kg	☼	77		76 - 135
Tetrachloroethene	ND		47.9	41.3		ug/Kg	☼	86		76 - 135
Toluene	ND		47.9	40.7		ug/Kg	☼	85		77 - 122
trans-1,2-Dichloroethene	ND		47.9	42.6		ug/Kg	☼	89		77 - 135
trans-1,3-Dichloropropene	ND		47.9	38.0		ug/Kg	☼	79		71 - 135
Trichloroethene	ND		47.9	40.3		ug/Kg	☼	84		77 - 135
Trichlorofluoromethane	ND		47.9	39.9		ug/Kg	☼	83		48 - 150
Vinyl chloride	ND		47.9	43.3		ug/Kg	☼	90		43 - 145

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	104		58 - 140
4-Bromofluorobenzene (Surr)	97		76 - 127
Dibromofluoromethane (Surr)	103		75 - 121
Toluene-d8 (Surr)	96		80 - 126

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-137073-9 MSD

Matrix: Solid

Analysis Batch: 497779

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12

Prep Type: Total/NA

Prep Batch: 497531

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
1,1,1-Trichloroethane	ND		48.7	49.6		ug/Kg	☼	102	70 - 135	17	20
1,1,2,2-Tetrachloroethane	ND		48.7	43.5		ug/Kg	☼	89	65 - 135	15	21
1,1,2-Trichloroethane	ND		48.7	45.6		ug/Kg	☼	94	78 - 135	17	20
1,1,2-Trichlorotrifluoroethane	ND		48.7	51.4		ug/Kg	☼	105	50 - 150	16	20
1,1-Dichloroethane	ND		48.7	49.4		ug/Kg	☼	101	70 - 135	16	20
1,1-Dichloroethene	ND		48.7	52.3		ug/Kg	☼	107	79 - 135	19	20
1,2,3-Trichlorobenzene	ND	F1	48.7	29.2	F1	ug/Kg	☼	60	62 - 135	14	31
1,2,4-Trichlorobenzene	ND	F1	48.7	31.8		ug/Kg	☼	65	65 - 135	16	26
1,2-Dibromo-3-Chloropropane	ND		48.7	44.4		ug/Kg	☼	91	66 - 150	17	28
1,2-Dibromoethane	ND		48.7	47.4		ug/Kg	☼	97	76 - 135	17	20
1,2-Dichlorobenzene	ND	F1	48.7	38.7		ug/Kg	☼	79	73 - 135	16	20
1,2-Dichloroethane	ND		48.7	47.1		ug/Kg	☼	97	69 - 135	18	20
1,2-Dichloropropane	ND		48.7	49.3		ug/Kg	☼	101	72 - 121	18	20
1,3-Dichlorobenzene	ND		48.7	41.1		ug/Kg	☼	84	69 - 135	18	20
1,4-Dichlorobenzene	ND	F1	48.7	41.0		ug/Kg	☼	84	73 - 135	17	22
1,4-Dioxane	ND		975	1220		ug/Kg	☼	125	52 - 135	11	30
2-Butanone (MEK)	ND		195	343		ug/Kg	☼	176	45 - 177	24	32
2-Hexanone	ND		195	196		ug/Kg	☼	100	67 - 150	17	29
4-Methyl-2-pentanone (MIBK)	ND		195	210		ug/Kg	☼	108	69 - 150	20	25
Acetone	ND		195	185		ug/Kg	☼	95	65 - 150	20	28
Benzene	ND		48.7	48.9		ug/Kg	☼	100	75 - 135	18	20
Bromoform	ND	F1	48.7	43.8		ug/Kg	☼	90	77 - 135	19	20
Bromomethane	ND		48.7	51.3		ug/Kg	☼	105	52 - 135	17	22
Carbon disulfide	ND		48.7	48.7		ug/Kg	☼	100	45 - 150	16	24
Carbon tetrachloride	ND		48.7	49.7		ug/Kg	☼	102	69 - 138	19	20
Chlorobenzene	ND		48.7	46.2		ug/Kg	☼	95	78 - 135	18	20
Chlorobromomethane	ND		48.7	49.3		ug/Kg	☼	101	74 - 135	16	21
Chlorodibromomethane	ND		48.7	45.7		ug/Kg	☼	94	77 - 135	17	20
Chloroethane	ND		48.7	49.0		ug/Kg	☼	101	51 - 145	17	22
Chloroform	ND		48.7	48.7		ug/Kg	☼	100	73 - 123	19	20
Chloromethane	ND		48.7	47.1		ug/Kg	☼	97	41 - 138	16	25
cis-1,2-Dichloroethene	ND		48.7	49.9		ug/Kg	☼	102	76 - 135	16	20
cis-1,3-Dichloropropene	ND		48.7	46.6		ug/Kg	☼	96	71 - 135	18	20
Cyclohexane	ND		48.7	46.8		ug/Kg	☼	96	50 - 150	15	30
Dichlorobromomethane	ND		48.7	46.9		ug/Kg	☼	96	73 - 135	19	20
Dichlorodifluoromethane	ND		48.7	44.1		ug/Kg	☼	91	32 - 152	15	28
Ethylbenzene	ND		48.7	46.2		ug/Kg	☼	95	73 - 125	18	20
Isopropylbenzene	ND		48.7	45.2		ug/Kg	☼	93	74 - 137	17	20
Methyl acetate	ND		97.5	129		ug/Kg	☼	133	50 - 150	18	30
Methyl tert-butyl ether	ND		48.7	47.3		ug/Kg	☼	97	71 - 141	18	20
Methylcyclohexane	ND		48.7	42.4		ug/Kg	☼	87	50 - 150	13	30
Methylene Chloride	ND		48.7	48.5		ug/Kg	☼	99	76 - 136	18	21
m-Xylene & p-Xylene	ND		48.7	46.6		ug/Kg	☼	96	77 - 135	19	20
o-Xylene	ND		48.7	45.2		ug/Kg	☼	93	75 - 135	17	20
Styrene	ND		48.7	44.2		ug/Kg	☼	91	76 - 135	18	20
Tetrachloroethene	ND		48.7	48.7		ug/Kg	☼	100	76 - 135	17	20
Toluene	ND		48.7	48.7		ug/Kg	☼	100	77 - 122	18	20
trans-1,2-Dichloroethene	ND		48.7	51.2		ug/Kg	☼	105	77 - 135	18	20

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-137073-9 MSD

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 497779

Prep Batch: 497531

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
trans-1,3-Dichloropropene	ND		48.7	45.8		ug/Kg	☼	94	71 - 135	19	20
Trichloroethene	ND		48.7	47.3		ug/Kg	☼	97	77 - 135	16	20
Trichlorofluoromethane	ND		48.7	47.5		ug/Kg	☼	98	48 - 150	18	33
Vinyl chloride	ND		48.7	50.6		ug/Kg	☼	104	43 - 145	15	24
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	104		58 - 140								
4-Bromofluorobenzene (Surr)	97		76 - 127								
Dibromofluoromethane (Surr)	103		75 - 121								
Toluene-d8 (Surr)	97		80 - 126								

Lab Sample ID: MB 280-497664/3-A

Client Sample ID: Method Blank

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 497791

Prep Batch: 497664

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		250	99	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
1,1,1,2-Tetrachloroethane	ND		250	14	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
1,1,2-Trichloroethane	ND		250	44	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
1,1,2-Trichlorotrifluoroethane	ND		1000	83	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
1,1-Dichloroethane	ND		250	11	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
1,1-Dichloroethene	ND		250	30	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
1,2,3-Trichlorobenzene	ND		250	41	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
1,2,4-Trichlorobenzene	ND		250	37	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
1,2-Dibromo-3-Chloropropane	ND		500	180	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
1,2-Dibromoethane	ND		250	26	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
1,2-Dichlorobenzene	ND		250	94	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
1,2-Dichloroethane	ND		250	35	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
1,2-Dichloropropane	ND		250	28	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
1,3-Dichlorobenzene	ND		250	24	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
1,4-Dichlorobenzene	ND		250	12	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
1,4-Dioxane	ND		25000	2800	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
2-Butanone (MEK)	ND		1000	190	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
2-Hexanone	ND		1000	240	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
4-Methyl-2-pentanone (MIBK)	ND		1000	220	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
Acetone	ND		3600	1800	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
Benzene	ND		250	7.6	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
Bromoform	ND		260	130	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
Bromomethane	ND		500	68	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
Carbon disulfide	ND		250	83	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
Carbon tetrachloride	ND		250	100	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
Chlorobenzene	ND		250	100	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
Chlorobromomethane	ND		250	120	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
Chlorodibromomethane	ND		250	110	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
Chloroethane	ND		500	100	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
Chloroform	ND		500	15	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
Chloromethane	ND		500	39	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
cis-1,2-Dichloroethene	ND		130	10	ug/Kg		06/05/20 19:00	06/06/20 07:10	50

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-497664/3-A
Matrix: Solid
Analysis Batch: 497791

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 497664

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		250	5.0	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
Cyclohexane	ND		250	88	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
Dichlorobromomethane	ND		250	110	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
Dichlorodifluoromethane	ND		500	140	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
Ethylbenzene	ND		250	15	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
Isopropylbenzene	ND		250	120	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
Methyl acetate	ND		500	140	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
Methyl tert-butyl ether	ND		1000	110	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
Methylcyclohexane	ND		250	21	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
Methylene Chloride	ND		250	80	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
m-Xylene & p-Xylene	ND		130	52	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
o-Xylene	ND		130	13	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
Styrene	ND		250	14	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
Tetrachloroethene	ND		250	96	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
Toluene	ND		250	11	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
trans-1,2-Dichloroethene	ND		130	20	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
trans-1,3-Dichloropropene	ND		250	4.2	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
Trichloroethene	ND		250	96	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
Trichlorofluoromethane	ND		500	160	ug/Kg		06/05/20 19:00	06/06/20 07:10	50
Vinyl chloride	ND		250	67	ug/Kg		06/05/20 19:00	06/06/20 07:10	50

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		58 - 140	06/05/20 19:00	06/06/20 07:10	50
4-Bromofluorobenzene (Surr)	99		76 - 127	06/05/20 19:00	06/06/20 07:10	50
Dibromofluoromethane (Surr)	98		75 - 121	06/05/20 19:00	06/06/20 07:10	50
Toluene-d8 (Surr)	99		80 - 126	06/05/20 19:00	06/06/20 07:10	50

Lab Sample ID: LCS 280-497664/1-A
Matrix: Solid
Analysis Batch: 497791

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497664

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1,1-Trichloroethane	50.0	46.5		ug/Kg		93	70 - 135
1,1,2,2-Tetrachloroethane	50.0	41.2		ug/Kg		82	65 - 135
1,1,2-Trichloroethane	50.0	42.8		ug/Kg		86	78 - 135
1,1,2-Trichlorotrifluoroethane	50.0	47.5		ug/Kg		95	50 - 150
1,1-Dichloroethane	50.0	46.9		ug/Kg		94	70 - 135
1,1-Dichloroethene	50.0	47.4		ug/Kg		95	79 - 135
1,2,3-Trichlorobenzene	50.0	49.3		ug/Kg		99	62 - 135
1,2,4-Trichlorobenzene	50.0	50.6		ug/Kg		101	65 - 135
1,2-Dibromo-3-Chloropropane	50.0	41.9		ug/Kg		84	66 - 150
1,2-Dibromoethane	50.0	45.0		ug/Kg		90	76 - 135
1,2-Dichlorobenzene	50.0	46.5		ug/Kg		93	73 - 135
1,2-Dichloroethane	50.0	44.2		ug/Kg		88	69 - 135
1,2-Dichloropropane	50.0	47.1		ug/Kg		94	72 - 121
1,3-Dichlorobenzene	50.0	47.7		ug/Kg		95	69 - 135
1,4-Dichlorobenzene	50.0	47.0		ug/Kg		94	73 - 135
1,4-Dioxane	1000	863		ug/Kg		86	52 - 135

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-497664/1-A
Matrix: Solid
Analysis Batch: 497791

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497664

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Butanone (MEK)	200	178		ug/Kg		89	45 - 177
2-Hexanone	200	172		ug/Kg		86	67 - 150
4-Methyl-2-pentanone (MIBK)	200	182		ug/Kg		91	69 - 150
Acetone	200	187		ug/Kg		94	65 - 150
Benzene	50.0	46.1		ug/Kg		92	75 - 135
Bromoform	50.0	39.5		ug/Kg		79	77 - 135
Bromomethane	50.0	44.8		ug/Kg		90	52 - 135
Carbon disulfide	50.0	47.1		ug/Kg		94	45 - 150
Carbon tetrachloride	50.0	44.4		ug/Kg		89	69 - 138
Chlorobenzene	50.0	46.5		ug/Kg		93	78 - 135
Chlorobromomethane	50.0	46.2		ug/Kg		92	74 - 135
Chlorodibromomethane	50.0	42.8		ug/Kg		86	77 - 135
Chloroethane	50.0	43.2		ug/Kg		86	51 - 145
Chloroform	50.0	45.5		ug/Kg		91	73 - 123
Chloromethane	50.0	39.8		ug/Kg		80	41 - 138
cis-1,2-Dichloroethene	50.0	46.6		ug/Kg		93	76 - 135
cis-1,3-Dichloropropene	50.0	44.7		ug/Kg		89	71 - 135
Cyclohexane	50.0	45.7		ug/Kg		91	50 - 150
Dichlorobromomethane	50.0	44.7		ug/Kg		89	73 - 135
Dichlorodifluoromethane	50.0	37.2		ug/Kg		74	32 - 152
Ethylbenzene	50.0	46.7		ug/Kg		93	73 - 125
Isopropylbenzene	50.0	47.8		ug/Kg		96	74 - 137
Methyl acetate	100	90.5		ug/Kg		90	50 - 150
Methyl tert-butyl ether	50.0	45.8		ug/Kg		92	71 - 141
Methylcyclohexane	50.0	45.0		ug/Kg		90	50 - 150
Methylene Chloride	50.0	45.6		ug/Kg		91	76 - 136
m-Xylene & p-Xylene	50.0	47.3		ug/Kg		95	77 - 135
o-Xylene	50.0	46.3		ug/Kg		93	75 - 135
Styrene	50.0	46.1		ug/Kg		92	76 - 135
Tetrachloroethene	50.0	47.9		ug/Kg		96	76 - 135
Toluene	50.0	46.7		ug/Kg		93	77 - 122
trans-1,2-Dichloroethene	50.0	47.9		ug/Kg		96	77 - 135
trans-1,3-Dichloropropene	50.0	43.9		ug/Kg		88	71 - 135
Trichloroethene	50.0	45.1		ug/Kg		90	77 - 135
Trichlorofluoromethane	50.0	37.9		ug/Kg		76	48 - 150
Vinyl chloride	50.0	44.7		ug/Kg		89	43 - 145

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	102		58 - 140
4-Bromofluorobenzene (Surr)	97		76 - 127
Dibromofluoromethane (Surr)	102		75 - 121
Toluene-d8 (Surr)	97		80 - 126

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-497664/2-A

Matrix: Solid

Analysis Batch: 497791

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 497664

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	%Rec. RPD	
									RPD	Limit
1,1,1-Trichloroethane	50.0	47.5		ug/Kg		95	70 - 135	2		20
1,1,2,2-Tetrachloroethane	50.0	42.6		ug/Kg		85	65 - 135	3		21
1,1,2-Trichloroethane	50.0	44.2		ug/Kg		88	78 - 135	3		20
1,1,2-Trichlorotrifluoroethane	50.0	48.6		ug/Kg		97	50 - 150	2		20
1,1-Dichloroethane	50.0	47.2		ug/Kg		94	70 - 135	1		20
1,1-Dichloroethene	50.0	48.3		ug/Kg		97	79 - 135	2		20
1,2,3-Trichlorobenzene	50.0	48.9		ug/Kg		98	62 - 135	1		31
1,2,4-Trichlorobenzene	50.0	50.0		ug/Kg		100	65 - 135	1		26
1,2-Dibromo-3-Chloropropane	50.0	43.3		ug/Kg		87	66 - 150	3		28
1,2-Dibromoethane	50.0	45.9		ug/Kg		92	76 - 135	2		20
1,2-Dichlorobenzene	50.0	46.1		ug/Kg		92	73 - 135	1		20
1,2-Dichloroethane	50.0	47.1		ug/Kg		94	69 - 135	6		20
1,2-Dichloropropane	50.0	48.0		ug/Kg		96	72 - 121	2		20
1,3-Dichlorobenzene	50.0	48.3		ug/Kg		97	69 - 135	1		20
1,4-Dichlorobenzene	50.0	48.3		ug/Kg		97	73 - 135	3		22
1,4-Dioxane	1000	915		ug/Kg		92	52 - 135	6		30
2-Butanone (MEK)	200	181		ug/Kg		91	45 - 177	2		32
2-Hexanone	200	179		ug/Kg		90	67 - 150	4		29
4-Methyl-2-pentanone (MIBK)	200	187		ug/Kg		93	69 - 150	2		25
Acetone	200	194		ug/Kg		97	65 - 150	4		28
Benzene	50.0	46.7		ug/Kg		93	75 - 135	1		20
Bromoform	50.0	40.6		ug/Kg		81	77 - 135	3		20
Bromomethane	50.0	49.7		ug/Kg		99	52 - 135	10		22
Carbon disulfide	50.0	48.1		ug/Kg		96	45 - 150	2		24
Carbon tetrachloride	50.0	45.4		ug/Kg		91	69 - 138	2		20
Chlorobenzene	50.0	47.4		ug/Kg		95	78 - 135	2		20
Chlorobromomethane	50.0	46.5		ug/Kg		93	74 - 135	1		21
Chlorodibromomethane	50.0	44.3		ug/Kg		89	77 - 135	4		20
Chloroethane	50.0	48.9		ug/Kg		98	51 - 145	12		22
Chloroform	50.0	46.3		ug/Kg		93	73 - 123	2		20
Chloromethane	50.0	46.5		ug/Kg		93	41 - 138	15		25
cis-1,2-Dichloroethene	50.0	48.2		ug/Kg		96	76 - 135	3		20
cis-1,3-Dichloropropene	50.0	46.4		ug/Kg		93	71 - 135	4		20
Cyclohexane	50.0	46.7		ug/Kg		93	50 - 150	2		30
Dichlorobromomethane	50.0	45.4		ug/Kg		91	73 - 135	2		20
Dichlorodifluoromethane	50.0	41.6		ug/Kg		83	32 - 152	11		28
Ethylbenzene	50.0	47.9		ug/Kg		96	73 - 125	3		20
Isopropylbenzene	50.0	48.0		ug/Kg		96	74 - 137	1		20
Methyl acetate	100	94.5		ug/Kg		95	50 - 150	4		30
Methyl tert-butyl ether	50.0	47.5		ug/Kg		95	71 - 141	4		20
Methylcyclohexane	50.0	44.8		ug/Kg		90	50 - 150	0		30
Methylene Chloride	50.0	47.0		ug/Kg		94	76 - 136	3		21
m-Xylene & p-Xylene	50.0	48.0		ug/Kg		96	77 - 135	1		20
o-Xylene	50.0	47.5		ug/Kg		95	75 - 135	3		20
Styrene	50.0	47.0		ug/Kg		94	76 - 135	2		20
Tetrachloroethene	50.0	48.6		ug/Kg		97	76 - 135	1		20
Toluene	50.0	47.5		ug/Kg		95	77 - 122	2		20
trans-1,2-Dichloroethene	50.0	48.8		ug/Kg		98	77 - 135	2		20

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-497664/2-A
Matrix: Solid
Analysis Batch: 497791

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 497664

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
trans-1,3-Dichloropropene	50.0	44.7		ug/Kg		89	71 - 135	2	20
Trichloroethene	50.0	45.8		ug/Kg		92	77 - 135	1	20
Trichlorofluoromethane	50.0	40.7		ug/Kg		81	48 - 150	7	33
Vinyl chloride	50.0	50.6		ug/Kg		101	43 - 145	12	24

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		58 - 140
4-Bromofluorobenzene (Surr)	96		76 - 127
Dibromofluoromethane (Surr)	101		75 - 121
Toluene-d8 (Surr)	98		80 - 126

Lab Sample ID: MB 280-497959/10
Matrix: Water
Analysis Batch: 497959

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			06/09/20 12:44	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			06/09/20 12:44	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			06/09/20 12:44	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			06/09/20 12:44	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/09/20 12:44	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			06/09/20 12:44	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			06/09/20 12:44	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			06/09/20 12:44	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			06/09/20 12:44	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			06/09/20 12:44	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			06/09/20 12:44	1
1,2-Dichloroethane	0.162	J	1.0	0.13	ug/L			06/09/20 12:44	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/09/20 12:44	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			06/09/20 12:44	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			06/09/20 12:44	1
1,4-Dioxane	ND		200	19	ug/L			06/09/20 12:44	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			06/09/20 12:44	1
2-Hexanone	ND		5.0	1.7	ug/L			06/09/20 12:44	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			06/09/20 12:44	1
Acetone	ND		10	1.9	ug/L			06/09/20 12:44	1
Benzene	ND		1.0	0.16	ug/L			06/09/20 12:44	1
Bromoform	ND		1.0	0.46	ug/L			06/09/20 12:44	1
Bromomethane	ND		2.0	0.21	ug/L			06/09/20 12:44	1
Carbon disulfide	ND		2.0	0.17	ug/L			06/09/20 12:44	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			06/09/20 12:44	1
Chlorobenzene	ND		1.0	0.17	ug/L			06/09/20 12:44	1
Chlorobromomethane	ND		1.0	0.10	ug/L			06/09/20 12:44	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			06/09/20 12:44	1
Chloroethane	ND		2.0	0.41	ug/L			06/09/20 12:44	1
Chloroform	ND		1.0	0.16	ug/L			06/09/20 12:44	1
Chloromethane	ND		2.0	0.30	ug/L			06/09/20 12:44	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/09/20 12:44	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-497959/10
Matrix: Water
Analysis Batch: 497959

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			06/09/20 12:44	1
Cyclohexane	ND		2.0	0.28	ug/L			06/09/20 12:44	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			06/09/20 12:44	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			06/09/20 12:44	1
Ethylbenzene	ND		1.0	0.16	ug/L			06/09/20 12:44	1
Isopropylbenzene	ND		1.0	0.19	ug/L			06/09/20 12:44	1
Methyl acetate	ND		5.0	1.6	ug/L			06/09/20 12:44	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			06/09/20 12:44	1
Methylcyclohexane	ND		1.0	0.10	ug/L			06/09/20 12:44	1
Methylene Chloride	ND		2.0	0.94	ug/L			06/09/20 12:44	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			06/09/20 12:44	1
o-Xylene	ND		1.0	0.19	ug/L			06/09/20 12:44	1
Styrene	ND		1.0	0.36	ug/L			06/09/20 12:44	1
Tetrachloroethene	ND		1.0	0.20	ug/L			06/09/20 12:44	1
Toluene	ND		1.0	0.17	ug/L			06/09/20 12:44	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/09/20 12:44	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			06/09/20 12:44	1
Trichloroethene	ND		1.0	0.16	ug/L			06/09/20 12:44	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			06/09/20 12:44	1
Vinyl chloride	ND		1.0	0.10	ug/L			06/09/20 12:44	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		70 - 127		06/09/20 12:44	1
4-Bromofluorobenzene (Surr)	106		78 - 120		06/09/20 12:44	1
Dibromofluoromethane (Surr)	97		77 - 120		06/09/20 12:44	1
Toluene-d8 (Surr)	102		80 - 125		06/09/20 12:44	1

Lab Sample ID: LCS 280-497959/5
Matrix: Water
Analysis Batch: 497959

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	20.7		ug/L		83	65 - 135
1,1,2,2-Tetrachloroethane	25.0	23.7		ug/L		95	58 - 135
1,1,2-Trichloroethane	25.0	23.9		ug/L		96	64 - 135
1,1,2-Trichlorotrifluoroethane	25.0	21.1		ug/L		84	65 - 140
1,1-Dichloroethane	25.0	24.6		ug/L		99	65 - 135
1,1-Dichloroethene	25.0	24.0		ug/L		96	65 - 136
1,2,3-Trichlorobenzene	25.0	21.6		ug/L		86	60 - 135
1,2,4-Trichlorobenzene	25.0	20.4		ug/L		82	58 - 135
1,2-Dibromo-3-Chloropropane	25.0	19.4		ug/L		78	57 - 135
1,2-Dibromoethane	25.0	21.8		ug/L		87	65 - 135
1,2-Dichlorobenzene	25.0	23.4		ug/L		94	65 - 135
1,2-Dichloroethane	25.0	24.2		ug/L		97	65 - 135
1,2-Dichloropropane	25.0	23.9		ug/L		95	64 - 135
1,3-Dichlorobenzene	25.0	24.1		ug/L		96	65 - 135
1,4-Dichlorobenzene	25.0	23.5		ug/L		94	65 - 135
1,4-Dioxane	500	374		ug/L		75	31 - 147

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-497959/5
Matrix: Water
Analysis Batch: 497959

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Butanone (MEK)	100	104		ug/L		104	44 - 177
2-Hexanone	100	99.5		ug/L		100	57 - 139
4-Methyl-2-pentanone (MIBK)	100	92.3		ug/L		92	60 - 150
Acetone	100	88.5		ug/L		88	39 - 156
Benzene	25.0	23.5		ug/L		94	65 - 135
Bromoform	25.0	18.3		ug/L		73	62 - 135
Bromomethane	25.0	15.5		ug/L		62	45 - 135
Carbon disulfide	25.0	23.7		ug/L		95	55 - 143
Carbon tetrachloride	25.0	21.8		ug/L		87	65 - 135
Chlorobenzene	25.0	23.2		ug/L		93	65 - 135
Chlorobromomethane	25.0	21.4		ug/L		86	65 - 135
Chlorodibromomethane	25.0	20.1		ug/L		81	65 - 135
Chloroethane	25.0	22.5		ug/L		90	46 - 136
Chloroform	25.0	23.3		ug/L		93	65 - 135
Chloromethane	25.0	17.1		ug/L		68	34 - 145
cis-1,2-Dichloroethene	25.0	24.2		ug/L		97	65 - 135
cis-1,3-Dichloropropene	25.0	23.0		ug/L		92	65 - 135
Cyclohexane	25.0	27.0		ug/L		108	62 - 135
Dichlorobromomethane	25.0	23.9		ug/L		96	65 - 135
Dichlorodifluoromethane	25.0	10.7		ug/L		43	43 - 142
Ethylbenzene	25.0	25.3		ug/L		101	65 - 135
Isopropylbenzene	25.0	24.6		ug/L		98	65 - 135
Methyl acetate	50.0	52.2		ug/L		104	52 - 135
Methyl tert-butyl ether	25.0	22.4		ug/L		90	54 - 135
Methylcyclohexane	25.0	25.4		ug/L		102	63 - 135
Methylene Chloride	25.0	24.0		ug/L		96	54 - 141
m-Xylene & p-Xylene	25.0	22.0		ug/L		88	65 - 135
o-Xylene	25.0	22.6		ug/L		91	65 - 135
Styrene	25.0	24.9		ug/L		100	65 - 135
Tetrachloroethene	25.0	20.7		ug/L		83	65 - 135
Toluene	25.0	23.1		ug/L		93	65 - 135
trans-1,2-Dichloroethene	25.0	24.5		ug/L		98	65 - 135
trans-1,3-Dichloropropene	25.0	19.5		ug/L		78	65 - 135
Trichloroethene	25.0	22.9		ug/L		91	65 - 135
Trichlorofluoromethane	25.0	22.6		ug/L		90	53 - 137
Vinyl chloride	25.0	20.6		ug/L		82	40 - 137

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		70 - 127
4-Bromofluorobenzene (Surr)	105		78 - 120
Dibromofluoromethane (Surr)	96		77 - 120
Toluene-d8 (Surr)	103		80 - 125

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-497959/6
Matrix: Water
Analysis Batch: 497959

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	25.0	19.9		ug/L		80	65 - 135	4	20
1,1,2,2-Tetrachloroethane	25.0	23.7		ug/L		95	58 - 135	0	20
1,1,2-Trichloroethane	25.0	22.7		ug/L		91	64 - 135	5	27
1,1,2-Trichlorotrifluoroethane	25.0	19.8		ug/L		79	65 - 140	6	20
1,1-Dichloroethane	25.0	23.7		ug/L		95	65 - 135	4	21
1,1-Dichloroethene	25.0	22.6		ug/L		91	65 - 136	6	20
1,2,3-Trichlorobenzene	25.0	21.0		ug/L		84	60 - 135	3	36
1,2,4-Trichlorobenzene	25.0	20.3		ug/L		81	58 - 135	1	25
1,2-Dibromo-3-Chloropropane	25.0	20.1		ug/L		80	57 - 135	3	22
1,2-Dibromoethane	25.0	21.0		ug/L		84	65 - 135	4	27
1,2-Dichlorobenzene	25.0	22.2		ug/L		89	65 - 135	5	20
1,2-Dichloroethane	25.0	23.7		ug/L		95	65 - 135	2	20
1,2-Dichloropropane	25.0	23.3		ug/L		93	64 - 135	3	20
1,3-Dichlorobenzene	25.0	22.7		ug/L		91	65 - 135	6	20
1,4-Dichlorobenzene	25.0	22.7		ug/L		91	65 - 135	4	23
1,4-Dioxane	500	476		ug/L		95	31 - 147	24	30
2-Butanone (MEK)	100	112		ug/L		112	44 - 177	8	32
2-Hexanone	100	108		ug/L		108	57 - 139	8	25
4-Methyl-2-pentanone (MIBK)	100	98.5		ug/L		99	60 - 150	6	22
Acetone	100	93.4		ug/L		93	39 - 156	5	23
Benzene	25.0	22.5		ug/L		90	65 - 135	4	20
Bromoform	25.0	18.3		ug/L		73	62 - 135	0	27
Bromomethane	25.0	15.7		ug/L		63	45 - 135	1	33
Carbon disulfide	25.0	21.5		ug/L		86	55 - 143	10	20
Carbon tetrachloride	25.0	20.8		ug/L		83	65 - 135	4	21
Chlorobenzene	25.0	22.2		ug/L		89	65 - 135	4	20
Chlorobromomethane	25.0	20.7		ug/L		83	65 - 135	3	29
Chlorodibromomethane	25.0	19.5		ug/L		78	65 - 135	3	20
Chloroethane	25.0	21.4		ug/L		86	46 - 136	5	25
Chloroform	25.0	22.1		ug/L		88	65 - 135	6	20
Chloromethane	25.0	17.3		ug/L		69	34 - 145	1	24
cis-1,2-Dichloroethene	25.0	23.0		ug/L		92	65 - 135	5	20
cis-1,3-Dichloropropene	25.0	21.5		ug/L		86	65 - 135	7	26
Cyclohexane	25.0	25.3		ug/L		101	62 - 135	6	20
Dichlorobromomethane	25.0	23.0		ug/L		92	65 - 135	4	20
Dichlorodifluoromethane	25.0	10.8		ug/L		43	43 - 142	1	30
Ethylbenzene	25.0	23.5		ug/L		94	65 - 135	7	20
Isopropylbenzene	25.0	24.0		ug/L		96	65 - 135	2	20
Methyl acetate	50.0	54.5		ug/L		109	52 - 135	4	27
Methyl tert-butyl ether	25.0	22.2		ug/L		89	54 - 135	1	21
Methylcyclohexane	25.0	24.8		ug/L		99	63 - 135	2	20
Methylene Chloride	25.0	22.3		ug/L		89	54 - 141	7	26
m-Xylene & p-Xylene	25.0	21.3		ug/L		85	65 - 135	3	20
o-Xylene	25.0	21.9		ug/L		87	65 - 135	3	20
Styrene	25.0	23.4		ug/L		94	65 - 135	6	26
Tetrachloroethene	25.0	19.8		ug/L		79	65 - 135	4	20
Toluene	25.0	22.2		ug/L		89	65 - 135	4	20
trans-1,2-Dichloroethene	25.0	23.2		ug/L		93	65 - 135	5	24

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-497959/6
Matrix: Water
Analysis Batch: 497959

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
trans-1,3-Dichloropropene	25.0	18.3		ug/L		73	65 - 135	6	26
Trichloroethene	25.0	21.9		ug/L		88	65 - 135	4	20
Trichlorofluoromethane	25.0	22.2		ug/L		89	53 - 137	2	27
Vinyl chloride	25.0	19.8		ug/L		79	40 - 137	4	24

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	102		70 - 127
4-Bromofluorobenzene (Surr)	106		78 - 120
Dibromofluoromethane (Surr)	97		77 - 120
Toluene-d8 (Surr)	102		80 - 125

Lab Sample ID: MB 280-498109/9
Matrix: Water
Analysis Batch: 498109

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			06/09/20 21:17	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.21	ug/L			06/09/20 21:17	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			06/09/20 21:17	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			06/09/20 21:17	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/09/20 21:17	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			06/09/20 21:17	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			06/09/20 21:17	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			06/09/20 21:17	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			06/09/20 21:17	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			06/09/20 21:17	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			06/09/20 21:17	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			06/09/20 21:17	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/09/20 21:17	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			06/09/20 21:17	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			06/09/20 21:17	1
1,4-Dioxane	ND		200	19	ug/L			06/09/20 21:17	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			06/09/20 21:17	1
2-Hexanone	ND		5.0	1.7	ug/L			06/09/20 21:17	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			06/09/20 21:17	1
Acetone	ND		10	1.9	ug/L			06/09/20 21:17	1
Benzene	ND		1.0	0.16	ug/L			06/09/20 21:17	1
Bromoform	ND		1.0	0.46	ug/L			06/09/20 21:17	1
Bromomethane	ND		2.0	0.21	ug/L			06/09/20 21:17	1
Carbon disulfide	ND		2.0	0.17	ug/L			06/09/20 21:17	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			06/09/20 21:17	1
Chlorobenzene	ND		1.0	0.17	ug/L			06/09/20 21:17	1
Chlorobromomethane	ND		1.0	0.10	ug/L			06/09/20 21:17	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			06/09/20 21:17	1
Chloroethane	ND		2.0	0.41	ug/L			06/09/20 21:17	1
Chloroform	ND		1.0	0.16	ug/L			06/09/20 21:17	1
Chloromethane	ND		2.0	0.30	ug/L			06/09/20 21:17	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/09/20 21:17	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-498109/9
Matrix: Water
Analysis Batch: 498109

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			06/09/20 21:17	1
Cyclohexane	ND		2.0	0.28	ug/L			06/09/20 21:17	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			06/09/20 21:17	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			06/09/20 21:17	1
Ethylbenzene	ND		1.0	0.16	ug/L			06/09/20 21:17	1
Isopropylbenzene	ND		1.0	0.19	ug/L			06/09/20 21:17	1
Methyl acetate	ND		5.0	1.6	ug/L			06/09/20 21:17	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			06/09/20 21:17	1
Methylcyclohexane	ND		1.0	0.10	ug/L			06/09/20 21:17	1
Methylene Chloride	ND		2.0	0.94	ug/L			06/09/20 21:17	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			06/09/20 21:17	1
o-Xylene	ND		1.0	0.19	ug/L			06/09/20 21:17	1
Styrene	ND		1.0	0.36	ug/L			06/09/20 21:17	1
Tetrachloroethene	ND		1.0	0.20	ug/L			06/09/20 21:17	1
Toluene	ND		1.0	0.17	ug/L			06/09/20 21:17	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/09/20 21:17	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			06/09/20 21:17	1
Trichloroethene	ND		1.0	0.16	ug/L			06/09/20 21:17	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			06/09/20 21:17	1
Vinyl chloride	ND		1.0	0.10	ug/L			06/09/20 21:17	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		70 - 127		06/09/20 21:17	1
4-Bromofluorobenzene (Surr)	108		78 - 120		06/09/20 21:17	1
Dibromofluoromethane (Surr)	103		77 - 120		06/09/20 21:17	1
Toluene-d8 (Surr)	100		80 - 125		06/09/20 21:17	1

Lab Sample ID: LCS 280-498109/4
Matrix: Water
Analysis Batch: 498109

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	22.7		ug/L		91	65 - 135
1,1,2,2-Tetrachloroethane	25.0	29.0		ug/L		116	58 - 135
1,1,2-Trichloroethane	25.0	25.2		ug/L		101	64 - 135
1,1,2-Trichlorotrifluoroethane	25.0	22.7		ug/L		91	65 - 140
1,1-Dichloroethane	25.0	25.2		ug/L		101	65 - 135
1,1-Dichloroethene	25.0	26.0		ug/L		104	65 - 136
1,2,3-Trichlorobenzene	25.0	23.6		ug/L		94	60 - 135
1,2,4-Trichlorobenzene	25.0	23.7		ug/L		95	58 - 135
1,2-Dibromo-3-Chloropropane	25.0	19.5		ug/L		78	57 - 135
1,2-Dibromoethane	25.0	25.3		ug/L		101	65 - 135
1,2-Dichlorobenzene	25.0	23.6		ug/L		94	65 - 135
1,2-Dichloroethane	25.0	26.0		ug/L		104	65 - 135
1,2-Dichloropropane	25.0	27.8		ug/L		111	64 - 135
1,3-Dichlorobenzene	25.0	23.9		ug/L		96	65 - 135
1,4-Dichlorobenzene	25.0	24.0		ug/L		96	65 - 135
1,4-Dioxane	500	502		ug/L		100	31 - 147

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-498109/4

Matrix: Water

Analysis Batch: 498109

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Butanone (MEK)	100	98.4		ug/L		98	44 - 177
2-Hexanone	100	102		ug/L		102	57 - 139
4-Methyl-2-pentanone (MIBK)	100	98.8		ug/L		99	60 - 150
Acetone	100	111		ug/L		111	39 - 156
Benzene	25.0	25.0		ug/L		100	65 - 135
Bromoform	25.0	19.1		ug/L		76	62 - 135
Bromomethane	25.0	26.5		ug/L		106	45 - 135
Carbon disulfide	25.0	28.7		ug/L		115	55 - 143
Carbon tetrachloride	25.0	20.8		ug/L		83	65 - 135
Chlorobenzene	25.0	23.8		ug/L		95	65 - 135
Chlorobromomethane	25.0	25.5		ug/L		102	65 - 135
Chlorodibromomethane	25.0	25.1		ug/L		100	65 - 135
Chloroethane	25.0	28.4		ug/L		114	46 - 136
Chloroform	25.0	25.6		ug/L		102	65 - 135
Chloromethane	25.0	29.0		ug/L		116	34 - 145
cis-1,2-Dichloroethene	25.0	25.2		ug/L		101	65 - 135
cis-1,3-Dichloropropene	25.0	26.6		ug/L		106	65 - 135
Cyclohexane	25.0	26.5		ug/L		106	62 - 135
Dichlorobromomethane	25.0	26.9		ug/L		108	65 - 135
Dichlorodifluoromethane	25.0	23.3		ug/L		93	43 - 142
Ethylbenzene	25.0	23.2		ug/L		93	65 - 135
Isopropylbenzene	25.0	25.9		ug/L		104	65 - 135
Methyl acetate	50.0	48.5		ug/L		97	52 - 135
Methyl tert-butyl ether	25.0	23.1		ug/L		92	54 - 135
Methylcyclohexane	25.0	26.3		ug/L		105	63 - 135
Methylene Chloride	25.0	26.8		ug/L		107	54 - 141
m-Xylene & p-Xylene	25.0	23.5		ug/L		94	65 - 135
o-Xylene	25.0	23.9		ug/L		95	65 - 135
Styrene	25.0	25.3		ug/L		101	65 - 135
Tetrachloroethene	25.0	21.1		ug/L		84	65 - 135
Toluene	25.0	23.2		ug/L		93	65 - 135
trans-1,2-Dichloroethene	25.0	24.9		ug/L		99	65 - 135
trans-1,3-Dichloropropene	25.0	21.9		ug/L		88	65 - 135
Trichloroethene	25.0	24.4		ug/L		98	65 - 135
Trichlorofluoromethane	25.0	26.1		ug/L		104	53 - 137
Vinyl chloride	25.0	29.1		ug/L		116	40 - 137

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	104		70 - 127
4-Bromofluorobenzene (Surr)	112		78 - 120
Dibromofluoromethane (Surr)	100		77 - 120
Toluene-d8 (Surr)	102		80 - 125

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-498109/5
 Matrix: Water
 Analysis Batch: 498109

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	25.0	21.9		ug/L		88	65 - 135	3	20
1,1,2,2-Tetrachloroethane	25.0	30.0		ug/L		120	58 - 135	3	20
1,1,2-Trichloroethane	25.0	25.7		ug/L		103	64 - 135	2	27
1,1,2-Trichlorotrifluoroethane	25.0	22.1		ug/L		88	65 - 140	3	20
1,1-Dichloroethane	25.0	24.8		ug/L		99	65 - 135	1	21
1,1-Dichloroethene	25.0	25.3		ug/L		101	65 - 136	3	20
1,2,3-Trichlorobenzene	25.0	22.9		ug/L		92	60 - 135	3	36
1,2,4-Trichlorobenzene	25.0	23.1		ug/L		92	58 - 135	3	25
1,2-Dibromo-3-Chloropropane	25.0	20.4		ug/L		82	57 - 135	4	22
1,2-Dibromoethane	25.0	26.0		ug/L		104	65 - 135	3	27
1,2-Dichlorobenzene	25.0	23.3		ug/L		93	65 - 135	1	20
1,2-Dichloroethane	25.0	27.0		ug/L		108	65 - 135	4	20
1,2-Dichloropropane	25.0	26.9		ug/L		108	64 - 135	3	20
1,3-Dichlorobenzene	25.0	22.9		ug/L		92	65 - 135	4	20
1,4-Dichlorobenzene	25.0	23.6		ug/L		94	65 - 135	2	23
1,4-Dioxane	500	551		ug/L		110	31 - 147	9	30
2-Butanone (MEK)	100	109		ug/L		109	44 - 177	10	32
2-Hexanone	100	115		ug/L		115	57 - 139	12	25
4-Methyl-2-pentanone (MIBK)	100	107		ug/L		107	60 - 150	8	22
Acetone	100	113		ug/L		113	39 - 156	1	23
Benzene	25.0	24.8		ug/L		99	65 - 135	1	20
Bromoform	25.0	19.5		ug/L		78	62 - 135	2	27
Bromomethane	25.0	28.4		ug/L		113	45 - 135	7	33
Carbon disulfide	25.0	27.8		ug/L		111	55 - 143	3	20
Carbon tetrachloride	25.0	20.2		ug/L		81	65 - 135	3	21
Chlorobenzene	25.0	23.8		ug/L		95	65 - 135	0	20
Chlorobromomethane	25.0	24.3		ug/L		97	65 - 135	5	29
Chlorodibromomethane	25.0	25.5		ug/L		102	65 - 135	2	20
Chloroethane	25.0	29.3		ug/L		117	46 - 136	3	25
Chloroform	25.0	24.5		ug/L		98	65 - 135	4	20
Chloromethane	25.0	28.8		ug/L		115	34 - 145	1	24
cis-1,2-Dichloroethene	25.0	24.7		ug/L		99	65 - 135	2	20
cis-1,3-Dichloropropene	25.0	27.3		ug/L		109	65 - 135	3	26
Cyclohexane	25.0	26.2		ug/L		105	62 - 135	1	20
Dichlorobromomethane	25.0	27.1		ug/L		108	65 - 135	1	20
Dichlorodifluoromethane	25.0	24.0		ug/L		96	43 - 142	3	30
Ethylbenzene	25.0	23.4		ug/L		94	65 - 135	1	20
Isopropylbenzene	25.0	24.9		ug/L		99	65 - 135	4	20
Methyl acetate	50.0	52.2		ug/L		104	52 - 135	7	27
Methyl tert-butyl ether	25.0	24.0		ug/L		96	54 - 135	4	21
Methylcyclohexane	25.0	25.4		ug/L		101	63 - 135	3	20
Methylene Chloride	25.0	27.1		ug/L		109	54 - 141	1	26
m-Xylene & p-Xylene	25.0	23.6		ug/L		94	65 - 135	0	20
o-Xylene	25.0	24.3		ug/L		97	65 - 135	2	20
Styrene	25.0	25.8		ug/L		103	65 - 135	2	26
Tetrachloroethene	25.0	20.3		ug/L		81	65 - 135	4	20
Toluene	25.0	22.7		ug/L		91	65 - 135	2	20
trans-1,2-Dichloroethene	25.0	23.9		ug/L		96	65 - 135	4	24

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-498109/5
Matrix: Water
Analysis Batch: 498109

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
trans-1,3-Dichloropropene	25.0	22.6		ug/L		90	65 - 135	3	26
Trichloroethene	25.0	24.1		ug/L		96	65 - 135	1	20
Trichlorofluoromethane	25.0	26.2		ug/L		105	53 - 137	0	27
Vinyl chloride	25.0	29.8		ug/L		119	40 - 137	2	24

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	102		70 - 127
4-Bromofluorobenzene (Surr)	109		78 - 120
Dibromofluoromethane (Surr)	102		77 - 120
Toluene-d8 (Surr)	106		80 - 125

Lab Sample ID: MB 280-498148/3-A
Matrix: Solid
Analysis Batch: 498147

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498148

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	2.0	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.29	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
1,1,2-Trichloroethane	ND		5.0	0.88	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
1,1,2-Trichlorotrifluoroethane	ND		20	1.7	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
1,1-Dichloroethane	ND		5.0	0.21	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
1,1-Dichloroethene	ND		5.0	0.59	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
1,2,3-Trichlorobenzene	ND		5.0	0.81	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
1,2,4-Trichlorobenzene	ND		5.0	0.73	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
1,2-Dibromo-3-Chloropropane	ND		10	3.7	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
1,2-Dibromoethane	ND		5.0	0.52	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
1,2-Dichlorobenzene	ND		5.0	1.9	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
1,2-Dichloroethane	ND		5.0	0.70	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
1,2-Dichloropropane	ND		5.0	0.55	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
1,3-Dichlorobenzene	ND		5.0	0.48	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
1,4-Dichlorobenzene	ND		5.0	0.25	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
1,4-Dioxane	ND		500	56	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
2-Butanone (MEK)	ND		20	3.9	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
2-Hexanone	ND		20	4.9	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.4	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
Acetone	ND		72	36	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
Benzene	ND		5.0	0.15	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
Bromoform	ND		5.1	2.6	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
Bromomethane	ND		10	1.4	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
Carbon disulfide	ND		5.0	1.7	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
Carbon tetrachloride	ND		5.0	2.0	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
Chlorobenzene	ND		5.0	2.1	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
Chlorobromomethane	ND		5.0	2.5	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
Chlorodibromomethane	ND		5.0	2.3	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
Chloroethane	ND		10	2.0	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
Chloroform	ND		10	0.29	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
Chloromethane	ND		10	0.77	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
cis-1,2-Dichloroethene	ND		2.5	0.20	ug/Kg		06/10/20 08:34	06/10/20 11:14	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-498148/3-A
Matrix: Solid
Analysis Batch: 498147

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498148

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		5.0	0.10	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
Cyclohexane	ND		5.0	1.8	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
Dichlorobromomethane	ND		5.0	2.1	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
Dichlorodifluoromethane	ND		10	2.7	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
Ethylbenzene	ND		5.0	0.31	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
Isopropylbenzene	ND		5.0	2.4	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
Methyl acetate	ND		10	2.8	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
Methyl tert-butyl ether	ND		20	2.1	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
Methylcyclohexane	ND		5.0	0.42	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
Methylene Chloride	ND		5.0	1.6	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
m-Xylene & p-Xylene	ND		2.5	1.0	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
o-Xylene	ND		2.5	0.27	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
Styrene	ND		5.0	0.28	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
Tetrachloroethene	ND		5.0	1.9	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
Toluene	ND		5.0	0.23	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
trans-1,2-Dichloroethene	ND		2.5	0.39	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
trans-1,3-Dichloropropene	ND		5.0	0.083	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
Trichloroethene	ND		5.0	1.9	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
Trichlorofluoromethane	ND		10	3.2	ug/Kg		06/10/20 08:34	06/10/20 11:14	1
Vinyl chloride	ND		5.0	1.3	ug/Kg		06/10/20 08:34	06/10/20 11:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		58 - 140	06/10/20 08:34	06/10/20 11:14	1
4-Bromofluorobenzene (Surr)	97		76 - 127	06/10/20 08:34	06/10/20 11:14	1
Dibromofluoromethane (Surr)	104		75 - 121	06/10/20 08:34	06/10/20 11:14	1
Toluene-d8 (Surr)	96		80 - 126	06/10/20 08:34	06/10/20 11:14	1

Lab Sample ID: MB 280-498148/4-A
Matrix: Solid
Analysis Batch: 498147

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498148

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		250	99	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
1,1,2,2-Tetrachloroethane	ND		250	14	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
1,1,2-Trichloroethane	ND		250	44	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
1,1,2-Trichlorotrifluoroethane	ND		1000	83	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
1,1-Dichloroethane	ND		250	11	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
1,1-Dichloroethene	ND		250	30	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
1,2,3-Trichlorobenzene	ND		250	41	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
1,2,4-Trichlorobenzene	ND		250	37	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
1,2-Dibromo-3-Chloropropane	ND		500	180	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
1,2-Dibromoethane	ND		250	26	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
1,2-Dichlorobenzene	ND		250	94	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
1,2-Dichloroethane	ND		250	35	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
1,2-Dichloropropane	ND		250	28	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
1,3-Dichlorobenzene	ND		250	24	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
1,4-Dichlorobenzene	ND		250	12	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
1,4-Dioxane	ND		25000	2800	ug/Kg		06/10/20 08:34	06/10/20 11:37	50

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-498148/4-A
Matrix: Solid
Analysis Batch: 498147

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498148

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	ND		1000	190	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
2-Hexanone	ND		1000	240	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
4-Methyl-2-pentanone (MIBK)	ND		1000	220	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
Acetone	ND		3600	1800	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
Benzene	ND		250	7.6	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
Bromoform	ND		260	130	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
Bromomethane	ND		500	68	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
Carbon disulfide	ND		250	83	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
Carbon tetrachloride	ND		250	100	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
Chlorobenzene	ND		250	100	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
Chlorobromomethane	ND		250	120	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
Chlorodibromomethane	ND		250	110	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
Chloroethane	ND		500	100	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
Chloroform	ND		500	15	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
Chloromethane	ND		500	39	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
cis-1,2-Dichloroethene	ND		130	10	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
cis-1,3-Dichloropropene	ND		250	5.0	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
Cyclohexane	ND		250	88	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
Dichlorobromomethane	ND		250	110	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
Dichlorodifluoromethane	ND		500	140	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
Ethylbenzene	ND		250	15	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
Isopropylbenzene	ND		250	120	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
Methyl acetate	ND		500	140	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
Methyl tert-butyl ether	ND		1000	110	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
Methylcyclohexane	ND		250	21	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
Methylene Chloride	ND		250	80	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
m-Xylene & p-Xylene	ND		130	52	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
o-Xylene	ND		130	13	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
Styrene	ND		250	14	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
Tetrachloroethene	ND		250	96	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
Toluene	ND		250	11	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
trans-1,2-Dichloroethene	ND		130	20	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
trans-1,3-Dichloropropene	ND		250	4.2	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
Trichloroethene	ND		250	96	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
Trichlorofluoromethane	ND		500	160	ug/Kg		06/10/20 08:34	06/10/20 11:37	50
Vinyl chloride	ND		250	67	ug/Kg		06/10/20 08:34	06/10/20 11:37	50

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		58 - 140	06/10/20 08:34	06/10/20 11:37	50
4-Bromofluorobenzene (Surr)	95		76 - 127	06/10/20 08:34	06/10/20 11:37	50
Dibromofluoromethane (Surr)	100		75 - 121	06/10/20 08:34	06/10/20 11:37	50
Toluene-d8 (Surr)	96		80 - 126	06/10/20 08:34	06/10/20 11:37	50

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-498148/1-A
Matrix: Solid
Analysis Batch: 498147

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498148
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1,1-Trichloroethane	50.0	46.0		ug/Kg		92	70 - 135
1,1,2,2-Tetrachloroethane	50.0	39.6		ug/Kg		79	65 - 135
1,1,2-Trichloroethane	50.0	42.0		ug/Kg		84	78 - 135
1,1,2-Trichlorotrifluoroethane	50.0	46.0		ug/Kg		92	50 - 150
1,1-Dichloroethane	50.0	45.4		ug/Kg		91	70 - 135
1,1-Dichloroethene	50.0	45.2		ug/Kg		90	79 - 135
1,2,3-Trichlorobenzene	50.0	47.3		ug/Kg		95	62 - 135
1,2,4-Trichlorobenzene	50.0	48.5		ug/Kg		97	65 - 135
1,2-Dibromo-3-Chloropropane	50.0	42.8		ug/Kg		86	66 - 150
1,2-Dibromoethane	50.0	43.0		ug/Kg		86	76 - 135
1,2-Dichlorobenzene	50.0	43.0		ug/Kg		86	73 - 135
1,2-Dichloroethane	50.0	44.5		ug/Kg		89	69 - 135
1,2-Dichloropropane	50.0	46.1		ug/Kg		92	72 - 121
1,3-Dichlorobenzene	50.0	44.3		ug/Kg		89	69 - 135
1,4-Dichlorobenzene	50.0	44.0		ug/Kg		88	73 - 135
1,4-Dioxane	1000	913		ug/Kg		91	52 - 135
2-Butanone (MEK)	200	197		ug/Kg		99	45 - 177
2-Hexanone	200	175		ug/Kg		87	67 - 150
4-Methyl-2-pentanone (MIBK)	200	196		ug/Kg		98	69 - 150
Acetone	200	202		ug/Kg		101	65 - 150
Benzene	50.0	44.2		ug/Kg		88	75 - 135
Bromoform	50.0	42.6		ug/Kg		85	77 - 135
Bromomethane	50.0	51.5		ug/Kg		103	52 - 135
Carbon disulfide	50.0	43.7		ug/Kg		87	45 - 150
Carbon tetrachloride	50.0	46.2		ug/Kg		92	69 - 138
Chlorobenzene	50.0	43.2		ug/Kg		86	78 - 135
Chlorobromomethane	50.0	46.1		ug/Kg		92	74 - 135
Chlorodibromomethane	50.0	43.5		ug/Kg		87	77 - 135
Chloroethane	50.0	49.2		ug/Kg		98	51 - 145
Chloroform	50.0	44.7		ug/Kg		89	73 - 123
Chloromethane	50.0	46.6		ug/Kg		93	41 - 138
cis-1,2-Dichloroethene	50.0	45.7		ug/Kg		91	76 - 135
cis-1,3-Dichloropropene	50.0	42.2		ug/Kg		84	71 - 135
Cyclohexane	50.0	44.4		ug/Kg		89	50 - 150
Dichlorobromomethane	50.0	44.3		ug/Kg		89	73 - 135
Dichlorodifluoromethane	50.0	39.0		ug/Kg		78	32 - 152
Ethylbenzene	50.0	42.9		ug/Kg		86	73 - 125
Isopropylbenzene	50.0	43.3		ug/Kg		87	74 - 137
Methyl acetate	100	95.9		ug/Kg		96	50 - 150
Methyl tert-butyl ether	50.0	44.3		ug/Kg		89	71 - 141
Methylcyclohexane	50.0	42.9		ug/Kg		86	50 - 150
Methylene Chloride	50.0	43.7		ug/Kg		87	76 - 136
m-Xylene & p-Xylene	50.0	43.5		ug/Kg		87	77 - 135
o-Xylene	50.0	42.6		ug/Kg		85	75 - 135
Styrene	50.0	42.6		ug/Kg		85	76 - 135
Tetrachloroethene	50.0	44.9		ug/Kg		90	76 - 135
Toluene	50.0	45.1		ug/Kg		90	77 - 122
trans-1,2-Dichloroethene	50.0	46.0		ug/Kg		92	77 - 135

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-498148/1-A
Matrix: Solid
Analysis Batch: 498147

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498148

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	50.0	43.7		ug/Kg		87	71 - 135
Trichloroethene	50.0	44.5		ug/Kg		89	77 - 135
Trichlorofluoromethane	50.0	48.3		ug/Kg		97	48 - 150
Vinyl chloride	50.0	49.6		ug/Kg		99	43 - 145

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	105		58 - 140
4-Bromofluorobenzene (Surr)	95		76 - 127
Dibromofluoromethane (Surr)	104		75 - 121
Toluene-d8 (Surr)	94		80 - 126

Lab Sample ID: LCSD 280-498148/2-A
Matrix: Solid
Analysis Batch: 498147

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 498148

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	50.0	46.5		ug/Kg		93	70 - 135	1	20
1,1,1,2-Tetrachloroethane	50.0	39.5		ug/Kg		79	65 - 135	0	21
1,1,1,2-Trichloroethane	50.0	43.3		ug/Kg		87	78 - 135	3	20
1,1,1,2-Trichlorotrifluoroethane	50.0	45.3		ug/Kg		91	50 - 150	2	20
1,1-Dichloroethane	50.0	46.3		ug/Kg		93	70 - 135	2	20
1,1-Dichloroethene	50.0	45.4		ug/Kg		91	79 - 135	0	20
1,2,3-Trichlorobenzene	50.0	45.3		ug/Kg		91	62 - 135	4	31
1,2,4-Trichlorobenzene	50.0	44.5		ug/Kg		89	65 - 135	8	26
1,2-Dibromo-3-Chloropropane	50.0	42.6		ug/Kg		85	66 - 150	1	28
1,2-Dibromoethane	50.0	45.0		ug/Kg		90	76 - 135	5	20
1,2-Dichlorobenzene	50.0	42.2		ug/Kg		84	73 - 135	2	20
1,2-Dichloroethane	50.0	46.0		ug/Kg		92	69 - 135	3	20
1,2-Dichloropropane	50.0	46.3		ug/Kg		93	72 - 121	0	20
1,3-Dichlorobenzene	50.0	42.7		ug/Kg		85	69 - 135	4	20
1,4-Dichlorobenzene	50.0	42.5		ug/Kg		85	73 - 135	3	22
1,4-Dioxane	1000	894		ug/Kg		89	52 - 135	2	30
2-Butanone (MEK)	200	198		ug/Kg		99	45 - 177	0	32
2-Hexanone	200	180		ug/Kg		90	67 - 150	3	29
4-Methyl-2-pentanone (MIBK)	200	197		ug/Kg		99	69 - 150	0	25
Acetone	200	201		ug/Kg		100	65 - 150	0	28
Benzene	50.0	44.6		ug/Kg		89	75 - 135	1	20
Bromoform	50.0	44.0		ug/Kg		88	77 - 135	3	20
Bromomethane	50.0	50.5		ug/Kg		101	52 - 135	2	22
Carbon disulfide	50.0	44.2		ug/Kg		88	45 - 150	1	24
Carbon tetrachloride	50.0	46.0		ug/Kg		92	69 - 138	1	20
Chlorobenzene	50.0	44.1		ug/Kg		88	78 - 135	2	20
Chlorobromomethane	50.0	46.9		ug/Kg		94	74 - 135	2	21
Chlorodibromomethane	50.0	45.0		ug/Kg		90	77 - 135	3	20
Chloroethane	50.0	48.3		ug/Kg		97	51 - 145	2	22
Chloroform	50.0	45.5		ug/Kg		91	73 - 123	2	20
Chloromethane	50.0	45.5		ug/Kg		91	41 - 138	2	25
cis-1,2-Dichloroethene	50.0	47.0		ug/Kg		94	76 - 135	3	20

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-498148/2-A
Matrix: Solid
Analysis Batch: 498147

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 498148

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,3-Dichloropropene	50.0	43.4		ug/Kg		87	71 - 135	3	20
Cyclohexane	50.0	43.5		ug/Kg		87	50 - 150	2	30
Dichlorobromomethane	50.0	45.1		ug/Kg		90	73 - 135	2	20
Dichlorodifluoromethane	50.0	37.9		ug/Kg		76	32 - 152	3	28
Ethylbenzene	50.0	42.8		ug/Kg		86	73 - 125	0	20
Isopropylbenzene	50.0	42.6		ug/Kg		85	74 - 137	2	20
Methyl acetate	100	98.2		ug/Kg		98	50 - 150	2	30
Methyl tert-butyl ether	50.0	45.7		ug/Kg		91	71 - 141	3	20
Methylcyclohexane	50.0	41.1		ug/Kg		82	50 - 150	4	30
Methylene Chloride	50.0	45.1		ug/Kg		90	76 - 136	3	21
m-Xylene & p-Xylene	50.0	42.6		ug/Kg		85	77 - 135	2	20
o-Xylene	50.0	43.0		ug/Kg		86	75 - 135	1	20
Styrene	50.0	42.4		ug/Kg		85	76 - 135	0	20
Tetrachloroethene	50.0	44.5		ug/Kg		89	76 - 135	1	20
Toluene	50.0	44.8		ug/Kg		90	77 - 122	1	20
trans-1,2-Dichloroethene	50.0	46.5		ug/Kg		93	77 - 135	1	20
trans-1,3-Dichloropropene	50.0	43.7		ug/Kg		87	71 - 135	0	20
Trichloroethene	50.0	44.9		ug/Kg		90	77 - 135	1	20
Trichlorofluoromethane	50.0	43.1		ug/Kg		86	48 - 150	11	33
Vinyl chloride	50.0	48.8		ug/Kg		98	43 - 145	2	24

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	103		58 - 140
4-Bromofluorobenzene (Surr)	95		76 - 127
Dibromofluoromethane (Surr)	103		75 - 121
Toluene-d8 (Surr)	95		80 - 126

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-496919/1-A
Matrix: Water
Analysis Batch: 497550

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 496919

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		10	1.8	ug/L		06/01/20 15:05	06/05/20 10:53	1
1,2,4,5-Tetrachlorobenzene	ND		10	1.7	ug/L		06/01/20 15:05	06/05/20 10:53	1
1,2,4-Trichlorobenzene	ND		4.0	0.59	ug/L		06/01/20 15:05	06/05/20 10:53	1
1,2-Dichlorobenzene	ND		4.0	0.23	ug/L		06/01/20 15:05	06/05/20 10:53	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		10	0.23	ug/L		06/01/20 15:05	06/05/20 10:53	1
1,3-Dichlorobenzene	ND		10	0.30	ug/L		06/01/20 15:05	06/05/20 10:53	1
1,3-Dinitrobenzene	ND		10	2.0	ug/L		06/01/20 15:05	06/05/20 10:53	1
1,4-Dichlorobenzene	ND		4.0	1.3	ug/L		06/01/20 15:05	06/05/20 10:53	1
1,4-Dioxane	ND		20	0.45	ug/L		06/01/20 15:05	06/05/20 10:53	1
1-Methylnaphthalene	ND		4.0	0.23	ug/L		06/01/20 15:05	06/05/20 10:53	1
2,2'-oxybis[1-chloropropane]	ND		10	0.28	ug/L		06/01/20 15:05	06/05/20 10:53	1
2,3,4,6-Tetrachlorophenol	ND		50	2.0	ug/L		06/01/20 15:05	06/05/20 10:53	1
2,4,5-Trichlorophenol	ND		10	2.1	ug/L		06/01/20 15:05	06/05/20 10:53	1
2,4,6-Trichlorophenol	ND		10	0.29	ug/L		06/01/20 15:05	06/05/20 10:53	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-496919/1-A
Matrix: Water
Analysis Batch: 497550

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 496919

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND		10	0.64	ug/L		06/01/20 15:05	06/05/20 10:53	1
2,4-Dimethylphenol	ND		10	0.58	ug/L		06/01/20 15:05	06/05/20 10:53	1
2,4-Dinitrophenol	ND		30	10	ug/L		06/01/20 15:05	06/05/20 10:53	1
2,4-Dinitrotoluene	ND		10	1.7	ug/L		06/01/20 15:05	06/05/20 10:53	1
2,6-Dichlorophenol	ND		10	1.4	ug/L		06/01/20 15:05	06/05/20 10:53	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		06/01/20 15:05	06/05/20 10:53	1
2-Chloronaphthalene	ND		4.0	0.26	ug/L		06/01/20 15:05	06/05/20 10:53	1
2-Chlorophenol	ND		10	2.0	ug/L		06/01/20 15:05	06/05/20 10:53	1
2-Methylnaphthalene	ND		4.0	1.5	ug/L		06/01/20 15:05	06/05/20 10:53	1
2-Methylphenol	ND		10	0.98	ug/L		06/01/20 15:05	06/05/20 10:53	1
2-Nitroaniline	ND		10	1.7	ug/L		06/01/20 15:05	06/05/20 10:53	1
2-Nitrophenol	ND		10	0.39	ug/L		06/01/20 15:05	06/05/20 10:53	1
3 & 4 Methylphenol	ND		10	0.25	ug/L		06/01/20 15:05	06/05/20 10:53	1
3,3'-Dichlorobenzidine	ND		50	2.0	ug/L		06/01/20 15:05	06/05/20 10:53	1
3-Methylphenol	ND		10	0.25	ug/L		06/01/20 15:05	06/05/20 10:53	1
3-Nitroaniline	ND		10	2.0	ug/L		06/01/20 15:05	06/05/20 10:53	1
4,6-Dinitro-2-methylphenol	ND		50	4.0	ug/L		06/01/20 15:05	06/05/20 10:53	1
4-Bromophenyl phenyl ether	ND		10	0.43	ug/L		06/01/20 15:05	06/05/20 10:53	1
4-Chloro-3-methylphenol	ND		10	2.4	ug/L		06/01/20 15:05	06/05/20 10:53	1
4-Chloroaniline	ND		10	2.1	ug/L		06/01/20 15:05	06/05/20 10:53	1
4-Chlorophenyl phenyl ether	ND		10	1.7	ug/L		06/01/20 15:05	06/05/20 10:53	1
4-Methylphenol	ND		10	0.25	ug/L		06/01/20 15:05	06/05/20 10:53	1
4-Nitroaniline	ND		10	2.0	ug/L		06/01/20 15:05	06/05/20 10:53	1
4-Nitrophenol	ND		10	1.2	ug/L		06/01/20 15:05	06/05/20 10:53	1
Acenaphthene	ND		4.0	0.28	ug/L		06/01/20 15:05	06/05/20 10:53	1
Acenaphthylene	ND		4.0	0.49	ug/L		06/01/20 15:05	06/05/20 10:53	1
Acetophenone	ND		10	0.24	ug/L		06/01/20 15:05	06/05/20 10:53	1
Aniline	ND		10	2.0	ug/L		06/01/20 15:05	06/05/20 10:53	1
Anthracene	ND		4.0	0.42	ug/L		06/01/20 15:05	06/05/20 10:53	1
Azobenzene	ND		4.0	0.23	ug/L		06/01/20 15:05	06/05/20 10:53	1
Benzaldehyde	ND		5.0	2.0	ug/L		06/01/20 15:05	06/05/20 10:53	1
Benzidine	ND		100	50	ug/L		06/01/20 15:05	06/05/20 10:53	1
Benzo[a]anthracene	ND		4.0	0.35	ug/L		06/01/20 15:05	06/05/20 10:53	1
Benzo[a]pyrene	ND		4.0	0.31	ug/L		06/01/20 15:05	06/05/20 10:53	1
Benzo[b]fluoranthene	ND		4.0	0.53	ug/L		06/01/20 15:05	06/05/20 10:53	1
Benzo[g,h,i]perylene	ND		4.0	0.50	ug/L		06/01/20 15:05	06/05/20 10:53	1
Benzo[k]fluoranthene	ND		4.0	0.46	ug/L		06/01/20 15:05	06/05/20 10:53	1
Benzoic acid	ND		25	10	ug/L		06/01/20 15:05	06/05/20 10:53	1
Benzyl alcohol	ND		10	0.23	ug/L		06/01/20 15:05	06/05/20 10:53	1
Bis(2-chloroethoxy)methane	ND		10	0.97	ug/L		06/01/20 15:05	06/05/20 10:53	1
Bis(2-chloroethyl)ether	ND		10	0.83	ug/L		06/01/20 15:05	06/05/20 10:53	1
Bis(2-ethylhexyl) phthalate	ND		10	0.56	ug/L		06/01/20 15:05	06/05/20 10:53	1
Butyl benzyl phthalate	ND		4.0	1.0	ug/L		06/01/20 15:05	06/05/20 10:53	1
Caprolactam	ND		5.0	2.5	ug/L		06/01/20 15:05	06/05/20 10:53	1
Carbazole	ND		4.0	0.43	ug/L		06/01/20 15:05	06/05/20 10:53	1
Chrysene	ND		4.0	0.54	ug/L		06/01/20 15:05	06/05/20 10:53	1
Dibenz(a,h)anthracene	ND		4.0	0.51	ug/L		06/01/20 15:05	06/05/20 10:53	1
Dibenzofuran	ND		4.0	0.29	ug/L		06/01/20 15:05	06/05/20 10:53	1
Diethyl phthalate	ND		4.0	0.38	ug/L		06/01/20 15:05	06/05/20 10:53	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-496919/1-A
Matrix: Water
Analysis Batch: 497550

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 496919

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl phthalate	ND		4.0	0.21	ug/L		06/01/20 15:05	06/05/20 10:53	1
Di-n-butyl phthalate	ND		4.0	1.2	ug/L		06/01/20 15:05	06/05/20 10:53	1
Di-n-octyl phthalate	ND		4.0	0.35	ug/L		06/01/20 15:05	06/05/20 10:53	1
Diphenylamine	ND		10	1.1	ug/L		06/01/20 15:05	06/05/20 10:53	1
Famphur	ND		100	1.5	ug/L		06/01/20 15:05	06/05/20 10:53	1
Fluoranthene	ND		4.0	0.20	ug/L		06/01/20 15:05	06/05/20 10:53	1
Fluorene	ND		4.0	0.31	ug/L		06/01/20 15:05	06/05/20 10:53	1
Hexachlorobenzene	ND		10	0.66	ug/L		06/01/20 15:05	06/05/20 10:53	1
Hexachlorobutadiene	ND		10	3.3	ug/L		06/01/20 15:05	06/05/20 10:53	1
Hexachlorocyclopentadiene	ND		50	3.1	ug/L		06/01/20 15:05	06/05/20 10:53	1
Hexachloroethane	ND		10	0.98	ug/L		06/01/20 15:05	06/05/20 10:53	1
Hexadecane	ND		10	0.54	ug/L		06/01/20 15:05	06/05/20 10:53	1
Indeno[1,2,3-cd]pyrene	ND		4.0	0.65	ug/L		06/01/20 15:05	06/05/20 10:53	1
Isophorone	ND		10	0.21	ug/L		06/01/20 15:05	06/05/20 10:53	1
Naphthalene	ND		4.0	0.29	ug/L		06/01/20 15:05	06/05/20 10:53	1
Nitrobenzene	ND		10	0.81	ug/L		06/01/20 15:05	06/05/20 10:53	1
N-Nitrosodimethylamine	ND		10	0.29	ug/L		06/01/20 15:05	06/05/20 10:53	1
N-Nitrosodi-n-propylamine	ND		10	0.35	ug/L		06/01/20 15:05	06/05/20 10:53	1
N-Nitrosodiphenylamine	ND		10	0.44	ug/L		06/01/20 15:05	06/05/20 10:53	1
Pentachlorophenol	ND		50	20	ug/L		06/01/20 15:05	06/05/20 10:53	1
Phenanthrene	ND		4.0	0.26	ug/L		06/01/20 15:05	06/05/20 10:53	1
Phenol	ND		10	2.0	ug/L		06/01/20 15:05	06/05/20 10:53	1
Pyrene	ND		10	0.37	ug/L		06/01/20 15:05	06/05/20 10:53	1
Pyridine	ND		20	1.7	ug/L		06/01/20 15:05	06/05/20 10:53	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	43	X	48 - 120	06/01/20 15:05	06/05/20 10:53	1
2,4,6-Tribromophenol (Surr)	76		42 - 131	06/01/20 15:05	06/05/20 10:53	1
2-Fluorophenol (Surr)	80		41 - 120	06/01/20 15:05	06/05/20 10:53	1
Nitrobenzene-d5 (Surr)	83		42 - 120	06/01/20 15:05	06/05/20 10:53	1
Phenol-d5 (Surr)	86		45 - 124	06/01/20 15:05	06/05/20 10:53	1
Terphenyl-d14 (Surr)	102		20 - 130	06/01/20 15:05	06/05/20 10:53	1

Lab Sample ID: LCS 280-496919/2-A
Matrix: Water
Analysis Batch: 497550

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 496919

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1'-Biphenyl	80.0	58.1		ug/L		73	63 - 99
1,2,4,5-Tetrachlorobenzene	80.0	53.7		ug/L		67	57 - 100
1,2,4-Trichlorobenzene	80.0	49.3		ug/L		62	41 - 99
1,2-Dichlorobenzene	80.0	48.8		ug/L		61	37 - 97
1,2-Diphenylhydrazine(as Azobenzene)	80.9	75.1		ug/L		93	66 - 104
1,3-Dichlorobenzene	80.0	47.4		ug/L		59	34 - 96
1,3-Dinitrobenzene	80.0	80.0		ug/L		100	72 - 114
1,4-Dichlorobenzene	80.0	47.3		ug/L		59	35 - 96
1,4-Dioxane	80.0	56.6		ug/L		71	46 - 94
1-Methylnaphthalene	80.0	55.2		ug/L		69	56 - 102

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-496919/2-A
Matrix: Water
Analysis Batch: 497550

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 496919

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,2'-oxybis[1-chloropropane]	80.0	65.5		ug/L		82	52 - 108
2,3,4,6-Tetrachlorophenol	80.0	72.0		ug/L		90	71 - 111
2,4,5-Trichlorophenol	80.0	71.7		ug/L		90	70 - 109
2,4,6-Trichlorophenol	80.0	70.8		ug/L		89	71 - 113
2,4-Dichlorophenol	80.0	70.5		ug/L		88	65 - 109
2,4-Dimethylphenol	80.0	56.4		ug/L		70	46 - 100
2,4-Dinitrophenol	160	170		ug/L		106	60 - 110
2,4-Dinitrotoluene	80.0	76.8		ug/L		96	72 - 110
2,6-Dichlorophenol	80.0	69.9		ug/L		87	64 - 109
2,6-Dinitrotoluene	80.0	75.5		ug/L		94	70 - 109
2-Chloronaphthalene	80.0	55.9		ug/L		70	61 - 98
2-Chlorophenol	80.0	67.5		ug/L		84	59 - 107
2-Methylnaphthalene	80.0	53.3		ug/L		67	55 - 100
2-Methylphenol	80.0	70.6		ug/L		88	61 - 105
2-Nitroaniline	80.0	87.2		ug/L		109	65 - 110
2-Nitrophenol	80.0	68.7		ug/L		86	63 - 108
3 & 4 Methylphenol	80.0	76.2		ug/L		95	58 - 107
3,3'-Dichlorobenzidine	160	154		ug/L		96	39 - 105
3-Methylphenol	80.0	76.2		ug/L		95	58 - 107
3-Nitroaniline	80.0	68.0		ug/L		85	37 - 94
4,6-Dinitro-2-methylphenol	160	149		ug/L		93	67 - 109
4-Bromophenyl phenyl ether	80.0	68.9		ug/L		86	67 - 105
4-Chloro-3-methylphenol	80.0	76.2		ug/L		95	68 - 110
4-Chloroaniline	80.0	46.3		ug/L		58	34 - 97
4-Chlorophenyl phenyl ether	80.0	66.5		ug/L		83	69 - 100
4-Methylphenol	80.0	76.2		ug/L		95	58 - 107
4-Nitroaniline	80.0	80.3		ug/L		100	64 - 103
4-Nitrophenol	160	156		ug/L		97	60 - 120
Acenaphthene	80.0	62.8		ug/L		79	63 - 99
Acenaphthylene	80.0	61.1		ug/L		76	66 - 98
Acetophenone	80.0	69.1		ug/L		86	59 - 106
Aniline	80.0	47.3		ug/L		59	40 - 96
Anthracene	80.0	69.6		ug/L		87	65 - 105
Azobenzene	80.0	74.3		ug/L		93	66 - 104
Benzaldehyde	80.0	46.9		ug/L		59	10 - 89
Benzidine	160	ND *		ug/L		3	10 - 52
Benzo[a]anthracene	80.0	70.7		ug/L		88	68 - 104
Benzo[a]pyrene	80.0	67.8		ug/L		85	66 - 102
Benzo[b]fluoranthene	80.0	74.1		ug/L		93	67 - 107
Benzo[g,h,i]perylene	80.0	70.4		ug/L		88	65 - 106
Benzo[k]fluoranthene	80.0	72.4		ug/L		91	71 - 109
Benzoic acid	80.0	75.2		ug/L		94	29 - 120
Benzyl alcohol	80.0	74.6		ug/L		93	61 - 107
Bis(2-chloroethoxy)methane	80.0	73.7		ug/L		92	62 - 106
Bis(2-chloroethyl)ether	80.0	70.3		ug/L		88	59 - 110
Bis(2-ethylhexyl) phthalate	80.0	79.1		ug/L		99	65 - 106
Butyl benzyl phthalate	80.0	76.4		ug/L		96	66 - 107
Caprolactam	80.0	77.1		ug/L		96	60 - 107
Carbazole	80.0	73.4		ug/L		92	66 - 109

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-496919/2-A
Matrix: Water
Analysis Batch: 497550

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 496919

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chrysene	80.0	69.7		ug/L		87	70 - 105
Dibenz(a,h)anthracene	80.0	71.1		ug/L		89	64 - 106
Dibenzofuran	80.0	64.8		ug/L		81	68 - 99
Diethyl phthalate	80.0	72.0		ug/L		90	71 - 105
Dimethyl phthalate	80.0	71.3		ug/L		89	70 - 107
Di-n-butyl phthalate	80.0	72.2		ug/L		90	75 - 120
Di-n-octyl phthalate	80.0	75.0		ug/L		94	71 - 120
Diphenylamine	68.0	59.7		ug/L		88	67 - 103
Fluoranthene	80.0	71.0		ug/L		89	66 - 107
Fluorene	80.0	68.3		ug/L		85	67 - 100
Hexachlorobenzene	80.0	67.7		ug/L		85	66 - 106
Hexachlorobutadiene	80.0	47.4		ug/L		59	33 - 98
Hexachlorocyclopentadiene	160	30.4	J	ug/L		19	10 - 67
Hexachloroethane	80.0	47.5		ug/L		59	24 - 98
Hexadecane	80.0	69.6		ug/L		87	50 - 150
Indeno[1,2,3-cd]pyrene	80.0	67.1		ug/L		84	56 - 104
Isophorone	80.0	69.7		ug/L		87	59 - 102
Naphthalene	80.0	51.8		ug/L		65	39 - 120
Nitrobenzene	80.0	70.6		ug/L		88	58 - 108
N-Nitrosodimethylamine	80.0	68.5		ug/L		86	53 - 106
N-Nitrosodi-n-propylamine	80.0	76.5		ug/L		96	57 - 106
N-Nitrosodiphenylamine	80.0	71.1		ug/L		89	65 - 104
Pentachlorophenol	160	156		ug/L		98	55 - 109
Phenanthrene	80.0	70.4		ug/L		88	67 - 106
Phenol	80.0	67.2		ug/L		84	60 - 108
Pyrene	80.0	72.6		ug/L		91	69 - 105
Pyridine	160	112		ug/L		70	46 - 88

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl	71		48 - 120
2,4,6-Tribromophenol (Surr)	87		42 - 131
2-Fluorophenol (Surr)	81		41 - 120
Nitrobenzene-d5 (Surr)	89		42 - 120
Phenol-d5 (Surr)	87		45 - 124
Terphenyl-d14 (Surr)	98		20 - 130

Lab Sample ID: LCSD 280-496919/3-A
Matrix: Water
Analysis Batch: 497550

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 496919

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1'-Biphenyl	80.0	64.8		ug/L		81	63 - 99	11	30
1,2,4,5-Tetrachlorobenzene	80.0	62.4		ug/L		78	57 - 100	15	30
1,2,4-Trichlorobenzene	80.0	49.1		ug/L		61	41 - 99	0	30
1,2-Dichlorobenzene	80.0	41.4		ug/L		52	37 - 97	16	30
1,2-Diphenylhydrazine(as Azobenzene)	80.9	75.1		ug/L		93	66 - 104	0	30
1,3-Dichlorobenzene	80.0	37.9		ug/L		47	34 - 96	22	30
1,3-Dinitrobenzene	80.0	79.0		ug/L		99	72 - 114	1	30

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-496919/3-A

Matrix: Water

Analysis Batch: 497550

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 496919

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dichlorobenzene	80.0	39.2		ug/L		49	35 - 96	19	30
1,4-Dioxane	80.0	55.3		ug/L		69	46 - 94	2	30
1-Methylnaphthalene	80.0	63.6		ug/L		80	56 - 102	14	30
2,2'-oxybis[1-chloropropane]	80.0	70.4		ug/L		88	52 - 108	7	30
2,3,4,6-Tetrachlorophenol	80.0	72.9		ug/L		91	71 - 111	1	30
2,4,5-Trichlorophenol	80.0	71.6		ug/L		89	70 - 109	0	30
2,4,6-Trichlorophenol	80.0	71.6		ug/L		89	71 - 113	1	30
2,4-Dichlorophenol	80.0	70.8		ug/L		88	65 - 109	0	30
2,4-Dimethylphenol	80.0	52.4		ug/L		65	46 - 100	7	30
2,4-Dinitrophenol	160	175		ug/L		109	60 - 110	3	30
2,4-Dinitrotoluene	80.0	77.2		ug/L		97	72 - 110	1	30
2,6-Dichlorophenol	80.0	69.5		ug/L		87	64 - 109	1	50
2,6-Dinitrotoluene	80.0	75.2		ug/L		94	70 - 109	0	30
2-Chloronaphthalene	80.0	64.0		ug/L		80	61 - 98	14	30
2-Chlorophenol	80.0	67.2		ug/L		84	59 - 107	0	30
2-Methylnaphthalene	80.0	61.5		ug/L		77	55 - 100	14	30
2-Methylphenol	80.0	69.7		ug/L		87	61 - 105	1	30
2-Nitroaniline	80.0	88.8 *		ug/L		111	65 - 110	2	30
2-Nitrophenol	80.0	71.4		ug/L		89	63 - 108	4	30
3 & 4 Methylphenol	80.0	72.9		ug/L		91	58 - 107	4	30
3,3'-Dichlorobenzidine	160	141		ug/L		88	39 - 105	9	30
3-Methylphenol	80.0	72.9		ug/L		91	58 - 107	4	30
3-Nitroaniline	80.0	64.9		ug/L		81	37 - 94	5	30
4,6-Dinitro-2-methylphenol	160	146		ug/L		91	67 - 109	2	30
4-Bromophenyl phenyl ether	80.0	66.5		ug/L		83	67 - 105	4	30
4-Chloro-3-methylphenol	80.0	73.1		ug/L		91	68 - 110	4	30
4-Chloroaniline	80.0	38.5		ug/L		48	34 - 97	18	30
4-Chlorophenyl phenyl ether	80.0	68.6		ug/L		86	69 - 100	3	30
4-Methylphenol	80.0	72.9		ug/L		91	58 - 107	4	30
4-Nitroaniline	80.0	75.0		ug/L		94	64 - 103	7	30
4-Nitrophenol	160	156		ug/L		98	60 - 120	0	30
Acenaphthene	80.0	67.6		ug/L		84	63 - 99	7	30
Acenaphthylene	80.0	67.0		ug/L		84	66 - 98	9	30
Acetophenone	80.0	70.1		ug/L		88	59 - 106	1	30
Aniline	80.0	38.5		ug/L		48	40 - 96	21	30
Anthracene	80.0	66.9		ug/L		84	65 - 105	4	30
Azobenzene	80.0	74.3		ug/L		93	66 - 104	0	30
Benzaldehyde	80.0	50.7		ug/L		63	10 - 89	8	50
Benzidine	160	ND	**1	ug/L		0	10 - 52	200	50
Benzo[a]anthracene	80.0	68.4		ug/L		86	68 - 104	3	30
Benzo[a]pyrene	80.0	65.7		ug/L		82	66 - 102	3	30
Benzo[b]fluoranthene	80.0	72.2		ug/L		90	67 - 107	3	30
Benzo[g,h,i]perylene	80.0	69.3		ug/L		87	65 - 106	2	30
Benzo[k]fluoranthene	80.0	71.0		ug/L		89	71 - 109	2	30
Benzoic acid	80.0	73.7		ug/L		92	29 - 120	2	30
Benzyl alcohol	80.0	72.3		ug/L		90	61 - 107	3	30
Bis(2-chloroethoxy)methane	80.0	73.5		ug/L		92	62 - 106	0	30
Bis(2-chloroethyl)ether	80.0	70.1		ug/L		88	59 - 110	0	30
Bis(2-ethylhexyl) phthalate	80.0	76.2		ug/L		95	65 - 106	4	30

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-496919/3-A
Matrix: Water
Analysis Batch: 497550

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 496919

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Butyl benzyl phthalate	80.0	73.5		ug/L		92	66 - 107	4	30
Caprolactam	80.0	73.8		ug/L		92	60 - 107	4	30
Carbazole	80.0	69.9		ug/L		87	66 - 109	5	30
Chrysene	80.0	68.4		ug/L		85	70 - 105	2	30
Dibenz(a,h)anthracene	80.0	69.8		ug/L		87	64 - 106	2	30
Dibenzofuran	80.0	68.1		ug/L		85	68 - 99	5	30
Diethyl phthalate	80.0	71.3		ug/L		89	71 - 105	1	30
Dimethyl phthalate	80.0	69.9		ug/L		87	70 - 107	2	30
Di-n-butyl phthalate	80.0	70.9		ug/L		89	75 - 120	2	30
Di-n-octyl phthalate	80.0	73.0		ug/L		91	71 - 120	3	30
Diphenylamine	68.0	58.1		ug/L		85	67 - 103	3	50
Fluoranthene	80.0	68.0		ug/L		85	66 - 107	4	30
Fluorene	80.0	69.4		ug/L		87	67 - 100	2	30
Hexachlorobenzene	80.0	66.4		ug/L		83	66 - 106	2	30
Hexachlorobutadiene	80.0	44.4		ug/L		55	33 - 98	7	30
Hexachlorocyclopentadiene	160	40.9	J	ug/L		26	10 - 67	29	50
Hexachloroethane	80.0	36.5		ug/L		46	24 - 98	26	30
Hexadecane	80.0	74.2		ug/L		93	50 - 150	6	30
Indeno[1,2,3-cd]pyrene	80.0	65.5		ug/L		82	56 - 104	2	30
Isophorone	80.0	69.7		ug/L		87	59 - 102	0	30
Naphthalene	80.0	56.2		ug/L		70	39 - 120	8	30
Nitrobenzene	80.0	71.6		ug/L		89	58 - 108	1	30
N-Nitrosodimethylamine	80.0	67.0		ug/L		84	53 - 106	2	34
N-Nitrosodi-n-propylamine	80.0	76.2		ug/L		95	57 - 106	0	30
N-Nitrosodiphenylamine	80.0	67.3		ug/L		84	65 - 104	5	30
Pentachlorophenol	160	153		ug/L		96	55 - 109	2	30
Phenanthrene	80.0	68.8		ug/L		86	67 - 106	2	30
Phenol	80.0	65.9		ug/L		82	60 - 108	2	30
Pyrene	80.0	70.0		ug/L		88	69 - 105	4	30
Pyridine	160	101		ug/L		63	46 - 88	11	41

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl	74		48 - 120
2,4,6-Tribromophenol (Surr)	84		42 - 131
2-Fluorophenol (Surr)	76		41 - 120
Nitrobenzene-d5 (Surr)	87		42 - 120
Phenol-d5 (Surr)	85		45 - 124
Terphenyl-d14 (Surr)	92		20 - 130

Lab Sample ID: MB 280-498186/1-A
Matrix: Solid
Analysis Batch: 498836

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498186

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		330	24	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
1,2,4,5-Tetrachlorobenzene	ND		330	49	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
1,2,4-Trichlorobenzene	ND		330	28	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
1,2-Dichlorobenzene	ND		330	22	ug/Kg		06/10/20 13:55	06/12/20 11:56	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-498186/1-A
Matrix: Solid
Analysis Batch: 498836

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498186

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Diphenylhydrazine(as Azobenzene)	ND		330	22	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
1,3-Dichlorobenzene	ND		330	12	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
1,3-Dinitrobenzene	ND		330	71	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
1,4-Dichlorobenzene	ND		330	14	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
1,4-Dioxane	ND		660	66	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
1-Methylnaphthalene	ND		330	11	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
2,2'-oxybis[1-chloropropane]	ND		330	23	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
2,3,4,6-Tetrachlorophenol	ND		1600	140	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
2,4,5-Trichlorophenol	ND		330	10	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
2,4,6-Trichlorophenol	ND		330	10	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
2,4-Dichlorophenol	ND		330	10	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
2,4-Dimethylphenol	ND		330	66	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
2,4-Dinitrophenol	ND		1600	330	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
2,4-Dinitrotoluene	ND		330	66	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
2,6-Dichlorophenol	ND		330	22	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
2,6-Dinitrotoluene	ND		330	28	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
2-Chloronaphthalene	ND		330	10	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
2-Chlorophenol	ND		330	21	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
2-Methylnaphthalene	ND		330	19	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
2-Methylphenol	ND		330	13	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
2-Nitroaniline	ND		1600	50	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
2-Nitrophenol	ND		330	10	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
3 & 4 Methylphenol	ND		330	33	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
3,3'-Dichlorobenzidine	ND		660	90	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
3-Methylphenol	ND		330	33	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
3-Nitroaniline	ND		1600	73	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
4,6-Dinitro-2-methylphenol	ND		1600	330	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
4-Bromophenyl phenyl ether	ND		330	19	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
4-Chloro-3-methylphenol	ND		330	25	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
4-Chloroaniline	ND		330	82	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
4-Chlorophenyl phenyl ether	ND		330	21	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
4-Methylphenol	ND		330	33	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
4-Nitroaniline	ND		1600	73	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
4-Nitrophenol	ND		1600	97	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Acenaphthene	ND		330	10	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Acenaphthylene	ND		330	82	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Acetophenone	ND		330	20	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Aniline	ND		330	130	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Anthracene	ND		330	17	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Azobenzene	ND		330	22	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Benzaldehyde	ND		330	67	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Benzidine	ND		3300	990	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Benzo[a]anthracene	ND		330	20	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Benzo[a]pyrene	ND		330	20	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Benzo[b]fluoranthene	ND		330	26	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Benzo[g,h,i]perylene	ND		330	16	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Benzo[k]fluoranthene	ND		330	40	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Benzoic acid	ND		1600	330	ug/Kg		06/10/20 13:55	06/12/20 11:56	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-498186/1-A
Matrix: Solid
Analysis Batch: 498836

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498186

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzyl alcohol	ND		330	10	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Bis(2-chloroethoxy)methane	ND		330	23	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Bis(2-chloroethyl)ether	ND		330	17	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Bis(2-ethylhexyl) phthalate	ND		330	46	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Butyl benzyl phthalate	ND		330	43	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Caprolactam	ND		330	110	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Carbazole	ND		330	36	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Chrysene	ND		330	27	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Dibenz(a,h)anthracene	ND		330	19	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Dibenzofuran	ND		330	20	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Diethyl phthalate	ND		660	26	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Dimethyl phthalate	ND		330	23	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Di-n-butyl phthalate	ND		330	29	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Di-n-octyl phthalate	ND		330	41	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Diphenylamine	ND		330	44	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Famphur	ND		660	34	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Fluoranthene	ND		330	36	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Fluorene	ND		330	18	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Hexachlorobenzene	ND		330	29	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Hexachlorobutadiene	ND		330	10	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Hexachlorocyclopentadiene	ND		1600	110	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Hexachloroethane	ND		330	21	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Hexadecane	ND		330	13	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Indeno[1,2,3-cd]pyrene	ND		330	22	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Isophorone	ND		330	17	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Naphthalene	ND		330	31	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Nitrobenzene	ND		330	22	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
N-Nitrosodimethylamine	ND		330	37	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
N-Nitrosodi-n-propylamine	ND		330	68	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
N-Nitrosodiphenylamine	ND		330	21	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Pentachlorophenol	ND		1600	330	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Phenanthrene	ND		330	17	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Phenol	ND		330	18	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Pyrene	ND		330	12	ug/Kg		06/10/20 13:55	06/12/20 11:56	1
Pyridine	ND		660	40	ug/Kg		06/10/20 13:55	06/12/20 11:56	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	67		46 - 120	06/10/20 13:55	06/12/20 11:56	1
2,4,6-Tribromophenol (Surr)	73		35 - 120	06/10/20 13:55	06/12/20 11:56	1
2-Fluorophenol (Surr)	69		43 - 120	06/10/20 13:55	06/12/20 11:56	1
Nitrobenzene-d5 (Surr)	68		46 - 120	06/10/20 13:55	06/12/20 11:56	1
Phenol-d5 (Surr)	70		46 - 120	06/10/20 13:55	06/12/20 11:56	1
Terphenyl-d14 (Surr)	97		46 - 120	06/10/20 13:55	06/12/20 11:56	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-498186/2-A
Matrix: Solid
Analysis Batch: 498836

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498186
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1'-Biphenyl	2670	2260		ug/Kg		85	60 - 120
1,2,4,5-Tetrachlorobenzene	2670	2160		ug/Kg		81	60 - 120
1,2,4-Trichlorobenzene	2670	2110		ug/Kg		79	59 - 120
1,2-Dichlorobenzene	2670	1980		ug/Kg		74	57 - 120
1,2-Diphenylhydrazine(as Azobenzene)	2700	2420		ug/Kg		90	60 - 120
1,3-Dichlorobenzene	2670	1950		ug/Kg		73	56 - 120
1,3-Dinitrobenzene	2670	2630		ug/Kg		99	66 - 120
1,4-Dichlorobenzene	2670	1970		ug/Kg		74	57 - 120
1,4-Dioxane	2670	960		ug/Kg		36	28 - 120
1-Methylnaphthalene	2670	2260		ug/Kg		85	57 - 120
2,2'-oxybis[1-chloropropane]	2670	1910		ug/Kg		72	46 - 120
2,3,4,6-Tetrachlorophenol	2670	2650		ug/Kg		99	63 - 120
2,4,5-Trichlorophenol	2670	2570		ug/Kg		96	65 - 120
2,4,6-Trichlorophenol	2670	2550		ug/Kg		96	64 - 120
2,4-Dichlorophenol	2670	2340		ug/Kg		88	64 - 120
2,4-Dimethylphenol	2670	2220		ug/Kg		83	60 - 120
2,4-Dinitrophenol	5330	5650		ug/Kg		106	52 - 120
2,4-Dinitrotoluene	2670	2760		ug/Kg		103	68 - 120
2,6-Dichlorophenol	2670	2290		ug/Kg		86	30 - 150
2,6-Dinitrotoluene	2670	2590		ug/Kg		97	68 - 120
2-Chloronaphthalene	2670	2250		ug/Kg		84	61 - 120
2-Chlorophenol	2670	2110		ug/Kg		79	62 - 120
2-Methylnaphthalene	2670	2200		ug/Kg		83	60 - 120
2-Methylphenol	2670	2170		ug/Kg		82	61 - 120
2-Nitroaniline	2670	2540		ug/Kg		95	63 - 120
2-Nitrophenol	2670	2290		ug/Kg		86	61 - 120
3 & 4 Methylphenol	2670	2270		ug/Kg		85	62 - 120
3,3'-Dichlorobenzidine	5330	4520		ug/Kg		85	22 - 120
3-Methylphenol	2670	2270		ug/Kg		85	62 - 120
3-Nitroaniline	2670	2300		ug/Kg		86	40 - 120
4,6-Dinitro-2-methylphenol	5330	5100		ug/Kg		96	60 - 120
4-Bromophenyl phenyl ether	2670	2580		ug/Kg		97	66 - 120
4-Chloro-3-methylphenol	2670	2520		ug/Kg		94	62 - 120
4-Chloroaniline	2670	1900		ug/Kg		71	33 - 120
4-Chlorophenyl phenyl ether	2670	2520		ug/Kg		94	63 - 120
4-Methylphenol	2670	2270		ug/Kg		85	62 - 120
4-Nitroaniline	2670	2640		ug/Kg		99	58 - 120
4-Nitrophenol	5330	4560		ug/Kg		86	67 - 120
Acenaphthene	2670	2360		ug/Kg		89	62 - 120
Acenaphthylene	2670	2420		ug/Kg		91	64 - 120
Acetophenone	2670	1590		ug/Kg		60	48 - 120
Aniline	2670	1490		ug/Kg		56	21 - 120
Anthracene	2670	2490		ug/Kg		93	66 - 120
Azobenzene	2670	2400		ug/Kg		90	59 - 120
Benzaldehyde	2670	2110		ug/Kg		79	30 - 150
Benzidine	5330	2500	J	ug/Kg		47	5 - 120
Benzo[a]anthracene	2670	2550		ug/Kg		95	64 - 120
Benzo[a]pyrene	2670	2470		ug/Kg		93	65 - 120

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-498186/2-A
Matrix: Solid
Analysis Batch: 498836

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498186

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[b]fluoranthene	2670	2540		ug/Kg		95	58 - 120
Benzo[g,h,i]perylene	2670	2470		ug/Kg		93	58 - 120
Benzo[k]fluoranthene	2670	2490		ug/Kg		93	62 - 120
Benzoic acid	2670	2470		ug/Kg		93	51 - 120
Benzyl alcohol	2670	2170		ug/Kg		81	61 - 120
Bis(2-chloroethoxy)methane	2670	2120		ug/Kg		80	58 - 120
Bis(2-chloroethyl)ether	2670	2040		ug/Kg		76	57 - 120
Bis(2-ethylhexyl) phthalate	2670	2890		ug/Kg		108	65 - 120
Butyl benzyl phthalate	2670	2670		ug/Kg		100	65 - 120
Caprolactam	2670	2590		ug/Kg		97	20 - 138
Carbazole	2670	2570		ug/Kg		96	65 - 120
Chrysene	2670	2580		ug/Kg		97	65 - 120
Dibenz(a,h)anthracene	2670	2570		ug/Kg		96	56 - 120
Dibenzofuran	2670	2420		ug/Kg		91	65 - 120
Diethyl phthalate	2670	2540		ug/Kg		95	68 - 120
Dimethyl phthalate	2670	2500		ug/Kg		94	66 - 120
Di-n-butyl phthalate	2670	2640		ug/Kg		99	66 - 120
Di-n-octyl phthalate	2670	2630		ug/Kg		99	55 - 120
Diphenylamine	2270	2230		ug/Kg		99	30 - 150
Fluoranthene	2670	2590		ug/Kg		97	64 - 120
Fluorene	2670	2490		ug/Kg		94	66 - 120
Hexachlorobenzene	2670	2590		ug/Kg		97	65 - 120
Hexachlorobutadiene	2670	1980		ug/Kg		74	58 - 120
Hexachlorocyclopentadiene	5330	3570		ug/Kg		67	43 - 120
Hexachloroethane	2670	1830		ug/Kg		68	56 - 120
Hexadecane	2670	2300		ug/Kg		86	45 - 135
Indeno[1,2,3-cd]pyrene	2670	2720		ug/Kg		102	46 - 120
Isophorone	2670	2020		ug/Kg		76	56 - 120
Naphthalene	2670	2050		ug/Kg		77	59 - 120
Nitrobenzene	2670	1990		ug/Kg		75	55 - 120
N-Nitrosodimethylamine	2670	1880		ug/Kg		71	50 - 120
N-Nitrosodi-n-propylamine	2670	2010		ug/Kg		75	52 - 120
N-Nitrosodiphenylamine	2670	2550		ug/Kg		96	65 - 120
Pentachlorophenol	5330	4860		ug/Kg		91	50 - 120
Phenanthrene	2670	2470		ug/Kg		93	67 - 120
Phenol	2670	2000		ug/Kg		75	63 - 120
Pyrene	2670	2560		ug/Kg		96	66 - 120
Pyridine	5330	2830		ug/Kg		53	37 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl	78		46 - 120
2,4,6-Tribromophenol (Surr)	91		35 - 120
2-Fluorophenol (Surr)	75		43 - 120
Nitrobenzene-d5 (Surr)	74		46 - 120
Phenol-d5 (Surr)	78		46 - 120
Terphenyl-d14 (Surr)	102		46 - 120

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-137073-9 MS

Matrix: Solid

Analysis Batch: 498836

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12

Prep Type: Total/NA

Prep Batch: 498186

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
1,1'-Biphenyl	ND		2790	2080		ug/Kg	*	74	60 - 120
1,2,4,5-Tetrachlorobenzene	ND		2790	2110		ug/Kg	*	76	60 - 120
1,2,4-Trichlorobenzene	ND		2790	1740		ug/Kg	*	62	59 - 120
1,2-Dichlorobenzene	ND	F1	2790	1480	F1	ug/Kg	*	53	57 - 120
1,2-Diphenylhydrazine(as Azobenzene)	ND		2820	2250		ug/Kg	*	80	60 - 120
1,3-Dichlorobenzene	ND	F1	2790	1380	F1	ug/Kg	*	49	56 - 120
1,3-Dinitrobenzene	ND		2790	2260		ug/Kg	*	81	66 - 120
1,4-Dichlorobenzene	ND	F1	2790	1420	F1	ug/Kg	*	51	57 - 120
1,4-Dioxane	ND	F1	2790	788		ug/Kg	*	28	28 - 120
1-Methylnaphthalene	ND		2790	2150		ug/Kg	*	77	57 - 120
2,2'-oxybis[1-chloropropane]	ND		2790	1530		ug/Kg	*	55	46 - 120
2,3,4,6-Tetrachlorophenol	ND		2790	2440		ug/Kg	*	88	63 - 120
2,4,5-Trichlorophenol	ND		2790	2370		ug/Kg	*	85	65 - 120
2,4,6-Trichlorophenol	ND		2790	2330		ug/Kg	*	84	64 - 120
2,4-Dichlorophenol	ND		2790	2250		ug/Kg	*	81	64 - 120
2,4-Dimethylphenol	ND		2790	2050		ug/Kg	*	73	60 - 120
2,4-Dinitrophenol	ND		5580	4040		ug/Kg	*	72	52 - 120
2,4-Dinitrotoluene	ND		2790	2450		ug/Kg	*	88	68 - 120
2,6-Dichlorophenol	ND		2790	2180		ug/Kg	*	78	30 - 150
2,6-Dinitrotoluene	ND		2790	2380		ug/Kg	*	85	68 - 120
2-Chloronaphthalene	ND		2790	2140		ug/Kg	*	77	61 - 120
2-Chlorophenol	ND		2790	1840		ug/Kg	*	66	62 - 120
2-Methylnaphthalene	ND		2790	2030		ug/Kg	*	73	60 - 120
2-Methylphenol	ND		2790	2090		ug/Kg	*	75	61 - 120
2-Nitroaniline	ND		2790	2290		ug/Kg	*	82	63 - 120
2-Nitrophenol	ND		2790	1840		ug/Kg	*	66	61 - 120
3 & 4 Methylphenol	ND		2790	2240		ug/Kg	*	80	62 - 120
3,3'-Dichlorobenzidine	ND		5580	4540		ug/Kg	*	81	22 - 120
3-Methylphenol	ND		2790	2240		ug/Kg	*	80	62 - 120
3-Nitroaniline	ND		2790	2250		ug/Kg	*	81	40 - 120
4,6-Dinitro-2-methylphenol	ND		5580	4260		ug/Kg	*	76	60 - 120
4-Bromophenyl phenyl ether	ND		2790	2540		ug/Kg	*	91	66 - 120
4-Chloro-3-methylphenol	ND		2790	2300		ug/Kg	*	83	62 - 120
4-Chloroaniline	ND		2790	1890		ug/Kg	*	68	33 - 120
4-Chlorophenyl phenyl ether	ND		2790	2320		ug/Kg	*	83	63 - 120
4-Methylphenol	ND		2790	2240		ug/Kg	*	80	62 - 120
4-Nitroaniline	ND		2790	2440		ug/Kg	*	88	58 - 120
4-Nitrophenol	ND		5580	3990		ug/Kg	*	71	67 - 120
Acenaphthene	ND		2790	2210		ug/Kg	*	79	62 - 120
Acenaphthylene	ND		2790	2200		ug/Kg	*	79	64 - 120
Acetophenone	ND		2790	1330		ug/Kg	*	48	48 - 120
Aniline	ND		2790	1140		ug/Kg	*	41	21 - 120
Anthracene	ND		2790	2410		ug/Kg	*	86	66 - 120
Azobenzene	ND		2790	2230		ug/Kg	*	80	59 - 120
Benzaldehyde	ND		2790	2080		ug/Kg	*	75	30 - 150
Benzidine	ND	F1	5580	ND	F1	ug/Kg	*	0	5 - 120
Benzo[a]anthracene	ND		2790	2370		ug/Kg	*	85	64 - 120
Benzo[a]pyrene	ND		2790	2360		ug/Kg	*	85	65 - 120

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-137073-9 MS

Matrix: Solid

Analysis Batch: 498836

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12

Prep Type: Total/NA

Prep Batch: 498186

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
Benzo[b]fluoranthene	ND		2790	2450		ug/Kg	*	88	58 - 120
Benzo[g,h,i]perylene	ND		2790	2220		ug/Kg	*	80	58 - 120
Benzo[k]fluoranthene	ND		2790	2370		ug/Kg	*	85	62 - 120
Benzoic acid	ND		2790	1810		ug/Kg	*	65	51 - 120
Benzyl alcohol	ND		2790	1930		ug/Kg	*	69	61 - 120
Bis(2-chloroethoxy)methane	ND		2790	1770		ug/Kg	*	64	58 - 120
Bis(2-chloroethyl)ether	ND	F1	2790	1500	F1	ug/Kg	*	54	57 - 120
Bis(2-ethylhexyl) phthalate	ND		2790	2610		ug/Kg	*	94	65 - 120
Butyl benzyl phthalate	ND		2790	2500		ug/Kg	*	90	65 - 120
Caprolactam	ND		2790	2290		ug/Kg	*	82	20 - 138
Carbazole	ND		2790	2430		ug/Kg	*	87	65 - 120
Chrysene	ND		2790	2360		ug/Kg	*	84	65 - 120
Dibenz(a,h)anthracene	ND		2790	2350		ug/Kg	*	84	56 - 120
Dibenzofuran	ND		2790	2240		ug/Kg	*	80	65 - 120
Diethyl phthalate	ND		2790	2280		ug/Kg	*	82	68 - 120
Dimethyl phthalate	ND		2790	2270		ug/Kg	*	81	66 - 120
Di-n-butyl phthalate	ND		2790	2450		ug/Kg	*	88	66 - 120
Di-n-octyl phthalate	ND		2790	2390		ug/Kg	*	86	55 - 120
Diphenylamine	ND		2370	1960		ug/Kg	*	83	30 - 150
Fluoranthene	ND		2790	2450		ug/Kg	*	88	64 - 120
Fluorene	ND		2790	2330		ug/Kg	*	83	66 - 120
Hexachlorobenzene	ND		2790	2400		ug/Kg	*	86	65 - 120
Hexachlorobutadiene	ND		2790	1640		ug/Kg	*	59	58 - 120
Hexachlorocyclopentadiene	ND		5580	2810		ug/Kg	*	50	43 - 120
Hexachloroethane	ND	F1	2790	1420	F1	ug/Kg	*	51	56 - 120
Hexadecane	19	J	2790	2180		ug/Kg	*	78	45 - 135
Indeno[1,2,3-cd]pyrene	ND		2790	2390		ug/Kg	*	86	46 - 120
Isophorone	ND		2790	1740		ug/Kg	*	62	56 - 120
Naphthalene	ND		2790	1780		ug/Kg	*	64	59 - 120
Nitrobenzene	ND		2790	1580		ug/Kg	*	57	55 - 120
N-Nitrosodimethylamine	ND	F1	2790	1340	F1	ug/Kg	*	48	50 - 120
N-Nitrosodi-n-propylamine	ND		2790	1660		ug/Kg	*	60	52 - 120
N-Nitrosodiphenylamine	ND		2790	2370		ug/Kg	*	85	65 - 120
Pentachlorophenol	ND		5580	4390		ug/Kg	*	79	50 - 120
Phenanthrene	ND		2790	2420		ug/Kg	*	87	67 - 120
Phenol	ND		2790	1860		ug/Kg	*	67	63 - 120
Pyrene	18	J	2790	2440		ug/Kg	*	87	66 - 120
Pyridine	ND		5580	2150		ug/Kg	*	38	37 - 120

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	78		35 - 120
2-Fluorobiphenyl	68		46 - 120
2-Fluorophenol (Surr)	57		43 - 120
Nitrobenzene-d5 (Surr)	54		46 - 120
Phenol-d5 (Surr)	69		46 - 120
Terphenyl-d14 (Surr)	91		46 - 120

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-137073-9 MSD

Matrix: Solid

Analysis Batch: 498836

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12

Prep Type: Total/NA

Prep Batch: 498186

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
1,1'-Biphenyl	ND		2750	2140		ug/Kg	☼	78	60 - 120	3	30
1,2,4,5-Tetrachlorobenzene	ND		2750	2070		ug/Kg	☼	75	60 - 120	2	30
1,2,4-Trichlorobenzene	ND		2750	1770		ug/Kg	☼	64	59 - 120	2	30
1,2-Dichlorobenzene	ND	F1	2750	1520	F1	ug/Kg	☼	55	57 - 120	3	30
1,2-Diphenylhydrazine(as Azobenzene)	ND		2780	2220		ug/Kg	☼	80	60 - 120	2	30
1,3-Dichlorobenzene	ND	F1	2750	1460	F1	ug/Kg	☼	53	56 - 120	6	30
1,3-Dinitrobenzene	ND		2750	2300		ug/Kg	☼	83	66 - 120	2	30
1,4-Dichlorobenzene	ND	F1	2750	1460	F1	ug/Kg	☼	53	57 - 120	3	30
1,4-Dioxane	ND	F1	2750	731	F1	ug/Kg	☼	27	28 - 120	7	30
1-Methylnaphthalene	ND		2750	2070		ug/Kg	☼	75	57 - 120	4	30
2,2'-oxybis[1-chloropropane]	ND		2750	1550		ug/Kg	☼	56	46 - 120	1	30
2,3,4,6-Tetrachlorophenol	ND		2750	2390		ug/Kg	☼	87	63 - 120	2	30
2,4,5-Trichlorophenol	ND		2750	2410		ug/Kg	☼	88	65 - 120	2	30
2,4,6-Trichlorophenol	ND		2750	2330		ug/Kg	☼	85	64 - 120	0	30
2,4-Dichlorophenol	ND		2750	2170		ug/Kg	☼	79	64 - 120	4	30
2,4-Dimethylphenol	ND		2750	2030		ug/Kg	☼	74	60 - 120	1	30
2,4-Dinitrophenol	ND		5510	3810		ug/Kg	☼	69	52 - 120	6	30
2,4-Dinitrotoluene	ND		2750	2450		ug/Kg	☼	89	68 - 120	0	30
2,6-Dichlorophenol	ND		2750	2180		ug/Kg	☼	79	30 - 150	0	30
2,6-Dinitrotoluene	ND		2750	2380		ug/Kg	☼	86	68 - 120	0	30
2-Chloronaphthalene	ND		2750	2150		ug/Kg	☼	78	61 - 120	0	30
2-Chlorophenol	ND		2750	1810		ug/Kg	☼	66	62 - 120	2	30
2-Methylnaphthalene	ND		2750	2040		ug/Kg	☼	74	60 - 120	0	30
2-Methylphenol	ND		2750	2040		ug/Kg	☼	74	61 - 120	2	30
2-Nitroaniline	ND		2750	2260		ug/Kg	☼	82	63 - 120	1	30
2-Nitrophenol	ND		2750	1860		ug/Kg	☼	68	61 - 120	1	30
3 & 4 Methylphenol	ND		2750	2060		ug/Kg	☼	75	62 - 120	8	30
3,3'-Dichlorobenzidine	ND		5510	4690		ug/Kg	☼	85	22 - 120	3	30
3-Methylphenol	ND		2750	2060		ug/Kg	☼	75	62 - 120	8	30
3-Nitroaniline	ND		2750	2330		ug/Kg	☼	85	40 - 120	4	30
4,6-Dinitro-2-methylphenol	ND		5510	3970		ug/Kg	☼	72	60 - 120	7	30
4-Bromophenyl phenyl ether	ND		2750	2380		ug/Kg	☼	86	66 - 120	7	30
4-Chloro-3-methylphenol	ND		2750	2330		ug/Kg	☼	85	62 - 120	1	30
4-Chloroaniline	ND		2750	1810		ug/Kg	☼	66	33 - 120	4	30
4-Chlorophenyl phenyl ether	ND		2750	2310		ug/Kg	☼	84	63 - 120	0	30
4-Methylphenol	ND		2750	2060		ug/Kg	☼	75	62 - 120	8	30
4-Nitroaniline	ND		2750	2390		ug/Kg	☼	87	58 - 120	2	30
4-Nitrophenol	ND		5510	4100		ug/Kg	☼	74	67 - 120	3	30
Acenaphthene	ND		2750	2180		ug/Kg	☼	79	62 - 120	2	30
Acenaphthylene	ND		2750	2240		ug/Kg	☼	81	64 - 120	2	30
Acetophenone	ND		2750	1370		ug/Kg	☼	50	48 - 120	3	30
Aniline	ND		2750	1100		ug/Kg	☼	40	21 - 120	4	30
Anthracene	ND		2750	2340		ug/Kg	☼	85	66 - 120	3	30
Azobenzene	ND		2750	2200		ug/Kg	☼	80	59 - 120	2	30
Benzaldehyde	ND		2750	2030		ug/Kg	☼	74	30 - 150	2	50
Benzidine	ND	F1	5510	ND	F1	ug/Kg	☼	0	5 - 120	NC	50
Benzo[a]anthracene	ND		2750	2430		ug/Kg	☼	88	64 - 120	3	30
Benzo[a]pyrene	ND		2750	2350		ug/Kg	☼	85	65 - 120	0	30

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-137073-9 MSD

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 498836

Prep Batch: 498186

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier						
Benzo[b]fluoranthene	ND		2750	2370		ug/Kg	☼	86	58 - 120	3	30
Benzo[g,h,i]perylene	ND		2750	2150		ug/Kg	☼	78	58 - 120	3	30
Benzo[k]fluoranthene	ND		2750	2340		ug/Kg	☼	85	62 - 120	1	30
Benzoic acid	ND		2750	1700		ug/Kg	☼	62	51 - 120	6	30
Benzyl alcohol	ND		2750	1920		ug/Kg	☼	70	61 - 120	0	30
Bis(2-chloroethoxy)methane	ND		2750	1840		ug/Kg	☼	67	58 - 120	4	30
Bis(2-chloroethyl)ether	ND	F1	2750	1530	F1	ug/Kg	☼	56	57 - 120	2	30
Bis(2-ethylhexyl) phthalate	ND		2750	2710		ug/Kg	☼	98	65 - 120	4	30
Butyl benzyl phthalate	ND		2750	2530		ug/Kg	☼	92	65 - 120	1	30
Caprolactam	ND		2750	2340		ug/Kg	☼	85	20 - 138	2	30
Carbazole	ND		2750	2320		ug/Kg	☼	84	65 - 120	4	30
Chrysene	ND		2750	2470		ug/Kg	☼	90	65 - 120	5	30
Dibenz(a,h)anthracene	ND		2750	2270		ug/Kg	☼	82	56 - 120	4	30
Dibenzofuran	ND		2750	2280		ug/Kg	☼	83	65 - 120	2	30
Diethyl phthalate	ND		2750	2290		ug/Kg	☼	83	68 - 120	0	30
Dimethyl phthalate	ND		2750	2320		ug/Kg	☼	84	66 - 120	2	30
Di-n-butyl phthalate	ND		2750	2380		ug/Kg	☼	86	66 - 120	3	30
Di-n-octyl phthalate	ND		2750	2480		ug/Kg	☼	90	55 - 120	4	30
Diphenylamine	ND		2340	1980		ug/Kg	☼	85	30 - 150	1	50
Fluoranthene	ND		2750	2290		ug/Kg	☼	83	64 - 120	7	30
Fluorene	ND		2750	2390		ug/Kg	☼	87	66 - 120	3	30
Hexachlorobenzene	ND		2750	2200		ug/Kg	☼	80	65 - 120	8	30
Hexachlorobutadiene	ND		2750	1650		ug/Kg	☼	60	58 - 120	1	30
Hexachlorocyclopentadiene	ND		5510	2560		ug/Kg	☼	46	43 - 120	9	30
Hexachloroethane	ND	F1	2750	1400	F1	ug/Kg	☼	51	56 - 120	1	30
Hexadecane	19	J	2750	2260		ug/Kg	☼	81	45 - 135	4	30
Indeno[1,2,3-cd]pyrene	ND		2750	2390		ug/Kg	☼	87	46 - 120	0	30
Isophorone	ND		2750	1750		ug/Kg	☼	64	56 - 120	1	30
Naphthalene	ND		2750	1760		ug/Kg	☼	64	59 - 120	1	30
Nitrobenzene	ND		2750	1600		ug/Kg	☼	58	55 - 120	2	30
N-Nitrosodimethylamine	ND	F1	2750	1440		ug/Kg	☼	52	50 - 120	8	30
N-Nitrosodi-n-propylamine	ND		2750	1690		ug/Kg	☼	61	52 - 120	2	30
N-Nitrosodiphenylamine	ND		2750	2270		ug/Kg	☼	82	65 - 120	4	30
Pentachlorophenol	ND		5510	4310		ug/Kg	☼	78	50 - 120	2	30
Phenanthrene	ND		2750	2270		ug/Kg	☼	82	67 - 120	6	30
Phenol	ND		2750	1750		ug/Kg	☼	63	63 - 120	6	30
Pyrene	18	J	2750	2460		ug/Kg	☼	88	66 - 120	0	30
Pyridine	ND		5510	2280		ug/Kg	☼	41	37 - 120	6	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	80		35 - 120
2-Fluorobiphenyl	70		46 - 120
2-Fluorophenol (Surr)	58		43 - 120
Nitrobenzene-d5 (Surr)	56		46 - 120
Phenol-d5 (Surr)	68		46 - 120
Terphenyl-d14 (Surr)	94		46 - 120

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Lab Sample ID: MB 280-498014/3-A
Matrix: Solid
Analysis Batch: 498073

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498014

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.0	0.76	mg/Kg		06/09/20 11:47	06/09/20 16:03	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	85		77 - 123				06/09/20 11:47	06/09/20 16:03	1

Lab Sample ID: LCS 280-498014/1-A
Matrix: Solid
Analysis Batch: 498073

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498014

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Gasoline Range Organics (GRO) -C6-C10	4.27	3.69		mg/Kg		86	75 - 135
Surrogate	%Recovery	LCS Qualifier	Limits				
a,a,a-Trifluorotoluene	89		77 - 123				

Lab Sample ID: LCSD 280-498014/2-A
Matrix: Solid
Analysis Batch: 498073

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 498014

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO) -C6-C10	4.27	3.77		mg/Kg		88	75 - 135	2	30
Surrogate	%Recovery	LCSD Qualifier	Limits						
a,a,a-Trifluorotoluene	85		77 - 123						

Lab Sample ID: MB 280-498159/5
Matrix: Water
Analysis Batch: 498159

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		25	10	ug/L			06/10/20 10:57	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	100		82 - 110					06/10/20 10:57	1

Lab Sample ID: LCS 280-498159/3
Matrix: Water
Analysis Batch: 498159

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C6-C10	76.9	79.0		ug/L		103	79 - 149

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics) (Continued)

Lab Sample ID: LCS 280-498159/3
Matrix: Water
Analysis Batch: 498159

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
a,a,a-Trifluorotoluene	99		82 - 110

Lab Sample ID: LCSD 280-498159/4
Matrix: Water
Analysis Batch: 498159

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C10	76.9	77.9		ug/L		101	79 - 149	1	27

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
a,a,a-Trifluorotoluene	98		82 - 110

Lab Sample ID: MB 280-498230/3-A
Matrix: Solid
Analysis Batch: 498321

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498230

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.0	0.76	mg/Kg		06/10/20 14:44	06/11/20 10:38	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	86		77 - 123	06/10/20 14:44	06/11/20 10:38	1

Lab Sample ID: LCS 280-498230/1-A
Matrix: Solid
Analysis Batch: 498321

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498230

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C6-C10	4.27	3.40		mg/Kg		80	75 - 135

Surrogate	LCS %Recovery	LCS Qualifier	Limits
a,a,a-Trifluorotoluene	85		77 - 123

Lab Sample ID: LCSD 280-498230/2-A
Matrix: Solid
Analysis Batch: 498321

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 498230

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C10	4.27	3.50		mg/Kg		82	75 - 135	3	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
a,a,a-Trifluorotoluene	86		77 - 123

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics) (Continued)

Lab Sample ID: 280-137073-9 MS
Matrix: Solid
Analysis Batch: 498321

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12
Prep Type: Total/NA
Prep Batch: 498230

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C6-C10	ND		3.93	3.51		mg/Kg	☒	89	75 - 135
Surrogate	%Recovery	MS Qualifier	Limits						
<i>a,a,a-Trifluorotoluene</i>	83		77 - 123						

Lab Sample ID: 280-137073-9 MSD
Matrix: Solid
Analysis Batch: 498321

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12
Prep Type: Total/NA
Prep Batch: 498230

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C10	ND		3.93	3.51		mg/Kg	☒	89	75 - 135	0	30
Surrogate	%Recovery	MSD Qualifier	Limits								
<i>a,a,a-Trifluorotoluene</i>	84		77 - 123								

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Lab Sample ID: MB 280-497026/1-A
Matrix: Water
Analysis Batch: 498093

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 497026

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.25	0.033	mg/L		06/02/20 14:36	06/09/20 22:38	1
Motor Oil (C20-C38)	ND		0.50	0.056	mg/L		06/02/20 14:36	06/09/20 22:38	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o-Terphenyl (Surr)</i>	78		50 - 115				06/02/20 14:36	06/09/20 22:38	1

Lab Sample ID: LCS 280-497026/2-A
Matrix: Water
Analysis Batch: 498093

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497026

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	1.98	1.72		mg/L		86	54 - 115
Surrogate	%Recovery	LCS Qualifier	Limits				
<i>o-Terphenyl (Surr)</i>	82		50 - 115				

Lab Sample ID: LCS 280-497026/4-A
Matrix: Water
Analysis Batch: 498093

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497026

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Motor Oil (C20-C38)	5.02	4.54		mg/L		91	54 - 115

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Lab Sample ID: LCS 280-497026/4-A
Matrix: Water
Analysis Batch: 498093

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497026

Surrogate	LCS %Recovery	LCS Qualifier	Limits
<i>o</i> -Terphenyl (Surr)	88		50 - 115

Lab Sample ID: LCSD 280-497026/3-A
Matrix: Water
Analysis Batch: 498093

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 497026

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	1.98	1.73		mg/L		87	54 - 115	1	31

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
<i>o</i> -Terphenyl (Surr)	85		50 - 115

Lab Sample ID: LCSD 280-497026/5-A
Matrix: Water
Analysis Batch: 498093

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 497026

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Motor Oil (C20-C38)	5.02	4.67		mg/L		93	54 - 115	3	31

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
<i>o</i> -Terphenyl (Surr)	90		50 - 115

Lab Sample ID: MB 280-498302/1-A
Matrix: Solid
Analysis Batch: 499134

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498302

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		8.0	3.6	mg/Kg		06/11/20 10:33	06/23/20 00:44	1
Motor Oil (C20-C38)	ND		24	7.8	mg/Kg		06/11/20 10:33	06/23/20 00:44	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	80		49 - 115	06/11/20 10:33	06/23/20 00:44	1

Lab Sample ID: LCS 280-498302/2-A
Matrix: Solid
Analysis Batch: 499134

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498302

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	132	113		mg/Kg		86	53 - 115

Surrogate	LCS %Recovery	LCS Qualifier	Limits
<i>o</i> -Terphenyl (Surr)	81		49 - 115

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Lab Sample ID: LCS 280-498302/3-A
Matrix: Solid
Analysis Batch: 499134

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498302

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Motor Oil (C20-C38)	334	308		mg/Kg		92	57 - 115
Surrogate	%Recovery	LCS Qualifier	Limits				
<i>o</i> -Terphenyl (Surr)	90		49 - 115				

Lab Sample ID: 280-137073-9 MS
Matrix: Solid
Analysis Batch: 500447

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12
Prep Type: Total/NA
Prep Batch: 498302

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	6.3	J	147	116		mg/Kg	☼	75	56 - 115
Surrogate	%Recovery	MS Qualifier	Limits						
<i>o</i> -Terphenyl (Surr)	67		49 - 115						

Lab Sample ID: 280-137073-9 MS
Matrix: Solid
Analysis Batch: 500447

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12
Prep Type: Total/NA
Prep Batch: 498302

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Motor Oil (C20-C38)	20	J	373	350		mg/Kg	☼	88	57 - 115
Surrogate	%Recovery	MS Qualifier	Limits						
<i>o</i> -Terphenyl (Surr)	73		49 - 115						

Lab Sample ID: 280-137073-9 MSD
Matrix: Solid
Analysis Batch: 500447

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12
Prep Type: Total/NA
Prep Batch: 498302

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Diesel Range Organics [C10-C28]	6.3	J	142	106		mg/Kg	☼	70	56 - 115	NC	23
Surrogate	%Recovery	MSD Qualifier	Limits								
<i>o</i> -Terphenyl (Surr)	73		49 - 115								

Lab Sample ID: 280-137073-9 MSD
Matrix: Solid
Analysis Batch: 500447

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12
Prep Type: Total/NA
Prep Batch: 498302

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Motor Oil (C20-C38)	20	J	356	325		mg/Kg	☼	86	57 - 115	7	30
Surrogate	%Recovery	MSD Qualifier	Limits								
<i>o</i> -Terphenyl (Surr)	73		49 - 115								

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 280-497041/1-A
Matrix: Water
Analysis Batch: 497743

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 497041

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan I	ND		0.050	0.0058	ug/L		06/02/20 16:13	06/08/20 11:45	1
Endosulfan II	ND		0.050	0.0066	ug/L		06/02/20 16:13	06/08/20 11:45	1
Endosulfan sulfate	ND		0.050	0.0049	ug/L		06/02/20 16:13	06/08/20 11:45	1
Endrin	ND		0.050	0.0086	ug/L		06/02/20 16:13	06/08/20 11:45	1
Endrin aldehyde	ND		0.050	0.0087	ug/L		06/02/20 16:13	06/08/20 11:45	1
Endrin ketone	ND		0.050	0.013	ug/L		06/02/20 16:13	06/08/20 11:45	1
beta-BHC	ND		0.050	0.0091	ug/L		06/02/20 16:13	06/08/20 11:45	1
alpha-BHC	ND		0.050	0.0097	ug/L		06/02/20 16:13	06/08/20 11:45	1
delta-BHC	ND		0.050	0.0078	ug/L		06/02/20 16:13	06/08/20 11:45	1
gamma-BHC (Lindane)	ND		0.050	0.010	ug/L		06/02/20 16:13	06/08/20 11:45	1
trans-Chlordane	ND		0.050	0.0072	ug/L		06/02/20 16:13	06/08/20 11:45	1
Dieldrin	ND		0.050	0.0046	ug/L		06/02/20 16:13	06/08/20 11:45	1
Heptachlor epoxide	ND		0.050	0.0032	ug/L		06/02/20 16:13	06/08/20 11:45	1
Heptachlor	ND		0.050	0.010	ug/L		06/02/20 16:13	06/08/20 11:45	1
Aldrin	ND		0.050	0.0062	ug/L		06/02/20 16:13	06/08/20 11:45	1
4,4'-DDD	ND		0.050	0.0042	ug/L		06/02/20 16:13	06/08/20 11:45	1
4,4'-DDE	ND		0.050	0.0042	ug/L		06/02/20 16:13	06/08/20 11:45	1
4,4'-DDT	ND		0.050	0.024	ug/L		06/02/20 16:13	06/08/20 11:45	1
Methoxychlor	ND		0.10	0.014	ug/L		06/02/20 16:13	06/08/20 11:45	1
Toxaphene	ND		3.0	1.5	ug/L		06/02/20 16:13	06/08/20 11:45	1
cis-Chlordane	ND		0.050	0.0088	ug/L		06/02/20 16:13	06/08/20 11:45	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	94		28 - 115	06/02/20 16:13	06/08/20 11:45	1
DCB Decachlorobiphenyl	86		34 - 122	06/02/20 16:13	06/08/20 11:45	1

Lab Sample ID: LCS 280-497041/2-A
Matrix: Water
Analysis Batch: 497743

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497041

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Endosulfan I	0.500	0.552		ug/L		110	46 - 125
Endosulfan II	0.500	0.489		ug/L		98	37 - 132
Endosulfan sulfate	0.500	0.517		ug/L		103	49 - 132
Endrin	0.500	0.506		ug/L		101	52 - 139
Endrin aldehyde	0.500	0.456		ug/L		91	38 - 123
Endrin ketone	0.500	0.495		ug/L		99	47 - 119
beta-BHC	0.500	0.575		ug/L		115	40 - 125
alpha-BHC	0.500	0.603	*	ug/L		121	49 - 117
delta-BHC	0.500	0.573		ug/L		115	49 - 119
gamma-BHC (Lindane)	0.500	0.578		ug/L		116	51 - 117
trans-Chlordane	0.500	0.537		ug/L		107	52 - 120
Dieldrin	0.500	0.564		ug/L		113	60 - 123
Heptachlor epoxide	0.500	0.570		ug/L		114	54 - 122
Heptachlor	0.500	0.522		ug/L		104	41 - 121
Aldrin	0.500	0.490		ug/L		98	41 - 109
4,4'-DDD	0.500	0.500		ug/L		100	61 - 126
4,4'-DDE	0.500	0.501		ug/L		100	56 - 122

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 280-497041/2-A
Matrix: Water
Analysis Batch: 497743

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497041

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDT	0.500	0.473		ug/L		95	55 - 129
Methoxychlor	0.500	0.446		ug/L		89	54 - 126
cis-Chlordane	0.500	0.538		ug/L		108	54 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	84		28 - 115
DCB Decachlorobiphenyl	94		34 - 122

Lab Sample ID: LCSD 280-497041/3-A
Matrix: Water
Analysis Batch: 497743

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 497041

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Endosulfan I	0.500	0.564		ug/L		113	46 - 125	2	18
Endosulfan II	0.500	0.502		ug/L		100	37 - 132	3	23
Endosulfan sulfate	0.500	0.526		ug/L		105	49 - 132	2	13
Endrin	0.500	0.477		ug/L		95	52 - 139	6	17
Endrin aldehyde	0.500	0.516		ug/L		103	38 - 123	12	17
Endrin ketone	0.500	0.520		ug/L		104	47 - 119	5	25
beta-BHC	0.500	0.595		ug/L		119	40 - 125	3	16
alpha-BHC	0.500	0.635 *		ug/L		127	49 - 117	5	16
delta-BHC	0.500	0.591		ug/L		118	49 - 119	3	16
gamma-BHC (Lindane)	0.500	0.599 *		ug/L		120	51 - 117	4	19
trans-Chlordane	0.500	0.550		ug/L		110	52 - 120	2	27
Dieldrin	0.500	0.577		ug/L		115	60 - 123	2	14
Heptachlor epoxide	0.500	0.585		ug/L		117	54 - 122	3	14
Heptachlor	0.500	0.525		ug/L		105	41 - 121	0	41
Aldrin	0.500	0.495		ug/L		99	41 - 109	1	42
4,4'-DDD	0.500	0.512		ug/L		102	61 - 126	2	14
4,4'-DDE	0.500	0.518		ug/L		104	56 - 122	3	20
4,4'-DDT	0.500	0.472		ug/L		94	55 - 129	0	19
Methoxychlor	0.500	0.450		ug/L		90	54 - 126	1	22
cis-Chlordane	0.500	0.548		ug/L		110	54 - 120	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene	86		28 - 115
DCB Decachlorobiphenyl	96		34 - 122

Lab Sample ID: MB 280-497995/1-A
Matrix: Solid
Analysis Batch: 498397

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 497995

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan I	ND		3.4	0.35	ug/Kg		06/09/20 13:05	06/11/20 19:54	1
Endosulfan II	ND		3.4	0.57	ug/Kg		06/09/20 13:05	06/11/20 19:54	1
Endosulfan sulfate	ND		3.4	0.55	ug/Kg		06/09/20 13:05	06/11/20 19:54	1
Endrin	ND		3.4	0.61	ug/Kg		06/09/20 13:05	06/11/20 19:54	1
Endrin aldehyde	ND		3.4	1.1	ug/Kg		06/09/20 13:05	06/11/20 19:54	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 280-497995/1-A
Matrix: Solid
Analysis Batch: 498397

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 497995

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endrin ketone	ND		3.4	0.40	ug/Kg		06/09/20 13:05	06/11/20 19:54	1
beta-BHC	ND		3.4	1.3	ug/Kg		06/09/20 13:05	06/11/20 19:54	1
alpha-BHC	ND		3.4	0.43	ug/Kg		06/09/20 13:05	06/11/20 19:54	1
delta-BHC	ND		3.4	0.80	ug/Kg		06/09/20 13:05	06/11/20 19:54	1
gamma-BHC (Lindane)	ND		3.4	0.39	ug/Kg		06/09/20 13:05	06/11/20 19:54	1
trans-Chlordane	ND		3.4	0.53	ug/Kg		06/09/20 13:05	06/11/20 19:54	1
Dieldrin	ND		3.4	0.42	ug/Kg		06/09/20 13:05	06/11/20 19:54	1
Heptachlor epoxide	ND		3.4	0.85	ug/Kg		06/09/20 13:05	06/11/20 19:54	1
Heptachlor	ND		3.4	0.43	ug/Kg		06/09/20 13:05	06/11/20 19:54	1
Aldrin	ND		3.4	0.50	ug/Kg		06/09/20 13:05	06/11/20 19:54	1
4,4'-DDD	ND		3.4	1.1	ug/Kg		06/09/20 13:05	06/11/20 19:54	1
4,4'-DDE	ND		3.4	0.48	ug/Kg		06/09/20 13:05	06/11/20 19:54	1
4,4'-DDT	ND		3.4	1.2	ug/Kg		06/09/20 13:05	06/11/20 19:54	1
Methoxychlor	ND		6.6	0.90	ug/Kg		06/09/20 13:05	06/11/20 19:54	1
Toxaphene	ND		130	32	ug/Kg		06/09/20 13:05	06/11/20 19:54	1
cis-Chlordane	ND		3.4	0.65	ug/Kg		06/09/20 13:05	06/11/20 19:54	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	91		59 - 115	06/09/20 13:05	06/11/20 19:54	1
DCB Decachlorobiphenyl	101		63 - 124	06/09/20 13:05	06/11/20 19:54	1

Lab Sample ID: LCS 280-497995/2-A
Matrix: Solid
Analysis Batch: 498397

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497995

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Endosulfan I	33.3	34.2	*	ug/Kg		103	60 - 101
Endosulfan II	33.3	35.9	*	ug/Kg		108	60 - 100
Endosulfan sulfate	33.3	35.9	*	ug/Kg		108	63 - 105
Endrin	33.3	36.5		ug/Kg		110	62 - 111
Endrin aldehyde	33.3	35.4	*	ug/Kg		106	53 - 88
Endrin ketone	33.3	34.7	*	ug/Kg		104	62 - 98
beta-BHC	33.3	33.0		ug/Kg		99	60 - 99
alpha-BHC	33.3	35.3	*	ug/Kg		106	61 - 101
delta-BHC	33.3	35.6	*	ug/Kg		107	62 - 103
gamma-BHC (Lindane)	33.3	35.1	*	ug/Kg		105	61 - 102
trans-Chlordane	33.3	36.6	*	ug/Kg		110	59 - 109
Dieldrin	33.3	37.1	*	ug/Kg		111	64 - 106
Heptachlor epoxide	33.3	36.3	*	ug/Kg		109	61 - 105
Heptachlor	33.3	34.5		ug/Kg		103	59 - 109
Aldrin	33.3	35.3	*	ug/Kg		106	59 - 104
4,4'-DDD	33.3	38.7	*	ug/Kg		116	63 - 104
4,4'-DDE	33.3	37.6	*	ug/Kg		113	63 - 105
4,4'-DDT	33.3	34.3		ug/Kg		103	63 - 106
Methoxychlor	33.3	36.9	*	ug/Kg		111	62 - 110
cis-Chlordane	33.3	36.4	*	ug/Kg		109	60 - 104

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 280-497995/2-A
Matrix: Solid
Analysis Batch: 498397

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497995

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	89		59 - 115
DCB Decachlorobiphenyl	97		63 - 124

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 280-497041/1-A
Matrix: Water
Analysis Batch: 498596

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 497041

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND		1.0	0.18	ug/L		06/02/20 16:13	06/13/20 22:16	1
PCB-1016	ND		1.0	0.17	ug/L		06/02/20 16:13	06/13/20 22:16	1
PCB-1232	ND		1.0	0.13	ug/L		06/02/20 16:13	06/13/20 22:16	1
PCB-1242	ND		1.0	0.10	ug/L		06/02/20 16:13	06/13/20 22:16	1
PCB-1248	ND		1.0	0.17	ug/L		06/02/20 16:13	06/13/20 22:16	1
PCB-1254	ND		1.0	0.14	ug/L		06/02/20 16:13	06/13/20 22:16	1
PCB-1260	ND		1.0	0.089	ug/L		06/02/20 16:13	06/13/20 22:16	1
PCB-1262	ND		1.0	0.094	ug/L		06/02/20 16:13	06/13/20 22:16	1
PCB-1268	ND		1.0	0.37	ug/L		06/02/20 16:13	06/13/20 22:16	1
Polychlorinated biphenyls, Total	ND		1.0	0.073	ug/L		06/02/20 16:13	06/13/20 22:16	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Tetrachloro-m-xylene	87		29 - 115	06/02/20 16:13	06/13/20 22:16	1
DCB Decachlorobiphenyl	111		26 - 135	06/02/20 16:13	06/13/20 22:16	1

Lab Sample ID: LCS 280-497041/4-A
Matrix: Water
Analysis Batch: 498596

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497041

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
PCB-1016	2.00	1.83		ug/L		91	58 - 125
PCB-1260	2.00	1.76		ug/L		88	72 - 128

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	86		29 - 115
DCB Decachlorobiphenyl	108		26 - 135

Lab Sample ID: LCSD 280-497041/5-A
Matrix: Water
Analysis Batch: 498596

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 497041

Analyte	Spike Added	LCSD LCSD		Unit	D	%Rec	Limits	RPD	
		Result	Qualifier					RPD	Limit
PCB-1016	2.00	1.86		ug/L		93	58 - 125	2	25
PCB-1260	2.00	1.73		ug/L		86	72 - 128	2	23

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	88		29 - 115
DCB Decachlorobiphenyl	102		26 - 135

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 280-497995/1-A
Matrix: Solid
Analysis Batch: 498439

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 497995

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND		94	31	ug/Kg		06/09/20 13:05	06/12/20 04:05	1
PCB-1016	ND		66	10	ug/Kg		06/09/20 13:05	06/12/20 04:05	1
PCB-1232	ND		66	10	ug/Kg		06/09/20 13:05	06/12/20 04:05	1
PCB-1242	ND		66	18	ug/Kg		06/09/20 13:05	06/12/20 04:05	1
PCB-1248	ND		66	4.8	ug/Kg		06/09/20 13:05	06/12/20 04:05	1
PCB-1254	ND		66	11	ug/Kg		06/09/20 13:05	06/12/20 04:05	1
PCB-1260	ND		66	2.3	ug/Kg		06/09/20 13:05	06/12/20 04:05	1
PCB-1262	ND		66	5.5	ug/Kg		06/09/20 13:05	06/12/20 04:05	1
PCB-1268	ND		66	2.7	ug/Kg		06/09/20 13:05	06/12/20 04:05	1
Polychlorinated biphenyls, Total	ND		66	5.3	ug/Kg		06/09/20 13:05	06/12/20 04:05	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	74		53 - 128	06/09/20 13:05	06/12/20 04:05	1
DCB Decachlorobiphenyl	77		59 - 130	06/09/20 13:05	06/12/20 04:05	1

Lab Sample ID: LCS 280-497995/3-A
Matrix: Solid
Analysis Batch: 498439

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497995

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
PCB-1016	133	108		ug/Kg		81	54 - 132
PCB-1260	133	106		ug/Kg		80	62 - 129

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	77		53 - 128
DCB Decachlorobiphenyl	85		59 - 130

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-496978/1-A
Matrix: Water
Analysis Batch: 497365

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 496978

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.33	ug/L		06/02/20 15:45	06/03/20 20:40	1
Barium	ND		1.0	0.29	ug/L		06/02/20 15:45	06/03/20 20:40	1
Cadmium	ND		1.0	0.27	ug/L		06/02/20 15:45	06/03/20 20:40	1
Chromium	ND		2.0	0.50	ug/L		06/02/20 15:45	06/03/20 20:40	1
Selenium	ND		5.0	0.37	ug/L		06/02/20 15:45	06/03/20 20:40	1
Silver	ND		5.0	0.033	ug/L		06/02/20 15:45	06/03/20 20:40	1

Lab Sample ID: MB 280-496978/1-A
Matrix: Water
Analysis Batch: 497535

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 496978

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		1.0	0.18	ug/L		06/02/20 15:45	06/04/20 23:22	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 280-496978/2-A
Matrix: Water
Analysis Batch: 497365

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 496978
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	40.0	39.8		ug/L		100	85 - 117
Barium	40.0	41.3		ug/L		103	85 - 118
Cadmium	40.0	39.2		ug/L		98	85 - 115
Chromium	40.0	41.1		ug/L		103	84 - 121
Selenium	40.0	40.8		ug/L		102	77 - 122
Silver	40.0	41.1		ug/L		103	85 - 115

Lab Sample ID: LCS 280-496978/2-A
Matrix: Water
Analysis Batch: 497535

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 496978
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Lead	40.0	41.8		ug/L		105	85 - 118

Lab Sample ID: MB 280-496985/1-A
Matrix: Solid
Analysis Batch: 497991

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 496985

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.60	0.051	mg/Kg		06/04/20 15:20	06/08/20 20:44	1
Barium	0.122	J	0.40	0.071	mg/Kg		06/04/20 15:20	06/08/20 20:44	1
Cadmium	ND		0.10	0.0094	mg/Kg		06/04/20 15:20	06/08/20 20:44	1
Chromium	ND		0.20	0.076	mg/Kg		06/04/20 15:20	06/08/20 20:44	1
Lead	ND		0.15	0.018	mg/Kg		06/04/20 15:20	06/08/20 20:44	1
Selenium	ND		0.50	0.13	mg/Kg		06/04/20 15:20	06/08/20 20:44	1

Lab Sample ID: LCS 280-496985/2-A
Matrix: Solid
Analysis Batch: 497991

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 496985
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	20.0	19.4		mg/Kg		97	83 - 111
Barium	20.0	19.4		mg/Kg		97	86 - 120
Cadmium	20.0	19.4		mg/Kg		97	85 - 109
Chromium	20.0	19.6		mg/Kg		98	87 - 121
Lead	20.0	20.3		mg/Kg		102	81 - 125
Selenium	20.0	18.7		mg/Kg		94	78 - 108

Lab Sample ID: 280-137073-9 MS
Matrix: Solid
Analysis Batch: 497991

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12
Prep Type: Total/NA
Prep Batch: 496985
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	1.6		17.6	18.9		mg/Kg	☼	98	83 - 111
Barium	100	F2 B	17.6	168	4	mg/Kg	☼	360	86 - 120
Cadmium	0.14		17.6	17.2		mg/Kg	☼	97	85 - 109
Chromium	7.5	F1	17.6	29.3	F1	mg/Kg	☼	124	87 - 121
Lead	16	F1	17.6	29.9	F1	mg/Kg	☼	78	81 - 125
Selenium	0.14	J F2	17.6	16.3		mg/Kg	☼	92	78 - 108

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 280-137073-9 MSD

Matrix: Solid
Analysis Batch: 497991

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12

Prep Type: Total/NA
Prep Batch: 496985

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						RPD	
Arsenic	1.6		20.7	21.8		mg/Kg	☼	98	83 - 111	14	20	
Barium	100	F2 B	20.7	118	4 F2	mg/Kg	☼	68	86 - 120	34	20	
Cadmium	0.14		20.7	20.8		mg/Kg	☼	100	85 - 109	19	20	
Chromium	7.5	F1	20.7	29.5		mg/Kg	☼	107	87 - 121	1	20	
Lead	16	F1	20.7	32.3	F1	mg/Kg	☼	78	81 - 125	8	20	
Selenium	0.14	J F2	20.7	20.6	F2	mg/Kg	☼	99	78 - 108	23	20	

Lab Sample ID: MB 280-497091/1-A

Matrix: Solid
Analysis Batch: 497898

Client Sample ID: Method Blank

Prep Type: Total/NA
Prep Batch: 497091

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
	Result	Qualifier								
Silver	ND		100	7.8	ug/Kg		06/04/20 17:00	06/08/20 16:14		1

Lab Sample ID: LCS 280-497091/2-A

Matrix: Solid
Analysis Batch: 497898

Client Sample ID: Lab Control Sample

Prep Type: Total/NA
Prep Batch: 497091

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
Silver	20000	20200		ug/Kg		101	83 - 113	

Lab Sample ID: 280-137073-9 MS

Matrix: Solid
Analysis Batch: 497898

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12

Prep Type: Total/NA
Prep Batch: 497091

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Silver	27	J	17200	17400		ug/Kg	☼	101	83 - 113	

Lab Sample ID: 280-137073-9 MSD

Matrix: Solid
Analysis Batch: 497898

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12

Prep Type: Total/NA
Prep Batch: 497091

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						RPD	
Silver	27	J	18500	18600		ug/Kg	☼	100	83 - 113	7	20	

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 280-498532/1-A

Matrix: Water
Analysis Batch: 498745

Client Sample ID: Method Blank

Prep Type: Total/NA
Prep Batch: 498532

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
	Result	Qualifier								
Mercury	0.0367	J	0.20	0.027	ug/L		06/12/20 13:55	06/12/20 19:03		1

Lab Sample ID: LCS 280-498532/2-A

Matrix: Water
Analysis Batch: 498745

Client Sample ID: Lab Control Sample

Prep Type: Total/NA
Prep Batch: 498532

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
Mercury	5.00	5.09		ug/L		102	84 - 120	

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCSD 280-498532/3-A
 Matrix: Water
 Analysis Batch: 498745

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 498532

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Mercury	5.00	5.12		ug/L		102	84 - 120	1	15

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 280-498344/1-A
 Matrix: Solid
 Analysis Batch: 498511

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 498344

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		17	5.5	ug/Kg		06/11/20 13:20	06/11/20 17:38	1

Lab Sample ID: LCS 280-498344/2-A
 Matrix: Solid
 Analysis Batch: 498511

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 498344

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	333	302		ug/Kg		91	87 - 111

Lab Sample ID: 280-137073-9 MS
 Matrix: Solid
 Analysis Batch: 498511

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12
 Prep Type: Total/NA
 Prep Batch: 498344

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	ND		372	406		ug/Kg	☼	109	87 - 111

Lab Sample ID: 280-137073-9 MSD
 Matrix: Solid
 Analysis Batch: 498511

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12
 Prep Type: Total/NA
 Prep Batch: 498344

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Mercury	ND		372	404		ug/Kg	☼	109	87 - 111	1	20

Method: Moisture - Percent Moisture

Lab Sample ID: 280-137073-15 DU
 Matrix: Solid
 Analysis Batch: 496886

Client Sample ID: CDOT I270 Env-05/06_2020-SB-25-14-15
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	11.8		11.7		%		1	20
Percent Solids	88.2		88.3		%		0.2	20

QC Association Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

GC/MS VOA

Prep Batch: 497531

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-1	CDOT I270 Env-05/06_2020-SB-06-15-17	Total/NA	Solid	5035	
280-137073-3	CDOT I270 Env-05/06_2020-SB-08-22-23	Total/NA	Solid	5035	
280-137073-4	CDOT I270 Env-05/06_2020-SB-20-3-5	Total/NA	Solid	5035	
280-137073-5	CDOT I270 Env-05/06_2020-SB-20-8-10	Total/NA	Solid	5035	
280-137073-7	CDOT I270 Env-05/06_2020-SB-22-5-7	Total/NA	Solid	5035	
280-137073-9	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	5035	
280-137073-10	CDOT I270 Env-05/06_2020-SB-02-20-22	Total/NA	Solid	5035	
280-137073-12	CDOT I270 Env-05/06_2020-SB-21-2-3	Total/NA	Solid	5035	
280-137073-15	CDOT I270 Env-05/06_2020-SB-25-14-15	Total/NA	Solid	5035	
280-137073-16	CDOT I270 Env-05/06_2020-SB-TB02	Total/NA	Solid	5035	
MB 280-497531/2-A	Method Blank	Total/NA	Solid	5035	
LCS 280-497531/1-A	Lab Control Sample	Total/NA	Solid	5035	
280-137073-9 MS	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	5035	
280-137073-9 MSD	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	5035	

Prep Batch: 497664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-1 - DL	CDOT I270 Env-05/06_2020-SB-06-15-17	Total/NA	Solid	5035	
MB 280-497664/3-A	Method Blank	Total/NA	Solid	5035	
LCS 280-497664/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-497664/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 497779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-1	CDOT I270 Env-05/06_2020-SB-06-15-17	Total/NA	Solid	8260B	497531
280-137073-3	CDOT I270 Env-05/06_2020-SB-08-22-23	Total/NA	Solid	8260B	497531
280-137073-4	CDOT I270 Env-05/06_2020-SB-20-3-5	Total/NA	Solid	8260B	497531
280-137073-5	CDOT I270 Env-05/06_2020-SB-20-8-10	Total/NA	Solid	8260B	497531
280-137073-7	CDOT I270 Env-05/06_2020-SB-22-5-7	Total/NA	Solid	8260B	497531
280-137073-9	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	8260B	497531
280-137073-10	CDOT I270 Env-05/06_2020-SB-02-20-22	Total/NA	Solid	8260B	497531
280-137073-12	CDOT I270 Env-05/06_2020-SB-21-2-3	Total/NA	Solid	8260B	497531
280-137073-15	CDOT I270 Env-05/06_2020-SB-25-14-15	Total/NA	Solid	8260B	497531
280-137073-16	CDOT I270 Env-05/06_2020-SB-TB02	Total/NA	Solid	8260B	497531
MB 280-497531/2-A	Method Blank	Total/NA	Solid	8260B	497531
LCS 280-497531/1-A	Lab Control Sample	Total/NA	Solid	8260B	497531
280-137073-9 MS	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	8260B	497531
280-137073-9 MSD	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	8260B	497531

Analysis Batch: 497791

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-497664/3-A	Method Blank	Total/NA	Solid	8260B	497664
LCS 280-497664/1-A	Lab Control Sample	Total/NA	Solid	8260B	497664
LCSD 280-497664/2-A	Lab Control Sample Dup	Total/NA	Solid	8260B	497664

Analysis Batch: 497805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-1 - DL	CDOT I270 Env-05/06_2020-SB-06-15-17	Total/NA	Solid	8260B	497664

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QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

GC/MS VOA

Analysis Batch: 497959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-6	CDOT I270 Env-05/06_2020-SB-20-GW	Total/NA	Water	8260B	
280-137073-8	CDOT I270 Env-05/06_2020-SB-22-GW	Total/NA	Water	8260B	
280-137073-14	CDOT I270 Env-05/06_2020-SB-TB02	Total/NA	Water	8260B	
MB 280-497959/10	Method Blank	Total/NA	Water	8260B	
LCS 280-497959/5	Lab Control Sample	Total/NA	Water	8260B	
LCSD 280-497959/6	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 498109

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-11	CDOT I270 Env-05/06_2020-SB-02-GW	Total/NA	Water	8260B	
280-137073-13	CDOT I270 Env-05/06_2020-SB-21-GW	Total/NA	Water	8260B	
MB 280-498109/9	Method Blank	Total/NA	Water	8260B	
LCS 280-498109/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 280-498109/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 498147

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-2	CDOT I270 Env-05/06_2020-SB-08-8-10	Total/NA	Solid	8260B	498148
280-137073-16 - DL	CDOT I270 Env-05/06_2020-SB-TB02	Total/NA	Solid	8260B	498148
MB 280-498148/3-A	Method Blank	Total/NA	Solid	8260B	498148
MB 280-498148/4-A	Method Blank	Total/NA	Solid	8260B	498148
LCS 280-498148/1-A	Lab Control Sample	Total/NA	Solid	8260B	498148
LCSD 280-498148/2-A	Lab Control Sample Dup	Total/NA	Solid	8260B	498148

Prep Batch: 498148

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-2	CDOT I270 Env-05/06_2020-SB-08-8-10	Total/NA	Solid	5035	
280-137073-16 - DL	CDOT I270 Env-05/06_2020-SB-TB02	Total/NA	Solid	5035	
MB 280-498148/3-A	Method Blank	Total/NA	Solid	5035	
MB 280-498148/4-A	Method Blank	Total/NA	Solid	5035	
LCS 280-498148/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-498148/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

GC/MS Semi VOA

Prep Batch: 496919

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-6	CDOT I270 Env-05/06_2020-SB-20-GW	Total/NA	Water	3520C	
280-137073-8	CDOT I270 Env-05/06_2020-SB-22-GW	Total/NA	Water	3520C	
MB 280-496919/1-A	Method Blank	Total/NA	Water	3520C	
LCS 280-496919/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 280-496919/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 497550

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-6	CDOT I270 Env-05/06_2020-SB-20-GW	Total/NA	Water	8270D	496919
280-137073-8	CDOT I270 Env-05/06_2020-SB-22-GW	Total/NA	Water	8270D	496919
MB 280-496919/1-A	Method Blank	Total/NA	Water	8270D	496919
LCS 280-496919/2-A	Lab Control Sample	Total/NA	Water	8270D	496919
LCSD 280-496919/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	496919

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

GC/MS Semi VOA

Prep Batch: 498186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-1	CDOT I270 Env-05/06_2020-SB-06-15-17	Total/NA	Solid	3550C	
280-137073-2	CDOT I270 Env-05/06_2020-SB-08-8-10	Total/NA	Solid	3550C	
280-137073-3	CDOT I270 Env-05/06_2020-SB-08-22-23	Total/NA	Solid	3550C	
280-137073-4	CDOT I270 Env-05/06_2020-SB-20-3-5	Total/NA	Solid	3550C	
280-137073-5	CDOT I270 Env-05/06_2020-SB-20-8-10	Total/NA	Solid	3550C	
280-137073-7	CDOT I270 Env-05/06_2020-SB-22-5-7	Total/NA	Solid	3550C	
280-137073-9	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	3550C	
280-137073-10	CDOT I270 Env-05/06_2020-SB-02-20-22	Total/NA	Solid	3550C	
280-137073-12	CDOT I270 Env-05/06_2020-SB-21-2-3	Total/NA	Solid	3550C	
280-137073-15	CDOT I270 Env-05/06_2020-SB-25-14-15	Total/NA	Solid	3550C	
MB 280-498186/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 280-498186/2-A	Lab Control Sample	Total/NA	Solid	3550C	
280-137073-9 MS	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	3550C	
280-137073-9 MSD	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	3550C	

Analysis Batch: 498836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-1	CDOT I270 Env-05/06_2020-SB-06-15-17	Total/NA	Solid	8270D	498186
280-137073-2	CDOT I270 Env-05/06_2020-SB-08-8-10	Total/NA	Solid	8270D	498186
280-137073-3	CDOT I270 Env-05/06_2020-SB-08-22-23	Total/NA	Solid	8270D	498186
280-137073-4	CDOT I270 Env-05/06_2020-SB-20-3-5	Total/NA	Solid	8270D	498186
280-137073-5	CDOT I270 Env-05/06_2020-SB-20-8-10	Total/NA	Solid	8270D	498186
280-137073-7	CDOT I270 Env-05/06_2020-SB-22-5-7	Total/NA	Solid	8270D	498186
280-137073-9	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	8270D	498186
280-137073-10	CDOT I270 Env-05/06_2020-SB-02-20-22	Total/NA	Solid	8270D	498186
280-137073-12	CDOT I270 Env-05/06_2020-SB-21-2-3	Total/NA	Solid	8270D	498186
280-137073-15	CDOT I270 Env-05/06_2020-SB-25-14-15	Total/NA	Solid	8270D	498186
MB 280-498186/1-A	Method Blank	Total/NA	Solid	8270D	498186
LCS 280-498186/2-A	Lab Control Sample	Total/NA	Solid	8270D	498186
280-137073-9 MS	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	8270D	498186
280-137073-9 MSD	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	8270D	498186

GC VOA

Prep Batch: 498014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-1	CDOT I270 Env-05/06_2020-SB-06-15-17	Total/NA	Solid	5035	
280-137073-2	CDOT I270 Env-05/06_2020-SB-08-8-10	Total/NA	Solid	5035	
MB 280-498014/3-A	Method Blank	Total/NA	Solid	5035	
LCS 280-498014/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-498014/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 498073

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-1	CDOT I270 Env-05/06_2020-SB-06-15-17	Total/NA	Solid	8015C	498014
280-137073-2	CDOT I270 Env-05/06_2020-SB-08-8-10	Total/NA	Solid	8015C	498014
MB 280-498014/3-A	Method Blank	Total/NA	Solid	8015C	498014
LCS 280-498014/1-A	Lab Control Sample	Total/NA	Solid	8015C	498014
LCSD 280-498014/2-A	Lab Control Sample Dup	Total/NA	Solid	8015C	498014

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

GC VOA

Analysis Batch: 498159

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-6	CDOT I270 Env-05/06_2020-SB-20-GW	Total/NA	Water	8015C	
280-137073-8	CDOT I270 Env-05/06_2020-SB-22-GW	Total/NA	Water	8015C	
280-137073-11	CDOT I270 Env-05/06_2020-SB-02-GW	Total/NA	Water	8015C	
280-137073-13	CDOT I270 Env-05/06_2020-SB-21-GW	Total/NA	Water	8015C	
280-137073-14	CDOT I270 Env-05/06_2020-SB-TB02	Total/NA	Water	8015C	
MB 280-498159/5	Method Blank	Total/NA	Water	8015C	
LCS 280-498159/3	Lab Control Sample	Total/NA	Water	8015C	
LCSD 280-498159/4	Lab Control Sample Dup	Total/NA	Water	8015C	

Prep Batch: 498230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-3	CDOT I270 Env-05/06_2020-SB-08-22-23	Total/NA	Solid	5035	
280-137073-4	CDOT I270 Env-05/06_2020-SB-20-3-5	Total/NA	Solid	5035	
280-137073-5	CDOT I270 Env-05/06_2020-SB-20-8-10	Total/NA	Solid	5035	
280-137073-7	CDOT I270 Env-05/06_2020-SB-22-5-7	Total/NA	Solid	5035	
280-137073-9	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	5035	
280-137073-10	CDOT I270 Env-05/06_2020-SB-02-20-22	Total/NA	Solid	5035	
280-137073-12	CDOT I270 Env-05/06_2020-SB-21-2-3	Total/NA	Solid	5035	
280-137073-15	CDOT I270 Env-05/06_2020-SB-25-14-15	Total/NA	Solid	5035	
280-137073-16	CDOT I270 Env-05/06_2020-SB-TB02	Total/NA	Solid	5035	
MB 280-498230/3-A	Method Blank	Total/NA	Solid	5035	
LCS 280-498230/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-498230/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
280-137073-9 MS	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	5035	
280-137073-9 MSD	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	5035	

Analysis Batch: 498321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-3	CDOT I270 Env-05/06_2020-SB-08-22-23	Total/NA	Solid	8015C	498230
280-137073-4	CDOT I270 Env-05/06_2020-SB-20-3-5	Total/NA	Solid	8015C	498230
280-137073-5	CDOT I270 Env-05/06_2020-SB-20-8-10	Total/NA	Solid	8015C	498230
280-137073-7	CDOT I270 Env-05/06_2020-SB-22-5-7	Total/NA	Solid	8015C	498230
280-137073-9	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	8015C	498230
280-137073-10	CDOT I270 Env-05/06_2020-SB-02-20-22	Total/NA	Solid	8015C	498230
280-137073-12	CDOT I270 Env-05/06_2020-SB-21-2-3	Total/NA	Solid	8015C	498230
280-137073-15	CDOT I270 Env-05/06_2020-SB-25-14-15	Total/NA	Solid	8015C	498230
280-137073-16	CDOT I270 Env-05/06_2020-SB-TB02	Total/NA	Solid	8015C	498230
MB 280-498230/3-A	Method Blank	Total/NA	Solid	8015C	498230
LCS 280-498230/1-A	Lab Control Sample	Total/NA	Solid	8015C	498230
LCSD 280-498230/2-A	Lab Control Sample Dup	Total/NA	Solid	8015C	498230
280-137073-9 MS	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	8015C	498230
280-137073-9 MSD	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	8015C	498230

GC Semi VOA

Prep Batch: 497026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-6	CDOT I270 Env-05/06_2020-SB-20-GW	Total/NA	Water	3510C	
280-137073-8	CDOT I270 Env-05/06_2020-SB-22-GW	Total/NA	Water	3510C	
280-137073-13	CDOT I270 Env-05/06_2020-SB-21-GW	Total/NA	Water	3510C	
MB 280-497026/1-A	Method Blank	Total/NA	Water	3510C	

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

GC Semi VOA (Continued)

Prep Batch: 497026 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-497026/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCS 280-497026/4-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 280-497026/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
LCSD 280-497026/5-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Prep Batch: 497041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-6	CDOT I270 Env-05/06_2020-SB-20-GW	Total/NA	Water	3510C	
MB 280-497041/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-497041/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCS 280-497041/4-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 280-497041/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
LCSD 280-497041/5-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 497743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-6	CDOT I270 Env-05/06_2020-SB-20-GW	Total/NA	Water	8081B	497041
MB 280-497041/1-A	Method Blank	Total/NA	Water	8081B	497041
LCS 280-497041/2-A	Lab Control Sample	Total/NA	Water	8081B	497041
LCSD 280-497041/3-A	Lab Control Sample Dup	Total/NA	Water	8081B	497041

Prep Batch: 497995

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-4	CDOT I270 Env-05/06_2020-SB-20-3-5	Total/NA	Solid	3546	
280-137073-5	CDOT I270 Env-05/06_2020-SB-20-8-10	Total/NA	Solid	3546	
MB 280-497995/1-A	Method Blank	Total/NA	Solid	3546	
LCS 280-497995/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCS 280-497995/3-A	Lab Control Sample	Total/NA	Solid	3546	

Analysis Batch: 498093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-6	CDOT I270 Env-05/06_2020-SB-20-GW	Total/NA	Water	8015C	497026
280-137073-8	CDOT I270 Env-05/06_2020-SB-22-GW	Total/NA	Water	8015C	497026
280-137073-13	CDOT I270 Env-05/06_2020-SB-21-GW	Total/NA	Water	8015C	497026
MB 280-497026/1-A	Method Blank	Total/NA	Water	8015C	497026
LCS 280-497026/2-A	Lab Control Sample	Total/NA	Water	8015C	497026
LCS 280-497026/4-A	Lab Control Sample	Total/NA	Water	8015C	497026
LCSD 280-497026/3-A	Lab Control Sample Dup	Total/NA	Water	8015C	497026
LCSD 280-497026/5-A	Lab Control Sample Dup	Total/NA	Water	8015C	497026

Prep Batch: 498302

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-1	CDOT I270 Env-05/06_2020-SB-06-15-17	Total/NA	Solid	3546	
280-137073-2	CDOT I270 Env-05/06_2020-SB-08-8-10	Total/NA	Solid	3546	
280-137073-3	CDOT I270 Env-05/06_2020-SB-08-22-23	Total/NA	Solid	3546	
280-137073-4	CDOT I270 Env-05/06_2020-SB-20-3-5	Total/NA	Solid	3546	
280-137073-5	CDOT I270 Env-05/06_2020-SB-20-8-10	Total/NA	Solid	3546	
280-137073-7	CDOT I270 Env-05/06_2020-SB-22-5-7	Total/NA	Solid	3546	
280-137073-9	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	3546	
280-137073-10	CDOT I270 Env-05/06_2020-SB-02-20-22	Total/NA	Solid	3546	
280-137073-12	CDOT I270 Env-05/06_2020-SB-21-2-3	Total/NA	Solid	3546	

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

GC Semi VOA (Continued)

Prep Batch: 498302 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-15	CDOT I270 Env-05/06_2020-SB-25-14-15	Total/NA	Solid	3546	
MB 280-498302/1-A	Method Blank	Total/NA	Solid	3546	
LCS 280-498302/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCS 280-498302/3-A	Lab Control Sample	Total/NA	Solid	3546	
280-137073-9 MS	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	3546	
280-137073-9 MS	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	3546	
280-137073-9 MSD	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	3546	
280-137073-9 MSD	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	3546	

Analysis Batch: 498397

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-4	CDOT I270 Env-05/06_2020-SB-20-3-5	Total/NA	Solid	8081B	497995
280-137073-5	CDOT I270 Env-05/06_2020-SB-20-8-10	Total/NA	Solid	8081B	497995
MB 280-497995/1-A	Method Blank	Total/NA	Solid	8081B	497995
LCS 280-497995/2-A	Lab Control Sample	Total/NA	Solid	8081B	497995

Analysis Batch: 498439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-4	CDOT I270 Env-05/06_2020-SB-20-3-5	Total/NA	Solid	8082A	497995
280-137073-5	CDOT I270 Env-05/06_2020-SB-20-8-10	Total/NA	Solid	8082A	497995
MB 280-497995/1-A	Method Blank	Total/NA	Solid	8082A	497995
LCS 280-497995/3-A	Lab Control Sample	Total/NA	Solid	8082A	497995

Analysis Batch: 498596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-6	CDOT I270 Env-05/06_2020-SB-20-GW	Total/NA	Water	8082A	497041
MB 280-497041/1-A	Method Blank	Total/NA	Water	8082A	497041
LCS 280-497041/4-A	Lab Control Sample	Total/NA	Water	8082A	497041
LCSD 280-497041/5-A	Lab Control Sample Dup	Total/NA	Water	8082A	497041

Analysis Batch: 499134

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-2	CDOT I270 Env-05/06_2020-SB-08-8-10	Total/NA	Solid	8015C	498302
280-137073-3	CDOT I270 Env-05/06_2020-SB-08-22-23	Total/NA	Solid	8015C	498302
280-137073-5	CDOT I270 Env-05/06_2020-SB-20-8-10	Total/NA	Solid	8015C	498302
280-137073-7	CDOT I270 Env-05/06_2020-SB-22-5-7	Total/NA	Solid	8015C	498302
280-137073-12	CDOT I270 Env-05/06_2020-SB-21-2-3	Total/NA	Solid	8015C	498302
280-137073-15	CDOT I270 Env-05/06_2020-SB-25-14-15	Total/NA	Solid	8015C	498302
MB 280-498302/1-A	Method Blank	Total/NA	Solid	8015C	498302
LCS 280-498302/2-A	Lab Control Sample	Total/NA	Solid	8015C	498302
LCS 280-498302/3-A	Lab Control Sample	Total/NA	Solid	8015C	498302

Analysis Batch: 500065

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-10	CDOT I270 Env-05/06_2020-SB-02-20-22	Total/NA	Solid	8015C	498302

Analysis Batch: 500447

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-1	CDOT I270 Env-05/06_2020-SB-06-15-17	Total/NA	Solid	8015C	498302
280-137073-4	CDOT I270 Env-05/06_2020-SB-20-3-5	Total/NA	Solid	8015C	498302
280-137073-9	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	8015C	498302

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

GC Semi VOA (Continued)

Analysis Batch: 500447 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-9 MS	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	8015C	498302
280-137073-9 MS	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	8015C	498302
280-137073-9 MSD	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	8015C	498302
280-137073-9 MSD	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	8015C	498302

Metals

Prep Batch: 496978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-6	CDOT I270 Env-05/06_2020-SB-20-GW	Total/NA	Water	3020A	
280-137073-8	CDOT I270 Env-05/06_2020-SB-22-GW	Total/NA	Water	3020A	
MB 280-496978/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-496978/2-A	Lab Control Sample	Total/NA	Water	3020A	

Prep Batch: 496985

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-1	CDOT I270 Env-05/06_2020-SB-06-15-17	Total/NA	Solid	3050B	
280-137073-2	CDOT I270 Env-05/06_2020-SB-08-8-10	Total/NA	Solid	3050B	
280-137073-3	CDOT I270 Env-05/06_2020-SB-08-22-23	Total/NA	Solid	3050B	
280-137073-4	CDOT I270 Env-05/06_2020-SB-20-3-5	Total/NA	Solid	3050B	
280-137073-5	CDOT I270 Env-05/06_2020-SB-20-8-10	Total/NA	Solid	3050B	
280-137073-7	CDOT I270 Env-05/06_2020-SB-22-5-7	Total/NA	Solid	3050B	
280-137073-9	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	3050B	
280-137073-10	CDOT I270 Env-05/06_2020-SB-02-20-22	Total/NA	Solid	3050B	
280-137073-12	CDOT I270 Env-05/06_2020-SB-21-2-3	Total/NA	Solid	3050B	
280-137073-15	CDOT I270 Env-05/06_2020-SB-25-14-15	Total/NA	Solid	3050B	
MB 280-496985/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-496985/2-A	Lab Control Sample	Total/NA	Solid	3050B	
280-137073-9 MS	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	3050B	
280-137073-9 MSD	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	3050B	

Prep Batch: 497091

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-1	CDOT I270 Env-05/06_2020-SB-06-15-17	Total/NA	Solid	3050B-Sb	
280-137073-2	CDOT I270 Env-05/06_2020-SB-08-8-10	Total/NA	Solid	3050B-Sb	
280-137073-3	CDOT I270 Env-05/06_2020-SB-08-22-23	Total/NA	Solid	3050B-Sb	
280-137073-4	CDOT I270 Env-05/06_2020-SB-20-3-5	Total/NA	Solid	3050B-Sb	
280-137073-5	CDOT I270 Env-05/06_2020-SB-20-8-10	Total/NA	Solid	3050B-Sb	
280-137073-7	CDOT I270 Env-05/06_2020-SB-22-5-7	Total/NA	Solid	3050B-Sb	
280-137073-9	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	3050B-Sb	
280-137073-10	CDOT I270 Env-05/06_2020-SB-02-20-22	Total/NA	Solid	3050B-Sb	
280-137073-12	CDOT I270 Env-05/06_2020-SB-21-2-3	Total/NA	Solid	3050B-Sb	
280-137073-15	CDOT I270 Env-05/06_2020-SB-25-14-15	Total/NA	Solid	3050B-Sb	
MB 280-497091/1-A	Method Blank	Total/NA	Solid	3050B-Sb	
LCS 280-497091/2-A	Lab Control Sample	Total/NA	Solid	3050B-Sb	
280-137073-9 MS	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	3050B-Sb	
280-137073-9 MSD	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	3050B-Sb	

Analysis Batch: 497365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-6	CDOT I270 Env-05/06_2020-SB-20-GW	Total/NA	Water	6020A	496978

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Metals (Continued)

Analysis Batch: 497365 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-8	CDOT I270 Env-05/06_2020-SB-22-GW	Total/NA	Water	6020A	496978
MB 280-496978/1-A	Method Blank	Total/NA	Water	6020A	496978
LCS 280-496978/2-A	Lab Control Sample	Total/NA	Water	6020A	496978

Analysis Batch: 497535

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-6	CDOT I270 Env-05/06_2020-SB-20-GW	Total/NA	Water	6020A	496978
280-137073-8	CDOT I270 Env-05/06_2020-SB-22-GW	Total/NA	Water	6020A	496978
MB 280-496978/1-A	Method Blank	Total/NA	Water	6020A	496978
LCS 280-496978/2-A	Lab Control Sample	Total/NA	Water	6020A	496978

Analysis Batch: 497898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-1	CDOT I270 Env-05/06_2020-SB-06-15-17	Total/NA	Solid	6020A	497091
280-137073-2	CDOT I270 Env-05/06_2020-SB-08-8-10	Total/NA	Solid	6020A	497091
280-137073-3	CDOT I270 Env-05/06_2020-SB-08-22-23	Total/NA	Solid	6020A	497091
280-137073-4	CDOT I270 Env-05/06_2020-SB-20-3-5	Total/NA	Solid	6020A	497091
280-137073-5	CDOT I270 Env-05/06_2020-SB-20-8-10	Total/NA	Solid	6020A	497091
280-137073-7	CDOT I270 Env-05/06_2020-SB-22-5-7	Total/NA	Solid	6020A	497091
280-137073-9	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	6020A	497091
280-137073-10	CDOT I270 Env-05/06_2020-SB-02-20-22	Total/NA	Solid	6020A	497091
280-137073-12	CDOT I270 Env-05/06_2020-SB-21-2-3	Total/NA	Solid	6020A	497091
280-137073-15	CDOT I270 Env-05/06_2020-SB-25-14-15	Total/NA	Solid	6020A	497091
MB 280-497091/1-A	Method Blank	Total/NA	Solid	6020A	497091
LCS 280-497091/2-A	Lab Control Sample	Total/NA	Solid	6020A	497091
280-137073-9 MS	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	6020A	497091
280-137073-9 MSD	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	6020A	497091

Analysis Batch: 497991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-1	CDOT I270 Env-05/06_2020-SB-06-15-17	Total/NA	Solid	6020A	496985
280-137073-2	CDOT I270 Env-05/06_2020-SB-08-8-10	Total/NA	Solid	6020A	496985
280-137073-3	CDOT I270 Env-05/06_2020-SB-08-22-23	Total/NA	Solid	6020A	496985
280-137073-4	CDOT I270 Env-05/06_2020-SB-20-3-5	Total/NA	Solid	6020A	496985
280-137073-5	CDOT I270 Env-05/06_2020-SB-20-8-10	Total/NA	Solid	6020A	496985
280-137073-7	CDOT I270 Env-05/06_2020-SB-22-5-7	Total/NA	Solid	6020A	496985
280-137073-9	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	6020A	496985
280-137073-10	CDOT I270 Env-05/06_2020-SB-02-20-22	Total/NA	Solid	6020A	496985
280-137073-12	CDOT I270 Env-05/06_2020-SB-21-2-3	Total/NA	Solid	6020A	496985
280-137073-15	CDOT I270 Env-05/06_2020-SB-25-14-15	Total/NA	Solid	6020A	496985
MB 280-496985/1-A	Method Blank	Total/NA	Solid	6020A	496985
LCS 280-496985/2-A	Lab Control Sample	Total/NA	Solid	6020A	496985
280-137073-9 MS	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	6020A	496985
280-137073-9 MSD	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	6020A	496985

Analysis Batch: 498028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-15	CDOT I270 Env-05/06_2020-SB-25-14-15	Total/NA	Solid	6020A	496985

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Metals

Prep Batch: 498344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-1	CDOT I270 Env-05/06_2020-SB-06-15-17	Total/NA	Solid	7471B	
280-137073-2	CDOT I270 Env-05/06_2020-SB-08-8-10	Total/NA	Solid	7471B	
280-137073-3	CDOT I270 Env-05/06_2020-SB-08-22-23	Total/NA	Solid	7471B	
280-137073-4	CDOT I270 Env-05/06_2020-SB-20-3-5	Total/NA	Solid	7471B	
280-137073-5	CDOT I270 Env-05/06_2020-SB-20-8-10	Total/NA	Solid	7471B	
280-137073-7	CDOT I270 Env-05/06_2020-SB-22-5-7	Total/NA	Solid	7471B	
280-137073-9	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	7471B	
280-137073-10	CDOT I270 Env-05/06_2020-SB-02-20-22	Total/NA	Solid	7471B	
280-137073-12	CDOT I270 Env-05/06_2020-SB-21-2-3	Total/NA	Solid	7471B	
280-137073-15	CDOT I270 Env-05/06_2020-SB-25-14-15	Total/NA	Solid	7471B	
MB 280-498344/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 280-498344/2-A	Lab Control Sample	Total/NA	Solid	7471B	
280-137073-9 MS	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	7471B	
280-137073-9 MSD	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	7471B	

Analysis Batch: 498511

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-1	CDOT I270 Env-05/06_2020-SB-06-15-17	Total/NA	Solid	7471B	498344
280-137073-2	CDOT I270 Env-05/06_2020-SB-08-8-10	Total/NA	Solid	7471B	498344
280-137073-3	CDOT I270 Env-05/06_2020-SB-08-22-23	Total/NA	Solid	7471B	498344
280-137073-4	CDOT I270 Env-05/06_2020-SB-20-3-5	Total/NA	Solid	7471B	498344
280-137073-5	CDOT I270 Env-05/06_2020-SB-20-8-10	Total/NA	Solid	7471B	498344
280-137073-7	CDOT I270 Env-05/06_2020-SB-22-5-7	Total/NA	Solid	7471B	498344
280-137073-9	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	7471B	498344
280-137073-10	CDOT I270 Env-05/06_2020-SB-02-20-22	Total/NA	Solid	7471B	498344
280-137073-12	CDOT I270 Env-05/06_2020-SB-21-2-3	Total/NA	Solid	7471B	498344
280-137073-15	CDOT I270 Env-05/06_2020-SB-25-14-15	Total/NA	Solid	7471B	498344
MB 280-498344/1-A	Method Blank	Total/NA	Solid	7471B	498344
LCS 280-498344/2-A	Lab Control Sample	Total/NA	Solid	7471B	498344
280-137073-9 MS	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	7471B	498344
280-137073-9 MSD	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	7471B	498344

Prep Batch: 498532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-6	CDOT I270 Env-05/06_2020-SB-20-GW	Total/NA	Water	7470A	
280-137073-8	CDOT I270 Env-05/06_2020-SB-22-GW	Total/NA	Water	7470A	
MB 280-498532/1-A	Method Blank	Total/NA	Water	7470A	
LCS 280-498532/2-A	Lab Control Sample	Total/NA	Water	7470A	
LCSD 280-498532/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	

Analysis Batch: 498745

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-6	CDOT I270 Env-05/06_2020-SB-20-GW	Total/NA	Water	7470A	498532
280-137073-8	CDOT I270 Env-05/06_2020-SB-22-GW	Total/NA	Water	7470A	498532
MB 280-498532/1-A	Method Blank	Total/NA	Water	7470A	498532
LCS 280-498532/2-A	Lab Control Sample	Total/NA	Water	7470A	498532
LCSD 280-498532/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	498532

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

General Chemistry

Analysis Batch: 496886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137073-1	CDOT I270 Env-05/06_2020-SB-06-15-17	Total/NA	Solid	Moisture	
280-137073-2	CDOT I270 Env-05/06_2020-SB-08-8-10	Total/NA	Solid	Moisture	
280-137073-3	CDOT I270 Env-05/06_2020-SB-08-22-23	Total/NA	Solid	Moisture	
280-137073-4	CDOT I270 Env-05/06_2020-SB-20-3-5	Total/NA	Solid	Moisture	
280-137073-5	CDOT I270 Env-05/06_2020-SB-20-8-10	Total/NA	Solid	Moisture	
280-137073-7	CDOT I270 Env-05/06_2020-SB-22-5-7	Total/NA	Solid	Moisture	
280-137073-9	CDOT I270 Env-05/06_2020-SB-02-10-12	Total/NA	Solid	Moisture	
280-137073-10	CDOT I270 Env-05/06_2020-SB-02-20-22	Total/NA	Solid	Moisture	
280-137073-12	CDOT I270 Env-05/06_2020-SB-21-2-3	Total/NA	Solid	Moisture	
280-137073-15	CDOT I270 Env-05/06_2020-SB-25-14-15	Total/NA	Solid	Moisture	
280-137073-15 DU	CDOT I270 Env-05/06_2020-SB-25-14-15	Total/NA	Solid	Moisture	

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

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Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-06-15-17

Lab Sample ID: 280-137073-1

Date Collected: 05/28/20 09:30

Matrix: Solid

Date Received: 05/29/20 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			496886	06/01/20 10:09	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-06-15-17

Lab Sample ID: 280-137073-1

Date Collected: 05/28/20 09:30

Matrix: Solid

Date Received: 05/29/20 15:50

Percent Solids: 90.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.556 g	5 mL	497531	05/28/20 09:30	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497779	06/05/20 14:22	GPM	TAL DEN
Total/NA	Prep	5035	DL		4.978 g	5 mL	497664	05/28/20 09:30	GPM	TAL DEN
Total/NA	Analysis	8260B	DL	50	5 g	5 mL	497805	06/06/20 17:52	GPM	TAL DEN
Total/NA	Prep	3550C			30.2 g	1 mL	498186	06/10/20 13:55	DCL	TAL DEN
Total/NA	Analysis	8270D		1			498836	06/12/20 12:50	RDP	TAL DEN
Total/NA	Prep	5035			5.519 g	5 mL	498014	05/28/20 09:30	AAR	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	498073	06/10/20 01:05	CAS	TAL DEN
Total/NA	Prep	3546			15.1 g	1 mL	498302	06/11/20 10:33	MB	TAL DEN
Total/NA	Analysis	8015C		1			500447	06/29/20 07:12	MAM	TAL DEN
Total/NA	Prep	3050B-Sb			1.196 g	100 mL	497091	06/04/20 17:00	EC	TAL DEN
Total/NA	Analysis	6020A		1			497898	06/08/20 16:54	LMT	TAL DEN
Total/NA	Prep	3050B			1.117 g	100 mL	496985	06/04/20 15:20	EC	TAL DEN
Total/NA	Analysis	6020A		1			497991	06/08/20 21:10	LMT	TAL DEN
Total/NA	Prep	7471B			0.60 g	50 mL	498344	06/11/20 13:20	AL	TAL DEN
Total/NA	Analysis	7471B		1			498511	06/11/20 17:43	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-08-8-10

Lab Sample ID: 280-137073-2

Date Collected: 05/28/20 10:55

Matrix: Solid

Date Received: 05/29/20 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			496886	06/01/20 10:09	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-08-8-10

Lab Sample ID: 280-137073-2

Date Collected: 05/28/20 10:55

Matrix: Solid

Date Received: 05/29/20 15:50

Percent Solids: 96.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.547 g	5 mL	498148	05/28/20 10:55	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	498147	06/10/20 12:45	GPM	TAL DEN
Total/NA	Prep	3550C			32.0 g	1 mL	498186	06/10/20 13:55	DCL	TAL DEN
Total/NA	Analysis	8270D		1			498836	06/12/20 13:18	RDP	TAL DEN
Total/NA	Prep	5035			5.059 g	5 mL	498014	05/28/20 10:55	AAR	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	498073	06/10/20 01:28	CAS	TAL DEN
Total/NA	Prep	3546			16.4 g	1 mL	498302	06/11/20 10:33	MB	TAL DEN
Total/NA	Analysis	8015C		1			499134	06/22/20 21:49	MAM	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-08-8-10

Lab Sample ID: 280-137073-2

Date Collected: 05/28/20 10:55

Matrix: Solid

Date Received: 05/29/20 15:50

Percent Solids: 96.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B-Sb			1.368 g	100 mL	497091	06/04/20 17:00	EC	TAL DEN
Total/NA	Analysis	6020A		1			497898	06/08/20 16:57	LMT	TAL DEN
Total/NA	Prep	3050B			1.046 g	100 mL	496985	06/04/20 15:20	EC	TAL DEN
Total/NA	Analysis	6020A		1			497991	06/08/20 21:13	LMT	TAL DEN
Total/NA	Prep	7471B			0.58 g	50 mL	498344	06/11/20 13:20	AL	TAL DEN
Total/NA	Analysis	7471B		1			498511	06/11/20 17:45	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-08-22-23

Lab Sample ID: 280-137073-3

Date Collected: 05/28/20 11:25

Matrix: Solid

Date Received: 05/29/20 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			496886	06/01/20 10:09	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-08-22-23

Lab Sample ID: 280-137073-3

Date Collected: 05/28/20 11:25

Matrix: Solid

Date Received: 05/29/20 15:50

Percent Solids: 95.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.105 g	5 mL	497531	05/28/20 11:25	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497779	06/05/20 15:08	GPM	TAL DEN
Total/NA	Prep	3550C			31.3 g	1 mL	498186	06/10/20 13:55	DCL	TAL DEN
Total/NA	Analysis	8270D		1			498836	06/12/20 13:45	RDP	TAL DEN
Total/NA	Prep	5035			5.208 g	5 mL	498230	05/28/20 11:25	AAR	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	498321	06/11/20 11:25	GO	TAL DEN
Total/NA	Prep	3546			16.3 g	1 mL	498302	06/11/20 10:33	MB	TAL DEN
Total/NA	Analysis	8015C		1			499134	06/22/20 22:11	MAM	TAL DEN
Total/NA	Prep	3050B-Sb			1.222 g	100 mL	497091	06/04/20 17:00	EC	TAL DEN
Total/NA	Analysis	6020A		1			497898	06/08/20 17:01	LMT	TAL DEN
Total/NA	Prep	3050B			1.085 g	100 mL	496985	06/04/20 15:20	EC	TAL DEN
Total/NA	Analysis	6020A		1			497991	06/08/20 21:28	LMT	TAL DEN
Total/NA	Prep	7471B			0.58 g	50 mL	498344	06/11/20 13:20	AL	TAL DEN
Total/NA	Analysis	7471B		1			498511	06/11/20 17:48	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-3-5

Lab Sample ID: 280-137073-4

Date Collected: 05/28/20 12:45

Matrix: Solid

Date Received: 05/29/20 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			496886	06/01/20 10:09	DLB	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-3-5

Lab Sample ID: 280-137073-4

Date Collected: 05/28/20 12:45

Matrix: Solid

Date Received: 05/29/20 15:50

Percent Solids: 89.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.68 g	5 mL	497531	05/28/20 12:45	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497779	06/05/20 15:30	GPM	TAL DEN
Total/NA	Prep	3550C			32.0 g	1 mL	498186	06/10/20 13:55	DCL	TAL DEN
Total/NA	Analysis	8270D		1			498836	06/12/20 14:12	RDP	TAL DEN
Total/NA	Prep	5035			6.284 g	5 mL	498230	05/28/20 12:45	AAR	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	498321	06/11/20 11:49	GO	TAL DEN
Total/NA	Prep	3546			15.6 g	1 mL	498302	06/11/20 10:33	MB	TAL DEN
Total/NA	Analysis	8015C		1			500447	06/29/20 07:34	MAM	TAL DEN
Total/NA	Prep	3546			15.6 g	10 mL	497995	06/09/20 13:05	DCL	TAL DEN
Total/NA	Analysis	8081B		1			498397	06/11/20 17:34	MD	TAL DEN
Total/NA	Prep	3546			15.6 g	10 mL	497995	06/09/20 13:05	DCL	TAL DEN
Total/NA	Analysis	8082A		1			498439	06/12/20 04:52	MAM	TAL DEN
Total/NA	Prep	3050B-Sb			1.141 g	100 mL	497091	06/04/20 17:00	EC	TAL DEN
Total/NA	Analysis	6020A		1			497898	06/08/20 17:05	LMT	TAL DEN
Total/NA	Prep	3050B			1.017 g	100 mL	496985	06/04/20 15:20	EC	TAL DEN
Total/NA	Analysis	6020A		1			497991	06/08/20 21:32	LMT	TAL DEN
Total/NA	Prep	7471B			0.57 g	50 mL	498344	06/11/20 13:20	AL	TAL DEN
Total/NA	Analysis	7471B		1			498511	06/11/20 17:50	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-8-10

Lab Sample ID: 280-137073-5

Date Collected: 05/28/20 13:05

Matrix: Solid

Date Received: 05/29/20 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			496886	06/01/20 10:09	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-8-10

Lab Sample ID: 280-137073-5

Date Collected: 05/28/20 13:05

Matrix: Solid

Date Received: 05/29/20 15:50

Percent Solids: 91.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.882 g	5 mL	497531	05/28/20 13:05	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497779	06/05/20 15:53	GPM	TAL DEN
Total/NA	Prep	3550C			31.7 g	1 mL	498186	06/10/20 13:55	DCL	TAL DEN
Total/NA	Analysis	8270D		1			498836	06/12/20 14:40	RDP	TAL DEN
Total/NA	Prep	5035			4.945 g	5 mL	498230	05/28/20 13:05	AAR	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	498321	06/11/20 12:13	GO	TAL DEN
Total/NA	Prep	3546			16.5 g	1 mL	498302	06/11/20 10:33	MB	TAL DEN
Total/NA	Analysis	8015C		1			499134	06/22/20 22:55	MAM	TAL DEN
Total/NA	Prep	3546			15.6 g	10 mL	497995	06/09/20 13:05	DCL	TAL DEN
Total/NA	Analysis	8081B		1			498397	06/11/20 17:52	MD	TAL DEN
Total/NA	Prep	3546			15.6 g	10 mL	497995	06/09/20 13:05	DCL	TAL DEN
Total/NA	Analysis	8082A		1			498439	06/12/20 05:15	MAM	TAL DEN
Total/NA	Prep	3050B-Sb			1.180 g	100 mL	497091	06/04/20 17:00	EC	TAL DEN
Total/NA	Analysis	6020A		1			497898	06/08/20 17:08	LMT	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-8-10

Lab Sample ID: 280-137073-5

Date Collected: 05/28/20 13:05

Matrix: Solid

Date Received: 05/29/20 15:50

Percent Solids: 91.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.248 g	100 mL	496985	06/04/20 15:20	EC	TAL DEN
Total/NA	Analysis	6020A		1			497991	06/08/20 21:35	LMT	TAL DEN
Total/NA	Prep	7471B			0.52 g	50 mL	498344	06/11/20 13:20	AL	TAL DEN
Total/NA	Analysis	7471B		1			498511	06/11/20 17:52	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-20-GW

Lab Sample ID: 280-137073-6

Date Collected: 05/28/20 13:40

Matrix: Water

Date Received: 05/29/20 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	497959	06/09/20 18:47	AJP	TAL DEN
Total/NA	Prep	3520C			1006.8 mL	1 mL	496919	06/01/20 15:05	JNM	TAL DEN
Total/NA	Analysis	8270D		1			497550	06/05/20 12:20	RDP	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	498159	06/10/20 16:28	CAS	TAL DEN
Total/NA	Prep	3510C			1010.5 mL	1 mL	497026	06/02/20 14:36	NK	TAL DEN
Total/NA	Analysis	8015C		1			498093	06/10/20 02:38	MAM	TAL DEN
Total/NA	Prep	3510C			250 mL	5 mL	497041	06/02/20 16:13	NK	TAL DEN
Total/NA	Analysis	8081B		1			497743	06/08/20 11:27	MD	TAL DEN
Total/NA	Prep	3510C			250 mL	5 mL	497041	06/02/20 16:13	NK	TAL DEN
Total/NA	Analysis	8082A		1			498596	06/13/20 23:27	MAM	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	496978	06/02/20 15:45	EAS	TAL DEN
Total/NA	Analysis	6020A		1			497365	06/03/20 21:10	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	496978	06/02/20 15:45	EAS	TAL DEN
Total/NA	Analysis	6020A		10			497535	06/04/20 23:52	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	498532	06/12/20 13:55	AL	TAL DEN
Total/NA	Analysis	7470A		1			498745	06/12/20 19:10	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-22-5-7

Lab Sample ID: 280-137073-7

Date Collected: 05/28/20 15:00

Matrix: Solid

Date Received: 05/29/20 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			496886	06/01/20 10:09	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-22-5-7

Lab Sample ID: 280-137073-7

Date Collected: 05/28/20 15:00

Matrix: Solid

Date Received: 05/29/20 15:50

Percent Solids: 79.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.211 g	5 mL	497531	05/28/20 15:00	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497779	06/05/20 16:16	GPM	TAL DEN
Total/NA	Prep	3550C			30.7 g	1 mL	498186	06/10/20 13:55	DCL	TAL DEN
Total/NA	Analysis	8270D		1			498836	06/12/20 15:07	RDP	TAL DEN
Total/NA	Prep	5035			5.829 g	5 mL	498230	05/28/20 15:00	AAR	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	498321	06/11/20 12:37	GO	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-22-5-7

Lab Sample ID: 280-137073-7

Date Collected: 05/28/20 15:00

Matrix: Solid

Date Received: 05/29/20 15:50

Percent Solids: 79.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15.8 g	1 mL	498302	06/11/20 10:33	MB	TAL DEN
Total/NA	Analysis	8015C		1			499134	06/22/20 23:17	MAM	TAL DEN
Total/NA	Prep	3050B-Sb			1.246 g	100 mL	497091	06/04/20 17:00	EC	TAL DEN
Total/NA	Analysis	6020A		1			497898	06/08/20 17:12	LMT	TAL DEN
Total/NA	Prep	3050B			1.305 g	100 mL	496985	06/04/20 15:20	EC	TAL DEN
Total/NA	Analysis	6020A		1			497991	06/08/20 21:39	LMT	TAL DEN
Total/NA	Prep	7471B			0.60 g	50 mL	498344	06/11/20 13:20	AL	TAL DEN
Total/NA	Analysis	7471B		1			498511	06/11/20 17:57	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-22-GW

Lab Sample ID: 280-137073-8

Date Collected: 05/28/20 15:10

Matrix: Water

Date Received: 05/29/20 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	497959	06/09/20 19:08	AJP	TAL DEN
Total/NA	Prep	3520C			1046.1 mL	1 mL	496919	06/01/20 15:05	JNM	TAL DEN
Total/NA	Analysis	8270D		1			497550	06/05/20 12:49	RDP	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	498159	06/10/20 16:52	CAS	TAL DEN
Total/NA	Prep	3510C			988.1 mL	1 mL	497026	06/02/20 14:36	NK	TAL DEN
Total/NA	Analysis	8015C		1			498093	06/10/20 03:22	MAM	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	496978	06/02/20 15:45	EAS	TAL DEN
Total/NA	Analysis	6020A		1			497365	06/03/20 21:14	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	496978	06/02/20 15:45	EAS	TAL DEN
Total/NA	Analysis	6020A		1			497535	06/04/20 23:55	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	498532	06/12/20 13:55	AL	TAL DEN
Total/NA	Analysis	7470A		1			498745	06/12/20 19:12	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12

Lab Sample ID: 280-137073-9

Date Collected: 05/29/20 08:50

Matrix: Solid

Date Received: 05/29/20 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			496886	06/01/20 10:09	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12

Lab Sample ID: 280-137073-9

Date Collected: 05/29/20 08:50

Matrix: Solid

Date Received: 05/29/20 15:50

Percent Solids: 89.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.064 g	5 mL	497531	05/29/20 08:50	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497779	06/05/20 09:27	GPM	TAL DEN
Total/NA	Prep	3550C			31.0 g	1 mL	498186	06/10/20 13:55	DCL	TAL DEN
Total/NA	Analysis	8270D		1			498836	06/12/20 15:34	RDP	TAL DEN
Total/NA	Prep	5035			5.523 g	5 mL	498230	05/29/20 08:50	AAR	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	498321	06/11/20 13:00	GO	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-10-12

Lab Sample ID: 280-137073-9

Date Collected: 05/29/20 08:50

Matrix: Solid

Date Received: 05/29/20 15:50

Percent Solids: 89.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15.5 g	1 mL	498302	06/11/20 10:33	MB	TAL DEN
Total/NA	Analysis	8015C		1			500447	06/29/20 07:55	MAM	TAL DEN
Total/NA	Prep	3050B-Sb			1.318 g	100 mL	497091	06/04/20 17:00	EC	TAL DEN
Total/NA	Analysis	6020A		1			497898	06/08/20 16:22	LMT	TAL DEN
Total/NA	Prep	3050B			1.152 g	100 mL	496985	06/04/20 15:20	EC	TAL DEN
Total/NA	Analysis	6020A		1			497991	06/08/20 20:51	LMT	TAL DEN
Total/NA	Prep	7471B			0.51 g	50 mL	498344	06/11/20 13:20	AL	TAL DEN
Total/NA	Analysis	7471B		1			498511	06/11/20 18:04	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-20-22

Lab Sample ID: 280-137073-10

Date Collected: 05/29/20 09:15

Matrix: Solid

Date Received: 05/29/20 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			496886	06/01/20 10:09	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-20-22

Lab Sample ID: 280-137073-10

Date Collected: 05/29/20 09:15

Matrix: Solid

Date Received: 05/29/20 15:50

Percent Solids: 90.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.624 g	5 mL	497531	05/29/20 09:15	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497779	06/05/20 16:38	GPM	TAL DEN
Total/NA	Prep	3550C			31.8 g	1 mL	498186	06/10/20 13:55	DCL	TAL DEN
Total/NA	Analysis	8270D		1			498836	06/12/20 16:56	RDP	TAL DEN
Total/NA	Prep	5035			4.84 g	5 mL	498230	05/29/20 09:15	AAR	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	498321	06/11/20 14:12	GO	TAL DEN
Total/NA	Prep	3546			15.7 g	1 mL	498302	06/11/20 10:33	MB	TAL DEN
Total/NA	Analysis	8015C		1			500065	06/25/20 02:13	JSM	TAL DEN
Total/NA	Prep	3050B-Sb			1.314 g	100 mL	497091	06/04/20 17:00	EC	TAL DEN
Total/NA	Analysis	6020A		1			497898	06/08/20 17:16	LMT	TAL DEN
Total/NA	Prep	3050B			1.021 g	100 mL	496985	06/04/20 15:20	EC	TAL DEN
Total/NA	Analysis	6020A		1			497991	06/08/20 21:43	LMT	TAL DEN
Total/NA	Prep	7471B			0.53 g	50 mL	498344	06/11/20 13:20	AL	TAL DEN
Total/NA	Analysis	7471B		1			498511	06/11/20 18:11	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-02-GW

Lab Sample ID: 280-137073-11

Date Collected: 05/29/20 10:15

Matrix: Water

Date Received: 05/29/20 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		100	5 mL	5 mL	498109	06/09/20 21:59	RJS	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	498159	06/10/20 18:50	CAS	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-21-2-3

Lab Sample ID: 280-137073-12

Date Collected: 05/29/20 11:40

Matrix: Solid

Date Received: 05/29/20 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			496886	06/01/20 10:09	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-21-2-3

Lab Sample ID: 280-137073-12

Date Collected: 05/29/20 11:40

Matrix: Solid

Date Received: 05/29/20 15:50

Percent Solids: 89.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.863 g	5 mL	497531	05/29/20 11:40	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497779	06/05/20 17:01	GPM	TAL DEN
Total/NA	Prep	3550C			31.3 g	1 mL	498186	06/10/20 13:55	DCL	TAL DEN
Total/NA	Analysis	8270D		1			498836	06/12/20 17:23	RDP	TAL DEN
Total/NA	Prep	5035			5.131 g	5 mL	498230	05/29/20 11:40	AAR	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	498321	06/11/20 14:36	GO	TAL DEN
Total/NA	Prep	3546			15.6 g	1 mL	498302	06/11/20 10:33	MB	TAL DEN
Total/NA	Analysis	8015C		1			499134	06/23/20 03:38	MAM	TAL DEN
Total/NA	Prep	3050B-Sb			1.386 g	100 mL	497091	06/04/20 17:00	EC	TAL DEN
Total/NA	Analysis	6020A		1			497898	06/08/20 17:19	LMT	TAL DEN
Total/NA	Prep	3050B			1.465 g	100 mL	496985	06/04/20 15:20	EC	TAL DEN
Total/NA	Analysis	6020A		1			497991	06/08/20 21:46	LMT	TAL DEN
Total/NA	Prep	7471B			0.60 g	50 mL	498344	06/11/20 13:20	AL	TAL DEN
Total/NA	Analysis	7471B		1			498511	06/11/20 18:13	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-21-GW

Lab Sample ID: 280-137073-13

Date Collected: 05/29/20 12:15

Matrix: Water

Date Received: 05/29/20 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		100	5 mL	5 mL	498109	06/09/20 22:20	RJS	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	498159	06/10/20 19:13	CAS	TAL DEN
Total/NA	Prep	3510C			241.4 mL	1 mL	497026	06/02/20 14:36	NK	TAL DEN
Total/NA	Analysis	8015C		1			498093	06/10/20 03:00	MAM	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB02

Lab Sample ID: 280-137073-14

Date Collected: 05/28/20 08:00

Matrix: Water

Date Received: 05/29/20 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	497959	06/09/20 19:29	AJP	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	498159	06/10/20 12:08	CAS	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-25-14-15

Lab Sample ID: 280-137073-15

Date Collected: 05/29/20 14:50

Matrix: Solid

Date Received: 05/29/20 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			496886	06/01/20 10:09	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-25-14-15

Lab Sample ID: 280-137073-15

Date Collected: 05/29/20 14:50

Matrix: Solid

Date Received: 05/29/20 15:50

Percent Solids: 88.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.912 g	5 mL	497531	05/29/20 14:50	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497779	06/05/20 17:23	GPM	TAL DEN
Total/NA	Prep	3550C			30.6 g	1 mL	498186	06/10/20 13:55	DCL	TAL DEN
Total/NA	Analysis	8270D		1			498836	06/12/20 17:51	RDP	TAL DEN
Total/NA	Prep	5035			5.511 g	5 mL	498230	05/29/20 14:50	AAR	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	498321	06/11/20 15:00	GO	TAL DEN
Total/NA	Prep	3546			16.6 g	1 mL	498302	06/11/20 10:33	MB	TAL DEN
Total/NA	Analysis	8015C		1			499134	06/23/20 04:00	MAM	TAL DEN
Total/NA	Prep	3050B-Sb			1.105 g	100 mL	497091	06/04/20 17:00	EC	TAL DEN
Total/NA	Analysis	6020A		1			497898	06/08/20 17:23	LMT	TAL DEN
Total/NA	Prep	3050B			1.055 g	100 mL	496985	06/04/20 15:20	EC	TAL DEN
Total/NA	Analysis	6020A		1			497991	06/08/20 21:50	LMT	TAL DEN
Total/NA	Prep	3050B			1.055 g	100 mL	496985	06/04/20 15:20	EC	TAL DEN
Total/NA	Analysis	6020A		10			498028	06/09/20 11:57	LMT	TAL DEN
Total/NA	Prep	7471B			0.59 g	50 mL	498344	06/11/20 13:20	AL	TAL DEN
Total/NA	Analysis	7471B		1			498511	06/11/20 18:15	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB02

Lab Sample ID: 280-137073-16

Date Collected: 05/28/20 08:00

Matrix: Solid

Date Received: 05/29/20 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	497531	05/28/20 08:00	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497779	06/05/20 09:04	GPM	TAL DEN
Total/NA	Prep	5035	DL		5 g	5 mL	498148	05/28/20 08:00	GPM	TAL DEN
Total/NA	Analysis	8260B	DL	50	5 g	5 mL	498147	06/10/20 12:00	GPM	TAL DEN
Total/NA	Prep	5035			5 g	5 mL	498230	05/28/20 08:00	AAR	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	498321	06/11/20 11:02	GO	TAL DEN

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137073-1

Laboratory: Eurofins TestAmerica, Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21
A2LA	ISO/IEC 17025	2907.01	10-31-21
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	02-08-21
Arizona	State	AZ0713	12-20-20
Arkansas DEQ	State	19-047-0	06-01-21
California	State	2513	01-08-21
Connecticut	State	PH-0686	09-30-20
Florida	NELAP	E87667-57	06-30-20
Georgia	State	4025-011	01-09-21
Illinois	NELAP	2000172019-1	04-30-21
Iowa	State	IA#370	12-01-20
Kansas	NELAP	E-10166	04-30-21
Louisiana	NELAP	30785	06-30-20
Maine	State	2019011 (231)	03-03-21
Minnesota	NELAP	1788752	12-31-20
Nevada	State	CO000262020-1	07-31-20
New Hampshire	NELAP	205319	04-29-21
New Jersey	NELAP	190002	06-30-20
New York	NELAP	59923	04-01-21
North Carolina (WW/SW)	State	358	12-31-20
North Dakota	State	R-034	01-08-21
Oklahoma	State	2018-006	08-31-20
Oregon	NELAP	4025-011	01-08-21
Pennsylvania	NELAP	013	08-01-20
South Carolina	State	72002001	01-08-21
Texas	NELAP	T104704183-19-17	09-30-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-18-00099	03-26-21
Utah	NELAP	CO000262019-11	07-31-20
Virginia	NELAP	10490	06-14-21
Washington	State	C583-19	08-05-20
West Virginia DEP	State	354	11-30-20
Wisconsin	State	999615430	08-31-20
Wyoming (UST)	A2LA	2907.01	10-31-21

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Chain of Custody Record

Client Information		Lab PM: Bandy, Darlene F		Carrier Tracking No(s): 280-99270-29871.5	
Client Contact: Mr. Jon Russ		E-Mail: darlene.bandy@testamericainc.com		Page: _____	
Company: Jacobs Engineering Group, Inc.		Address: 707 17th Street Suite 2400		Job #: _____	
City: Denver		State, Zip: CO, 80202		COC No: 280-99270-29871.5	
Phone: 720 286 3385		PO #: _____		Preservation Codes:	
Purchase Order not required		WO #: _____		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: _____	
Project #: 28020733		Project Name: CDOT I-270 Interchange Improvements		M - Hexane N - None O - AcNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Site: _____		Due Date Requested: _____		Total Number of Containers: _____	
TAT Requested (days): Standard TAT		Field Filtered Sample (Yes or No)		Special Instructions/Note: _____	
Sample Identification		Sample Date		Sample Time	
CDOT I270 Env-05/06_2020-SB-15-17		5/28/20		0930	
CDOT I270 Env-05/06_2020-SB-68-8-10		5/28/20		1055	
CDOT I270 Env-05/06_2020-SB-08-22-23		5/28/20		1125	
CDOT I270 Env-05/06_2020-SB-20-3-5		5/28/20		1245	
CDOT I270 Env-05/06_2020-SB-20-8-10		5/28/20		1305	
CDOT I270 Env-05/06_2020-SB-20-6W		5/28/20		1340	
CDOT I270 Env-05/06_2020-SB-22-5-7		5/28/20		1500	
CDOT I270 Env-05/06_2020-SB-22-6W		5/28/20		1510	
CDOT I270 Env-05/06_2020-SB-02-10-12		5/29/20		0850	
CDOT I270 Env-05/06_2020-SB-02-20-22		5/29/20		0915	
CDOT I270 Env-05/06_2020-SB-02-6W		5/29/20		1015	
Possible Hazard Identification		<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Radiological		MSJ MSD	
Deliverable Requested: I, II, III, IV, Other (specify)		<input type="checkbox"/> Unknown <input type="checkbox"/> Poison B		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Empty Kit Relinquished by:		Date: _____		<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Relinquished by: _____		Date: 5/29/16		Company: JCBJ	
Relinquished by: _____		Date: 5/29/16		Date/Time: 05/29/2020 1550	
Relinquished by: _____		Date: _____		Date/Time: _____	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.: _____		Cooler Temperature(s) °C and Other Remarks: 16.5, 12.1, 24.8 in 4 to 6 AB Slab	

Client Information
 Company: Jacobs Engineering Group, Inc.
 Address: 707 17th Street Suite 2400
 City: Denver
 State: CO
 Zip: 80202
 Phone: 720 286 3785
 Email: jon.russ@jacobs.com
 Project Name: CDOT I-270 Interchange Improvements
 Site:

Client Information
 Sampler: CR
 Lab PM: Bandy, Darlene F
 Phone: 720 286 3385
 E-Mail: darlene.bandy@lestamericainc.com

COC No: 280-99270-29871.1
 Page: _____
 Job #: _____

Carrier Tracking No(s): _____

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, G=grab, B=biological, A=air)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	J&FF	8260B - VOCs - Soils	8015C - GRO - TPH - GRO - Soils	8015C - TPH-DRO/RODRO, 8270D SVOCs - Soils	6020A, 7471B RCRA Metals, Moisture	8081B - Pesticides - Soils	8082A - PCBs - Soils	8260B - VOCs - Waters	8015C - GRO - TPH - GRO - Waters	8270D - SVOCs Waters	8015C - DRO - TPH - DRO/ORO	6020A, 7470A RCRA Metals	8081B - Pesticides - Waters	8082A - PCBs - Waters	Total Number of Containers	Special Instructions/Note:
CDOT I270 Env-05/06_2020-SB-21-2-3	5/29/20	1140	C	Solid		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	80 limited volume
CDOT I270 Env-05/06_2020-SB-21-6-W	5/29/20	1215	G	Solid		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Solid + water Tip Blank
CDOT I270 Env-05/06_2020-SB-TB 2	5/28/20	0800	G	Solid		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CDOT I270 Env-05/06_2020-SB-25-14-15	5/27/20	1450	G	Solid		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CDOT I270 Env-05/06_2020-SB-				Solid																			
CDOT I270 Env-05/06_2020-SB-				Solid																			
CDOT I270 Env-05/06_2020-SB-				Solid																			
CDOT I270 Env-05/06_2020-SB-				Solid																			
CDOT I270 Env-05/06_2020-SB-				Solid																			
CDOT I270 Env-05/06_2020-SB-				Solid																			

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Unknown Poison B Radiological

Deliverable Requested: I, II, III, IV, Other (specify) _____

Empty Kit Requisitioned by: _____ Date: _____

Requisitioned by: _____ Date: 5/29/20 1550 Company: STADEN

Requisitioned by: _____ Date: _____ Company: _____

Requisitioned by: _____ Date: _____ Company: _____

Custody Seal No.: _____
 Δ Yes Δ No

Special Instructions/OC Requirements: _____

Return To Client Disposal By Lab _____ Archive For _____ Months

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Method of Shipment: _____

Received by: _____ Date: 05/29/20 1550 Company: STADEN

Received by: _____ Date: _____ Company: _____

Received by: _____ Date: _____ Company: _____

Cooler Temperature(s) °C and Other Remarks: _____

Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 280-137073-1

Login Number: 137073

List Source: Eurofins TestAmerica, Denver

List Number: 1

Creator: Bentley, Beau J

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	False	Client drop off.
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Refer to Job Narrative for details.
Cooler Temperature is acceptable.	False	Cooler temperature outside required temperature criteria.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	False	Refer to Job Narrative for details.
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	False	Refer to Job Narrative for details.
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	False	Refer to Job Narrative for details.
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	False	Refer to Job Narrative for details.
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-137283-1

Client Project/Site: CDOT I-270 Interchange Improvements

For:

Jacobs Engineering Group, Inc.
707 17th Street
Suite 2400
Denver, Colorado 80202

Attn: Mr. Jon Russ



Authorized for release by:
7/31/2020 9:31:24 PM

Darlene Bandy, Project Manager I
(303)736-0188
Darlene.Bandy@Eurofinset.com

LINKS

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www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate recovery exceeds control limits

GC VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate recovery exceeds control limits

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive

Eurofins TestAmerica, Denver

Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

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Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Job ID: 280-137283-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: Jacobs Engineering Group, Inc.

Project: CDOT I-270 Interchange Improvements

Report Number: 280-137283-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 6/4/2020 2:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 8.0° C, 10.7° C and 14.3° C.

Receipt Exceptions

The following samples were received at the laboratory outside the required temperature criteria: CDOT I270 Env-05/06_2020-SB-11-6.5-8 (280-137283-1), CDOT I270 Env-05/06_2020-SB-11-GW (280-137283-2), CDOT I270 Env-05/06_2020-SB-07-7-8 (280-137283-3), CDOT I270 Env-05/06_2020-SB-07-GW (280-137283-4), CDOT I270 Env-05/06_2020-SB-09-2-3 (280-137283-5), CDOT I270 Env-05/06_2020-SB-09-GW (280-137283-6) and CDOT I270 Env-05/06_2020-SB-TB-03 (280-137283-12). All samples arrived intermixed between 3 coolers. The samples noted were collected on 6/3 and received outside of temperature on 6/4. All three of the coolers contained water, indicating evidence of melted ice. It was noted that fresher bags of ice were also included in the coolers; however, it is assumed the ice could not sufficiently chill the volume prior to receipt at the laboratory.

The following samples were received at the laboratory outside the required temperature criteria: CDOT I270 Env-05/06_2020-SB-12-10-12 (280-137283-7), CDOT I270 Env-05/06_2020-SB-05-10-12 (280-137283-8), CDOT I270 Env-05/06_2020-SB-5-28-29 (280-137283-9), CDOT I270 Env-05/06_2020-SB-3-12-14 (280-137283-10) and CDOT I270 Env-05/06_2020-SB-3-27-29 (280-137283-11). The samples are considered acceptable since they were collected and submitted to the laboratory on the same day.

The following samples were observed to be biphasic: CDOT I270 Env-05/06_2020-SB-11-GW (280-137283-2) and CDOT I270 Env-05/06_2020-SB-07-GW (280-137283-4). 6 of 6 HCl VOA Vials for these samples have ~10mm of light tan silt separating from the aqueous volume. The laboratory proceeded with analysis from the aqueous portion of the volume.

1 x 500mL Nitric Acid preserved plastic container for sample CDOT I270 Env-05/06_2020-SB-11-GW (280-137283-2) was received filled with ~350mL of volume. Sufficient volume is available for analysis.

6 x 40mL HCL VOA Vials were submitted labeled for sample CDOT I270 Env-05/06_2020-SB-TB-03 (280-137283-12). The containers were received empty and only contained the preservative. Analysis for aqueous volume was not logged for sample CDOT I270 Env-05/06_2020-SB-TB-03 (280-137283-12) per empty volume received. It can be noted the sample will be analyzed for the solid volume only that was submitted.

VOLATILE ORGANIC COMPOUNDS (GC-MS) - Soil

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Job ID: 280-137283-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Samples CDOT I270 Env-05/06_2020-SB-11-6.5-8 (280-137283-1), CDOT I270 Env-05/06_2020-SB-07-7-8 (280-137283-3), CDOT I270 Env-05/06_2020-SB-09-2-3 (280-137283-5), CDOT I270 Env-05/06_2020-SB-12-10-12 (280-137283-7), CDOT I270 Env-05/06_2020-SB-05-10-12 (280-137283-8), CDOT I270 Env-05/06_2020-SB-5-28-29 (280-137283-9), CDOT I270 Env-05/06_2020-SB-3-12-14 (280-137283-10), CDOT I270 Env-05/06_2020-SB-3-27-29 (280-137283-11) and CDOT I270 Env-05/06_2020-SB-TB-03 (280-137283-12) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 06/03/2020 and 06/04/2020 and analyzed on 06/07/2020.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-497711 and analytical batch 280-497709. A duplicate LCS (LCSD) was analyzed.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GC-MS) - Water

Samples CDOT I270 Env-05/06_2020-SB-11-GW (280-137283-2), CDOT I270 Env-05/06_2020-SB-07-GW (280-137283-4) and CDOT I270 Env-05/06_2020-SB-09-GW (280-137283-6) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 06/15/2020.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 280-498705. A duplicate LCS (LCSD) was analyzed.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GC/MS) - Soil

Samples CDOT I270 Env-05/06_2020-SB-11-6.5-8 (280-137283-1), CDOT I270 Env-05/06_2020-SB-07-7-8 (280-137283-3), CDOT I270 Env-05/06_2020-SB-09-2-3 (280-137283-5), CDOT I270 Env-05/06_2020-SB-12-10-12 (280-137283-7), CDOT I270 Env-05/06_2020-SB-05-10-12 (280-137283-8), CDOT I270 Env-05/06_2020-SB-5-28-29 (280-137283-9), CDOT I270 Env-05/06_2020-SB-3-12-14 (280-137283-10) and CDOT I270 Env-05/06_2020-SB-3-27-29 (280-137283-11) were analyzed for semivolatile organic compounds (GC/MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 06/16/2020 and analyzed on 06/20/2020.

Nitrobenzene-d5 (Surr) failed the surrogate recovery criteria low for CDOT I270 Env-05/06_2020-SB-09-2-3 (280-137283-5). Refer to the QC report for details. Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Nitrobenzene-d5 (Surr) - 43% limit 46-120

4-Nitrophenol failed the recovery criteria low for the MS of sample CDOT I270 Env-05/06_2020-SB-05-10-12MS (280-137283-8) in batch 280-499495. 4-Nitrophenol, Hexachlorobutadiene, Hexachloroethane and Phenol failed the recovery criteria low for the MSD. Refer to the QC report for details. The acceptable LCS data indicate that the analytical system was operating within control.

The following samples could not be thoroughly homogenized before sub-sampling was performed due to sample matrix: CDOT I270 Env-05/06_2020-SB-5-28-29 (280-137283-9) and CDOT I270 Env-05/06_2020-SB-3-27-29 (280-137283-11). The samples were like wet clay.

The continuing calibration verification (CCV) associated with batch 280-499495 recovered above the upper control limit for Famphur at 49.2%D, limit 20%D. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data has been reported. The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-11-6.5-8 (280-137283-1), CDOT I270 Env-05/06_2020-SB-07-7-8 (280-137283-3), CDOT I270 Env-05/06_2020-SB-09-2-3 (280-137283-5), CDOT I270 Env-05/06_2020-SB-12-10-12 (280-137283-7), CDOT I270 Env-05/06_2020-SB-05-10-12 (280-137283-8), CDOT I270 Env-05/06_2020-SB-5-28-29 (280-137283-9), CDOT I270 Env-05/06_2020-SB-3-12-14 (280-137283-10), CDOT I270 Env-05/06_2020-SB-3-27-29 (280-137283-11) and (CCV 280-499495/5).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS) - Water

Samples CDOT I270 Env-05/06_2020-SB-11-GW (280-137283-2), CDOT I270 Env-05/06_2020-SB-07-GW (280-137283-4) and CDOT I270 Env-05/06_2020-SB-09-GW (280-137283-6) were analyzed for semivolatile organic compounds (GC-MS) in accordance with SW-846

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Job ID: 280-137283-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

8270D. The samples were prepared on 06/08/2020 and analyzed on 06/17/2020.

2-Fluorobiphenyl failed the surrogate recovery criteria low for MB 280-497769/1-A. Refer to the QC report for details. The associated LCS/LCSD and samples were in control, therefore the data have been qualified and reported.

2-Fluorobiphenyl - 38% limit 48-120

1,2,4-Trichlorobenzene failed the recovery criteria low for LCS 280-497769/2-A. 1,2,4-Trichlorobenzene, Hexachlorobutadiene and Hexachloroethane exceeded the RPD limit. Refer to the QC report for details.

The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 280-497769 and analytical batch 280-499090 recovered outside control limits for the following analytes: Bis(2-ethylhexyl) phthalate at 107% and 110% respectively, limit 65-106%. These analytes were biased high in the LCS/LCSD and were not detected in the associated samples; therefore, the data have been qualified and reported.

The laboratory control sample (LCS) for preparation batch 280-497769 and analytical batch 280-499090 recovered just below control limits for the following analyte: 1,2,4-Trichlorobenzene at 40%, limit 41-99%. The LCSD was in control for this analyte, and samples were outside hold time for re-extraction; therefore, the data have been qualified and reported.

1,2,4-Trichlorobenzene, Hexachlorobutadiene and Hexachloroethane exceeded the RPD limit for LCS 280-497769/2-A and LCSD 280-497769/3-A at 34%, 40%, and 33% respectively (limit 30% RPD).

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-497769. A duplicate LCS (LCSD) was analyzed.

The continuing calibration verification (CCV) associated with batch 280-499090 recovered above the upper control limit for Famphur at 47.1%D, limit 20%D. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data has been reported. The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-11-GW (280-137283-2), CDOT I270 Env-05/06_2020-SB-07-GW (280-137283-4), CDOT I270 Env-05/06_2020-SB-09-GW (280-137283-6) and (CCV 280-499090/5).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GASOLINE RANGE ORGANICS (GRO) - Soil

Samples CDOT I270 Env-05/06_2020-SB-11-6.5-8 (280-137283-1), CDOT I270 Env-05/06_2020-SB-07-7-8 (280-137283-3), CDOT I270 Env-05/06_2020-SB-09-2-3 (280-137283-5), CDOT I270 Env-05/06_2020-SB-12-10-12 (280-137283-7), CDOT I270 Env-05/06_2020-SB-05-10-12 (280-137283-8), CDOT I270 Env-05/06_2020-SB-5-28-29 (280-137283-9), CDOT I270 Env-05/06_2020-SB-3-12-14 (280-137283-10), CDOT I270 Env-05/06_2020-SB-3-27-29 (280-137283-11) and CDOT I270 Env-05/06_2020-SB-TB-03 (280-137283-12) were analyzed for Gasoline Range Organics (GRO) in accordance with EPA SW-846 Method 8015C - GRO. The samples were prepared on 06/03/2020 and 06/04/2020 and analyzed on 06/16/2020, 06/18/2020 and 06/20/2020.

Reanalysis of the following samples were performed outside of the analytical holding time due to failure of quality control parameters in the initial analysis. CDOT I270 Env-05/06_2020-SB-11-6.5-8 (280-137283-1), CDOT I270 Env-05/06_2020-SB-07-7-8 (280-137283-3), CDOT I270 Env-05/06_2020-SB-09-2-3 (280-137283-5), CDOT I270 Env-05/06_2020-SB-TB-03 (280-137283-12), (280-137171-G-4-A), (280-137171-F-4-B MS) and (280-137171-F-4-C MSD).

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-499104 and analytical batch 280-499340. A duplicate LCS (LCSD) was analyzed.

The continuing calibration verification (CCV) associated with batch 280-498815 recovered outside acceptance criteria, low biased, for Gasoline Range Organics (GRO)-C6-C10, at -22.2%D. Associated samples were reanalyzed out of hold. Both sets of data have been reported. Associated samples are CDOT I270 Env-05/06_2020-SB-11-6.5-8 (280-137283-1), CDOT I270 Env-05/06_2020-SB-07-7-8 (280-137283-3), CDOT I270 Env-05/06_2020-SB-09-2-3 (280-137283-5), and CDOT I270 Env-05/06_2020-SB-TB-03 (280-137283-12).

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GASOLINE RANGE ORGANICS (GRO) - Water

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Job ID: 280-137283-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Samples CDOT I270 Env-05/06_2020-SB-11-GW (280-137283-2), CDOT I270 Env-05/06_2020-SB-07-GW (280-137283-4) and CDOT I270 Env-05/06_2020-SB-09-GW (280-137283-6) were analyzed for Gasoline Range Organics (GRO) in accordance with EPA SW-846 Method 8015C - GRO. The samples were analyzed on 06/16/2020.

The following sample(s) was collected in a properly preserved vial; however, the pH level was 3 and outside the required criteria when verified by the laboratory: CDOT I270 Env-05/06_2020-SB-11-GW (280-137283-2) and CDOT I270 Env-05/06_2020-SB-07-GW (280-137283-4). The samples were analyzed outside the 7-day holding time specified for unpreserved samples but within the 14-day holding time specified for preserved samples.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DIESEL RANGE ORGANICS - Soil

Samples CDOT I270 Env-05/06_2020-SB-11-6.5-8 (280-137283-1), CDOT I270 Env-05/06_2020-SB-07-7-8 (280-137283-3), CDOT I270 Env-05/06_2020-SB-09-2-3 (280-137283-5), CDOT I270 Env-05/06_2020-SB-12-10-12 (280-137283-7), CDOT I270 Env-05/06_2020-SB-05-10-12 (280-137283-8), CDOT I270 Env-05/06_2020-SB-5-28-29 (280-137283-9), CDOT I270 Env-05/06_2020-SB-3-12-14 (280-137283-10) and CDOT I270 Env-05/06_2020-SB-3-27-29 (280-137283-11) were analyzed for diesel range organics in accordance with EPA SW-846 Method 8015C - DRO. The samples were prepared on 06/17/2020 and analyzed on 06/20/2020.

The following samples could not be thoroughly homogenized before sub-sampling was performed due to sample matrix: CDOT I270 Env-05/06_2020-SB-5-28-29 (280-137283-9) and CDOT I270 Env-05/06_2020-SB-3-27-29 (280-137283-11). The samples were like wet clay.

o-Terphenyl (Surr) failed the surrogate recovery criteria low for CDOT I270 Env-05/06_2020-SB-3-27-29 (280-137283-11). Refer to the QC report for details. Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed. The sample was documented as clay and that homogenization was not possible.

o-Terphenyl (Surr) failed the surrogate recovery criteria low for CDOT I270 Env-05/06_2020-SB-11-6.5-8MS (280-137283-1MS). Refer to the QC report for details.

The associated method blank (MB) for the initial run had DRO/RRO results above 1/2 the RL in the associated MB. Carry over was suspected, and all samples and QC were re-analyzed. Sample results confirm between initial analysis and re-analysis. The re-analysis of the MB shows carry over contamination from a previous injection during the initial analysis. The MB results in the re-analysis is ND for all targets.

Motor Oil (C20-C38) failed the recovery criteria low for the MS of sample CDOT I270 Env-05/06_2020-SB-11-6.5-8MS (280-137283-1) at 24% (limits 45-130%) in batch 280-499482. It is noted that the surrogate recovered below control limits as well. Motor Oil (C20-C38) exceeded the RPD limit for the MSD of sample CDOT I270 Env-05/06_2020-SB-11-6.5-8MSD (280-137283-1) in batch 280-499482. Refer to the QC report for details. The associated matrix spike duplicate (MSD) laboratory control sample (LCS) recovery was within acceptance limits. Because of the difference in recoveries between the MS and MSD, the RPD exceeded acceptance limits. The samples were out of hold for re-extraction; therefore, re-extraction was not initiated.

The continuing calibration verification (CCV) associated with batch 280-499667 recovered above the upper control limit (+/-20%D) for Diesel Range Organics [C10-C28] and o-Terphenyl. (Surr) The samples associated with this CCV (MB) were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: (CCVRT 280-499667/4) and (MB 280-499036/1-A).

Sequence goes:

- CCVRT biased high
- CCV RRO in control
- MB
- CCV DRO in control
- CCV RRO in control

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Job ID: 280-137283-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

DIESEL RANGE ORGANICS - Water

Samples CDOT I270 Env-05/06_2020-SB-11-GW (280-137283-2), CDOT I270 Env-05/06_2020-SB-07-GW (280-137283-4) and CDOT I270 Env-05/06_2020-SB-09-GW (280-137283-6) were analyzed for Diesel Range Organics in accordance with EPA SW-846 Method 8015C - DRO. The samples were prepared on 06/09/2020 and analyzed on 06/14/2020 and 06/23/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

METALS (ICPMS) - Soil

Samples CDOT I270 Env-05/06_2020-SB-11-6.5-8 (280-137283-1), CDOT I270 Env-05/06_2020-SB-07-7-8 (280-137283-3), CDOT I270 Env-05/06_2020-SB-09-2-3 (280-137283-5), CDOT I270 Env-05/06_2020-SB-12-10-12 (280-137283-7), CDOT I270 Env-05/06_2020-SB-05-10-12 (280-137283-8), CDOT I270 Env-05/06_2020-SB-5-28-29 (280-137283-9), CDOT I270 Env-05/06_2020-SB-3-12-14 (280-137283-10) and CDOT I270 Env-05/06_2020-SB-3-27-29 (280-137283-11) were analyzed for metals (ICPMS) in accordance with SW 846 6020A. The samples were prepared on 06/10/2020 and 06/22/2020 and analyzed on 06/13/2020, 06/17/2020 and 06/24/2020.

The low level continuing calibration verification (CCVL) associated with batch 280-498301 recovered (59%, 65% & 64% for Barium and 141% for Lead) outside of control limits (70-130%) for Barium and Lead. The samples associated with this CCV were >10x the level of the CCVL for the affected analytes; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP/MS) - Soil (Sb prep for Silver)

Samples CDOT I270 Env-05/06_2020-SB-11-6.5-8 (280-137283-1), CDOT I270 Env-05/06_2020-SB-07-7-8 (280-137283-3), CDOT I270 Env-05/06_2020-SB-09-2-3 (280-137283-5), CDOT I270 Env-05/06_2020-SB-12-10-12 (280-137283-7), CDOT I270 Env-05/06_2020-SB-05-10-12 (280-137283-8), CDOT I270 Env-05/06_2020-SB-5-28-29 (280-137283-9), CDOT I270 Env-05/06_2020-SB-3-12-14 (280-137283-10) and CDOT I270 Env-05/06_2020-SB-3-27-29 (280-137283-11) were analyzed for Total Metals (ICP/MS) in accordance with 6020A. The samples were prepared on 06/10/2020 and analyzed on 06/13/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICPMS) - Water

Samples CDOT I270 Env-05/06_2020-SB-11-GW (280-137283-2), CDOT I270 Env-05/06_2020-SB-07-GW (280-137283-4) and CDOT I270 Env-05/06_2020-SB-09-GW (280-137283-6) were analyzed for total metals (ICPMS) in accordance with EPA SW-846 6020A. The samples were prepared on 06/09/2020 and analyzed on 06/10/2020.

Selenium was detected in method blank MB 280-497866/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY - Water

Samples CDOT I270 Env-05/06_2020-SB-11-GW (280-137283-2), CDOT I270 Env-05/06_2020-SB-07-GW (280-137283-4) and CDOT I270 Env-05/06_2020-SB-09-GW (280-137283-6) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 06/15/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY (CVAA) - Soil

Samples CDOT I270 Env-05/06_2020-SB-11-6.5-8 (280-137283-1), CDOT I270 Env-05/06_2020-SB-07-7-8 (280-137283-3), CDOT I270 Env-05/06_2020-SB-09-2-3 (280-137283-5), CDOT I270 Env-05/06_2020-SB-12-10-12 (280-137283-7), CDOT I270 Env-05/06_2020-SB-05-10-12 (280-137283-8), CDOT I270 Env-05/06_2020-SB-5-28-29 (280-137283-9), CDOT I270 Env-05/06_2020-SB-3-12-14 (280-137283-10) and CDOT I270 Env-05/06_2020-SB-3-27-29 (280-137283-11) were analyzed for total mercury (CVAA) in accordance with EPA SW-846 Method 7471B. The samples were prepared and analyzed on 06/18/2020.

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Job ID: 280-137283-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

Samples CDOT I270 Env-05/06_2020-SB-11-6.5-8 (280-137283-1), CDOT I270 Env-05/06_2020-SB-07-7-8 (280-137283-3), CDOT I270 Env-05/06_2020-SB-09-2-3 (280-137283-5), CDOT I270 Env-05/06_2020-SB-12-10-12 (280-137283-7), CDOT I270 Env-05/06_2020-SB-05-10-12 (280-137283-8), CDOT I270 Env-05/06_2020-SB-5-28-29 (280-137283-9), CDOT I270 Env-05/06_2020-SB-3-12-14 (280-137283-10) and CDOT I270 Env-05/06_2020-SB-3-27-29 (280-137283-11) were analyzed for percent solids in accordance with ASTM D2216-90. The samples were analyzed on 06/05/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

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Detection Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-11-6.5-8

Lab Sample ID: 280-137283-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Hexadecane	26	J	370	15	ug/Kg	1	☼	8270D	Total/NA
Pyrene	29	J	370	13	ug/Kg	1	☼	8270D	Total/NA
Diesel Range Organics [C10-C28]	5.2	J	9.0	4.1	mg/Kg	1	☼	8015C	Total/NA
Motor Oil (C20-C38)	11	J F1 F2	27	8.8	mg/Kg	1	☼	8015C	Total/NA
Arsenic	2.4		0.60	0.050	mg/Kg	1	☼	6020A	Total/NA
Silver	31	J	83	6.5	ug/Kg	1	☼	6020A	Total/NA
Barium	120		0.40	0.070	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.13		0.10	0.0098	mg/Kg	1	☼	6020A	Total/NA
Chromium	9.4		0.20	0.076	mg/Kg	1	☼	6020A	Total/NA
Lead	12		0.15	0.018	mg/Kg	1	☼	6020A	Total/NA
Selenium	0.18	J	0.50	0.13	mg/Kg	1	☼	6020A	Total/NA
Mercury	12	J	21	6.9	ug/Kg	1	☼	7471B	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-11-GW

Lab Sample ID: 280-137283-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	7.2	J	10	1.9	ug/L	1		8260B	Total/NA
Carbon disulfide	1.6	J	2.0	0.17	ug/L	1		8260B	Total/NA
m-Xylene & p-Xylene	0.61	J	2.0	0.15	ug/L	1		8260B	Total/NA
Diesel Range Organics [C10-C28]	0.45		0.25	0.033	mg/L	1		8015C	Total/NA
Motor Oil (C20-C38)	0.53		0.50	0.057	mg/L	1		8015C	Total/NA
Arsenic	19		5.0	0.33	ug/L	1		6020A	Total/NA
Barium	1100	^	1.0	0.29	ug/L	1		6020A	Total/NA
Cadmium	0.72	J	1.0	0.27	ug/L	1		6020A	Total/NA
Chromium	61		2.0	0.50	ug/L	1		6020A	Total/NA
Lead	51	^	1.0	0.18	ug/L	1		6020A	Total/NA
Selenium	7.7	B	5.0	0.37	ug/L	1		6020A	Total/NA
Silver	0.12	J	5.0	0.033	ug/L	1		6020A	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-07-7-8

Lab Sample ID: 280-137283-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	25		22	4.2	ug/Kg	1	☼	8260B	Total/NA
Acetone	110		78	39	ug/Kg	1	☼	8260B	Total/NA
Carbon disulfide	3.9	J	5.4	1.8	ug/Kg	1	☼	8260B	Total/NA
Gasoline Range Organics (GRO)	4.3		3.1	1.2	mg/Kg	1	☼	8015C	Total/NA
-C6-C10	4.1	H	3.1	1.2	mg/Kg	1	☼	8015C	Total/NA
Gasoline Range Organics (GRO)	14		8.6	3.9	mg/Kg	1	☼	8015C	Total/NA
-C6-C10	24	J	26	8.5	mg/Kg	1	☼	8015C	Total/NA
Diesel Range Organics [C10-C28]	1.7		0.70	0.059	mg/Kg	1	☼	6020A	Total/NA
Motor Oil (C20-C38)	280		94	7.3	ug/Kg	1	☼	6020A	Total/NA
Arsenic	140		0.46	0.082	mg/Kg	1	☼	6020A	Total/NA
Silver	0.50		0.095	0.0089	mg/Kg	1	☼	6020A	Total/NA
Barium	6.9		0.23	0.088	mg/Kg	1	☼	6020A	Total/NA
Cadmium	7.9		0.17	0.021	mg/Kg	1	☼	6020A	Total/NA
Chromium	7.9		0.17	0.021	mg/Kg	1	☼	6020A	Total/NA
Lead	7.9		0.17	0.021	mg/Kg	1	☼	6020A	Total/NA
Selenium	0.15	J	0.58	0.15	mg/Kg	1	☼	6020A	Total/NA
Mercury	40		21	6.8	ug/Kg	1	☼	7471B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-07-GW

Lab Sample ID: 280-137283-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.8	J	10	1.9	ug/L	1		8260B	Total/NA
m-Xylene & p-Xylene	0.49	J	2.0	0.15	ug/L	1		8260B	Total/NA
Diesel Range Organics [C10-C28]	0.091	J	0.26	0.034	mg/L	1		8015C	Total/NA
Motor Oil (C20-C38)	0.11	J	0.53	0.059	mg/L	1		8015C	Total/NA
Arsenic	56		5.0	0.33	ug/L	1		6020A	Total/NA
Barium	3800	^	1.0	0.29	ug/L	1		6020A	Total/NA
Cadmium	1.9		1.0	0.27	ug/L	1		6020A	Total/NA
Chromium	200		2.0	0.50	ug/L	1		6020A	Total/NA
Lead	230	^	1.0	0.18	ug/L	1		6020A	Total/NA
Selenium	6.6	B	5.0	0.37	ug/L	1		6020A	Total/NA
Silver	0.63	J	5.0	0.033	ug/L	1		6020A	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-09-2-3

Lab Sample ID: 280-137283-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	7.8	J	8.3	3.8	mg/Kg	1	☼	8015C	Total/NA
Motor Oil (C20-C38)	20	J	25	8.1	mg/Kg	1	☼	8015C	Total/NA
Arsenic	0.78		0.62	0.052	mg/Kg	1	☼	6020A	Total/NA
Silver	10	J	78	6.1	ug/Kg	1	☼	6020A	Total/NA
Barium	45		0.41	0.072	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.11		0.086	0.0081	mg/Kg	1	☼	6020A	Total/NA
Chromium	3.5		0.21	0.078	mg/Kg	1	☼	6020A	Total/NA
Lead	4.7		0.15	0.019	mg/Kg	1	☼	6020A	Total/NA
Mercury	9.0	J	21	6.7	ug/Kg	1	☼	7471B	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-09-GW

Lab Sample ID: 280-137283-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	1.9	J	10	1.9	ug/L	1		8260B	Total/NA
Diesel Range Organics [C10-C28]	0.12	J	0.25	0.032	mg/L	1		8015C	Total/NA
Motor Oil (C20-C38)	0.14	J	0.50	0.056	mg/L	1		8015C	Total/NA
Arsenic	7.8		5.0	0.33	ug/L	1		6020A	Total/NA
Barium	370	^	1.0	0.29	ug/L	1		6020A	Total/NA
Cadmium	0.38	J	1.0	0.27	ug/L	1		6020A	Total/NA
Chromium	24		2.0	0.50	ug/L	1		6020A	Total/NA
Lead	20	^	1.0	0.18	ug/L	1		6020A	Total/NA
Selenium	7.4	B	5.0	0.37	ug/L	1		6020A	Total/NA
Silver	0.088	J	5.0	0.033	ug/L	1		6020A	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-12-10-12

Lab Sample ID: 280-137283-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl acetate	10		8.5	2.3	ug/Kg	1	☼	8260B	Total/NA
Toluene	0.21	J	4.2	0.19	ug/Kg	1	☼	8260B	Total/NA
Diesel Range Organics [C10-C28]	11		7.9	3.6	mg/Kg	1	☼	8015C	Total/NA
Motor Oil (C20-C38)	17	J	24	7.7	mg/Kg	1	☼	8015C	Total/NA
Arsenic	1.2		0.49	0.041	mg/Kg	1	☼	6020A	Total/NA
Silver	39	J	73	5.7	ug/Kg	1	☼	6020A	Total/NA
Barium	120		0.33	0.058	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.11		0.076	0.0072	mg/Kg	1	☼	6020A	Total/NA
Chromium	5.9		0.16	0.062	mg/Kg	1	☼	6020A	Total/NA
Lead	5.9		0.12	0.015	mg/Kg	1	☼	6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-12-10-12
(Continued)

Lab Sample ID: 280-137283-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	14	J	18	5.8	ug/Kg	1	☼	7471B	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-05-10-12

Lab Sample ID: 280-137283-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	0.58	J	6.0	0.27	ug/Kg	1	☼	8260B	Total/NA
Diesel Range Organics [C10-C28]	8.7		8.4	3.8	mg/Kg	1	☼	8015C	Total/NA
Motor Oil (C20-C38)	15	J	25	8.2	mg/Kg	1	☼	8015C	Total/NA
Arsenic	1.5		0.56	0.047	mg/Kg	1	☼	6020A	Total/NA
Silver	11	J	94	7.4	ug/Kg	1	☼	6020A	Total/NA
Barium	100		0.37	0.066	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.11		0.092	0.0087	mg/Kg	1	☼	6020A	Total/NA
Chromium	4.9		0.19	0.071	mg/Kg	1	☼	6020A	Total/NA
Lead	4.9		0.14	0.017	mg/Kg	1	☼	6020A	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-5-28-29

Lab Sample ID: 280-137283-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	5.6	J	22	4.2	ug/Kg	1	☼	8260B	Total/NA
4-Methyl-2-pentanone (MIBK)	17	J	22	4.8	ug/Kg	1	☼	8260B	Total/NA
Toluene	0.30	J	5.5	0.25	ug/Kg	1	☼	8260B	Total/NA
Arsenic	3.0		0.73	0.061	mg/Kg	1	☼	6020A	Total/NA
Silver	22	J	100	7.9	ug/Kg	1	☼	6020A	Total/NA
Barium	200		0.49	0.086	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.14		0.096	0.0090	mg/Kg	1	☼	6020A	Total/NA
Chromium	13		0.24	0.092	mg/Kg	1	☼	6020A	Total/NA
Lead	12		0.18	0.022	mg/Kg	1	☼	6020A	Total/NA
Selenium	0.19	J	0.61	0.16	mg/Kg	1	☼	6020A	Total/NA
Mercury	24		21	6.9	ug/Kg	1	☼	7471B	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-3-12-14

Lab Sample ID: 280-137283-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.2		0.56	0.047	mg/Kg	1	☼	6020A	Total/NA
Barium	31		0.37	0.065	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.043	J	0.093	0.0087	mg/Kg	1	☼	6020A	Total/NA
Chromium	2.2		0.19	0.071	mg/Kg	1	☼	6020A	Total/NA
Lead	3.0		0.14	0.017	mg/Kg	1	☼	6020A	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-3-27-29

Lab Sample ID: 280-137283-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.8		0.75	0.063	mg/Kg	1	☼	6020A	Total/NA
Silver	23	J	120	9.0	ug/Kg	1	☼	6020A	Total/NA
Barium	150		0.50	0.088	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.13		0.097	0.0091	mg/Kg	1	☼	6020A	Total/NA
Chromium	9.2		0.25	0.095	mg/Kg	1	☼	6020A	Total/NA
Lead	16		0.19	0.023	mg/Kg	1	☼	6020A	Total/NA
Selenium	0.18	J	0.62	0.17	mg/Kg	1	☼	6020A	Total/NA
Mercury	16	J	23	7.6	ug/Kg	1	☼	7471B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB-03

Lab Sample ID: 280-137283-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	0.40	J	5.0	0.23	ug/Kg	1		8260B	Total/NA

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

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Method Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL DEN
8015C	Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)	SW846	TAL DEN
8015C	Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)	SW846	TAL DEN
6020A	Metals (ICP/MS)	SW846	TAL DEN
7470A	Mercury (CVAA)	SW846	TAL DEN
7471B	Mercury (CVAA)	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN
3020A	Preparation, Total Metals	SW846	TAL DEN
3050B	Preparation, Metals	SW846	TAL DEN
3050B-Sb	Preparation, Metals (Antimony)	SW846	TAL DEN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL DEN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL DEN
3546	Microwave Extraction	SW846	TAL DEN
3550C	Ultrasonic Extraction	SW846	TAL DEN
5030B	Purge and Trap	SW846	TAL DEN
5030C	Purge and Trap	SW846	TAL DEN
5035	Closed System Purge and Trap	SW846	TAL DEN
7470A	Preparation, Mercury	SW846	TAL DEN
7471B	Preparation, Mercury	SW846	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-137283-1	CDOT I270 Env-05/06_2020-SB-11-6.5-8	Solid	06/03/20 10:25	06/04/20 14:40	
280-137283-2	CDOT I270 Env-05/06_2020-SB-11-GW	Water	06/03/20 11:30	06/04/20 14:40	
280-137283-3	CDOT I270 Env-05/06_2020-SB-07-7-8	Solid	06/03/20 13:50	06/04/20 14:40	
280-137283-4	CDOT I270 Env-05/06_2020-SB-07-GW	Water	06/03/20 14:20	06/04/20 14:40	
280-137283-5	CDOT I270 Env-05/06_2020-SB-09-2-3	Solid	06/03/20 12:40	06/04/20 14:40	
280-137283-6	CDOT I270 Env-05/06_2020-SB-09-GW	Water	06/03/20 13:00	06/04/20 14:40	
280-137283-7	CDOT I270 Env-05/06_2020-SB-12-10-12	Solid	06/04/20 10:00	06/04/20 14:40	
280-137283-8	CDOT I270 Env-05/06_2020-SB-05-10-12	Solid	06/04/20 11:00	06/04/20 14:40	
280-137283-9	CDOT I270 Env-05/06_2020-SB-5-28-29	Solid	06/04/20 11:40	06/04/20 14:40	
280-137283-10	CDOT I270 Env-05/06_2020-SB-3-12-14	Solid	06/04/20 13:05	06/04/20 14:40	
280-137283-11	CDOT I270 Env-05/06_2020-SB-3-27-29	Solid	06/04/20 13:40	06/04/20 14:40	
280-137283-12	CDOT I270 Env-05/06_2020-SB-TB-03	Solid	06/03/20 08:00	06/04/20 14:40	

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-11-6.5-8

Date Collected: 06/03/20 10:25

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-1

Matrix: Solid

Percent Solids: 83.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.2	1.7	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
1,1,2,2-Tetrachloroethane	ND		4.2	0.24	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
1,1,2-Trichloroethane	ND		4.2	0.74	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
1,1,2-Trichlorotrifluoroethane	ND		17	1.4	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
1,1-Dichloroethane	ND		4.2	0.18	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
1,1-Dichloroethene	ND		4.2	0.49	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
1,2,3-Trichlorobenzene	ND		4.2	0.68	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
1,2,4-Trichlorobenzene	ND		4.2	0.61	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
1,2-Dibromo-3-Chloropropane	ND		8.4	3.1	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
1,2-Dibromoethane	ND		4.2	0.43	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
1,2-Dichlorobenzene	ND		4.2	1.6	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
1,2-Dichloroethane	ND		4.2	0.58	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
1,2-Dichloropropane	ND		4.2	0.46	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
1,3-Dichlorobenzene	ND		4.2	0.40	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
1,4-Dichlorobenzene	ND		4.2	0.20	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
1,4-Dioxane	ND		420	47	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
2-Butanone (MEK)	ND		17	3.2	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
2-Hexanone	ND		17	4.1	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
4-Methyl-2-pentanone (MIBK)	ND		17	3.6	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
Acetone	ND		60	30	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
Benzene	ND		4.2	0.13	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
Bromoform	ND		4.3	2.1	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
Bromomethane	ND		8.4	1.1	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
Carbon disulfide	ND		4.2	1.4	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
Carbon tetrachloride	ND		4.2	1.7	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
Chlorobenzene	ND		4.2	1.7	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
Chlorobromomethane	ND		4.2	2.1	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
Chlorodibromomethane	ND		4.2	1.9	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
Chloroethane	ND		8.4	1.7	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
Chloroform	ND		8.4	0.24	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
Chloromethane	ND		8.4	0.64	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
cis-1,2-Dichloroethene	ND		2.1	0.17	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
cis-1,3-Dichloropropene	ND		4.2	0.084	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
Cyclohexane	ND		4.2	1.5	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
Dichlorobromomethane	ND		4.2	1.8	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
Dichlorodifluoromethane	ND		8.4	2.3	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
Ethylbenzene	ND		4.2	0.25	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
Isopropylbenzene	ND		4.2	2.0	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
Methyl acetate	ND		8.4	2.3	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
Methyl tert-butyl ether	ND		17	1.8	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
Methylcyclohexane	ND		4.2	0.35	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
Methylene Chloride	ND		4.2	1.3	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
m-Xylene & p-Xylene	ND		2.1	0.87	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
o-Xylene	ND		2.1	0.22	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
Styrene	ND		4.2	0.23	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
Tetrachloroethene	ND		4.2	1.6	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
Toluene	ND		4.2	0.19	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
trans-1,2-Dichloroethene	ND		2.1	0.33	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
trans-1,3-Dichloropropene	ND		4.2	0.069	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-11-6.5-8

Date Collected: 06/03/20 10:25

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-1

Matrix: Solid

Percent Solids: 83.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		4.2	1.6	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
Trichlorofluoromethane	ND		8.4	2.7	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
Vinyl chloride	ND		4.2	1.1	ug/Kg	☼	06/03/20 10:25	06/07/20 12:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		58 - 140				06/03/20 10:25	06/07/20 12:34	1
Toluene-d8 (Surr)	97		80 - 126				06/03/20 10:25	06/07/20 12:34	1
4-Bromofluorobenzene (Surr)	96		76 - 127				06/03/20 10:25	06/07/20 12:34	1
Dibromofluoromethane (Surr)	102		75 - 121				06/03/20 10:25	06/07/20 12:34	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-11-GW

Date Collected: 06/03/20 11:30

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			06/15/20 12:10	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			06/15/20 12:10	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			06/15/20 12:10	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			06/15/20 12:10	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/15/20 12:10	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			06/15/20 12:10	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			06/15/20 12:10	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			06/15/20 12:10	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			06/15/20 12:10	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			06/15/20 12:10	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			06/15/20 12:10	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			06/15/20 12:10	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/15/20 12:10	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			06/15/20 12:10	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			06/15/20 12:10	1
1,4-Dioxane	ND		200	19	ug/L			06/15/20 12:10	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			06/15/20 12:10	1
2-Hexanone	ND		5.0	1.7	ug/L			06/15/20 12:10	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			06/15/20 12:10	1
Acetone	7.2	J	10	1.9	ug/L			06/15/20 12:10	1
Benzene	ND		1.0	0.16	ug/L			06/15/20 12:10	1
Bromoform	ND		1.0	0.46	ug/L			06/15/20 12:10	1
Bromomethane	ND		2.0	0.21	ug/L			06/15/20 12:10	1
Carbon disulfide	1.6	J	2.0	0.17	ug/L			06/15/20 12:10	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			06/15/20 12:10	1
Chlorobenzene	ND		1.0	0.17	ug/L			06/15/20 12:10	1
Chlorobromomethane	ND		1.0	0.10	ug/L			06/15/20 12:10	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			06/15/20 12:10	1
Chloroethane	ND		2.0	0.41	ug/L			06/15/20 12:10	1
Chloroform	ND		1.0	0.16	ug/L			06/15/20 12:10	1
Chloromethane	ND		2.0	0.30	ug/L			06/15/20 12:10	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/15/20 12:10	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			06/15/20 12:10	1
Cyclohexane	ND		2.0	0.28	ug/L			06/15/20 12:10	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			06/15/20 12:10	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			06/15/20 12:10	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-11-GW

Lab Sample ID: 280-137283-2

Date Collected: 06/03/20 11:30

Matrix: Water

Date Received: 06/04/20 14:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		1.0	0.16	ug/L			06/15/20 12:10	1
Isopropylbenzene	ND		1.0	0.19	ug/L			06/15/20 12:10	1
Methyl acetate	ND		5.0	1.6	ug/L			06/15/20 12:10	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			06/15/20 12:10	1
Methylcyclohexane	ND		1.0	0.10	ug/L			06/15/20 12:10	1
Methylene Chloride	ND		2.0	0.94	ug/L			06/15/20 12:10	1
m-Xylene & p-Xylene	0.61	J	2.0	0.15	ug/L			06/15/20 12:10	1
o-Xylene	ND		1.0	0.19	ug/L			06/15/20 12:10	1
Styrene	ND		1.0	0.36	ug/L			06/15/20 12:10	1
Tetrachloroethene	ND		1.0	0.20	ug/L			06/15/20 12:10	1
Toluene	ND		1.0	0.17	ug/L			06/15/20 12:10	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/15/20 12:10	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			06/15/20 12:10	1
Trichloroethene	ND		1.0	0.16	ug/L			06/15/20 12:10	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			06/15/20 12:10	1
Vinyl chloride	ND		1.0	0.10	ug/L			06/15/20 12:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		70 - 127		06/15/20 12:10	1
Toluene-d8 (Surr)	99		80 - 125		06/15/20 12:10	1
4-Bromofluorobenzene (Surr)	105		78 - 120		06/15/20 12:10	1
Dibromofluoromethane (Surr)	101		77 - 120		06/15/20 12:10	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-07-7-8

Lab Sample ID: 280-137283-3

Date Collected: 06/03/20 13:50

Matrix: Solid

Date Received: 06/04/20 14:40

Percent Solids: 82.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.4	2.1	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
1,1,2,2-Tetrachloroethane	ND		5.4	0.31	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
1,1,2-Trichloroethane	ND		5.4	0.96	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
1,1,2-Trichlorotrifluoroethane	ND		22	1.8	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
1,1-Dichloroethane	ND		5.4	0.23	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
1,1-Dichloroethene	ND		5.4	0.64	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
1,2,3-Trichlorobenzene	ND		5.4	0.88	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
1,2,4-Trichlorobenzene	ND		5.4	0.79	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
1,2-Dibromo-3-Chloropropane	ND		11	4.0	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
1,2-Dibromoethane	ND		5.4	0.56	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
1,2-Dichlorobenzene	ND		5.4	2.0	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
1,2-Dichloroethane	ND		5.4	0.76	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
1,2-Dichloropropane	ND		5.4	0.60	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
1,3-Dichlorobenzene	ND		5.4	0.52	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
1,4-Dichlorobenzene	ND		5.4	0.27	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
1,4-Dioxane	ND		540	61	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
2-Butanone (MEK)	25		22	4.2	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
2-Hexanone	ND		22	5.3	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
4-Methyl-2-pentanone (MIBK)	ND		22	4.7	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
Acetone	110		78	39	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
Benzene	ND		5.4	0.16	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
Bromoform	ND		5.5	2.8	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
Bromomethane	ND		11	1.5	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-07-7-8

Date Collected: 06/03/20 13:50

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-3

Matrix: Solid

Percent Solids: 82.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	3.9	J	5.4	1.8	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
Carbon tetrachloride	ND		5.4	2.2	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
Chlorobenzene	ND		5.4	2.2	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
Chlorobromomethane	ND		5.4	2.7	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
Chlorodibromomethane	ND		5.4	2.5	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
Chloroethane	ND		11	2.2	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
Chloroform	ND		11	0.31	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
Chloromethane	ND		11	0.84	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
cis-1,2-Dichloroethene	ND		2.7	0.22	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
cis-1,3-Dichloropropene	ND		5.4	0.11	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
Cyclohexane	ND		5.4	1.9	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
Dichlorobromomethane	ND		5.4	2.3	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
Dichlorodifluoromethane	ND		11	3.0	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
Ethylbenzene	ND		5.4	0.33	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
Isopropylbenzene	ND		5.4	2.6	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
Methyl acetate	ND		11	3.0	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
Methyl tert-butyl ether	ND		22	2.3	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
Methylcyclohexane	ND		5.4	0.46	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
Methylene Chloride	ND		5.4	1.7	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
m-Xylene & p-Xylene	ND		2.7	1.1	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
o-Xylene	ND		2.7	0.29	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
Styrene	ND		5.4	0.30	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
Tetrachloroethene	ND		5.4	2.1	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
Toluene	ND		5.4	0.25	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
trans-1,2-Dichloroethene	ND		2.7	0.42	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
trans-1,3-Dichloropropene	ND		5.4	0.090	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
Trichloroethene	ND		5.4	2.1	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
Trichlorofluoromethane	ND		11	3.5	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1
Vinyl chloride	ND		5.4	1.5	ug/Kg	☼	06/03/20 13:50	06/07/20 12:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		58 - 140	06/03/20 13:50	06/07/20 12:56	1
Toluene-d8 (Surr)	99		80 - 126	06/03/20 13:50	06/07/20 12:56	1
4-Bromofluorobenzene (Surr)	105		76 - 127	06/03/20 13:50	06/07/20 12:56	1
Dibromofluoromethane (Surr)	102		75 - 121	06/03/20 13:50	06/07/20 12:56	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-07-GW

Date Collected: 06/03/20 14:20

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			06/15/20 12:31	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			06/15/20 12:31	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			06/15/20 12:31	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			06/15/20 12:31	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/15/20 12:31	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			06/15/20 12:31	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			06/15/20 12:31	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			06/15/20 12:31	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			06/15/20 12:31	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			06/15/20 12:31	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-07-GW

Lab Sample ID: 280-137283-4

Date Collected: 06/03/20 14:20

Matrix: Water

Date Received: 06/04/20 14:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			06/15/20 12:31	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			06/15/20 12:31	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/15/20 12:31	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			06/15/20 12:31	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			06/15/20 12:31	1
1,4-Dioxane	ND		200	19	ug/L			06/15/20 12:31	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			06/15/20 12:31	1
2-Hexanone	ND		5.0	1.7	ug/L			06/15/20 12:31	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			06/15/20 12:31	1
Acetone	3.8	J	10	1.9	ug/L			06/15/20 12:31	1
Benzene	ND		1.0	0.16	ug/L			06/15/20 12:31	1
Bromoform	ND		1.0	0.46	ug/L			06/15/20 12:31	1
Bromomethane	ND		2.0	0.21	ug/L			06/15/20 12:31	1
Carbon disulfide	ND		2.0	0.17	ug/L			06/15/20 12:31	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			06/15/20 12:31	1
Chlorobenzene	ND		1.0	0.17	ug/L			06/15/20 12:31	1
Chlorobromomethane	ND		1.0	0.10	ug/L			06/15/20 12:31	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			06/15/20 12:31	1
Chloroethane	ND		2.0	0.41	ug/L			06/15/20 12:31	1
Chloroform	ND		1.0	0.16	ug/L			06/15/20 12:31	1
Chloromethane	ND		2.0	0.30	ug/L			06/15/20 12:31	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/15/20 12:31	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			06/15/20 12:31	1
Cyclohexane	ND		2.0	0.28	ug/L			06/15/20 12:31	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			06/15/20 12:31	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			06/15/20 12:31	1
Ethylbenzene	ND		1.0	0.16	ug/L			06/15/20 12:31	1
Isopropylbenzene	ND		1.0	0.19	ug/L			06/15/20 12:31	1
Methyl acetate	ND		5.0	1.6	ug/L			06/15/20 12:31	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			06/15/20 12:31	1
Methylcyclohexane	ND		1.0	0.10	ug/L			06/15/20 12:31	1
Methylene Chloride	ND		2.0	0.94	ug/L			06/15/20 12:31	1
m-Xylene & p-Xylene	0.49	J	2.0	0.15	ug/L			06/15/20 12:31	1
o-Xylene	ND		1.0	0.19	ug/L			06/15/20 12:31	1
Styrene	ND		1.0	0.36	ug/L			06/15/20 12:31	1
Tetrachloroethene	ND		1.0	0.20	ug/L			06/15/20 12:31	1
Toluene	ND		1.0	0.17	ug/L			06/15/20 12:31	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/15/20 12:31	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			06/15/20 12:31	1
Trichloroethene	ND		1.0	0.16	ug/L			06/15/20 12:31	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			06/15/20 12:31	1
Vinyl chloride	ND		1.0	0.10	ug/L			06/15/20 12:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		70 - 127					06/15/20 12:31	1
Toluene-d8 (Surr)	99		80 - 125					06/15/20 12:31	1
4-Bromofluorobenzene (Surr)	102		78 - 120					06/15/20 12:31	1
Dibromofluoromethane (Surr)	101		77 - 120					06/15/20 12:31	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-09-2-3

Date Collected: 06/03/20 12:40

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-5

Matrix: Solid

Percent Solids: 93.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.6	1.8	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
1,1,2,2-Tetrachloroethane	ND		4.6	0.26	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
1,1,2-Trichloroethane	ND		4.6	0.81	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
1,1,2-Trichlorotrifluoroethane	ND		19	1.5	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
1,1-Dichloroethane	ND		4.6	0.19	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
1,1-Dichloroethene	ND		4.6	0.55	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
1,2,3-Trichlorobenzene	ND		4.6	0.75	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
1,2,4-Trichlorobenzene	ND		4.6	0.68	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
1,2-Dibromo-3-Chloropropane	ND		9.3	3.4	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
1,2-Dibromoethane	ND		4.6	0.48	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
1,2-Dichlorobenzene	ND		4.6	1.7	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
1,2-Dichloroethane	ND		4.6	0.65	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
1,2-Dichloropropane	ND		4.6	0.51	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
1,3-Dichlorobenzene	ND		4.6	0.44	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
1,4-Dichlorobenzene	ND		4.6	0.23	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
1,4-Dioxane	ND		460	52	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
2-Butanone (MEK)	ND		19	3.6	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
2-Hexanone	ND		19	4.5	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
4-Methyl-2-pentanone (MIBK)	ND		19	4.0	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
Acetone	ND		67	33	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
Benzene	ND		4.6	0.14	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
Bromoform	ND		4.7	2.4	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
Bromomethane	ND		9.3	1.2	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
Carbon disulfide	ND		4.6	1.5	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
Carbon tetrachloride	ND		4.6	1.9	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
Chlorobenzene	ND		4.6	1.9	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
Chlorobromomethane	ND		4.6	2.3	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
Chlorodibromomethane	ND		4.6	2.1	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
Chloroethane	ND		9.3	1.8	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
Chloroform	ND		9.3	0.27	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
Chloromethane	ND		9.3	0.71	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
cis-1,2-Dichloroethene	ND		2.3	0.19	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
cis-1,3-Dichloropropene	ND		4.6	0.093	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
Cyclohexane	ND		4.6	1.6	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
Dichlorobromomethane	ND		4.6	2.0	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
Dichlorodifluoromethane	ND		9.3	2.5	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
Ethylbenzene	ND		4.6	0.28	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
Isopropylbenzene	ND		4.6	2.2	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
Methyl acetate	ND		9.3	2.5	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
Methyl tert-butyl ether	ND		19	2.0	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
Methylcyclohexane	ND		4.6	0.39	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
Methylene Chloride	ND		4.6	1.5	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
m-Xylene & p-Xylene	ND		2.3	0.96	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
o-Xylene	ND		2.3	0.25	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
Styrene	ND		4.6	0.26	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
Tetrachloroethene	ND		4.6	1.8	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
Toluene	ND		4.6	0.21	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
trans-1,2-Dichloroethene	ND		2.3	0.36	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
trans-1,3-Dichloropropene	ND		4.6	0.077	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-09-2-3

Date Collected: 06/03/20 12:40

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-5

Matrix: Solid

Percent Solids: 93.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		4.6	1.8	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
Trichlorofluoromethane	ND		9.3	3.0	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
Vinyl chloride	ND		4.6	1.2	ug/Kg	☼	06/03/20 12:40	06/07/20 13:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		58 - 140				06/03/20 12:40	06/07/20 13:19	1
Toluene-d8 (Surr)	97		80 - 126				06/03/20 12:40	06/07/20 13:19	1
4-Bromofluorobenzene (Surr)	98		76 - 127				06/03/20 12:40	06/07/20 13:19	1
Dibromofluoromethane (Surr)	103		75 - 121				06/03/20 12:40	06/07/20 13:19	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-09-GW

Date Collected: 06/03/20 13:00

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			06/15/20 12:53	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			06/15/20 12:53	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			06/15/20 12:53	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			06/15/20 12:53	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/15/20 12:53	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			06/15/20 12:53	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			06/15/20 12:53	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			06/15/20 12:53	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			06/15/20 12:53	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			06/15/20 12:53	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			06/15/20 12:53	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			06/15/20 12:53	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/15/20 12:53	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			06/15/20 12:53	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			06/15/20 12:53	1
1,4-Dioxane	ND		200	19	ug/L			06/15/20 12:53	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			06/15/20 12:53	1
2-Hexanone	ND		5.0	1.7	ug/L			06/15/20 12:53	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			06/15/20 12:53	1
Acetone	1.9	J	10	1.9	ug/L			06/15/20 12:53	1
Benzene	ND		1.0	0.16	ug/L			06/15/20 12:53	1
Bromoform	ND		1.0	0.46	ug/L			06/15/20 12:53	1
Bromomethane	ND		2.0	0.21	ug/L			06/15/20 12:53	1
Carbon disulfide	ND		2.0	0.17	ug/L			06/15/20 12:53	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			06/15/20 12:53	1
Chlorobenzene	ND		1.0	0.17	ug/L			06/15/20 12:53	1
Chlorobromomethane	ND		1.0	0.10	ug/L			06/15/20 12:53	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			06/15/20 12:53	1
Chloroethane	ND		2.0	0.41	ug/L			06/15/20 12:53	1
Chloroform	ND		1.0	0.16	ug/L			06/15/20 12:53	1
Chloromethane	ND		2.0	0.30	ug/L			06/15/20 12:53	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/15/20 12:53	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			06/15/20 12:53	1
Cyclohexane	ND		2.0	0.28	ug/L			06/15/20 12:53	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			06/15/20 12:53	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			06/15/20 12:53	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-09-GW

Date Collected: 06/03/20 13:00

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		1.0	0.16	ug/L			06/15/20 12:53	1
Isopropylbenzene	ND		1.0	0.19	ug/L			06/15/20 12:53	1
Methyl acetate	ND		5.0	1.6	ug/L			06/15/20 12:53	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			06/15/20 12:53	1
Methylcyclohexane	ND		1.0	0.10	ug/L			06/15/20 12:53	1
Methylene Chloride	ND		2.0	0.94	ug/L			06/15/20 12:53	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			06/15/20 12:53	1
o-Xylene	ND		1.0	0.19	ug/L			06/15/20 12:53	1
Styrene	ND		1.0	0.36	ug/L			06/15/20 12:53	1
Tetrachloroethene	ND		1.0	0.20	ug/L			06/15/20 12:53	1
Toluene	ND		1.0	0.17	ug/L			06/15/20 12:53	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/15/20 12:53	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			06/15/20 12:53	1
Trichloroethene	ND		1.0	0.16	ug/L			06/15/20 12:53	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			06/15/20 12:53	1
Vinyl chloride	ND		1.0	0.10	ug/L			06/15/20 12:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		70 - 127		06/15/20 12:53	1
Toluene-d8 (Surr)	101		80 - 125		06/15/20 12:53	1
4-Bromofluorobenzene (Surr)	101		78 - 120		06/15/20 12:53	1
Dibromofluoromethane (Surr)	100		77 - 120		06/15/20 12:53	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-12-10-12

Date Collected: 06/04/20 10:00

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-7

Matrix: Solid

Percent Solids: 94.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.2	1.7	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
1,1,2,2-Tetrachloroethane	ND		4.2	0.24	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
1,1,2-Trichloroethane	ND		4.2	0.74	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
1,1,2-Trichlorotrifluoroethane	ND		17	1.4	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
1,1-Dichloroethane	ND		4.2	0.18	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
1,1-Dichloroethene	ND		4.2	0.50	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
1,2,3-Trichlorobenzene	ND		4.2	0.68	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
1,2,4-Trichlorobenzene	ND		4.2	0.62	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
1,2-Dibromo-3-Chloropropane	ND		8.5	3.1	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
1,2-Dibromoethane	ND		4.2	0.44	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
1,2-Dichlorobenzene	ND		4.2	1.6	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
1,2-Dichloroethane	ND		4.2	0.59	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
1,2-Dichloropropane	ND		4.2	0.46	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
1,3-Dichlorobenzene	ND		4.2	0.41	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
1,4-Dichlorobenzene	ND		4.2	0.21	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
1,4-Dioxane	ND		420	47	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
2-Butanone (MEK)	ND		17	3.3	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
2-Hexanone	ND		17	4.1	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
4-Methyl-2-pentanone (MIBK)	ND		17	3.7	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
Acetone	ND		61	30	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
Benzene	ND		4.2	0.13	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
Bromoform	ND		4.3	2.2	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
Bromomethane	ND		8.5	1.1	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-12-10-12

Date Collected: 06/04/20 10:00

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-7

Matrix: Solid

Percent Solids: 94.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		4.2	1.4	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
Carbon tetrachloride	ND		4.2	1.7	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
Chlorobenzene	ND		4.2	1.7	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
Chlorobromomethane	ND		4.2	2.1	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
Chlorodibromomethane	ND		4.2	1.9	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
Chloroethane	ND		8.5	1.7	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
Chloroform	ND		8.5	0.25	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
Chloromethane	ND		8.5	0.65	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
cis-1,2-Dichloroethene	ND		2.1	0.17	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
cis-1,3-Dichloropropene	ND		4.2	0.085	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
Cyclohexane	ND		4.2	1.5	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
Dichlorobromomethane	ND		4.2	1.8	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
Dichlorodifluoromethane	ND		8.5	2.3	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
Ethylbenzene	ND		4.2	0.26	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
Isopropylbenzene	ND		4.2	2.0	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
Methyl acetate	10		8.5	2.3	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
Methyl tert-butyl ether	ND		17	1.8	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
Methylcyclohexane	ND		4.2	0.36	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
Methylene Chloride	ND		4.2	1.4	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
m-Xylene & p-Xylene	ND		2.1	0.88	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
o-Xylene	ND		2.1	0.22	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
Styrene	ND		4.2	0.24	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
Tetrachloroethene	ND		4.2	1.6	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
Toluene	0.21 J		4.2	0.19	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
trans-1,2-Dichloroethene	ND		2.1	0.33	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
trans-1,3-Dichloropropene	ND		4.2	0.070	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
Trichloroethene	ND		4.2	1.6	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
Trichlorofluoromethane	ND		8.5	2.7	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
Vinyl chloride	ND		4.2	1.1	ug/Kg	☼	06/04/20 10:00	06/07/20 13:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		58 - 140				06/04/20 10:00	06/07/20 13:42	1
Toluene-d8 (Surr)	98		80 - 126				06/04/20 10:00	06/07/20 13:42	1
4-Bromofluorobenzene (Surr)	101		76 - 127				06/04/20 10:00	06/07/20 13:42	1
Dibromofluoromethane (Surr)	101		75 - 121				06/04/20 10:00	06/07/20 13:42	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-05-10-12

Date Collected: 06/04/20 11:00

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-8

Matrix: Solid

Percent Solids: 91.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		6.0	2.4	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
1,1,2,2-Tetrachloroethane	ND		6.0	0.34	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
1,1,2-Trichloroethane	ND		6.0	1.1	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
1,1,2-Trichlorotrifluoroethane	ND		24	2.0	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
1,1-Dichloroethane	ND		6.0	0.25	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
1,1-Dichloroethene	ND		6.0	0.70	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
1,2,3-Trichlorobenzene	ND		6.0	0.97	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
1,2,4-Trichlorobenzene	ND		6.0	0.87	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
1,2-Dibromo-3-Chloropropane	ND		12	4.4	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
1,2-Dibromoethane	ND		6.0	0.62	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-05-10-12

Lab Sample ID: 280-137283-8

Date Collected: 06/04/20 11:00

Matrix: Solid

Date Received: 06/04/20 14:40

Percent Solids: 91.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		6.0	2.2	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
1,2-Dichloroethane	ND		6.0	0.84	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
1,2-Dichloropropane	ND		6.0	0.66	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
1,3-Dichlorobenzene	ND		6.0	0.57	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
1,4-Dichlorobenzene	ND		6.0	0.29	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
1,4-Dioxane	ND		600	67	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
2-Butanone (MEK)	ND		24	4.6	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
2-Hexanone	ND		24	5.8	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
4-Methyl-2-pentanone (MIBK)	ND		24	5.2	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
Acetone	ND		86	43	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
Benzene	ND		6.0	0.18	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
Bromoform	ND		6.1	3.0	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
Bromomethane	ND		12	1.6	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
Carbon disulfide	ND		6.0	2.0	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
Carbon tetrachloride	ND		6.0	2.4	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
Chlorobenzene	ND		6.0	2.5	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
Chlorobromomethane	ND		6.0	2.9	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
Chlorodibromomethane	ND		6.0	2.7	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
Chloroethane	ND		12	2.4	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
Chloroform	ND		12	0.35	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
Chloromethane	ND		12	0.92	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
cis-1,2-Dichloroethene	ND		3.0	0.24	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
cis-1,3-Dichloropropene	ND		6.0	0.12	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
Cyclohexane	ND		6.0	2.1	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
Dichlorobromomethane	ND		6.0	2.5	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
Dichlorodifluoromethane	ND		12	3.3	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
Ethylbenzene	ND		6.0	0.36	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
Isopropylbenzene	ND		6.0	2.9	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
Methyl acetate	ND		12	3.3	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
Methyl tert-butyl ether	ND		24	2.5	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
Methylcyclohexane	ND		6.0	0.50	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
Methylene Chloride	ND		6.0	1.9	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
m-Xylene & p-Xylene	ND		3.0	1.2	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
o-Xylene	ND		3.0	0.32	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
Styrene	ND		6.0	0.33	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
Tetrachloroethene	ND		6.0	2.3	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
Toluene	0.58 J		6.0	0.27	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
trans-1,2-Dichloroethene	ND		3.0	0.47	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
trans-1,3-Dichloropropene	ND		6.0	0.099	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
Trichloroethene	ND		6.0	2.3	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
Trichlorofluoromethane	ND		12	3.8	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1
Vinyl chloride	ND		6.0	1.6	ug/Kg	☼	06/04/20 11:00	06/07/20 14:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		58 - 140	06/04/20 11:00	06/07/20 14:04	1
Toluene-d8 (Surr)	97		80 - 126	06/04/20 11:00	06/07/20 14:04	1
4-Bromofluorobenzene (Surr)	99		76 - 127	06/04/20 11:00	06/07/20 14:04	1
Dibromofluoromethane (Surr)	102		75 - 121	06/04/20 11:00	06/07/20 14:04	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-5-28-29

Date Collected: 06/04/20 11:40

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-9

Matrix: Solid

Percent Solids: 79.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.5	2.2	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
1,1,2,2-Tetrachloroethane	ND		5.5	0.31	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
1,1,2-Trichloroethane	ND		5.5	0.96	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
1,1,2-Trichlorotrifluoroethane	ND		22	1.8	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
1,1-Dichloroethane	ND		5.5	0.23	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
1,1-Dichloroethene	ND		5.5	0.64	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
1,2,3-Trichlorobenzene	ND		5.5	0.88	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
1,2,4-Trichlorobenzene	ND		5.5	0.80	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
1,2-Dibromo-3-Chloropropane	ND		11	4.0	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
1,2-Dibromoethane	ND		5.5	0.57	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
1,2-Dichlorobenzene	ND		5.5	2.0	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
1,2-Dichloroethane	ND		5.5	0.76	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
1,2-Dichloropropane	ND		5.5	0.60	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
1,3-Dichlorobenzene	ND		5.5	0.52	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
1,4-Dichlorobenzene	ND		5.5	0.27	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
1,4-Dioxane	ND		550	61	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
2-Butanone (MEK)	5.6	J	22	4.2	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
2-Hexanone	ND		22	5.3	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
4-Methyl-2-pentanone (MIBK)	17	J	22	4.8	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
Acetone	ND		78	39	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
Benzene	ND		5.5	0.16	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
Bromoform	ND		5.6	2.8	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
Bromomethane	ND		11	1.5	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
Carbon disulfide	ND		5.5	1.8	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
Carbon tetrachloride	ND		5.5	2.2	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
Chlorobenzene	ND		5.5	2.2	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
Chlorobromomethane	ND		5.5	2.7	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
Chlorodibromomethane	ND		5.5	2.5	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
Chloroethane	ND		11	2.2	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
Chloroform	ND		11	0.32	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
Chloromethane	ND		11	0.84	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
cis-1,2-Dichloroethene	ND		2.7	0.22	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
cis-1,3-Dichloropropene	ND		5.5	0.11	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
Cyclohexane	ND		5.5	1.9	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
Dichlorobromomethane	ND		5.5	2.3	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
Dichlorodifluoromethane	ND		11	3.0	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
Ethylbenzene	ND		5.5	0.33	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
Isopropylbenzene	ND		5.5	2.6	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
Methyl acetate	ND		11	3.0	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
Methyl tert-butyl ether	ND		22	2.3	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
Methylcyclohexane	ND		5.5	0.46	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
Methylene Chloride	ND		5.5	1.7	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
m-Xylene & p-Xylene	ND		2.7	1.1	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
o-Xylene	ND		2.7	0.29	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
Styrene	ND		5.5	0.31	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
Tetrachloroethene	ND		5.5	2.1	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
Toluene	0.30	J	5.5	0.25	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
trans-1,2-Dichloroethene	ND		2.7	0.43	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
trans-1,3-Dichloropropene	ND		5.5	0.090	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-5-28-29

Date Collected: 06/04/20 11:40

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-9

Matrix: Solid

Percent Solids: 79.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		5.5	2.1	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
Trichlorofluoromethane	ND		11	3.5	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
Vinyl chloride	ND		5.5	1.5	ug/Kg	☼	06/04/20 11:40	06/07/20 14:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		58 - 140				06/04/20 11:40	06/07/20 14:27	1
Toluene-d8 (Surr)	96		80 - 126				06/04/20 11:40	06/07/20 14:27	1
4-Bromofluorobenzene (Surr)	98		76 - 127				06/04/20 11:40	06/07/20 14:27	1
Dibromofluoromethane (Surr)	103		75 - 121				06/04/20 11:40	06/07/20 14:27	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-3-12-14

Date Collected: 06/04/20 13:05

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-10

Matrix: Solid

Percent Solids: 96.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	2.0	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.29	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
1,1,2-Trichloroethane	ND		5.0	0.89	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
1,1,2-Trichlorotrifluoroethane	ND		20	1.7	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
1,1-Dichloroethane	ND		5.0	0.21	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
1,1-Dichloroethene	ND		5.0	0.59	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
1,2,3-Trichlorobenzene	ND		5.0	0.82	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
1,2,4-Trichlorobenzene	ND		5.0	0.74	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
1,2-Dibromo-3-Chloropropane	ND		10	3.7	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
1,2-Dibromoethane	ND		5.0	0.52	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
1,2-Dichlorobenzene	ND		5.0	1.9	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
1,2-Dichloroethane	ND		5.0	0.71	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
1,2-Dichloropropane	ND		5.0	0.55	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
1,3-Dichlorobenzene	ND		5.0	0.48	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
1,4-Dichlorobenzene	ND		5.0	0.25	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
1,4-Dioxane	ND		500	57	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
2-Butanone (MEK)	ND		20	3.9	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
2-Hexanone	ND		20	4.9	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.4	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
Acetone	ND		73	36	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
Benzene	ND		5.0	0.15	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
Bromoform	ND		5.1	2.6	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
Bromomethane	ND		10	1.4	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
Carbon disulfide	ND		5.0	1.7	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
Carbon tetrachloride	ND		5.0	2.0	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
Chlorobenzene	ND		5.0	2.1	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
Chlorobromomethane	ND		5.0	2.5	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
Chlorodibromomethane	ND		5.0	2.3	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
Chloroethane	ND		10	2.0	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
Chloroform	ND		10	0.29	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
Chloromethane	ND		10	0.78	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
cis-1,2-Dichloroethene	ND		2.5	0.20	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
cis-1,3-Dichloropropene	ND		5.0	0.10	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
Cyclohexane	ND		5.0	1.8	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
Dichlorobromomethane	ND		5.0	2.1	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
Dichlorodifluoromethane	ND		10	2.8	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-3-12-14

Date Collected: 06/04/20 13:05

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-10

Matrix: Solid

Percent Solids: 96.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		5.0	0.31	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
Isopropylbenzene	ND		5.0	2.4	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
Methyl acetate	ND		10	2.8	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
Methyl tert-butyl ether	ND		20	2.1	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
Methylcyclohexane	ND		5.0	0.42	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
Methylene Chloride	ND		5.0	1.6	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
m-Xylene & p-Xylene	ND		2.5	1.0	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
o-Xylene	ND		2.5	0.27	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
Styrene	ND		5.0	0.28	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
Tetrachloroethene	ND		5.0	1.9	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
Toluene	ND		5.0	0.23	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
trans-1,2-Dichloroethene	ND		2.5	0.39	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
trans-1,3-Dichloropropene	ND		5.0	0.084	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
Trichloroethene	ND		5.0	1.9	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
Trichlorofluoromethane	ND		10	3.2	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1
Vinyl chloride	ND		5.0	1.4	ug/Kg	☼	06/04/20 13:05	06/07/20 14:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		58 - 140	06/04/20 13:05	06/07/20 14:50	1
Toluene-d8 (Surr)	96		80 - 126	06/04/20 13:05	06/07/20 14:50	1
4-Bromofluorobenzene (Surr)	97		76 - 127	06/04/20 13:05	06/07/20 14:50	1
Dibromofluoromethane (Surr)	102		75 - 121	06/04/20 13:05	06/07/20 14:50	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-3-27-29

Date Collected: 06/04/20 13:40

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-11

Matrix: Solid

Percent Solids: 76.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	2.0	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.29	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
1,1,2-Trichloroethane	ND		5.0	0.88	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
1,1,2-Trichlorotrifluoroethane	ND		20	1.7	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
1,1-Dichloroethane	ND		5.0	0.21	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
1,1-Dichloroethene	ND		5.0	0.59	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
1,2,3-Trichlorobenzene	ND		5.0	0.81	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
1,2,4-Trichlorobenzene	ND		5.0	0.73	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
1,2-Dibromo-3-Chloropropane	ND		10	3.7	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
1,2-Dibromoethane	ND		5.0	0.52	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
1,2-Dichlorobenzene	ND		5.0	1.9	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
1,2-Dichloroethane	ND		5.0	0.70	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
1,2-Dichloropropane	ND		5.0	0.55	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
1,3-Dichlorobenzene	ND		5.0	0.48	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
1,4-Dichlorobenzene	ND		5.0	0.25	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
1,4-Dioxane	ND		500	56	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
2-Butanone (MEK)	ND		20	3.9	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
2-Hexanone	ND		20	4.9	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.4	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
Acetone	ND		72	36	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
Benzene	ND		5.0	0.15	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
Bromoform	ND		5.1	2.6	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
Bromomethane	ND		10	1.4	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-3-27-29

Date Collected: 06/04/20 13:40

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-11

Matrix: Solid

Percent Solids: 76.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		5.0	1.7	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
Carbon tetrachloride	ND		5.0	2.0	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
Chlorobenzene	ND		5.0	2.1	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
Chlorobromomethane	ND		5.0	2.5	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
Chlorodibromomethane	ND		5.0	2.3	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
Chloroethane	ND		10	2.0	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
Chloroform	ND		10	0.29	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
Chloromethane	ND		10	0.77	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
cis-1,2-Dichloroethene	ND		2.5	0.20	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
cis-1,3-Dichloropropene	ND		5.0	0.10	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
Cyclohexane	ND		5.0	1.8	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
Dichlorobromomethane	ND		5.0	2.1	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
Dichlorodifluoromethane	ND		10	2.7	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
Ethylbenzene	ND		5.0	0.31	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
Isopropylbenzene	ND		5.0	2.4	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
Methyl acetate	ND		10	2.8	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
Methyl tert-butyl ether	ND		20	2.1	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
Methylcyclohexane	ND		5.0	0.42	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
Methylene Chloride	ND		5.0	1.6	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
m-Xylene & p-Xylene	ND		2.5	1.0	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
o-Xylene	ND		2.5	0.27	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
Styrene	ND		5.0	0.28	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
Tetrachloroethene	ND		5.0	1.9	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
Toluene	ND		5.0	0.23	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
trans-1,2-Dichloroethene	ND		2.5	0.39	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
trans-1,3-Dichloropropene	ND		5.0	0.083	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
Trichloroethene	ND		5.0	1.9	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
Trichlorofluoromethane	ND		10	3.2	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
Vinyl chloride	ND		5.0	1.3	ug/Kg	☼	06/04/20 13:40	06/07/20 15:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		58 - 140				06/04/20 13:40	06/07/20 15:12	1
Toluene-d8 (Surr)	96		80 - 126				06/04/20 13:40	06/07/20 15:12	1
4-Bromofluorobenzene (Surr)	98		76 - 127				06/04/20 13:40	06/07/20 15:12	1
Dibromofluoromethane (Surr)	102		75 - 121				06/04/20 13:40	06/07/20 15:12	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB-03

Date Collected: 06/03/20 08:00

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-12

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	2.0	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.29	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
1,1,2-Trichloroethane	ND		5.0	0.88	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
1,1,2-Trichlorotrifluoroethane	ND		20	1.7	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
1,1-Dichloroethane	ND		5.0	0.21	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
1,1-Dichloroethene	ND		5.0	0.59	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
1,2,3-Trichlorobenzene	ND		5.0	0.81	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
1,2,4-Trichlorobenzene	ND		5.0	0.73	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
1,2-Dibromo-3-Chloropropane	ND		10	3.7	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
1,2-Dibromoethane	ND		5.0	0.52	ug/Kg		06/03/20 08:00	06/07/20 11:48	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB-03

Lab Sample ID: 280-137283-12

Date Collected: 06/03/20 08:00

Matrix: Solid

Date Received: 06/04/20 14:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		5.0	1.9	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
1,2-Dichloroethane	ND		5.0	0.70	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
1,2-Dichloropropane	ND		5.0	0.55	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
1,3-Dichlorobenzene	ND		5.0	0.48	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
1,4-Dichlorobenzene	ND		5.0	0.25	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
1,4-Dioxane	ND		500	56	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
2-Butanone (MEK)	ND		20	3.9	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
2-Hexanone	ND		20	4.9	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.4	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
Acetone	ND		72	36	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
Benzene	ND		5.0	0.15	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
Bromoform	ND		5.1	2.6	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
Bromomethane	ND		10	1.4	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
Carbon disulfide	ND		5.0	1.7	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
Carbon tetrachloride	ND		5.0	2.0	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
Chlorobenzene	ND		5.0	2.1	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
Chlorobromomethane	ND		5.0	2.5	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
Chlorodibromomethane	ND		5.0	2.3	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
Chloroethane	ND		10	2.0	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
Chloroform	ND		10	0.29	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
Chloromethane	ND		10	0.77	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
cis-1,2-Dichloroethene	ND		2.5	0.20	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
cis-1,3-Dichloropropene	ND		5.0	0.10	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
Cyclohexane	ND		5.0	1.8	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
Dichlorobromomethane	ND		5.0	2.1	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
Dichlorodifluoromethane	ND		10	2.7	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
Ethylbenzene	ND		5.0	0.31	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
Isopropylbenzene	ND		5.0	2.4	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
Methyl acetate	ND		10	2.8	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
Methyl tert-butyl ether	ND		20	2.1	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
Methylcyclohexane	ND		5.0	0.42	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
Methylene Chloride	ND		5.0	1.6	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
m-Xylene & p-Xylene	ND		2.5	1.0	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
o-Xylene	ND		2.5	0.27	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
Styrene	ND		5.0	0.28	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
Tetrachloroethene	ND		5.0	1.9	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
Toluene	0.40	J	5.0	0.23	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
trans-1,2-Dichloroethene	ND		2.5	0.39	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
trans-1,3-Dichloropropene	ND		5.0	0.083	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
Trichloroethene	ND		5.0	1.9	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
Trichlorofluoromethane	ND		10	3.2	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
Vinyl chloride	ND		5.0	1.3	ug/Kg		06/03/20 08:00	06/07/20 11:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		58 - 140				06/03/20 08:00	06/07/20 11:48	1
4-Bromofluorobenzene (Surr)	99		76 - 127				06/03/20 08:00	06/07/20 11:48	1
Dibromofluoromethane (Surr)	101		75 - 121				06/03/20 08:00	06/07/20 11:48	1
Toluene-d8 (Surr)	98		80 - 126				06/03/20 08:00	06/07/20 11:48	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-11-6.5-8

Date Collected: 06/03/20 10:25

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-1

Matrix: Solid

Percent Solids: 83.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		370	27	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
1,2,4,5-Tetrachlorobenzene	ND		370	55	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
1,2,4-Trichlorobenzene	ND		370	31	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
1,2-Dichlorobenzene	ND		370	25	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		370	25	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
1,3-Dichlorobenzene	ND		370	13	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
1,3-Dinitrobenzene	ND		370	79	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
1,4-Dichlorobenzene	ND		370	15	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
1,4-Dioxane	ND		740	74	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
1-Methylnaphthalene	ND		370	12	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
2,2'-oxybis[1-chloropropane]	ND		370	26	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
2,3,4,6-Tetrachlorophenol	ND		1800	150	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
2,4,5-Trichlorophenol	ND		370	11	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
2,4,6-Trichlorophenol	ND		370	11	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
2,4-Dichlorophenol	ND		370	11	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
2,4-Dimethylphenol	ND		370	74	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
2,4-Dinitrophenol	ND		1800	370	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
2,4-Dinitrotoluene	ND		370	74	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
2,6-Dichlorophenol	ND		370	25	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
2,6-Dinitrotoluene	ND		370	31	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
2-Chloronaphthalene	ND		370	11	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
2-Chlorophenol	ND		370	23	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
2-Methylnaphthalene	ND		370	21	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
2-Methylphenol	ND		370	14	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
2-Nitroaniline	ND		1800	56	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
2-Nitrophenol	ND		370	11	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
3 & 4 Methylphenol	ND		370	37	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
3,3'-Dichlorobenzidine	ND		740	100	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
3-Methylphenol	ND		370	37	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
3-Nitroaniline	ND		1800	81	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
4,6-Dinitro-2-methylphenol	ND		1800	370	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
4-Bromophenyl phenyl ether	ND		370	21	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
4-Chloro-3-methylphenol	ND		370	28	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
4-Chloroaniline	ND		370	91	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
4-Chlorophenyl phenyl ether	ND		370	23	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
4-Methylphenol	ND		370	37	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
4-Nitroaniline	ND		1800	81	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
4-Nitrophenol	ND		1800	110	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Acenaphthene	ND		370	11	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Acenaphthylene	ND		370	92	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Acetophenone	ND		370	22	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Aniline	ND		370	140	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Anthracene	ND		370	19	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Azobenzene	ND		370	25	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Benzaldehyde	ND		370	75	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Benzidine	ND		3700	1100	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Benzo[a]anthracene	ND		370	22	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Benzo[a]pyrene	ND		370	22	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Benzo[b]fluoranthene	ND		370	29	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-11-6.5-8

Lab Sample ID: 280-137283-1

Date Collected: 06/03/20 10:25

Matrix: Solid

Date Received: 06/04/20 14:40

Percent Solids: 83.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		370	18	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Benzo[k]fluoranthene	ND		370	45	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Benzoic acid	ND		1800	370	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Benzyl alcohol	ND		370	11	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Bis(2-chloroethoxy)methane	ND		370	26	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Bis(2-chloroethyl)ether	ND		370	19	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Bis(2-ethylhexyl) phthalate	ND		370	51	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Butyl benzyl phthalate	ND		370	48	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Caprolactam	ND		370	120	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Carbazole	ND		370	40	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Chrysene	ND		370	30	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Dibenz(a,h)anthracene	ND		370	21	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Dibenzofuran	ND		370	22	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Diethyl phthalate	ND		740	29	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Dimethyl phthalate	ND		370	26	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Di-n-butyl phthalate	ND		370	32	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Di-n-octyl phthalate	ND		370	45	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Diphenylamine	ND		370	49	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Famphur	ND		740	38	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Fluoranthene	ND		370	40	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Fluorene	ND		370	20	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Hexachlorobenzene	ND		370	32	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Hexachlorobutadiene	ND		370	11	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Hexachlorocyclopentadiene	ND		1800	120	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Hexachloroethane	ND		370	24	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Hexadecane	26	J	370	15	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Indeno[1,2,3-cd]pyrene	ND		370	25	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Isophorone	ND		370	19	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Naphthalene	ND		370	35	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Nitrobenzene	ND		370	25	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
N-Nitrosodimethylamine	ND		370	41	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
N-Nitrosodi-n-propylamine	ND		370	76	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
N-Nitrosodiphenylamine	ND		370	23	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Pentachlorophenol	ND		1800	370	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Phenanthrene	ND		370	19	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Phenol	ND		370	20	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Pyrene	29	J	370	13	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1
Pyridine	ND		740	45	ug/Kg	☼	06/16/20 17:27	06/20/20 19:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	74		35 - 120	06/16/20 17:27	06/20/20 19:43	1
2-Fluorobiphenyl	71		46 - 120	06/16/20 17:27	06/20/20 19:43	1
2-Fluorophenol (Surr)	68		43 - 120	06/16/20 17:27	06/20/20 19:43	1
Nitrobenzene-d5 (Surr)	64		46 - 120	06/16/20 17:27	06/20/20 19:43	1
Phenol-d5 (Surr)	72		46 - 120	06/16/20 17:27	06/20/20 19:43	1
Terphenyl-d14 (Surr)	90		46 - 120	06/16/20 17:27	06/20/20 19:43	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-11-GW

Lab Sample ID: 280-137283-2

Date Collected: 06/03/20 11:30

Matrix: Water

Date Received: 06/04/20 14:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		10	1.7	ug/L		06/08/20 14:31	06/17/20 14:20	1
1,2,4,5-Tetrachlorobenzene	ND		10	1.7	ug/L		06/08/20 14:31	06/17/20 14:20	1
1,2,4-Trichlorobenzene	ND	**1	4.0	0.59	ug/L		06/08/20 14:31	06/17/20 14:20	1
1,2-Dichlorobenzene	ND		4.0	0.23	ug/L		06/08/20 14:31	06/17/20 14:20	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		10	0.23	ug/L		06/08/20 14:31	06/17/20 14:20	1
1,3-Dichlorobenzene	ND		10	0.30	ug/L		06/08/20 14:31	06/17/20 14:20	1
1,3-Dinitrobenzene	ND		10	2.0	ug/L		06/08/20 14:31	06/17/20 14:20	1
1,4-Dichlorobenzene	ND		4.0	1.3	ug/L		06/08/20 14:31	06/17/20 14:20	1
1,4-Dioxane	ND		20	0.45	ug/L		06/08/20 14:31	06/17/20 14:20	1
1-Methylnaphthalene	ND		4.0	0.23	ug/L		06/08/20 14:31	06/17/20 14:20	1
2,2'-oxybis[1-chloropropane]	ND		10	0.28	ug/L		06/08/20 14:31	06/17/20 14:20	1
2,3,4,6-Tetrachlorophenol	ND		50	2.0	ug/L		06/08/20 14:31	06/17/20 14:20	1
2,4,5-Trichlorophenol	ND		10	2.1	ug/L		06/08/20 14:31	06/17/20 14:20	1
2,4,6-Trichlorophenol	ND		10	0.29	ug/L		06/08/20 14:31	06/17/20 14:20	1
2,4-Dichlorophenol	ND		10	0.64	ug/L		06/08/20 14:31	06/17/20 14:20	1
2,4-Dimethylphenol	ND		10	0.58	ug/L		06/08/20 14:31	06/17/20 14:20	1
2,4-Dinitrophenol	ND		30	10	ug/L		06/08/20 14:31	06/17/20 14:20	1
2,4-Dinitrotoluene	ND		10	1.7	ug/L		06/08/20 14:31	06/17/20 14:20	1
2,6-Dichlorophenol	ND		10	1.3	ug/L		06/08/20 14:31	06/17/20 14:20	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		06/08/20 14:31	06/17/20 14:20	1
2-Chloronaphthalene	ND		4.0	0.26	ug/L		06/08/20 14:31	06/17/20 14:20	1
2-Chlorophenol	ND		10	2.0	ug/L		06/08/20 14:31	06/17/20 14:20	1
2-Methylnaphthalene	ND		4.0	1.5	ug/L		06/08/20 14:31	06/17/20 14:20	1
2-Methylphenol	ND		10	0.98	ug/L		06/08/20 14:31	06/17/20 14:20	1
2-Nitroaniline	ND		10	1.7	ug/L		06/08/20 14:31	06/17/20 14:20	1
2-Nitrophenol	ND		10	0.39	ug/L		06/08/20 14:31	06/17/20 14:20	1
3 & 4 Methylphenol	ND		10	0.25	ug/L		06/08/20 14:31	06/17/20 14:20	1
3,3'-Dichlorobenzidine	ND		50	2.0	ug/L		06/08/20 14:31	06/17/20 14:20	1
3-Methylphenol	ND		10	0.25	ug/L		06/08/20 14:31	06/17/20 14:20	1
3-Nitroaniline	ND		10	2.0	ug/L		06/08/20 14:31	06/17/20 14:20	1
4,6-Dinitro-2-methylphenol	ND		50	4.0	ug/L		06/08/20 14:31	06/17/20 14:20	1
4-Bromophenyl phenyl ether	ND		10	0.43	ug/L		06/08/20 14:31	06/17/20 14:20	1
4-Chloro-3-methylphenol	ND		10	2.4	ug/L		06/08/20 14:31	06/17/20 14:20	1
4-Chloroaniline	ND		10	2.1	ug/L		06/08/20 14:31	06/17/20 14:20	1
4-Chlorophenyl phenyl ether	ND		10	1.7	ug/L		06/08/20 14:31	06/17/20 14:20	1
4-Methylphenol	ND		10	0.25	ug/L		06/08/20 14:31	06/17/20 14:20	1
4-Nitroaniline	ND		10	2.0	ug/L		06/08/20 14:31	06/17/20 14:20	1
4-Nitrophenol	ND		10	1.2	ug/L		06/08/20 14:31	06/17/20 14:20	1
Acenaphthene	ND		4.0	0.28	ug/L		06/08/20 14:31	06/17/20 14:20	1
Acenaphthylene	ND		4.0	0.49	ug/L		06/08/20 14:31	06/17/20 14:20	1
Acetophenone	ND		10	0.24	ug/L		06/08/20 14:31	06/17/20 14:20	1
Aniline	ND		10	2.0	ug/L		06/08/20 14:31	06/17/20 14:20	1
Anthracene	ND		4.0	0.42	ug/L		06/08/20 14:31	06/17/20 14:20	1
Azobenzene	ND		4.0	0.23	ug/L		06/08/20 14:31	06/17/20 14:20	1
Benzaldehyde	ND		5.0	2.0	ug/L		06/08/20 14:31	06/17/20 14:20	1
Benzidine	ND		100	50	ug/L		06/08/20 14:31	06/17/20 14:20	1
Benzo[a]anthracene	ND		4.0	0.35	ug/L		06/08/20 14:31	06/17/20 14:20	1
Benzo[a]pyrene	ND		4.0	0.31	ug/L		06/08/20 14:31	06/17/20 14:20	1
Benzo[b]fluoranthene	ND		4.0	0.53	ug/L		06/08/20 14:31	06/17/20 14:20	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-11-GW

Lab Sample ID: 280-137283-2

Date Collected: 06/03/20 11:30

Matrix: Water

Date Received: 06/04/20 14:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		4.0	0.50	ug/L		06/08/20 14:31	06/17/20 14:20	1
Benzo[k]fluoranthene	ND		4.0	0.46	ug/L		06/08/20 14:31	06/17/20 14:20	1
Benzoic acid	ND		25	10	ug/L		06/08/20 14:31	06/17/20 14:20	1
Benzyl alcohol	ND		10	0.23	ug/L		06/08/20 14:31	06/17/20 14:20	1
Bis(2-chloroethoxy)methane	ND		10	0.97	ug/L		06/08/20 14:31	06/17/20 14:20	1
Bis(2-chloroethyl)ether	ND		10	0.83	ug/L		06/08/20 14:31	06/17/20 14:20	1
Bis(2-ethylhexyl) phthalate	ND	*	10	0.56	ug/L		06/08/20 14:31	06/17/20 14:20	1
Butyl benzyl phthalate	ND		4.0	1.0	ug/L		06/08/20 14:31	06/17/20 14:20	1
Caprolactam	ND		5.0	2.5	ug/L		06/08/20 14:31	06/17/20 14:20	1
Carbazole	ND		4.0	0.43	ug/L		06/08/20 14:31	06/17/20 14:20	1
Chrysene	ND		4.0	0.54	ug/L		06/08/20 14:31	06/17/20 14:20	1
Dibenz(a,h)anthracene	ND		4.0	0.51	ug/L		06/08/20 14:31	06/17/20 14:20	1
Dibenzofuran	ND		4.0	0.29	ug/L		06/08/20 14:31	06/17/20 14:20	1
Diethyl phthalate	ND		4.0	0.38	ug/L		06/08/20 14:31	06/17/20 14:20	1
Dimethyl phthalate	ND		4.0	0.21	ug/L		06/08/20 14:31	06/17/20 14:20	1
Di-n-butyl phthalate	ND		4.0	1.2	ug/L		06/08/20 14:31	06/17/20 14:20	1
Di-n-octyl phthalate	ND		4.0	0.35	ug/L		06/08/20 14:31	06/17/20 14:20	1
Diphenylamine	ND		10	1.1	ug/L		06/08/20 14:31	06/17/20 14:20	1
Famphur	ND		100	1.5	ug/L		06/08/20 14:31	06/17/20 14:20	1
Fluoranthene	ND		4.0	0.20	ug/L		06/08/20 14:31	06/17/20 14:20	1
Fluorene	ND		4.0	0.31	ug/L		06/08/20 14:31	06/17/20 14:20	1
Hexachlorobenzene	ND		10	0.66	ug/L		06/08/20 14:31	06/17/20 14:20	1
Hexachlorobutadiene	ND	*1	10	3.3	ug/L		06/08/20 14:31	06/17/20 14:20	1
Hexachlorocyclopentadiene	ND		50	3.1	ug/L		06/08/20 14:31	06/17/20 14:20	1
Hexachloroethane	ND	*1	10	0.98	ug/L		06/08/20 14:31	06/17/20 14:20	1
Hexadecane	ND		10	0.54	ug/L		06/08/20 14:31	06/17/20 14:20	1
Indeno[1,2,3-cd]pyrene	ND		4.0	0.65	ug/L		06/08/20 14:31	06/17/20 14:20	1
Isophorone	ND		10	0.21	ug/L		06/08/20 14:31	06/17/20 14:20	1
Naphthalene	ND		4.0	0.29	ug/L		06/08/20 14:31	06/17/20 14:20	1
Nitrobenzene	ND		10	0.81	ug/L		06/08/20 14:31	06/17/20 14:20	1
N-Nitrosodimethylamine	ND		10	0.29	ug/L		06/08/20 14:31	06/17/20 14:20	1
N-Nitrosodi-n-propylamine	ND		10	0.35	ug/L		06/08/20 14:31	06/17/20 14:20	1
N-Nitrosodiphenylamine	ND		10	0.44	ug/L		06/08/20 14:31	06/17/20 14:20	1
Pentachlorophenol	ND		50	20	ug/L		06/08/20 14:31	06/17/20 14:20	1
Phenanthrene	ND		4.0	0.26	ug/L		06/08/20 14:31	06/17/20 14:20	1
Phenol	ND		10	2.0	ug/L		06/08/20 14:31	06/17/20 14:20	1
Pyrene	ND		10	0.37	ug/L		06/08/20 14:31	06/17/20 14:20	1
Pyridine	ND		20	1.7	ug/L		06/08/20 14:31	06/17/20 14:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	55		48 - 120	06/08/20 14:31	06/17/20 14:20	1
2-Fluorophenol (Surr)	64		41 - 120	06/08/20 14:31	06/17/20 14:20	1
2,4,6-Tribromophenol (Surr)	71		42 - 131	06/08/20 14:31	06/17/20 14:20	1
Nitrobenzene-d5 (Surr)	71		42 - 120	06/08/20 14:31	06/17/20 14:20	1
Phenol-d5 (Surr)	64		45 - 124	06/08/20 14:31	06/17/20 14:20	1
Terphenyl-d14 (Surr)	23		20 - 130	06/08/20 14:31	06/17/20 14:20	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-07-7-8

Lab Sample ID: 280-137283-3

Date Collected: 06/03/20 13:50

Matrix: Solid

Date Received: 06/04/20 14:40

Percent Solids: 82.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		380	28	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
1,2,4,5-Tetrachlorobenzene	ND		380	56	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
1,2,4-Trichlorobenzene	ND		380	32	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
1,2-Dichlorobenzene	ND		380	25	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		380	25	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
1,3-Dichlorobenzene	ND		380	14	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
1,3-Dinitrobenzene	ND		380	81	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
1,4-Dichlorobenzene	ND		380	16	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
1,4-Dioxane	ND		760	76	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
1-Methylnaphthalene	ND		380	13	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
2,2'-oxybis[1-chloropropane]	ND		380	26	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
2,3,4,6-Tetrachlorophenol	ND		1800	160	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
2,4,5-Trichlorophenol	ND		380	11	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
2,4,6-Trichlorophenol	ND		380	11	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
2,4-Dichlorophenol	ND		380	11	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
2,4-Dimethylphenol	ND		380	76	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
2,4-Dinitrophenol	ND		1800	380	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
2,4-Dinitrotoluene	ND		380	76	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
2,6-Dichlorophenol	ND		380	26	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
2,6-Dinitrotoluene	ND		380	32	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
2-Chloronaphthalene	ND		380	11	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
2-Chlorophenol	ND		380	24	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
2-Methylnaphthalene	ND		380	22	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
2-Methylphenol	ND		380	15	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
2-Nitroaniline	ND		1800	57	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
2-Nitrophenol	ND		380	11	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
3 & 4 Methylphenol	ND		380	38	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
3,3'-Dichlorobenzidine	ND		760	100	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
3-Methylphenol	ND		380	38	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
3-Nitroaniline	ND		1800	84	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
4,6-Dinitro-2-methylphenol	ND		1800	380	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
4-Bromophenyl phenyl ether	ND		380	22	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
4-Chloro-3-methylphenol	ND		380	28	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
4-Chloroaniline	ND		380	94	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
4-Chlorophenyl phenyl ether	ND		380	24	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
4-Methylphenol	ND		380	38	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
4-Nitroaniline	ND		1800	83	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
4-Nitrophenol	ND		1800	110	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Acenaphthene	ND		380	12	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Acenaphthylene	ND		380	94	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Acetophenone	ND		380	23	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Aniline	ND		380	150	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Anthracene	ND		380	19	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Azobenzene	ND		380	25	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Benzaldehyde	ND		380	77	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Benzidine	ND		3800	1100	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Benzo[a]anthracene	ND		380	23	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Benzo[a]pyrene	ND		380	23	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Benzo[b]fluoranthene	ND		380	30	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-07-7-8

Lab Sample ID: 280-137283-3

Date Collected: 06/03/20 13:50

Matrix: Solid

Date Received: 06/04/20 14:40

Percent Solids: 82.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		380	18	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Benzo[k]fluoranthene	ND		380	46	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Benzoic acid	ND		1800	380	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Benzyl alcohol	ND		380	11	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Bis(2-chloroethoxy)methane	ND		380	26	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Bis(2-chloroethyl)ether	ND		380	19	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Bis(2-ethylhexyl) phthalate	ND		380	53	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Butyl benzyl phthalate	ND		380	49	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Caprolactam	ND		380	120	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Carbazole	ND		380	41	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Chrysene	ND		380	31	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Dibenz(a,h)anthracene	ND		380	22	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Dibenzofuran	ND		380	23	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Diethyl phthalate	ND		760	30	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Dimethyl phthalate	ND		380	26	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Di-n-butyl phthalate	ND		380	33	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Di-n-octyl phthalate	ND		380	46	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Diphenylamine	ND		380	50	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Famphur	ND		760	39	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Fluoranthene	ND		380	41	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Fluorene	ND		380	21	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Hexachlorobenzene	ND		380	33	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Hexachlorobutadiene	ND		380	11	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Hexachlorocyclopentadiene	ND		1800	130	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Hexachloroethane	ND		380	24	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Hexadecane	ND		380	15	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Indeno[1,2,3-cd]pyrene	ND		380	25	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Isophorone	ND		380	19	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Naphthalene	ND		380	35	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Nitrobenzene	ND		380	25	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
N-Nitrosodimethylamine	ND		380	42	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
N-Nitrosodi-n-propylamine	ND		380	78	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
N-Nitrosodiphenylamine	ND		380	24	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Pentachlorophenol	ND		1800	380	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Phenanthrene	ND		380	19	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Phenol	ND		380	21	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Pyrene	ND		380	14	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1
Pyridine	ND		760	46	ug/Kg	☼	06/16/20 17:27	06/20/20 20:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	70		35 - 120	06/16/20 17:27	06/20/20 20:11	1
2-Fluorobiphenyl	69		46 - 120	06/16/20 17:27	06/20/20 20:11	1
2-Fluorophenol (Surr)	72		43 - 120	06/16/20 17:27	06/20/20 20:11	1
Nitrobenzene-d5 (Surr)	68		46 - 120	06/16/20 17:27	06/20/20 20:11	1
Phenol-d5 (Surr)	75		46 - 120	06/16/20 17:27	06/20/20 20:11	1
Terphenyl-d14 (Surr)	91		46 - 120	06/16/20 17:27	06/20/20 20:11	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-07-GW

Lab Sample ID: 280-137283-4

Date Collected: 06/03/20 14:20

Matrix: Water

Date Received: 06/04/20 14:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		10	1.8	ug/L		06/08/20 14:31	06/17/20 14:47	1
1,2,4,5-Tetrachlorobenzene	ND		10	1.8	ug/L		06/08/20 14:31	06/17/20 14:47	1
1,2,4-Trichlorobenzene	ND	**1	4.1	0.60	ug/L		06/08/20 14:31	06/17/20 14:47	1
1,2-Dichlorobenzene	ND		4.1	0.24	ug/L		06/08/20 14:31	06/17/20 14:47	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		10	0.24	ug/L		06/08/20 14:31	06/17/20 14:47	1
1,3-Dichlorobenzene	ND		10	0.31	ug/L		06/08/20 14:31	06/17/20 14:47	1
1,3-Dinitrobenzene	ND		10	2.0	ug/L		06/08/20 14:31	06/17/20 14:47	1
1,4-Dichlorobenzene	ND		4.1	1.3	ug/L		06/08/20 14:31	06/17/20 14:47	1
1,4-Dioxane	ND		20	0.46	ug/L		06/08/20 14:31	06/17/20 14:47	1
1-Methylnaphthalene	ND		4.1	0.24	ug/L		06/08/20 14:31	06/17/20 14:47	1
2,2'-oxybis[1-chloropropane]	ND		10	0.29	ug/L		06/08/20 14:31	06/17/20 14:47	1
2,3,4,6-Tetrachlorophenol	ND		51	2.0	ug/L		06/08/20 14:31	06/17/20 14:47	1
2,4,5-Trichlorophenol	ND		10	2.1	ug/L		06/08/20 14:31	06/17/20 14:47	1
2,4,6-Trichlorophenol	ND		10	0.30	ug/L		06/08/20 14:31	06/17/20 14:47	1
2,4-Dichlorophenol	ND		10	0.66	ug/L		06/08/20 14:31	06/17/20 14:47	1
2,4-Dimethylphenol	ND		10	0.59	ug/L		06/08/20 14:31	06/17/20 14:47	1
2,4-Dinitrophenol	ND		31	10	ug/L		06/08/20 14:31	06/17/20 14:47	1
2,4-Dinitrotoluene	ND		10	1.7	ug/L		06/08/20 14:31	06/17/20 14:47	1
2,6-Dichlorophenol	ND		10	1.4	ug/L		06/08/20 14:31	06/17/20 14:47	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		06/08/20 14:31	06/17/20 14:47	1
2-Chloronaphthalene	ND		4.1	0.27	ug/L		06/08/20 14:31	06/17/20 14:47	1
2-Chlorophenol	ND		10	2.0	ug/L		06/08/20 14:31	06/17/20 14:47	1
2-Methylnaphthalene	ND		4.1	1.5	ug/L		06/08/20 14:31	06/17/20 14:47	1
2-Methylphenol	ND		10	1.0	ug/L		06/08/20 14:31	06/17/20 14:47	1
2-Nitroaniline	ND		10	1.8	ug/L		06/08/20 14:31	06/17/20 14:47	1
2-Nitrophenol	ND		10	0.40	ug/L		06/08/20 14:31	06/17/20 14:47	1
3 & 4 Methylphenol	ND		10	0.26	ug/L		06/08/20 14:31	06/17/20 14:47	1
3,3'-Dichlorobenzidine	ND		51	2.0	ug/L		06/08/20 14:31	06/17/20 14:47	1
3-Methylphenol	ND		10	0.26	ug/L		06/08/20 14:31	06/17/20 14:47	1
3-Nitroaniline	ND		10	2.0	ug/L		06/08/20 14:31	06/17/20 14:47	1
4,6-Dinitro-2-methylphenol	ND		51	4.1	ug/L		06/08/20 14:31	06/17/20 14:47	1
4-Bromophenyl phenyl ether	ND		10	0.44	ug/L		06/08/20 14:31	06/17/20 14:47	1
4-Chloro-3-methylphenol	ND		10	2.5	ug/L		06/08/20 14:31	06/17/20 14:47	1
4-Chloroaniline	ND		10	2.2	ug/L		06/08/20 14:31	06/17/20 14:47	1
4-Chlorophenyl phenyl ether	ND		10	1.7	ug/L		06/08/20 14:31	06/17/20 14:47	1
4-Methylphenol	ND		10	0.26	ug/L		06/08/20 14:31	06/17/20 14:47	1
4-Nitroaniline	ND		10	2.0	ug/L		06/08/20 14:31	06/17/20 14:47	1
4-Nitrophenol	ND		10	1.3	ug/L		06/08/20 14:31	06/17/20 14:47	1
Acenaphthene	ND		4.1	0.29	ug/L		06/08/20 14:31	06/17/20 14:47	1
Acenaphthylene	ND		4.1	0.50	ug/L		06/08/20 14:31	06/17/20 14:47	1
Acetophenone	ND		10	0.25	ug/L		06/08/20 14:31	06/17/20 14:47	1
Aniline	ND		10	2.0	ug/L		06/08/20 14:31	06/17/20 14:47	1
Anthracene	ND		4.1	0.43	ug/L		06/08/20 14:31	06/17/20 14:47	1
Azobenzene	ND		4.1	0.24	ug/L		06/08/20 14:31	06/17/20 14:47	1
Benzaldehyde	ND		5.1	2.0	ug/L		06/08/20 14:31	06/17/20 14:47	1
Benzidine	ND		100	51	ug/L		06/08/20 14:31	06/17/20 14:47	1
Benzo[a]anthracene	ND		4.1	0.36	ug/L		06/08/20 14:31	06/17/20 14:47	1
Benzo[a]pyrene	ND		4.1	0.32	ug/L		06/08/20 14:31	06/17/20 14:47	1
Benzo[b]fluoranthene	ND		4.1	0.54	ug/L		06/08/20 14:31	06/17/20 14:47	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-07-GW

Lab Sample ID: 280-137283-4

Date Collected: 06/03/20 14:20

Matrix: Water

Date Received: 06/04/20 14:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		4.1	0.51	ug/L		06/08/20 14:31	06/17/20 14:47	1
Benzo[k]fluoranthene	ND		4.1	0.47	ug/L		06/08/20 14:31	06/17/20 14:47	1
Benzoic acid	ND		26	10	ug/L		06/08/20 14:31	06/17/20 14:47	1
Benzyl alcohol	ND		10	0.24	ug/L		06/08/20 14:31	06/17/20 14:47	1
Bis(2-chloroethoxy)methane	ND		10	0.99	ug/L		06/08/20 14:31	06/17/20 14:47	1
Bis(2-chloroethyl)ether	ND		10	0.85	ug/L		06/08/20 14:31	06/17/20 14:47	1
Bis(2-ethylhexyl) phthalate	ND	*	10	0.57	ug/L		06/08/20 14:31	06/17/20 14:47	1
Butyl benzyl phthalate	ND		4.1	1.0	ug/L		06/08/20 14:31	06/17/20 14:47	1
Caprolactam	ND		5.1	2.6	ug/L		06/08/20 14:31	06/17/20 14:47	1
Carbazole	ND		4.1	0.44	ug/L		06/08/20 14:31	06/17/20 14:47	1
Chrysene	ND		4.1	0.55	ug/L		06/08/20 14:31	06/17/20 14:47	1
Dibenz(a,h)anthracene	ND		4.1	0.52	ug/L		06/08/20 14:31	06/17/20 14:47	1
Dibenzofuran	ND		4.1	0.30	ug/L		06/08/20 14:31	06/17/20 14:47	1
Diethyl phthalate	ND		4.1	0.39	ug/L		06/08/20 14:31	06/17/20 14:47	1
Dimethyl phthalate	ND		4.1	0.22	ug/L		06/08/20 14:31	06/17/20 14:47	1
Di-n-butyl phthalate	ND		4.1	1.2	ug/L		06/08/20 14:31	06/17/20 14:47	1
Di-n-octyl phthalate	ND		4.1	0.36	ug/L		06/08/20 14:31	06/17/20 14:47	1
Diphenylamine	ND		10	1.1	ug/L		06/08/20 14:31	06/17/20 14:47	1
Famphur	ND		100	1.6	ug/L		06/08/20 14:31	06/17/20 14:47	1
Fluoranthene	ND		4.1	0.20	ug/L		06/08/20 14:31	06/17/20 14:47	1
Fluorene	ND		4.1	0.32	ug/L		06/08/20 14:31	06/17/20 14:47	1
Hexachlorobenzene	ND		10	0.68	ug/L		06/08/20 14:31	06/17/20 14:47	1
Hexachlorobutadiene	ND	*1	10	3.4	ug/L		06/08/20 14:31	06/17/20 14:47	1
Hexachlorocyclopentadiene	ND		51	3.2	ug/L		06/08/20 14:31	06/17/20 14:47	1
Hexachloroethane	ND	*1	10	1.0	ug/L		06/08/20 14:31	06/17/20 14:47	1
Hexadecane	ND		10	0.55	ug/L		06/08/20 14:31	06/17/20 14:47	1
Indeno[1,2,3-cd]pyrene	ND		4.1	0.67	ug/L		06/08/20 14:31	06/17/20 14:47	1
Isophorone	ND		10	0.22	ug/L		06/08/20 14:31	06/17/20 14:47	1
Naphthalene	ND		4.1	0.30	ug/L		06/08/20 14:31	06/17/20 14:47	1
Nitrobenzene	ND		10	0.83	ug/L		06/08/20 14:31	06/17/20 14:47	1
N-Nitrosodimethylamine	ND		10	0.30	ug/L		06/08/20 14:31	06/17/20 14:47	1
N-Nitrosodi-n-propylamine	ND		10	0.36	ug/L		06/08/20 14:31	06/17/20 14:47	1
N-Nitrosodiphenylamine	ND		10	0.45	ug/L		06/08/20 14:31	06/17/20 14:47	1
Pentachlorophenol	ND		51	20	ug/L		06/08/20 14:31	06/17/20 14:47	1
Phenanthrene	ND		4.1	0.27	ug/L		06/08/20 14:31	06/17/20 14:47	1
Phenol	ND		10	2.0	ug/L		06/08/20 14:31	06/17/20 14:47	1
Pyrene	ND		10	0.38	ug/L		06/08/20 14:31	06/17/20 14:47	1
Pyridine	ND		20	1.7	ug/L		06/08/20 14:31	06/17/20 14:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	49		48 - 120	06/08/20 14:31	06/17/20 14:47	1
2-Fluorophenol (Surr)	64		41 - 120	06/08/20 14:31	06/17/20 14:47	1
2,4,6-Tribromophenol (Surr)	75		42 - 131	06/08/20 14:31	06/17/20 14:47	1
Nitrobenzene-d5 (Surr)	75		42 - 120	06/08/20 14:31	06/17/20 14:47	1
Phenol-d5 (Surr)	63		45 - 124	06/08/20 14:31	06/17/20 14:47	1
Terphenyl-d14 (Surr)	23		20 - 130	06/08/20 14:31	06/17/20 14:47	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-09-2-3

Date Collected: 06/03/20 12:40

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-5

Matrix: Solid

Percent Solids: 93.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		330	24	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
1,2,4,5-Tetrachlorobenzene	ND		330	48	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
1,2,4-Trichlorobenzene	ND		330	28	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
1,2-Dichlorobenzene	ND		330	22	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		330	22	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
1,3-Dichlorobenzene	ND		330	12	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
1,3-Dinitrobenzene	ND		330	70	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
1,4-Dichlorobenzene	ND		330	13	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
1,4-Dioxane	ND		650	65	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
1-Methylnaphthalene	ND		330	11	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
2,2'-oxybis[1-chloropropane]	ND		330	23	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
2,3,4,6-Tetrachlorophenol	ND		1600	140	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
2,4,5-Trichlorophenol	ND		330	9.9	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
2,4,6-Trichlorophenol	ND		330	9.9	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
2,4-Dichlorophenol	ND		330	9.9	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
2,4-Dimethylphenol	ND		330	65	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
2,4-Dinitrophenol	ND		1600	330	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
2,4-Dinitrotoluene	ND		330	65	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
2,6-Dichlorophenol	ND		330	22	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
2,6-Dinitrotoluene	ND		330	28	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
2-Chloronaphthalene	ND		330	9.9	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
2-Chlorophenol	ND		330	21	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
2-Methylnaphthalene	ND		330	19	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
2-Methylphenol	ND		330	13	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
2-Nitroaniline	ND		1600	49	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
2-Nitrophenol	ND		330	9.9	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
3 & 4 Methylphenol	ND		330	33	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
3,3'-Dichlorobenzidine	ND		650	89	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
3-Methylphenol	ND		330	33	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
3-Nitroaniline	ND		1600	72	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
4,6-Dinitro-2-methylphenol	ND		1600	330	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
4-Bromophenyl phenyl ether	ND		330	19	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
4-Chloro-3-methylphenol	ND		330	24	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
4-Chloroaniline	ND		330	81	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
4-Chlorophenyl phenyl ether	ND		330	21	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
4-Methylphenol	ND		330	33	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
4-Nitroaniline	ND		1600	72	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
4-Nitrophenol	ND		1600	96	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Acenaphthene	ND		330	10	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Acenaphthylene	ND		330	81	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Acetophenone	ND		330	20	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Aniline	ND		330	130	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Anthracene	ND		330	17	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Azobenzene	ND		330	22	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Benzaldehyde	ND		330	66	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Benzidine	ND		3300	980	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Benzo[a]anthracene	ND		330	20	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Benzo[a]pyrene	ND		330	20	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Benzo[b]fluoranthene	ND		330	26	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-09-2-3

Date Collected: 06/03/20 12:40

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-5

Matrix: Solid

Percent Solids: 93.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		330	16	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Benzo[k]fluoranthene	ND		330	40	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Benzoic acid	ND		1600	330	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Benzyl alcohol	ND		330	9.9	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Bis(2-chloroethoxy)methane	ND		330	23	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Bis(2-chloroethyl)ether	ND		330	16	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Bis(2-ethylhexyl) phthalate	ND		330	45	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Butyl benzyl phthalate	ND		330	42	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Caprolactam	ND		330	100	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Carbazole	ND		330	36	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Chrysene	ND		330	27	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Dibenz(a,h)anthracene	ND		330	19	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Dibenzofuran	ND		330	20	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Diethyl phthalate	ND		650	26	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Dimethyl phthalate	ND		330	23	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Di-n-butyl phthalate	ND		330	29	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Di-n-octyl phthalate	ND		330	40	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Diphenylamine	ND		330	43	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Famphur	ND		650	34	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Fluoranthene	ND		330	36	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Fluorene	ND		330	18	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Hexachlorobenzene	ND		330	29	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Hexachlorobutadiene	ND		330	9.9	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Hexachlorocyclopentadiene	ND		1600	110	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Hexachloroethane	ND		330	21	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Hexadecane	ND		330	13	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Indeno[1,2,3-cd]pyrene	ND		330	22	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Isophorone	ND		330	17	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Naphthalene	ND		330	31	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Nitrobenzene	ND		330	22	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
N-Nitrosodimethylamine	ND		330	37	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
N-Nitrosodi-n-propylamine	ND		330	67	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
N-Nitrosodiphenylamine	ND		330	21	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Pentachlorophenol	ND		1600	330	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Phenanthrene	ND		330	17	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Phenol	ND		330	18	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Pyrene	ND		330	12	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1
Pyridine	ND		650	40	ug/Kg	☼	06/16/20 17:27	06/20/20 20:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	67		35 - 120	06/16/20 17:27	06/20/20 20:38	1
2-Fluorobiphenyl	52		46 - 120	06/16/20 17:27	06/20/20 20:38	1
2-Fluorophenol (Surr)	44		43 - 120	06/16/20 17:27	06/20/20 20:38	1
Nitrobenzene-d5 (Surr)	43	X	46 - 120	06/16/20 17:27	06/20/20 20:38	1
Phenol-d5 (Surr)	50		46 - 120	06/16/20 17:27	06/20/20 20:38	1
Terphenyl-d14 (Surr)	88		46 - 120	06/16/20 17:27	06/20/20 20:38	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-09-GW

Lab Sample ID: 280-137283-6

Date Collected: 06/03/20 13:00

Matrix: Water

Date Received: 06/04/20 14:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		9.8	1.7	ug/L		06/08/20 14:31	06/17/20 15:15	1
1,2,4,5-Tetrachlorobenzene	ND		9.8	1.7	ug/L		06/08/20 14:31	06/17/20 15:15	1
1,2,4-Trichlorobenzene	ND	**1	3.9	0.58	ug/L		06/08/20 14:31	06/17/20 15:15	1
1,2-Dichlorobenzene	ND		3.9	0.22	ug/L		06/08/20 14:31	06/17/20 15:15	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		9.8	0.22	ug/L		06/08/20 14:31	06/17/20 15:15	1
1,3-Dichlorobenzene	ND		9.8	0.29	ug/L		06/08/20 14:31	06/17/20 15:15	1
1,3-Dinitrobenzene	ND		9.8	2.0	ug/L		06/08/20 14:31	06/17/20 15:15	1
1,4-Dichlorobenzene	ND		3.9	1.3	ug/L		06/08/20 14:31	06/17/20 15:15	1
1,4-Dioxane	ND		20	0.44	ug/L		06/08/20 14:31	06/17/20 15:15	1
1-Methylnaphthalene	ND		3.9	0.22	ug/L		06/08/20 14:31	06/17/20 15:15	1
2,2'-oxybis[1-chloropropane]	ND		9.8	0.27	ug/L		06/08/20 14:31	06/17/20 15:15	1
2,3,4,6-Tetrachlorophenol	ND		49	2.0	ug/L		06/08/20 14:31	06/17/20 15:15	1
2,4,5-Trichlorophenol	ND		9.8	2.0	ug/L		06/08/20 14:31	06/17/20 15:15	1
2,4,6-Trichlorophenol	ND		9.8	0.28	ug/L		06/08/20 14:31	06/17/20 15:15	1
2,4-Dichlorophenol	ND		9.8	0.63	ug/L		06/08/20 14:31	06/17/20 15:15	1
2,4-Dimethylphenol	ND		9.8	0.57	ug/L		06/08/20 14:31	06/17/20 15:15	1
2,4-Dinitrophenol	ND		29	9.8	ug/L		06/08/20 14:31	06/17/20 15:15	1
2,4-Dinitrotoluene	ND		9.8	1.6	ug/L		06/08/20 14:31	06/17/20 15:15	1
2,6-Dichlorophenol	ND		9.8	1.3	ug/L		06/08/20 14:31	06/17/20 15:15	1
2,6-Dinitrotoluene	ND		9.8	1.8	ug/L		06/08/20 14:31	06/17/20 15:15	1
2-Chloronaphthalene	ND		3.9	0.25	ug/L		06/08/20 14:31	06/17/20 15:15	1
2-Chlorophenol	ND		9.8	2.0	ug/L		06/08/20 14:31	06/17/20 15:15	1
2-Methylnaphthalene	ND		3.9	1.5	ug/L		06/08/20 14:31	06/17/20 15:15	1
2-Methylphenol	ND		9.8	0.96	ug/L		06/08/20 14:31	06/17/20 15:15	1
2-Nitroaniline	ND		9.8	1.7	ug/L		06/08/20 14:31	06/17/20 15:15	1
2-Nitrophenol	ND		9.8	0.38	ug/L		06/08/20 14:31	06/17/20 15:15	1
3 & 4 Methylphenol	ND		9.8	0.24	ug/L		06/08/20 14:31	06/17/20 15:15	1
3,3'-Dichlorobenzidine	ND		49	2.0	ug/L		06/08/20 14:31	06/17/20 15:15	1
3-Methylphenol	ND		9.8	0.24	ug/L		06/08/20 14:31	06/17/20 15:15	1
3-Nitroaniline	ND		9.8	2.0	ug/L		06/08/20 14:31	06/17/20 15:15	1
4,6-Dinitro-2-methylphenol	ND		49	3.9	ug/L		06/08/20 14:31	06/17/20 15:15	1
4-Bromophenyl phenyl ether	ND		9.8	0.42	ug/L		06/08/20 14:31	06/17/20 15:15	1
4-Chloro-3-methylphenol	ND		9.8	2.4	ug/L		06/08/20 14:31	06/17/20 15:15	1
4-Chloroaniline	ND		9.8	2.1	ug/L		06/08/20 14:31	06/17/20 15:15	1
4-Chlorophenyl phenyl ether	ND		9.8	1.6	ug/L		06/08/20 14:31	06/17/20 15:15	1
4-Methylphenol	ND		9.8	0.24	ug/L		06/08/20 14:31	06/17/20 15:15	1
4-Nitroaniline	ND		9.8	2.0	ug/L		06/08/20 14:31	06/17/20 15:15	1
4-Nitrophenol	ND		9.8	1.2	ug/L		06/08/20 14:31	06/17/20 15:15	1
Acenaphthene	ND		3.9	0.27	ug/L		06/08/20 14:31	06/17/20 15:15	1
Acenaphthylene	ND		3.9	0.48	ug/L		06/08/20 14:31	06/17/20 15:15	1
Acetophenone	ND		9.8	0.23	ug/L		06/08/20 14:31	06/17/20 15:15	1
Aniline	ND		9.8	2.0	ug/L		06/08/20 14:31	06/17/20 15:15	1
Anthracene	ND		3.9	0.41	ug/L		06/08/20 14:31	06/17/20 15:15	1
Azobenzene	ND		3.9	0.22	ug/L		06/08/20 14:31	06/17/20 15:15	1
Benzaldehyde	ND		4.9	2.0	ug/L		06/08/20 14:31	06/17/20 15:15	1
Benzidine	ND		98	49	ug/L		06/08/20 14:31	06/17/20 15:15	1
Benzo[a]anthracene	ND		3.9	0.34	ug/L		06/08/20 14:31	06/17/20 15:15	1
Benzo[a]pyrene	ND		3.9	0.30	ug/L		06/08/20 14:31	06/17/20 15:15	1
Benzo[b]fluoranthene	ND		3.9	0.52	ug/L		06/08/20 14:31	06/17/20 15:15	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-09-GW

Lab Sample ID: 280-137283-6

Date Collected: 06/03/20 13:00

Matrix: Water

Date Received: 06/04/20 14:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		3.9	0.49	ug/L		06/08/20 14:31	06/17/20 15:15	1
Benzo[k]fluoranthene	ND		3.9	0.45	ug/L		06/08/20 14:31	06/17/20 15:15	1
Benzoic acid	ND		24	9.8	ug/L		06/08/20 14:31	06/17/20 15:15	1
Benzyl alcohol	ND		9.8	0.22	ug/L		06/08/20 14:31	06/17/20 15:15	1
Bis(2-chloroethoxy)methane	ND		9.8	0.95	ug/L		06/08/20 14:31	06/17/20 15:15	1
Bis(2-chloroethyl)ether	ND		9.8	0.81	ug/L		06/08/20 14:31	06/17/20 15:15	1
Bis(2-ethylhexyl) phthalate	ND	*	9.8	0.55	ug/L		06/08/20 14:31	06/17/20 15:15	1
Butyl benzyl phthalate	ND		3.9	0.98	ug/L		06/08/20 14:31	06/17/20 15:15	1
Caprolactam	ND		4.9	2.4	ug/L		06/08/20 14:31	06/17/20 15:15	1
Carbazole	ND		3.9	0.42	ug/L		06/08/20 14:31	06/17/20 15:15	1
Chrysene	ND		3.9	0.53	ug/L		06/08/20 14:31	06/17/20 15:15	1
Dibenz(a,h)anthracene	ND		3.9	0.50	ug/L		06/08/20 14:31	06/17/20 15:15	1
Dibenzofuran	ND		3.9	0.28	ug/L		06/08/20 14:31	06/17/20 15:15	1
Diethyl phthalate	ND		3.9	0.37	ug/L		06/08/20 14:31	06/17/20 15:15	1
Dimethyl phthalate	ND		3.9	0.21	ug/L		06/08/20 14:31	06/17/20 15:15	1
Di-n-butyl phthalate	ND		3.9	1.1	ug/L		06/08/20 14:31	06/17/20 15:15	1
Di-n-octyl phthalate	ND		3.9	0.34	ug/L		06/08/20 14:31	06/17/20 15:15	1
Diphenylamine	ND		9.8	1.0	ug/L		06/08/20 14:31	06/17/20 15:15	1
Famphur	ND		98	1.5	ug/L		06/08/20 14:31	06/17/20 15:15	1
Fluoranthene	ND		3.9	0.20	ug/L		06/08/20 14:31	06/17/20 15:15	1
Fluorene	ND		3.9	0.30	ug/L		06/08/20 14:31	06/17/20 15:15	1
Hexachlorobenzene	ND		9.8	0.64	ug/L		06/08/20 14:31	06/17/20 15:15	1
Hexachlorobutadiene	ND	*1	9.8	3.2	ug/L		06/08/20 14:31	06/17/20 15:15	1
Hexachlorocyclopentadiene	ND		49	3.0	ug/L		06/08/20 14:31	06/17/20 15:15	1
Hexachloroethane	ND	*1	9.8	0.96	ug/L		06/08/20 14:31	06/17/20 15:15	1
Hexadecane	ND		9.8	0.53	ug/L		06/08/20 14:31	06/17/20 15:15	1
Indeno[1,2,3-cd]pyrene	ND		3.9	0.64	ug/L		06/08/20 14:31	06/17/20 15:15	1
Isophorone	ND		9.8	0.21	ug/L		06/08/20 14:31	06/17/20 15:15	1
Naphthalene	ND		3.9	0.28	ug/L		06/08/20 14:31	06/17/20 15:15	1
Nitrobenzene	ND		9.8	0.79	ug/L		06/08/20 14:31	06/17/20 15:15	1
N-Nitrosodimethylamine	ND		9.8	0.28	ug/L		06/08/20 14:31	06/17/20 15:15	1
N-Nitrosodi-n-propylamine	ND		9.8	0.34	ug/L		06/08/20 14:31	06/17/20 15:15	1
N-Nitrosodiphenylamine	ND		9.8	0.43	ug/L		06/08/20 14:31	06/17/20 15:15	1
Pentachlorophenol	ND		49	20	ug/L		06/08/20 14:31	06/17/20 15:15	1
Phenanthrene	ND		3.9	0.25	ug/L		06/08/20 14:31	06/17/20 15:15	1
Phenol	ND		9.8	2.0	ug/L		06/08/20 14:31	06/17/20 15:15	1
Pyrene	ND		9.8	0.36	ug/L		06/08/20 14:31	06/17/20 15:15	1
Pyridine	ND		20	1.7	ug/L		06/08/20 14:31	06/17/20 15:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	52		48 - 120	06/08/20 14:31	06/17/20 15:15	1
2-Fluorophenol (Surr)	56		41 - 120	06/08/20 14:31	06/17/20 15:15	1
2,4,6-Tribromophenol (Surr)	54		42 - 131	06/08/20 14:31	06/17/20 15:15	1
Nitrobenzene-d5 (Surr)	76		42 - 120	06/08/20 14:31	06/17/20 15:15	1
Phenol-d5 (Surr)	58		45 - 124	06/08/20 14:31	06/17/20 15:15	1
Terphenyl-d14 (Surr)	24		20 - 130	06/08/20 14:31	06/17/20 15:15	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-12-10-12

Date Collected: 06/04/20 10:00

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-7

Matrix: Solid

Percent Solids: 94.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		320	24	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
1,2,4,5-Tetrachlorobenzene	ND		320	48	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
1,2,4-Trichlorobenzene	ND		320	27	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
1,2-Dichlorobenzene	ND		320	22	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		320	22	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
1,3-Dichlorobenzene	ND		320	12	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
1,3-Dinitrobenzene	ND		320	69	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
1,4-Dichlorobenzene	ND		320	13	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
1,4-Dioxane	ND		650	65	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
1-Methylnaphthalene	ND		320	11	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
2,2'-oxybis[1-chloropropane]	ND		320	23	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
2,3,4,6-Tetrachlorophenol	ND		1600	130	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
2,4,5-Trichlorophenol	ND		320	9.8	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
2,4,6-Trichlorophenol	ND		320	9.8	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
2,4-Dichlorophenol	ND		320	9.8	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
2,4-Dimethylphenol	ND		320	65	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
2,4-Dinitrophenol	ND		1600	330	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
2,4-Dinitrotoluene	ND		320	65	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
2,6-Dichlorophenol	ND		320	22	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
2,6-Dinitrotoluene	ND		320	27	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
2-Chloronaphthalene	ND		320	9.8	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
2-Chlorophenol	ND		320	21	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
2-Methylnaphthalene	ND		320	19	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
2-Methylphenol	ND		320	13	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
2-Nitroaniline	ND		1600	49	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
2-Nitrophenol	ND		320	9.8	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
3 & 4 Methylphenol	ND		320	32	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
3,3'-Dichlorobenzidine	ND		650	88	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
3-Methylphenol	ND		320	32	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
3-Nitroaniline	ND		1600	71	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
4,6-Dinitro-2-methylphenol	ND		1600	320	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
4-Bromophenyl phenyl ether	ND		320	19	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
4-Chloro-3-methylphenol	ND		320	24	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
4-Chloroaniline	ND		320	80	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
4-Chlorophenyl phenyl ether	ND		320	21	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
4-Methylphenol	ND		320	32	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
4-Nitroaniline	ND		1600	71	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
4-Nitrophenol	ND		1600	95	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Acenaphthene	ND		320	10	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Acenaphthylene	ND		320	80	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Acetophenone	ND		320	20	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Aniline	ND		320	130	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Anthracene	ND		320	17	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Azobenzene	ND		320	22	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Benzaldehyde	ND		320	66	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Benzidine	ND		3200	970	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Benzo[a]anthracene	ND		320	20	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Benzo[a]pyrene	ND		320	20	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Benzo[b]fluoranthene	ND		320	26	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-12-10-12

Lab Sample ID: 280-137283-7

Date Collected: 06/04/20 10:00

Matrix: Solid

Date Received: 06/04/20 14:40

Percent Solids: 94.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		320	16	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Benzo[k]fluoranthene	ND		320	39	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Benzoic acid	ND		1600	320	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Benzyl alcohol	ND		320	9.8	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Bis(2-chloroethoxy)methane	ND		320	23	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Bis(2-chloroethyl)ether	ND		320	16	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Bis(2-ethylhexyl) phthalate	ND		320	45	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Butyl benzyl phthalate	ND		320	42	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Caprolactam	ND		320	100	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Carbazole	ND		320	35	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Chrysene	ND		320	26	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Dibenz(a,h)anthracene	ND		320	19	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Dibenzofuran	ND		320	20	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Diethyl phthalate	ND		650	25	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Dimethyl phthalate	ND		320	23	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Di-n-butyl phthalate	ND		320	28	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Di-n-octyl phthalate	ND		320	40	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Diphenylamine	ND		320	43	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Famphur	ND		650	33	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Fluoranthene	ND		320	35	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Fluorene	ND		320	18	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Hexachlorobenzene	ND		320	28	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Hexachlorobutadiene	ND		320	9.8	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Hexachlorocyclopentadiene	ND		1600	110	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Hexachloroethane	ND		320	21	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Hexadecane	ND		320	13	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Indeno[1,2,3-cd]pyrene	ND		320	22	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Isophorone	ND		320	17	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Naphthalene	ND		320	30	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Nitrobenzene	ND		320	22	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
N-Nitrosodimethylamine	ND		320	36	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
N-Nitrosodi-n-propylamine	ND		320	67	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
N-Nitrosodiphenylamine	ND		320	21	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Pentachlorophenol	ND		1600	320	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Phenanthrene	ND		320	17	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Phenol	ND		320	18	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Pyrene	ND		320	12	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1
Pyridine	ND		650	39	ug/Kg	☼	06/16/20 17:27	06/20/20 21:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	69		35 - 120	06/16/20 17:27	06/20/20 21:05	1
2-Fluorobiphenyl	69		46 - 120	06/16/20 17:27	06/20/20 21:05	1
2-Fluorophenol (Surr)	68		43 - 120	06/16/20 17:27	06/20/20 21:05	1
Nitrobenzene-d5 (Surr)	68		46 - 120	06/16/20 17:27	06/20/20 21:05	1
Phenol-d5 (Surr)	74		46 - 120	06/16/20 17:27	06/20/20 21:05	1
Terphenyl-d14 (Surr)	89		46 - 120	06/16/20 17:27	06/20/20 21:05	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-05-10-12

Lab Sample ID: 280-137283-8

Date Collected: 06/04/20 11:00

Matrix: Solid

Date Received: 06/04/20 14:40

Percent Solids: 91.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		350	26	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
1,2,4,5-Tetrachlorobenzene	ND		350	52	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
1,2,4-Trichlorobenzene	ND		350	30	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
1,2-Dichlorobenzene	ND		350	23	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		350	23	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
1,3-Dichlorobenzene	ND		350	13	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
1,3-Dinitrobenzene	ND		350	75	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
1,4-Dichlorobenzene	ND		350	14	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
1,4-Dioxane	ND		700	70	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
1-Methylnaphthalene	ND		350	12	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
2,2'-oxybis[1-chloropropane]	ND		350	24	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
2,3,4,6-Tetrachlorophenol	ND		1700	150	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
2,4,5-Trichlorophenol	ND		350	11	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
2,4,6-Trichlorophenol	ND		350	11	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
2,4-Dichlorophenol	ND		350	11	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
2,4-Dimethylphenol	ND		350	70	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
2,4-Dinitrophenol	ND		1700	350	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
2,4-Dinitrotoluene	ND		350	70	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
2,6-Dichlorophenol	ND		350	24	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
2,6-Dinitrotoluene	ND		350	30	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
2-Chloronaphthalene	ND		350	11	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
2-Chlorophenol	ND		350	22	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
2-Methylnaphthalene	ND		350	20	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
2-Methylphenol	ND		350	14	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
2-Nitroaniline	ND		1700	53	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
2-Nitrophenol	ND		350	11	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
3 & 4 Methylphenol	ND		350	35	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
3,3'-Dichlorobenzidine	ND		700	96	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
3-Methylphenol	ND		350	35	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
3-Nitroaniline	ND		1700	78	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
4,6-Dinitro-2-methylphenol	ND		1700	350	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
4-Bromophenyl phenyl ether	ND		350	20	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
4-Chloro-3-methylphenol	ND		350	26	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
4-Chloroaniline	ND		350	87	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
4-Chlorophenyl phenyl ether	ND		350	22	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
4-Methylphenol	ND		350	35	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
4-Nitroaniline	ND		1700	77	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
4-Nitrophenol	ND	F1	1700	100	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Acenaphthene	ND		350	11	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Acenaphthylene	ND		350	87	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Acetophenone	ND		350	21	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Aniline	ND		350	140	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Anthracene	ND		350	18	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Azobenzene	ND		350	23	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Benzaldehyde	ND		350	71	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Benzidine	ND		3500	1100	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Benzo[a]anthracene	ND		350	21	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Benzo[a]pyrene	ND		350	21	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Benzo[b]fluoranthene	ND		350	28	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-05-10-12

Lab Sample ID: 280-137283-8

Date Collected: 06/04/20 11:00

Matrix: Solid

Date Received: 06/04/20 14:40

Percent Solids: 91.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		350	17	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Benzo[k]fluoranthene	ND		350	42	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Benzoic acid	ND		1700	350	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Benzyl alcohol	ND		350	11	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Bis(2-chloroethoxy)methane	ND		350	24	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Bis(2-chloroethyl)ether	ND		350	18	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Bis(2-ethylhexyl) phthalate	ND		350	49	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Butyl benzyl phthalate	ND		350	46	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Caprolactam	ND		350	110	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Carbazole	ND		350	38	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Chrysene	ND		350	29	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Dibenz(a,h)anthracene	ND		350	20	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Dibenzofuran	ND		350	21	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Diethyl phthalate	ND		700	28	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Dimethyl phthalate	ND		350	24	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Di-n-butyl phthalate	ND		350	31	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Di-n-octyl phthalate	ND		350	43	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Diphenylamine	ND		350	47	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Famphur	ND		700	36	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Fluoranthene	ND		350	38	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Fluorene	ND		350	19	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Hexachlorobenzene	ND		350	31	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Hexachlorobutadiene	ND	F1	350	11	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Hexachlorocyclopentadiene	ND		1700	120	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Hexachloroethane	ND	F1	350	23	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Hexadecane	ND		350	14	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Indeno[1,2,3-cd]pyrene	ND		350	23	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Isophorone	ND		350	18	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Naphthalene	ND		350	33	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Nitrobenzene	ND		350	23	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
N-Nitrosodimethylamine	ND		350	39	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
N-Nitrosodi-n-propylamine	ND		350	72	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
N-Nitrosodiphenylamine	ND		350	22	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Pentachlorophenol	ND		1700	350	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Phenanthrene	ND		350	18	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Phenol	ND	F1	350	19	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Pyrene	ND		350	13	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1
Pyridine	ND		700	42	ug/Kg	☼	06/16/20 17:27	06/20/20 21:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	62		35 - 120	06/16/20 17:27	06/20/20 21:33	1
2-Fluorobiphenyl	69		46 - 120	06/16/20 17:27	06/20/20 21:33	1
2-Fluorophenol (Surr)	73		43 - 120	06/16/20 17:27	06/20/20 21:33	1
Nitrobenzene-d5 (Surr)	66		46 - 120	06/16/20 17:27	06/20/20 21:33	1
Phenol-d5 (Surr)	77		46 - 120	06/16/20 17:27	06/20/20 21:33	1
Terphenyl-d14 (Surr)	90		46 - 120	06/16/20 17:27	06/20/20 21:33	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-5-28-29

Date Collected: 06/04/20 11:40

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-9

Matrix: Solid

Percent Solids: 79.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		410	30	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
1,2,4,5-Tetrachlorobenzene	ND		410	61	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
1,2,4-Trichlorobenzene	ND		410	35	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
1,2-Dichlorobenzene	ND		410	27	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		410	27	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
1,3-Dichlorobenzene	ND		410	15	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
1,3-Dinitrobenzene	ND		410	88	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
1,4-Dichlorobenzene	ND		410	17	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
1,4-Dioxane	ND		820	82	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
1-Methylnaphthalene	ND		410	14	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
2,2'-oxybis[1-chloropropane]	ND		410	29	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
2,3,4,6-Tetrachlorophenol	ND		2000	170	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
2,4,5-Trichlorophenol	ND		410	12	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
2,4,6-Trichlorophenol	ND		410	12	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
2,4-Dichlorophenol	ND		410	12	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
2,4-Dimethylphenol	ND		410	82	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
2,4-Dinitrophenol	ND		2000	410	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
2,4-Dinitrotoluene	ND		410	82	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
2,6-Dichlorophenol	ND		410	28	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
2,6-Dinitrotoluene	ND		410	35	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
2-Chloronaphthalene	ND		410	12	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
2-Chlorophenol	ND		410	26	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
2-Methylnaphthalene	ND		410	24	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
2-Methylphenol	ND		410	16	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
2-Nitroaniline	ND		2000	62	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
2-Nitrophenol	ND		410	12	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
3 & 4 Methylphenol	ND		410	41	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
3,3'-Dichlorobenzidine	ND		820	110	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
3-Methylphenol	ND		410	41	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
3-Nitroaniline	ND		2000	91	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
4,6-Dinitro-2-methylphenol	ND		2000	410	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
4-Bromophenyl phenyl ether	ND		410	24	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
4-Chloro-3-methylphenol	ND		410	31	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
4-Chloroaniline	ND		410	100	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
4-Chlorophenyl phenyl ether	ND		410	26	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
4-Methylphenol	ND		410	41	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
4-Nitroaniline	ND		2000	90	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
4-Nitrophenol	ND		2000	120	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Acenaphthene	ND		410	13	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Acenaphthylene	ND		410	100	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Acetophenone	ND		410	25	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Aniline	ND		410	160	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Anthracene	ND		410	21	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Azobenzene	ND		410	27	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Benzaldehyde	ND		410	83	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Benzidine	ND		4100	1200	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Benzo[a]anthracene	ND		410	25	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Benzo[a]pyrene	ND		410	25	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Benzo[b]fluoranthene	ND		410	33	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-5-28-29

Date Collected: 06/04/20 11:40

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-9

Matrix: Solid

Percent Solids: 79.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		410	20	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Benzo[k]fluoranthene	ND		410	50	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Benzoic acid	ND		2000	410	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Benzyl alcohol	ND		410	12	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Bis(2-chloroethoxy)methane	ND		410	29	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Bis(2-chloroethyl)ether	ND		410	21	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Bis(2-ethylhexyl) phthalate	ND		410	57	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Butyl benzyl phthalate	ND		410	53	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Caprolactam	ND		410	130	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Carbazole	ND		410	45	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Chrysene	ND		410	34	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Dibenz(a,h)anthracene	ND		410	24	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Dibenzofuran	ND		410	25	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Diethyl phthalate	ND		820	32	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Dimethyl phthalate	ND		410	29	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Di-n-butyl phthalate	ND		410	36	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Di-n-octyl phthalate	ND		410	50	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Diphenylamine	ND		410	55	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Famphur	ND		820	42	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Fluoranthene	ND		410	45	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Fluorene	ND		410	22	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Hexachlorobenzene	ND		410	36	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Hexachlorobutadiene	ND		410	12	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Hexachlorocyclopentadiene	ND		2000	140	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Hexachloroethane	ND		410	26	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Hexadecane	ND		410	17	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Indeno[1,2,3-cd]pyrene	ND		410	27	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Isophorone	ND		410	21	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Naphthalene	ND		410	39	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Nitrobenzene	ND		410	27	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
N-Nitrosodimethylamine	ND		410	46	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
N-Nitrosodi-n-propylamine	ND		410	84	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
N-Nitrosodiphenylamine	ND		410	26	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Pentachlorophenol	ND		2000	410	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Phenanthrene	ND		410	21	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Phenol	ND		410	22	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Pyrene	ND		410	15	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1
Pyridine	ND		820	50	ug/Kg	☼	06/16/20 17:27	06/20/20 22:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	61		35 - 120	06/16/20 17:27	06/20/20 22:55	1
2-Fluorobiphenyl	66		46 - 120	06/16/20 17:27	06/20/20 22:55	1
2-Fluorophenol (Surr)	68		43 - 120	06/16/20 17:27	06/20/20 22:55	1
Nitrobenzene-d5 (Surr)	63		46 - 120	06/16/20 17:27	06/20/20 22:55	1
Phenol-d5 (Surr)	73		46 - 120	06/16/20 17:27	06/20/20 22:55	1
Terphenyl-d14 (Surr)	88		46 - 120	06/16/20 17:27	06/20/20 22:55	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-3-12-14

Date Collected: 06/04/20 13:05

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-10

Matrix: Solid

Percent Solids: 96.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		320	23	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
1,2,4,5-Tetrachlorobenzene	ND		320	47	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
1,2,4-Trichlorobenzene	ND		320	27	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
1,2-Dichlorobenzene	ND		320	21	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		320	21	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
1,3-Dichlorobenzene	ND		320	12	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
1,3-Dinitrobenzene	ND		320	69	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
1,4-Dichlorobenzene	ND		320	13	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
1,4-Dioxane	ND		640	64	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
1-Methylnaphthalene	ND		320	11	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
2,2'-oxybis[1-chloropropane]	ND		320	22	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
2,3,4,6-Tetrachlorophenol	ND		1500	130	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
2,4,5-Trichlorophenol	ND		320	9.7	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
2,4,6-Trichlorophenol	ND		320	9.7	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
2,4-Dichlorophenol	ND		320	9.7	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
2,4-Dimethylphenol	ND		320	64	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
2,4-Dinitrophenol	ND		1500	320	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
2,4-Dinitrotoluene	ND		320	64	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
2,6-Dichlorophenol	ND		320	22	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
2,6-Dinitrotoluene	ND		320	27	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
2-Chloronaphthalene	ND		320	9.7	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
2-Chlorophenol	ND		320	20	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
2-Methylnaphthalene	ND		320	18	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
2-Methylphenol	ND		320	13	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
2-Nitroaniline	ND		1500	48	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
2-Nitrophenol	ND		320	9.7	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
3 & 4 Methylphenol	ND		320	32	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
3,3'-Dichlorobenzidine	ND		640	87	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
3-Methylphenol	ND		320	32	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
3-Nitroaniline	ND		1500	71	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
4,6-Dinitro-2-methylphenol	ND		1500	320	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
4-Bromophenyl phenyl ether	ND		320	18	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
4-Chloro-3-methylphenol	ND		320	24	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
4-Chloroaniline	ND		320	79	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
4-Chlorophenyl phenyl ether	ND		320	20	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
4-Methylphenol	ND		320	32	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
4-Nitroaniline	ND		1500	70	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
4-Nitrophenol	ND		1500	94	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Acenaphthene	ND		320	10	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Acenaphthylene	ND		320	79	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Acetophenone	ND		320	19	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Aniline	ND		320	130	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Anthracene	ND		320	16	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Azobenzene	ND		320	21	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Benzaldehyde	ND		320	65	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Benzidine	ND		3200	960	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Benzo[a]anthracene	ND		320	19	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Benzo[a]pyrene	ND		320	19	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Benzo[b]fluoranthene	ND		320	25	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-3-12-14

Date Collected: 06/04/20 13:05

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-10

Matrix: Solid

Percent Solids: 96.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		320	15	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Benzo[k]fluoranthene	ND		320	39	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Benzoic acid	ND		1500	320	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Benzyl alcohol	ND		320	9.7	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Bis(2-chloroethoxy)methane	ND		320	22	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Bis(2-chloroethyl)ether	ND		320	16	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Bis(2-ethylhexyl) phthalate	ND		320	45	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Butyl benzyl phthalate	ND		320	42	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Caprolactam	ND		320	100	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Carbazole	ND		320	35	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Chrysene	ND		320	26	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Dibenz(a,h)anthracene	ND		320	18	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Dibenzofuran	ND		320	19	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Diethyl phthalate	ND		640	25	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Dimethyl phthalate	ND		320	22	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Di-n-butyl phthalate	ND		320	28	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Di-n-octyl phthalate	ND		320	39	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Diphenylamine	ND		320	43	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Famphur	ND		640	33	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Fluoranthene	ND		320	35	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Fluorene	ND		320	17	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Hexachlorobenzene	ND		320	28	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Hexachlorobutadiene	ND		320	9.7	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Hexachlorocyclopentadiene	ND		1500	110	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Hexachloroethane	ND		320	21	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Hexadecane	ND		320	13	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Indeno[1,2,3-cd]pyrene	ND		320	21	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Isophorone	ND		320	16	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Naphthalene	ND		320	30	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Nitrobenzene	ND		320	21	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
N-Nitrosodimethylamine	ND		320	36	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
N-Nitrosodi-n-propylamine	ND		320	66	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
N-Nitrosodiphenylamine	ND		320	20	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Pentachlorophenol	ND		1500	320	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Phenanthrene	ND		320	16	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Phenol	ND		320	17	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Pyrene	ND		320	12	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1
Pyridine	ND		640	39	ug/Kg	☼	06/16/20 17:27	06/20/20 23:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	65		35 - 120	06/16/20 17:27	06/20/20 23:22	1
2-Fluorobiphenyl	70		46 - 120	06/16/20 17:27	06/20/20 23:22	1
2-Fluorophenol (Surr)	76		43 - 120	06/16/20 17:27	06/20/20 23:22	1
Nitrobenzene-d5 (Surr)	67		46 - 120	06/16/20 17:27	06/20/20 23:22	1
Phenol-d5 (Surr)	80		46 - 120	06/16/20 17:27	06/20/20 23:22	1
Terphenyl-d14 (Surr)	92		46 - 120	06/16/20 17:27	06/20/20 23:22	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-3-27-29

Date Collected: 06/04/20 13:40

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-11

Matrix: Solid

Percent Solids: 76.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		410	30	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
1,2,4,5-Tetrachlorobenzene	ND		410	62	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
1,2,4-Trichlorobenzene	ND		410	35	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
1,2-Dichlorobenzene	ND		410	28	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		410	28	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
1,3-Dichlorobenzene	ND		410	15	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
1,3-Dinitrobenzene	ND		410	89	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
1,4-Dichlorobenzene	ND		410	17	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
1,4-Dioxane	ND		830	83	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
1-Methylnaphthalene	ND		410	14	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
2,2'-oxybis[1-chloropropane]	ND		410	29	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
2,3,4,6-Tetrachlorophenol	ND		2000	170	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
2,4,5-Trichlorophenol	ND		410	13	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
2,4,6-Trichlorophenol	ND		410	13	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
2,4-Dichlorophenol	ND		410	13	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
2,4-Dimethylphenol	ND		410	83	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
2,4-Dinitrophenol	ND		2000	420	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
2,4-Dinitrotoluene	ND		410	83	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
2,6-Dichlorophenol	ND		410	28	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
2,6-Dinitrotoluene	ND		410	35	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
2-Chloronaphthalene	ND		410	13	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
2-Chlorophenol	ND		410	26	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
2-Methylnaphthalene	ND		410	24	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
2-Methylphenol	ND		410	16	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
2-Nitroaniline	ND		2000	63	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
2-Nitrophenol	ND		410	13	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
3 & 4 Methylphenol	ND		410	41	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
3,3'-Dichlorobenzidine	ND		830	110	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
3-Methylphenol	ND		410	41	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
3-Nitroaniline	ND		2000	92	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
4,6-Dinitro-2-methylphenol	ND		2000	410	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
4-Bromophenyl phenyl ether	ND		410	24	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
4-Chloro-3-methylphenol	ND		410	31	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
4-Chloroaniline	ND		410	100	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
4-Chlorophenyl phenyl ether	ND		410	26	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
4-Methylphenol	ND		410	41	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
4-Nitroaniline	ND		2000	91	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
4-Nitrophenol	ND		2000	120	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Acenaphthene	ND		410	13	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Acenaphthylene	ND		410	100	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Acetophenone	ND		410	25	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Aniline	ND		410	160	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Anthracene	ND		410	21	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Azobenzene	ND		410	28	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Benzaldehyde	ND		410	84	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Benzidine	ND		4100	1200	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Benzo[a]anthracene	ND		410	25	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Benzo[a]pyrene	ND		410	25	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Benzo[b]fluoranthene	ND		410	33	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-3-27-29

Date Collected: 06/04/20 13:40

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-11

Matrix: Solid

Percent Solids: 76.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		410	20	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Benzo[k]fluoranthene	ND		410	50	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Benzoic acid	ND		2000	410	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Benzyl alcohol	ND		410	13	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Bis(2-chloroethoxy)methane	ND		410	29	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Bis(2-chloroethyl)ether	ND		410	21	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Bis(2-ethylhexyl) phthalate	ND		410	58	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Butyl benzyl phthalate	ND		410	54	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Caprolactam	ND		410	130	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Carbazole	ND		410	45	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Chrysene	ND		410	34	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Dibenz(a,h)anthracene	ND		410	24	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Dibenzofuran	ND		410	25	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Diethyl phthalate	ND		830	33	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Dimethyl phthalate	ND		410	29	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Di-n-butyl phthalate	ND		410	36	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Di-n-octyl phthalate	ND		410	51	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Diphenylamine	ND		410	55	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Famphur	ND		830	43	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Fluoranthene	ND		410	45	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Fluorene	ND		410	23	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Hexachlorobenzene	ND		410	36	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Hexachlorobutadiene	ND		410	13	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Hexachlorocyclopentadiene	ND		2000	140	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Hexachloroethane	ND		410	27	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Hexadecane	ND		410	17	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Indeno[1,2,3-cd]pyrene	ND		410	28	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Isophorone	ND		410	21	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Naphthalene	ND		410	39	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Nitrobenzene	ND		410	28	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
N-Nitrosodimethylamine	ND		410	46	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
N-Nitrosodi-n-propylamine	ND		410	85	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
N-Nitrosodiphenylamine	ND		410	26	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Pentachlorophenol	ND		2000	410	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Phenanthrene	ND		410	21	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Phenol	ND		410	23	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Pyrene	ND		410	15	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1
Pyridine	ND		830	50	ug/Kg	☼	06/16/20 17:27	06/20/20 23:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	64		35 - 120	06/16/20 17:27	06/20/20 23:49	1
2-Fluorobiphenyl	65		46 - 120	06/16/20 17:27	06/20/20 23:49	1
2-Fluorophenol (Surr)	71		43 - 120	06/16/20 17:27	06/20/20 23:49	1
Nitrobenzene-d5 (Surr)	66		46 - 120	06/16/20 17:27	06/20/20 23:49	1
Phenol-d5 (Surr)	75		46 - 120	06/16/20 17:27	06/20/20 23:49	1
Terphenyl-d14 (Surr)	93		46 - 120	06/16/20 17:27	06/20/20 23:49	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-11-6.5-8

Date Collected: 06/03/20 10:25

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-1

Matrix: Solid

Percent Solids: 83.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.8	1.1	mg/Kg	☼	06/03/20 10:25	06/16/20 06:11	1
Gasoline Range Organics (GRO) -C6-C10	ND	H	2.8	1.1	mg/Kg	☼	06/03/20 10:25	06/20/20 11:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	88		77 - 123				06/03/20 10:25	06/16/20 06:11	1
a,a,a-Trifluorotoluene	80		77 - 123				06/03/20 10:25	06/20/20 11:15	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-11-GW

Date Collected: 06/03/20 11:30

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		25	10	ug/L			06/16/20 18:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	93		82 - 110					06/16/20 18:35	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-07-7-8

Date Collected: 06/03/20 13:50

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-3

Matrix: Solid

Percent Solids: 82.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	4.3		3.1	1.2	mg/Kg	☼	06/03/20 13:50	06/16/20 06:34	1
Gasoline Range Organics (GRO) -C6-C10	4.1	H	3.1	1.2	mg/Kg	☼	06/03/20 13:50	06/20/20 11:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	87		77 - 123				06/03/20 13:50	06/16/20 06:34	1
a,a,a-Trifluorotoluene	80		77 - 123				06/03/20 13:50	06/20/20 11:37	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-07-GW

Date Collected: 06/03/20 14:20

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		25	10	ug/L			06/16/20 18:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	89		82 - 110					06/16/20 18:59	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-09-2-3

Date Collected: 06/03/20 12:40

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-5

Matrix: Solid

Percent Solids: 93.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.0	0.77	mg/Kg	☼	06/03/20 12:40	06/16/20 06:58	1
Gasoline Range Organics (GRO) -C6-C10	ND	H	2.0	0.77	mg/Kg	☼	06/03/20 12:40	06/20/20 11:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	89		77 - 123				06/03/20 12:40	06/16/20 06:58	1
a,a,a-Trifluorotoluene	79		77 - 123				06/03/20 12:40	06/20/20 11:58	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-09-GW

Date Collected: 06/03/20 13:00

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		25	10	ug/L			06/16/20 19:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	90		82 - 110					06/16/20 19:22	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-12-10-12

Date Collected: 06/04/20 10:00

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-7

Matrix: Solid

Percent Solids: 94.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.0	0.75	mg/Kg	☼	06/04/20 10:00	06/18/20 20:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	100		77 - 123				06/04/20 10:00	06/18/20 20:27	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-05-10-12

Date Collected: 06/04/20 11:00

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-8

Matrix: Solid

Percent Solids: 91.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		3.1	1.2	mg/Kg	☼	06/04/20 11:00	06/18/20 20:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	97		77 - 123				06/04/20 11:00	06/18/20 20:47	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-5-28-29

Date Collected: 06/04/20 11:40

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-9

Matrix: Solid

Percent Solids: 79.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		3.2	1.2	mg/Kg	☼	06/04/20 11:40	06/18/20 21:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	97		77 - 123				06/04/20 11:40	06/18/20 21:25	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-3-12-14

Date Collected: 06/04/20 13:05

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-10

Matrix: Solid

Percent Solids: 96.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.7	1.0	mg/Kg	☼	06/04/20 13:05	06/18/20 21:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	99		77 - 123				06/04/20 13:05	06/18/20 21:46	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-3-27-29

Date Collected: 06/04/20 13:40

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-11

Matrix: Solid

Percent Solids: 76.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.9	1.1	mg/Kg	☼	06/04/20 13:40	06/18/20 22:05	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	98		77 - 123	06/04/20 13:40	06/18/20 22:05	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB-03 **Lab Sample ID: 280-137283-12**
Date Collected: 06/03/20 08:00 **Matrix: Solid**
Date Received: 06/04/20 14:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	ND		2.0	0.76	mg/Kg		06/03/20 08:00	06/16/20 07:21	1
-C6-C10									
Gasoline Range Organics (GRO)	ND	H	2.0	0.76	mg/Kg		06/03/20 08:00	06/20/20 12:20	1
-C6-C10									

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	93		77 - 123	06/03/20 08:00	06/16/20 07:21	1
a,a,a-Trifluorotoluene	78		77 - 123	06/03/20 08:00	06/20/20 12:20	1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-11-6.5-8 **Lab Sample ID: 280-137283-1**
Date Collected: 06/03/20 10:25 **Matrix: Solid**
Date Received: 06/04/20 14:40 **Percent Solids: 83.3**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	5.2	J	9.0	4.1	mg/Kg	☼	06/17/20 08:03	06/20/20 16:11	1
Motor Oil (C20-C38)	11	J F1 F2	27	8.8	mg/Kg	☼	06/17/20 08:03	06/20/20 16:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	61		49 - 115	06/17/20 08:03	06/20/20 16:11	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-11-GW **Lab Sample ID: 280-137283-2**
Date Collected: 06/03/20 11:30 **Matrix: Water**
Date Received: 06/04/20 14:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	0.45		0.25	0.033	mg/L		06/09/20 11:46	06/14/20 08:01	1
Motor Oil (C20-C38)	0.53		0.50	0.057	mg/L		06/09/20 11:46	06/14/20 08:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	92		50 - 115	06/09/20 11:46	06/14/20 08:01	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-07-7-8 **Lab Sample ID: 280-137283-3**
Date Collected: 06/03/20 13:50 **Matrix: Solid**
Date Received: 06/04/20 14:40 **Percent Solids: 82.1**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	14		8.6	3.9	mg/Kg	☼	06/17/20 08:03	06/20/20 18:01	1
Motor Oil (C20-C38)	24	J	26	8.5	mg/Kg	☼	06/17/20 08:03	06/20/20 18:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	55		49 - 115	06/17/20 08:03	06/20/20 18:01	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-07-GW **Lab Sample ID: 280-137283-4**
Date Collected: 06/03/20 14:20 **Matrix: Water**
Date Received: 06/04/20 14:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	0.091	J	0.26	0.034	mg/L		06/09/20 11:46	06/14/20 09:29	1
Motor Oil (C20-C38)	0.11	J	0.53	0.059	mg/L		06/09/20 11:46	06/14/20 09:29	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	86		50 - 115	06/09/20 11:46	06/14/20 09:29	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-09-2-3							Lab Sample ID: 280-137283-5		
Date Collected: 06/03/20 12:40							Matrix: Solid		
Date Received: 06/04/20 14:40							Percent Solids: 93.5		
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	7.8	J	8.3	3.8	mg/Kg	☼	06/17/20 08:03	06/20/20 18:23	1
Motor Oil (C20-C38)	20	J	25	8.1	mg/Kg	☼	06/17/20 08:03	06/20/20 18:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	69		49 - 115	06/17/20 08:03	06/20/20 18:23	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-09-GW							Lab Sample ID: 280-137283-6		
Date Collected: 06/03/20 13:00							Matrix: Water		
Date Received: 06/04/20 14:40									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	0.12	J	0.25	0.032	mg/L		06/09/20 15:25	06/23/20 17:30	1
Motor Oil (C20-C38)	0.14	J	0.50	0.056	mg/L		06/09/20 15:25	06/23/20 17:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	82		50 - 115	06/09/20 15:25	06/23/20 17:30	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-12-10-12							Lab Sample ID: 280-137283-7		
Date Collected: 06/04/20 10:00							Matrix: Solid		
Date Received: 06/04/20 14:40							Percent Solids: 94.6		
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	11	J	7.9	3.6	mg/Kg	☼	06/17/20 08:03	06/20/20 18:45	1
Motor Oil (C20-C38)	17	J	24	7.7	mg/Kg	☼	06/17/20 08:03	06/20/20 18:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	69		49 - 115	06/17/20 08:03	06/20/20 18:45	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-05-10-12							Lab Sample ID: 280-137283-8		
Date Collected: 06/04/20 11:00							Matrix: Solid		
Date Received: 06/04/20 14:40							Percent Solids: 91.4		
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	8.7	J	8.4	3.8	mg/Kg	☼	06/17/20 08:03	06/20/20 19:07	1
Motor Oil (C20-C38)	15	J	25	8.2	mg/Kg	☼	06/17/20 08:03	06/20/20 19:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	69		49 - 115	06/17/20 08:03	06/20/20 19:07	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-5-28-29							Lab Sample ID: 280-137283-9		
Date Collected: 06/04/20 11:40							Matrix: Solid		
Date Received: 06/04/20 14:40							Percent Solids: 79.7		
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.8	4.4	mg/Kg	☼	06/17/20 08:03	06/20/20 19:29	1
Motor Oil (C20-C38)	ND		29	9.6	mg/Kg	☼	06/17/20 08:03	06/20/20 19:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	55		49 - 115	06/17/20 08:03	06/20/20 19:29	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-3-12-14

Date Collected: 06/04/20 13:05

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-10

Matrix: Solid

Percent Solids: 96.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		7.7	3.5	mg/Kg	☼	06/17/20 08:03	06/20/20 19:51	1
Motor Oil (C20-C38)	ND		23	7.5	mg/Kg	☼	06/17/20 08:03	06/20/20 19:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	62		49 - 115				06/17/20 08:03	06/20/20 19:51	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-3-27-29

Date Collected: 06/04/20 13:40

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-11

Matrix: Solid

Percent Solids: 76.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10	4.6	mg/Kg	☼	06/17/20 08:03	06/20/20 20:13	1
Motor Oil (C20-C38)	ND		31	10	mg/Kg	☼	06/17/20 08:03	06/20/20 20:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	38	X	49 - 115				06/17/20 08:03	06/20/20 20:13	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-11-6.5-8

Date Collected: 06/03/20 10:25

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-1

Matrix: Solid

Percent Solids: 83.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.4		0.60	0.050	mg/Kg	☼	06/10/20 09:10	06/13/20 00:36	1
Silver	31	J	83	6.5	ug/Kg	☼	06/10/20 16:50	06/13/20 01:42	1
Barium	120		0.40	0.070	mg/Kg	☼	06/10/20 09:10	06/13/20 00:36	1
Cadmium	0.13		0.10	0.0098	mg/Kg	☼	06/22/20 16:00	06/24/20 03:17	1
Chromium	9.4		0.20	0.076	mg/Kg	☼	06/10/20 09:10	06/13/20 00:36	1
Lead	12		0.15	0.018	mg/Kg	☼	06/10/20 09:10	06/13/20 00:36	1
Selenium	0.18	J	0.50	0.13	mg/Kg	☼	06/10/20 09:10	06/17/20 18:38	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-11-GW

Date Collected: 06/03/20 11:30

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	19		5.0	0.33	ug/L		06/09/20 15:20	06/10/20 18:03	1
Barium	1100	^	1.0	0.29	ug/L		06/09/20 15:20	06/10/20 18:03	1
Cadmium	0.72	J	1.0	0.27	ug/L		06/09/20 15:20	06/10/20 18:03	1
Chromium	61		2.0	0.50	ug/L		06/09/20 15:20	06/10/20 18:03	1
Lead	51	^	1.0	0.18	ug/L		06/09/20 15:20	06/10/20 18:03	1
Selenium	7.7	B	5.0	0.37	ug/L		06/09/20 15:20	06/10/20 18:03	1
Silver	0.12	J	5.0	0.033	ug/L		06/09/20 15:20	06/10/20 18:03	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-07-7-8

Date Collected: 06/03/20 13:50

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-3

Matrix: Solid

Percent Solids: 82.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.7		0.70	0.059	mg/Kg	☼	06/10/20 09:10	06/13/20 00:39	1
Silver	280		94	7.3	ug/Kg	☼	06/10/20 16:50	06/13/20 01:46	1
Barium	140		0.46	0.082	mg/Kg	☼	06/10/20 09:10	06/13/20 00:39	1
Cadmium	0.50		0.095	0.0089	mg/Kg	☼	06/22/20 16:00	06/24/20 03:21	1
Chromium	6.9		0.23	0.088	mg/Kg	☼	06/10/20 09:10	06/13/20 00:39	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 6020A - Metals (ICP/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-07-7-8

Date Collected: 06/03/20 13:50

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-3

Matrix: Solid

Percent Solids: 82.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	7.9		0.17	0.021	mg/Kg	☼	06/10/20 09:10	06/13/20 00:39	1
Selenium	0.15	J	0.58	0.15	mg/Kg	☼	06/10/20 09:10	06/17/20 19:07	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-07-GW

Date Collected: 06/03/20 14:20

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	56		5.0	0.33	ug/L		06/09/20 15:20	06/10/20 18:06	1
Barium	3800	^	1.0	0.29	ug/L		06/09/20 15:20	06/10/20 18:06	1
Cadmium	1.9		1.0	0.27	ug/L		06/09/20 15:20	06/10/20 18:06	1
Chromium	200		2.0	0.50	ug/L		06/09/20 15:20	06/10/20 18:06	1
Lead	230	^	1.0	0.18	ug/L		06/09/20 15:20	06/10/20 18:06	1
Selenium	6.6	B	5.0	0.37	ug/L		06/09/20 15:20	06/10/20 18:06	1
Silver	0.63	J	5.0	0.033	ug/L		06/09/20 15:20	06/10/20 18:06	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-09-2-3

Date Collected: 06/03/20 12:40

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-5

Matrix: Solid

Percent Solids: 93.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.78		0.62	0.052	mg/Kg	☼	06/10/20 09:10	06/13/20 00:43	1
Silver	10	J	78	6.1	ug/Kg	☼	06/10/20 16:50	06/13/20 01:49	1
Barium	45		0.41	0.072	mg/Kg	☼	06/10/20 09:10	06/13/20 00:43	1
Cadmium	0.11		0.086	0.0081	mg/Kg	☼	06/22/20 16:00	06/24/20 03:24	1
Chromium	3.5		0.21	0.078	mg/Kg	☼	06/10/20 09:10	06/13/20 00:43	1
Lead	4.7		0.15	0.019	mg/Kg	☼	06/10/20 09:10	06/13/20 00:43	1
Selenium	ND		0.51	0.14	mg/Kg	☼	06/10/20 09:10	06/17/20 19:10	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-09-GW

Date Collected: 06/03/20 13:00

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.8		5.0	0.33	ug/L		06/09/20 15:20	06/10/20 18:10	1
Barium	370	^	1.0	0.29	ug/L		06/09/20 15:20	06/10/20 18:10	1
Cadmium	0.38	J	1.0	0.27	ug/L		06/09/20 15:20	06/10/20 18:10	1
Chromium	24		2.0	0.50	ug/L		06/09/20 15:20	06/10/20 18:10	1
Lead	20	^	1.0	0.18	ug/L		06/09/20 15:20	06/10/20 18:10	1
Selenium	7.4	B	5.0	0.37	ug/L		06/09/20 15:20	06/10/20 18:10	1
Silver	0.088	J	5.0	0.033	ug/L		06/09/20 15:20	06/10/20 18:10	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-12-10-12

Date Collected: 06/04/20 10:00

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-7

Matrix: Solid

Percent Solids: 94.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.2		0.49	0.041	mg/Kg	☼	06/10/20 09:10	06/13/20 00:47	1
Silver	39	J	73	5.7	ug/Kg	☼	06/10/20 16:50	06/13/20 02:04	1
Barium	120		0.33	0.058	mg/Kg	☼	06/10/20 09:10	06/13/20 00:47	1
Cadmium	0.11		0.076	0.0072	mg/Kg	☼	06/22/20 16:00	06/24/20 03:28	1
Chromium	5.9		0.16	0.062	mg/Kg	☼	06/10/20 09:10	06/13/20 00:47	1
Lead	5.9		0.12	0.015	mg/Kg	☼	06/10/20 09:10	06/13/20 00:47	1
Selenium	ND		0.41	0.11	mg/Kg	☼	06/10/20 09:10	06/17/20 19:14	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-05-10-12

Date Collected: 06/04/20 11:00

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-8

Matrix: Solid

Percent Solids: 91.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5		0.56	0.047	mg/Kg	☼	06/10/20 09:10	06/13/20 00:50	1
Silver	11	J	94	7.4	ug/Kg	☼	06/10/20 16:50	06/13/20 02:08	1
Barium	100		0.37	0.066	mg/Kg	☼	06/10/20 09:10	06/13/20 00:50	1
Cadmium	0.11		0.092	0.0087	mg/Kg	☼	06/22/20 16:00	06/24/20 03:32	1
Chromium	4.9		0.19	0.071	mg/Kg	☼	06/10/20 09:10	06/13/20 00:50	1
Lead	4.9		0.14	0.017	mg/Kg	☼	06/10/20 09:10	06/13/20 00:50	1
Selenium	ND		0.47	0.12	mg/Kg	☼	06/10/20 09:10	06/17/20 19:18	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-5-28-29

Date Collected: 06/04/20 11:40

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-9

Matrix: Solid

Percent Solids: 79.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.0		0.73	0.061	mg/Kg	☼	06/10/20 09:10	06/13/20 00:54	1
Silver	22	J	100	7.9	ug/Kg	☼	06/10/20 16:50	06/13/20 02:11	1
Barium	200		0.49	0.086	mg/Kg	☼	06/10/20 09:10	06/13/20 00:54	1
Cadmium	0.14		0.096	0.0090	mg/Kg	☼	06/22/20 16:00	06/24/20 03:35	1
Chromium	13		0.24	0.092	mg/Kg	☼	06/10/20 09:10	06/13/20 00:54	1
Lead	12		0.18	0.022	mg/Kg	☼	06/10/20 09:10	06/13/20 00:54	1
Selenium	0.19	J	0.61	0.16	mg/Kg	☼	06/10/20 09:10	06/17/20 19:21	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-3-12-14

Date Collected: 06/04/20 13:05

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-10

Matrix: Solid

Percent Solids: 96.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.2		0.56	0.047	mg/Kg	☼	06/10/20 09:10	06/13/20 00:58	1
Silver	ND		83	6.5	ug/Kg	☼	06/10/20 16:50	06/13/20 02:15	1
Barium	31		0.37	0.065	mg/Kg	☼	06/10/20 09:10	06/13/20 00:58	1
Cadmium	0.043	J	0.093	0.0087	mg/Kg	☼	06/22/20 16:00	06/24/20 03:50	1
Chromium	2.2		0.19	0.071	mg/Kg	☼	06/10/20 09:10	06/13/20 00:58	1
Lead	3.0		0.14	0.017	mg/Kg	☼	06/10/20 09:10	06/13/20 00:58	1
Selenium	ND		0.46	0.12	mg/Kg	☼	06/10/20 09:10	06/17/20 19:25	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-3-27-29

Date Collected: 06/04/20 13:40

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-11

Matrix: Solid

Percent Solids: 76.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.8		0.75	0.063	mg/Kg	☼	06/10/20 09:10	06/13/20 01:02	1
Silver	23	J	120	9.0	ug/Kg	☼	06/10/20 16:50	06/13/20 02:19	1
Barium	150		0.50	0.088	mg/Kg	☼	06/10/20 09:10	06/13/20 01:02	1
Cadmium	0.13		0.097	0.0091	mg/Kg	☼	06/22/20 16:00	06/24/20 03:54	1
Chromium	9.2		0.25	0.095	mg/Kg	☼	06/10/20 09:10	06/13/20 01:02	1
Lead	16		0.19	0.023	mg/Kg	☼	06/10/20 09:10	06/13/20 01:02	1
Selenium	0.18	J	0.62	0.17	mg/Kg	☼	06/10/20 09:10	06/17/20 19:28	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-11-GW

Date Collected: 06/03/20 11:30

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.027	ug/L		06/15/20 14:15	06/15/20 18:22	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 7470A - Mercury (CVAA)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-07-GW

Date Collected: 06/03/20 14:20

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.027	ug/L		06/15/20 14:15	06/15/20 18:24	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-09-GW

Date Collected: 06/03/20 13:00

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.027	ug/L		06/15/20 14:15	06/15/20 18:26	1

Method: 7471B - Mercury (CVAA)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-11-6.5-8

Date Collected: 06/03/20 10:25

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-1

Matrix: Solid

Percent Solids: 83.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	12	J	21	6.9	ug/Kg	☒	06/18/20 13:50	06/18/20 18:32	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-07-7-8

Date Collected: 06/03/20 13:50

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-3

Matrix: Solid

Percent Solids: 82.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	40		21	6.8	ug/Kg	☒	06/18/20 13:50	06/18/20 18:34	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-09-2-3

Date Collected: 06/03/20 12:40

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-5

Matrix: Solid

Percent Solids: 93.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	9.0	J	21	6.7	ug/Kg	☒	06/18/20 13:50	06/18/20 18:37	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-12-10-12

Date Collected: 06/04/20 10:00

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-7

Matrix: Solid

Percent Solids: 94.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	14	J	18	5.8	ug/Kg	☒	06/18/20 13:50	06/18/20 18:39	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-05-10-12

Date Collected: 06/04/20 11:00

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-8

Matrix: Solid

Percent Solids: 91.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		21	6.7	ug/Kg	☒	06/18/20 13:50	06/18/20 18:41	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-5-28-29

Date Collected: 06/04/20 11:40

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-9

Matrix: Solid

Percent Solids: 79.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	24		21	6.9	ug/Kg	☒	06/18/20 13:50	06/18/20 18:44	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-3-12-14

Date Collected: 06/04/20 13:05

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-10

Matrix: Solid

Percent Solids: 96.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		18	5.9	ug/Kg	☒	06/18/20 13:50	06/18/20 18:46	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 7471B - Mercury (CVAA)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-3-27-29

Date Collected: 06/04/20 13:40

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-11

Matrix: Solid

Percent Solids: 76.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	16	J	23	7.6	ug/Kg	☼	06/18/20 13:50	06/18/20 18:48	1

General Chemistry

Client Sample ID: CDOT I270 Env-05/06_2020-SB-11-6.5-8

Date Collected: 06/03/20 10:25

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-1

Matrix: Solid

Percent Solids: 83.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	16.7		0.1	0.1	%			06/05/20 10:52	1
Percent Solids	83.3		0.1	0.1	%			06/05/20 10:52	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-07-7-8

Date Collected: 06/03/20 13:50

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-3

Matrix: Solid

Percent Solids: 82.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	17.9		0.1	0.1	%			06/05/20 10:52	1
Percent Solids	82.1		0.1	0.1	%			06/05/20 10:52	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-09-2-3

Date Collected: 06/03/20 12:40

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-5

Matrix: Solid

Percent Solids: 93.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.5		0.1	0.1	%			06/05/20 10:52	1
Percent Solids	93.5		0.1	0.1	%			06/05/20 10:52	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-12-10-12

Date Collected: 06/04/20 10:00

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-7

Matrix: Solid

Percent Solids: 94.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	5.4		0.1	0.1	%			06/05/20 10:52	1
Percent Solids	94.6		0.1	0.1	%			06/05/20 10:52	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-05-10-12

Date Collected: 06/04/20 11:00

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-8

Matrix: Solid

Percent Solids: 91.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	8.6		0.1	0.1	%			06/05/20 10:52	1
Percent Solids	91.4		0.1	0.1	%			06/05/20 10:52	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-5-28-29

Date Collected: 06/04/20 11:40

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-9

Matrix: Solid

Percent Solids: 79.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	20.3		0.1	0.1	%			06/05/20 10:52	1
Percent Solids	79.7		0.1	0.1	%			06/05/20 10:52	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-3-12-14

Date Collected: 06/04/20 13:05

Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-10

Matrix: Solid

Percent Solids: 96.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.0		0.1	0.1	%			06/05/20 10:52	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

General Chemistry (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-3-12-14
Date Collected: 06/04/20 13:05
Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-10
Matrix: Solid
Percent Solids: 96.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	96.0		0.1	0.1	%			06/05/20 10:52	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-3-27-29
Date Collected: 06/04/20 13:40
Date Received: 06/04/20 14:40

Lab Sample ID: 280-137283-11
Matrix: Solid
Percent Solids: 76.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	23.2		0.1	0.1	%			06/05/20 10:52	1
Percent Solids	76.8		0.1	0.1	%			06/05/20 10:52	1

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (58-140)	TOL (80-126)	BFB (76-127)	DBFM (75-121)
280-137283-1	CDOT I270 Env-05/06_2020-SB	108	97	96	102
280-137283-3	CDOT I270 Env-05/06_2020-SB-07-7-8	106	99	105	102
280-137283-5	CDOT I270 Env-05/06_2020-SB-09-2-3	106	97	98	103
280-137283-7	CDOT I270 Env-05/06_2020-SB-12-10-12	106	98	101	101
280-137283-8	CDOT I270 Env-05/06_2020-SB-05-10-12	105	97	99	102
280-137283-9	CDOT I270 Env-05/06_2020-SB-5-28-29	108	96	98	103
280-137283-10	CDOT I270 Env-05/06_2020-SB-3-12-14	104	96	97	102
280-137283-11	CDOT I270 Env-05/06_2020-SB-3-27-29	107	96	98	102
280-137283-12	CDOT I270 Env-05/06_2020-SB-TB-03	102	98	99	101
LCS 280-497711/1-A	Lab Control Sample	101	98	96	101
LCSD 280-497711/2-A	Lab Control Sample Dup	103	96	96	102
MB 280-497711/3-A	Method Blank	103	97	97	102

Surrogate Legend

- DCA = 1,2-Dichloroethane-d4 (Surr)
- TOL = Toluene-d8 (Surr)
- BFB = 4-Bromofluorobenzene (Surr)
- DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (70-127)	TOL (80-125)	BFB (78-120)	DBFM (77-120)
280-137283-2	CDOT I270 Env-05/06_2020-SB	106	99	105	101
280-137283-4	CDOT I270 Env-05/06_2020-SB-07-GW	105	99	102	101
280-137283-6	CDOT I270 Env-05/06_2020-SB-09-GW	105	101	101	100
LCS 280-498705/5	Lab Control Sample	103	100	102	99
LCSD 280-498705/6	Lab Control Sample Dup	102	100	105	99
MB 280-498705/10	Method Blank	107	99	103	100

Surrogate Legend

- DCA = 1,2-Dichloroethane-d4 (Surr)
- TOL = Toluene-d8 (Surr)
- BFB = 4-Bromofluorobenzene (Surr)
- DBFM = Dibromofluoromethane (Surr)

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (35-120)	FBP (46-120)	2FP (43-120)	NBZ (46-120)	PHL (46-120)	TPHL (46-120)
280-137283-1	CDOT I270 Env-05/06_2020-SB	74	71	68	64	72	90
280-137283-3	CDOT I270	70	69	72	68	75	91
280-137283-5	Env-05/06_2020-SB-07-7-8						
	CDOT I270	67	52	44	43 X	50	88
	Env-05/06_2020-SB-09-2-3						
280-137283-7	CDOT I270	69	69	68	68	74	89
	Env-05/06_2020-SB-12-10-12						
280-137283-8	CDOT I270	62	69	73	66	77	90
	Env-05/06_2020-SB-05-10-12						
280-137283-8 MS	CDOT I270	71	69	74	67	76	91
	Env-05/06_2020-SB-05-10-12						
280-137283-8 MSD	CDOT I270	70	64	62	60	65	91
	Env-05/06_2020-SB-05-10-12						
280-137283-9	CDOT I270	61	66	68	63	73	88
	Env-05/06_2020-SB-5-28-29						
280-137283-10	CDOT I270	65	70	76	67	80	92
	Env-05/06_2020-SB-3-12-14						
280-137283-11	CDOT I270	64	65	71	66	75	93
	Env-05/06_2020-SB-3-27-29						
LCS 280-498955/2-A	Lab Control Sample	78	79	78	73	77	98
MB 280-498955/1-A	Method Blank	71	73	76	68	77	98

Surrogate Legend

- TBP = 2,4,6-Tribromophenol (Surr)
- FBP = 2-Fluorobiphenyl
- 2FP = 2-Fluorophenol (Surr)
- NBZ = Nitrobenzene-d5 (Surr)
- PHL = Phenol-d5 (Surr)
- TPHL = Terphenyl-d14 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (48-120)	2FP (41-120)	TBP (42-131)	NBZ (42-120)	PHL (45-124)	TPHL (20-130)
280-137283-2	CDOT I270 Env-05/06_2020-SB	55	64	71	71	64	23
280-137283-4	CDOT I270	49	64	75	75	63	23
	Env-05/06_2020-SB-07-GW						
280-137283-6	CDOT I270	52	56	54	76	58	24
	Env-05/06_2020-SB-09-GW						
LCS 280-497769/2-A	Lab Control Sample	73	81	93	81	87	109
LCS 280-497769/3-A	Lab Control Sample Dup	75	82	97	83	84	109
MB 280-497769/1-A	Method Blank	38 X	87	87	80	91	106

Surrogate Legend

- FBP = 2-Fluorobiphenyl
- 2FP = 2-Fluorophenol (Surr)
- TBP = 2,4,6-Tribromophenol (Surr)
- NBZ = Nitrobenzene-d5 (Surr)
- PHL = Phenol-d5 (Surr)
- TPHL = Terphenyl-d14 (Surr)

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TFT1 (77-123)
280-137283-1	CDOT I270 Env-05/06_2020-SB	88
280-137283-1	CDOT I270	80
280-137283-3	Env-05/06_2020-SB-11-6.5-8	
280-137283-3	CDOT I270	87
280-137283-3	Env-05/06_2020-SB-07-7-8	
280-137283-3	CDOT I270	80
280-137283-5	Env-05/06_2020-SB-07-7-8	
280-137283-5	CDOT I270	89
280-137283-5	Env-05/06_2020-SB-09-2-3	
280-137283-5	CDOT I270	79
280-137283-7	Env-05/06_2020-SB-09-2-3	
280-137283-7	CDOT I270	100
280-137283-8	Env-05/06_2020-SB-12-10-12	
280-137283-8	CDOT I270	97
280-137283-9	Env-05/06_2020-SB-05-10-12	
280-137283-9	CDOT I270	97
280-137283-10	Env-05/06_2020-SB-5-28-29	
280-137283-10	CDOT I270	99
280-137283-11	Env-05/06_2020-SB-3-12-14	
280-137283-11	CDOT I270	98
280-137283-12	Env-05/06_2020-SB-3-27-29	
280-137283-12	CDOT I270	93
280-137283-12	Env-05/06_2020-SB-TB-03	
280-137283-12	CDOT I270	78
280-137283-12	Env-05/06_2020-SB-TB-03	
LCS 280-498797/1-A	Lab Control Sample	90
LCS 280-499104/1-A	Lab Control Sample	94
LCSD 280-498797/2-A	Lab Control Sample Dup	90
LCSD 280-499104/2-A	Lab Control Sample Dup	93
MB 280-498655/3-A	Method Blank	89
MB 280-498797/3-A	Method Blank	82
MB 280-498971/3-A	Method Blank	96
MB 280-499104/3-A	Method Blank	95

Surrogate Legend

TFT = a,a,a-Trifluorotoluene

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TFT1 (82-110)
280-137283-2	CDOT I270 Env-05/06_2020-SB	93
280-137283-4	CDOT I270	89
280-137283-6	Env-05/06_2020-SB-07-GW	
280-137283-6	CDOT I270	90
280-137283-6	Env-05/06_2020-SB-09-GW	
LCS 280-498931/29	Lab Control Sample	95
LCSD 280-498931/30	Lab Control Sample Dup	96
MB 280-498931/31	Method Blank	98

Surrogate Legend

TFT = a,a,a-Trifluorotoluene

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTPH1 (49-115)
280-137283-1	CDOT I270 Env-05/06_2020-SB	61
280-137283-1 MS	CDOT I270	71
280-137283-1 MS	Env-05/06_2020-SB-11-6.5-8	
280-137283-1 MS	CDOT I270	22 X
280-137283-1 MSD	Env-05/06_2020-SB-11-6.5-8	
280-137283-1 MSD	CDOT I270	63
280-137283-1 MSD	Env-05/06_2020-SB-11-6.5-8	
280-137283-1 MSD	CDOT I270	73
280-137283-3	Env-05/06_2020-SB-11-6.5-8	
280-137283-3	CDOT I270	55
280-137283-5	Env-05/06_2020-SB-07-7-8	
280-137283-5	CDOT I270	69
280-137283-7	Env-05/06_2020-SB-09-2-3	
280-137283-7	CDOT I270	69
280-137283-8	Env-05/06_2020-SB-12-10-12	
280-137283-8	CDOT I270	69
280-137283-9	Env-05/06_2020-SB-05-10-12	
280-137283-9	CDOT I270	55
280-137283-10	Env-05/06_2020-SB-5-28-29	
280-137283-10	CDOT I270	62
280-137283-11	Env-05/06_2020-SB-3-12-14	
280-137283-11	CDOT I270	38 X
LCS 280-499036/2-A	Lab Control Sample	79
LCS 280-499036/3-A	Lab Control Sample	76
MB 280-499036/1-A	Method Blank	88

Surrogate Legend

OTPH = o-Terphenyl (Surr)

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTPH1 (50-115)
280-137283-2	CDOT I270 Env-05/06_2020-SB	92
280-137283-4	CDOT I270	86
280-137283-6	Env-05/06_2020-SB-07-GW	
280-137283-6	CDOT I270	82
280-137283-6	Env-05/06_2020-SB-09-GW	
LCS 280-497993/2-A	Lab Control Sample	97
LCS 280-497993/3-A	Lab Control Sample	106
LCS 280-498068/2-A	Lab Control Sample	90
LCS 280-498068/3-A	Lab Control Sample	102
MB 280-497993/1-A	Method Blank	85
MB 280-498068/1-A	Method Blank	89

Surrogate Legend

OTPH = o-Terphenyl (Surr)

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-497711/3-A

Matrix: Solid

Analysis Batch: 497709

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 497711

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1-Trichloroethane	ND		5.0	2.0	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.29	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
1,1,2-Trichloroethane	ND		5.0	0.88	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
1,1,2-Trichlorotrifluoroethane	ND		20	1.7	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
1,1-Dichloroethane	ND		5.0	0.21	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
1,1-Dichloroethene	ND		5.0	0.59	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
1,2,3-Trichlorobenzene	ND		5.0	0.81	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
1,2,4-Trichlorobenzene	ND		5.0	0.73	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
1,2-Dibromo-3-Chloropropane	ND		10	3.7	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
1,2-Dibromoethane	ND		5.0	0.52	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
1,2-Dichlorobenzene	ND		5.0	1.9	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
1,2-Dichloroethane	ND		5.0	0.70	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
1,2-Dichloropropane	ND		5.0	0.55	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
1,3-Dichlorobenzene	ND		5.0	0.48	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
1,4-Dichlorobenzene	ND		5.0	0.25	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
1,4-Dioxane	ND		500	56	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
2-Butanone (MEK)	ND		20	3.9	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
2-Hexanone	ND		20	4.9	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.4	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
Acetone	ND		72	36	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
Benzene	ND		5.0	0.15	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
Bromoform	ND		5.1	2.6	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
Bromomethane	ND		10	1.4	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
Carbon disulfide	ND		5.0	1.7	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
Carbon tetrachloride	ND		5.0	2.0	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
Chlorobenzene	ND		5.0	2.1	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
Chlorobromomethane	ND		5.0	2.5	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
Chlorodibromomethane	ND		5.0	2.3	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
Chloroethane	ND		10	2.0	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
Chloroform	ND		10	0.29	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
Chloromethane	ND		10	0.77	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
cis-1,2-Dichloroethene	ND		2.5	0.20	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
cis-1,3-Dichloropropene	ND		5.0	0.10	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
Cyclohexane	ND		5.0	1.8	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
Dichlorobromomethane	ND		5.0	2.1	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
Dichlorodifluoromethane	ND		10	2.7	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
Ethylbenzene	ND		5.0	0.31	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
Isopropylbenzene	ND		5.0	2.4	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
Methyl acetate	ND		10	2.8	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
Methyl tert-butyl ether	ND		20	2.1	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
Methylcyclohexane	ND		5.0	0.42	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
Methylene Chloride	ND		5.0	1.6	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
m-Xylene & p-Xylene	ND		2.5	1.0	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
o-Xylene	ND		2.5	0.27	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
Styrene	ND		5.0	0.28	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
Tetrachloroethene	ND		5.0	1.9	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
Toluene	ND		5.0	0.23	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
trans-1,2-Dichloroethene	ND		2.5	0.39	ug/Kg		06/07/20 10:06	06/07/20 11:26	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-497711/3-A
Matrix: Solid
Analysis Batch: 497709

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 497711

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
trans-1,3-Dichloropropene	ND		5.0	0.083	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
Trichloroethene	ND		5.0	1.9	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
Trichlorofluoromethane	ND		10	3.2	ug/Kg		06/07/20 10:06	06/07/20 11:26	1
Vinyl chloride	ND		5.0	1.3	ug/Kg		06/07/20 10:06	06/07/20 11:26	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	103		58 - 140	06/07/20 10:06	06/07/20 11:26	1
4-Bromofluorobenzene (Surr)	97		76 - 127	06/07/20 10:06	06/07/20 11:26	1
Dibromofluoromethane (Surr)	102		75 - 121	06/07/20 10:06	06/07/20 11:26	1
Toluene-d8 (Surr)	97		80 - 126	06/07/20 10:06	06/07/20 11:26	1

Lab Sample ID: LCS 280-497711/1-A
Matrix: Solid
Analysis Batch: 497709

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497711

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
		Result	Qualifier					
1,1,1-Trichloroethane	50.0	48.3		ug/Kg		97		70 - 135
1,1,1,2-Tetrachloroethane	50.0	41.3		ug/Kg		83		65 - 135
1,1,2-Trichloroethane	50.0	45.1		ug/Kg		90		78 - 135
1,1,2-Trichlorotrifluoroethane	50.0	49.3		ug/Kg		99		50 - 150
1,1-Dichloroethane	50.0	48.2		ug/Kg		96		70 - 135
1,1-Dichloroethene	50.0	48.2		ug/Kg		96		79 - 135
1,2,3-Trichlorobenzene	50.0	49.3		ug/Kg		99		62 - 135
1,2,4-Trichlorobenzene	50.0	50.1		ug/Kg		100		65 - 135
1,2-Dibromo-3-Chloropropane	50.0	41.3		ug/Kg		83		66 - 150
1,2-Dibromoethane	50.0	45.8		ug/Kg		92		76 - 135
1,2-Dichlorobenzene	50.0	46.8		ug/Kg		94		73 - 135
1,2-Dichloroethane	50.0	46.4		ug/Kg		93		69 - 135
1,2-Dichloropropane	50.0	48.9		ug/Kg		98		72 - 121
1,3-Dichlorobenzene	50.0	48.1		ug/Kg		96		69 - 135
1,4-Dichlorobenzene	50.0	48.5		ug/Kg		97		73 - 135
1,4-Dioxane	1000	842		ug/Kg		84		52 - 135
2-Butanone (MEK)	200	180		ug/Kg		90		45 - 177
2-Hexanone	200	170		ug/Kg		85		67 - 150
4-Methyl-2-pentanone (MIBK)	200	186		ug/Kg		93		69 - 150
Acetone	200	201		ug/Kg		100		65 - 150
Benzene	50.0	47.7		ug/Kg		95		75 - 135
Bromoform	50.0	43.9		ug/Kg		88		77 - 135
Bromomethane	50.0	50.0		ug/Kg		100		52 - 135
Carbon disulfide	50.0	47.4		ug/Kg		95		45 - 150
Carbon tetrachloride	50.0	47.6		ug/Kg		95		69 - 138
Chlorobenzene	50.0	47.8		ug/Kg		96		78 - 135
Chlorobromomethane	50.0	48.8		ug/Kg		98		74 - 135
Chlorodibromomethane	50.0	45.9		ug/Kg		92		77 - 135
Chloroethane	50.0	47.8		ug/Kg		96		51 - 145
Chloroform	50.0	46.9		ug/Kg		94		73 - 123
Chloromethane	50.0	45.5		ug/Kg		91		41 - 138
cis-1,2-Dichloroethene	50.0	49.0		ug/Kg		98		76 - 135

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-497711/1-A
Matrix: Solid
Analysis Batch: 497709

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497711

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,3-Dichloropropene	50.0	46.4		ug/Kg		93	71 - 135
Cyclohexane	50.0	46.8		ug/Kg		94	50 - 150
Dichlorobromomethane	50.0	46.6		ug/Kg		93	73 - 135
Dichlorodifluoromethane	50.0	38.8		ug/Kg		78	32 - 152
Ethylbenzene	50.0	47.6		ug/Kg		95	73 - 125
Isopropylbenzene	50.0	47.3		ug/Kg		95	74 - 137
Methyl acetate	100	93.7		ug/Kg		94	50 - 150
Methyl tert-butyl ether	50.0	46.2		ug/Kg		92	71 - 141
Methylcyclohexane	50.0	45.0		ug/Kg		90	50 - 150
Methylene Chloride	50.0	47.2		ug/Kg		94	76 - 136
m-Xylene & p-Xylene	50.0	48.7		ug/Kg		97	77 - 135
o-Xylene	50.0	47.6		ug/Kg		95	75 - 135
Styrene	50.0	47.5		ug/Kg		95	76 - 135
Tetrachloroethene	50.0	49.3		ug/Kg		99	76 - 135
Toluene	50.0	48.2		ug/Kg		96	77 - 122
trans-1,2-Dichloroethene	50.0	49.1		ug/Kg		98	77 - 135
trans-1,3-Dichloropropene	50.0	46.3		ug/Kg		93	71 - 135
Trichloroethene	50.0	47.6		ug/Kg		95	77 - 135
Trichlorofluoromethane	50.0	48.5		ug/Kg		97	48 - 150
Vinyl chloride	50.0	49.1		ug/Kg		98	43 - 145

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		58 - 140
4-Bromofluorobenzene (Surr)	96		76 - 127
Dibromofluoromethane (Surr)	101		75 - 121
Toluene-d8 (Surr)	98		80 - 126

Lab Sample ID: LCSD 280-497711/2-A
Matrix: Solid
Analysis Batch: 497709

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 497711

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
1,1,1-Trichloroethane	50.0	48.8		ug/Kg		98	70 - 135	1	20
1,1,2,2-Tetrachloroethane	50.0	43.5		ug/Kg		87	65 - 135	5	21
1,1,2-Trichloroethane	50.0	45.7		ug/Kg		91	78 - 135	1	20
1,1,2-Trichlorotrifluoroethane	50.0	49.0		ug/Kg		98	50 - 150	1	20
1,1-Dichloroethane	50.0	49.1		ug/Kg		98	70 - 135	2	20
1,1-Dichloroethene	50.0	49.0		ug/Kg		98	79 - 135	2	20
1,2,3-Trichlorobenzene	50.0	50.3		ug/Kg		101	62 - 135	2	31
1,2,4-Trichlorobenzene	50.0	50.3		ug/Kg		101	65 - 135	0	26
1,2-Dibromo-3-Chloropropane	50.0	47.1		ug/Kg		94	66 - 150	13	28
1,2-Dibromoethane	50.0	46.6		ug/Kg		93	76 - 135	2	20
1,2-Dichlorobenzene	50.0	47.0		ug/Kg		94	73 - 135	1	20
1,2-Dichloroethane	50.0	47.6		ug/Kg		95	69 - 135	3	20
1,2-Dichloropropane	50.0	49.8		ug/Kg		100	72 - 121	2	20
1,3-Dichlorobenzene	50.0	48.6		ug/Kg		97	69 - 135	1	20
1,4-Dichlorobenzene	50.0	48.4		ug/Kg		97	73 - 135	0	22
1,4-Dioxane	1000	942		ug/Kg		94	52 - 135	11	30

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-497711/2-A
Matrix: Solid
Analysis Batch: 497709

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 497711

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Butanone (MEK)	200	204		ug/Kg		102	45 - 177	13	32
2-Hexanone	200	188		ug/Kg		94	67 - 150	10	29
4-Methyl-2-pentanone (MIBK)	200	204		ug/Kg		102	69 - 150	9	25
Acetone	200	220		ug/Kg		110	65 - 150	9	28
Benzene	50.0	48.2		ug/Kg		96	75 - 135	1	20
Bromoform	50.0	45.4		ug/Kg		91	77 - 135	4	20
Bromomethane	50.0	50.1		ug/Kg		100	52 - 135	0	22
Carbon disulfide	50.0	47.7		ug/Kg		95	45 - 150	1	24
Carbon tetrachloride	50.0	47.9		ug/Kg		96	69 - 138	1	20
Chlorobenzene	50.0	47.3		ug/Kg		95	78 - 135	1	20
Chlorobromomethane	50.0	49.1		ug/Kg		98	74 - 135	1	21
Chlorodibromomethane	50.0	47.2		ug/Kg		94	77 - 135	3	20
Chloroethane	50.0	48.5		ug/Kg		97	51 - 145	1	22
Chloroform	50.0	48.1		ug/Kg		96	73 - 123	3	20
Chloromethane	50.0	45.7		ug/Kg		91	41 - 138	0	25
cis-1,2-Dichloroethene	50.0	50.2		ug/Kg		100	76 - 135	2	20
cis-1,3-Dichloropropene	50.0	46.7		ug/Kg		93	71 - 135	1	20
Cyclohexane	50.0	47.3		ug/Kg		95	50 - 150	1	30
Dichlorobromomethane	50.0	47.1		ug/Kg		94	73 - 135	1	20
Dichlorodifluoromethane	50.0	38.9		ug/Kg		78	32 - 152	0	28
Ethylbenzene	50.0	47.1		ug/Kg		94	73 - 125	1	20
Isopropylbenzene	50.0	47.8		ug/Kg		96	74 - 137	1	20
Methyl acetate	100	103		ug/Kg		103	50 - 150	9	30
Methyl tert-butyl ether	50.0	47.8		ug/Kg		96	71 - 141	3	20
Methylcyclohexane	50.0	45.6		ug/Kg		91	50 - 150	1	30
Methylene Chloride	50.0	47.2		ug/Kg		94	76 - 136	0	21
m-Xylene & p-Xylene	50.0	47.0		ug/Kg		94	77 - 135	3	20
o-Xylene	50.0	47.7		ug/Kg		95	75 - 135	0	20
Styrene	50.0	47.4		ug/Kg		95	76 - 135	0	20
Tetrachloroethene	50.0	49.2		ug/Kg		98	76 - 135	0	20
Toluene	50.0	48.6		ug/Kg		97	77 - 122	1	20
trans-1,2-Dichloroethene	50.0	49.4		ug/Kg		99	77 - 135	1	20
trans-1,3-Dichloropropene	50.0	47.0		ug/Kg		94	71 - 135	2	20
Trichloroethene	50.0	48.4		ug/Kg		97	77 - 135	2	20
Trichlorofluoromethane	50.0	47.6		ug/Kg		95	48 - 150	2	33
Vinyl chloride	50.0	48.8		ug/Kg		98	43 - 145	1	24

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	103		58 - 140
4-Bromofluorobenzene (Surr)	96		76 - 127
Dibromofluoromethane (Surr)	102		75 - 121
Toluene-d8 (Surr)	96		80 - 126

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-498705/10
Matrix: Water
Analysis Batch: 498705

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			06/15/20 10:15	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			06/15/20 10:15	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			06/15/20 10:15	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			06/15/20 10:15	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/15/20 10:15	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			06/15/20 10:15	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			06/15/20 10:15	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			06/15/20 10:15	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			06/15/20 10:15	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			06/15/20 10:15	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			06/15/20 10:15	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			06/15/20 10:15	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/15/20 10:15	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			06/15/20 10:15	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			06/15/20 10:15	1
1,4-Dioxane	ND		200	19	ug/L			06/15/20 10:15	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			06/15/20 10:15	1
2-Hexanone	ND		5.0	1.7	ug/L			06/15/20 10:15	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			06/15/20 10:15	1
Acetone	ND		10	1.9	ug/L			06/15/20 10:15	1
Benzene	ND		1.0	0.16	ug/L			06/15/20 10:15	1
Bromoform	ND		1.0	0.46	ug/L			06/15/20 10:15	1
Bromomethane	ND		2.0	0.21	ug/L			06/15/20 10:15	1
Carbon disulfide	ND		2.0	0.17	ug/L			06/15/20 10:15	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			06/15/20 10:15	1
Chlorobenzene	ND		1.0	0.17	ug/L			06/15/20 10:15	1
Chlorobromomethane	ND		1.0	0.10	ug/L			06/15/20 10:15	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			06/15/20 10:15	1
Chloroethane	ND		2.0	0.41	ug/L			06/15/20 10:15	1
Chloroform	ND		1.0	0.16	ug/L			06/15/20 10:15	1
Chloromethane	ND		2.0	0.30	ug/L			06/15/20 10:15	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/15/20 10:15	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			06/15/20 10:15	1
Cyclohexane	ND		2.0	0.28	ug/L			06/15/20 10:15	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			06/15/20 10:15	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			06/15/20 10:15	1
Ethylbenzene	ND		1.0	0.16	ug/L			06/15/20 10:15	1
Isopropylbenzene	ND		1.0	0.19	ug/L			06/15/20 10:15	1
Methyl acetate	ND		5.0	1.6	ug/L			06/15/20 10:15	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			06/15/20 10:15	1
Methylcyclohexane	ND		1.0	0.10	ug/L			06/15/20 10:15	1
Methylene Chloride	ND		2.0	0.94	ug/L			06/15/20 10:15	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			06/15/20 10:15	1
o-Xylene	ND		1.0	0.19	ug/L			06/15/20 10:15	1
Styrene	ND		1.0	0.36	ug/L			06/15/20 10:15	1
Tetrachloroethene	ND		1.0	0.20	ug/L			06/15/20 10:15	1
Toluene	ND		1.0	0.17	ug/L			06/15/20 10:15	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/15/20 10:15	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-498705/10
Matrix: Water
Analysis Batch: 498705

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			06/15/20 10:15	1
Trichloroethene	ND		1.0	0.16	ug/L			06/15/20 10:15	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			06/15/20 10:15	1
Vinyl chloride	ND		1.0	0.10	ug/L			06/15/20 10:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		70 - 127		06/15/20 10:15	1
4-Bromofluorobenzene (Surr)	103		78 - 120		06/15/20 10:15	1
Dibromofluoromethane (Surr)	100		77 - 120		06/15/20 10:15	1
Toluene-d8 (Surr)	99		80 - 125		06/15/20 10:15	1

Lab Sample ID: LCS 280-498705/5
Matrix: Water
Analysis Batch: 498705

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	18.5		ug/L		74	65 - 135
1,1,1,2-Tetrachloroethane	25.0	21.7		ug/L		87	58 - 135
1,1,2-Trichloroethane	25.0	22.8		ug/L		91	64 - 135
1,1,2-Trichlorotrifluoroethane	25.0	17.6		ug/L		70	65 - 140
1,1-Dichloroethane	25.0	20.6		ug/L		82	65 - 135
1,1-Dichloroethene	25.0	19.6		ug/L		78	65 - 136
1,2,3-Trichlorobenzene	25.0	20.5		ug/L		82	60 - 135
1,2,4-Trichlorobenzene	25.0	19.0		ug/L		76	58 - 135
1,2-Dibromo-3-Chloropropane	25.0	20.4		ug/L		82	57 - 135
1,2-Dibromoethane	25.0	20.7		ug/L		83	65 - 135
1,2-Dichlorobenzene	25.0	21.0		ug/L		84	65 - 135
1,2-Dichloroethane	25.0	22.9		ug/L		92	65 - 135
1,2-Dichloropropane	25.0	21.1		ug/L		85	64 - 135
1,3-Dichlorobenzene	25.0	21.0		ug/L		84	65 - 135
1,4-Dichlorobenzene	25.0	21.1		ug/L		84	65 - 135
1,4-Dioxane	500	405		ug/L		81	31 - 147
2-Butanone (MEK)	100	99.0		ug/L		99	44 - 177
2-Hexanone	100	95.9		ug/L		96	57 - 139
4-Methyl-2-pentanone (MIBK)	100	89.9		ug/L		90	60 - 150
Acetone	100	88.2		ug/L		88	39 - 156
Benzene	25.0	20.4		ug/L		81	65 - 135
Bromoform	25.0	18.9		ug/L		76	62 - 135
Bromomethane	25.0	21.5		ug/L		86	45 - 135
Carbon disulfide	25.0	18.1		ug/L		73	55 - 143
Carbon tetrachloride	25.0	19.1		ug/L		76	65 - 135
Chlorobenzene	25.0	20.5		ug/L		82	65 - 135
Chlorobromomethane	25.0	20.1		ug/L		80	65 - 135
Chlorodibromomethane	25.0	19.4		ug/L		78	65 - 135
Chloroethane	25.0	24.7		ug/L		99	46 - 136
Chloroform	25.0	20.6		ug/L		82	65 - 135
Chloromethane	25.0	22.9		ug/L		92	34 - 145
cis-1,2-Dichloroethene	25.0	21.6		ug/L		87	65 - 135

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-498705/5
Matrix: Water
Analysis Batch: 498705

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	LCS LCS	
								%Recovery	Qualifier
cis-1,3-Dichloropropene	25.0	20.9		ug/L		84	65 - 135		
Cyclohexane	25.0	19.9		ug/L		80	62 - 135		
Dichlorobromomethane	25.0	22.3		ug/L		89	65 - 135		
Dichlorodifluoromethane	25.0	24.3		ug/L		97	43 - 142		
Ethylbenzene	25.0	21.4		ug/L		86	65 - 135		
Isopropylbenzene	25.0	20.8		ug/L		83	65 - 135		
Methyl acetate	50.0	50.1		ug/L		100	52 - 135		
Methyl tert-butyl ether	25.0	21.9		ug/L		88	54 - 135		
Methylcyclohexane	25.0	20.2		ug/L		81	63 - 135		
Methylene Chloride	25.0	20.3		ug/L		81	54 - 141		
m-Xylene & p-Xylene	25.0	19.2		ug/L		77	65 - 135		
o-Xylene	25.0	19.6		ug/L		78	65 - 135		
Styrene	25.0	21.3		ug/L		85	65 - 135		
Tetrachloroethene	25.0	17.9		ug/L		72	65 - 135		
Toluene	25.0	20.1		ug/L		80	65 - 135		
trans-1,2-Dichloroethene	25.0	20.8		ug/L		83	65 - 135		
trans-1,3-Dichloropropene	25.0	18.7		ug/L		75	65 - 135		
Trichloroethene	25.0	19.9		ug/L		80	65 - 135		
Trichlorofluoromethane	25.0	24.7		ug/L		99	53 - 137		
Vinyl chloride	25.0	24.7		ug/L		99	40 - 137		
Surrogate									
1,2-Dichloroethane-d4 (Surr)						103	70 - 127		
4-Bromofluorobenzene (Surr)						102	78 - 120		
Dibromofluoromethane (Surr)						99	77 - 120		
Toluene-d8 (Surr)						100	80 - 125		

Lab Sample ID: LCSD 280-498705/6
Matrix: Water
Analysis Batch: 498705

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD
									Limit
1,1,1-Trichloroethane	25.0	19.2		ug/L		77	65 - 135	4	20
1,1,2,2-Tetrachloroethane	25.0	22.4		ug/L		90	58 - 135	3	20
1,1,2-Trichloroethane	25.0	23.3		ug/L		93	64 - 135	2	27
1,1,2-Trichlorotrifluoroethane	25.0	18.0		ug/L		72	65 - 140	2	20
1,1-Dichloroethane	25.0	22.0		ug/L		88	65 - 135	7	21
1,1-Dichloroethene	25.0	18.7		ug/L		75	65 - 136	5	20
1,2,3-Trichlorobenzene	25.0	21.2		ug/L		85	60 - 135	3	36
1,2,4-Trichlorobenzene	25.0	19.7		ug/L		79	58 - 135	4	25
1,2-Dibromo-3-Chloropropane	25.0	20.8		ug/L		83	57 - 135	2	22
1,2-Dibromoethane	25.0	21.8		ug/L		87	65 - 135	5	27
1,2-Dichlorobenzene	25.0	21.9		ug/L		88	65 - 135	4	20
1,2-Dichloroethane	25.0	23.3		ug/L		93	65 - 135	2	20
1,2-Dichloropropane	25.0	21.9		ug/L		87	64 - 135	3	20
1,3-Dichlorobenzene	25.0	21.8		ug/L		87	65 - 135	4	20
1,4-Dichlorobenzene	25.0	21.7		ug/L		87	65 - 135	3	23
1,4-Dioxane	500	453		ug/L		91	31 - 147	11	30

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-498705/6

Matrix: Water

Analysis Batch: 498705

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Butanone (MEK)	100	102		ug/L		102	44 - 177	3	32
2-Hexanone	100	99.0		ug/L		99	57 - 139	3	25
4-Methyl-2-pentanone (MIBK)	100	93.3		ug/L		93	60 - 150	4	22
Acetone	100	90.2		ug/L		90	39 - 156	2	23
Benzene	25.0	21.2		ug/L		85	65 - 135	4	20
Bromoform	25.0	19.0		ug/L		76	62 - 135	1	27
Bromomethane	25.0	22.4		ug/L		89	45 - 135	4	33
Carbon disulfide	25.0	18.5		ug/L		74	55 - 143	2	20
Carbon tetrachloride	25.0	20.1		ug/L		80	65 - 135	5	21
Chlorobenzene	25.0	21.2		ug/L		85	65 - 135	3	20
Chlorobromomethane	25.0	21.0		ug/L		84	65 - 135	4	29
Chlorodibromomethane	25.0	19.3		ug/L		77	65 - 135	1	20
Chloroethane	25.0	24.7		ug/L		99	46 - 136	0	25
Chloroform	25.0	21.4		ug/L		86	65 - 135	4	20
Chloromethane	25.0	24.2		ug/L		97	34 - 145	5	24
cis-1,2-Dichloroethene	25.0	22.2		ug/L		89	65 - 135	3	20
cis-1,3-Dichloropropene	25.0	21.3		ug/L		85	65 - 135	2	26
Cyclohexane	25.0	20.8		ug/L		83	62 - 135	4	20
Dichlorobromomethane	25.0	22.9		ug/L		92	65 - 135	3	20
Dichlorodifluoromethane	25.0	25.0		ug/L		100	43 - 142	3	30
Ethylbenzene	25.0	22.4		ug/L		89	65 - 135	4	20
Isopropylbenzene	25.0	21.9		ug/L		88	65 - 135	5	20
Methyl acetate	50.0	50.4		ug/L		101	52 - 135	1	27
Methyl tert-butyl ether	25.0	22.4		ug/L		90	54 - 135	2	21
Methylcyclohexane	25.0	20.8		ug/L		83	63 - 135	3	20
Methylene Chloride	25.0	22.1		ug/L		88	54 - 141	8	26
m-Xylene & p-Xylene	25.0	20.2		ug/L		81	65 - 135	5	20
o-Xylene	25.0	20.0		ug/L		80	65 - 135	2	20
Styrene	25.0	22.3		ug/L		89	65 - 135	5	26
Tetrachloroethene	25.0	18.8		ug/L		75	65 - 135	5	20
Toluene	25.0	21.3		ug/L		85	65 - 135	6	20
trans-1,2-Dichloroethene	25.0	21.7		ug/L		87	65 - 135	4	24
trans-1,3-Dichloropropene	25.0	19.0		ug/L		76	65 - 135	1	26
Trichloroethene	25.0	21.3		ug/L		85	65 - 135	7	20
Trichlorofluoromethane	25.0	25.0		ug/L		100	53 - 137	1	27
Vinyl chloride	25.0	24.4		ug/L		97	40 - 137	1	24

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	102		70 - 127
4-Bromofluorobenzene (Surr)	105		78 - 120
Dibromofluoromethane (Surr)	99		77 - 120
Toluene-d8 (Surr)	100		80 - 125

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-497769/1-A
Matrix: Water
Analysis Batch: 499090

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 497769

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1'-Biphenyl	ND		10	1.8	ug/L		06/08/20 14:31	06/17/20 12:57	1
1,2,4,5-Tetrachlorobenzene	ND		10	1.7	ug/L		06/08/20 14:31	06/17/20 12:57	1
1,2,4-Trichlorobenzene	ND		4.0	0.59	ug/L		06/08/20 14:31	06/17/20 12:57	1
1,2-Dichlorobenzene	ND		4.0	0.23	ug/L		06/08/20 14:31	06/17/20 12:57	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		10	0.23	ug/L		06/08/20 14:31	06/17/20 12:57	1
1,3-Dichlorobenzene	ND		10	0.30	ug/L		06/08/20 14:31	06/17/20 12:57	1
1,3-Dinitrobenzene	ND		10	2.0	ug/L		06/08/20 14:31	06/17/20 12:57	1
1,4-Dichlorobenzene	ND		4.0	1.3	ug/L		06/08/20 14:31	06/17/20 12:57	1
1,4-Dioxane	ND		20	0.45	ug/L		06/08/20 14:31	06/17/20 12:57	1
1-Methylnaphthalene	ND		4.0	0.23	ug/L		06/08/20 14:31	06/17/20 12:57	1
2,2'-oxybis[1-chloropropane]	ND		10	0.28	ug/L		06/08/20 14:31	06/17/20 12:57	1
2,3,4,6-Tetrachlorophenol	ND		50	2.0	ug/L		06/08/20 14:31	06/17/20 12:57	1
2,4,5-Trichlorophenol	ND		10	2.1	ug/L		06/08/20 14:31	06/17/20 12:57	1
2,4,6-Trichlorophenol	ND		10	0.29	ug/L		06/08/20 14:31	06/17/20 12:57	1
2,4-Dichlorophenol	ND		10	0.64	ug/L		06/08/20 14:31	06/17/20 12:57	1
2,4-Dimethylphenol	ND		10	0.58	ug/L		06/08/20 14:31	06/17/20 12:57	1
2,4-Dinitrophenol	ND		30	10	ug/L		06/08/20 14:31	06/17/20 12:57	1
2,4-Dinitrotoluene	ND		10	1.7	ug/L		06/08/20 14:31	06/17/20 12:57	1
2,6-Dichlorophenol	ND		10	1.4	ug/L		06/08/20 14:31	06/17/20 12:57	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		06/08/20 14:31	06/17/20 12:57	1
2-Chloronaphthalene	ND		4.0	0.26	ug/L		06/08/20 14:31	06/17/20 12:57	1
2-Chlorophenol	ND		10	2.0	ug/L		06/08/20 14:31	06/17/20 12:57	1
2-Methylnaphthalene	ND		4.0	1.5	ug/L		06/08/20 14:31	06/17/20 12:57	1
2-Methylphenol	ND		10	0.98	ug/L		06/08/20 14:31	06/17/20 12:57	1
2-Nitroaniline	ND		10	1.7	ug/L		06/08/20 14:31	06/17/20 12:57	1
2-Nitrophenol	ND		10	0.39	ug/L		06/08/20 14:31	06/17/20 12:57	1
3 & 4 Methylphenol	ND		10	0.25	ug/L		06/08/20 14:31	06/17/20 12:57	1
3,3'-Dichlorobenzidine	ND		50	2.0	ug/L		06/08/20 14:31	06/17/20 12:57	1
3-Methylphenol	ND		10	0.25	ug/L		06/08/20 14:31	06/17/20 12:57	1
3-Nitroaniline	ND		10	2.0	ug/L		06/08/20 14:31	06/17/20 12:57	1
4,6-Dinitro-2-methylphenol	ND		50	4.0	ug/L		06/08/20 14:31	06/17/20 12:57	1
4-Bromophenyl phenyl ether	ND		10	0.43	ug/L		06/08/20 14:31	06/17/20 12:57	1
4-Chloro-3-methylphenol	ND		10	2.4	ug/L		06/08/20 14:31	06/17/20 12:57	1
4-Chloroaniline	ND		10	2.1	ug/L		06/08/20 14:31	06/17/20 12:57	1
4-Chlorophenyl phenyl ether	ND		10	1.7	ug/L		06/08/20 14:31	06/17/20 12:57	1
4-Methylphenol	ND		10	0.25	ug/L		06/08/20 14:31	06/17/20 12:57	1
4-Nitroaniline	ND		10	2.0	ug/L		06/08/20 14:31	06/17/20 12:57	1
4-Nitrophenol	ND		10	1.2	ug/L		06/08/20 14:31	06/17/20 12:57	1
Acenaphthene	ND		4.0	0.28	ug/L		06/08/20 14:31	06/17/20 12:57	1
Acenaphthylene	ND		4.0	0.49	ug/L		06/08/20 14:31	06/17/20 12:57	1
Acetophenone	ND		10	0.24	ug/L		06/08/20 14:31	06/17/20 12:57	1
Aniline	ND		10	2.0	ug/L		06/08/20 14:31	06/17/20 12:57	1
Anthracene	ND		4.0	0.42	ug/L		06/08/20 14:31	06/17/20 12:57	1
Azobenzene	ND		4.0	0.23	ug/L		06/08/20 14:31	06/17/20 12:57	1
Benzaldehyde	ND		5.0	2.0	ug/L		06/08/20 14:31	06/17/20 12:57	1
Benzidine	ND		100	50	ug/L		06/08/20 14:31	06/17/20 12:57	1
Benzo[a]anthracene	ND		4.0	0.35	ug/L		06/08/20 14:31	06/17/20 12:57	1
Benzo[a]pyrene	ND		4.0	0.31	ug/L		06/08/20 14:31	06/17/20 12:57	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-497769/1-A
Matrix: Water
Analysis Batch: 499090

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 497769

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND		4.0	0.53	ug/L		06/08/20 14:31	06/17/20 12:57	1
Benzo[g,h,i]perylene	ND		4.0	0.50	ug/L		06/08/20 14:31	06/17/20 12:57	1
Benzo[k]fluoranthene	ND		4.0	0.46	ug/L		06/08/20 14:31	06/17/20 12:57	1
Benzoic acid	ND		25	10	ug/L		06/08/20 14:31	06/17/20 12:57	1
Benzyl alcohol	ND		10	0.23	ug/L		06/08/20 14:31	06/17/20 12:57	1
Bis(2-chloroethoxy)methane	ND		10	0.97	ug/L		06/08/20 14:31	06/17/20 12:57	1
Bis(2-chloroethyl)ether	ND		10	0.83	ug/L		06/08/20 14:31	06/17/20 12:57	1
Bis(2-ethylhexyl) phthalate	ND		10	0.56	ug/L		06/08/20 14:31	06/17/20 12:57	1
Butyl benzyl phthalate	ND		4.0	1.0	ug/L		06/08/20 14:31	06/17/20 12:57	1
Caprolactam	ND		5.0	2.5	ug/L		06/08/20 14:31	06/17/20 12:57	1
Carbazole	ND		4.0	0.43	ug/L		06/08/20 14:31	06/17/20 12:57	1
Chrysene	ND		4.0	0.54	ug/L		06/08/20 14:31	06/17/20 12:57	1
Dibenz(a,h)anthracene	ND		4.0	0.51	ug/L		06/08/20 14:31	06/17/20 12:57	1
Dibenzofuran	ND		4.0	0.29	ug/L		06/08/20 14:31	06/17/20 12:57	1
Diethyl phthalate	ND		4.0	0.38	ug/L		06/08/20 14:31	06/17/20 12:57	1
Dimethyl phthalate	ND		4.0	0.21	ug/L		06/08/20 14:31	06/17/20 12:57	1
Di-n-butyl phthalate	ND		4.0	1.2	ug/L		06/08/20 14:31	06/17/20 12:57	1
Di-n-octyl phthalate	ND		4.0	0.35	ug/L		06/08/20 14:31	06/17/20 12:57	1
Diphenylamine	ND		10	1.1	ug/L		06/08/20 14:31	06/17/20 12:57	1
Famphur	ND		100	1.5	ug/L		06/08/20 14:31	06/17/20 12:57	1
Fluoranthene	ND		4.0	0.20	ug/L		06/08/20 14:31	06/17/20 12:57	1
Fluorene	ND		4.0	0.31	ug/L		06/08/20 14:31	06/17/20 12:57	1
Hexachlorobenzene	ND		10	0.66	ug/L		06/08/20 14:31	06/17/20 12:57	1
Hexachlorobutadiene	ND		10	3.3	ug/L		06/08/20 14:31	06/17/20 12:57	1
Hexachlorocyclopentadiene	ND		50	3.1	ug/L		06/08/20 14:31	06/17/20 12:57	1
Hexachloroethane	ND		10	0.98	ug/L		06/08/20 14:31	06/17/20 12:57	1
Hexadecane	ND		10	0.54	ug/L		06/08/20 14:31	06/17/20 12:57	1
Indeno[1,2,3-cd]pyrene	ND		4.0	0.65	ug/L		06/08/20 14:31	06/17/20 12:57	1
Isophorone	ND		10	0.21	ug/L		06/08/20 14:31	06/17/20 12:57	1
Naphthalene	ND		4.0	0.29	ug/L		06/08/20 14:31	06/17/20 12:57	1
Nitrobenzene	ND		10	0.81	ug/L		06/08/20 14:31	06/17/20 12:57	1
N-Nitrosodimethylamine	ND		10	0.29	ug/L		06/08/20 14:31	06/17/20 12:57	1
N-Nitrosodi-n-propylamine	ND		10	0.35	ug/L		06/08/20 14:31	06/17/20 12:57	1
N-Nitrosodiphenylamine	ND		10	0.44	ug/L		06/08/20 14:31	06/17/20 12:57	1
Pentachlorophenol	ND		50	20	ug/L		06/08/20 14:31	06/17/20 12:57	1
Phenanthrene	ND		4.0	0.26	ug/L		06/08/20 14:31	06/17/20 12:57	1
Phenol	ND		10	2.0	ug/L		06/08/20 14:31	06/17/20 12:57	1
Pyrene	ND		10	0.37	ug/L		06/08/20 14:31	06/17/20 12:57	1
Pyridine	ND		20	1.7	ug/L		06/08/20 14:31	06/17/20 12:57	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	87		42 - 131	06/08/20 14:31	06/17/20 12:57	1
2-Fluorobiphenyl	38	X	48 - 120	06/08/20 14:31	06/17/20 12:57	1
2-Fluorophenol (Surr)	87		41 - 120	06/08/20 14:31	06/17/20 12:57	1
Nitrobenzene-d5 (Surr)	80		42 - 120	06/08/20 14:31	06/17/20 12:57	1
Phenol-d5 (Surr)	91		45 - 124	06/08/20 14:31	06/17/20 12:57	1
Terphenyl-d14 (Surr)	106		20 - 130	06/08/20 14:31	06/17/20 12:57	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-497769/2-A
Matrix: Water
Analysis Batch: 499090

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497769
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1'-Biphenyl	80.0	53.4		ug/L		67	63 - 99
1,2,4,5-Tetrachlorobenzene	80.0	49.5		ug/L		62	57 - 100
1,2,4-Trichlorobenzene	80.0	32.3	*	ug/L		40	41 - 99
1,2-Dichlorobenzene	80.0	32.6		ug/L		41	37 - 97
1,2-Diphenylhydrazine(as Azobenzene)	80.9	70.8		ug/L		87	66 - 104
1,3-Dichlorobenzene	80.0	31.8		ug/L		40	34 - 96
1,3-Dinitrobenzene	80.0	74.9		ug/L		94	72 - 114
1,4-Dichlorobenzene	80.0	31.9		ug/L		40	35 - 96
1,4-Dioxane	80.0	55.6		ug/L		69	46 - 94
1-Methylnaphthalene	80.0	46.8		ug/L		59	56 - 102
2,2'-oxybis[1-chloropropane]	80.0	59.4		ug/L		74	52 - 108
2,3,4,6-Tetrachlorophenol	80.0	76.6		ug/L		96	71 - 111
2,4,5-Trichlorophenol	80.0	73.0		ug/L		91	70 - 109
2,4,6-Trichlorophenol	80.0	73.4		ug/L		92	71 - 113
2,4-Dichlorophenol	80.0	70.5		ug/L		88	65 - 109
2,4-Dimethylphenol	80.0	53.9		ug/L		67	46 - 100
2,4-Dinitrophenol	160	165		ug/L		103	60 - 110
2,4-Dinitrotoluene	80.0	80.2		ug/L		100	72 - 110
2,6-Dichlorophenol	80.0	71.1		ug/L		89	64 - 109
2,6-Dinitrotoluene	80.0	78.9		ug/L		99	70 - 109
2-Chloronaphthalene	80.0	52.7		ug/L		66	61 - 98
2-Chlorophenol	80.0	68.0		ug/L		85	59 - 107
2-Methylnaphthalene	80.0	44.7		ug/L		56	55 - 100
2-Methylphenol	80.0	70.3		ug/L		88	61 - 105
2-Nitroaniline	80.0	74.5		ug/L		93	65 - 110
2-Nitrophenol	80.0	70.6		ug/L		88	63 - 108
3 & 4 Methylphenol	80.0	73.4		ug/L		92	58 - 107
3,3'-Dichlorobenzidine	160	147		ug/L		92	39 - 105
3-Methylphenol	80.0	73.4		ug/L		92	58 - 107
3-Nitroaniline	80.0	70.8		ug/L		88	37 - 94
4,6-Dinitro-2-methylphenol	160	155		ug/L		97	67 - 109
4-Bromophenyl phenyl ether	80.0	75.1		ug/L		94	67 - 105
4-Chloro-3-methylphenol	80.0	74.0		ug/L		92	68 - 110
4-Chloroaniline	80.0	58.7		ug/L		73	34 - 97
4-Chlorophenyl phenyl ether	80.0	70.0		ug/L		88	69 - 100
4-Methylphenol	80.0	73.4		ug/L		92	58 - 107
4-Nitroaniline	80.0	78.4		ug/L		98	64 - 103
4-Nitrophenol	160	138		ug/L		87	60 - 120
Acenaphthene	80.0	62.2		ug/L		78	63 - 99
Acenaphthylene	80.0	59.9		ug/L		75	66 - 98
Acetophenone	80.0	68.0		ug/L		85	59 - 106
Aniline	80.0	54.5		ug/L		68	40 - 96
Anthracene	80.0	72.9		ug/L		91	65 - 105
Azobenzene	80.0	70.0		ug/L		87	66 - 104
Benzaldehyde	80.0	47.1		ug/L		59	10 - 89
Benzidine	160	73.8	J	ug/L		46	10 - 52
Benzo[a]anthracene	80.0	73.2		ug/L		91	68 - 104
Benzo[a]pyrene	80.0	70.7		ug/L		88	66 - 102

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-497769/2-A
Matrix: Water
Analysis Batch: 499090

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497769

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[b]fluoranthene	80.0	73.7		ug/L		92	67 - 107
Benzo[g,h,i]perylene	80.0	72.6		ug/L		91	65 - 106
Benzo[k]fluoranthene	80.0	71.7		ug/L		90	71 - 109
Benzoic acid	80.0	70.8		ug/L		88	29 - 120
Benzyl alcohol	80.0	74.4		ug/L		93	61 - 107
Bis(2-chloroethoxy)methane	80.0	71.5		ug/L		89	62 - 106
Bis(2-chloroethyl)ether	80.0	69.8		ug/L		87	59 - 110
Bis(2-ethylhexyl) phthalate	80.0	85.6	*	ug/L		107	65 - 106
Butyl benzyl phthalate	80.0	79.9		ug/L		100	66 - 107
Caprolactam	80.0	81.8		ug/L		102	60 - 107
Carbazole	80.0	74.3		ug/L		93	66 - 109
Chrysene	80.0	73.6		ug/L		92	70 - 105
Dibenz(a,h)anthracene	80.0	72.7		ug/L		91	64 - 106
Dibenzofuran	80.0	64.8		ug/L		81	68 - 99
Diethyl phthalate	80.0	78.3		ug/L		98	71 - 105
Dimethyl phthalate	80.0	77.1		ug/L		96	70 - 107
Di-n-butyl phthalate	80.0	78.8		ug/L		98	75 - 120
Di-n-octyl phthalate	80.0	74.4		ug/L		93	71 - 120
Diphenylamine	68.0	62.9		ug/L		92	67 - 103
Fluoranthene	80.0	73.2		ug/L		91	66 - 107
Fluorene	80.0	69.9		ug/L		87	67 - 100
Hexachlorobenzene	80.0	70.7		ug/L		88	66 - 106
Hexachlorobutadiene	80.0	27.2		ug/L		34	33 - 98
Hexachlorocyclopentadiene	160	21.1	J	ug/L		13	10 - 67
Hexachloroethane	80.0	27.2		ug/L		34	24 - 98
Hexadecane	80.0	64.6		ug/L		81	50 - 150
Indeno[1,2,3-cd]pyrene	80.0	74.9		ug/L		94	56 - 104
Isophorone	80.0	66.7		ug/L		83	59 - 102
Naphthalene	80.0	38.3		ug/L		48	39 - 120
Nitrobenzene	80.0	62.4		ug/L		78	58 - 108
N-Nitrosodimethylamine	80.0	65.2		ug/L		81	53 - 106
N-Nitrosodi-n-propylamine	80.0	69.6		ug/L		87	57 - 106
N-Nitrosodiphenylamine	80.0	74.5		ug/L		93	65 - 104
Pentachlorophenol	160	140		ug/L		88	55 - 109
Phenanthrene	80.0	73.0		ug/L		91	67 - 106
Phenol	80.0	64.5		ug/L		81	60 - 108
Pyrene	80.0	77.1		ug/L		96	69 - 105
Pyridine	160	115		ug/L		72	46 - 88

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	93		42 - 131
2-Fluorobiphenyl	73		48 - 120
2-Fluorophenol (Surr)	81		41 - 120
Nitrobenzene-d5 (Surr)	81		42 - 120
Phenol-d5 (Surr)	87		45 - 124
Terphenyl-d14 (Surr)	109		20 - 130

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-497769/3-A

Matrix: Water

Analysis Batch: 499090

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 497769

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit	
									%Rec.	RPD
1,1'-Biphenyl	80.0	61.7		ug/L		77	63 - 99	14		30
1,2,4,5-Tetrachlorobenzene	80.0	57.7		ug/L		72	57 - 100	15		30
1,2,4-Trichlorobenzene	80.0	45.6	*1	ug/L		57	41 - 99	34		30
1,2-Dichlorobenzene	80.0	44.1		ug/L		55	37 - 97	30		30
1,2-Diphenylhydrazine(as Azobenzene)	80.9	71.9		ug/L		89	66 - 104	2		30
1,3-Dichlorobenzene	80.0	43.0		ug/L		54	34 - 96	30		30
1,3-Dinitrobenzene	80.0	77.7		ug/L		97	72 - 114	4		30
1,4-Dichlorobenzene	80.0	42.2		ug/L		53	35 - 96	28		30
1,4-Dioxane	80.0	51.9		ug/L		65	46 - 94	7		30
1-Methylnaphthalene	80.0	56.4		ug/L		70	56 - 102	18		30
2,2'-oxybis[1-chloropropane]	80.0	62.4		ug/L		78	52 - 108	5		30
2,3,4,6-Tetrachlorophenol	80.0	81.1		ug/L		101	71 - 111	6		30
2,4,5-Trichlorophenol	80.0	78.8		ug/L		99	70 - 109	8		30
2,4,6-Trichlorophenol	80.0	74.7		ug/L		93	71 - 113	2		30
2,4-Dichlorophenol	80.0	71.1		ug/L		89	65 - 109	1		30
2,4-Dimethylphenol	80.0	51.8		ug/L		65	46 - 100	4		30
2,4-Dinitrophenol	160	172		ug/L		108	60 - 110	4		30
2,4-Dinitrotoluene	80.0	79.8		ug/L		100	72 - 110	1		30
2,6-Dichlorophenol	80.0	72.2		ug/L		90	64 - 109	1		50
2,6-Dinitrotoluene	80.0	84.7		ug/L		106	70 - 109	7		30
2-Chloronaphthalene	80.0	60.0		ug/L		75	61 - 98	13		30
2-Chlorophenol	80.0	69.0		ug/L		86	59 - 107	1		30
2-Methylnaphthalene	80.0	54.7		ug/L		68	55 - 100	20		30
2-Methylphenol	80.0	69.1		ug/L		86	61 - 105	2		30
2-Nitroaniline	80.0	77.7		ug/L		97	65 - 110	4		30
2-Nitrophenol	80.0	74.5		ug/L		93	63 - 108	5		30
3 & 4 Methylphenol	80.0	71.5		ug/L		89	58 - 107	3		30
3,3'-Dichlorobenzidine	160	132		ug/L		83	39 - 105	11		30
3-Methylphenol	80.0	71.5		ug/L		89	58 - 107	3		30
3-Nitroaniline	80.0	68.9		ug/L		86	37 - 94	3		30
4,6-Dinitro-2-methylphenol	160	155		ug/L		97	67 - 109	0		30
4-Bromophenyl phenyl ether	80.0	76.9		ug/L		96	67 - 105	2		30
4-Chloro-3-methylphenol	80.0	74.3		ug/L		93	68 - 110	0		30
4-Chloroaniline	80.0	56.8		ug/L		71	34 - 97	3		30
4-Chlorophenyl phenyl ether	80.0	72.2		ug/L		90	69 - 100	3		30
4-Methylphenol	80.0	71.5		ug/L		89	58 - 107	3		30
4-Nitroaniline	80.0	78.6		ug/L		98	64 - 103	0		30
4-Nitrophenol	160	137		ug/L		86	60 - 120	1		30
Acenaphthene	80.0	67.7		ug/L		85	63 - 99	9		30
Acenaphthylene	80.0	66.7		ug/L		83	66 - 98	11		30
Acetophenone	80.0	67.4		ug/L		84	59 - 106	1		30
Aniline	80.0	48.4		ug/L		60	40 - 96	12		30
Anthracene	80.0	72.5		ug/L		91	65 - 105	1		30
Azobenzene	80.0	71.2		ug/L		89	66 - 104	2		30
Benzaldehyde	80.0	38.8		ug/L		48	10 - 89	19		50
Benzidine	160	55.4	J	ug/L		35	10 - 52	28		50
Benzo[a]anthracene	80.0	74.3		ug/L		93	68 - 104	2		30
Benzo[a]pyrene	80.0	73.1		ug/L		91	66 - 102	3		30

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-497769/3-A
Matrix: Water
Analysis Batch: 499090

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 497769

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[b]fluoranthene	80.0	77.1		ug/L		96	67 - 107	4	30
Benzo[g,h,i]perylene	80.0	76.9		ug/L		96	65 - 106	6	30
Benzo[k]fluoranthene	80.0	74.6		ug/L		93	71 - 109	4	30
Benzoic acid	80.0	74.3		ug/L		93	29 - 120	5	30
Benzyl alcohol	80.0	71.6		ug/L		90	61 - 107	4	30
Bis(2-chloroethoxy)methane	80.0	72.0		ug/L		90	62 - 106	1	30
Bis(2-chloroethyl)ether	80.0	68.3		ug/L		85	59 - 110	2	30
Bis(2-ethylhexyl) phthalate	80.0	87.7	*	ug/L		110	65 - 106	2	30
Butyl benzyl phthalate	80.0	81.0		ug/L		101	66 - 107	1	30
Caprolactam	80.0	80.2		ug/L		100	60 - 107	2	30
Carbazole	80.0	73.0		ug/L		91	66 - 109	2	30
Chrysene	80.0	75.3		ug/L		94	70 - 105	2	30
Dibenz(a,h)anthracene	80.0	75.7		ug/L		95	64 - 106	4	30
Dibenzofuran	80.0	71.6		ug/L		89	68 - 99	10	30
Diethyl phthalate	80.0	78.1		ug/L		98	71 - 105	0	30
Dimethyl phthalate	80.0	79.0		ug/L		99	70 - 107	2	30
Di-n-butyl phthalate	80.0	77.9		ug/L		97	75 - 120	1	30
Di-n-octyl phthalate	80.0	76.4		ug/L		95	71 - 120	3	30
Diphenylamine	68.0	65.5		ug/L		96	67 - 103	4	50
Fluoranthene	80.0	73.3		ug/L		92	66 - 107	0	30
Fluorene	80.0	73.5		ug/L		92	67 - 100	5	30
Hexachlorobenzene	80.0	72.0		ug/L		90	66 - 106	2	30
Hexachlorobutadiene	80.0	40.8	*1	ug/L		51	33 - 98	40	30
Hexachlorocyclopentadiene	160	28.6	J	ug/L		18	10 - 67	30	50
Hexachloroethane	80.0	37.8	*1	ug/L		47	24 - 98	33	30
Hexadecane	80.0	68.9		ug/L		86	50 - 150	6	30
Indeno[1,2,3-cd]pyrene	80.0	78.2		ug/L		98	56 - 104	4	30
Isophorone	80.0	66.2		ug/L		83	59 - 102	1	30
Naphthalene	80.0	51.3		ug/L		64	39 - 120	29	30
Nitrobenzene	80.0	65.2		ug/L		81	58 - 108	4	30
N-Nitrosodimethylamine	80.0	65.4		ug/L		82	53 - 106	0	34
N-Nitrosodi-n-propylamine	80.0	69.4		ug/L		87	57 - 106	0	30
N-Nitrosodiphenylamine	80.0	73.8		ug/L		92	65 - 104	1	30
Pentachlorophenol	160	142		ug/L		89	55 - 109	1	30
Phenanthrene	80.0	73.8		ug/L		92	67 - 106	1	30
Phenol	80.0	64.5		ug/L		81	60 - 108	0	30
Pyrene	80.0	78.0		ug/L		98	69 - 105	1	30
Pyridine	160	109		ug/L		68	46 - 88	5	41

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2,4,6-Tribromophenol (Surr)	97		42 - 131
2-Fluorobiphenyl	75		48 - 120
2-Fluorophenol (Surr)	82		41 - 120
Nitrobenzene-d5 (Surr)	83		42 - 120
Phenol-d5 (Surr)	84		45 - 124
Terphenyl-d14 (Surr)	109		20 - 130

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-498955/1-A
Matrix: Solid
Analysis Batch: 499495

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498955

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1'-Biphenyl	ND		330	24	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
1,2,4,5-Tetrachlorobenzene	ND		330	49	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
1,2,4-Trichlorobenzene	ND		330	28	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
1,2-Dichlorobenzene	ND		330	22	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		330	22	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
1,3-Dichlorobenzene	ND		330	12	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
1,3-Dinitrobenzene	ND		330	71	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
1,4-Dichlorobenzene	ND		330	14	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
1,4-Dioxane	ND		660	66	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
1-Methylnaphthalene	ND		330	11	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
2,2'-oxybis[1-chloropropane]	ND		330	23	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
2,3,4,6-Tetrachlorophenol	ND		1600	140	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
2,4,5-Trichlorophenol	ND		330	10	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
2,4,6-Trichlorophenol	ND		330	10	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
2,4-Dichlorophenol	ND		330	10	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
2,4-Dimethylphenol	ND		330	66	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
2,4-Dinitrophenol	ND		1600	330	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
2,4-Dinitrotoluene	ND		330	66	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
2,6-Dichlorophenol	ND		330	22	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
2,6-Dinitrotoluene	ND		330	28	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
2-Chloronaphthalene	ND		330	10	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
2-Chlorophenol	ND		330	21	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
2-Methylnaphthalene	ND		330	19	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
2-Methylphenol	ND		330	13	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
2-Nitroaniline	ND		1600	50	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
2-Nitrophenol	ND		330	10	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
3 & 4 Methylphenol	ND		330	33	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
3,3'-Dichlorobenzidine	ND		660	90	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
3-Methylphenol	ND		330	33	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
3-Nitroaniline	ND		1600	73	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
4,6-Dinitro-2-methylphenol	ND		1600	330	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
4-Bromophenyl phenyl ether	ND		330	19	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
4-Chloro-3-methylphenol	ND		330	25	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
4-Chloroaniline	ND		330	82	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
4-Chlorophenyl phenyl ether	ND		330	21	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
4-Methylphenol	ND		330	33	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
4-Nitroaniline	ND		1600	73	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
4-Nitrophenol	ND		1600	97	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Acenaphthene	ND		330	10	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Acenaphthylene	ND		330	82	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Acetophenone	ND		330	20	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Aniline	ND		330	130	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Anthracene	ND		330	17	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Azobenzene	ND		330	22	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Benzaldehyde	ND		330	67	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Benzidine	ND		3300	990	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Benzo[a]anthracene	ND		330	20	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Benzo[a]pyrene	ND		330	20	ug/Kg		06/16/20 17:27	06/20/20 18:49	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-498955/1-A
Matrix: Solid
Analysis Batch: 499495

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498955

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND		330	26	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Benzo[g,h,i]perylene	ND		330	16	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Benzo[k]fluoranthene	ND		330	40	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Benzoic acid	ND		1600	330	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Benzyl alcohol	ND		330	10	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Bis(2-chloroethoxy)methane	ND		330	23	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Bis(2-chloroethyl)ether	ND		330	17	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Bis(2-ethylhexyl) phthalate	ND		330	46	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Butyl benzyl phthalate	ND		330	43	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Caprolactam	ND		330	110	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Carbazole	ND		330	36	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Chrysene	ND		330	27	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Dibenz(a,h)anthracene	ND		330	19	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Dibenzofuran	ND		330	20	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Diethyl phthalate	ND		660	26	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Dimethyl phthalate	ND		330	23	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Di-n-butyl phthalate	ND		330	29	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Di-n-octyl phthalate	ND		330	41	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Diphenylamine	ND		330	44	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Famphur	ND		660	34	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Fluoranthene	ND		330	36	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Fluorene	ND		330	18	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Hexachlorobenzene	ND		330	29	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Hexachlorobutadiene	ND		330	10	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Hexachlorocyclopentadiene	ND		1600	110	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Hexachloroethane	ND		330	21	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Hexadecane	ND		330	13	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Indeno[1,2,3-cd]pyrene	ND		330	22	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Isophorone	ND		330	17	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Naphthalene	ND		330	31	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Nitrobenzene	ND		330	22	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
N-Nitrosodimethylamine	ND		330	37	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
N-Nitrosodi-n-propylamine	ND		330	68	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
N-Nitrosodiphenylamine	ND		330	21	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Pentachlorophenol	ND		1600	330	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Phenanthrene	ND		330	17	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Phenol	ND		330	18	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Pyrene	ND		330	12	ug/Kg		06/16/20 17:27	06/20/20 18:49	1
Pyridine	ND		660	40	ug/Kg		06/16/20 17:27	06/20/20 18:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	71		35 - 120	06/16/20 17:27	06/20/20 18:49	1
2-Fluorobiphenyl	73		46 - 120	06/16/20 17:27	06/20/20 18:49	1
2-Fluorophenol (Surr)	76		43 - 120	06/16/20 17:27	06/20/20 18:49	1
Nitrobenzene-d5 (Surr)	68		46 - 120	06/16/20 17:27	06/20/20 18:49	1
Phenol-d5 (Surr)	77		46 - 120	06/16/20 17:27	06/20/20 18:49	1
Terphenyl-d14 (Surr)	98		46 - 120	06/16/20 17:27	06/20/20 18:49	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-498955/2-A
Matrix: Solid
Analysis Batch: 499495

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498955
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1'-Biphenyl	2670	2160		ug/Kg		81	60 - 120
1,2,4,5-Tetrachlorobenzene	2670	2060		ug/Kg		77	60 - 120
1,2,4-Trichlorobenzene	2670	2010		ug/Kg		76	59 - 120
1,2-Dichlorobenzene	2670	1930		ug/Kg		72	57 - 120
1,2-Diphenylhydrazine(as Azobenzene)	2700	2210		ug/Kg		82	60 - 120
1,3-Dichlorobenzene	2670	1930		ug/Kg		73	56 - 120
1,3-Dinitrobenzene	2670	2200		ug/Kg		83	66 - 120
1,4-Dichlorobenzene	2670	1910		ug/Kg		71	57 - 120
1,4-Dioxane	2670	1110		ug/Kg		42	28 - 120
1-Methylnaphthalene	2670	2140		ug/Kg		80	57 - 120
2,2'-oxybis[1-chloropropane]	2670	2040		ug/Kg		77	46 - 120
2,3,4,6-Tetrachlorophenol	2670	2290		ug/Kg		86	63 - 120
2,4,5-Trichlorophenol	2670	2350		ug/Kg		88	65 - 120
2,4,6-Trichlorophenol	2670	2300		ug/Kg		86	64 - 120
2,4-Dichlorophenol	2670	2110		ug/Kg		79	64 - 120
2,4-Dimethylphenol	2670	2110		ug/Kg		79	60 - 120
2,4-Dinitrophenol	5330	4480		ug/Kg		84	52 - 120
2,4-Dinitrotoluene	2670	2360		ug/Kg		88	68 - 120
2,6-Dichlorophenol	2670	2140		ug/Kg		80	30 - 150
2,6-Dinitrotoluene	2670	2340		ug/Kg		88	68 - 120
2-Chloronaphthalene	2670	2160		ug/Kg		81	61 - 120
2-Chlorophenol	2670	2050		ug/Kg		77	62 - 120
2-Methylnaphthalene	2670	2050		ug/Kg		77	60 - 120
2-Methylphenol	2670	2070		ug/Kg		78	61 - 120
2-Nitroaniline	2670	2340		ug/Kg		88	63 - 120
2-Nitrophenol	2670	2250		ug/Kg		84	61 - 120
3 & 4 Methylphenol	2670	2060		ug/Kg		77	62 - 120
3,3'-Dichlorobenzidine	5330	3980		ug/Kg		75	22 - 120
3-Methylphenol	2670	2060		ug/Kg		77	62 - 120
3-Nitroaniline	2670	1780		ug/Kg		67	40 - 120
4,6-Dinitro-2-methylphenol	5330	4410		ug/Kg		83	60 - 120
4-Bromophenyl phenyl ether	2670	2360		ug/Kg		89	66 - 120
4-Chloro-3-methylphenol	2670	2110		ug/Kg		79	62 - 120
4-Chloroaniline	2670	1340		ug/Kg		50	33 - 120
4-Chlorophenyl phenyl ether	2670	2240		ug/Kg		84	63 - 120
4-Methylphenol	2670	2060		ug/Kg		77	62 - 120
4-Nitroaniline	2670	2190		ug/Kg		82	58 - 120
4-Nitrophenol	5330	3720		ug/Kg		70	67 - 120
Acenaphthene	2670	2190		ug/Kg		82	62 - 120
Acenaphthylene	2670	2230		ug/Kg		84	64 - 120
Acetophenone	2670	1600		ug/Kg		60	48 - 120
Aniline	2670	1250		ug/Kg		47	21 - 120
Anthracene	2670	2320		ug/Kg		87	66 - 120
Azobenzene	2670	2190		ug/Kg		82	59 - 120
Benzaldehyde	2670	1460		ug/Kg		55	30 - 150
Benzidine	5330	1420	J	ug/Kg		27	5 - 120
Benzo[a]anthracene	2670	2350		ug/Kg		88	64 - 120
Benzo[a]pyrene	2670	2250		ug/Kg		85	65 - 120

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-498955/2-A
Matrix: Solid
Analysis Batch: 499495

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498955

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[b]fluoranthene	2670	2300		ug/Kg		86	58 - 120
Benzo[g,h,i]perylene	2670	2310		ug/Kg		87	58 - 120
Benzo[k]fluoranthene	2670	2310		ug/Kg		87	62 - 120
Benzoic acid	2670	2210		ug/Kg		83	51 - 120
Benzyl alcohol	2670	2090		ug/Kg		79	61 - 120
Bis(2-chloroethoxy)methane	2670	2090		ug/Kg		78	58 - 120
Bis(2-chloroethyl)ether	2670	2060		ug/Kg		77	57 - 120
Bis(2-ethylhexyl) phthalate	2670	2570		ug/Kg		96	65 - 120
Butyl benzyl phthalate	2670	2420		ug/Kg		91	65 - 120
Caprolactam	2670	2350		ug/Kg		88	20 - 138
Carbazole	2670	2320		ug/Kg		87	65 - 120
Chrysene	2670	2420		ug/Kg		91	65 - 120
Dibenz(a,h)anthracene	2670	2390		ug/Kg		89	56 - 120
Dibenzofuran	2670	2210		ug/Kg		83	65 - 120
Diethyl phthalate	2670	2230		ug/Kg		84	68 - 120
Dimethyl phthalate	2670	2240		ug/Kg		84	66 - 120
Di-n-butyl phthalate	2670	2350		ug/Kg		88	66 - 120
Di-n-octyl phthalate	2670	2320		ug/Kg		87	55 - 120
Diphenylamine	2270	1900		ug/Kg		84	30 - 150
Fluoranthene	2670	2290		ug/Kg		86	64 - 120
Fluorene	2670	2230		ug/Kg		84	66 - 120
Hexachlorobenzene	2670	2270		ug/Kg		85	65 - 120
Hexachlorobutadiene	2670	1860		ug/Kg		70	58 - 120
Hexachlorocyclopentadiene	5330	3450		ug/Kg		65	43 - 120
Hexachloroethane	2670	1790		ug/Kg		67	56 - 120
Hexadecane	2670	2240		ug/Kg		84	45 - 135
Indeno[1,2,3-cd]pyrene	2670	2430		ug/Kg		91	46 - 120
Isophorone	2670	1920		ug/Kg		72	56 - 120
Naphthalene	2670	2060		ug/Kg		77	59 - 120
Nitrobenzene	2670	1970		ug/Kg		74	55 - 120
N-Nitrosodimethylamine	2670	2000		ug/Kg		75	50 - 120
N-Nitrosodi-n-propylamine	2670	1990		ug/Kg		75	52 - 120
N-Nitrosodiphenylamine	2670	2320		ug/Kg		87	65 - 120
Pentachlorophenol	5330	4200		ug/Kg		79	50 - 120
Phenanthrene	2670	2320		ug/Kg		87	67 - 120
Phenol	2670	1940		ug/Kg		73	63 - 120
Pyrene	2670	2410		ug/Kg		90	66 - 120
Pyridine	5330	3150		ug/Kg		59	37 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	78		35 - 120
2-Fluorobiphenyl	79		46 - 120
2-Fluorophenol (Surr)	78		43 - 120
Nitrobenzene-d5 (Surr)	73		46 - 120
Phenol-d5 (Surr)	77		46 - 120
Terphenyl-d14 (Surr)	98		46 - 120

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-137283-8 MS

Matrix: Solid

Analysis Batch: 499495

Client Sample ID: CDOT I270 Env-05/06_2020-SB-05-10-12

Prep Type: Total/NA

Prep Batch: 498955

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
1,1'-Biphenyl	ND		2800	2050		ug/Kg	*	73	60 - 120
1,2,4,5-Tetrachlorobenzene	ND		2800	1890		ug/Kg	*	68	60 - 120
1,2,4-Trichlorobenzene	ND		2800	1920		ug/Kg	*	69	59 - 120
1,2-Dichlorobenzene	ND		2800	1860		ug/Kg	*	67	57 - 120
1,2-Diphenylhydrazine(as Azobenzene)	ND		2830	2070		ug/Kg	*	73	60 - 120
1,3-Dichlorobenzene	ND		2800	1860		ug/Kg	*	66	56 - 120
1,3-Dinitrobenzene	ND		2800	2180		ug/Kg	*	78	66 - 120
1,4-Dichlorobenzene	ND		2800	1900		ug/Kg	*	68	57 - 120
1,4-Dioxane	ND		2800	1070		ug/Kg	*	38	28 - 120
1-Methylnaphthalene	ND		2800	2040		ug/Kg	*	73	57 - 120
2,2'-oxybis[1-chloropropane]	ND		2800	2040		ug/Kg	*	73	46 - 120
2,3,4,6-Tetrachlorophenol	ND		2800	2160		ug/Kg	*	77	63 - 120
2,4,5-Trichlorophenol	ND		2800	2250		ug/Kg	*	80	65 - 120
2,4,6-Trichlorophenol	ND		2800	2200		ug/Kg	*	79	64 - 120
2,4-Dichlorophenol	ND		2800	2070		ug/Kg	*	74	64 - 120
2,4-Dimethylphenol	ND		2800	2000		ug/Kg	*	72	60 - 120
2,4-Dinitrophenol	ND		5590	3380		ug/Kg	*	60	52 - 120
2,4-Dinitrotoluene	ND		2800	2150		ug/Kg	*	77	68 - 120
2,6-Dichlorophenol	ND		2800	2110		ug/Kg	*	75	30 - 150
2,6-Dinitrotoluene	ND		2800	2280		ug/Kg	*	82	68 - 120
2-Chloronaphthalene	ND		2800	2090		ug/Kg	*	75	61 - 120
2-Chlorophenol	ND		2800	2090		ug/Kg	*	75	62 - 120
2-Methylnaphthalene	ND		2800	2040		ug/Kg	*	73	60 - 120
2-Methylphenol	ND		2800	2150		ug/Kg	*	77	61 - 120
2-Nitroaniline	ND		2800	2210		ug/Kg	*	79	63 - 120
2-Nitrophenol	ND		2800	2140		ug/Kg	*	77	61 - 120
3 & 4 Methylphenol	ND		2800	2190		ug/Kg	*	78	62 - 120
3,3'-Dichlorobenzidine	ND		5590	4440		ug/Kg	*	79	22 - 120
3-Methylphenol	ND		2800	2190		ug/Kg	*	78	62 - 120
3-Nitroaniline	ND		2800	2030		ug/Kg	*	73	40 - 120
4,6-Dinitro-2-methylphenol	ND		5590	3980		ug/Kg	*	71	60 - 120
4-Bromophenyl phenyl ether	ND		2800	2340		ug/Kg	*	84	66 - 120
4-Chloro-3-methylphenol	ND		2800	2100		ug/Kg	*	75	62 - 120
4-Chloroaniline	ND		2800	1780		ug/Kg	*	64	33 - 120
4-Chlorophenyl phenyl ether	ND		2800	2180		ug/Kg	*	78	63 - 120
4-Methylphenol	ND		2800	2190		ug/Kg	*	78	62 - 120
4-Nitroaniline	ND		2800	2120		ug/Kg	*	76	58 - 120
4-Nitrophenol	ND	F1	5590	3550	F1	ug/Kg	*	63	67 - 120
Acenaphthene	ND		2800	2150		ug/Kg	*	77	62 - 120
Acenaphthylene	ND		2800	2110		ug/Kg	*	75	64 - 120
Acetophenone	ND		2800	1600		ug/Kg	*	57	48 - 120
Aniline	ND		2800	1500		ug/Kg	*	54	21 - 120
Anthracene	ND		2800	2240		ug/Kg	*	80	66 - 120
Azobenzene	ND		2800	2050		ug/Kg	*	73	59 - 120
Benzaldehyde	ND		2800	2210		ug/Kg	*	79	30 - 150
Benzidine	ND		5590	1630	J	ug/Kg	*	29	5 - 120
Benzo[a]anthracene	ND		2800	2240		ug/Kg	*	80	64 - 120
Benzo[a]pyrene	ND		2800	2200		ug/Kg	*	79	65 - 120

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-137283-8 MS

Matrix: Solid

Analysis Batch: 499495

Client Sample ID: CDOT I270 Env-05/06_2020-SB-05-10-12

Prep Type: Total/NA

Prep Batch: 498955

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Benzo[b]fluoranthene	ND		2800	2260		ug/Kg	☼	81		58 - 120
Benzo[g,h,i]perylene	ND		2800	2220		ug/Kg	☼	80		58 - 120
Benzo[k]fluoranthene	ND		2800	2260		ug/Kg	☼	81		62 - 120
Benzoic acid	ND		2800	2210		ug/Kg	☼	79		51 - 120
Benzyl alcohol	ND		2800	2140		ug/Kg	☼	76		61 - 120
Bis(2-chloroethoxy)methane	ND		2800	2010		ug/Kg	☼	72		58 - 120
Bis(2-chloroethyl)ether	ND		2800	2080		ug/Kg	☼	74		57 - 120
Bis(2-ethylhexyl) phthalate	ND		2800	2580		ug/Kg	☼	92		65 - 120
Butyl benzyl phthalate	ND		2800	2440		ug/Kg	☼	87		65 - 120
Caprolactam	ND		2800	2280		ug/Kg	☼	82		20 - 138
Carbazole	ND		2800	2280		ug/Kg	☼	82		65 - 120
Chrysene	ND		2800	2290		ug/Kg	☼	82		65 - 120
Dibenz(a,h)anthracene	ND		2800	2270		ug/Kg	☼	81		56 - 120
Dibenzofuran	ND		2800	2130		ug/Kg	☼	76		65 - 120
Diethyl phthalate	ND		2800	2100		ug/Kg	☼	75		68 - 120
Dimethyl phthalate	ND		2800	2190		ug/Kg	☼	78		66 - 120
Di-n-butyl phthalate	ND		2800	2290		ug/Kg	☼	82		66 - 120
Di-n-octyl phthalate	ND		2800	2380		ug/Kg	☼	85		55 - 120
Diphenylamine	ND		2380	1850		ug/Kg	☼	78		30 - 150
Fluoranthene	ND		2800	2240		ug/Kg	☼	80		64 - 120
Fluorene	ND		2800	2170		ug/Kg	☼	78		66 - 120
Hexachlorobenzene	ND		2800	2230		ug/Kg	☼	80		65 - 120
Hexachlorobutadiene	ND	F1	2800	1780		ug/Kg	☼	64		58 - 120
Hexachlorocyclopentadiene	ND		5590	2910		ug/Kg	☼	52		43 - 120
Hexachloroethane	ND	F1	2800	1780		ug/Kg	☼	64		56 - 120
Hexadecane	ND		2800	2190		ug/Kg	☼	78		45 - 135
Indeno[1,2,3-cd]pyrene	ND		2800	2350		ug/Kg	☼	84		46 - 120
Isophorone	ND		2800	1860		ug/Kg	☼	67		56 - 120
Naphthalene	ND		2800	1910		ug/Kg	☼	68		59 - 120
Nitrobenzene	ND		2800	1910		ug/Kg	☼	68		55 - 120
N-Nitrosodimethylamine	ND		2800	1890		ug/Kg	☼	68		50 - 120
N-Nitrosodi-n-propylamine	ND		2800	2020		ug/Kg	☼	72		52 - 120
N-Nitrosodiphenylamine	ND		2800	2350		ug/Kg	☼	84		65 - 120
Pentachlorophenol	ND		5590	4110		ug/Kg	☼	73		50 - 120
Phenanthrene	ND		2800	2260		ug/Kg	☼	81		67 - 120
Phenol	ND	F1	2800	1970		ug/Kg	☼	70		63 - 120
Pyrene	ND		2800	2300		ug/Kg	☼	82		66 - 120
Pyridine	ND		5590	3160		ug/Kg	☼	56		37 - 120
		MS		MS						
Surrogate		%Recovery	Qualifier		Limits					
2,4,6-Tribromophenol (Surr)		71			35 - 120					
2-Fluorobiphenyl		69			46 - 120					
2-Fluorophenol (Surr)		74			43 - 120					
Nitrobenzene-d5 (Surr)		67			46 - 120					
Phenol-d5 (Surr)		76			46 - 120					
Terphenyl-d14 (Surr)		91			46 - 120					

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-137283-8 MSD

Matrix: Solid

Analysis Batch: 499495

Client Sample ID: CDOT I270 Env-05/06_2020-SB-05-10-12

Prep Type: Total/NA

Prep Batch: 498955

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
1,1'-Biphenyl	ND		2760	1870		ug/Kg	☼	68	60 - 120	9	30
1,2,4,5-Tetrachlorobenzene	ND		2760	1820		ug/Kg	☼	66	60 - 120	4	30
1,2,4-Trichlorobenzene	ND		2760	1660		ug/Kg	☼	60	59 - 120	14	30
1,2-Dichlorobenzene	ND		2760	1610		ug/Kg	☼	58	57 - 120	15	30
1,2-Diphenylhydrazine(as Azobenzene)	ND		2790	2070		ug/Kg	☼	74	60 - 120	0	30
1,3-Dichlorobenzene	ND		2760	1610		ug/Kg	☼	58	56 - 120	14	30
1,3-Dinitrobenzene	ND		2760	2160		ug/Kg	☼	78	66 - 120	1	30
1,4-Dichlorobenzene	ND		2760	1580		ug/Kg	☼	57	57 - 120	19	30
1,4-Dioxane	ND		2760	800		ug/Kg	☼	29	28 - 120	29	30
1-Methylnaphthalene	ND		2760	1910		ug/Kg	☼	69	57 - 120	6	30
2,2'-oxybis[1-chloropropane]	ND		2760	1700		ug/Kg	☼	62	46 - 120	18	30
2,3,4,6-Tetrachlorophenol	ND		2760	2140		ug/Kg	☼	78	63 - 120	1	30
2,4,5-Trichlorophenol	ND		2760	2200		ug/Kg	☼	79	65 - 120	2	30
2,4,6-Trichlorophenol	ND		2760	2110		ug/Kg	☼	76	64 - 120	4	30
2,4-Dichlorophenol	ND		2760	2010		ug/Kg	☼	73	64 - 120	3	30
2,4-Dimethylphenol	ND		2760	1910		ug/Kg	☼	69	60 - 120	5	30
2,4-Dinitrophenol	ND		5520	3950		ug/Kg	☼	72	52 - 120	16	30
2,4-Dinitrotoluene	ND		2760	2150		ug/Kg	☼	78	68 - 120	0	30
2,6-Dichlorophenol	ND		2760	1970		ug/Kg	☼	71	30 - 150	7	30
2,6-Dinitrotoluene	ND		2760	2210		ug/Kg	☼	80	68 - 120	3	30
2-Chloronaphthalene	ND		2760	1890		ug/Kg	☼	68	61 - 120	10	30
2-Chlorophenol	ND		2760	1770		ug/Kg	☼	64	62 - 120	17	30
2-Methylnaphthalene	ND		2760	1840		ug/Kg	☼	67	60 - 120	10	30
2-Methylphenol	ND		2760	1830		ug/Kg	☼	66	61 - 120	16	30
2-Nitroaniline	ND		2760	2190		ug/Kg	☼	79	63 - 120	1	30
2-Nitrophenol	ND		2760	1910		ug/Kg	☼	69	61 - 120	11	30
3 & 4 Methylphenol	ND		2760	1990		ug/Kg	☼	72	62 - 120	10	30
3,3'-Dichlorobenzidine	ND		5520	4210		ug/Kg	☼	76	22 - 120	5	30
3-Methylphenol	ND		2760	1990		ug/Kg	☼	72	62 - 120	10	30
3-Nitroaniline	ND		2760	2000		ug/Kg	☼	72	40 - 120	2	30
4,6-Dinitro-2-methylphenol	ND		5520	4240		ug/Kg	☼	77	60 - 120	6	30
4-Bromophenyl phenyl ether	ND		2760	2370		ug/Kg	☼	86	66 - 120	1	30
4-Chloro-3-methylphenol	ND		2760	2140		ug/Kg	☼	78	62 - 120	2	30
4-Chloroaniline	ND		2760	1550		ug/Kg	☼	56	33 - 120	14	30
4-Chlorophenyl phenyl ether	ND		2760	2100		ug/Kg	☼	76	63 - 120	4	30
4-Methylphenol	ND		2760	1990		ug/Kg	☼	72	62 - 120	10	30
4-Nitroaniline	ND		2760	2010		ug/Kg	☼	73	58 - 120	6	30
4-Nitrophenol	ND	F1	5520	3430	F1	ug/Kg	☼	62	67 - 120	4	30
Acenaphthene	ND		2760	2000		ug/Kg	☼	72	62 - 120	7	30
Acenaphthylene	ND		2760	1990		ug/Kg	☼	72	64 - 120	6	30
Acetophenone	ND		2760	1340		ug/Kg	☼	49	48 - 120	17	30
Aniline	ND		2760	1180		ug/Kg	☼	43	21 - 120	24	30
Anthracene	ND		2760	2200		ug/Kg	☼	80	66 - 120	2	30
Azobenzene	ND		2760	2040		ug/Kg	☼	74	59 - 120	0	30
Benzaldehyde	ND		2760	1790		ug/Kg	☼	65	30 - 150	21	50
Benzidine	ND		5520	1150	J	ug/Kg	☼	21	5 - 120	35	50
Benzo[a]anthracene	ND		2760	2270		ug/Kg	☼	82	64 - 120	1	30
Benzo[a]pyrene	ND		2760	2210		ug/Kg	☼	80	65 - 120	0	30

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-137283-8 MSD

Client Sample ID: CDOT I270 Env-05/06_2020-SB-05-10-12

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 499495

Prep Batch: 498955

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier						
Benzo[b]fluoranthene	ND		2760	2270		ug/Kg	☼	82	58 - 120	0	30
Benzo[g,h,i]perylene	ND		2760	2200		ug/Kg	☼	80	58 - 120	1	30
Benzo[k]fluoranthene	ND		2760	2280		ug/Kg	☼	83	62 - 120	1	30
Benzoic acid	ND		2760	2160		ug/Kg	☼	78	51 - 120	2	30
Benzyl alcohol	ND		2760	1930		ug/Kg	☼	70	61 - 120	10	30
Bis(2-chloroethoxy)methane	ND		2760	1810		ug/Kg	☼	65	58 - 120	11	30
Bis(2-chloroethyl)ether	ND		2760	1720		ug/Kg	☼	62	57 - 120	19	30
Bis(2-ethylhexyl) phthalate	ND		2760	2570		ug/Kg	☼	93	65 - 120	1	30
Butyl benzyl phthalate	ND		2760	2430		ug/Kg	☼	88	65 - 120	0	30
Caprolactam	ND		2760	2390		ug/Kg	☼	87	20 - 138	5	30
Carbazole	ND		2760	2160		ug/Kg	☼	78	65 - 120	5	30
Chrysene	ND		2760	2260		ug/Kg	☼	82	65 - 120	1	30
Dibenz(a,h)anthracene	ND		2760	2260		ug/Kg	☼	82	56 - 120	0	30
Dibenzofuran	ND		2760	2000		ug/Kg	☼	73	65 - 120	6	30
Diethyl phthalate	ND		2760	2070		ug/Kg	☼	75	68 - 120	1	30
Dimethyl phthalate	ND		2760	2140		ug/Kg	☼	78	66 - 120	2	30
Di-n-butyl phthalate	ND		2760	2230		ug/Kg	☼	81	66 - 120	2	30
Di-n-octyl phthalate	ND		2760	2320		ug/Kg	☼	84	55 - 120	3	30
Diphenylamine	ND		2350	1820		ug/Kg	☼	78	30 - 150	2	50
Fluoranthene	ND		2760	2080		ug/Kg	☼	75	64 - 120	7	30
Fluorene	ND		2760	2100		ug/Kg	☼	76	66 - 120	3	30
Hexachlorobenzene	ND		2760	2210		ug/Kg	☼	80	65 - 120	1	30
Hexachlorobutadiene	ND	F1	2760	1540	F1	ug/Kg	☼	56	58 - 120	14	30
Hexachlorocyclopentadiene	ND		5520	2380		ug/Kg	☼	43	43 - 120	20	30
Hexachloroethane	ND	F1	2760	1450	F1	ug/Kg	☼	53	56 - 120	20	30
Hexadecane	ND		2760	2050		ug/Kg	☼	74	45 - 135	7	30
Indeno[1,2,3-cd]pyrene	ND		2760	2330		ug/Kg	☼	84	46 - 120	1	30
Isophorone	ND		2760	1710		ug/Kg	☼	62	56 - 120	8	30
Naphthalene	ND		2760	1710		ug/Kg	☼	62	59 - 120	11	30
Nitrobenzene	ND		2760	1640		ug/Kg	☼	59	55 - 120	15	30
N-Nitrosodimethylamine	ND		2760	1570		ug/Kg	☼	57	50 - 120	19	30
N-Nitrosodi-n-propylamine	ND		2760	1760		ug/Kg	☼	64	52 - 120	14	30
N-Nitrosodiphenylamine	ND		2760	2370		ug/Kg	☼	86	65 - 120	1	30
Pentachlorophenol	ND		5520	4110		ug/Kg	☼	74	50 - 120	0	30
Phenanthrene	ND		2760	2190		ug/Kg	☼	79	67 - 120	3	30
Phenol	ND	F1	2760	1660	F1	ug/Kg	☼	60	63 - 120	17	30
Pyrene	ND		2760	2300		ug/Kg	☼	83	66 - 120	0	30
Pyridine	ND		5520	2450		ug/Kg	☼	44	37 - 120	25	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	70		35 - 120
2-Fluorobiphenyl	64		46 - 120
2-Fluorophenol (Surr)	62		43 - 120
Nitrobenzene-d5 (Surr)	60		46 - 120
Phenol-d5 (Surr)	65		46 - 120
Terphenyl-d14 (Surr)	91		46 - 120

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Lab Sample ID: MB 280-498655/3-A
Matrix: Solid
Analysis Batch: 498815

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498655

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.0	0.76	mg/Kg		06/13/20 14:13	06/15/20 23:05	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	89		77 - 123				06/13/20 14:13	06/15/20 23:05	1

Lab Sample ID: MB 280-498797/3-A
Matrix: Solid
Analysis Batch: 499385

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498797

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.0	0.76	mg/Kg		06/15/20 14:46	06/20/20 05:11	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	82		77 - 123				06/15/20 14:46	06/20/20 05:11	1

Lab Sample ID: LCS 280-498797/1-A
Matrix: Solid
Analysis Batch: 498815

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498797

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Gasoline Range Organics (GRO) -C6-C10	4.27	3.77		mg/Kg		88	75 - 135
Surrogate	%Recovery	LCS Qualifier	Limits				
a,a,a-Trifluorotoluene	90		77 - 123				

Lab Sample ID: LCSD 280-498797/2-A
Matrix: Solid
Analysis Batch: 498815

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 498797

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO) -C6-C10	4.27	3.70		mg/Kg		87	75 - 135	2	30
Surrogate	%Recovery	LCSD Qualifier	Limits						
a,a,a-Trifluorotoluene	90		77 - 123						

Lab Sample ID: MB 280-498931/31
Matrix: Water
Analysis Batch: 498931

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		25	10	ug/L			06/16/20 13:16	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics) (Continued)

Lab Sample ID: MB 280-498931/31
Matrix: Water
Analysis Batch: 498931

Client Sample ID: Method Blank
Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	98		82 - 110		06/16/20 13:16	1

Lab Sample ID: LCS 280-498931/29
Matrix: Water
Analysis Batch: 498931

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C6-C10	76.9	81.1		ug/L		105	79 - 149

Surrogate	LCS %Recovery	LCS Qualifier	Limits
a,a,a-Trifluorotoluene	95		82 - 110

Lab Sample ID: LCSD 280-498931/30
Matrix: Water
Analysis Batch: 498931

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C10	76.9	78.5		ug/L		102	79 - 149	3	27

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
a,a,a-Trifluorotoluene	96		82 - 110

Lab Sample ID: MB 280-498971/3-A
Matrix: Solid
Analysis Batch: 499340

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498971

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.0	0.76	mg/Kg		06/16/20 14:13	06/19/20 03:04	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	96		77 - 123	06/16/20 14:13	06/19/20 03:04	1

Lab Sample ID: MB 280-499104/3-A
Matrix: Solid
Analysis Batch: 499340

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499104

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.0	0.76	mg/Kg		06/17/20 12:13	06/19/20 04:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	95		77 - 123	06/17/20 12:13	06/19/20 04:14	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics) (Continued)

Lab Sample ID: LCS 280-499104/1-A
Matrix: Solid
Analysis Batch: 499340

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499104

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C6-C10	4.27	3.65		mg/Kg		86	75 - 135
Surrogate		LCS %Recovery	LCS Qualifier				Limits
a,a,a-Trifluorotoluene		94					77 - 123

Lab Sample ID: LCSD 280-499104/2-A
Matrix: Solid
Analysis Batch: 499340

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 499104

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C10	4.27	3.57		mg/Kg		84	75 - 135	2	30
Surrogate		LCSD %Recovery	LCSD Qualifier				Limits		
a,a,a-Trifluorotoluene		93					77 - 123		

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Lab Sample ID: MB 280-497993/1-A
Matrix: Water
Analysis Batch: 498637

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 497993

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.25	0.033	mg/L		06/09/20 11:46	06/14/20 00:00	1
Motor Oil (C20-C38)	ND		0.50	0.056	mg/L		06/09/20 11:46	06/14/20 00:00	1
Surrogate		MB %Recovery	MB Qualifier				Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)		85					06/09/20 11:46	06/14/20 00:00	1

Lab Sample ID: LCS 280-497993/2-A
Matrix: Water
Analysis Batch: 498637

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497993

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	1.98	1.97		mg/L		99	54 - 115
Surrogate		LCS %Recovery	LCS Qualifier				Limits
o-Terphenyl (Surr)		97					50 - 115

Lab Sample ID: LCS 280-497993/3-A
Matrix: Water
Analysis Batch: 498637

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497993

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Motor Oil (C20-C38)	5.02	5.45		mg/L		109	54 - 115

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Lab Sample ID: LCS 280-497993/3-A
Matrix: Water
Analysis Batch: 498637

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497993

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
<i>o</i> -Terphenyl (Surr)	106		50 - 115

Lab Sample ID: MB 280-498068/1-A
Matrix: Water
Analysis Batch: 499135

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498068

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Diesel Range Organics [C10-C28]	ND		0.25	0.033	mg/L		06/09/20 15:25	06/23/20 07:14	1
Motor Oil (C20-C38)	ND		0.50	0.056	mg/L		06/09/20 15:25	06/23/20 07:14	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
<i>o</i> -Terphenyl (Surr)	89		50 - 115	06/09/20 15:25	06/23/20 07:14	1

Lab Sample ID: LCS 280-498068/2-A
Matrix: Water
Analysis Batch: 499135

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498068

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Diesel Range Organics [C10-C28]	1.98	1.79		mg/L		90	54 - 115

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
<i>o</i> -Terphenyl (Surr)	90		50 - 115

Lab Sample ID: LCS 280-498068/3-A
Matrix: Water
Analysis Batch: 499135

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498068

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Motor Oil (C20-C38)	5.02	5.24		mg/L		104	54 - 115

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
<i>o</i> -Terphenyl (Surr)	102		50 - 115

Lab Sample ID: MB 280-499036/1-A
Matrix: Solid
Analysis Batch: 499667

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499036

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Diesel Range Organics [C10-C28]	ND		8.0	3.6	mg/Kg		06/17/20 08:03	06/25/20 20:22	1
Motor Oil (C20-C38)	ND		24	7.8	mg/Kg		06/17/20 08:03	06/25/20 20:22	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
<i>o</i> -Terphenyl (Surr)	88		49 - 115	06/17/20 08:03	06/25/20 20:22	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Lab Sample ID: LCS 280-499036/2-A
Matrix: Solid
Analysis Batch: 499482

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499036

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	132	102		mg/Kg		77	53 - 115
Surrogate	%Recovery	LCS Qualifier	Limits				
<i>o</i> -Terphenyl (Surr)	79		49 - 115				

Lab Sample ID: LCS 280-499036/3-A
Matrix: Solid
Analysis Batch: 499482

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499036

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Motor Oil (C20-C38)	334	275		mg/Kg		82	57 - 115
Surrogate	%Recovery	LCS Qualifier	Limits				
<i>o</i> -Terphenyl (Surr)	76		49 - 115				

Lab Sample ID: 280-137283-1 MS
Matrix: Solid
Analysis Batch: 499482

Client Sample ID: CDOT I270 Env-05/06_2020-SB-11-6.5-8
Prep Type: Total/NA
Prep Batch: 499036

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	5.2	J	145	105		mg/Kg	☼	69	56 - 115
Surrogate	%Recovery	MS Qualifier	Limits						
<i>o</i> -Terphenyl (Surr)	71		49 - 115						

Lab Sample ID: 280-137283-1 MS
Matrix: Solid
Analysis Batch: 499482

Client Sample ID: CDOT I270 Env-05/06_2020-SB-11-6.5-8
Prep Type: Total/NA
Prep Batch: 499036

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Motor Oil (C20-C38)	11	J F1 F2	356	97.4	F1	mg/Kg	☼	24	57 - 115
Surrogate	%Recovery	MS Qualifier	Limits						
<i>o</i> -Terphenyl (Surr)	22	X	49 - 115						

Lab Sample ID: 280-137283-1 MSD
Matrix: Solid
Analysis Batch: 499482

Client Sample ID: CDOT I270 Env-05/06_2020-SB-11-6.5-8
Prep Type: Total/NA
Prep Batch: 499036

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Diesel Range Organics [C10-C28]	5.2	J	149	99.9		mg/Kg	☼	64	56 - 115	5	23

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Lab Sample ID: 280-137283-1 MSD
Matrix: Solid
Analysis Batch: 499482

Client Sample ID: CDOT I270 Env-05/06_2020-SB-11-6.5-8
Prep Type: Total/NA
Prep Batch: 499036

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl (Surr)	63		49 - 115

Lab Sample ID: 280-137283-1 MSD
Matrix: Solid
Analysis Batch: 499482

Client Sample ID: CDOT I270 Env-05/06_2020-SB-11-6.5-8
Prep Type: Total/NA
Prep Batch: 499036

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	Limits	RPD	Limit
				Result	Qualifier						
Motor Oil (C20-C38)	11	J F1 F2	391	353	F2	mg/Kg	☼	88	57 - 115	114	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl (Surr)	73		49 - 115

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-497866/1-A
Matrix: Water
Analysis Batch: 498301

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 497866

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	ND		5.0	0.33	ug/L		06/09/20 15:20	06/10/20 14:55	1
Barium	ND		1.0	0.29	ug/L		06/09/20 15:20	06/10/20 14:55	1
Cadmium	ND		1.0	0.27	ug/L		06/09/20 15:20	06/10/20 14:55	1
Chromium	ND		2.0	0.50	ug/L		06/09/20 15:20	06/10/20 14:55	1
Lead	ND		1.0	0.18	ug/L		06/09/20 15:20	06/10/20 14:55	1
Selenium	0.777	J	5.0	0.37	ug/L		06/09/20 15:20	06/10/20 14:55	1
Silver	ND		5.0	0.033	ug/L		06/09/20 15:20	06/10/20 14:55	1

Lab Sample ID: LCS 280-497866/2-A
Matrix: Water
Analysis Batch: 498301

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497866

Analyte	Spike Added	LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
Arsenic	40.0	38.6		ug/L		96	85 - 117
Barium	40.0	42.0		ug/L		105	85 - 118
Cadmium	40.0	38.9		ug/L		97	85 - 115
Chromium	40.0	40.8		ug/L		102	84 - 121
Lead	40.0	40.8		ug/L		102	85 - 118
Selenium	40.0	38.1		ug/L		95	77 - 122
Silver	40.0	37.1		ug/L		93	85 - 115

Lab Sample ID: MB 280-497979/1-A
Matrix: Solid
Analysis Batch: 498702

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 497979

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	ND		0.60	0.051	mg/Kg		06/10/20 09:10	06/12/20 23:07	1
Barium	ND		0.40	0.071	mg/Kg		06/10/20 09:10	06/12/20 23:07	1
Chromium	ND		0.20	0.076	mg/Kg		06/10/20 09:10	06/12/20 23:07	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 280-497979/1-A
Matrix: Solid
Analysis Batch: 498702

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 497979

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.15	0.018	mg/Kg		06/10/20 09:10	06/12/20 23:07	1

Lab Sample ID: MB 280-497979/1-A
Matrix: Solid
Analysis Batch: 499212

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 497979

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.50	0.13	mg/Kg		06/10/20 09:10	06/17/20 18:08	1

Lab Sample ID: LCS 280-497979/2-A
Matrix: Solid
Analysis Batch: 498702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497979
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	20.0	17.0		mg/Kg		85	83 - 111
Barium	20.0	17.2		mg/Kg		86	86 - 120
Chromium	20.0	17.5		mg/Kg		87	87 - 121
Lead	20.0	17.0		mg/Kg		85	81 - 125

Lab Sample ID: LCS 280-497979/2-A
Matrix: Solid
Analysis Batch: 499212

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497979
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Selenium	20.0	15.9		mg/Kg		80	78 - 108

Lab Sample ID: MB 280-498036/1-A
Matrix: Solid
Analysis Batch: 498702

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498036

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		100	7.8	ug/Kg		06/10/20 16:50	06/13/20 01:16	1

Lab Sample ID: LCS 280-498036/2-A
Matrix: Solid
Analysis Batch: 498702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498036
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Silver	20000	18400		ug/Kg		92	83 - 113

Lab Sample ID: MB 280-499407/1-A
Matrix: Solid
Analysis Batch: 499978

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499407

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.10	0.0094	mg/Kg		06/22/20 16:00	06/24/20 03:06	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 280-499407/2-A
Matrix: Solid
Analysis Batch: 499978

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499407
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Cadmium	20.0	20.3		mg/Kg		102	85 - 109

Lab Sample ID: 280-137283-11 MS
Matrix: Solid
Analysis Batch: 499978

Client Sample ID: CDOT I270 Env-05/06_2020-SB-3-27-29
Prep Type: Total/NA
Prep Batch: 499407
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cadmium	0.13		20.3	19.4		mg/Kg	*	95	85 - 109

Lab Sample ID: 280-137283-11 MSD
Matrix: Solid
Analysis Batch: 499978

Client Sample ID: CDOT I270 Env-05/06_2020-SB-3-27-29
Prep Type: Total/NA
Prep Batch: 499407
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Cadmium	0.13		18.8	19.1		mg/Kg	*	101	85 - 109	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 280-498767/1-A
Matrix: Water
Analysis Batch: 498933

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498767

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.027	ug/L		06/15/20 14:15	06/15/20 17:59	1

Lab Sample ID: LCS 280-498767/2-A
Matrix: Water
Analysis Batch: 498933

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498767
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	5.00	5.24		ug/L		105	84 - 120

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 280-498948/1-A
Matrix: Solid
Analysis Batch: 499327

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498948

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		17	5.5	ug/Kg		06/18/20 13:50	06/18/20 15:09	1

Lab Sample ID: LCS 280-498948/2-A
Matrix: Solid
Analysis Batch: 499327

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498948
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	333	352		ug/Kg		106	87 - 111

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: LCSD 280-498948/3-A
Matrix: Solid
Analysis Batch: 499327

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 498948

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	333	349		ug/Kg		105	87 - 111	1	20

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

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QC Association Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

GC/MS VOA

Analysis Batch: 497709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-1	CDOT I270 Env-05/06_2020-SB-11-6.5-8	Total/NA	Solid	8260B	497711
280-137283-3	CDOT I270 Env-05/06_2020-SB-07-7-8	Total/NA	Solid	8260B	497711
280-137283-5	CDOT I270 Env-05/06_2020-SB-09-2-3	Total/NA	Solid	8260B	497711
280-137283-7	CDOT I270 Env-05/06_2020-SB-12-10-12	Total/NA	Solid	8260B	497711
280-137283-8	CDOT I270 Env-05/06_2020-SB-05-10-12	Total/NA	Solid	8260B	497711
280-137283-9	CDOT I270 Env-05/06_2020-SB-5-28-29	Total/NA	Solid	8260B	497711
280-137283-10	CDOT I270 Env-05/06_2020-SB-3-12-14	Total/NA	Solid	8260B	497711
280-137283-11	CDOT I270 Env-05/06_2020-SB-3-27-29	Total/NA	Solid	8260B	497711
280-137283-12	CDOT I270 Env-05/06_2020-SB-TB-03	Total/NA	Solid	8260B	497711
MB 280-497711/3-A	Method Blank	Total/NA	Solid	8260B	497711
LCS 280-497711/1-A	Lab Control Sample	Total/NA	Solid	8260B	497711
LCSD 280-497711/2-A	Lab Control Sample Dup	Total/NA	Solid	8260B	497711

Prep Batch: 497711

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-1	CDOT I270 Env-05/06_2020-SB-11-6.5-8	Total/NA	Solid	5035	
280-137283-3	CDOT I270 Env-05/06_2020-SB-07-7-8	Total/NA	Solid	5035	
280-137283-5	CDOT I270 Env-05/06_2020-SB-09-2-3	Total/NA	Solid	5035	
280-137283-7	CDOT I270 Env-05/06_2020-SB-12-10-12	Total/NA	Solid	5035	
280-137283-8	CDOT I270 Env-05/06_2020-SB-05-10-12	Total/NA	Solid	5035	
280-137283-9	CDOT I270 Env-05/06_2020-SB-5-28-29	Total/NA	Solid	5035	
280-137283-10	CDOT I270 Env-05/06_2020-SB-3-12-14	Total/NA	Solid	5035	
280-137283-11	CDOT I270 Env-05/06_2020-SB-3-27-29	Total/NA	Solid	5035	
280-137283-12	CDOT I270 Env-05/06_2020-SB-TB-03	Total/NA	Solid	5035	
MB 280-497711/3-A	Method Blank	Total/NA	Solid	5035	
LCS 280-497711/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-497711/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 498705

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-2	CDOT I270 Env-05/06_2020-SB-11-GW	Total/NA	Water	8260B	
280-137283-4	CDOT I270 Env-05/06_2020-SB-07-GW	Total/NA	Water	8260B	
280-137283-6	CDOT I270 Env-05/06_2020-SB-09-GW	Total/NA	Water	8260B	
MB 280-498705/10	Method Blank	Total/NA	Water	8260B	
LCS 280-498705/5	Lab Control Sample	Total/NA	Water	8260B	
LCSD 280-498705/6	Lab Control Sample Dup	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 497769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-2	CDOT I270 Env-05/06_2020-SB-11-GW	Total/NA	Water	3520C	
280-137283-4	CDOT I270 Env-05/06_2020-SB-07-GW	Total/NA	Water	3520C	
280-137283-6	CDOT I270 Env-05/06_2020-SB-09-GW	Total/NA	Water	3520C	
MB 280-497769/1-A	Method Blank	Total/NA	Water	3520C	
LCS 280-497769/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 280-497769/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Prep Batch: 498955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-1	CDOT I270 Env-05/06_2020-SB-11-6.5-8	Total/NA	Solid	3550C	

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QC Association Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

GC/MS Semi VOA (Continued)

Prep Batch: 498955 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-3	CDOT I270 Env-05/06_2020-SB-07-7-8	Total/NA	Solid	3550C	
280-137283-5	CDOT I270 Env-05/06_2020-SB-09-2-3	Total/NA	Solid	3550C	
280-137283-7	CDOT I270 Env-05/06_2020-SB-12-10-12	Total/NA	Solid	3550C	
280-137283-8	CDOT I270 Env-05/06_2020-SB-05-10-12	Total/NA	Solid	3550C	
280-137283-9	CDOT I270 Env-05/06_2020-SB-5-28-29	Total/NA	Solid	3550C	
280-137283-10	CDOT I270 Env-05/06_2020-SB-3-12-14	Total/NA	Solid	3550C	
280-137283-11	CDOT I270 Env-05/06_2020-SB-3-27-29	Total/NA	Solid	3550C	
MB 280-498955/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 280-498955/2-A	Lab Control Sample	Total/NA	Solid	3550C	
280-137283-8 MS	CDOT I270 Env-05/06_2020-SB-05-10-12	Total/NA	Solid	3550C	
280-137283-8 MSD	CDOT I270 Env-05/06_2020-SB-05-10-12	Total/NA	Solid	3550C	

Analysis Batch: 499090

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-2	CDOT I270 Env-05/06_2020-SB-11-GW	Total/NA	Water	8270D	497769
280-137283-4	CDOT I270 Env-05/06_2020-SB-07-GW	Total/NA	Water	8270D	497769
280-137283-6	CDOT I270 Env-05/06_2020-SB-09-GW	Total/NA	Water	8270D	497769
MB 280-497769/1-A	Method Blank	Total/NA	Water	8270D	497769
LCS 280-497769/2-A	Lab Control Sample	Total/NA	Water	8270D	497769
LCSD 280-497769/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	497769

Analysis Batch: 499495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-1	CDOT I270 Env-05/06_2020-SB-11-6-5-8	Total/NA	Solid	8270D	498955
280-137283-3	CDOT I270 Env-05/06_2020-SB-07-7-8	Total/NA	Solid	8270D	498955
280-137283-5	CDOT I270 Env-05/06_2020-SB-09-2-3	Total/NA	Solid	8270D	498955
280-137283-7	CDOT I270 Env-05/06_2020-SB-12-10-12	Total/NA	Solid	8270D	498955
280-137283-8	CDOT I270 Env-05/06_2020-SB-05-10-12	Total/NA	Solid	8270D	498955
280-137283-9	CDOT I270 Env-05/06_2020-SB-5-28-29	Total/NA	Solid	8270D	498955
280-137283-10	CDOT I270 Env-05/06_2020-SB-3-12-14	Total/NA	Solid	8270D	498955
280-137283-11	CDOT I270 Env-05/06_2020-SB-3-27-29	Total/NA	Solid	8270D	498955
MB 280-498955/1-A	Method Blank	Total/NA	Solid	8270D	498955
LCS 280-498955/2-A	Lab Control Sample	Total/NA	Solid	8270D	498955
280-137283-8 MS	CDOT I270 Env-05/06_2020-SB-05-10-12	Total/NA	Solid	8270D	498955
280-137283-8 MSD	CDOT I270 Env-05/06_2020-SB-05-10-12	Total/NA	Solid	8270D	498955

GC VOA

Prep Batch: 498655

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-498655/3-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 498797

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-1	CDOT I270 Env-05/06_2020-SB-11-6-5-8	Total/NA	Solid	5035	
280-137283-3	CDOT I270 Env-05/06_2020-SB-07-7-8	Total/NA	Solid	5035	
280-137283-5	CDOT I270 Env-05/06_2020-SB-09-2-3	Total/NA	Solid	5035	
280-137283-12	CDOT I270 Env-05/06_2020-SB-TB-03	Total/NA	Solid	5035	
MB 280-498797/3-A	Method Blank	Total/NA	Solid	5035	
LCS 280-498797/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-498797/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

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QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

GC VOA

Analysis Batch: 498815

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-1	CDOT I270 Env-05/06_2020-SB-11-6.5-8	Total/NA	Solid	8015C	498797
280-137283-3	CDOT I270 Env-05/06_2020-SB-07-7-8	Total/NA	Solid	8015C	498797
280-137283-5	CDOT I270 Env-05/06_2020-SB-09-2-3	Total/NA	Solid	8015C	498797
280-137283-12	CDOT I270 Env-05/06_2020-SB-TB-03	Total/NA	Solid	8015C	498797
MB 280-498655/3-A	Method Blank	Total/NA	Solid	8015C	498655
LCS 280-498797/1-A	Lab Control Sample	Total/NA	Solid	8015C	498797
LCSD 280-498797/2-A	Lab Control Sample Dup	Total/NA	Solid	8015C	498797

Analysis Batch: 498931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-2	CDOT I270 Env-05/06_2020-SB-11-GW	Total/NA	Water	8015C	
280-137283-4	CDOT I270 Env-05/06_2020-SB-07-GW	Total/NA	Water	8015C	
280-137283-6	CDOT I270 Env-05/06_2020-SB-09-GW	Total/NA	Water	8015C	
MB 280-498931/31	Method Blank	Total/NA	Water	8015C	
LCS 280-498931/29	Lab Control Sample	Total/NA	Water	8015C	
LCSD 280-498931/30	Lab Control Sample Dup	Total/NA	Water	8015C	

Prep Batch: 498971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-498971/3-A	Method Blank	Total/NA	Solid	5030B	

Prep Batch: 499104

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-7	CDOT I270 Env-05/06_2020-SB-12-10-12	Total/NA	Solid	5035	
280-137283-8	CDOT I270 Env-05/06_2020-SB-05-10-12	Total/NA	Solid	5035	
280-137283-9	CDOT I270 Env-05/06_2020-SB-5-28-29	Total/NA	Solid	5035	
280-137283-10	CDOT I270 Env-05/06_2020-SB-3-12-14	Total/NA	Solid	5035	
280-137283-11	CDOT I270 Env-05/06_2020-SB-3-27-29	Total/NA	Solid	5035	
MB 280-499104/3-A	Method Blank	Total/NA	Solid	5035	
LCS 280-499104/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-499104/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 499340

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-7	CDOT I270 Env-05/06_2020-SB-12-10-12	Total/NA	Solid	8015C	499104
280-137283-8	CDOT I270 Env-05/06_2020-SB-05-10-12	Total/NA	Solid	8015C	499104
280-137283-9	CDOT I270 Env-05/06_2020-SB-5-28-29	Total/NA	Solid	8015C	499104
280-137283-10	CDOT I270 Env-05/06_2020-SB-3-12-14	Total/NA	Solid	8015C	499104
280-137283-11	CDOT I270 Env-05/06_2020-SB-3-27-29	Total/NA	Solid	8015C	499104
MB 280-498971/3-A	Method Blank	Total/NA	Solid	8015C	498971
MB 280-499104/3-A	Method Blank	Total/NA	Solid	8015C	499104
LCS 280-499104/1-A	Lab Control Sample	Total/NA	Solid	8015C	499104
LCSD 280-499104/2-A	Lab Control Sample Dup	Total/NA	Solid	8015C	499104

Analysis Batch: 499385

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-1	CDOT I270 Env-05/06_2020-SB-11-6.5-8	Total/NA	Solid	8015C	498797
280-137283-3	CDOT I270 Env-05/06_2020-SB-07-7-8	Total/NA	Solid	8015C	498797
280-137283-5	CDOT I270 Env-05/06_2020-SB-09-2-3	Total/NA	Solid	8015C	498797
280-137283-12	CDOT I270 Env-05/06_2020-SB-TB-03	Total/NA	Solid	8015C	498797
MB 280-498797/3-A	Method Blank	Total/NA	Solid	8015C	498797

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QC Association Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

GC Semi VOA

Prep Batch: 497993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-2	CDOT I270 Env-05/06_2020-SB-11-GW	Total/NA	Water	3510C	
280-137283-4	CDOT I270 Env-05/06_2020-SB-07-GW	Total/NA	Water	3510C	
MB 280-497993/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-497993/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCS 280-497993/3-A	Lab Control Sample	Total/NA	Water	3510C	

Prep Batch: 498068

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-6	CDOT I270 Env-05/06_2020-SB-09-GW	Total/NA	Water	3510C	
MB 280-498068/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-498068/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCS 280-498068/3-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 498637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-2	CDOT I270 Env-05/06_2020-SB-11-GW	Total/NA	Water	8015C	497993
280-137283-4	CDOT I270 Env-05/06_2020-SB-07-GW	Total/NA	Water	8015C	497993
MB 280-497993/1-A	Method Blank	Total/NA	Water	8015C	497993
LCS 280-497993/2-A	Lab Control Sample	Total/NA	Water	8015C	497993
LCS 280-497993/3-A	Lab Control Sample	Total/NA	Water	8015C	497993

Prep Batch: 499036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-1	CDOT I270 Env-05/06_2020-SB-11-6.5-8	Total/NA	Solid	3546	
280-137283-3	CDOT I270 Env-05/06_2020-SB-07-7-8	Total/NA	Solid	3546	
280-137283-5	CDOT I270 Env-05/06_2020-SB-09-2-3	Total/NA	Solid	3546	
280-137283-7	CDOT I270 Env-05/06_2020-SB-12-10-12	Total/NA	Solid	3546	
280-137283-8	CDOT I270 Env-05/06_2020-SB-05-10-12	Total/NA	Solid	3546	
280-137283-9	CDOT I270 Env-05/06_2020-SB-5-28-29	Total/NA	Solid	3546	
280-137283-10	CDOT I270 Env-05/06_2020-SB-3-12-14	Total/NA	Solid	3546	
280-137283-11	CDOT I270 Env-05/06_2020-SB-3-27-29	Total/NA	Solid	3546	
MB 280-499036/1-A	Method Blank	Total/NA	Solid	3546	
LCS 280-499036/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCS 280-499036/3-A	Lab Control Sample	Total/NA	Solid	3546	
280-137283-1 MS	CDOT I270 Env-05/06_2020-SB-11-6.5-8	Total/NA	Solid	3546	
280-137283-1 MS	CDOT I270 Env-05/06_2020-SB-11-6.5-8	Total/NA	Solid	3546	
280-137283-1 MSD	CDOT I270 Env-05/06_2020-SB-11-6.5-8	Total/NA	Solid	3546	
280-137283-1 MSD	CDOT I270 Env-05/06_2020-SB-11-6.5-8	Total/NA	Solid	3546	

Analysis Batch: 499135

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-6	CDOT I270 Env-05/06_2020-SB-09-GW	Total/NA	Water	8015C	498068
MB 280-498068/1-A	Method Blank	Total/NA	Water	8015C	498068
LCS 280-498068/2-A	Lab Control Sample	Total/NA	Water	8015C	498068
LCS 280-498068/3-A	Lab Control Sample	Total/NA	Water	8015C	498068

Analysis Batch: 499482

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-1	CDOT I270 Env-05/06_2020-SB-11-6.5-8	Total/NA	Solid	8015C	499036
280-137283-3	CDOT I270 Env-05/06_2020-SB-07-7-8	Total/NA	Solid	8015C	499036
280-137283-5	CDOT I270 Env-05/06_2020-SB-09-2-3	Total/NA	Solid	8015C	499036

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

GC Semi VOA (Continued)

Analysis Batch: 499482 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-7	CDOT I270 Env-05/06_2020-SB-12-10-12	Total/NA	Solid	8015C	499036
280-137283-8	CDOT I270 Env-05/06_2020-SB-05-10-12	Total/NA	Solid	8015C	499036
280-137283-9	CDOT I270 Env-05/06_2020-SB-5-28-29	Total/NA	Solid	8015C	499036
280-137283-10	CDOT I270 Env-05/06_2020-SB-3-12-14	Total/NA	Solid	8015C	499036
280-137283-11	CDOT I270 Env-05/06_2020-SB-3-27-29	Total/NA	Solid	8015C	499036
LCS 280-499036/2-A	Lab Control Sample	Total/NA	Solid	8015C	499036
LCS 280-499036/3-A	Lab Control Sample	Total/NA	Solid	8015C	499036
280-137283-1 MS	CDOT I270 Env-05/06_2020-SB-11-6.5-8	Total/NA	Solid	8015C	499036
280-137283-1 MS	CDOT I270 Env-05/06_2020-SB-11-6.5-8	Total/NA	Solid	8015C	499036
280-137283-1 MSD	CDOT I270 Env-05/06_2020-SB-11-6.5-8	Total/NA	Solid	8015C	499036
280-137283-1 MSD	CDOT I270 Env-05/06_2020-SB-11-6.5-8	Total/NA	Solid	8015C	499036

Analysis Batch: 499667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-499036/1-A	Method Blank	Total/NA	Solid	8015C	499036

Metals

Prep Batch: 497866

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-2	CDOT I270 Env-05/06_2020-SB-11-GW	Total/NA	Water	3020A	
280-137283-4	CDOT I270 Env-05/06_2020-SB-07-GW	Total/NA	Water	3020A	
280-137283-6	CDOT I270 Env-05/06_2020-SB-09-GW	Total/NA	Water	3020A	
MB 280-497866/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-497866/2-A	Lab Control Sample	Total/NA	Water	3020A	

Prep Batch: 497979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-1	CDOT I270 Env-05/06_2020-SB-11-6.5-8	Total/NA	Solid	3050B	
280-137283-3	CDOT I270 Env-05/06_2020-SB-07-7-8	Total/NA	Solid	3050B	
280-137283-5	CDOT I270 Env-05/06_2020-SB-09-2-3	Total/NA	Solid	3050B	
280-137283-7	CDOT I270 Env-05/06_2020-SB-12-10-12	Total/NA	Solid	3050B	
280-137283-8	CDOT I270 Env-05/06_2020-SB-05-10-12	Total/NA	Solid	3050B	
280-137283-9	CDOT I270 Env-05/06_2020-SB-5-28-29	Total/NA	Solid	3050B	
280-137283-10	CDOT I270 Env-05/06_2020-SB-3-12-14	Total/NA	Solid	3050B	
280-137283-11	CDOT I270 Env-05/06_2020-SB-3-27-29	Total/NA	Solid	3050B	
MB 280-497979/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-497979/2-A	Lab Control Sample	Total/NA	Solid	3050B	

Prep Batch: 498036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-1	CDOT I270 Env-05/06_2020-SB-11-6.5-8	Total/NA	Solid	3050B-Sb	
280-137283-3	CDOT I270 Env-05/06_2020-SB-07-7-8	Total/NA	Solid	3050B-Sb	
280-137283-5	CDOT I270 Env-05/06_2020-SB-09-2-3	Total/NA	Solid	3050B-Sb	
280-137283-7	CDOT I270 Env-05/06_2020-SB-12-10-12	Total/NA	Solid	3050B-Sb	
280-137283-8	CDOT I270 Env-05/06_2020-SB-05-10-12	Total/NA	Solid	3050B-Sb	
280-137283-9	CDOT I270 Env-05/06_2020-SB-5-28-29	Total/NA	Solid	3050B-Sb	
280-137283-10	CDOT I270 Env-05/06_2020-SB-3-12-14	Total/NA	Solid	3050B-Sb	
280-137283-11	CDOT I270 Env-05/06_2020-SB-3-27-29	Total/NA	Solid	3050B-Sb	
MB 280-498036/1-A	Method Blank	Total/NA	Solid	3050B-Sb	
LCS 280-498036/2-A	Lab Control Sample	Total/NA	Solid	3050B-Sb	

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Metals

Analysis Batch: 498301

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-2	CDOT I270 Env-05/06_2020-SB-11-GW	Total/NA	Water	6020A	497866
280-137283-4	CDOT I270 Env-05/06_2020-SB-07-GW	Total/NA	Water	6020A	497866
280-137283-6	CDOT I270 Env-05/06_2020-SB-09-GW	Total/NA	Water	6020A	497866
MB 280-497866/1-A	Method Blank	Total/NA	Water	6020A	497866
LCS 280-497866/2-A	Lab Control Sample	Total/NA	Water	6020A	497866

Analysis Batch: 498702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-1	CDOT I270 Env-05/06_2020-SB-11-6.5-8	Total/NA	Solid	6020A	497979
280-137283-1	CDOT I270 Env-05/06_2020-SB-11-6.5-8	Total/NA	Solid	6020A	498036
280-137283-3	CDOT I270 Env-05/06_2020-SB-07-7-8	Total/NA	Solid	6020A	497979
280-137283-3	CDOT I270 Env-05/06_2020-SB-07-7-8	Total/NA	Solid	6020A	498036
280-137283-5	CDOT I270 Env-05/06_2020-SB-09-2-3	Total/NA	Solid	6020A	497979
280-137283-5	CDOT I270 Env-05/06_2020-SB-09-2-3	Total/NA	Solid	6020A	498036
280-137283-7	CDOT I270 Env-05/06_2020-SB-12-10-12	Total/NA	Solid	6020A	497979
280-137283-7	CDOT I270 Env-05/06_2020-SB-12-10-12	Total/NA	Solid	6020A	498036
280-137283-8	CDOT I270 Env-05/06_2020-SB-05-10-12	Total/NA	Solid	6020A	497979
280-137283-8	CDOT I270 Env-05/06_2020-SB-05-10-12	Total/NA	Solid	6020A	498036
280-137283-9	CDOT I270 Env-05/06_2020-SB-5-28-29	Total/NA	Solid	6020A	497979
280-137283-9	CDOT I270 Env-05/06_2020-SB-5-28-29	Total/NA	Solid	6020A	498036
280-137283-10	CDOT I270 Env-05/06_2020-SB-3-12-14	Total/NA	Solid	6020A	497979
280-137283-10	CDOT I270 Env-05/06_2020-SB-3-12-14	Total/NA	Solid	6020A	498036
280-137283-11	CDOT I270 Env-05/06_2020-SB-3-27-29	Total/NA	Solid	6020A	497979
280-137283-11	CDOT I270 Env-05/06_2020-SB-3-27-29	Total/NA	Solid	6020A	498036
MB 280-497979/1-A	Method Blank	Total/NA	Solid	6020A	497979
MB 280-498036/1-A	Method Blank	Total/NA	Solid	6020A	498036
LCS 280-497979/2-A	Lab Control Sample	Total/NA	Solid	6020A	497979
LCS 280-498036/2-A	Lab Control Sample	Total/NA	Solid	6020A	498036

Prep Batch: 498767

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-2	CDOT I270 Env-05/06_2020-SB-11-GW	Total/NA	Water	7470A	
280-137283-4	CDOT I270 Env-05/06_2020-SB-07-GW	Total/NA	Water	7470A	
280-137283-6	CDOT I270 Env-05/06_2020-SB-09-GW	Total/NA	Water	7470A	
MB 280-498767/1-A	Method Blank	Total/NA	Water	7470A	
LCS 280-498767/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 498933

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-2	CDOT I270 Env-05/06_2020-SB-11-GW	Total/NA	Water	7470A	498767
280-137283-4	CDOT I270 Env-05/06_2020-SB-07-GW	Total/NA	Water	7470A	498767
280-137283-6	CDOT I270 Env-05/06_2020-SB-09-GW	Total/NA	Water	7470A	498767
MB 280-498767/1-A	Method Blank	Total/NA	Water	7470A	498767
LCS 280-498767/2-A	Lab Control Sample	Total/NA	Water	7470A	498767

Prep Batch: 498948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-1	CDOT I270 Env-05/06_2020-SB-11-6.5-8	Total/NA	Solid	7471B	
280-137283-3	CDOT I270 Env-05/06_2020-SB-07-7-8	Total/NA	Solid	7471B	
280-137283-5	CDOT I270 Env-05/06_2020-SB-09-2-3	Total/NA	Solid	7471B	
280-137283-7	CDOT I270 Env-05/06_2020-SB-12-10-12	Total/NA	Solid	7471B	

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Metals (Continued)

Prep Batch: 498948 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-8	CDOT I270 Env-05/06_2020-SB-05-10-12	Total/NA	Solid	7471B	
280-137283-9	CDOT I270 Env-05/06_2020-SB-5-28-29	Total/NA	Solid	7471B	
280-137283-10	CDOT I270 Env-05/06_2020-SB-3-12-14	Total/NA	Solid	7471B	
280-137283-11	CDOT I270 Env-05/06_2020-SB-3-27-29	Total/NA	Solid	7471B	
MB 280-498948/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 280-498948/2-A	Lab Control Sample	Total/NA	Solid	7471B	
LCSD 280-498948/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	

Analysis Batch: 499212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-1	CDOT I270 Env-05/06_2020-SB-11-6.5-8	Total/NA	Solid	6020A	497979
280-137283-3	CDOT I270 Env-05/06_2020-SB-07-7-8	Total/NA	Solid	6020A	497979
280-137283-5	CDOT I270 Env-05/06_2020-SB-09-2-3	Total/NA	Solid	6020A	497979
280-137283-7	CDOT I270 Env-05/06_2020-SB-12-10-12	Total/NA	Solid	6020A	497979
280-137283-8	CDOT I270 Env-05/06_2020-SB-05-10-12	Total/NA	Solid	6020A	497979
280-137283-9	CDOT I270 Env-05/06_2020-SB-5-28-29	Total/NA	Solid	6020A	497979
280-137283-10	CDOT I270 Env-05/06_2020-SB-3-12-14	Total/NA	Solid	6020A	497979
280-137283-11	CDOT I270 Env-05/06_2020-SB-3-27-29	Total/NA	Solid	6020A	497979
MB 280-497979/1-A	Method Blank	Total/NA	Solid	6020A	497979
LCS 280-497979/2-A	Lab Control Sample	Total/NA	Solid	6020A	497979

Analysis Batch: 499327

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-498948/1-A	Method Blank	Total/NA	Solid	7471B	498948
LCS 280-498948/2-A	Lab Control Sample	Total/NA	Solid	7471B	498948
LCSD 280-498948/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	498948

Analysis Batch: 499390

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-1	CDOT I270 Env-05/06_2020-SB-11-6.5-8	Total/NA	Solid	7471B	498948
280-137283-3	CDOT I270 Env-05/06_2020-SB-07-7-8	Total/NA	Solid	7471B	498948
280-137283-5	CDOT I270 Env-05/06_2020-SB-09-2-3	Total/NA	Solid	7471B	498948
280-137283-7	CDOT I270 Env-05/06_2020-SB-12-10-12	Total/NA	Solid	7471B	498948
280-137283-8	CDOT I270 Env-05/06_2020-SB-05-10-12	Total/NA	Solid	7471B	498948
280-137283-9	CDOT I270 Env-05/06_2020-SB-5-28-29	Total/NA	Solid	7471B	498948
280-137283-10	CDOT I270 Env-05/06_2020-SB-3-12-14	Total/NA	Solid	7471B	498948
280-137283-11	CDOT I270 Env-05/06_2020-SB-3-27-29	Total/NA	Solid	7471B	498948

Prep Batch: 499407

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-1	CDOT I270 Env-05/06_2020-SB-11-6.5-8	Total/NA	Solid	3050B	
280-137283-3	CDOT I270 Env-05/06_2020-SB-07-7-8	Total/NA	Solid	3050B	
280-137283-5	CDOT I270 Env-05/06_2020-SB-09-2-3	Total/NA	Solid	3050B	
280-137283-7	CDOT I270 Env-05/06_2020-SB-12-10-12	Total/NA	Solid	3050B	
280-137283-8	CDOT I270 Env-05/06_2020-SB-05-10-12	Total/NA	Solid	3050B	
280-137283-9	CDOT I270 Env-05/06_2020-SB-5-28-29	Total/NA	Solid	3050B	
280-137283-10	CDOT I270 Env-05/06_2020-SB-3-12-14	Total/NA	Solid	3050B	
280-137283-11	CDOT I270 Env-05/06_2020-SB-3-27-29	Total/NA	Solid	3050B	
MB 280-499407/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-499407/2-A	Lab Control Sample	Total/NA	Solid	3050B	
280-137283-11 MS	CDOT I270 Env-05/06_2020-SB-3-27-29	Total/NA	Solid	3050B	

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Metals (Continued)

Prep Batch: 499407 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-11 MSD	CDOT I270 Env-05/06_2020-SB-3-27-29	Total/NA	Solid	3050B	

Analysis Batch: 499978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-1	CDOT I270 Env-05/06_2020-SB-11-6.5-8	Total/NA	Solid	6020A	499407
280-137283-3	CDOT I270 Env-05/06_2020-SB-07-7-8	Total/NA	Solid	6020A	499407
280-137283-5	CDOT I270 Env-05/06_2020-SB-09-2-3	Total/NA	Solid	6020A	499407
280-137283-7	CDOT I270 Env-05/06_2020-SB-12-10-12	Total/NA	Solid	6020A	499407
280-137283-8	CDOT I270 Env-05/06_2020-SB-05-10-12	Total/NA	Solid	6020A	499407
280-137283-9	CDOT I270 Env-05/06_2020-SB-5-28-29	Total/NA	Solid	6020A	499407
280-137283-10	CDOT I270 Env-05/06_2020-SB-3-12-14	Total/NA	Solid	6020A	499407
280-137283-11	CDOT I270 Env-05/06_2020-SB-3-27-29	Total/NA	Solid	6020A	499407
MB 280-499407/1-A	Method Blank	Total/NA	Solid	6020A	499407
LCS 280-499407/2-A	Lab Control Sample	Total/NA	Solid	6020A	499407
280-137283-11 MS	CDOT I270 Env-05/06_2020-SB-3-27-29	Total/NA	Solid	6020A	499407
280-137283-11 MSD	CDOT I270 Env-05/06_2020-SB-3-27-29	Total/NA	Solid	6020A	499407

General Chemistry

Analysis Batch: 497583

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137283-1	CDOT I270 Env-05/06_2020-SB-11-6.5-8	Total/NA	Solid	Moisture	
280-137283-3	CDOT I270 Env-05/06_2020-SB-07-7-8	Total/NA	Solid	Moisture	
280-137283-5	CDOT I270 Env-05/06_2020-SB-09-2-3	Total/NA	Solid	Moisture	
280-137283-7	CDOT I270 Env-05/06_2020-SB-12-10-12	Total/NA	Solid	Moisture	
280-137283-8	CDOT I270 Env-05/06_2020-SB-05-10-12	Total/NA	Solid	Moisture	
280-137283-9	CDOT I270 Env-05/06_2020-SB-5-28-29	Total/NA	Solid	Moisture	
280-137283-10	CDOT I270 Env-05/06_2020-SB-3-12-14	Total/NA	Solid	Moisture	
280-137283-11	CDOT I270 Env-05/06_2020-SB-3-27-29	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-11-6.5-8

Lab Sample ID: 280-137283-1

Date Collected: 06/03/20 10:25

Matrix: Solid

Date Received: 06/04/20 14:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			497583	06/05/20 10:52	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-11-6.5-8

Lab Sample ID: 280-137283-1

Date Collected: 06/03/20 10:25

Matrix: Solid

Date Received: 06/04/20 14:40

Percent Solids: 83.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			7.184 g	5 mL	497711	06/03/20 10:25	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497709	06/07/20 12:34	GPM	TAL DEN
Total/NA	Prep	3550C			32.3 g	1 mL	498955	06/16/20 17:27	DCL	TAL DEN
Total/NA	Analysis	8270D		1			499495	06/20/20 19:43	AJE	TAL DEN
Total/NA	Prep	5035			5.067 g	5 mL	498797	06/03/20 10:25	CAS	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	498815	06/16/20 06:11	CAS	TAL DEN
Total/NA	Prep	5035			5.067 g	5 mL	498797	06/03/20 10:25	CAS	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	499385	06/20/20 11:15	CAS	TAL DEN
Total/NA	Prep	3546			16.0 g	1 mL	499036	06/17/20 08:03	MB	TAL DEN
Total/NA	Analysis	8015C		1			499482	06/20/20 16:11	MAM	TAL DEN
Total/NA	Prep	3050B			1.207 g	100 mL	497979	06/10/20 09:10	NK	TAL DEN
Total/NA	Analysis	6020A		1			498702	06/13/20 00:36	LMT	TAL DEN
Total/NA	Prep	3050B-Sb			1.444 g	100 mL	498036	06/10/20 16:50	EC	TAL DEN
Total/NA	Analysis	6020A		1			498702	06/13/20 01:42	LMT	TAL DEN
Total/NA	Prep	3050B			1.207 g	100 mL	497979	06/10/20 09:10	NK	TAL DEN
Total/NA	Analysis	6020A		1			499212	06/17/20 18:38	LMT	TAL DEN
Total/NA	Prep	3050B			1.150 g	100 mL	499407	06/22/20 16:00	EC	TAL DEN
Total/NA	Analysis	6020A		1			499978	06/24/20 03:17	LMT	TAL DEN
Total/NA	Prep	7471B			.58 g	50 mL	498948	06/18/20 13:50	AL	TAL DEN
Total/NA	Analysis	7471B		1			499390	06/18/20 18:32	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-11-GW

Lab Sample ID: 280-137283-2

Date Collected: 06/03/20 11:30

Matrix: Water

Date Received: 06/04/20 14:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	498705	06/15/20 12:10	AJP	TAL DEN
Total/NA	Prep	3520C			1002.3 mL	1 mL	497769	06/08/20 14:31	JNM	TAL DEN
Total/NA	Analysis	8270D		1			499090	06/17/20 14:20	AJE	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	498931	06/16/20 18:35	CAS	TAL DEN
Total/NA	Prep	3510C			991.1 mL	1 mL	497993	06/09/20 11:46	AC	TAL DEN
Total/NA	Analysis	8015C		1			498637	06/14/20 08:01	MAM	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	497866	06/09/20 15:20	EC	TAL DEN
Total/NA	Analysis	6020A		1			498301	06/10/20 18:03	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	498767	06/15/20 14:15	AL	TAL DEN
Total/NA	Analysis	7470A		1			498933	06/15/20 18:22	AL	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-07-7-8

Lab Sample ID: 280-137283-3

Date Collected: 06/03/20 13:50

Matrix: Solid

Date Received: 06/04/20 14:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			497583	06/05/20 10:52	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-07-7-8

Lab Sample ID: 280-137283-3

Date Collected: 06/03/20 13:50

Matrix: Solid

Date Received: 06/04/20 14:40

Percent Solids: 82.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.607 g	5 mL	497711	06/03/20 13:50	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497709	06/07/20 12:56	GPM	TAL DEN
Total/NA	Prep	3550C			31.9 g	1 mL	498955	06/16/20 17:27	DCL	TAL DEN
Total/NA	Analysis	8270D		1			499495	06/20/20 20:11	AJE	TAL DEN
Total/NA	Prep	5035			4.499 g	5 mL	498797	06/03/20 13:50	CAS	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	498815	06/16/20 06:34	CAS	TAL DEN
Total/NA	Prep	5035			4.499 g	5 mL	498797	06/03/20 13:50	CAS	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	499385	06/20/20 11:37	CAS	TAL DEN
Total/NA	Prep	3546			16.9 g	1 mL	499036	06/17/20 08:03	MB	TAL DEN
Total/NA	Analysis	8015C		1			499482	06/20/20 18:01	MAM	TAL DEN
Total/NA	Prep	3050B			1.051 g	100 mL	497979	06/10/20 09:10	NK	TAL DEN
Total/NA	Analysis	6020A		1			498702	06/13/20 00:39	LMT	TAL DEN
Total/NA	Prep	3050B-Sb			1.299 g	100 mL	498036	06/10/20 16:50	EC	TAL DEN
Total/NA	Analysis	6020A		1			498702	06/13/20 01:46	LMT	TAL DEN
Total/NA	Prep	3050B			1.051 g	100 mL	497979	06/10/20 09:10	NK	TAL DEN
Total/NA	Analysis	6020A		1			499212	06/17/20 19:07	LMT	TAL DEN
Total/NA	Prep	3050B			1.279 g	100 mL	499407	06/22/20 16:00	EC	TAL DEN
Total/NA	Analysis	6020A		1			499978	06/24/20 03:21	LMT	TAL DEN
Total/NA	Prep	7471B			.59 g	50 mL	498948	06/18/20 13:50	AL	TAL DEN
Total/NA	Analysis	7471B		1			499390	06/18/20 18:34	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-07-GW

Lab Sample ID: 280-137283-4

Date Collected: 06/03/20 14:20

Matrix: Water

Date Received: 06/04/20 14:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	498705	06/15/20 12:31	AJP	TAL DEN
Total/NA	Prep	3520C			975.7 mL	1 mL	497769	06/08/20 14:31	JNM	TAL DEN
Total/NA	Analysis	8270D		1			499090	06/17/20 14:47	AJE	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	498931	06/16/20 18:59	CAS	TAL DEN
Total/NA	Prep	3510C			947.9 mL	1 mL	497993	06/09/20 11:46	AC	TAL DEN
Total/NA	Analysis	8015C		1			498637	06/14/20 09:29	MAM	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	497866	06/09/20 15:20	EC	TAL DEN
Total/NA	Analysis	6020A		1			498301	06/10/20 18:06	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	498767	06/15/20 14:15	AL	TAL DEN
Total/NA	Analysis	7470A		1			498933	06/15/20 18:24	AL	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-09-2-3

Lab Sample ID: 280-137283-5

Date Collected: 06/03/20 12:40

Matrix: Solid

Date Received: 06/04/20 14:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			497583	06/05/20 10:52	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-09-2-3

Lab Sample ID: 280-137283-5

Date Collected: 06/03/20 12:40

Matrix: Solid

Date Received: 06/04/20 14:40

Percent Solids: 93.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.782 g	5 mL	497711	06/03/20 12:40	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497709	06/07/20 13:19	GPM	TAL DEN
Total/NA	Prep	3550C			32.5 g	1 mL	498955	06/16/20 17:27	DCL	TAL DEN
Total/NA	Analysis	8270D		1			499495	06/20/20 20:38	AJE	TAL DEN
Total/NA	Prep	5035			5.653 g	5 mL	498797	06/03/20 12:40	CAS	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	498815	06/16/20 06:58	CAS	TAL DEN
Total/NA	Prep	5035			5.653 g	5 mL	498797	06/03/20 12:40	CAS	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	499385	06/20/20 11:58	CAS	TAL DEN
Total/NA	Prep	3546			15.4 g	1 mL	499036	06/17/20 08:03	MB	TAL DEN
Total/NA	Analysis	8015C		1			499482	06/20/20 18:23	MAM	TAL DEN
Total/NA	Prep	3050B			1.042 g	100 mL	497979	06/10/20 09:10	NK	TAL DEN
Total/NA	Analysis	6020A		1			498702	06/13/20 00:43	LMT	TAL DEN
Total/NA	Prep	3050B-Sb			1.370 g	100 mL	498036	06/10/20 16:50	EC	TAL DEN
Total/NA	Analysis	6020A		1			498702	06/13/20 01:49	LMT	TAL DEN
Total/NA	Prep	3050B			1.042 g	100 mL	497979	06/10/20 09:10	NK	TAL DEN
Total/NA	Analysis	6020A		1			499212	06/17/20 19:10	LMT	TAL DEN
Total/NA	Prep	3050B			1.241 g	100 mL	499407	06/22/20 16:00	EC	TAL DEN
Total/NA	Analysis	6020A		1			499978	06/24/20 03:24	LMT	TAL DEN
Total/NA	Prep	7471B			.53 g	50 mL	498948	06/18/20 13:50	AL	TAL DEN
Total/NA	Analysis	7471B		1			499390	06/18/20 18:37	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-09-GW

Lab Sample ID: 280-137283-6

Date Collected: 06/03/20 13:00

Matrix: Water

Date Received: 06/04/20 14:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	498705	06/15/20 12:53	AJP	TAL DEN
Total/NA	Prep	3520C			1023.4 mL	1 mL	497769	06/08/20 14:31	JNM	TAL DEN
Total/NA	Analysis	8270D		1			499090	06/17/20 15:15	AJE	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	498931	06/16/20 19:22	CAS	TAL DEN
Total/NA	Prep	3510C			1008.1 mL	1 mL	498068	06/09/20 15:25	AC	TAL DEN
Total/NA	Analysis	8015C		1			499135	06/23/20 17:30	MAM	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	497866	06/09/20 15:20	EC	TAL DEN
Total/NA	Analysis	6020A		1			498301	06/10/20 18:10	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	498767	06/15/20 14:15	AL	TAL DEN
Total/NA	Analysis	7470A		1			498933	06/15/20 18:26	AL	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-12-10-12

Lab Sample ID: 280-137283-7

Date Collected: 06/04/20 10:00

Matrix: Solid

Date Received: 06/04/20 14:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			497583	06/05/20 10:52	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-12-10-12

Lab Sample ID: 280-137283-7

Date Collected: 06/04/20 10:00

Matrix: Solid

Date Received: 06/04/20 14:40

Percent Solids: 94.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.25 g	5 mL	497711	06/04/20 10:00	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497709	06/07/20 13:42	GPM	TAL DEN
Total/NA	Prep	3550C			32.4 g	1 mL	498955	06/16/20 17:27	DCL	TAL DEN
Total/NA	Analysis	8270D		1			499495	06/20/20 21:05	AJE	TAL DEN
Total/NA	Prep	5035			5.706 g	5 mL	499104	06/04/20 10:00	CAS	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	499340	06/18/20 20:27	CAS	TAL DEN
Total/NA	Prep	3546			16.1 g	1 mL	499036	06/17/20 08:03	MB	TAL DEN
Total/NA	Analysis	8015C		1			499482	06/20/20 18:45	MAM	TAL DEN
Total/NA	Prep	3050B			1.289 g	100 mL	497979	06/10/20 09:10	NK	TAL DEN
Total/NA	Analysis	6020A		1			498702	06/13/20 00:47	LMT	TAL DEN
Total/NA	Prep	3050B-Sb			1.443 g	100 mL	498036	06/10/20 16:50	EC	TAL DEN
Total/NA	Analysis	6020A		1			498702	06/13/20 02:04	LMT	TAL DEN
Total/NA	Prep	3050B			1.289 g	100 mL	497979	06/10/20 09:10	NK	TAL DEN
Total/NA	Analysis	6020A		1			499212	06/17/20 19:14	LMT	TAL DEN
Total/NA	Prep	3050B			1.383 g	100 mL	499407	06/22/20 16:00	EC	TAL DEN
Total/NA	Analysis	6020A		1			499978	06/24/20 03:28	LMT	TAL DEN
Total/NA	Prep	7471B			.60 g	50 mL	498948	06/18/20 13:50	AL	TAL DEN
Total/NA	Analysis	7471B		1			499390	06/18/20 18:39	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-05-10-12

Lab Sample ID: 280-137283-8

Date Collected: 06/04/20 11:00

Matrix: Solid

Date Received: 06/04/20 14:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			497583	06/05/20 10:52	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-05-10-12

Lab Sample ID: 280-137283-8

Date Collected: 06/04/20 11:00

Matrix: Solid

Date Received: 06/04/20 14:40

Percent Solids: 91.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.583 g	5 mL	497711	06/04/20 11:00	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497709	06/07/20 14:04	GPM	TAL DEN
Total/NA	Prep	3550C			30.9 g	1 mL	498955	06/16/20 17:27	DCL	TAL DEN
Total/NA	Analysis	8270D		1			499495	06/20/20 21:33	AJE	TAL DEN
Total/NA	Prep	5035			3.787 g	5 mL	499104	06/04/20 11:00	CAS	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	499340	06/18/20 20:47	CAS	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-05-10-12

Lab Sample ID: 280-137283-8

Date Collected: 06/04/20 11:00

Matrix: Solid

Date Received: 06/04/20 14:40

Percent Solids: 91.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15.7 g	1 mL	499036	06/17/20 08:03	MB	TAL DEN
Total/NA	Analysis	8015C		1			499482	06/20/20 19:07	MAM	TAL DEN
Total/NA	Prep	3050B			1.171 g	100 mL	497979	06/10/20 09:10	NK	TAL DEN
Total/NA	Analysis	6020A		1			498702	06/13/20 00:50	LMT	TAL DEN
Total/NA	Prep	3050B-Sb			1.161 g	100 mL	498036	06/10/20 16:50	EC	TAL DEN
Total/NA	Analysis	6020A		1			498702	06/13/20 02:08	LMT	TAL DEN
Total/NA	Prep	3050B			1.171 g	100 mL	497979	06/10/20 09:10	NK	TAL DEN
Total/NA	Analysis	6020A		1			499212	06/17/20 19:18	LMT	TAL DEN
Total/NA	Prep	3050B			1.186 g	100 mL	499407	06/22/20 16:00	EC	TAL DEN
Total/NA	Analysis	6020A		1			499978	06/24/20 03:32	LMT	TAL DEN
Total/NA	Prep	7471B			.54 g	50 mL	498948	06/18/20 13:50	AL	TAL DEN
Total/NA	Analysis	7471B		1			499390	06/18/20 18:41	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-5-28-29

Lab Sample ID: 280-137283-9

Date Collected: 06/04/20 11:40

Matrix: Solid

Date Received: 06/04/20 14:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			497583	06/05/20 10:52	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-5-28-29

Lab Sample ID: 280-137283-9

Date Collected: 06/04/20 11:40

Matrix: Solid

Date Received: 06/04/20 14:40

Percent Solids: 79.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.755 g	5 mL	497711	06/04/20 11:40	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497709	06/07/20 14:27	GPM	TAL DEN
Total/NA	Prep	3550C			30.3 g	1 mL	498955	06/16/20 17:27	DCL	TAL DEN
Total/NA	Analysis	8270D		1			499495	06/20/20 22:55	AJE	TAL DEN
Total/NA	Prep	5035			4.592 g	5 mL	499104	06/04/20 11:40	CAS	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	499340	06/18/20 21:25	CAS	TAL DEN
Total/NA	Prep	3546			15.4 g	1 mL	499036	06/17/20 08:03	MB	TAL DEN
Total/NA	Analysis	8015C		1			499482	06/20/20 19:29	MAM	TAL DEN
Total/NA	Prep	3050B			1.033 g	100 mL	497979	06/10/20 09:10	NK	TAL DEN
Total/NA	Analysis	6020A		1			498702	06/13/20 00:54	LMT	TAL DEN
Total/NA	Prep	3050B-Sb			1.241 g	100 mL	498036	06/10/20 16:50	EC	TAL DEN
Total/NA	Analysis	6020A		1			498702	06/13/20 02:11	LMT	TAL DEN
Total/NA	Prep	3050B			1.033 g	100 mL	497979	06/10/20 09:10	NK	TAL DEN
Total/NA	Analysis	6020A		1			499212	06/17/20 19:21	LMT	TAL DEN
Total/NA	Prep	3050B			1.309 g	100 mL	499407	06/22/20 16:00	EC	TAL DEN
Total/NA	Analysis	6020A		1			499978	06/24/20 03:35	LMT	TAL DEN
Total/NA	Prep	7471B			.60 g	50 mL	498948	06/18/20 13:50	AL	TAL DEN
Total/NA	Analysis	7471B		1			499390	06/18/20 18:44	AL	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-3-12-14

Lab Sample ID: 280-137283-10

Date Collected: 06/04/20 13:05

Matrix: Solid

Date Received: 06/04/20 14:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			497583	06/05/20 10:52	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-3-12-14

Lab Sample ID: 280-137283-10

Date Collected: 06/04/20 13:05

Matrix: Solid

Date Received: 06/04/20 14:40

Percent Solids: 96.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.171 g	5 mL	497711	06/04/20 13:05	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497709	06/07/20 14:50	GPM	TAL DEN
Total/NA	Prep	3550C			32.3 g	1 mL	498955	06/16/20 17:27	DCL	TAL DEN
Total/NA	Analysis	8270D		1			499495	06/20/20 23:22	AJE	TAL DEN
Total/NA	Prep	5035			3.925 g	5 mL	499104	06/04/20 13:05	CAS	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	499340	06/18/20 21:46	CAS	TAL DEN
Total/NA	Prep	3546			16.3 g	1 mL	499036	06/17/20 08:03	MB	TAL DEN
Total/NA	Analysis	8015C		1			499482	06/20/20 19:51	MAM	TAL DEN
Total/NA	Prep	3050B			1.122 g	100 mL	497979	06/10/20 09:10	NK	TAL DEN
Total/NA	Analysis	6020A		1			498702	06/13/20 00:58	LMT	TAL DEN
Total/NA	Prep	3050B-Sb			1.255 g	100 mL	498036	06/10/20 16:50	EC	TAL DEN
Total/NA	Analysis	6020A		1			498702	06/13/20 02:15	LMT	TAL DEN
Total/NA	Prep	3050B			1.122 g	100 mL	497979	06/10/20 09:10	NK	TAL DEN
Total/NA	Analysis	6020A		1			499212	06/17/20 19:25	LMT	TAL DEN
Total/NA	Prep	3050B			1.123 g	100 mL	499407	06/22/20 16:00	EC	TAL DEN
Total/NA	Analysis	6020A		1			499978	06/24/20 03:50	LMT	TAL DEN
Total/NA	Prep	7471B			.59 g	50 mL	498948	06/18/20 13:50	AL	TAL DEN
Total/NA	Analysis	7471B		1			499390	06/18/20 18:46	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-3-27-29

Lab Sample ID: 280-137283-11

Date Collected: 06/04/20 13:40

Matrix: Solid

Date Received: 06/04/20 14:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			497583	06/05/20 10:52	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-3-27-29

Lab Sample ID: 280-137283-11

Date Collected: 06/04/20 13:40

Matrix: Solid

Date Received: 06/04/20 14:40

Percent Solids: 76.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.487 g	5 mL	497711	06/04/20 13:40	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497709	06/07/20 15:12	GPM	TAL DEN
Total/NA	Prep	3550C			31.1 g	1 mL	498955	06/16/20 17:27	DCL	TAL DEN
Total/NA	Analysis	8270D		1			499495	06/20/20 23:49	AJE	TAL DEN
Total/NA	Prep	5035			5.693 g	5 mL	499104	06/04/20 13:40	CAS	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	499340	06/18/20 22:05	CAS	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-3-27-29

Lab Sample ID: 280-137283-11

Date Collected: 06/04/20 13:40

Matrix: Solid

Date Received: 06/04/20 14:40

Percent Solids: 76.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15.3 g	1 mL	499036	06/17/20 08:03	MB	TAL DEN
Total/NA	Analysis	8015C		1			499482	06/20/20 20:13	MAM	TAL DEN
Total/NA	Prep	3050B			1.045 g	100 mL	497979	06/10/20 09:10	NK	TAL DEN
Total/NA	Analysis	6020A		1			498702	06/13/20 01:02	LMT	TAL DEN
Total/NA	Prep	3050B-Sb			1.128 g	100 mL	498036	06/10/20 16:50	EC	TAL DEN
Total/NA	Analysis	6020A		1			498702	06/13/20 02:19	LMT	TAL DEN
Total/NA	Prep	3050B			1.045 g	100 mL	497979	06/10/20 09:10	NK	TAL DEN
Total/NA	Analysis	6020A		1			499212	06/17/20 19:28	LMT	TAL DEN
Total/NA	Prep	3050B			1.348 g	100 mL	499407	06/22/20 16:00	EC	TAL DEN
Total/NA	Analysis	6020A		1			499978	06/24/20 03:54	LMT	TAL DEN
Total/NA	Prep	7471B			.57 g	50 mL	498948	06/18/20 13:50	AL	TAL DEN
Total/NA	Analysis	7471B		1			499390	06/18/20 18:48	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB-03

Lab Sample ID: 280-137283-12

Date Collected: 06/03/20 08:00

Matrix: Solid

Date Received: 06/04/20 14:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	497711	06/03/20 08:00	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497709	06/07/20 11:48	GPM	TAL DEN
Total/NA	Prep	5035			5 g	5 mL	498797	06/03/20 08:00	CAS	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	498815	06/16/20 07:21	CAS	TAL DEN
Total/NA	Prep	5035			5 g	5 mL	498797	06/03/20 08:00	CAS	TAL DEN
Total/NA	Analysis	8015C		1	1 mL	50 mL	499385	06/20/20 12:20	CAS	TAL DEN

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137283-1

Laboratory: Eurofins TestAmerica, Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21
A2LA	ISO/IEC 17025	2907.01	10-31-21
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	02-08-21
Arizona	State	AZ0713	12-20-20
Arkansas DEQ	State	19-047-0	06-01-21
California	State	2513	01-08-21
Connecticut	State	PH-0686	09-30-20
Florida	NELAP	E87667-57	06-30-20
Georgia	State	4025-011	01-09-21
Illinois	NELAP	2000172019-1	04-30-21
Iowa	State	IA#370	12-01-20
Kansas	NELAP	E-10166	04-30-21
Louisiana	NELAP	30785	06-30-20
Maine	State	2019011 (231)	03-03-21
Minnesota	NELAP	1788752	12-31-20
Nevada	State	CO000262020-1	07-31-20
New Hampshire	NELAP	205319	04-29-21
New Jersey	NELAP	190002	06-30-20
New York	NELAP	59923	04-01-21
North Carolina (WW/SW)	State	358	12-31-20
North Dakota	State	R-034	01-08-21
Oklahoma	State	2018-006	08-31-20
Oregon	NELAP	4025-011	01-08-21
Pennsylvania	NELAP	013	08-01-20
South Carolina	State	72002001	01-08-21
Texas	NELAP	T104704183-19-17	09-30-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-18-00099	03-26-21
Utah	NELAP	CO000262019-11	07-31-20
Virginia	NELAP	10490	06-14-21
Washington	State	C583-19	08-05-20
West Virginia DEP	State	354	11-30-20
Wisconsin	State	999615430	08-31-20
Wyoming (UST)	A2LA	2907.01	10-31-21

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Client Information Client Contact: Mr. Jon Russ Company: Jacobs Engineering Group, Inc. Address: 707 17th Street Suite 2400 City: Denver State, Zip: CO, 80202 Phone: 720 286 7385 Email: jon.russ@jacobs.com Project Name: CDOT I-270 Interchange Improvements Site:		Lab PM: Bandy, Darlene F E-Mail: darlene.bandy@testamericainc.com Carrier Tracking No(s): Lab No: 280-99270-29871.3 Page: Job #:	
Due Date Requested: TAT Requested (days): Standard TAT PO #: Purchase Order not required WO #:		Analysis Requested	
Sample Identification		Field Filtered Sample (Yes or No)	
Sample ID: CDOT 1270 Env-05/06_2020-SB-11-6.5-8 CDOT 1270 Env-05/06_2020-SB-11-6W CDOT 1270 Env-05/06_2020-SB-07-7-8 CDOT 1270 Env-05/06_2020-SB-07-6W CDOT 1270 Env-05/06_2020-SB-09-2-3 CDOT 1270 Env-05/06_2020-SB-09-6W CDOT 1270 Env-05/06_2020-SB-12-10-12 CDOT 1270 Env-05/06_2020-SB-5-DUP 28-29 CDOT 1270 Env-05/06_2020-SB-3-MS 12-14 CDOT 1270 Env-05/06_2020-SB-3-MSD 27-29	Sample Date: 6/3/20 6/3/20 6/5/20 6/3/20 6/3/20 6/3/20 6/4/20 6/4/20 6/4/20 6/4/20	Sample Time: 1025 1130 1350 1420 1240 1300 1000 1100 1140 1305 1340	
Matrix: Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid	Preservation Code: C/F G C/F G C/F G C/F C/F C/F C/F C/F	Perform MS/MSD (Yes or No): X X X X X X X X X X X X	J&FF: X X X X X X X X X X X
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input checked="" type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions (QC Requirements): <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Empty Kit Relinquished by: Relinquished by: [Signature] Relinquished by: [Signature]		Method of Shipment: Received by: [Signature] Received by: [Signature] Received by: [Signature]	
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks: 2.2, 10.1, 13.7, 18.8, 10.6, 16.1, 17.0	



Chain of Custody Record

Client Information
 Client Contact: Mr. Jon Russ
 Company: Jacobs Engineering Group, Inc.
 Address: 707 17th Street Suite 2400
 City: Denver
 State, Zip: CO, 80202
 Phone: 720 286 3385
 Email: jon.russ@jacobs.com

Project Name: CDOT I-270 Interchange Improvements
Site:

Sample Identification
Sample Date: 6/3/20
Sample Time: 0800
Sample Type: G-grab
Matrix: Water
Preservation Code: J&F

Due Date Requested:
TAT Requested (days): Standard TAT
PO #:
Purchase Order not required
WO #:

Project #: 28020733
SSOW#:

Carrier Tracking No(s):

Lab PM: Bandy, Darlene F
E-Mail: darlene.bandy@testamericainc.com

Phone: 720 286 3385

COC No: 280-99270-29871.9
Page:
Job #:

Sample ID	Env-05/06-2020-SB-MSB-TB-03	Env-05/06-2020-SB-	Analysis Requested													
Sample ID	Env-05/06-2020-SB-MSB-TB-03	Env-05/06-2020-SB-	8260B - VOCs - Soils	8015C - GRO - TPH - GRO - Soils	8015C - TPH-DRO/RDRO, 8270D SVOCs - Soils	6020A, 7471B RCRA Metals, Moisture	8081B - Pesticides - Soils	8082A - PCBs - Soils	8260B - VOCs - Waters	8015C - GRO - TPH - GRO - Waters	8270D - SVOCs Waters	8015C - DRO - TPH - DRO/RO	6020A, 7470A RCRA Metals	8081B - Pesticides - Waters	8082A - PCBs - Waters	Total Number of Containers
CDOT 1270 Env-05/06-2020-SB-MSB-TB-03	Env-05/06-2020-SB-			J&F						XX						1
CDOT 1270 Env-05/06-2020-SB-	Env-05/06-2020-SB-															

Special Instructions/Note: Trip Blank

Preservation Codes:
 A - HCL
 B - NaOH
 C - Zn Acetate
 D - Nitric Acid
 E - NaHSO4
 F - MeOH
 G - Amchlor
 H - Ascorbic Acid
 I - Ice
 J - DI Water
 K - EDTA
 L - EDA
 Other:

M-Hexane
 N - None
 O - AsNaO2
 P - Na2O4S
 Q - Na2SO3
 R - Na2S2O3
 S - H2SO4
 T - TSP Dodecahydrate
 U - Acetone
 V - MCAA
 W - pH 4-5
 Z - other (specify)

Possible Hazard Identification
 Non-Hazard
 Flammable
 Skin Irritant
 Poison B
 Unknown
 Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client
 Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by: [Signature]
Date: 6/4/20 1440
Company: Jacobs

Relinquished by: [Signature]
Date/Time: 06/04/2020 1440
Company: ERTDEN

Relinquished by:
Date/Time:
Company:

Relinquished by:
Date/Time:
Company:

Custody Seals Intact: Yes No
Custody Seal No.:



Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 280-137283-1

Login Number: 137283

List Source: Eurofins TestAmerica, Denver

List Number: 1

Creator: Bentley, Beau J

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	Refer to Job Narrative for details.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	False	Refer to Job Narrative for details.
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	False	Refer to Job Narrative for details.
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Consultant Work Product - Not CDOT Approved - Jacobs Engineering

ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-137349-1

Client Project/Site: CDOT I-270 Interchange Improvements

For:

Jacobs Engineering Group, Inc.
707 17th Street
Suite 2400
Denver, Colorado 80202

Attn: Mr. Jon Russ



Authorized for release by:
7/31/2020 10:18:09 PM

Darlene Bandy, Project Manager I
(303)736-0188
Darlene.Bandy@Eurofinset.com

LINKS

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results through
Total Access

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www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate recovery exceeds control limits

GC VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
B	Compound was found in the blank and sample.
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate recovery exceeds control limits

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present

Eurofins TestAmerica, Denver

Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Job ID: 280-137349-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: Jacobs Engineering Group, Inc.

Project: CDOT I-270 Interchange Improvements

Report Number: 280-137349-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 6/5/2020 2:25 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 15.2° C and 24.2° C.

Receipt Exceptions

The following samples were observed to be biphasic: CDOT I270 Env-05/06_2020-SB-17-GW (280-137349-4) and CDOT I270 Env-05/06_2020-SB-16-GW (280-137349-6). The volume for these samples contain ~80% of tan silt that mixes easily with the aqueous volume. The laboratory will proceed with analysis from the aqueous portion of the volume.

VOLATILE ORGANIC COMPOUNDS (GC-MS) - Soil

Samples CDOT I270 Env-05/06_2020-SB-16-DUP01 (280-137349-1), CDOT I270 Env-05/06_2020-SB-W-01-5-7 (280-137349-2), CDOT I270 Env-05/06_2020-SB-17-10-12 (280-137349-3), CDOT I270 Env-05/06_2020-SB-16-10-12 (280-137349-5) and CDOT I270 Env-05/06_2020-SB-TB04 (280-137349-8) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 06/05/2020 and analyzed on 06/07/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GC-MS) - Water

Samples CDOT I270 Env-05/06_2020-SB-17-GW (280-137349-4), CDOT I270 Env-05/06_2020-SB-16-GW (280-137349-6) and CDOT I270 Env-05/06_2020-SB-TB04 (280-137349-7) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 06/16/2020.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with analytical batches 280-498882 and 280-498883. A duplicate LCS (LCSD) was analyzed.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GC/MS) - Soil

Samples CDOT I270 Env-05/06_2020-SB-16-DUP01 (280-137349-1), CDOT I270 Env-05/06_2020-SB-W-01-5-7 (280-137349-2), CDOT I270 Env-05/06_2020-SB-17-10-12 (280-137349-3) and CDOT I270 Env-05/06_2020-SB-16-10-12 (280-137349-5) were analyzed for semivolatile organic compounds (GC/MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 06/18/2020

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Job ID: 280-137349-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

and analyzed on 06/24/2020.

The continuing calibration verification (CCV) associated with batch 280-499913 recovered above the upper control limit for Famphur (+44.2%D, limit +20%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been qualified and reported. The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-16-DUP01 (280-137349-1), CDOT I270 Env-05/06_2020-SB-W-01-5-7 (280-137349-2), CDOT I270 Env-05/06_2020-SB-17-10-12 (280-137349-3), CDOT I270 Env-05/06_2020-SB-16-10-12 (280-137349-5), (CCV 280-499913/5) and (280-137759-A-9-A).

The continuing calibration verification (CCV) associated with batch 280-499913 recovered outside acceptance criteria, low biased, for 4-Nitrophenol (-22.6%D, limit -20%D). A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported. Associated samples: CDOT I270 Env-05/06_2020-SB-16-DUP01 (280-137349-1), CDOT I270 Env-05/06_2020-SB-W-01-5-7 (280-137349-2), CDOT I270 Env-05/06_2020-SB-17-10-12 (280-137349-3), CDOT I270 Env-05/06_2020-SB-16-10-12 (280-137349-5), (CCV 280-499913/3), (CCVL 280-499913/21) and (280-137759-A-9-A)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS) - Water

Samples CDOT I270 Env-05/06_2020-SB-17-GW (280-137349-4) and CDOT I270 Env-05/06_2020-SB-16-GW (280-137349-6) were analyzed for semivolatile organic compounds (GC-MS) in accordance with SW-846 8270D. The samples were prepared on 06/11/2020 and analyzed on 06/21/2020.

2,4,6-Tribromophenol (Surr), 2-Fluorophenol (Surr) and Phenol-d5 (Surr) failed the surrogate recovery criteria low for CDOT I270 Env-05/06_2020-SB-16-GW (280-137349-6). Refer to the QC report for details. Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

- 2-Fluorophenol (Surr) - 34% limit 41-120
- 2,4,6-Tribromophenol (Surr) - 18% limit 42-131
- Phenol-d5 (Surr) - 35% limit 45-124

4-Nitrophenol failed the recovery criteria low for LCS 280-498333/2-A at 57%R, limits 60-120%R. Refer to the QC report for details. 4-Nitrophenol has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. The LCSD and RPD were within control limits for this analyte. These results have been qualified and reported.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-498333. A duplicate LCS (LCSD) was analyzed. CDOT I270 Env-05/06_2020-SB-17-GW (280-137349-4) and CDOT I270 Env-05/06_2020-SB-16-GW (280-137349-6)

The continuing calibration verification (CCV) associated with batch 280-499495 recovered above the upper control limit for Famphur at 49.2%D, limit 20%D. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been qualified and reported. The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-17-GW (280-137349-4), CDOT I270 Env-05/06_2020-SB-16-GW (280-137349-6) and (CCV 280-499495/5).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GASOLINE RANGE ORGANICS (GRO) - Soil

Samples CDOT I270 Env-05/06_2020-SB-16-DUP01 (280-137349-1), CDOT I270 Env-05/06_2020-SB-W-01-5-7 (280-137349-2), CDOT I270 Env-05/06_2020-SB-17-10-12 (280-137349-3), CDOT I270 Env-05/06_2020-SB-16-10-12 (280-137349-5) and CDOT I270 Env-05/06_2020-SB-TB04 (280-137349-8) were analyzed for Gasoline Range Organics (GRO) in accordance with EPA SW-846 Method 8015C - GRO. The samples were prepared on 06/05/2020 and analyzed on 06/24/2020, 06/25/2020 and 06/29/2020.

Reanalysis of the following samples was performed outside of the analytical holding time due to QC and surrogate failures in the original analysis. CDOT I270 Env-05/06_2020-SB-16-10-12 (280-137349-5)

Reanalysis of the following sample(s) was performed outside of the analytical holding time due to failure of quality control parameters in the initial analysis CDOT I270 Env-05/06_2020-SB-TB04 (280-137349-8)

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Job ID: 280-137349-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-499800 and analytical batch 280-499884, and with preparation batch 280-500003 and analytical batch 280-500020. A duplicate LCS (LCSD) was analyzed.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GASOLINE RANGE ORGANICS (GRO) - Water

Samples CDOT I270 Env-05/06_2020-SB-17-GW (280-137349-4), CDOT I270 Env-05/06_2020-SB-16-GW (280-137349-6) and CDOT I270 Env-05/06_2020-SB-TB04 (280-137349-7) were analyzed for Gasoline Range Organics (GRO) in accordance with EPA SW-846 Method 8015C - GRO. The samples were analyzed on 06/19/2020.

The following volatile sample was analyzed with significant headspace in the sample container(s): CDOT I270 Env-05/06_2020-SB-TB04 (280-137349-7). Significant headspace is defined as a bubble greater than 6 mm in diameter.

Vials for sample CDOT I270 Env-05/06_2020-SB-17-GW (280-137349-4) contained excess sediment that required the sample to be decanted creating headspace. Significant headspace is defined as a bubble greater than 6 mm in diameter.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DIESEL RANGE ORGANICS - Soil

Samples CDOT I270 Env-05/06_2020-SB-16-DUP01 (280-137349-1), CDOT I270 Env-05/06_2020-SB-W-01-5-7 (280-137349-2), CDOT I270 Env-05/06_2020-SB-17-10-12 (280-137349-3) and CDOT I270 Env-05/06_2020-SB-16-10-12 (280-137349-5) were analyzed for diesel range organics in accordance with EPA SW-846 Method 8015C - DRO. The samples were prepared on 06/18/2020 and 06/29/2020 and analyzed on 06/21/2020 and 07/08/2020.

The following samples were re-prepared outside of preparation holding time due to RRO quality control failing low: CDOT I270 Env-05/06_2020-SB-16-DUP01 (280-137349-1), CDOT I270 Env-05/06_2020-SB-W-01-5-7 (280-137349-2), CDOT I270 Env-05/06_2020-SB-17-10-12 (280-137349-3) and CDOT I270 Env-05/06_2020-SB-16-10-12 (280-137349-5).

Diesel Range Organics [C10-C28] was detected in method blank MB 280-500438/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Surrogate recovery for the following samples were outside control limits: CDOT I270 Env-05/06_2020-SB-16-DUP01 (280-137349-1), CDOT I270 Env-05/06_2020-SB-W-01-5-7 (280-137349-2), CDOT I270 Env-05/06_2020-SB-17-10-12 (280-137349-3) and CDOT I270 Env-05/06_2020-SB-16-10-12 (280-137349-5). Re-extraction and/or re-analysis was performed outside of holding time with acceptable results.

Motor Oil (C20-C38) failed the recovery criteria low for LCS 280-499194/3-A. Refer to the QC report for details. The following samples were re-extracted due to low biased LCS/LCSD. Surrogate(s) and batch QC met acceptance criteria on the re-extraction. Initial extraction is low biased compared to the re-extraction. Both set of data have been reported. CDOT I270 Env-05/06_2020-SB-16-DUP01 (280-137349-1), CDOT I270 Env-05/06_2020-SB-W-01-5-7 (280-137349-2), CDOT I270 Env-05/06_2020-SB-17-10-12 (280-137349-3) and CDOT I270 Env-05/06_2020-SB-16-10-12 (280-137349-5)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DIESEL RANGE ORGANICS - Water

Samples CDOT I270 Env-05/06_2020-SB-17-GW (280-137349-4) and CDOT I270 Env-05/06_2020-SB-16-GW (280-137349-6) were analyzed for Diesel Range Organics in accordance with EPA SW-846 Method 8015C - DRO. The samples were prepared on 06/11/2020 and analyzed on 06/15/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

METALS (ICPMS) - Soil

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Job ID: 280-137349-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Samples CDOT I270 Env-05/06_2020-SB-16-DUP01 (280-137349-1), CDOT I270 Env-05/06_2020-SB-W-01-5-7 (280-137349-2), CDOT I270 Env-05/06_2020-SB-17-10-12 (280-137349-3) and CDOT I270 Env-05/06_2020-SB-16-10-12 (280-137349-5) were analyzed for metals (ICPMS) in accordance with SW 846 6020A. The samples were prepared on 06/11/2020 and analyzed on 06/17/2020.

Barium failed the recovery criteria high for the MS of sample CDOT I270 Env-05/06_2020-SB-16-10-12MS (280-137349-5) in batch 280-499212. Barium failed the recovery criteria low for the MSD of sample CDOT I270 Env-05/06_2020-SB-16-10-12MSD (280-137349-5) in batch 280-499212. Barium exceeded the RPD limit. Refer to the QC report for details. The acceptable LCS data indicate that the analytical system was operating within control.

The initial low level continuing calibration verification (ICVL) associated with batch 280-499212 recovered (133%) above the upper control limit (130%) for Barium. The samples associated with this ICVL were >10x the level of the ICVL for the affected analytes; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP/MS) - Soil (Sb Prep for Silver)

Samples CDOT I270 Env-05/06_2020-SB-16-DUP01 (280-137349-1), CDOT I270 Env-05/06_2020-SB-W-01-5-7 (280-137349-2), CDOT I270 Env-05/06_2020-SB-17-10-12 (280-137349-3) and CDOT I270 Env-05/06_2020-SB-16-10-12 (280-137349-5) were analyzed for Total Metals (ICP/MS) in accordance with 6020A. The samples were prepared on 06/10/2020 and analyzed on 06/13/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICPMS) - Water

Samples CDOT I270 Env-05/06_2020-SB-17-GW (280-137349-4) and CDOT I270 Env-05/06_2020-SB-16-GW (280-137349-6) were analyzed for total metals (ICPMS) in accordance with EPA SW-846 6020A. The samples were prepared on 06/09/2020 and analyzed on 06/10/2020.

Selenium was detected in method blank MB 280-497866/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

The low level continuing calibration verification (CCVL) associated with batch 280-498301 recovered (59%, 65% & 64% for Barium and 141% for Lead) outside of control limits (70-130%) for Barium and Lead. The samples associated with this CCV were >10x the level of the CCVL for the affected analytes; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY - Water

Samples CDOT I270 Env-05/06_2020-SB-17-GW (280-137349-4) and CDOT I270 Env-05/06_2020-SB-16-GW (280-137349-6) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 06/19/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY (CVAA) - Soil

Samples CDOT I270 Env-05/06_2020-SB-16-DUP01 (280-137349-1), CDOT I270 Env-05/06_2020-SB-W-01-5-7 (280-137349-2), CDOT I270 Env-05/06_2020-SB-17-10-12 (280-137349-3) and CDOT I270 Env-05/06_2020-SB-16-10-12 (280-137349-5) were analyzed for total mercury (CVAA) in accordance with EPA SW-846 Method 7471B. The samples were prepared and analyzed on 06/18/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

Samples CDOT I270 Env-05/06_2020-SB-16-DUP01 (280-137349-1), CDOT I270 Env-05/06_2020-SB-W-01-5-7 (280-137349-2), CDOT I270 Env-05/06_2020-SB-17-10-12 (280-137349-3) and CDOT I270 Env-05/06_2020-SB-16-10-12 (280-137349-5) were analyzed for percent solids in accordance with ASTM D2216-90. The samples were analyzed on 06/08/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-DUP01

Lab Sample ID: 280-137349-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	4.5	J	8.0	3.6	mg/Kg	1	☼	8015C	Total/NA
Motor Oil (C20-C38)	19	J*	24	7.8	mg/Kg	1	☼	8015C	Total/NA
Diesel Range Organics [C10-C28] - RE	6.9	J H B	7.8	3.5	mg/Kg	1	☼	8015C	Total/NA
Motor Oil (C20-C38) - RE	20	J H	23	7.6	mg/Kg	1	☼	8015C	Total/NA
Arsenic	0.80		0.59	0.050	mg/Kg	1	☼	6020A	Total/NA
Silver	13	J	98	7.7	ug/Kg	1	☼	6020A	Total/NA
Barium	47	^	0.39	0.069	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.036	J	0.098	0.0092	mg/Kg	1	☼	6020A	Total/NA
Chromium	3.8		0.20	0.075	mg/Kg	1	☼	6020A	Total/NA
Lead	3.5		0.15	0.018	mg/Kg	1	☼	6020A	Total/NA
Mercury	6.5	J	19	6.1	ug/Kg	1	☼	7471B	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-W-01-5-7

Lab Sample ID: 280-137349-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dichlorobenzene	18		11	0.55	ug/Kg	1	☼	8260B	Total/NA
2-Butanone (MEK)	110		45	8.7	ug/Kg	1	☼	8260B	Total/NA
Acetone	390		160	80	ug/Kg	1	☼	8260B	Total/NA
Benzene	10	J	11	0.34	ug/Kg	1	☼	8260B	Total/NA
Carbon disulfide	35		11	3.7	ug/Kg	1	☼	8260B	Total/NA
Cyclohexane	7.9	J	11	4.0	ug/Kg	1	☼	8260B	Total/NA
Ethylbenzene	1.3	J	11	0.68	ug/Kg	1	☼	8260B	Total/NA
Isopropylbenzene	17		11	5.4	ug/Kg	1	☼	8260B	Total/NA
Methylcyclohexane	29		11	0.94	ug/Kg	1	☼	8260B	Total/NA
m-Xylene & p-Xylene	15		5.6	2.3	ug/Kg	1	☼	8260B	Total/NA
o-Xylene	6.4		5.6	0.60	ug/Kg	1	☼	8260B	Total/NA
Toluene	2.5	J	11	0.51	ug/Kg	1	☼	8260B	Total/NA
1,1'-Biphenyl	100	J	430	31	ug/Kg	1	☼	8270D	Total/NA
1-Methylnaphthalene	360	J	430	15	ug/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	360	J	430	25	ug/Kg	1	☼	8270D	Total/NA
Acenaphthene	420	J	430	13	ug/Kg	1	☼	8270D	Total/NA
Anthracene	900		430	22	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	1400		430	26	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	1100		430	26	ug/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	1400		430	34	ug/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	350	J	430	21	ug/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	250	J	430	60	ug/Kg	1	☼	8270D	Total/NA
Carbazole	340	J	430	47	ug/Kg	1	☼	8270D	Total/NA
Chrysene	1500		430	35	ug/Kg	1	☼	8270D	Total/NA
Dibenzofuran	320	J	430	26	ug/Kg	1	☼	8270D	Total/NA
Fluoranthene	2800		430	47	ug/Kg	1	☼	8270D	Total/NA
Fluorene	510		430	23	ug/Kg	1	☼	8270D	Total/NA
Hexadecane	260	J	430	17	ug/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	400	J	430	29	ug/Kg	1	☼	8270D	Total/NA
Naphthalene	410	J	430	40	ug/Kg	1	☼	8270D	Total/NA
Phenanthrene	3800		430	22	ug/Kg	1	☼	8270D	Total/NA
Pyrene	3100		430	16	ug/Kg	1	☼	8270D	Total/NA
Gasoline Range Organics (GRO) -C6-C10	12	H	6.9	2.6	mg/Kg	1	☼	8015C	Total/NA
Diesel Range Organics [C10-C28]	1200		10	4.6	mg/Kg	1	☼	8015C	Total/NA
Motor Oil (C20-C38)	2000	*	30	9.8	mg/Kg	1	☼	8015C	Total/NA
Arsenic	3.5		0.70	0.059	mg/Kg	1	☼	6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-W-01-5-7
 (Continued)

Lab Sample ID: 280-137349-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Silver	830		89	6.9	ug/Kg	1	☼	6020A	Total/NA
Barium	150	^	0.46	0.082	mg/Kg	1	☼	6020A	Total/NA
Cadmium	1.7		0.12	0.011	mg/Kg	1	☼	6020A	Total/NA
Chromium	30		0.23	0.088	mg/Kg	1	☼	6020A	Total/NA
Lead	220		0.17	0.021	mg/Kg	1	☼	6020A	Total/NA
Selenium	0.26	J	0.58	0.15	mg/Kg	1	☼	6020A	Total/NA
Mercury	380		22	7.3	ug/Kg	1	☼	7471B	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-17-10-12

Lab Sample ID: 280-137349-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	0.36	J	4.7	0.21	ug/Kg	1	☼	8260B	Total/NA
Motor Oil (C20-C38)	16	J*	26	8.4	mg/Kg	1	☼	8015C	Total/NA
Diesel Range Organics [C10-C28] - RE	7.5	J H B	7.8	3.5	mg/Kg	1	☼	8015C	Total/NA
Motor Oil (C20-C38) - RE	28	H	23	7.6	mg/Kg	1	☼	8015C	Total/NA
Arsenic	0.96		0.58	0.049	mg/Kg	1	☼	6020A	Total/NA
Silver	7.8	J	86	6.8	ug/Kg	1	☼	6020A	Total/NA
Barium	35	^	0.39	0.069	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.024	J	0.097	0.0091	mg/Kg	1	☼	6020A	Total/NA
Chromium	3.3		0.19	0.074	mg/Kg	1	☼	6020A	Total/NA
Lead	3.3		0.15	0.018	mg/Kg	1	☼	6020A	Total/NA
Mercury	19	J	21	6.8	ug/Kg	1	☼	7471B	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-17-GW

Lab Sample ID: 280-137349-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
4-Methyl-2-pentanone (MIBK)	2.2	J	5.0	0.98	ug/L	1		8260B	Total/NA
Acetone	3.0	J	10	1.9	ug/L	1		8260B	Total/NA
Bromomethane	0.33	J	2.0	0.21	ug/L	1		8260B	Total/NA
Carbon disulfide	0.53	J	2.0	0.17	ug/L	1		8260B	Total/NA
Gasoline Range Organics (GRO) -C6-C10	10	J	25	10	ug/L	1		8015C	Total/NA
Diesel Range Organics [C10-C28]	0.18	J	0.25	0.032	mg/L	1		8015C	Total/NA
Motor Oil (C20-C38)	0.17	J	0.49	0.055	mg/L	1		8015C	Total/NA
Arsenic	8.8		5.0	0.33	ug/L	1		6020A	Total/NA
Barium	430	^	1.0	0.29	ug/L	1		6020A	Total/NA
Cadmium	0.56	J	1.0	0.27	ug/L	1		6020A	Total/NA
Chromium	23		2.0	0.50	ug/L	1		6020A	Total/NA
Lead	19	^	1.0	0.18	ug/L	1		6020A	Total/NA
Selenium	1.4	J B	5.0	0.37	ug/L	1		6020A	Total/NA
Silver	0.12	J	5.0	0.033	ug/L	1		6020A	Total/NA
Mercury	0.19	J	0.20	0.027	ug/L	1		7470A	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-10-12

Lab Sample ID: 280-137349-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	0.31	J	4.6	0.21	ug/Kg	1	☼	8260B	Total/NA
Motor Oil (C20-C38)	9.2	J*	23	7.6	mg/Kg	1	☼	8015C	Total/NA
Diesel Range Organics [C10-C28] - RE	6.6	J H B	8.6	3.9	mg/Kg	1	☼	8015C	Total/NA
Motor Oil (C20-C38) - RE	26	H	26	8.4	mg/Kg	1	☼	8015C	Total/NA
Arsenic	0.97		0.52	0.044	mg/Kg	1	☼	6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-10-12
 (Continued)

Lab Sample ID: 280-137349-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	55	^ F2 F1	0.35	0.061	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.022	J	0.087	0.0082	mg/Kg	1	☼	6020A	Total/NA
Chromium	4.0		0.17	0.066	mg/Kg	1	☼	6020A	Total/NA
Lead	3.7		0.13	0.016	mg/Kg	1	☼	6020A	Total/NA
Mercury	110		19	6.2	ug/Kg	1	☼	7471B	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-GW

Lab Sample ID: 280-137349-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	0.16	J	0.25	0.033	mg/L	1		8015C	Total/NA
Motor Oil (C20-C38)	0.28	J	0.50	0.056	mg/L	1		8015C	Total/NA
Arsenic	10		5.0	0.33	ug/L	1		6020A	Total/NA
Barium	1500	^	1.0	0.29	ug/L	1		6020A	Total/NA
Cadmium	1.7		1.0	0.27	ug/L	1		6020A	Total/NA
Chromium	26		2.0	0.50	ug/L	1		6020A	Total/NA
Lead	36	^	1.0	0.18	ug/L	1		6020A	Total/NA
Selenium	2.5	J B	5.0	0.37	ug/L	1		6020A	Total/NA
Silver	0.23	J	5.0	0.033	ug/L	1		6020A	Total/NA
Mercury	0.34		0.20	0.027	ug/L	1		7470A	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB04

Lab Sample ID: 280-137349-7

No Detections.

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB04

Lab Sample ID: 280-137349-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.17	J	5.0	0.15	ug/Kg	1		8260B	Total/NA
Toluene	0.87	J	5.0	0.23	ug/Kg	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Method Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL DEN
8015C	Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)	SW846	TAL DEN
8015C	Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)	SW846	TAL DEN
6020A	Metals (ICP/MS)	SW846	TAL DEN
7470A	Mercury (CVAA)	SW846	TAL DEN
7471B	Mercury (CVAA)	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN
3020A	Preparation, Total Metals	SW846	TAL DEN
3050B	Preparation, Metals	SW846	TAL DEN
3050B-Sb	Preparation, Metals (Antimony)	SW846	TAL DEN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL DEN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL DEN
3546	Microwave Extraction	SW846	TAL DEN
3550C	Ultrasonic Extraction	SW846	TAL DEN
5030B	Purge and Trap	SW846	TAL DEN
5030C	Purge and Trap	SW846	TAL DEN
5035	Closed System Purge and Trap	SW846	TAL DEN
7470A	Preparation, Mercury	SW846	TAL DEN
7471B	Preparation, Mercury	SW846	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-137349-1	CDOT I270 Env-05/06_2020-SB-16-DUP01	Solid	06/05/20 12:30	06/05/20 14:25	
280-137349-2	CDOT I270 Env-05/06_2020-SB-W-01-5-7	Solid	06/05/20 09:00	06/05/20 14:25	
280-137349-3	CDOT I270 Env-05/06_2020-SB-17-10-12	Solid	06/05/20 11:20	06/05/20 14:25	
280-137349-4	CDOT I270 Env-05/06_2020-SB-17-GW	Water	06/05/20 11:35	06/05/20 14:25	
280-137349-5	CDOT I270 Env-05/06_2020-SB-16-10-12	Solid	06/05/20 12:30	06/05/20 14:25	
280-137349-6	CDOT I270 Env-05/06_2020-SB-16-GW	Water	06/05/20 13:10	06/05/20 14:25	
280-137349-7	CDOT I270 Env-05/06_2020-SB-TB04	Water	06/05/20 08:00	06/05/20 14:25	
280-137349-8	CDOT I270 Env-05/06_2020-SB-TB04	Solid	06/05/20 08:00	06/05/20 14:25	

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-DUP01

Date Collected: 06/05/20 12:30

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-1

Matrix: Solid

Percent Solids: 94.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.7	1.9	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
1,1,2,2-Tetrachloroethane	ND		4.7	0.27	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
1,1,2-Trichloroethane	ND		4.7	0.84	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
1,1,2-Trichlorotrifluoroethane	ND		19	1.6	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
1,1-Dichloroethane	ND		4.7	0.20	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
1,1-Dichloroethene	ND		4.7	0.56	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
1,2,3-Trichlorobenzene	ND		4.7	0.77	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
1,2,4-Trichlorobenzene	ND		4.7	0.69	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
1,2-Dibromo-3-Chloropropane	ND		9.5	3.5	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
1,2-Dibromoethane	ND		4.7	0.49	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
1,2-Dichlorobenzene	ND		4.7	1.8	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
1,2-Dichloroethane	ND		4.7	0.66	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
1,2-Dichloropropane	ND		4.7	0.52	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
1,3-Dichlorobenzene	ND		4.7	0.46	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
1,4-Dichlorobenzene	ND		4.7	0.23	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
1,4-Dioxane	ND		470	53	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
2-Butanone (MEK)	ND		19	3.7	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
2-Hexanone	ND		19	4.6	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
4-Methyl-2-pentanone (MIBK)	ND		19	4.1	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
Acetone	ND		68	34	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
Benzene	ND		4.7	0.14	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
Bromoform	ND		4.8	2.4	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
Bromomethane	ND		9.5	1.3	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
Carbon disulfide	ND		4.7	1.6	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
Carbon tetrachloride	ND		4.7	1.9	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
Chlorobenzene	ND		4.7	2.0	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
Chlorobromomethane	ND		4.7	2.3	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
Chlorodibromomethane	ND		4.7	2.2	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
Chloroethane	ND		9.5	1.9	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
Chloroform	ND		9.5	0.28	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
Chloromethane	ND		9.5	0.73	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
cis-1,2-Dichloroethene	ND		2.4	0.19	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
cis-1,3-Dichloropropene	ND		4.7	0.095	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
Cyclohexane	ND		4.7	1.7	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
Dichlorobromomethane	ND		4.7	2.0	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
Dichlorodifluoromethane	ND		9.5	2.6	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
Ethylbenzene	ND		4.7	0.29	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
Isopropylbenzene	ND		4.7	2.3	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
Methyl acetate	ND		9.5	2.6	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
Methyl tert-butyl ether	ND		19	2.0	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
Methylcyclohexane	ND		4.7	0.40	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
Methylene Chloride	ND		4.7	1.5	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
m-Xylene & p-Xylene	ND		2.4	0.99	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
o-Xylene	ND		2.4	0.25	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
Styrene	ND		4.7	0.27	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
Tetrachloroethene	ND		4.7	1.8	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
Toluene	ND		4.7	0.22	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
trans-1,2-Dichloroethene	ND		2.4	0.37	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
trans-1,3-Dichloropropene	ND		4.7	0.079	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-DUP01

Date Collected: 06/05/20 12:30

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-1

Matrix: Solid

Percent Solids: 94.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		4.7	1.8	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
Trichlorofluoromethane	ND		9.5	3.0	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
Vinyl chloride	ND		4.7	1.3	ug/Kg	☼	06/05/20 12:30	06/07/20 06:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		58 - 140				06/05/20 12:30	06/07/20 06:54	1
4-Bromofluorobenzene (Surr)	98		76 - 127				06/05/20 12:30	06/07/20 06:54	1
Dibromofluoromethane (Surr)	103		75 - 121				06/05/20 12:30	06/07/20 06:54	1
Toluene-d8 (Surr)	98		80 - 126				06/05/20 12:30	06/07/20 06:54	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-W-01-5-7

Date Collected: 06/05/20 09:00

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-2

Matrix: Solid

Percent Solids: 76.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		11	4.4	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
1,1,2,2-Tetrachloroethane	ND		11	0.64	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
1,1,2-Trichloroethane	ND		11	2.0	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
1,1,2-Trichlorotrifluoroethane	ND		45	3.7	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
1,1-Dichloroethane	ND		11	0.47	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
1,1-Dichloroethene	ND		11	1.3	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
1,2,3-Trichlorobenzene	ND		11	1.8	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
1,2,4-Trichlorobenzene	ND		11	1.6	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
1,2-Dibromo-3-Chloropropane	ND		22	8.2	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
1,2-Dibromoethane	ND		11	1.2	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
1,2-Dichlorobenzene	ND		11	4.2	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
1,2-Dichloroethane	ND		11	1.6	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
1,2-Dichloropropane	ND		11	1.2	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
1,3-Dichlorobenzene	ND		11	1.1	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
1,4-Dichlorobenzene	18		11	0.55	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
1,4-Dioxane	ND		1100	130	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
2-Butanone (MEK)	110		45	8.7	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
2-Hexanone	ND		45	11	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
4-Methyl-2-pentanone (MIBK)	ND		45	9.8	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
Acetone	390		160	80	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
Benzene	10 J		11	0.34	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
Bromoform	ND		11	5.7	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
Bromomethane	ND		22	3.0	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
Carbon disulfide	35		11	3.7	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
Carbon tetrachloride	ND		11	4.5	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
Chlorobenzene	ND		11	4.6	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
Chlorobromomethane	ND		11	5.5	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
Chlorodibromomethane	ND		11	5.1	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
Chloroethane	ND		22	4.5	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
Chloroform	ND		22	0.65	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
Chloromethane	ND		22	1.7	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
cis-1,2-Dichloroethene	ND		5.6	0.45	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
cis-1,3-Dichloropropene	ND		11	0.22	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
Cyclohexane	7.9 J		11	4.0	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
Dichlorobromomethane	ND		11	4.8	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
Dichlorodifluoromethane	ND		22	6.2	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-W-01-5-7

Date Collected: 06/05/20 09:00

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-2

Matrix: Solid

Percent Solids: 76.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	1.3	J	11	0.68	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
Isopropylbenzene	17		11	5.4	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
Methyl acetate	ND		22	6.2	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
Methyl tert-butyl ether	ND		45	4.7	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
Methylcyclohexane	29		11	0.94	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
Methylene Chloride	ND		11	3.6	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
m-Xylene & p-Xylene	15		5.6	2.3	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
o-Xylene	6.4		5.6	0.60	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
Styrene	ND		11	0.63	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
Tetrachloroethene	ND		11	4.3	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
Toluene	2.5	J	11	0.51	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
trans-1,2-Dichloroethene	ND		5.6	0.88	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
trans-1,3-Dichloropropene	ND		11	0.19	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
Trichloroethene	ND		11	4.3	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
Trichlorofluoromethane	ND		22	7.2	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1
Vinyl chloride	ND		11	3.0	ug/Kg	☼	06/05/20 09:00	06/07/20 07:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		58 - 140	06/05/20 09:00	06/07/20 07:16	1
4-Bromofluorobenzene (Surr)	108		76 - 127	06/05/20 09:00	06/07/20 07:16	1
Dibromofluoromethane (Surr)	102		75 - 121	06/05/20 09:00	06/07/20 07:16	1
Toluene-d8 (Surr)	102		80 - 126	06/05/20 09:00	06/07/20 07:16	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-17-10-12

Date Collected: 06/05/20 11:20

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-3

Matrix: Solid

Percent Solids: 92.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.7	1.9	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
1,1,2,2-Tetrachloroethane	ND		4.7	0.27	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
1,1,2-Trichloroethane	ND		4.7	0.83	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
1,1,2-Trichlorotrifluoroethane	ND		19	1.6	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
1,1-Dichloroethane	ND		4.7	0.20	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
1,1-Dichloroethene	ND		4.7	0.55	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
1,2,3-Trichlorobenzene	ND		4.7	0.76	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
1,2,4-Trichlorobenzene	ND		4.7	0.69	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
1,2-Dibromo-3-Chloropropane	ND		9.4	3.4	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
1,2-Dibromoethane	ND		4.7	0.49	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
1,2-Dichlorobenzene	ND		4.7	1.8	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
1,2-Dichloroethane	ND		4.7	0.66	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
1,2-Dichloropropane	ND		4.7	0.52	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
1,3-Dichlorobenzene	ND		4.7	0.45	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
1,4-Dichlorobenzene	ND		4.7	0.23	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
1,4-Dioxane	ND		470	53	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
2-Butanone (MEK)	ND		19	3.7	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
2-Hexanone	ND		19	4.6	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
4-Methyl-2-pentanone (MIBK)	ND		19	4.1	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
Acetone	ND		68	33	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
Benzene	ND		4.7	0.14	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
Bromoform	ND		4.8	2.4	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
Bromomethane	ND		9.4	1.3	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-17-10-12

Date Collected: 06/05/20 11:20

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-3

Matrix: Solid

Percent Solids: 92.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		4.7	1.6	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
Carbon tetrachloride	ND		4.7	1.9	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
Chlorobenzene	ND		4.7	1.9	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
Chlorobromomethane	ND		4.7	2.3	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
Chlorodibromomethane	ND		4.7	2.1	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
Chloroethane	ND		9.4	1.9	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
Chloroform	ND		9.4	0.27	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
Chloromethane	ND		9.4	0.72	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
cis-1,2-Dichloroethene	ND		2.3	0.19	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
cis-1,3-Dichloropropene	ND		4.7	0.094	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
Cyclohexane	ND		4.7	1.7	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
Dichlorobromomethane	ND		4.7	2.0	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
Dichlorodifluoromethane	ND		9.4	2.6	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
Ethylbenzene	ND		4.7	0.29	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
Isopropylbenzene	ND		4.7	2.3	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
Methyl acetate	ND		9.4	2.6	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
Methyl tert-butyl ether	ND		19	2.0	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
Methylcyclohexane	ND		4.7	0.39	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
Methylene Chloride	ND		4.7	1.5	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
m-Xylene & p-Xylene	ND		2.3	0.98	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
o-Xylene	ND		2.3	0.25	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
Styrene	ND		4.7	0.26	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
Tetrachloroethene	ND		4.7	1.8	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
Toluene	0.36	J	4.7	0.21	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
trans-1,2-Dichloroethene	ND		2.3	0.37	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
trans-1,3-Dichloropropene	ND		4.7	0.078	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
Trichloroethene	ND		4.7	1.8	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
Trichlorofluoromethane	ND		9.4	3.0	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
Vinyl chloride	ND		4.7	1.3	ug/Kg	☼	06/05/20 11:20	06/07/20 07:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		58 - 140				06/05/20 11:20	06/07/20 07:39	1
4-Bromofluorobenzene (Surr)	96		76 - 127				06/05/20 11:20	06/07/20 07:39	1
Dibromofluoromethane (Surr)	103		75 - 121				06/05/20 11:20	06/07/20 07:39	1
Toluene-d8 (Surr)	95		80 - 126				06/05/20 11:20	06/07/20 07:39	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-17-GW

Date Collected: 06/05/20 11:35

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			06/16/20 13:36	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			06/16/20 13:36	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			06/16/20 13:36	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			06/16/20 13:36	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/16/20 13:36	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			06/16/20 13:36	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			06/16/20 13:36	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			06/16/20 13:36	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			06/16/20 13:36	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			06/16/20 13:36	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-17-GW

Lab Sample ID: 280-137349-4

Date Collected: 06/05/20 11:35

Matrix: Water

Date Received: 06/05/20 14:25

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			06/16/20 13:36	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			06/16/20 13:36	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/16/20 13:36	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			06/16/20 13:36	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			06/16/20 13:36	1
1,4-Dioxane	ND		200	19	ug/L			06/16/20 13:36	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			06/16/20 13:36	1
2-Hexanone	ND		5.0	1.7	ug/L			06/16/20 13:36	1
4-Methyl-2-pentanone (MIBK)	2.2	J	5.0	0.98	ug/L			06/16/20 13:36	1
Acetone	3.0	J	10	1.9	ug/L			06/16/20 13:36	1
Benzene	ND		1.0	0.16	ug/L			06/16/20 13:36	1
Bromoform	ND		1.0	0.46	ug/L			06/16/20 13:36	1
Bromomethane	0.33	J	2.0	0.21	ug/L			06/16/20 13:36	1
Carbon disulfide	0.53	J	2.0	0.17	ug/L			06/16/20 13:36	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			06/16/20 13:36	1
Chlorobenzene	ND		1.0	0.17	ug/L			06/16/20 13:36	1
Chlorobromomethane	ND		1.0	0.10	ug/L			06/16/20 13:36	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			06/16/20 13:36	1
Chloroethane	ND		2.0	0.41	ug/L			06/16/20 13:36	1
Chloroform	ND		1.0	0.16	ug/L			06/16/20 13:36	1
Chloromethane	ND		2.0	0.30	ug/L			06/16/20 13:36	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/16/20 13:36	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			06/16/20 13:36	1
Cyclohexane	ND		2.0	0.28	ug/L			06/16/20 13:36	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			06/16/20 13:36	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			06/16/20 13:36	1
Ethylbenzene	ND		1.0	0.16	ug/L			06/16/20 13:36	1
Isopropylbenzene	ND		1.0	0.19	ug/L			06/16/20 13:36	1
Methyl acetate	ND		5.0	1.6	ug/L			06/16/20 13:36	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			06/16/20 13:36	1
Methylcyclohexane	ND		1.0	0.10	ug/L			06/16/20 13:36	1
Methylene Chloride	ND		2.0	0.94	ug/L			06/16/20 13:36	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			06/16/20 13:36	1
o-Xylene	ND		1.0	0.19	ug/L			06/16/20 13:36	1
Styrene	ND		1.0	0.36	ug/L			06/16/20 13:36	1
Tetrachloroethene	ND		1.0	0.20	ug/L			06/16/20 13:36	1
Toluene	ND		1.0	0.17	ug/L			06/16/20 13:36	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/16/20 13:36	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			06/16/20 13:36	1
Trichloroethene	ND		1.0	0.16	ug/L			06/16/20 13:36	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			06/16/20 13:36	1
Vinyl chloride	ND		1.0	0.10	ug/L			06/16/20 13:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>1,2-Dichloroethane-d4 (Surr)</i>	110		70 - 127					06/16/20 13:36	1
<i>Toluene-d8 (Surr)</i>	95		80 - 125					06/16/20 13:36	1
<i>4-Bromofluorobenzene (Surr)</i>	99		78 - 120					06/16/20 13:36	1
<i>Dibromofluoromethane (Surr)</i>	105		77 - 120					06/16/20 13:36	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-10-12

Date Collected: 06/05/20 12:30

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-5

Matrix: Solid

Percent Solids: 91.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.6	1.8	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
1,1,2,2-Tetrachloroethane	ND		4.6	0.26	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
1,1,2-Trichloroethane	ND		4.6	0.82	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
1,1,2-Trichlorotrifluoroethane	ND		19	1.5	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
1,1-Dichloroethane	ND		4.6	0.19	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
1,1-Dichloroethene	ND		4.6	0.55	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
1,2,3-Trichlorobenzene	ND		4.6	0.75	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
1,2,4-Trichlorobenzene	ND		4.6	0.68	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
1,2-Dibromo-3-Chloropropane	ND		9.3	3.4	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
1,2-Dibromoethane	ND		4.6	0.48	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
1,2-Dichlorobenzene	ND		4.6	1.7	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
1,2-Dichloroethane	ND		4.6	0.65	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
1,2-Dichloropropane	ND		4.6	0.51	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
1,3-Dichlorobenzene	ND		4.6	0.45	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
1,4-Dichlorobenzene	ND		4.6	0.23	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
1,4-Dioxane	ND		460	52	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
2-Butanone (MEK)	ND		19	3.6	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
2-Hexanone	ND		19	4.5	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
4-Methyl-2-pentanone (MIBK)	ND		19	4.0	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
Acetone	ND		67	33	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
Benzene	ND		4.6	0.14	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
Bromoform	ND		4.7	2.4	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
Bromomethane	ND		9.3	1.3	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
Carbon disulfide	ND		4.6	1.5	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
Carbon tetrachloride	ND		4.6	1.9	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
Chlorobenzene	ND		4.6	1.9	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
Chlorobromomethane	ND		4.6	2.3	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
Chlorodibromomethane	ND		4.6	2.1	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
Chloroethane	ND		9.3	1.8	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
Chloroform	ND		9.3	0.27	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
Chloromethane	ND		9.3	0.71	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
cis-1,2-Dichloroethene	ND		2.3	0.19	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
cis-1,3-Dichloropropene	ND		4.6	0.093	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
Cyclohexane	ND		4.6	1.6	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
Dichlorobromomethane	ND		4.6	2.0	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
Dichlorodifluoromethane	ND		9.3	2.5	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
Ethylbenzene	ND		4.6	0.28	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
Isopropylbenzene	ND		4.6	2.2	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
Methyl acetate	ND		9.3	2.6	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
Methyl tert-butyl ether	ND		19	2.0	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
Methylcyclohexane	ND		4.6	0.39	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
Methylene Chloride	ND		4.6	1.5	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
m-Xylene & p-Xylene	ND		2.3	0.96	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
o-Xylene	ND		2.3	0.25	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
Styrene	ND		4.6	0.26	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
Tetrachloroethene	ND		4.6	1.8	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
Toluene	0.31	J	4.6	0.21	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
trans-1,2-Dichloroethene	ND		2.3	0.36	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
trans-1,3-Dichloropropene	ND		4.6	0.077	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-10-12

Date Collected: 06/05/20 12:30

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-5

Matrix: Solid

Percent Solids: 91.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		4.6	1.8	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
Trichlorofluoromethane	ND		9.3	3.0	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
Vinyl chloride	ND		4.6	1.2	ug/Kg	☼	06/05/20 12:30	06/07/20 08:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		58 - 140				06/05/20 12:30	06/07/20 08:02	1
4-Bromofluorobenzene (Surr)	97		76 - 127				06/05/20 12:30	06/07/20 08:02	1
Dibromofluoromethane (Surr)	102		75 - 121				06/05/20 12:30	06/07/20 08:02	1
Toluene-d8 (Surr)	97		80 - 126				06/05/20 12:30	06/07/20 08:02	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-GW

Date Collected: 06/05/20 13:10

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			06/16/20 16:14	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			06/16/20 16:14	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			06/16/20 16:14	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			06/16/20 16:14	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/16/20 16:14	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			06/16/20 16:14	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			06/16/20 16:14	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			06/16/20 16:14	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			06/16/20 16:14	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			06/16/20 16:14	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			06/16/20 16:14	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			06/16/20 16:14	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/16/20 16:14	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			06/16/20 16:14	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			06/16/20 16:14	1
1,4-Dioxane	ND		200	19	ug/L			06/16/20 16:14	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			06/16/20 16:14	1
2-Hexanone	ND		5.0	1.7	ug/L			06/16/20 16:14	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			06/16/20 16:14	1
Acetone	ND		10	1.9	ug/L			06/16/20 16:14	1
Benzene	ND		1.0	0.16	ug/L			06/16/20 16:14	1
Bromoform	ND		1.0	0.46	ug/L			06/16/20 16:14	1
Bromomethane	ND		2.0	0.21	ug/L			06/16/20 16:14	1
Carbon disulfide	ND		2.0	0.17	ug/L			06/16/20 16:14	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			06/16/20 16:14	1
Chlorobenzene	ND		1.0	0.17	ug/L			06/16/20 16:14	1
Chlorobromomethane	ND		1.0	0.10	ug/L			06/16/20 16:14	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			06/16/20 16:14	1
Chloroethane	ND		2.0	0.41	ug/L			06/16/20 16:14	1
Chloroform	ND		1.0	0.16	ug/L			06/16/20 16:14	1
Chloromethane	ND		2.0	0.30	ug/L			06/16/20 16:14	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/16/20 16:14	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			06/16/20 16:14	1
Cyclohexane	ND		2.0	0.28	ug/L			06/16/20 16:14	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			06/16/20 16:14	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			06/16/20 16:14	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-GW

Lab Sample ID: 280-137349-6

Date Collected: 06/05/20 13:10

Matrix: Water

Date Received: 06/05/20 14:25

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		1.0	0.16	ug/L			06/16/20 16:14	1
Isopropylbenzene	ND		1.0	0.19	ug/L			06/16/20 16:14	1
Methyl acetate	ND		5.0	1.6	ug/L			06/16/20 16:14	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			06/16/20 16:14	1
Methylcyclohexane	ND		1.0	0.10	ug/L			06/16/20 16:14	1
Methylene Chloride	ND		2.0	0.94	ug/L			06/16/20 16:14	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			06/16/20 16:14	1
o-Xylene	ND		1.0	0.19	ug/L			06/16/20 16:14	1
Styrene	ND		1.0	0.36	ug/L			06/16/20 16:14	1
Tetrachloroethene	ND		1.0	0.20	ug/L			06/16/20 16:14	1
Toluene	ND		1.0	0.17	ug/L			06/16/20 16:14	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/16/20 16:14	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			06/16/20 16:14	1
Trichloroethene	ND		1.0	0.16	ug/L			06/16/20 16:14	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			06/16/20 16:14	1
Vinyl chloride	ND		1.0	0.10	ug/L			06/16/20 16:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		70 - 127		06/16/20 16:14	1
Toluene-d8 (Surr)	94		80 - 125		06/16/20 16:14	1
4-Bromofluorobenzene (Surr)	105		78 - 120		06/16/20 16:14	1
Dibromofluoromethane (Surr)	99		77 - 120		06/16/20 16:14	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB04

Lab Sample ID: 280-137349-7

Date Collected: 06/05/20 08:00

Matrix: Water

Date Received: 06/05/20 14:25

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			06/16/20 16:35	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			06/16/20 16:35	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			06/16/20 16:35	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			06/16/20 16:35	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/16/20 16:35	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			06/16/20 16:35	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			06/16/20 16:35	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			06/16/20 16:35	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			06/16/20 16:35	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			06/16/20 16:35	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			06/16/20 16:35	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			06/16/20 16:35	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/16/20 16:35	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			06/16/20 16:35	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			06/16/20 16:35	1
1,4-Dioxane	ND		200	19	ug/L			06/16/20 16:35	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			06/16/20 16:35	1
2-Hexanone	ND		5.0	1.7	ug/L			06/16/20 16:35	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			06/16/20 16:35	1
Acetone	ND		10	1.9	ug/L			06/16/20 16:35	1
Benzene	ND		1.0	0.16	ug/L			06/16/20 16:35	1
Bromoform	ND		1.0	0.46	ug/L			06/16/20 16:35	1
Bromomethane	ND		2.0	0.21	ug/L			06/16/20 16:35	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB04

Lab Sample ID: 280-137349-7

Date Collected: 06/05/20 08:00

Matrix: Water

Date Received: 06/05/20 14:25

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		2.0	0.17	ug/L			06/16/20 16:35	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			06/16/20 16:35	1
Chlorobenzene	ND		1.0	0.17	ug/L			06/16/20 16:35	1
Chlorobromomethane	ND		1.0	0.10	ug/L			06/16/20 16:35	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			06/16/20 16:35	1
Chloroethane	ND		2.0	0.41	ug/L			06/16/20 16:35	1
Chloroform	ND		1.0	0.16	ug/L			06/16/20 16:35	1
Chloromethane	ND		2.0	0.30	ug/L			06/16/20 16:35	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/16/20 16:35	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			06/16/20 16:35	1
Cyclohexane	ND		2.0	0.28	ug/L			06/16/20 16:35	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			06/16/20 16:35	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			06/16/20 16:35	1
Ethylbenzene	ND		1.0	0.16	ug/L			06/16/20 16:35	1
Isopropylbenzene	ND		1.0	0.19	ug/L			06/16/20 16:35	1
Methyl acetate	ND		5.0	1.6	ug/L			06/16/20 16:35	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			06/16/20 16:35	1
Methylcyclohexane	ND		1.0	0.10	ug/L			06/16/20 16:35	1
Methylene Chloride	ND		2.0	0.94	ug/L			06/16/20 16:35	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			06/16/20 16:35	1
o-Xylene	ND		1.0	0.19	ug/L			06/16/20 16:35	1
Styrene	ND		1.0	0.36	ug/L			06/16/20 16:35	1
Tetrachloroethene	ND		1.0	0.20	ug/L			06/16/20 16:35	1
Toluene	ND		1.0	0.17	ug/L			06/16/20 16:35	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/16/20 16:35	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			06/16/20 16:35	1
Trichloroethene	ND		1.0	0.16	ug/L			06/16/20 16:35	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			06/16/20 16:35	1
Vinyl chloride	ND		1.0	0.10	ug/L			06/16/20 16:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		70 - 127					06/16/20 16:35	1
Toluene-d8 (Surr)	98		80 - 125					06/16/20 16:35	1
4-Bromofluorobenzene (Surr)	109		78 - 120					06/16/20 16:35	1
Dibromofluoromethane (Surr)	100		77 - 120					06/16/20 16:35	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB04

Lab Sample ID: 280-137349-8

Date Collected: 06/05/20 08:00

Matrix: Solid

Date Received: 06/05/20 14:25

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	2.0	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.29	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
1,1,2-Trichloroethane	ND		5.0	0.88	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
1,1,2-Trichlorotrifluoroethane	ND		20	1.7	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
1,1-Dichloroethane	ND		5.0	0.21	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
1,1-Dichloroethene	ND		5.0	0.59	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
1,2,3-Trichlorobenzene	ND		5.0	0.81	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
1,2,4-Trichlorobenzene	ND		5.0	0.73	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
1,2-Dibromo-3-Chloropropane	ND		10	3.7	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
1,2-Dibromoethane	ND		5.0	0.52	ug/Kg		06/05/20 08:00	06/07/20 00:50	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB04

Lab Sample ID: 280-137349-8

Date Collected: 06/05/20 08:00

Matrix: Solid

Date Received: 06/05/20 14:25

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		5.0	1.9	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
1,2-Dichloroethane	ND		5.0	0.70	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
1,2-Dichloropropane	ND		5.0	0.55	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
1,3-Dichlorobenzene	ND		5.0	0.48	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
1,4-Dichlorobenzene	ND		5.0	0.25	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
1,4-Dioxane	ND		500	56	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
2-Butanone (MEK)	ND		20	3.9	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
2-Hexanone	ND		20	4.9	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.4	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
Acetone	ND		72	36	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
Benzene	0.17	J	5.0	0.15	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
Bromoform	ND		5.1	2.6	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
Bromomethane	ND		10	1.4	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
Carbon disulfide	ND		5.0	1.7	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
Carbon tetrachloride	ND		5.0	2.0	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
Chlorobenzene	ND		5.0	2.1	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
Chlorobromomethane	ND		5.0	2.5	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
Chlorodibromomethane	ND		5.0	2.3	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
Chloroethane	ND		10	2.0	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
Chloroform	ND		10	0.29	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
Chloromethane	ND		10	0.77	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
cis-1,2-Dichloroethene	ND		2.5	0.20	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
cis-1,3-Dichloropropene	ND		5.0	0.10	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
Cyclohexane	ND		5.0	1.8	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
Dichlorobromomethane	ND		5.0	2.1	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
Dichlorodifluoromethane	ND		10	2.7	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
Ethylbenzene	ND		5.0	0.31	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
Isopropylbenzene	ND		5.0	2.4	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
Methyl acetate	ND		10	2.8	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
Methyl tert-butyl ether	ND		20	2.1	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
Methylcyclohexane	ND		5.0	0.42	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
Methylene Chloride	ND		5.0	1.6	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
m-Xylene & p-Xylene	ND		2.5	1.0	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
o-Xylene	ND		2.5	0.27	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
Styrene	ND		5.0	0.28	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
Tetrachloroethene	ND		5.0	1.9	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
Toluene	0.87	J	5.0	0.23	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
trans-1,2-Dichloroethene	ND		2.5	0.39	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
trans-1,3-Dichloropropene	ND		5.0	0.083	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
Trichloroethene	ND		5.0	1.9	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
Trichlorofluoromethane	ND		10	3.2	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
Vinyl chloride	ND		5.0	1.3	ug/Kg		06/05/20 08:00	06/07/20 00:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		58 - 140				06/05/20 08:00	06/07/20 00:50	1
Toluene-d8 (Surr)	97		80 - 126				06/05/20 08:00	06/07/20 00:50	1
4-Bromofluorobenzene (Surr)	99		76 - 127				06/05/20 08:00	06/07/20 00:50	1
Dibromofluoromethane (Surr)	101		75 - 121				06/05/20 08:00	06/07/20 00:50	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-DUP01

Date Collected: 06/05/20 12:30

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-1

Matrix: Solid

Percent Solids: 94.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		330	24	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
1,2,4,5-Tetrachlorobenzene	ND		330	50	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
1,2,4-Trichlorobenzene	ND		330	28	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
1,2-Dichlorobenzene	ND		330	22	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		330	22	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
1,3-Dichlorobenzene	ND		330	12	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
1,3-Dinitrobenzene	ND		330	72	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
1,4-Dichlorobenzene	ND		330	14	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
1,4-Dioxane	ND		670	67	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
1-Methylnaphthalene	ND		330	11	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
2,2'-oxybis[1-chloropropane]	ND		330	23	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
2,3,4,6-Tetrachlorophenol	ND		1600	140	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
2,4,5-Trichlorophenol	ND		330	10	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
2,4,6-Trichlorophenol	ND		330	10	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
2,4-Dichlorophenol	ND		330	10	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
2,4-Dimethylphenol	ND		330	67	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
2,4-Dinitrophenol	ND		1600	340	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
2,4-Dinitrotoluene	ND		330	67	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
2,6-Dichlorophenol	ND		330	23	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
2,6-Dinitrotoluene	ND		330	28	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
2-Chloronaphthalene	ND		330	10	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
2-Chlorophenol	ND		330	21	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
2-Methylnaphthalene	ND		330	19	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
2-Methylphenol	ND		330	13	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
2-Nitroaniline	ND		1600	51	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
2-Nitrophenol	ND		330	10	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
3 & 4 Methylphenol	ND		330	33	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
3,3'-Dichlorobenzidine	ND		670	91	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
3-Methylphenol	ND		330	33	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
3-Nitroaniline	ND		1600	74	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
4,6-Dinitro-2-methylphenol	ND		1600	330	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
4-Bromophenyl phenyl ether	ND		330	19	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
4-Chloro-3-methylphenol	ND		330	25	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
4-Chloroaniline	ND		330	83	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
4-Chlorophenyl phenyl ether	ND		330	21	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
4-Methylphenol	ND		330	33	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
4-Nitroaniline	ND		1600	73	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
4-Nitrophenol	ND		1600	98	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Acenaphthene	ND		330	10	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Acenaphthylene	ND		330	83	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Acetophenone	ND		330	20	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Aniline	ND		330	130	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Anthracene	ND		330	17	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Azobenzene	ND		330	22	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Benzaldehyde	ND		330	68	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Benzidine	ND		3300	1000	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Benzo[a]anthracene	ND		330	20	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Benzo[a]pyrene	ND		330	20	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Benzo[b]fluoranthene	ND		330	26	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-DUP01

Lab Sample ID: 280-137349-1

Date Collected: 06/05/20 12:30

Matrix: Solid

Date Received: 06/05/20 14:25

Percent Solids: 94.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		330	16	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Benzo[k]fluoranthene	ND		330	40	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Benzoic acid	ND		1600	330	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Benzyl alcohol	ND		330	10	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Bis(2-chloroethoxy)methane	ND		330	23	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Bis(2-chloroethyl)ether	ND		330	17	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Bis(2-ethylhexyl) phthalate	ND		330	47	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Butyl benzyl phthalate	ND		330	43	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Caprolactam	ND		330	110	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Carbazole	ND		330	36	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Chrysene	ND		330	27	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Dibenz(a,h)anthracene	ND		330	19	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Dibenzofuran	ND		330	20	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Diethyl phthalate	ND		670	26	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Dimethyl phthalate	ND		330	23	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Di-n-butyl phthalate	ND		330	29	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Di-n-octyl phthalate	ND		330	41	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Diphenylamine	ND		330	44	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Famphur	ND		670	34	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Fluoranthene	ND		330	36	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Fluorene	ND		330	18	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Hexachlorobenzene	ND		330	29	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Hexachlorobutadiene	ND		330	10	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Hexachlorocyclopentadiene	ND		1600	110	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Hexachloroethane	ND		330	22	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Hexadecane	ND		330	13	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Indeno[1,2,3-cd]pyrene	ND		330	22	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Isophorone	ND		330	17	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Naphthalene	ND		330	31	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Nitrobenzene	ND		330	22	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
N-Nitrosodimethylamine	ND		330	37	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
N-Nitrosodi-n-propylamine	ND		330	69	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
N-Nitrosodiphenylamine	ND		330	21	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Pentachlorophenol	ND		1600	330	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Phenanthrene	ND		330	17	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Phenol	ND		330	18	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Pyrene	ND		330	12	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1
Pyridine	ND		670	40	ug/Kg	☼	06/18/20 09:43	06/24/20 19:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	72		46 - 120	06/18/20 09:43	06/24/20 19:37	1
2-Fluorophenol (Surr)	79		43 - 120	06/18/20 09:43	06/24/20 19:37	1
2,4,6-Tribromophenol (Surr)	67		35 - 120	06/18/20 09:43	06/24/20 19:37	1
Nitrobenzene-d5 (Surr)	72		46 - 120	06/18/20 09:43	06/24/20 19:37	1
Phenol-d5 (Surr)	82		46 - 120	06/18/20 09:43	06/24/20 19:37	1
Terphenyl-d14 (Surr)	89		46 - 120	06/18/20 09:43	06/24/20 19:37	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-W-01-5-7

Lab Sample ID: 280-137349-2

Date Collected: 06/05/20 09:00

Matrix: Solid

Date Received: 06/05/20 14:25

Percent Solids: 76.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	100	J	430	31	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
1,2,4,5-Tetrachlorobenzene	ND		430	64	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
1,2,4-Trichlorobenzene	ND		430	36	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
1,2-Dichlorobenzene	ND		430	29	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		430	29	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
1,3-Dichlorobenzene	ND		430	16	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
1,3-Dinitrobenzene	ND		430	92	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
1,4-Dichlorobenzene	ND		430	18	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
1,4-Dioxane	ND		860	86	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
1-Methylnaphthalene	360	J	430	15	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
2,2'-oxybis[1-chloropropane]	ND		430	30	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
2,3,4,6-Tetrachlorophenol	ND		2100	180	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
2,4,5-Trichlorophenol	ND		430	13	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
2,4,6-Trichlorophenol	ND		430	13	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
2,4-Dichlorophenol	ND		430	13	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
2,4-Dimethylphenol	ND		430	86	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
2,4-Dinitrophenol	ND		2100	430	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
2,4-Dinitrotoluene	ND		430	86	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
2,6-Dichlorophenol	ND		430	29	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
2,6-Dinitrotoluene	ND		430	36	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
2-Chloronaphthalene	ND		430	13	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
2-Chlorophenol	ND		430	27	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
2-Methylnaphthalene	360	J	430	25	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
2-Methylphenol	ND		430	17	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
2-Nitroaniline	ND		2100	65	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
2-Nitrophenol	ND		430	13	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
3 & 4 Methylphenol	ND		430	43	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
3,3'-Dichlorobenzidine	ND		860	120	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
3-Methylphenol	ND		430	43	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
3-Nitroaniline	ND		2100	95	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
4,6-Dinitro-2-methylphenol	ND		2100	430	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
4-Bromophenyl phenyl ether	ND		430	25	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
4-Chloro-3-methylphenol	ND		430	32	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
4-Chloroaniline	ND		430	110	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
4-Chlorophenyl phenyl ether	ND		430	27	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
4-Methylphenol	ND		430	43	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
4-Nitroaniline	ND		2100	94	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
4-Nitrophenol	ND		2100	130	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Acenaphthene	420	J	430	13	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Acenaphthylene	ND		430	110	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Acetophenone	ND		430	26	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Aniline	ND		430	170	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Anthracene	900		430	22	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Azobenzene	ND		430	29	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Benzaldehyde	ND		430	87	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Benzidine	ND		4300	1300	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Benzo[a]anthracene	1400		430	26	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Benzo[a]pyrene	1100		430	26	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Benzo[b]fluoranthene	1400		430	34	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-W-01-5-7

Lab Sample ID: 280-137349-2

Date Collected: 06/05/20 09:00

Matrix: Solid

Date Received: 06/05/20 14:25

Percent Solids: 76.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	350	J	430	21	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Benzo[k]fluoranthene	ND		430	52	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Benzoic acid	ND		2100	430	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Benzyl alcohol	ND		430	13	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Bis(2-chloroethoxy)methane	ND		430	30	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Bis(2-chloroethyl)ether	ND		430	22	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Bis(2-ethylhexyl) phthalate	250	J	430	60	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Butyl benzyl phthalate	ND		430	56	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Caprolactam	ND		430	140	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Carbazole	340	J	430	47	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Chrysene	1500		430	35	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Dibenz(a,h)anthracene	ND		430	25	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Dibenzofuran	320	J	430	26	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Diethyl phthalate	ND		860	34	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Dimethyl phthalate	ND		430	30	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Di-n-butyl phthalate	ND		430	38	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Di-n-octyl phthalate	ND		430	53	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Diphenylamine	ND		430	57	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Famphur	ND		860	44	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Fluoranthene	2800		430	47	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Fluorene	510		430	23	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Hexachlorobenzene	ND		430	38	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Hexachlorobutadiene	ND		430	13	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Hexachlorocyclopentadiene	ND		2100	140	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Hexachloroethane	ND		430	28	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Hexadecane	260	J	430	17	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Indeno[1,2,3-cd]pyrene	400	J	430	29	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Isophorone	ND		430	22	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Naphthalene	410	J	430	40	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Nitrobenzene	ND		430	29	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
N-Nitrosodimethylamine	ND		430	48	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
N-Nitrosodi-n-propylamine	ND		430	88	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
N-Nitrosodiphenylamine	ND		430	27	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Pentachlorophenol	ND		2100	430	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Phenanthrene	3800		430	22	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Phenol	ND		430	23	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Pyrene	3100		430	16	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1
Pyridine	ND		860	52	ug/Kg	☼	06/18/20 09:43	06/24/20 20:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	66		46 - 120	06/18/20 09:43	06/24/20 20:04	1
2-Fluorophenol (Surr)	70		43 - 120	06/18/20 09:43	06/24/20 20:04	1
2,4,6-Tribromophenol (Surr)	64		35 - 120	06/18/20 09:43	06/24/20 20:04	1
Nitrobenzene-d5 (Surr)	64		46 - 120	06/18/20 09:43	06/24/20 20:04	1
Phenol-d5 (Surr)	74		46 - 120	06/18/20 09:43	06/24/20 20:04	1
Terphenyl-d14 (Surr)	82		46 - 120	06/18/20 09:43	06/24/20 20:04	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-17-10-12

Lab Sample ID: 280-137349-3

Date Collected: 06/05/20 11:20

Matrix: Solid

Date Received: 06/05/20 14:25

Percent Solids: 92.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		350	25	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
1,2,4,5-Tetrachlorobenzene	ND		350	52	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
1,2,4-Trichlorobenzene	ND		350	29	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
1,2-Dichlorobenzene	ND		350	23	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		350	23	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
1,3-Dichlorobenzene	ND		350	13	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
1,3-Dinitrobenzene	ND		350	75	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
1,4-Dichlorobenzene	ND		350	14	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
1,4-Dioxane	ND		690	69	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
1-Methylnaphthalene	ND		350	12	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
2,2'-oxybis[1-chloropropane]	ND		350	24	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
2,3,4,6-Tetrachlorophenol	ND		1700	140	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
2,4,5-Trichlorophenol	ND		350	11	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
2,4,6-Trichlorophenol	ND		350	11	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
2,4-Dichlorophenol	ND		350	11	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
2,4-Dimethylphenol	ND		350	69	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
2,4-Dinitrophenol	ND		1700	350	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
2,4-Dinitrotoluene	ND		350	69	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
2,6-Dichlorophenol	ND		350	24	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
2,6-Dinitrotoluene	ND		350	29	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
2-Chloronaphthalene	ND		350	11	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
2-Chlorophenol	ND		350	22	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
2-Methylnaphthalene	ND		350	20	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
2-Methylphenol	ND		350	14	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
2-Nitroaniline	ND		1700	53	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
2-Nitrophenol	ND		350	11	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
3 & 4 Methylphenol	ND		350	35	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
3,3'-Dichlorobenzidine	ND		690	95	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
3-Methylphenol	ND		350	35	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
3-Nitroaniline	ND		1700	77	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
4,6-Dinitro-2-methylphenol	ND		1700	350	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
4-Bromophenyl phenyl ether	ND		350	20	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
4-Chloro-3-methylphenol	ND		350	26	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
4-Chloroaniline	ND		350	86	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
4-Chlorophenyl phenyl ether	ND		350	22	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
4-Methylphenol	ND		350	35	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
4-Nitroaniline	ND		1700	76	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
4-Nitrophenol	ND		1700	100	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Acenaphthene	ND		350	11	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Acenaphthylene	ND		350	86	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Acetophenone	ND		350	21	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Aniline	ND		350	140	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Anthracene	ND		350	18	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Azobenzene	ND		350	23	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Benzaldehyde	ND		350	71	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Benzidine	ND		3500	1000	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Benzo[a]anthracene	ND		350	21	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Benzo[a]pyrene	ND		350	21	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Benzo[b]fluoranthene	ND		350	28	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-17-10-12

Lab Sample ID: 280-137349-3

Date Collected: 06/05/20 11:20

Matrix: Solid

Date Received: 06/05/20 14:25

Percent Solids: 92.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		350	17	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Benzo[k]fluoranthene	ND		350	42	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Benzoic acid	ND		1700	350	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Benzyl alcohol	ND		350	11	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Bis(2-chloroethoxy)methane	ND		350	24	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Bis(2-chloroethyl)ether	ND		350	17	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Bis(2-ethylhexyl) phthalate	ND		350	48	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Butyl benzyl phthalate	ND		350	45	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Caprolactam	ND		350	110	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Carbazole	ND		350	38	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Chrysene	ND		350	28	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Dibenz(a,h)anthracene	ND		350	20	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Dibenzofuran	ND		350	21	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Diethyl phthalate	ND		690	27	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Dimethyl phthalate	ND		350	24	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Di-n-butyl phthalate	ND		350	31	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Di-n-octyl phthalate	ND		350	43	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Diphenylamine	ND		350	46	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Famphur	ND		690	36	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Fluoranthene	ND		350	38	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Fluorene	ND		350	19	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Hexachlorobenzene	ND		350	31	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Hexachlorobutadiene	ND		350	11	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Hexachlorocyclopentadiene	ND		1700	120	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Hexachloroethane	ND		350	22	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Hexadecane	ND		350	14	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Indeno[1,2,3-cd]pyrene	ND		350	23	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Isophorone	ND		350	18	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Naphthalene	ND		350	33	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Nitrobenzene	ND		350	23	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
N-Nitrosodimethylamine	ND		350	39	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
N-Nitrosodi-n-propylamine	ND		350	72	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
N-Nitrosodiphenylamine	ND		350	22	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Pentachlorophenol	ND		1700	350	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Phenanthrene	ND		350	18	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Phenol	ND		350	19	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Pyrene	ND		350	13	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1
Pyridine	ND		690	42	ug/Kg	☼	06/18/20 09:43	06/24/20 20:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	74		46 - 120	06/18/20 09:43	06/24/20 20:32	1
2-Fluorophenol (Surr)	77		43 - 120	06/18/20 09:43	06/24/20 20:32	1
2,4,6-Tribromophenol (Surr)	72		35 - 120	06/18/20 09:43	06/24/20 20:32	1
Nitrobenzene-d5 (Surr)	72		46 - 120	06/18/20 09:43	06/24/20 20:32	1
Phenol-d5 (Surr)	83		46 - 120	06/18/20 09:43	06/24/20 20:32	1
Terphenyl-d14 (Surr)	95		46 - 120	06/18/20 09:43	06/24/20 20:32	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-17-GW

Lab Sample ID: 280-137349-4

Date Collected: 06/05/20 11:35

Matrix: Water

Date Received: 06/05/20 14:25

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		9.9	1.7	ug/L		06/11/20 14:55	06/21/20 01:39	1
1,2,4,5-Tetrachlorobenzene	ND		9.9	1.7	ug/L		06/11/20 14:55	06/21/20 01:39	1
1,2,4-Trichlorobenzene	ND		3.9	0.58	ug/L		06/11/20 14:55	06/21/20 01:39	1
1,2-Dichlorobenzene	ND		3.9	0.23	ug/L		06/11/20 14:55	06/21/20 01:39	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		9.9	0.23	ug/L		06/11/20 14:55	06/21/20 01:39	1
1,3-Dichlorobenzene	ND		9.9	0.30	ug/L		06/11/20 14:55	06/21/20 01:39	1
1,3-Dinitrobenzene	ND		9.9	2.0	ug/L		06/11/20 14:55	06/21/20 01:39	1
1,4-Dichlorobenzene	ND		3.9	1.3	ug/L		06/11/20 14:55	06/21/20 01:39	1
1,4-Dioxane	ND		20	0.44	ug/L		06/11/20 14:55	06/21/20 01:39	1
1-Methylnaphthalene	ND		3.9	0.23	ug/L		06/11/20 14:55	06/21/20 01:39	1
2,2'-oxybis[1-chloropropane]	ND		9.9	0.28	ug/L		06/11/20 14:55	06/21/20 01:39	1
2,3,4,6-Tetrachlorophenol	ND		49	2.0	ug/L		06/11/20 14:55	06/21/20 01:39	1
2,4,5-Trichlorophenol	ND		9.9	2.0	ug/L		06/11/20 14:55	06/21/20 01:39	1
2,4,6-Trichlorophenol	ND		9.9	0.29	ug/L		06/11/20 14:55	06/21/20 01:39	1
2,4-Dichlorophenol	ND		9.9	0.63	ug/L		06/11/20 14:55	06/21/20 01:39	1
2,4-Dimethylphenol	ND		9.9	0.57	ug/L		06/11/20 14:55	06/21/20 01:39	1
2,4-Dinitrophenol	ND		30	9.9	ug/L		06/11/20 14:55	06/21/20 01:39	1
2,4-Dinitrotoluene	ND		9.9	1.6	ug/L		06/11/20 14:55	06/21/20 01:39	1
2,6-Dichlorophenol	ND		9.9	1.3	ug/L		06/11/20 14:55	06/21/20 01:39	1
2,6-Dinitrotoluene	ND		9.9	1.9	ug/L		06/11/20 14:55	06/21/20 01:39	1
2-Chloronaphthalene	ND		3.9	0.26	ug/L		06/11/20 14:55	06/21/20 01:39	1
2-Chlorophenol	ND		9.9	2.0	ug/L		06/11/20 14:55	06/21/20 01:39	1
2-Methylnaphthalene	ND		3.9	1.5	ug/L		06/11/20 14:55	06/21/20 01:39	1
2-Methylphenol	ND		9.9	0.97	ug/L		06/11/20 14:55	06/21/20 01:39	1
2-Nitroaniline	ND		9.9	1.7	ug/L		06/11/20 14:55	06/21/20 01:39	1
2-Nitrophenol	ND		9.9	0.38	ug/L		06/11/20 14:55	06/21/20 01:39	1
3 & 4 Methylphenol	ND		9.9	0.25	ug/L		06/11/20 14:55	06/21/20 01:39	1
3,3'-Dichlorobenzidine	ND		49	2.0	ug/L		06/11/20 14:55	06/21/20 01:39	1
3-Methylphenol	ND		9.9	0.25	ug/L		06/11/20 14:55	06/21/20 01:39	1
3-Nitroaniline	ND		9.9	2.0	ug/L		06/11/20 14:55	06/21/20 01:39	1
4,6-Dinitro-2-methylphenol	ND		49	3.9	ug/L		06/11/20 14:55	06/21/20 01:39	1
4-Bromophenyl phenyl ether	ND		9.9	0.42	ug/L		06/11/20 14:55	06/21/20 01:39	1
4-Chloro-3-methylphenol	ND		9.9	2.4	ug/L		06/11/20 14:55	06/21/20 01:39	1
4-Chloroaniline	ND		9.9	2.1	ug/L		06/11/20 14:55	06/21/20 01:39	1
4-Chlorophenyl phenyl ether	ND		9.9	1.6	ug/L		06/11/20 14:55	06/21/20 01:39	1
4-Methylphenol	ND		9.9	0.25	ug/L		06/11/20 14:55	06/21/20 01:39	1
4-Nitroaniline	ND		9.9	2.0	ug/L		06/11/20 14:55	06/21/20 01:39	1
4-Nitrophenol	ND *		9.9	1.2	ug/L		06/11/20 14:55	06/21/20 01:39	1
Acenaphthene	ND		3.9	0.28	ug/L		06/11/20 14:55	06/21/20 01:39	1
Acenaphthylene	ND		3.9	0.48	ug/L		06/11/20 14:55	06/21/20 01:39	1
Acetophenone	ND		9.9	0.24	ug/L		06/11/20 14:55	06/21/20 01:39	1
Aniline	ND		9.9	2.0	ug/L		06/11/20 14:55	06/21/20 01:39	1
Anthracene	ND		3.9	0.41	ug/L		06/11/20 14:55	06/21/20 01:39	1
Azobenzene	ND		3.9	0.23	ug/L		06/11/20 14:55	06/21/20 01:39	1
Benzaldehyde	ND		4.9	2.0	ug/L		06/11/20 14:55	06/21/20 01:39	1
Benzidine	ND		99	49	ug/L		06/11/20 14:55	06/21/20 01:39	1
Benzo[a]anthracene	ND		3.9	0.35	ug/L		06/11/20 14:55	06/21/20 01:39	1
Benzo[a]pyrene	ND		3.9	0.31	ug/L		06/11/20 14:55	06/21/20 01:39	1
Benzo[b]fluoranthene	ND		3.9	0.52	ug/L		06/11/20 14:55	06/21/20 01:39	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-17-GW

Lab Sample ID: 280-137349-4

Date Collected: 06/05/20 11:35

Matrix: Water

Date Received: 06/05/20 14:25

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		3.9	0.49	ug/L		06/11/20 14:55	06/21/20 01:39	1
Benzo[k]fluoranthene	ND		3.9	0.45	ug/L		06/11/20 14:55	06/21/20 01:39	1
Benzoic acid	ND		25	9.9	ug/L		06/11/20 14:55	06/21/20 01:39	1
Benzyl alcohol	ND		9.9	0.23	ug/L		06/11/20 14:55	06/21/20 01:39	1
Bis(2-chloroethoxy)methane	ND		9.9	0.96	ug/L		06/11/20 14:55	06/21/20 01:39	1
Bis(2-chloroethyl)ether	ND		9.9	0.82	ug/L		06/11/20 14:55	06/21/20 01:39	1
Bis(2-ethylhexyl) phthalate	ND		9.9	0.55	ug/L		06/11/20 14:55	06/21/20 01:39	1
Butyl benzyl phthalate	ND		3.9	0.99	ug/L		06/11/20 14:55	06/21/20 01:39	1
Caprolactam	ND		4.9	2.5	ug/L		06/11/20 14:55	06/21/20 01:39	1
Carbazole	ND		3.9	0.42	ug/L		06/11/20 14:55	06/21/20 01:39	1
Chrysene	ND		3.9	0.53	ug/L		06/11/20 14:55	06/21/20 01:39	1
Dibenz(a,h)anthracene	ND		3.9	0.50	ug/L		06/11/20 14:55	06/21/20 01:39	1
Dibenzofuran	ND		3.9	0.29	ug/L		06/11/20 14:55	06/21/20 01:39	1
Diethyl phthalate	ND		3.9	0.37	ug/L		06/11/20 14:55	06/21/20 01:39	1
Dimethyl phthalate	ND		3.9	0.21	ug/L		06/11/20 14:55	06/21/20 01:39	1
Di-n-butyl phthalate	ND		3.9	1.1	ug/L		06/11/20 14:55	06/21/20 01:39	1
Di-n-octyl phthalate	ND		3.9	0.35	ug/L		06/11/20 14:55	06/21/20 01:39	1
Diphenylamine	ND		9.9	1.0	ug/L		06/11/20 14:55	06/21/20 01:39	1
Famphur	ND		99	1.5	ug/L		06/11/20 14:55	06/21/20 01:39	1
Fluoranthene	ND		3.9	0.20	ug/L		06/11/20 14:55	06/21/20 01:39	1
Fluorene	ND		3.9	0.31	ug/L		06/11/20 14:55	06/21/20 01:39	1
Hexachlorobenzene	ND		9.9	0.65	ug/L		06/11/20 14:55	06/21/20 01:39	1
Hexachlorobutadiene	ND		9.9	3.3	ug/L		06/11/20 14:55	06/21/20 01:39	1
Hexachlorocyclopentadiene	ND		49	3.1	ug/L		06/11/20 14:55	06/21/20 01:39	1
Hexachloroethane	ND		9.9	0.97	ug/L		06/11/20 14:55	06/21/20 01:39	1
Hexadecane	ND		9.9	0.53	ug/L		06/11/20 14:55	06/21/20 01:39	1
Indeno[1,2,3-cd]pyrene	ND		3.9	0.64	ug/L		06/11/20 14:55	06/21/20 01:39	1
Isophorone	ND		9.9	0.21	ug/L		06/11/20 14:55	06/21/20 01:39	1
Naphthalene	ND		3.9	0.29	ug/L		06/11/20 14:55	06/21/20 01:39	1
Nitrobenzene	ND		9.9	0.80	ug/L		06/11/20 14:55	06/21/20 01:39	1
N-Nitrosodimethylamine	ND		9.9	0.29	ug/L		06/11/20 14:55	06/21/20 01:39	1
N-Nitrosodi-n-propylamine	ND		9.9	0.35	ug/L		06/11/20 14:55	06/21/20 01:39	1
N-Nitrosodiphenylamine	ND		9.9	0.43	ug/L		06/11/20 14:55	06/21/20 01:39	1
Pentachlorophenol	ND		49	20	ug/L		06/11/20 14:55	06/21/20 01:39	1
Phenanthrene	ND		3.9	0.26	ug/L		06/11/20 14:55	06/21/20 01:39	1
Phenol	ND		9.9	2.0	ug/L		06/11/20 14:55	06/21/20 01:39	1
Pyrene	ND		9.9	0.36	ug/L		06/11/20 14:55	06/21/20 01:39	1
Pyridine	ND		20	1.7	ug/L		06/11/20 14:55	06/21/20 01:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	60		48 - 120	06/11/20 14:55	06/21/20 01:39	1
2-Fluorophenol (Surr)	61		41 - 120	06/11/20 14:55	06/21/20 01:39	1
2,4,6-Tribromophenol (Surr)	66		42 - 131	06/11/20 14:55	06/21/20 01:39	1
Nitrobenzene-d5 (Surr)	61		42 - 120	06/11/20 14:55	06/21/20 01:39	1
Phenol-d5 (Surr)	67		45 - 124	06/11/20 14:55	06/21/20 01:39	1
Terphenyl-d14 (Surr)	26		20 - 130	06/11/20 14:55	06/21/20 01:39	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-10-12

Date Collected: 06/05/20 12:30

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-5

Matrix: Solid

Percent Solids: 91.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		360	26	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
1,2,4,5-Tetrachlorobenzene	ND		360	53	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
1,2,4-Trichlorobenzene	ND		360	30	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
1,2-Dichlorobenzene	ND		360	24	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		360	24	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
1,3-Dichlorobenzene	ND		360	13	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
1,3-Dinitrobenzene	ND		360	77	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
1,4-Dichlorobenzene	ND		360	15	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
1,4-Dioxane	ND		720	72	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
1-Methylnaphthalene	ND		360	12	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
2,2'-oxybis[1-chloropropane]	ND		360	25	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
2,3,4,6-Tetrachlorophenol	ND		1700	150	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
2,4,5-Trichlorophenol	ND		360	11	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
2,4,6-Trichlorophenol	ND		360	11	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
2,4-Dichlorophenol	ND		360	11	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
2,4-Dimethylphenol	ND		360	72	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
2,4-Dinitrophenol	ND		1700	360	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
2,4-Dinitrotoluene	ND		360	72	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
2,6-Dichlorophenol	ND		360	24	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
2,6-Dinitrotoluene	ND		360	30	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
2-Chloronaphthalene	ND		360	11	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
2-Chlorophenol	ND		360	23	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
2-Methylnaphthalene	ND		360	21	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
2-Methylphenol	ND		360	14	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
2-Nitroaniline	ND		1700	54	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
2-Nitrophenol	ND		360	11	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
3 & 4 Methylphenol	ND		360	36	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
3,3'-Dichlorobenzidine	ND		720	98	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
3-Methylphenol	ND		360	36	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
3-Nitroaniline	ND		1700	79	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
4,6-Dinitro-2-methylphenol	ND		1700	360	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
4-Bromophenyl phenyl ether	ND		360	21	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
4-Chloro-3-methylphenol	ND		360	27	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
4-Chloroaniline	ND		360	89	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
4-Chlorophenyl phenyl ether	ND		360	23	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
4-Methylphenol	ND		360	36	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
4-Nitroaniline	ND		1700	79	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
4-Nitrophenol	ND		1700	110	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Acenaphthene	ND		360	11	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Acenaphthylene	ND		360	89	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Acetophenone	ND		360	22	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Aniline	ND		360	140	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Anthracene	ND		360	18	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Azobenzene	ND		360	24	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Benzaldehyde	ND		360	73	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Benzidine	ND		3600	1100	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Benzo[a]anthracene	ND		360	22	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Benzo[a]pyrene	ND		360	22	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Benzo[b]fluoranthene	ND		360	28	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-10-12

Lab Sample ID: 280-137349-5

Date Collected: 06/05/20 12:30

Matrix: Solid

Date Received: 06/05/20 14:25

Percent Solids: 91.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		360	17	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Benzo[k]fluoranthene	ND		360	43	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Benzoic acid	ND		1700	360	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Benzyl alcohol	ND		360	11	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Bis(2-chloroethoxy)methane	ND		360	25	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Bis(2-chloroethyl)ether	ND		360	18	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Bis(2-ethylhexyl) phthalate	ND		360	50	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Butyl benzyl phthalate	ND		360	47	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Caprolactam	ND		360	110	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Carbazole	ND		360	39	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Chrysene	ND		360	29	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Dibenz(a,h)anthracene	ND		360	21	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Dibenzofuran	ND		360	22	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Diethyl phthalate	ND		720	28	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Dimethyl phthalate	ND		360	25	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Di-n-butyl phthalate	ND		360	31	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Di-n-octyl phthalate	ND		360	44	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Diphenylamine	ND		360	48	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Famphur	ND		720	37	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Fluoranthene	ND		360	39	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Fluorene	ND		360	20	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Hexachlorobenzene	ND		360	31	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Hexachlorobutadiene	ND		360	11	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Hexachlorocyclopentadiene	ND		1700	120	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Hexachloroethane	ND		360	23	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Hexadecane	ND		360	14	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Indeno[1,2,3-cd]pyrene	ND		360	24	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Isophorone	ND		360	18	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Naphthalene	ND		360	34	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Nitrobenzene	ND		360	24	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
N-Nitrosodimethylamine	ND		360	40	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
N-Nitrosodi-n-propylamine	ND		360	74	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
N-Nitrosodiphenylamine	ND		360	23	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Pentachlorophenol	ND		1700	360	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Phenanthrene	ND		360	18	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Phenol	ND		360	20	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Pyrene	ND		360	13	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1
Pyridine	ND		720	43	ug/Kg	☼	06/18/20 09:43	06/24/20 21:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	70		46 - 120	06/18/20 09:43	06/24/20 21:00	1
2-Fluorophenol (Surr)	71		43 - 120	06/18/20 09:43	06/24/20 21:00	1
2,4,6-Tribromophenol (Surr)	71		35 - 120	06/18/20 09:43	06/24/20 21:00	1
Nitrobenzene-d5 (Surr)	65		46 - 120	06/18/20 09:43	06/24/20 21:00	1
Phenol-d5 (Surr)	78		46 - 120	06/18/20 09:43	06/24/20 21:00	1
Terphenyl-d14 (Surr)	89		46 - 120	06/18/20 09:43	06/24/20 21:00	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-GW

Lab Sample ID: 280-137349-6

Date Collected: 06/05/20 13:10

Matrix: Water

Date Received: 06/05/20 14:25

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		9.9	1.7	ug/L		06/11/20 14:55	06/21/20 02:06	1
1,2,4,5-Tetrachlorobenzene	ND		9.9	1.7	ug/L		06/11/20 14:55	06/21/20 02:06	1
1,2,4-Trichlorobenzene	ND		4.0	0.59	ug/L		06/11/20 14:55	06/21/20 02:06	1
1,2-Dichlorobenzene	ND		4.0	0.23	ug/L		06/11/20 14:55	06/21/20 02:06	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		9.9	0.23	ug/L		06/11/20 14:55	06/21/20 02:06	1
1,3-Dichlorobenzene	ND		9.9	0.30	ug/L		06/11/20 14:55	06/21/20 02:06	1
1,3-Dinitrobenzene	ND		9.9	2.0	ug/L		06/11/20 14:55	06/21/20 02:06	1
1,4-Dichlorobenzene	ND		4.0	1.3	ug/L		06/11/20 14:55	06/21/20 02:06	1
1,4-Dioxane	ND		20	0.44	ug/L		06/11/20 14:55	06/21/20 02:06	1
1-Methylnaphthalene	ND		4.0	0.23	ug/L		06/11/20 14:55	06/21/20 02:06	1
2,2'-oxybis[1-chloropropane]	ND		9.9	0.28	ug/L		06/11/20 14:55	06/21/20 02:06	1
2,3,4,6-Tetrachlorophenol	ND		50	2.0	ug/L		06/11/20 14:55	06/21/20 02:06	1
2,4,5-Trichlorophenol	ND		9.9	2.0	ug/L		06/11/20 14:55	06/21/20 02:06	1
2,4,6-Trichlorophenol	ND		9.9	0.29	ug/L		06/11/20 14:55	06/21/20 02:06	1
2,4-Dichlorophenol	ND		9.9	0.63	ug/L		06/11/20 14:55	06/21/20 02:06	1
2,4-Dimethylphenol	ND		9.9	0.58	ug/L		06/11/20 14:55	06/21/20 02:06	1
2,4-Dinitrophenol	ND		30	9.9	ug/L		06/11/20 14:55	06/21/20 02:06	1
2,4-Dinitrotoluene	ND		9.9	1.6	ug/L		06/11/20 14:55	06/21/20 02:06	1
2,6-Dichlorophenol	ND		9.9	1.3	ug/L		06/11/20 14:55	06/21/20 02:06	1
2,6-Dinitrotoluene	ND		9.9	1.9	ug/L		06/11/20 14:55	06/21/20 02:06	1
2-Chloronaphthalene	ND		4.0	0.26	ug/L		06/11/20 14:55	06/21/20 02:06	1
2-Chlorophenol	ND		9.9	2.0	ug/L		06/11/20 14:55	06/21/20 02:06	1
2-Methylnaphthalene	ND		4.0	1.5	ug/L		06/11/20 14:55	06/21/20 02:06	1
2-Methylphenol	ND		9.9	0.97	ug/L		06/11/20 14:55	06/21/20 02:06	1
2-Nitroaniline	ND		9.9	1.7	ug/L		06/11/20 14:55	06/21/20 02:06	1
2-Nitrophenol	ND		9.9	0.39	ug/L		06/11/20 14:55	06/21/20 02:06	1
3 & 4 Methylphenol	ND		9.9	0.25	ug/L		06/11/20 14:55	06/21/20 02:06	1
3,3'-Dichlorobenzidine	ND		50	2.0	ug/L		06/11/20 14:55	06/21/20 02:06	1
3-Methylphenol	ND		9.9	0.25	ug/L		06/11/20 14:55	06/21/20 02:06	1
3-Nitroaniline	ND		9.9	2.0	ug/L		06/11/20 14:55	06/21/20 02:06	1
4,6-Dinitro-2-methylphenol	ND		50	4.0	ug/L		06/11/20 14:55	06/21/20 02:06	1
4-Bromophenyl phenyl ether	ND		9.9	0.43	ug/L		06/11/20 14:55	06/21/20 02:06	1
4-Chloro-3-methylphenol	ND		9.9	2.4	ug/L		06/11/20 14:55	06/21/20 02:06	1
4-Chloroaniline	ND		9.9	2.1	ug/L		06/11/20 14:55	06/21/20 02:06	1
4-Chlorophenyl phenyl ether	ND		9.9	1.6	ug/L		06/11/20 14:55	06/21/20 02:06	1
4-Methylphenol	ND		9.9	0.25	ug/L		06/11/20 14:55	06/21/20 02:06	1
4-Nitroaniline	ND		9.9	2.0	ug/L		06/11/20 14:55	06/21/20 02:06	1
4-Nitrophenol	ND *		9.9	1.2	ug/L		06/11/20 14:55	06/21/20 02:06	1
Acenaphthene	ND		4.0	0.28	ug/L		06/11/20 14:55	06/21/20 02:06	1
Acenaphthylene	ND		4.0	0.49	ug/L		06/11/20 14:55	06/21/20 02:06	1
Acetophenone	ND		9.9	0.24	ug/L		06/11/20 14:55	06/21/20 02:06	1
Aniline	ND		9.9	2.0	ug/L		06/11/20 14:55	06/21/20 02:06	1
Anthracene	ND		4.0	0.42	ug/L		06/11/20 14:55	06/21/20 02:06	1
Azobenzene	ND		4.0	0.23	ug/L		06/11/20 14:55	06/21/20 02:06	1
Benzaldehyde	ND		5.0	2.0	ug/L		06/11/20 14:55	06/21/20 02:06	1
Benzidine	ND		99	50	ug/L		06/11/20 14:55	06/21/20 02:06	1
Benzo[a]anthracene	ND		4.0	0.35	ug/L		06/11/20 14:55	06/21/20 02:06	1
Benzo[a]pyrene	ND		4.0	0.31	ug/L		06/11/20 14:55	06/21/20 02:06	1
Benzo[b]fluoranthene	ND		4.0	0.53	ug/L		06/11/20 14:55	06/21/20 02:06	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-GW

Lab Sample ID: 280-137349-6

Date Collected: 06/05/20 13:10

Matrix: Water

Date Received: 06/05/20 14:25

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		4.0	0.50	ug/L		06/11/20 14:55	06/21/20 02:06	1
Benzo[k]fluoranthene	ND		4.0	0.46	ug/L		06/11/20 14:55	06/21/20 02:06	1
Benzoic acid	ND		25	9.9	ug/L		06/11/20 14:55	06/21/20 02:06	1
Benzyl alcohol	ND		9.9	0.23	ug/L		06/11/20 14:55	06/21/20 02:06	1
Bis(2-chloroethoxy)methane	ND		9.9	0.96	ug/L		06/11/20 14:55	06/21/20 02:06	1
Bis(2-chloroethyl)ether	ND		9.9	0.82	ug/L		06/11/20 14:55	06/21/20 02:06	1
Bis(2-ethylhexyl) phthalate	ND		9.9	0.56	ug/L		06/11/20 14:55	06/21/20 02:06	1
Butyl benzyl phthalate	ND		4.0	0.99	ug/L		06/11/20 14:55	06/21/20 02:06	1
Caprolactam	ND		5.0	2.5	ug/L		06/11/20 14:55	06/21/20 02:06	1
Carbazole	ND		4.0	0.43	ug/L		06/11/20 14:55	06/21/20 02:06	1
Chrysene	ND		4.0	0.54	ug/L		06/11/20 14:55	06/21/20 02:06	1
Dibenz(a,h)anthracene	ND		4.0	0.51	ug/L		06/11/20 14:55	06/21/20 02:06	1
Dibenzofuran	ND		4.0	0.29	ug/L		06/11/20 14:55	06/21/20 02:06	1
Diethyl phthalate	ND		4.0	0.38	ug/L		06/11/20 14:55	06/21/20 02:06	1
Dimethyl phthalate	ND		4.0	0.21	ug/L		06/11/20 14:55	06/21/20 02:06	1
Di-n-butyl phthalate	ND		4.0	1.2	ug/L		06/11/20 14:55	06/21/20 02:06	1
Di-n-octyl phthalate	ND		4.0	0.35	ug/L		06/11/20 14:55	06/21/20 02:06	1
Diphenylamine	ND		9.9	1.1	ug/L		06/11/20 14:55	06/21/20 02:06	1
Famphur	ND		99	1.5	ug/L		06/11/20 14:55	06/21/20 02:06	1
Fluoranthene	ND		4.0	0.20	ug/L		06/11/20 14:55	06/21/20 02:06	1
Fluorene	ND		4.0	0.31	ug/L		06/11/20 14:55	06/21/20 02:06	1
Hexachlorobenzene	ND		9.9	0.65	ug/L		06/11/20 14:55	06/21/20 02:06	1
Hexachlorobutadiene	ND		9.9	3.3	ug/L		06/11/20 14:55	06/21/20 02:06	1
Hexachlorocyclopentadiene	ND		50	3.1	ug/L		06/11/20 14:55	06/21/20 02:06	1
Hexachloroethane	ND		9.9	0.98	ug/L		06/11/20 14:55	06/21/20 02:06	1
Hexadecane	ND		9.9	0.54	ug/L		06/11/20 14:55	06/21/20 02:06	1
Indeno[1,2,3-cd]pyrene	ND		4.0	0.64	ug/L		06/11/20 14:55	06/21/20 02:06	1
Isophorone	ND		9.9	0.21	ug/L		06/11/20 14:55	06/21/20 02:06	1
Naphthalene	ND		4.0	0.29	ug/L		06/11/20 14:55	06/21/20 02:06	1
Nitrobenzene	ND		9.9	0.80	ug/L		06/11/20 14:55	06/21/20 02:06	1
N-Nitrosodimethylamine	ND		9.9	0.29	ug/L		06/11/20 14:55	06/21/20 02:06	1
N-Nitrosodi-n-propylamine	ND		9.9	0.35	ug/L		06/11/20 14:55	06/21/20 02:06	1
N-Nitrosodiphenylamine	ND		9.9	0.44	ug/L		06/11/20 14:55	06/21/20 02:06	1
Pentachlorophenol	ND		50	20	ug/L		06/11/20 14:55	06/21/20 02:06	1
Phenanthrene	ND		4.0	0.26	ug/L		06/11/20 14:55	06/21/20 02:06	1
Phenol	ND		9.9	2.0	ug/L		06/11/20 14:55	06/21/20 02:06	1
Pyrene	ND		9.9	0.37	ug/L		06/11/20 14:55	06/21/20 02:06	1
Pyridine	ND		20	1.7	ug/L		06/11/20 14:55	06/21/20 02:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	69		48 - 120	06/11/20 14:55	06/21/20 02:06	1
2-Fluorophenol (Surr)	34	X	41 - 120	06/11/20 14:55	06/21/20 02:06	1
2,4,6-Tribromophenol (Surr)	18	X	42 - 131	06/11/20 14:55	06/21/20 02:06	1
Nitrobenzene-d5 (Surr)	74		42 - 120	06/11/20 14:55	06/21/20 02:06	1
Phenol-d5 (Surr)	35	X	45 - 124	06/11/20 14:55	06/21/20 02:06	1
Terphenyl-d14 (Surr)	37		20 - 130	06/11/20 14:55	06/21/20 02:06	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-DUP01

Date Collected: 06/05/20 12:30

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-1

Matrix: Solid

Percent Solids: 94.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND	H	2.1	0.79	mg/Kg	☼	06/05/20 12:30	06/24/20 00:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	84		77 - 123				06/05/20 12:30	06/24/20 00:03	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-W-01-5-7

Date Collected: 06/05/20 09:00

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-2

Matrix: Solid

Percent Solids: 76.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	12	H	6.9	2.6	mg/Kg	☼	06/05/20 09:00	06/24/20 00:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	82		77 - 123				06/05/20 09:00	06/24/20 00:23	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-17-10-12

Date Collected: 06/05/20 11:20

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-3

Matrix: Solid

Percent Solids: 92.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND	H	2.4	0.93	mg/Kg	☼	06/05/20 11:20	06/24/20 00:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	83		77 - 123				06/05/20 11:20	06/24/20 00:43	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-17-GW

Date Collected: 06/05/20 11:35

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	10	J	25	10	ug/L			06/19/20 06:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	92		82 - 110					06/19/20 06:33	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-10-12

Date Collected: 06/05/20 12:30

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-5

Matrix: Solid

Percent Solids: 91.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND	H	2.4	0.92	mg/Kg	☼	06/05/20 12:30	06/25/20 06:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	82		77 - 123				06/05/20 12:30	06/25/20 06:10	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-GW

Date Collected: 06/05/20 13:10

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		25	10	ug/L			06/19/20 06:57	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	93		82 - 110		06/19/20 06:57	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB04 **Lab Sample ID: 280-137349-7**
Date Collected: 06/05/20 08:00 **Matrix: Water**
Date Received: 06/05/20 14:25

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		25	10	ug/L		06/19/20 05:47		1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	97		82 - 110		06/19/20 05:47	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB04 **Lab Sample ID: 280-137349-8**
Date Collected: 06/05/20 08:00 **Matrix: Solid**
Date Received: 06/05/20 14:25

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND	H	2.0	0.76	mg/Kg		06/05/20 08:00	06/29/20 11:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	102		77 - 123	06/05/20 08:00	06/29/20 11:54	1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-DUP01 **Lab Sample ID: 280-137349-1**
Date Collected: 06/05/20 12:30 **Matrix: Solid**
Date Received: 06/05/20 14:25 **Percent Solids: 94.8**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	4.5	J	8.0	3.6	mg/Kg	☼	06/18/20 06:56	06/21/20 07:35	1
Motor Oil (C20-C38)	19	J*	24	7.8	mg/Kg	☼	06/18/20 06:56	06/21/20 07:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	46	X	49 - 115	06/18/20 06:56	06/21/20 07:35	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-W-01-5-7 **Lab Sample ID: 280-137349-2**
Date Collected: 06/05/20 09:00 **Matrix: Solid**
Date Received: 06/05/20 14:25 **Percent Solids: 76.0**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	1200		10	4.6	mg/Kg	☼	06/18/20 06:56	06/21/20 07:58	1
Motor Oil (C20-C38)	2000	*	30	9.8	mg/Kg	☼	06/18/20 06:56	06/21/20 07:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	73		49 - 115	06/18/20 06:56	06/21/20 07:58	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-17-10-12 **Lab Sample ID: 280-137349-3**
Date Collected: 06/05/20 11:20 **Matrix: Solid**
Date Received: 06/05/20 14:25 **Percent Solids: 92.0**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		8.6	3.9	mg/Kg	☼	06/18/20 06:56	06/21/20 08:20	1
Motor Oil (C20-C38)	16	J*	26	8.4	mg/Kg	☼	06/18/20 06:56	06/21/20 08:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	20	X	49 - 115	06/18/20 06:56	06/21/20 08:20	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-17-GW

Date Collected: 06/05/20 11:35

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	0.18	J	0.25	0.032	mg/L		06/11/20 14:49	06/15/20 22:40	1
Motor Oil (C20-C38)	0.17	J	0.49	0.055	mg/L		06/11/20 14:49	06/15/20 22:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	83		50 - 115				06/11/20 14:49	06/15/20 22:40	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-10-12

Date Collected: 06/05/20 12:30

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-5

Matrix: Solid

Percent Solids: 91.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		7.8	3.6	mg/Kg	☼	06/18/20 06:56	06/21/20 08:43	1
Motor Oil (C20-C38)	9.2	J *	23	7.6	mg/Kg	☼	06/18/20 06:56	06/21/20 08:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	3	X	49 - 115				06/18/20 06:56	06/21/20 08:43	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-GW

Date Collected: 06/05/20 13:10

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	0.16	J	0.25	0.033	mg/L		06/11/20 14:49	06/15/20 23:24	1
Motor Oil (C20-C38)	0.28	J	0.50	0.056	mg/L		06/11/20 14:49	06/15/20 23:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	87		50 - 115				06/11/20 14:49	06/15/20 23:24	1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) - RE

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-DUP01

Date Collected: 06/05/20 12:30

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-1

Matrix: Solid

Percent Solids: 94.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	6.9	J H B	7.8	3.5	mg/Kg	☼	06/29/20 07:41	07/08/20 22:36	1
Motor Oil (C20-C38)	20	J H	23	7.6	mg/Kg	☼	06/29/20 07:41	07/08/20 22:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	64		49 - 115				06/29/20 07:41	07/08/20 22:36	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-17-10-12

Date Collected: 06/05/20 11:20

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-3

Matrix: Solid

Percent Solids: 92.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	7.5	J H B	7.8	3.5	mg/Kg	☼	06/29/20 07:41	07/08/20 23:20	1
Motor Oil (C20-C38)	28	H	23	7.6	mg/Kg	☼	06/29/20 07:41	07/08/20 23:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	63		49 - 115				06/29/20 07:41	07/08/20 23:20	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) - RE

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-10-12

Date Collected: 06/05/20 12:30

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-5

Matrix: Solid

Percent Solids: 91.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	6.6	J H B	8.6	3.9	mg/Kg	☼	06/29/20 07:41	07/08/20 23:42	1
Motor Oil (C20-C38)	26	H	26	8.4	mg/Kg	☼	06/29/20 07:41	07/08/20 23:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	67		49 - 115				06/29/20 07:41	07/08/20 23:42	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-DUP01

Date Collected: 06/05/20 12:30

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-1

Matrix: Solid

Percent Solids: 94.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.80		0.59	0.050	mg/Kg	☼	06/11/20 08:30	06/17/20 17:16	1
Silver	13	J	98	7.7	ug/Kg	☼	06/10/20 16:50	06/13/20 02:22	1
Barium	47	^	0.39	0.069	mg/Kg	☼	06/11/20 08:30	06/17/20 17:16	1
Cadmium	0.036	J	0.098	0.0092	mg/Kg	☼	06/11/20 08:30	06/17/20 17:16	1
Chromium	3.8		0.20	0.075	mg/Kg	☼	06/11/20 08:30	06/17/20 17:16	1
Lead	3.5		0.15	0.018	mg/Kg	☼	06/11/20 08:30	06/17/20 17:16	1
Selenium	ND		0.49	0.13	mg/Kg	☼	06/11/20 08:30	06/17/20 17:16	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-W-01-5-7

Date Collected: 06/05/20 09:00

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-2

Matrix: Solid

Percent Solids: 76.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.5		0.70	0.059	mg/Kg	☼	06/11/20 08:30	06/17/20 17:19	1
Silver	830		89	6.9	ug/Kg	☼	06/10/20 16:50	06/13/20 02:26	1
Barium	150	^	0.46	0.082	mg/Kg	☼	06/11/20 08:30	06/17/20 17:19	1
Cadmium	1.7		0.12	0.011	mg/Kg	☼	06/11/20 08:30	06/17/20 17:19	1
Chromium	30		0.23	0.088	mg/Kg	☼	06/11/20 08:30	06/17/20 17:19	1
Lead	220		0.17	0.021	mg/Kg	☼	06/11/20 08:30	06/17/20 17:19	1
Selenium	0.26	J	0.58	0.15	mg/Kg	☼	06/11/20 08:30	06/17/20 17:19	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-17-10-12

Date Collected: 06/05/20 11:20

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-3

Matrix: Solid

Percent Solids: 92.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.96		0.58	0.049	mg/Kg	☼	06/11/20 08:30	06/17/20 17:23	1
Silver	7.8	J	86	6.8	ug/Kg	☼	06/10/20 16:50	06/13/20 02:30	1
Barium	35	^	0.39	0.069	mg/Kg	☼	06/11/20 08:30	06/17/20 17:23	1
Cadmium	0.024	J	0.097	0.0091	mg/Kg	☼	06/11/20 08:30	06/17/20 17:23	1
Chromium	3.3		0.19	0.074	mg/Kg	☼	06/11/20 08:30	06/17/20 17:23	1
Lead	3.3		0.15	0.018	mg/Kg	☼	06/11/20 08:30	06/17/20 17:23	1
Selenium	ND		0.49	0.13	mg/Kg	☼	06/11/20 08:30	06/17/20 17:23	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-17-GW

Date Collected: 06/05/20 11:35

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	8.8		5.0	0.33	ug/L		06/09/20 15:20	06/10/20 18:21	1
Barium	430	^	1.0	0.29	ug/L		06/09/20 15:20	06/10/20 18:21	1
Cadmium	0.56	J	1.0	0.27	ug/L		06/09/20 15:20	06/10/20 18:21	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 6020A - Metals (ICP/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-17-GW

Date Collected: 06/05/20 11:35

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	23		2.0	0.50	ug/L		06/09/20 15:20	06/10/20 18:21	1
Lead	19	^	1.0	0.18	ug/L		06/09/20 15:20	06/10/20 18:21	1
Selenium	1.4	J B	5.0	0.37	ug/L		06/09/20 15:20	06/10/20 18:21	1
Silver	0.12	J	5.0	0.033	ug/L		06/09/20 15:20	06/10/20 18:21	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-10-12

Date Collected: 06/05/20 12:30

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-5

Matrix: Solid

Percent Solids: 91.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.97		0.52	0.044	mg/Kg	☼	06/11/20 08:30	06/17/20 17:38	1
Silver	ND		92	7.2	ug/Kg	☼	06/10/20 16:50	06/13/20 02:34	1
Barium	55	^ F2 F1	0.35	0.061	mg/Kg	☼	06/11/20 08:30	06/17/20 17:38	1
Cadmium	0.022	J	0.087	0.0082	mg/Kg	☼	06/11/20 08:30	06/17/20 17:38	1
Chromium	4.0		0.17	0.066	mg/Kg	☼	06/11/20 08:30	06/17/20 17:38	1
Lead	3.7		0.13	0.016	mg/Kg	☼	06/11/20 08:30	06/17/20 17:38	1
Selenium	ND		0.44	0.12	mg/Kg	☼	06/11/20 08:30	06/17/20 17:38	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-GW

Date Collected: 06/05/20 13:10

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10		5.0	0.33	ug/L		06/09/20 15:20	06/10/20 18:25	1
Barium	1500	^	1.0	0.29	ug/L		06/09/20 15:20	06/10/20 18:25	1
Cadmium	1.7		1.0	0.27	ug/L		06/09/20 15:20	06/10/20 18:25	1
Chromium	26		2.0	0.50	ug/L		06/09/20 15:20	06/10/20 18:25	1
Lead	36	^	1.0	0.18	ug/L		06/09/20 15:20	06/10/20 18:25	1
Selenium	2.5	J B	5.0	0.37	ug/L		06/09/20 15:20	06/10/20 18:25	1
Silver	0.23	J	5.0	0.033	ug/L		06/09/20 15:20	06/10/20 18:25	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-17-GW

Date Collected: 06/05/20 11:35

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.19	J	0.20	0.027	ug/L		06/19/20 14:40	06/19/20 20:50	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-GW

Date Collected: 06/05/20 13:10

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.34		0.20	0.027	ug/L		06/19/20 14:40	06/19/20 20:52	1

Method: 7471B - Mercury (CVAA)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-DUP01

Date Collected: 06/05/20 12:30

Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-1

Matrix: Solid

Percent Solids: 94.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	6.5	J	19	6.1	ug/Kg	☼	06/18/20 13:50	06/18/20 18:50	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 7471B - Mercury (CVAA)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-W-01-5-7
Date Collected: 06/05/20 09:00
Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-2
Matrix: Solid
Percent Solids: 76.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	380		22	7.3	ug/Kg	☼	06/18/20 13:50	06/18/20 18:57	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-17-10-12
Date Collected: 06/05/20 11:20
Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-3
Matrix: Solid
Percent Solids: 92.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	19	J	21	6.8	ug/Kg	☼	06/18/20 13:50	06/18/20 19:00	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-10-12
Date Collected: 06/05/20 12:30
Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-5
Matrix: Solid
Percent Solids: 91.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	110		19	6.2	ug/Kg	☼	06/18/20 13:50	06/18/20 19:02	1

General Chemistry

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-DUP01
Date Collected: 06/05/20 12:30
Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-1
Matrix: Solid
Percent Solids: 94.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	5.2		0.1	0.1	%			06/08/20 11:14	1
Percent Solids	94.8		0.1	0.1	%			06/08/20 11:14	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-W-01-5-7
Date Collected: 06/05/20 09:00
Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-2
Matrix: Solid
Percent Solids: 76.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	24.0		0.1	0.1	%			06/08/20 11:14	1
Percent Solids	76.0		0.1	0.1	%			06/08/20 11:14	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-17-10-12
Date Collected: 06/05/20 11:20
Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-3
Matrix: Solid
Percent Solids: 92.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	8.0		0.1	0.1	%			06/08/20 11:14	1
Percent Solids	92.0		0.1	0.1	%			06/08/20 11:14	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-10-12
Date Collected: 06/05/20 12:30
Date Received: 06/05/20 14:25

Lab Sample ID: 280-137349-5
Matrix: Solid
Percent Solids: 91.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	8.1		0.1	0.1	%			06/08/20 11:14	1
Percent Solids	91.9		0.1	0.1	%			06/08/20 11:14	1

Eurofins TestAmerica, Denver

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (58-140)	BFB (76-127)	DBFM (75-121)	TOL (80-126)
280-137349-1	CDOT I270 Env-05/06_2020-SB	105	98	103	98
280-137349-2	CDOT I270 Env-05/06_2020-SB-W-01-5-7	109	108	102	102
280-137349-3	CDOT I270 Env-05/06_2020-SB-17-10-12	106	96	103	95
280-137349-5	CDOT I270 Env-05/06_2020-SB-16-10-12	105	97	102	97
280-137349-8	CDOT I270 Env-05/06_2020-SB-TB04	102	99	101	97
LCS 280-497700/1-A	Lab Control Sample	101	96	101	96
MB 280-497700/2-A	Method Blank	103	96	102	99

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (70-127)	TOL (80-125)	BFB (78-120)	DBFM (77-120)
280-137349-4	CDOT I270 Env-05/06_2020-SB	110	95	99	105
280-137349-6	CDOT I270 Env-05/06_2020-SB-16-GW	108	94	105	99
280-137349-7	CDOT I270 Env-05/06_2020-SB-TB04	108	98	109	100
LCS 280-498882/5	Lab Control Sample	101	100	100	99
LCS 280-498883/4	Lab Control Sample	107	95	109	102
LCSD 280-498882/6	Lab Control Sample Dup	98	101	102	98
LCSD 280-498883/5	Lab Control Sample Dup	105	96	106	99
MB 280-498882/10	Method Blank	98	101	101	96
MB 280-498883/8	Method Blank	107	96	109	101

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (46-120)	2FP (43-120)	TBP (35-120)	NBZ (46-120)	PHL (46-120)	TPHL (46-120)
280-137349-1	CDOT I270 Env-05/06_2020-SB	72	79	67	72	82	89
280-137349-2	CDOT I270 Env-05/06_2020-SB-W-01-5-7	66	70	64	64	74	82
280-137349-3	CDOT I270 Env-05/06_2020-SB-17-10-12	74	77	72	72	83	95

Eurofins TestAmerica, Denver

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (46-120)	2FP (43-120)	TBP (35-120)	NBZ (46-120)	PHL (46-120)	TPHL (46-120)
280-137349-5	CDOT I270 Env-05/06_2020-SB	70	71	71	65	78	89
LCS 280-499195/2-A	Lab Control Sample	67	70	75	63	73	91
MB 280-499195/1-A	Method Blank	66	67	68	63	70	86

Surrogate Legend

FBP = 2-Fluorobiphenyl
 2FP = 2-Fluorophenol (Surr)
 TBP = 2,4,6-Tribromophenol (Surr)
 NBZ = Nitrobenzene-d5 (Surr)
 PHL = Phenol-d5 (Surr)
 TPHL = Terphenyl-d14 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (48-120)	2FP (41-120)	TBP (42-131)	NBZ (42-120)	PHL (45-124)	TPHL (20-130)
280-137349-4	CDOT I270 Env-05/06_2020-SB	60	61	66	61	67	26
280-137349-6	CDOT I270 Env-05/06_2020-SB-16-GW	69	34 X	18 X	74	35 X	37
LCS 280-498333/2-A	Lab Control Sample	71	71	77	72	70	90
LCSD 280-498333/3-A	Lab Control Sample Dup	73	79	79	76	82	93
MB 280-498333/1-A	Method Blank	55	61	68	58	63	91

Surrogate Legend

FBP = 2-Fluorobiphenyl
 2FP = 2-Fluorophenol (Surr)
 TBP = 2,4,6-Tribromophenol (Surr)
 NBZ = Nitrobenzene-d5 (Surr)
 PHL = Phenol-d5 (Surr)
 TPHL = Terphenyl-d14 (Surr)

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		TFT1 (77-123)
280-137349-1	CDOT I270 Env-05/06_2020-SB	84
280-137349-2	CDOT I270 Env-05/06_2020-SB-W-01-5-7	82
280-137349-3	CDOT I270 Env-05/06_2020-SB-17-10-12	83
280-137349-5	CDOT I270 Env-05/06_2020-SB-16-10-12	82
280-137349-8	CDOT I270 Env-05/06_2020-SB-TB04	102
LCS 280-499800/1-A	Lab Control Sample	89
LCS 280-500003/1-A	Lab Control Sample	108
LCSD 280-499800/2-A	Lab Control Sample Dup	88
LCSD 280-500003/2-A	Lab Control Sample Dup	107
MB 280-499800/3-A	Method Blank	85

Eurofins TestAmerica, Denver

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

(Continued)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TFT1 (77-123)
MB 280-500003/3-A	Method Blank	83

Surrogate Legend

TFT = a,a,a-Trifluorotoluene

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TFT1 (82-110)
280-137349-4	CDOT I270 Env-05/06_2020-SB	92
280-137349-6	CDOT I270 Env-05/06_2020-SB-16-GW	93
280-137349-7	CDOT I270 Env-05/06_2020-SB-TB04	97
LCS 280-499325/20	Lab Control Sample	95
LCS 280-499325/21	Lab Control Sample Dup	97
MB 280-499325/22	Method Blank	96

Surrogate Legend

TFT = a,a,a-Trifluorotoluene

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTPH1 (49-115)
280-137349-1	CDOT I270 Env-05/06_2020-SB	46 X
280-137349-1 - RE	CDOT I270 Env-05/06_2020-SB-16-DUP01	64
280-137349-2	CDOT I270 Env-05/06_2020-SB-W-01-5-7	73
280-137349-3	CDOT I270 Env-05/06_2020-SB-17-10-12	20 X
280-137349-3 - RE	CDOT I270 Env-05/06_2020-SB-17-10-12	63
280-137349-5	CDOT I270 Env-05/06_2020-SB-16-10-12	3 X
280-137349-5 - RE	CDOT I270 Env-05/06_2020-SB-16-10-12	67
LCS 280-499194/2-A	Lab Control Sample	76
LCS 280-499194/3-A	Lab Control Sample	71
LCS 280-500438/2-A	Lab Control Sample	84
LCS 280-500438/3-A	Lab Control Sample	78
MB 280-499194/1-A	Method Blank	68
MB 280-500438/1-A	Method Blank	72

Surrogate Legend

OTPH = o-Terphenyl (Surr)

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTPH1 (50-115)
280-137349-4	CDOT I270 Env-05/06_2020-SB	83
280-137349-6	CDOT I270	87
	Env-05/06_2020-SB-16-GW	
LCS 280-498368/2-A	Lab Control Sample	92
LCS 280-498368/4-A	Lab Control Sample	93
LCSD 280-498368/3-A	Lab Control Sample Dup	93
LCSD 280-498368/5-A	Lab Control Sample Dup	96
MB 280-498368/1-A	Method Blank	83

Surrogate Legend

OTPH = o-Terphenyl (Surr)

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-497700/2-A

Matrix: Solid

Analysis Batch: 497699

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 497700

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1-Trichloroethane	ND		5.0	2.0	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.29	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
1,1,2-Trichloroethane	ND		5.0	0.88	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
1,1,2-Trichlorotrifluoroethane	ND		20	1.7	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
1,1-Dichloroethane	ND		5.0	0.21	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
1,1-Dichloroethene	ND		5.0	0.59	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
1,2,3-Trichlorobenzene	ND		5.0	0.81	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
1,2,4-Trichlorobenzene	ND		5.0	0.73	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
1,2-Dibromo-3-Chloropropane	ND		10	3.7	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
1,2-Dibromoethane	ND		5.0	0.52	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
1,2-Dichlorobenzene	ND		5.0	1.9	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
1,2-Dichloroethane	ND		5.0	0.70	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
1,2-Dichloropropane	ND		5.0	0.55	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
1,3-Dichlorobenzene	ND		5.0	0.48	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
1,4-Dichlorobenzene	ND		5.0	0.25	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
1,4-Dioxane	ND		500	56	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
2-Butanone (MEK)	ND		20	3.9	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
2-Hexanone	ND		20	4.9	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.4	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
Acetone	ND		72	36	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
Benzene	ND		5.0	0.15	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
Bromoform	ND		5.1	2.6	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
Bromomethane	ND		10	1.4	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
Carbon disulfide	ND		5.0	1.7	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
Carbon tetrachloride	ND		5.0	2.0	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
Chlorobenzene	ND		5.0	2.1	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
Chlorobromomethane	ND		5.0	2.5	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
Chlorodibromomethane	ND		5.0	2.3	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
Chloroethane	ND		10	2.0	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
Chloroform	ND		10	0.29	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
Chloromethane	ND		10	0.77	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
cis-1,2-Dichloroethene	ND		2.5	0.20	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
cis-1,3-Dichloropropene	ND		5.0	0.10	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
Cyclohexane	ND		5.0	1.8	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
Dichlorobromomethane	ND		5.0	2.1	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
Dichlorodifluoromethane	ND		10	2.7	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
Ethylbenzene	ND		5.0	0.31	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
Isopropylbenzene	ND		5.0	2.4	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
Methyl acetate	ND		10	2.8	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
Methyl tert-butyl ether	ND		20	2.1	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
Methylcyclohexane	ND		5.0	0.42	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
Methylene Chloride	ND		5.0	1.6	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
m-Xylene & p-Xylene	ND		2.5	1.0	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
o-Xylene	ND		2.5	0.27	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
Styrene	ND		5.0	0.28	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
Tetrachloroethene	ND		5.0	1.9	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
Toluene	ND		5.0	0.23	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
trans-1,2-Dichloroethene	ND		2.5	0.39	ug/Kg		06/06/20 20:27	06/06/20 23:41	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-497700/2-A
Matrix: Solid
Analysis Batch: 497699

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 497700

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
trans-1,3-Dichloropropene	ND		5.0	0.083	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
Trichloroethene	ND		5.0	1.9	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
Trichlorofluoromethane	ND		10	3.2	ug/Kg		06/06/20 20:27	06/06/20 23:41	1
Vinyl chloride	ND		5.0	1.3	ug/Kg		06/06/20 20:27	06/06/20 23:41	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	103		58 - 140	06/06/20 20:27	06/06/20 23:41	1
4-Bromofluorobenzene (Surr)	96		76 - 127	06/06/20 20:27	06/06/20 23:41	1
Dibromofluoromethane (Surr)	102		75 - 121	06/06/20 20:27	06/06/20 23:41	1
Toluene-d8 (Surr)	99		80 - 126	06/06/20 20:27	06/06/20 23:41	1

Lab Sample ID: LCS 280-497700/1-A
Matrix: Solid
Analysis Batch: 497699

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497700

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
		Result	Qualifier					
1,1,1-Trichloroethane	50.0	47.4		ug/Kg		95		70 - 135
1,1,1,2-Tetrachloroethane	50.0	42.6		ug/Kg		85		65 - 135
1,1,2-Trichloroethane	50.0	44.0		ug/Kg		88		78 - 135
1,1,2-Trichlorotrifluoroethane	50.0	49.0		ug/Kg		98		50 - 150
1,1-Dichloroethane	50.0	46.7		ug/Kg		93		70 - 135
1,1-Dichloroethene	50.0	48.2		ug/Kg		96		79 - 135
1,2,3-Trichlorobenzene	50.0	50.2		ug/Kg		100		62 - 135
1,2,4-Trichlorobenzene	50.0	51.2		ug/Kg		102		65 - 135
1,2-Dibromo-3-Chloropropane	50.0	45.7		ug/Kg		91		66 - 150
1,2-Dibromoethane	50.0	46.1		ug/Kg		92		76 - 135
1,2-Dichlorobenzene	50.0	46.6		ug/Kg		93		73 - 135
1,2-Dichloroethane	50.0	45.3		ug/Kg		91		69 - 135
1,2-Dichloropropane	50.0	47.3		ug/Kg		95		72 - 121
1,3-Dichlorobenzene	50.0	48.6		ug/Kg		97		69 - 135
1,4-Dichlorobenzene	50.0	48.1		ug/Kg		96		73 - 135
1,4-Dioxane	1000	863		ug/Kg		86		52 - 135
2-Butanone (MEK)	200	186		ug/Kg		93		45 - 177
2-Hexanone	200	170		ug/Kg		85		67 - 150
4-Methyl-2-pentanone (MIBK)	200	188		ug/Kg		94		69 - 150
Acetone	200	186		ug/Kg		93		65 - 150
Benzene	50.0	46.1		ug/Kg		92		75 - 135
Bromoform	50.0	44.2		ug/Kg		88		77 - 135
Bromomethane	50.0	49.5		ug/Kg		99		52 - 135
Carbon disulfide	50.0	46.4		ug/Kg		93		45 - 150
Carbon tetrachloride	50.0	47.6		ug/Kg		95		69 - 138
Chlorobenzene	50.0	46.3		ug/Kg		93		78 - 135
Chlorobromomethane	50.0	47.6		ug/Kg		95		74 - 135
Chlorodibromomethane	50.0	46.1		ug/Kg		92		77 - 135
Chloroethane	50.0	47.2		ug/Kg		94		51 - 145
Chloroform	50.0	46.3		ug/Kg		93		73 - 123
Chloromethane	50.0	45.7		ug/Kg		91		41 - 138
cis-1,2-Dichloroethene	50.0	47.7		ug/Kg		95		76 - 135

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-497700/1-A
Matrix: Solid
Analysis Batch: 497699

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497700

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,3-Dichloropropene	50.0	45.4		ug/Kg		91	71 - 135
Cyclohexane	50.0	45.7		ug/Kg		91	50 - 150
Dichlorobromomethane	50.0	45.8		ug/Kg		92	73 - 135
Dichlorodifluoromethane	50.0	41.2		ug/Kg		82	32 - 152
Ethylbenzene	50.0	46.3		ug/Kg		93	73 - 125
Isopropylbenzene	50.0	47.4		ug/Kg		95	74 - 137
Methyl acetate	100	91.0		ug/Kg		91	50 - 150
Methyl tert-butyl ether	50.0	45.6		ug/Kg		91	71 - 141
Methylcyclohexane	50.0	44.4		ug/Kg		89	50 - 150
Methylene Chloride	50.0	46.2		ug/Kg		92	76 - 136
m-Xylene & p-Xylene	50.0	46.0		ug/Kg		92	77 - 135
o-Xylene	50.0	45.9		ug/Kg		92	75 - 135
Styrene	50.0	45.8		ug/Kg		92	76 - 135
Tetrachloroethene	50.0	48.1		ug/Kg		96	76 - 135
Toluene	50.0	47.3		ug/Kg		95	77 - 122
trans-1,2-Dichloroethene	50.0	48.3		ug/Kg		97	77 - 135
trans-1,3-Dichloropropene	50.0	45.1		ug/Kg		90	71 - 135
Trichloroethene	50.0	46.4		ug/Kg		93	77 - 135
Trichlorofluoromethane	50.0	52.2		ug/Kg		104	48 - 150
Vinyl chloride	50.0	48.7		ug/Kg		97	43 - 145

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		58 - 140
4-Bromofluorobenzene (Surr)	96		76 - 127
Dibromofluoromethane (Surr)	101		75 - 121
Toluene-d8 (Surr)	96		80 - 126

Lab Sample ID: MB 280-498882/10
Matrix: Water
Analysis Batch: 498882

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			06/16/20 10:24	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			06/16/20 10:24	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			06/16/20 10:24	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			06/16/20 10:24	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/16/20 10:24	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			06/16/20 10:24	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			06/16/20 10:24	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			06/16/20 10:24	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			06/16/20 10:24	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			06/16/20 10:24	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			06/16/20 10:24	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			06/16/20 10:24	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/16/20 10:24	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			06/16/20 10:24	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			06/16/20 10:24	1
1,4-Dioxane	ND		200	19	ug/L			06/16/20 10:24	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-498882/10
Matrix: Water
Analysis Batch: 498882

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	ND		6.0	2.0	ug/L			06/16/20 10:24	1
2-Hexanone	ND		5.0	1.7	ug/L			06/16/20 10:24	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			06/16/20 10:24	1
Acetone	ND		10	1.9	ug/L			06/16/20 10:24	1
Benzene	ND		1.0	0.16	ug/L			06/16/20 10:24	1
Bromoform	ND		1.0	0.46	ug/L			06/16/20 10:24	1
Bromomethane	ND		2.0	0.21	ug/L			06/16/20 10:24	1
Carbon disulfide	ND		2.0	0.17	ug/L			06/16/20 10:24	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			06/16/20 10:24	1
Chlorobenzene	ND		1.0	0.17	ug/L			06/16/20 10:24	1
Chlorobromomethane	ND		1.0	0.10	ug/L			06/16/20 10:24	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			06/16/20 10:24	1
Chloroethane	ND		2.0	0.41	ug/L			06/16/20 10:24	1
Chloroform	ND		1.0	0.16	ug/L			06/16/20 10:24	1
Chloromethane	ND		2.0	0.30	ug/L			06/16/20 10:24	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/16/20 10:24	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			06/16/20 10:24	1
Cyclohexane	ND		2.0	0.28	ug/L			06/16/20 10:24	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			06/16/20 10:24	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			06/16/20 10:24	1
Ethylbenzene	ND		1.0	0.16	ug/L			06/16/20 10:24	1
Isopropylbenzene	ND		1.0	0.19	ug/L			06/16/20 10:24	1
Methyl acetate	ND		5.0	1.6	ug/L			06/16/20 10:24	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			06/16/20 10:24	1
Methylcyclohexane	ND		1.0	0.10	ug/L			06/16/20 10:24	1
Methylene Chloride	ND		2.0	0.94	ug/L			06/16/20 10:24	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			06/16/20 10:24	1
o-Xylene	ND		1.0	0.19	ug/L			06/16/20 10:24	1
Styrene	ND		1.0	0.36	ug/L			06/16/20 10:24	1
Tetrachloroethene	ND		1.0	0.20	ug/L			06/16/20 10:24	1
Toluene	ND		1.0	0.17	ug/L			06/16/20 10:24	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/16/20 10:24	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			06/16/20 10:24	1
Trichloroethene	ND		1.0	0.16	ug/L			06/16/20 10:24	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			06/16/20 10:24	1
Vinyl chloride	ND		1.0	0.10	ug/L			06/16/20 10:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		70 - 127		06/16/20 10:24	1
4-Bromofluorobenzene (Surr)	101		78 - 120		06/16/20 10:24	1
Dibromofluoromethane (Surr)	96		77 - 120		06/16/20 10:24	1
Toluene-d8 (Surr)	101		80 - 125		06/16/20 10:24	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-498882/5

Matrix: Water

Analysis Batch: 498882

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	17.4		ug/L		70	65 - 135
1,1,2,2-Tetrachloroethane	25.0	21.4		ug/L		86	58 - 135
1,1,2-Trichloroethane	25.0	23.2		ug/L		93	64 - 135
1,1,2-Trichlorotrifluoroethane	25.0	16.9		ug/L		67	65 - 140
1,1-Dichloroethane	25.0	20.4		ug/L		82	65 - 135
1,1-Dichloroethene	25.0	17.9		ug/L		71	65 - 136
1,2,3-Trichlorobenzene	25.0	20.3		ug/L		81	60 - 135
1,2,4-Trichlorobenzene	25.0	18.4		ug/L		74	58 - 135
1,2-Dibromo-3-Chloropropane	25.0	20.4		ug/L		81	57 - 135
1,2-Dibromoethane	25.0	21.0		ug/L		84	65 - 135
1,2-Dichlorobenzene	25.0	21.0		ug/L		84	65 - 135
1,2-Dichloroethane	25.0	22.7		ug/L		91	65 - 135
1,2-Dichloropropane	25.0	20.9		ug/L		84	64 - 135
1,3-Dichlorobenzene	25.0	20.3		ug/L		81	65 - 135
1,4-Dichlorobenzene	25.0	20.6		ug/L		82	65 - 135
1,4-Dioxane	500	525		ug/L		105	31 - 147
2-Butanone (MEK)	100	101		ug/L		101	44 - 177
2-Hexanone	100	96.8		ug/L		97	57 - 139
4-Methyl-2-pentanone (MIBK)	100	92.8		ug/L		93	60 - 150
Acetone	100	92.5		ug/L		93	39 - 156
Benzene	25.0	19.6		ug/L		78	65 - 135
Bromoform	25.0	18.6		ug/L		75	62 - 135
Bromomethane	25.0	21.5		ug/L		86	45 - 135
Carbon disulfide	25.0	17.2		ug/L		69	55 - 143
Carbon tetrachloride	25.0	18.0		ug/L		72	65 - 135
Chlorobenzene	25.0	20.2		ug/L		81	65 - 135
Chlorobromomethane	25.0	20.4		ug/L		81	65 - 135
Chlorodibromomethane	25.0	18.9		ug/L		75	65 - 135
Chloroethane	25.0	22.6		ug/L		91	46 - 136
Chloroform	25.0	20.2		ug/L		81	65 - 135
Chloromethane	25.0	22.7		ug/L		91	34 - 145
cis-1,2-Dichloroethene	25.0	21.3		ug/L		85	65 - 135
cis-1,3-Dichloropropene	25.0	20.3		ug/L		81	65 - 135
Cyclohexane	25.0	19.0		ug/L		76	62 - 135
Dichlorobromomethane	25.0	21.7		ug/L		87	65 - 135
Dichlorodifluoromethane	25.0	21.8		ug/L		87	43 - 142
Ethylbenzene	25.0	21.2		ug/L		85	65 - 135
Isopropylbenzene	25.0	19.8		ug/L		79	65 - 135
Methyl acetate	50.0	50.5		ug/L		101	52 - 135
Methyl tert-butyl ether	25.0	21.9		ug/L		88	54 - 135
Methylcyclohexane	25.0	18.8		ug/L		75	63 - 135
Methylene Chloride	25.0	20.5		ug/L		82	54 - 141
m-Xylene & p-Xylene	25.0	19.0		ug/L		76	65 - 135
o-Xylene	25.0	19.2		ug/L		77	65 - 135
Styrene	25.0	21.3		ug/L		85	65 - 135
Tetrachloroethene	25.0	17.0		ug/L		68	65 - 135
Toluene	25.0	20.0		ug/L		80	65 - 135
trans-1,2-Dichloroethene	25.0	20.4		ug/L		82	65 - 135

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-498882/5

Matrix: Water

Analysis Batch: 498882

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	25.0	18.5		ug/L		74	65 - 135
Trichloroethene	25.0	19.7		ug/L		79	65 - 135
Trichlorofluoromethane	25.0	22.1		ug/L		88	53 - 137
Vinyl chloride	25.0	22.5		ug/L		90	40 - 137

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		70 - 127
4-Bromofluorobenzene (Surr)	100		78 - 120
Dibromofluoromethane (Surr)	99		77 - 120
Toluene-d8 (Surr)	100		80 - 125

Lab Sample ID: LCSD 280-498882/6

Matrix: Water

Analysis Batch: 498882

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	25.0	19.9		ug/L		80	65 - 135	13	20
1,1,1,2-Tetrachloroethane	25.0	22.3		ug/L		89	58 - 135	4	20
1,1,1,2-Trichloroethane	25.0	25.5		ug/L		102	64 - 135	9	27
1,1,1,2-Trichlorotrifluoroethane	25.0	18.0		ug/L		72	65 - 140	6	20
1,1-Dichloroethane	25.0	22.3		ug/L		89	65 - 135	9	21
1,1-Dichloroethene	25.0	19.9		ug/L		80	65 - 136	11	20
1,2,3-Trichlorobenzene	25.0	21.2		ug/L		85	60 - 135	5	36
1,2,4-Trichlorobenzene	25.0	20.4		ug/L		82	58 - 135	10	25
1,2-Dibromo-3-Chloropropane	25.0	21.6		ug/L		86	57 - 135	6	22
1,2-Dibromoethane	25.0	22.5		ug/L		90	65 - 135	6	27
1,2-Dichlorobenzene	25.0	22.9		ug/L		92	65 - 135	9	20
1,2-Dichloroethane	25.0	25.1		ug/L		100	65 - 135	10	20
1,2-Dichloropropane	25.0	22.3		ug/L		89	64 - 135	7	20
1,3-Dichlorobenzene	25.0	22.8		ug/L		91	65 - 135	11	20
1,4-Dichlorobenzene	25.0	22.6		ug/L		91	65 - 135	9	23
1,4-Dioxane	500	504		ug/L		101	31 - 147	4	30
2-Butanone (MEK)	100	108		ug/L		108	44 - 177	6	32
2-Hexanone	100	105		ug/L		105	57 - 139	9	25
4-Methyl-2-pentanone (MIBK)	100	97.1		ug/L		97	60 - 150	4	22
Acetone	100	100		ug/L		100	39 - 156	8	23
Benzene	25.0	22.0		ug/L		88	65 - 135	12	20
Bromoform	25.0	20.2		ug/L		81	62 - 135	8	27
Bromomethane	25.0	16.5		ug/L		66	45 - 135	26	33
Carbon disulfide	25.0	18.8		ug/L		75	55 - 143	9	20
Carbon tetrachloride	25.0	20.7		ug/L		83	65 - 135	14	21
Chlorobenzene	25.0	22.8		ug/L		91	65 - 135	12	20
Chlorobromomethane	25.0	22.7		ug/L		91	65 - 135	11	29
Chlorodibromomethane	25.0	20.5		ug/L		82	65 - 135	8	20
Chloroethane	25.0	21.7		ug/L		87	46 - 136	4	25
Chloroform	25.0	22.7		ug/L		91	65 - 135	12	20
Chloromethane	25.0	20.5		ug/L		82	34 - 145	10	24
cis-1,2-Dichloroethene	25.0	23.2		ug/L		93	65 - 135	9	20

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-498882/6
Matrix: Water
Analysis Batch: 498882

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,3-Dichloropropene	25.0	21.2		ug/L		85	65 - 135	4	26
Cyclohexane	25.0	20.7		ug/L		83	62 - 135	9	20
Dichlorobromomethane	25.0	23.9		ug/L		96	65 - 135	10	20
Dichlorodifluoromethane	25.0	20.2		ug/L		81	43 - 142	8	30
Ethylbenzene	25.0	23.6		ug/L		94	65 - 135	11	20
Isopropylbenzene	25.0	22.5		ug/L		90	65 - 135	13	20
Methyl acetate	50.0	52.9		ug/L		106	52 - 135	5	27
Methyl tert-butyl ether	25.0	23.1		ug/L		92	54 - 135	5	21
Methylcyclohexane	25.0	21.4		ug/L		86	63 - 135	13	20
Methylene Chloride	25.0	22.2		ug/L		89	54 - 141	8	26
m-Xylene & p-Xylene	25.0	20.7		ug/L		83	65 - 135	8	20
o-Xylene	25.0	21.2		ug/L		85	65 - 135	10	20
Styrene	25.0	23.9		ug/L		96	65 - 135	11	26
Tetrachloroethene	25.0	19.4		ug/L		77	65 - 135	13	20
Toluene	25.0	21.9		ug/L		88	65 - 135	9	20
trans-1,2-Dichloroethene	25.0	21.9		ug/L		88	65 - 135	7	24
trans-1,3-Dichloropropene	25.0	18.9		ug/L		75	65 - 135	2	26
Trichloroethene	25.0	23.5		ug/L		94	65 - 135	18	20
Trichlorofluoromethane	25.0	20.4		ug/L		82	53 - 137	8	27
Vinyl chloride	25.0	20.0		ug/L		80	40 - 137	12	24

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	98		70 - 127
4-Bromofluorobenzene (Surr)	102		78 - 120
Dibromofluoromethane (Surr)	98		77 - 120
Toluene-d8 (Surr)	101		80 - 125

Lab Sample ID: MB 280-498883/8
Matrix: Water
Analysis Batch: 498883

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			06/16/20 10:58	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			06/16/20 10:58	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			06/16/20 10:58	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			06/16/20 10:58	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/16/20 10:58	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			06/16/20 10:58	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			06/16/20 10:58	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			06/16/20 10:58	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			06/16/20 10:58	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			06/16/20 10:58	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			06/16/20 10:58	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			06/16/20 10:58	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/16/20 10:58	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			06/16/20 10:58	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			06/16/20 10:58	1
1,4-Dioxane	ND		200	19	ug/L			06/16/20 10:58	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-498883/8
Matrix: Water
Analysis Batch: 498883

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	ND		6.0	2.0	ug/L			06/16/20 10:58	1
2-Hexanone	ND		5.0	1.7	ug/L			06/16/20 10:58	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			06/16/20 10:58	1
Acetone	ND		10	1.9	ug/L			06/16/20 10:58	1
Benzene	ND		1.0	0.16	ug/L			06/16/20 10:58	1
Bromoform	ND		1.0	0.46	ug/L			06/16/20 10:58	1
Bromomethane	ND		2.0	0.21	ug/L			06/16/20 10:58	1
Carbon disulfide	ND		2.0	0.17	ug/L			06/16/20 10:58	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			06/16/20 10:58	1
Chlorobenzene	ND		1.0	0.17	ug/L			06/16/20 10:58	1
Chlorobromomethane	ND		1.0	0.10	ug/L			06/16/20 10:58	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			06/16/20 10:58	1
Chloroethane	ND		2.0	0.41	ug/L			06/16/20 10:58	1
Chloroform	ND		1.0	0.16	ug/L			06/16/20 10:58	1
Chloromethane	ND		2.0	0.30	ug/L			06/16/20 10:58	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/16/20 10:58	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			06/16/20 10:58	1
Cyclohexane	ND		2.0	0.28	ug/L			06/16/20 10:58	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			06/16/20 10:58	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			06/16/20 10:58	1
Ethylbenzene	ND		1.0	0.16	ug/L			06/16/20 10:58	1
Isopropylbenzene	ND		1.0	0.19	ug/L			06/16/20 10:58	1
Methyl acetate	ND		5.0	1.6	ug/L			06/16/20 10:58	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			06/16/20 10:58	1
Methylcyclohexane	ND		1.0	0.10	ug/L			06/16/20 10:58	1
Methylene Chloride	ND		2.0	0.94	ug/L			06/16/20 10:58	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			06/16/20 10:58	1
o-Xylene	ND		1.0	0.19	ug/L			06/16/20 10:58	1
Styrene	ND		1.0	0.36	ug/L			06/16/20 10:58	1
Tetrachloroethene	ND		1.0	0.20	ug/L			06/16/20 10:58	1
Toluene	ND		1.0	0.17	ug/L			06/16/20 10:58	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/16/20 10:58	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			06/16/20 10:58	1
Trichloroethene	ND		1.0	0.16	ug/L			06/16/20 10:58	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			06/16/20 10:58	1
Vinyl chloride	ND		1.0	0.10	ug/L			06/16/20 10:58	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		70 - 127		06/16/20 10:58	1
4-Bromofluorobenzene (Surr)	109		78 - 120		06/16/20 10:58	1
Dibromofluoromethane (Surr)	101		77 - 120		06/16/20 10:58	1
Toluene-d8 (Surr)	96		80 - 125		06/16/20 10:58	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-498883/4
Matrix: Water
Analysis Batch: 498883

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	21.9		ug/L		88	65 - 135
1,1,2,2-Tetrachloroethane	25.0	24.0		ug/L		96	58 - 135
1,1,2-Trichloroethane	25.0	22.2		ug/L		89	64 - 135
1,1,2-Trichlorotrifluoroethane	25.0	18.7		ug/L		75	65 - 140
1,1-Dichloroethane	25.0	21.3		ug/L		85	65 - 135
1,1-Dichloroethene	25.0	20.4		ug/L		81	65 - 136
1,2,3-Trichlorobenzene	25.0	20.0		ug/L		80	60 - 135
1,2,4-Trichlorobenzene	25.0	19.1		ug/L		76	58 - 135
1,2-Dibromo-3-Chloropropane	25.0	20.4		ug/L		81	57 - 135
1,2-Dibromoethane	25.0	21.6		ug/L		86	65 - 135
1,2-Dichlorobenzene	25.0	21.6		ug/L		86	65 - 135
1,2-Dichloroethane	25.0	22.0		ug/L		88	65 - 135
1,2-Dichloropropane	25.0	20.9		ug/L		84	64 - 135
1,3-Dichlorobenzene	25.0	20.5		ug/L		82	65 - 135
1,4-Dichlorobenzene	25.0	22.0		ug/L		88	65 - 135
1,4-Dioxane	500	414		ug/L		83	31 - 147
2-Butanone (MEK)	100	93.2		ug/L		93	44 - 177
2-Hexanone	100	92.3		ug/L		92	57 - 139
4-Methyl-2-pentanone (MIBK)	100	90.7		ug/L		91	60 - 150
Acetone	100	100		ug/L		100	39 - 156
Benzene	25.0	20.9		ug/L		84	65 - 135
Bromoform	25.0	20.4		ug/L		82	62 - 135
Bromomethane	25.0	18.8		ug/L		75	45 - 135
Carbon disulfide	25.0	18.8		ug/L		75	55 - 143
Carbon tetrachloride	25.0	20.8		ug/L		83	65 - 135
Chlorobenzene	25.0	20.6		ug/L		82	65 - 135
Chlorobromomethane	25.0	21.5		ug/L		86	65 - 135
Chlorodibromomethane	25.0	21.6		ug/L		86	65 - 135
Chloroethane	25.0	19.3		ug/L		77	46 - 136
Chloroform	25.0	21.4		ug/L		86	65 - 135
Chloromethane	25.0	15.6		ug/L		62	34 - 145
cis-1,2-Dichloroethene	25.0	21.6		ug/L		86	65 - 135
cis-1,3-Dichloropropene	25.0	20.1		ug/L		80	65 - 135
Cyclohexane	25.0	20.3		ug/L		81	62 - 135
Dichlorobromomethane	25.0	22.0		ug/L		88	65 - 135
Dichlorodifluoromethane	25.0	12.1		ug/L		48	43 - 142
Ethylbenzene	25.0	21.3		ug/L		85	65 - 135
Isopropylbenzene	25.0	22.5		ug/L		90	65 - 135
Methyl acetate	50.0	46.9		ug/L		94	52 - 135
Methyl tert-butyl ether	25.0	22.6		ug/L		90	54 - 135
Methylcyclohexane	25.0	19.8		ug/L		79	63 - 135
Methylene Chloride	25.0	20.9		ug/L		84	54 - 141
m-Xylene & p-Xylene	25.0	20.7		ug/L		83	65 - 135
o-Xylene	25.0	21.7		ug/L		87	65 - 135
Styrene	25.0	22.3		ug/L		89	65 - 135
Tetrachloroethene	25.0	20.1		ug/L		80	65 - 135
Toluene	25.0	21.3		ug/L		85	65 - 135
trans-1,2-Dichloroethene	25.0	20.8		ug/L		83	65 - 135

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-498883/4

Matrix: Water

Analysis Batch: 498883

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	25.0	19.7		ug/L		79	65 - 135
Trichloroethene	25.0	19.9		ug/L		79	65 - 135
Trichlorofluoromethane	25.0	19.5		ug/L		78	53 - 137
Vinyl chloride	25.0	17.1		ug/L		68	40 - 137

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	107		70 - 127
4-Bromofluorobenzene (Surr)	109		78 - 120
Dibromofluoromethane (Surr)	102		77 - 120
Toluene-d8 (Surr)	95		80 - 125

Lab Sample ID: LCSD 280-498883/5

Matrix: Water

Analysis Batch: 498883

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	25.0	20.1		ug/L		80	65 - 135	9	20
1,1,1,2-Tetrachloroethane	25.0	24.6		ug/L		98	58 - 135	2	20
1,1,2-Trichloroethane	25.0	23.2		ug/L		93	64 - 135	5	27
1,1,2-Trichlorotrifluoroethane	25.0	17.3		ug/L		69	65 - 140	8	20
1,1-Dichloroethane	25.0	20.5		ug/L		82	65 - 135	4	21
1,1-Dichloroethene	25.0	19.4		ug/L		78	65 - 136	5	20
1,2,3-Trichlorobenzene	25.0	18.7		ug/L		75	60 - 135	7	36
1,2,4-Trichlorobenzene	25.0	18.7		ug/L		75	58 - 135	2	25
1,2-Dibromo-3-Chloropropane	25.0	22.3		ug/L		89	57 - 135	9	22
1,2-Dibromoethane	25.0	22.5		ug/L		90	65 - 135	4	27
1,2-Dichlorobenzene	25.0	21.3		ug/L		85	65 - 135	1	20
1,2-Dichloroethane	25.0	21.5		ug/L		86	65 - 135	2	20
1,2-Dichloropropane	25.0	20.7		ug/L		83	64 - 135	1	20
1,3-Dichlorobenzene	25.0	20.8		ug/L		83	65 - 135	2	20
1,4-Dichlorobenzene	25.0	20.9		ug/L		84	65 - 135	5	23
1,4-Dioxane	500	470		ug/L		94	31 - 147	13	30
2-Butanone (MEK)	100	103		ug/L		103	44 - 177	10	32
2-Hexanone	100	102		ug/L		102	57 - 139	10	25
4-Methyl-2-pentanone (MIBK)	100	104		ug/L		104	60 - 150	13	22
Acetone	100	104		ug/L		104	39 - 156	4	23
Benzene	25.0	20.1		ug/L		80	65 - 135	4	20
Bromoform	25.0	20.7		ug/L		83	62 - 135	2	27
Bromomethane	25.0	18.8		ug/L		75	45 - 135	0	33
Carbon disulfide	25.0	16.9		ug/L		68	55 - 143	11	20
Carbon tetrachloride	25.0	18.5		ug/L		74	65 - 135	11	21
Chlorobenzene	25.0	20.1		ug/L		81	65 - 135	2	20
Chlorobromomethane	25.0	21.4		ug/L		86	65 - 135	0	29
Chlorodibromomethane	25.0	22.1		ug/L		88	65 - 135	2	20
Chloroethane	25.0	18.6		ug/L		74	46 - 136	4	25
Chloroform	25.0	20.7		ug/L		83	65 - 135	4	20
Chloromethane	25.0	14.7		ug/L		59	34 - 145	6	24
cis-1,2-Dichloroethene	25.0	20.8		ug/L		83	65 - 135	4	20

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-498883/5
 Matrix: Water
 Analysis Batch: 498883

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,3-Dichloropropene	25.0	19.9		ug/L		80	65 - 135	1	26
Cyclohexane	25.0	19.1		ug/L		76	62 - 135	6	20
Dichlorobromomethane	25.0	21.3		ug/L		85	65 - 135	3	20
Dichlorodifluoromethane	25.0	11.6		ug/L		47	43 - 142	3	30
Ethylbenzene	25.0	20.2		ug/L		81	65 - 135	6	20
Isopropylbenzene	25.0	21.0		ug/L		84	65 - 135	7	20
Methyl acetate	50.0	49.3		ug/L		99	52 - 135	5	27
Methyl tert-butyl ether	25.0	22.7		ug/L		91	54 - 135	0	21
Methylcyclohexane	25.0	19.1		ug/L		76	63 - 135	4	20
Methylene Chloride	25.0	19.9		ug/L		79	54 - 141	5	26
m-Xylene & p-Xylene	25.0	19.9		ug/L		80	65 - 135	4	20
o-Xylene	25.0	21.2		ug/L		85	65 - 135	2	20
Styrene	25.0	21.7		ug/L		87	65 - 135	3	26
Tetrachloroethene	25.0	18.7		ug/L		75	65 - 135	8	20
Toluene	25.0	21.2		ug/L		85	65 - 135	1	20
trans-1,2-Dichloroethene	25.0	19.6		ug/L		78	65 - 135	6	24
trans-1,3-Dichloropropene	25.0	21.0		ug/L		84	65 - 135	6	26
Trichloroethene	25.0	19.4		ug/L		77	65 - 135	3	20
Trichlorofluoromethane	25.0	19.0		ug/L		76	53 - 137	3	27
Vinyl chloride	25.0	16.4		ug/L		66	40 - 137	4	24

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	105		70 - 127
4-Bromofluorobenzene (Surr)	106		78 - 120
Dibromofluoromethane (Surr)	99		77 - 120
Toluene-d8 (Surr)	96		80 - 125

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-498333/1-A
 Matrix: Water
 Analysis Batch: 499495

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 498333

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		10	1.8	ug/L		06/11/20 14:55	06/21/20 00:17	1
1,2,4,5-Tetrachlorobenzene	ND		10	1.7	ug/L		06/11/20 14:55	06/21/20 00:17	1
1,2,4-Trichlorobenzene	ND		4.0	0.59	ug/L		06/11/20 14:55	06/21/20 00:17	1
1,2-Dichlorobenzene	ND		4.0	0.23	ug/L		06/11/20 14:55	06/21/20 00:17	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		10	0.23	ug/L		06/11/20 14:55	06/21/20 00:17	1
1,3-Dichlorobenzene	ND		10	0.30	ug/L		06/11/20 14:55	06/21/20 00:17	1
1,3-Dinitrobenzene	ND		10	2.0	ug/L		06/11/20 14:55	06/21/20 00:17	1
1,4-Dichlorobenzene	ND		4.0	1.3	ug/L		06/11/20 14:55	06/21/20 00:17	1
1,4-Dioxane	ND		20	0.45	ug/L		06/11/20 14:55	06/21/20 00:17	1
1-Methylnaphthalene	ND		4.0	0.23	ug/L		06/11/20 14:55	06/21/20 00:17	1
2,2'-oxybis[1-chloropropane]	ND		10	0.28	ug/L		06/11/20 14:55	06/21/20 00:17	1
2,3,4,6-Tetrachlorophenol	ND		50	2.0	ug/L		06/11/20 14:55	06/21/20 00:17	1
2,4,5-Trichlorophenol	ND		10	2.1	ug/L		06/11/20 14:55	06/21/20 00:17	1
2,4,6-Trichlorophenol	ND		10	0.29	ug/L		06/11/20 14:55	06/21/20 00:17	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-498333/1-A
Matrix: Water
Analysis Batch: 499495

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498333

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2,4-Dichlorophenol	ND		10	0.64	ug/L		06/11/20 14:55	06/21/20 00:17	1
2,4-Dimethylphenol	ND		10	0.58	ug/L		06/11/20 14:55	06/21/20 00:17	1
2,4-Dinitrophenol	ND		30	10	ug/L		06/11/20 14:55	06/21/20 00:17	1
2,4-Dinitrotoluene	ND		10	1.7	ug/L		06/11/20 14:55	06/21/20 00:17	1
2,6-Dichlorophenol	ND		10	1.4	ug/L		06/11/20 14:55	06/21/20 00:17	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		06/11/20 14:55	06/21/20 00:17	1
2-Chloronaphthalene	ND		4.0	0.26	ug/L		06/11/20 14:55	06/21/20 00:17	1
2-Chlorophenol	ND		10	2.0	ug/L		06/11/20 14:55	06/21/20 00:17	1
2-Methylnaphthalene	ND		4.0	1.5	ug/L		06/11/20 14:55	06/21/20 00:17	1
2-Methylphenol	ND		10	0.98	ug/L		06/11/20 14:55	06/21/20 00:17	1
2-Nitroaniline	ND		10	1.7	ug/L		06/11/20 14:55	06/21/20 00:17	1
2-Nitrophenol	ND		10	0.39	ug/L		06/11/20 14:55	06/21/20 00:17	1
3 & 4 Methylphenol	ND		10	0.25	ug/L		06/11/20 14:55	06/21/20 00:17	1
3,3'-Dichlorobenzidine	ND		50	2.0	ug/L		06/11/20 14:55	06/21/20 00:17	1
3-Methylphenol	ND		10	0.25	ug/L		06/11/20 14:55	06/21/20 00:17	1
3-Nitroaniline	ND		10	2.0	ug/L		06/11/20 14:55	06/21/20 00:17	1
4,6-Dinitro-2-methylphenol	ND		50	4.0	ug/L		06/11/20 14:55	06/21/20 00:17	1
4-Bromophenyl phenyl ether	ND		10	0.43	ug/L		06/11/20 14:55	06/21/20 00:17	1
4-Chloro-3-methylphenol	ND		10	2.4	ug/L		06/11/20 14:55	06/21/20 00:17	1
4-Chloroaniline	ND		10	2.1	ug/L		06/11/20 14:55	06/21/20 00:17	1
4-Chlorophenyl phenyl ether	ND		10	1.7	ug/L		06/11/20 14:55	06/21/20 00:17	1
4-Methylphenol	ND		10	0.25	ug/L		06/11/20 14:55	06/21/20 00:17	1
4-Nitroaniline	ND		10	2.0	ug/L		06/11/20 14:55	06/21/20 00:17	1
4-Nitrophenol	ND		10	1.2	ug/L		06/11/20 14:55	06/21/20 00:17	1
Acenaphthene	ND		4.0	0.28	ug/L		06/11/20 14:55	06/21/20 00:17	1
Acenaphthylene	ND		4.0	0.49	ug/L		06/11/20 14:55	06/21/20 00:17	1
Acetophenone	ND		10	0.24	ug/L		06/11/20 14:55	06/21/20 00:17	1
Aniline	ND		10	2.0	ug/L		06/11/20 14:55	06/21/20 00:17	1
Anthracene	ND		4.0	0.42	ug/L		06/11/20 14:55	06/21/20 00:17	1
Azobenzene	ND		4.0	0.23	ug/L		06/11/20 14:55	06/21/20 00:17	1
Benzaldehyde	ND		5.0	2.0	ug/L		06/11/20 14:55	06/21/20 00:17	1
Benzidine	ND		100	50	ug/L		06/11/20 14:55	06/21/20 00:17	1
Benzo[a]anthracene	ND		4.0	0.35	ug/L		06/11/20 14:55	06/21/20 00:17	1
Benzo[a]pyrene	ND		4.0	0.31	ug/L		06/11/20 14:55	06/21/20 00:17	1
Benzo[b]fluoranthene	ND		4.0	0.53	ug/L		06/11/20 14:55	06/21/20 00:17	1
Benzo[g,h,i]perylene	ND		4.0	0.50	ug/L		06/11/20 14:55	06/21/20 00:17	1
Benzo[k]fluoranthene	ND		4.0	0.46	ug/L		06/11/20 14:55	06/21/20 00:17	1
Benzoic acid	ND		25	10	ug/L		06/11/20 14:55	06/21/20 00:17	1
Benzyl alcohol	ND		10	0.23	ug/L		06/11/20 14:55	06/21/20 00:17	1
Bis(2-chloroethoxy)methane	ND		10	0.97	ug/L		06/11/20 14:55	06/21/20 00:17	1
Bis(2-chloroethyl)ether	ND		10	0.83	ug/L		06/11/20 14:55	06/21/20 00:17	1
Bis(2-ethylhexyl) phthalate	ND		10	0.56	ug/L		06/11/20 14:55	06/21/20 00:17	1
Butyl benzyl phthalate	ND		4.0	1.0	ug/L		06/11/20 14:55	06/21/20 00:17	1
Caprolactam	ND		5.0	2.5	ug/L		06/11/20 14:55	06/21/20 00:17	1
Carbazole	ND		4.0	0.43	ug/L		06/11/20 14:55	06/21/20 00:17	1
Chrysene	ND		4.0	0.54	ug/L		06/11/20 14:55	06/21/20 00:17	1
Dibenz(a,h)anthracene	ND		4.0	0.51	ug/L		06/11/20 14:55	06/21/20 00:17	1
Dibenzofuran	ND		4.0	0.29	ug/L		06/11/20 14:55	06/21/20 00:17	1
Diethyl phthalate	ND		4.0	0.38	ug/L		06/11/20 14:55	06/21/20 00:17	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-498333/1-A
Matrix: Water
Analysis Batch: 499495

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498333

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl phthalate	ND		4.0	0.21	ug/L		06/11/20 14:55	06/21/20 00:17	1
Di-n-butyl phthalate	ND		4.0	1.2	ug/L		06/11/20 14:55	06/21/20 00:17	1
Di-n-octyl phthalate	ND		4.0	0.35	ug/L		06/11/20 14:55	06/21/20 00:17	1
Diphenylamine	ND		10	1.1	ug/L		06/11/20 14:55	06/21/20 00:17	1
Famphur	ND		100	1.5	ug/L		06/11/20 14:55	06/21/20 00:17	1
Fluoranthene	ND		4.0	0.20	ug/L		06/11/20 14:55	06/21/20 00:17	1
Fluorene	ND		4.0	0.31	ug/L		06/11/20 14:55	06/21/20 00:17	1
Hexachlorobenzene	ND		10	0.66	ug/L		06/11/20 14:55	06/21/20 00:17	1
Hexachlorobutadiene	ND		10	3.3	ug/L		06/11/20 14:55	06/21/20 00:17	1
Hexachlorocyclopentadiene	ND		50	3.1	ug/L		06/11/20 14:55	06/21/20 00:17	1
Hexachloroethane	ND		10	0.98	ug/L		06/11/20 14:55	06/21/20 00:17	1
Hexadecane	ND		10	0.54	ug/L		06/11/20 14:55	06/21/20 00:17	1
Indeno[1,2,3-cd]pyrene	ND		4.0	0.65	ug/L		06/11/20 14:55	06/21/20 00:17	1
Isophorone	ND		10	0.21	ug/L		06/11/20 14:55	06/21/20 00:17	1
Naphthalene	ND		4.0	0.29	ug/L		06/11/20 14:55	06/21/20 00:17	1
Nitrobenzene	ND		10	0.81	ug/L		06/11/20 14:55	06/21/20 00:17	1
N-Nitrosodimethylamine	ND		10	0.29	ug/L		06/11/20 14:55	06/21/20 00:17	1
N-Nitrosodi-n-propylamine	ND		10	0.35	ug/L		06/11/20 14:55	06/21/20 00:17	1
N-Nitrosodiphenylamine	ND		10	0.44	ug/L		06/11/20 14:55	06/21/20 00:17	1
Pentachlorophenol	ND		50	20	ug/L		06/11/20 14:55	06/21/20 00:17	1
Phenanthrene	ND		4.0	0.26	ug/L		06/11/20 14:55	06/21/20 00:17	1
Phenol	ND		10	2.0	ug/L		06/11/20 14:55	06/21/20 00:17	1
Pyrene	ND		10	0.37	ug/L		06/11/20 14:55	06/21/20 00:17	1
Pyridine	ND		20	1.7	ug/L		06/11/20 14:55	06/21/20 00:17	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	55		48 - 120	06/11/20 14:55	06/21/20 00:17	1
2-Fluorophenol (Surr)	61		41 - 120	06/11/20 14:55	06/21/20 00:17	1
2,4,6-Tribromophenol (Surr)	68		42 - 131	06/11/20 14:55	06/21/20 00:17	1
Nitrobenzene-d5 (Surr)	58		42 - 120	06/11/20 14:55	06/21/20 00:17	1
Phenol-d5 (Surr)	63		45 - 124	06/11/20 14:55	06/21/20 00:17	1
Terphenyl-d14 (Surr)	91		20 - 130	06/11/20 14:55	06/21/20 00:17	1

Lab Sample ID: LCS 280-498333/2-A
Matrix: Water
Analysis Batch: 499495

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498333

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1'-Biphenyl	80.0	59.9		ug/L		75	63 - 99
1,2,4,5-Tetrachlorobenzene	80.0	54.3		ug/L		68	57 - 100
1,2,4-Trichlorobenzene	80.0	45.7		ug/L		57	41 - 99
1,2-Dichlorobenzene	80.0	42.8		ug/L		53	37 - 97
1,2-Diphenylhydrazine(as Azobenzene)	80.9	64.3		ug/L		80	66 - 104
1,3-Dichlorobenzene	80.0	40.0		ug/L		50	34 - 96
1,3-Dinitrobenzene	80.0	67.7		ug/L		85	72 - 114
1,4-Dichlorobenzene	80.0	40.3		ug/L		50	35 - 96
1,4-Dioxane	80.0	50.1		ug/L		63	46 - 94
1-Methylnaphthalene	80.0	56.7		ug/L		71	56 - 102

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-498333/2-A
Matrix: Water
Analysis Batch: 499495

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498333
%Rec. Limits

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,2'-oxybis[1-chloropropane]	80.0	62.9		ug/L		79	52 - 108
2,3,4,6-Tetrachlorophenol	80.0	65.5		ug/L		82	71 - 111
2,4,5-Trichlorophenol	80.0	67.6		ug/L		84	70 - 109
2,4,6-Trichlorophenol	80.0	68.7		ug/L		86	71 - 113
2,4-Dichlorophenol	80.0	63.7		ug/L		80	65 - 109
2,4-Dimethylphenol	80.0	51.7		ug/L		65	46 - 100
2,4-Dinitrophenol	160	126		ug/L		79	60 - 110
2,4-Dinitrotoluene	80.0	67.4		ug/L		84	72 - 110
2,6-Dichlorophenol	80.0	63.1		ug/L		79	64 - 109
2,6-Dinitrotoluene	80.0	69.0		ug/L		86	70 - 109
2-Chloronaphthalene	80.0	59.8		ug/L		75	61 - 98
2-Chlorophenol	80.0	64.1		ug/L		80	59 - 107
2-Methylnaphthalene	80.0	54.3		ug/L		68	55 - 100
2-Methylphenol	80.0	64.2		ug/L		80	61 - 105
2-Nitroaniline	80.0	67.1		ug/L		84	65 - 110
2-Nitrophenol	80.0	66.6		ug/L		83	63 - 108
3 & 4 Methylphenol	80.0	65.9		ug/L		82	58 - 107
3,3'-Dichlorobenzidine	160	99.6		ug/L		62	39 - 105
3-Methylphenol	80.0	65.9		ug/L		82	58 - 107
3-Nitroaniline	80.0	54.5		ug/L		68	37 - 94
4,6-Dinitro-2-methylphenol	160	121		ug/L		76	67 - 109
4-Bromophenyl phenyl ether	80.0	66.9		ug/L		84	67 - 105
4-Chloro-3-methylphenol	80.0	63.2		ug/L		79	68 - 110
4-Chloroaniline	80.0	47.5		ug/L		59	34 - 97
4-Chlorophenyl phenyl ether	80.0	64.4		ug/L		80	69 - 100
4-Methylphenol	80.0	65.9		ug/L		82	58 - 107
4-Nitroaniline	80.0	65.4		ug/L		82	64 - 103
4-Nitrophenol	160	91.8	*	ug/L		57	60 - 120
Acenaphthene	80.0	62.7		ug/L		78	63 - 99
Acenaphthylene	80.0	62.7		ug/L		78	66 - 98
Acetophenone	80.0	63.5		ug/L		79	59 - 106
Aniline	80.0	44.5		ug/L		56	40 - 96
Anthracene	80.0	62.1		ug/L		78	65 - 105
Azobenzene	80.0	63.7		ug/L		80	66 - 104
Benzaldehyde	80.0	55.8		ug/L		70	10 - 89
Benzidine	160	61.5	J	ug/L		38	10 - 52
Benzo[a]anthracene	80.0	62.8		ug/L		78	68 - 104
Benzo[a]pyrene	80.0	62.1		ug/L		78	66 - 102
Benzo[b]fluoranthene	80.0	63.1		ug/L		79	67 - 107
Benzo[g,h,i]perylene	80.0	62.1		ug/L		78	65 - 106
Benzo[k]fluoranthene	80.0	62.9		ug/L		79	71 - 109
Benzoic acid	80.0	56.0		ug/L		70	29 - 120
Benzyl alcohol	80.0	65.8		ug/L		82	61 - 107
Bis(2-chloroethoxy)methane	80.0	64.0		ug/L		80	62 - 106
Bis(2-chloroethyl)ether	80.0	65.4		ug/L		82	59 - 110
Bis(2-ethylhexyl) phthalate	80.0	71.2		ug/L		89	65 - 106
Butyl benzyl phthalate	80.0	67.5		ug/L		84	66 - 107
Caprolactam	80.0	65.2		ug/L		81	60 - 107
Carbazole	80.0	60.8		ug/L		76	66 - 109

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-498333/2-A
Matrix: Water
Analysis Batch: 499495

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498333

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chrysene	80.0	63.1		ug/L		79	70 - 105
Dibenz(a,h)anthracene	80.0	63.8		ug/L		80	64 - 106
Dibenzofuran	80.0	63.9		ug/L		80	68 - 99
Diethyl phthalate	80.0	65.2		ug/L		81	71 - 105
Dimethyl phthalate	80.0	68.1		ug/L		85	70 - 107
Di-n-butyl phthalate	80.0	63.0		ug/L		79	75 - 120
Di-n-octyl phthalate	80.0	63.4		ug/L		79	71 - 120
Diphenylamine	68.0	54.8		ug/L		81	67 - 103
Fluoranthene	80.0	57.3		ug/L		72	66 - 107
Fluorene	80.0	64.5		ug/L		81	67 - 100
Hexachlorobenzene	80.0	61.4		ug/L		77	66 - 106
Hexachlorobutadiene	80.0	36.0		ug/L		45	33 - 98
Hexachlorocyclopentadiene	160	47.4	J	ug/L		30	10 - 67
Hexachloroethane	80.0	33.3		ug/L		42	24 - 98
Hexadecane	80.0	64.9		ug/L		81	50 - 150
Indeno[1,2,3-cd]pyrene	80.0	65.4		ug/L		82	56 - 104
Isophorone	80.0	58.6		ug/L		73	59 - 102
Naphthalene	80.0	52.8		ug/L		66	39 - 120
Nitrobenzene	80.0	58.4		ug/L		73	58 - 108
N-Nitrosodimethylamine	80.0	60.9		ug/L		76	53 - 106
N-Nitrosodi-n-propylamine	80.0	64.3		ug/L		80	57 - 106
N-Nitrosodiphenylamine	80.0	66.6		ug/L		83	65 - 104
Pentachlorophenol	160	117		ug/L		73	55 - 109
Phenanthrene	80.0	63.3		ug/L		79	67 - 106
Phenol	80.0	54.3		ug/L		68	60 - 108
Pyrene	80.0	66.3		ug/L		83	69 - 105
Pyridine	160	105		ug/L		66	46 - 88

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl	71		48 - 120
2-Fluorophenol (Surr)	71		41 - 120
2,4,6-Tribromophenol (Surr)	77		42 - 131
Nitrobenzene-d5 (Surr)	72		42 - 120
Phenol-d5 (Surr)	70		45 - 124
Terphenyl-d14 (Surr)	90		20 - 130

Lab Sample ID: LCSD 280-498333/3-A
Matrix: Water
Analysis Batch: 499495

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 498333

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1'-Biphenyl	80.0	62.4		ug/L		78	63 - 99	4	30
1,2,4,5-Tetrachlorobenzene	80.0	57.1		ug/L		71	57 - 100	5	30
1,2,4-Trichlorobenzene	80.0	52.7		ug/L		66	41 - 99	14	30
1,2-Dichlorobenzene	80.0	48.7		ug/L		61	37 - 97	13	30
1,2-Diphenylhydrazine(as Azobenzene)	80.9	67.5		ug/L		83	66 - 104	5	30
1,3-Dichlorobenzene	80.0	47.4		ug/L		59	34 - 96	17	30
1,3-Dinitrobenzene	80.0	68.9		ug/L		86	72 - 114	2	30

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-498333/3-A

Matrix: Water

Analysis Batch: 499495

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 498333

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
							Limits	RPD		
1,4-Dichlorobenzene	80.0	46.9		ug/L		59	35 - 96	15	30	
1,4-Dioxane	80.0	54.6		ug/L		68	46 - 94	9	30	
1-Methylnaphthalene	80.0	61.4		ug/L		77	56 - 102	8	30	
2,2'-oxybis[1-chloropropane]	80.0	66.4		ug/L		83	52 - 108	5	30	
2,3,4,6-Tetrachlorophenol	80.0	67.9		ug/L		85	71 - 111	4	30	
2,4,5-Trichlorophenol	80.0	69.6		ug/L		87	70 - 109	3	30	
2,4,6-Trichlorophenol	80.0	67.8		ug/L		85	71 - 113	1	30	
2,4-Dichlorophenol	80.0	67.4		ug/L		84	65 - 109	6	30	
2,4-Dimethylphenol	80.0	54.1		ug/L		68	46 - 100	5	30	
2,4-Dinitrophenol	160	137		ug/L		86	60 - 110	8	30	
2,4-Dinitrotoluene	80.0	73.0		ug/L		91	72 - 110	8	30	
2,6-Dichlorophenol	80.0	67.8		ug/L		85	64 - 109	7	50	
2,6-Dinitrotoluene	80.0	70.5		ug/L		88	70 - 109	2	30	
2-Chloronaphthalene	80.0	63.6		ug/L		80	61 - 98	6	30	
2-Chlorophenol	80.0	66.7		ug/L		83	59 - 107	4	30	
2-Methylnaphthalene	80.0	58.9		ug/L		74	55 - 100	8	30	
2-Methylphenol	80.0	66.2		ug/L		83	61 - 105	3	30	
2-Nitroaniline	80.0	70.8		ug/L		88	65 - 110	5	30	
2-Nitrophenol	80.0	74.1		ug/L		93	63 - 108	11	30	
3 & 4 Methylphenol	80.0	67.8		ug/L		85	58 - 107	3	30	
3,3'-Dichlorobenzidine	160	115		ug/L		72	39 - 105	15	30	
3-Methylphenol	80.0	67.8		ug/L		85	58 - 107	3	30	
3-Nitroaniline	80.0	57.8		ug/L		72	37 - 94	6	30	
4,6-Dinitro-2-methylphenol	160	128		ug/L		80	67 - 109	5	30	
4-Bromophenyl phenyl ether	80.0	69.3		ug/L		87	67 - 105	4	30	
4-Chloro-3-methylphenol	80.0	67.4		ug/L		84	68 - 110	6	30	
4-Chloroaniline	80.0	47.6		ug/L		60	34 - 97	0	30	
4-Chlorophenyl phenyl ether	80.0	66.6		ug/L		83	69 - 100	3	30	
4-Methylphenol	80.0	67.8		ug/L		85	58 - 107	3	30	
4-Nitroaniline	80.0	65.7		ug/L		82	64 - 103	0	30	
4-Nitrophenol	160	109		ug/L		68	60 - 120	17	30	
Acenaphthene	80.0	66.1		ug/L		83	63 - 99	5	30	
Acenaphthylene	80.0	64.8		ug/L		81	66 - 98	3	30	
Acetophenone	80.0	65.9		ug/L		82	59 - 106	4	30	
Aniline	80.0	45.0		ug/L		56	40 - 96	1	30	
Anthracene	80.0	66.0		ug/L		83	65 - 105	6	30	
Azobenzene	80.0	66.8		ug/L		83	66 - 104	5	30	
Benzaldehyde	80.0	52.3		ug/L		65	10 - 89	6	50	
Benzidine	160	54.8	J	ug/L		34	10 - 52	11	50	
Benzo[a]anthracene	80.0	67.2		ug/L		84	68 - 104	7	30	
Benzo[a]pyrene	80.0	65.7		ug/L		82	66 - 102	6	30	
Benzo[b]fluoranthene	80.0	66.8		ug/L		83	67 - 107	6	30	
Benzo[g,h,i]perylene	80.0	66.3		ug/L		83	65 - 106	7	30	
Benzo[k]fluoranthene	80.0	70.2		ug/L		88	71 - 109	11	30	
Benzoic acid	80.0	68.9		ug/L		86	29 - 120	21	30	
Benzyl alcohol	80.0	66.4		ug/L		83	61 - 107	1	30	
Bis(2-chloroethoxy)methane	80.0	67.8		ug/L		85	62 - 106	6	30	
Bis(2-chloroethyl)ether	80.0	67.0		ug/L		84	59 - 110	2	30	
Bis(2-ethylhexyl) phthalate	80.0	77.0		ug/L		96	65 - 106	8	30	

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-498333/3-A
Matrix: Water
Analysis Batch: 499495

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 498333

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Butyl benzyl phthalate	80.0	72.9		ug/L		91	66 - 107	8	30
Caprolactam	80.0	70.1		ug/L		88	60 - 107	7	30
Carbazole	80.0	67.1		ug/L		84	66 - 109	10	30
Chrysene	80.0	68.1		ug/L		85	70 - 105	8	30
Dibenz(a,h)anthracene	80.0	69.0		ug/L		86	64 - 106	8	30
Dibenzofuran	80.0	66.2		ug/L		83	68 - 99	4	30
Diethyl phthalate	80.0	65.6		ug/L		82	71 - 105	1	30
Dimethyl phthalate	80.0	67.8		ug/L		85	70 - 107	0	30
Di-n-butyl phthalate	80.0	68.5		ug/L		86	75 - 120	8	30
Di-n-octyl phthalate	80.0	68.8		ug/L		86	71 - 120	8	30
Diphenylamine	68.0	57.1		ug/L		84	67 - 103	4	50
Fluoranthene	80.0	65.0		ug/L		81	66 - 107	13	30
Fluorene	80.0	66.7		ug/L		83	67 - 100	3	30
Hexachlorobenzene	80.0	66.4		ug/L		83	66 - 106	8	30
Hexachlorobutadiene	80.0	44.8		ug/L		56	33 - 98	22	30
Hexachlorocyclopentadiene	160	49.7	J	ug/L		31	10 - 67	5	50
Hexachloroethane	80.0	42.9		ug/L		54	24 - 98	25	30
Hexadecane	80.0	69.1		ug/L		86	50 - 150	6	30
Indeno[1,2,3-cd]pyrene	80.0	68.7		ug/L		86	56 - 104	5	30
Isophorone	80.0	62.5		ug/L		78	59 - 102	7	30
Naphthalene	80.0	58.7		ug/L		73	39 - 120	11	30
Nitrobenzene	80.0	63.2		ug/L		79	58 - 108	8	30
N-Nitrosodimethylamine	80.0	64.6		ug/L		81	53 - 106	6	34
N-Nitrosodi-n-propylamine	80.0	64.7		ug/L		81	57 - 106	1	30
N-Nitrosodiphenylamine	80.0	68.7		ug/L		86	65 - 104	3	30
Pentachlorophenol	160	132		ug/L		82	55 - 109	12	30
Phenanthrene	80.0	66.9		ug/L		84	67 - 106	5	30
Phenol	80.0	62.2		ug/L		78	60 - 108	14	30
Pyrene	80.0	68.6		ug/L		86	69 - 105	3	30
Pyridine	160	114		ug/L		71	46 - 88	8	41

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2-Fluorobiphenyl	73		48 - 120
2-Fluorophenol (Surr)	79		41 - 120
2,4,6-Tribromophenol (Surr)	79		42 - 131
Nitrobenzene-d5 (Surr)	76		42 - 120
Phenol-d5 (Surr)	82		45 - 124
Terphenyl-d14 (Surr)	93		20 - 130

Lab Sample ID: MB 280-499195/1-A
Matrix: Solid
Analysis Batch: 499913

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499195

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		310	23	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
1,2,4,5-Tetrachlorobenzene	ND		310	46	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
1,2,4-Trichlorobenzene	ND		310	26	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
1,2-Dichlorobenzene	ND		310	21	ug/Kg		06/18/20 09:43	06/24/20 14:35	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-499195/1-A
Matrix: Solid
Analysis Batch: 499913

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499195

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Diphenylhydrazine(as Azobenzene)	ND		310	21	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
1,3-Dichlorobenzene	ND		310	11	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
1,3-Dinitrobenzene	ND		310	67	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
1,4-Dichlorobenzene	ND		310	13	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
1,4-Dioxane	ND		620	62	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
1-Methylnaphthalene	ND		310	11	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2,2'-oxybis[1-chloropropane]	ND		310	22	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2,3,4,6-Tetrachlorophenol	ND		1500	130	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2,4,5-Trichlorophenol	ND		310	9.4	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2,4,6-Trichlorophenol	ND		310	9.4	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2,4-Dichlorophenol	ND		310	9.4	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2,4-Dimethylphenol	ND		310	62	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2,4-Dinitrophenol	ND		1500	310	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2,4-Dinitrotoluene	ND		310	62	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2,6-Dichlorophenol	ND		310	21	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2,6-Dinitrotoluene	ND		310	26	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2-Chloronaphthalene	ND		310	9.4	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2-Chlorophenol	ND		310	20	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2-Methylnaphthalene	ND		310	18	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2-Methylphenol	ND		310	12	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2-Nitroaniline	ND		1500	47	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2-Nitrophenol	ND		310	9.4	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
3 & 4 Methylphenol	ND		310	31	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
3,3'-Dichlorobenzidine	ND		620	85	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
3-Methylphenol	ND		310	31	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
3-Nitroaniline	ND		1500	69	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
4,6-Dinitro-2-methylphenol	ND		1500	310	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
4-Bromophenyl phenyl ether	ND		310	18	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
4-Chloro-3-methylphenol	ND		310	23	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
4-Chloroaniline	ND		310	77	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
4-Chlorophenyl phenyl ether	ND		310	20	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
4-Methylphenol	ND		310	31	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
4-Nitroaniline	ND		1500	68	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
4-Nitrophenol	ND		1500	92	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Acenaphthene	ND		310	9.7	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Acenaphthylene	ND		310	77	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Acetophenone	ND		310	19	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Aniline	ND		310	120	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Anthracene	ND		310	16	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Azobenzene	ND		310	21	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Benzaldehyde	ND		310	63	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Benzidine	ND		3100	930	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Benzo[a]anthracene	ND		310	19	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Benzo[a]pyrene	ND		310	19	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Benzo[b]fluoranthene	ND		310	25	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Benzo[g,h,i]perylene	ND		310	15	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Benzo[k]fluoranthene	ND		310	38	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Benzoic acid	ND		1500	310	ug/Kg		06/18/20 09:43	06/24/20 14:35	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-499195/1-A
Matrix: Solid
Analysis Batch: 499913

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499195

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzyl alcohol	ND		310	9.4	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Bis(2-chloroethoxy)methane	ND		310	22	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Bis(2-chloroethyl)ether	ND		310	16	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Bis(2-ethylhexyl) phthalate	ND		310	43	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Butyl benzyl phthalate	ND		310	41	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Caprolactam	ND		310	100	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Carbazole	ND		310	34	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Chrysene	ND		310	25	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Dibenz(a,h)anthracene	ND		310	18	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Dibenzofuran	ND		310	19	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Diethyl phthalate	ND		620	25	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Dimethyl phthalate	ND		310	22	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Di-n-butyl phthalate	ND		310	27	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Di-n-octyl phthalate	ND		310	38	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Diphenylamine	ND		310	42	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Famphur	ND		620	32	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Fluoranthene	ND		310	34	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Fluorene	ND		310	17	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Hexachlorobenzene	ND		310	27	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Hexachlorobutadiene	ND		310	9.4	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Hexachlorocyclopentadiene	ND		1500	100	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Hexachloroethane	ND		310	20	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Hexadecane	ND		310	13	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Indeno[1,2,3-cd]pyrene	ND		310	21	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Isophorone	ND		310	16	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Naphthalene	ND		310	29	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Nitrobenzene	ND		310	21	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
N-Nitrosodimethylamine	ND		310	35	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
N-Nitrosodi-n-propylamine	ND		310	64	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
N-Nitrosodiphenylamine	ND		310	20	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Pentachlorophenol	ND		1500	310	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Phenanthrene	ND		310	16	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Phenol	ND		310	17	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Pyrene	ND		310	11	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Pyridine	ND		620	38	ug/Kg		06/18/20 09:43	06/24/20 14:35	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	66		46 - 120	06/18/20 09:43	06/24/20 14:35	1
2-Fluorophenol (Surr)	67		43 - 120	06/18/20 09:43	06/24/20 14:35	1
2,4,6-Tribromophenol (Surr)	68		35 - 120	06/18/20 09:43	06/24/20 14:35	1
Nitrobenzene-d5 (Surr)	63		46 - 120	06/18/20 09:43	06/24/20 14:35	1
Phenol-d5 (Surr)	70		46 - 120	06/18/20 09:43	06/24/20 14:35	1
Terphenyl-d14 (Surr)	86		46 - 120	06/18/20 09:43	06/24/20 14:35	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-499195/2-A
Matrix: Solid
Analysis Batch: 499913

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499195
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1'-Biphenyl	2490	1870		ug/Kg		75	60 - 120
1,2,4,5-Tetrachlorobenzene	2490	1710		ug/Kg		69	60 - 120
1,2,4-Trichlorobenzene	2490	1680		ug/Kg		67	59 - 120
1,2-Dichlorobenzene	2490	1740		ug/Kg		70	57 - 120
1,2-Diphenylhydrazine(as Azobenzene)	2520	2050		ug/Kg		81	60 - 120
1,3-Dichlorobenzene	2490	1680		ug/Kg		68	56 - 120
1,3-Dinitrobenzene	2490	2120		ug/Kg		85	66 - 120
1,4-Dichlorobenzene	2490	1710		ug/Kg		68	57 - 120
1,4-Dioxane	2490	1010		ug/Kg		40	28 - 120
1-Methylnaphthalene	2490	1850		ug/Kg		74	57 - 120
2,2'-oxybis[1-chloropropane]	2490	1950		ug/Kg		78	46 - 120
2,3,4,6-Tetrachlorophenol	2490	2060		ug/Kg		82	63 - 120
2,4,5-Trichlorophenol	2490	2060		ug/Kg		83	65 - 120
2,4,6-Trichlorophenol	2490	2040		ug/Kg		82	64 - 120
2,4-Dichlorophenol	2490	1830		ug/Kg		73	64 - 120
2,4-Dimethylphenol	2490	1710		ug/Kg		68	60 - 120
2,4-Dinitrophenol	4980	4200		ug/Kg		84	52 - 120
2,4-Dinitrotoluene	2490	2260		ug/Kg		91	68 - 120
2,6-Dichlorophenol	2490	1820		ug/Kg		73	30 - 150
2,6-Dinitrotoluene	2490	2260		ug/Kg		91	68 - 120
2-Chloronaphthalene	2490	1850		ug/Kg		74	61 - 120
2-Chlorophenol	2490	1860		ug/Kg		75	62 - 120
2-Methylnaphthalene	2490	1780		ug/Kg		72	60 - 120
2-Methylphenol	2490	1940		ug/Kg		78	61 - 120
2-Nitroaniline	2490	2110		ug/Kg		85	63 - 120
2-Nitrophenol	2490	1900		ug/Kg		76	61 - 120
3 & 4 Methylphenol	2490	1970		ug/Kg		79	62 - 120
3,3'-Dichlorobenzidine	4980	4040		ug/Kg		81	22 - 120
3-Methylphenol	2490	1970		ug/Kg		79	62 - 120
3-Nitroaniline	2490	2110		ug/Kg		85	40 - 120
4,6-Dinitro-2-methylphenol	4980	4020		ug/Kg		81	60 - 120
4-Bromophenyl phenyl ether	2490	2010		ug/Kg		81	66 - 120
4-Chloro-3-methylphenol	2490	1970		ug/Kg		79	62 - 120
4-Chloroaniline	2490	1650		ug/Kg		66	33 - 120
4-Chlorophenyl phenyl ether	2490	2020		ug/Kg		81	63 - 120
4-Methylphenol	2490	1970		ug/Kg		79	62 - 120
4-Nitroaniline	2490	2210		ug/Kg		89	58 - 120
4-Nitrophenol	4980	3340		ug/Kg		67	67 - 120
Acenaphthene	2490	1970		ug/Kg		79	62 - 120
Acenaphthylene	2490	1970		ug/Kg		79	64 - 120
Acetophenone	2490	1400		ug/Kg		56	48 - 120
Aniline	2490	1430		ug/Kg		57	21 - 120
Anthracene	2490	2100		ug/Kg		84	66 - 120
Azobenzene	2490	2030		ug/Kg		81	59 - 120
Benzaldehyde	2490	1970		ug/Kg		79	30 - 150
Benzidine	4980	2490	J	ug/Kg		50	5 - 120
Benzo[a]anthracene	2490	2110		ug/Kg		85	64 - 120
Benzo[a]pyrene	2490	2170		ug/Kg		87	65 - 120

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-499195/2-A
Matrix: Solid
Analysis Batch: 499913

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499195

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[b]fluoranthene	2490	2210		ug/Kg		88	58 - 120
Benzo[g,h,i]perylene	2490	2140		ug/Kg		86	58 - 120
Benzo[k]fluoranthene	2490	2160		ug/Kg		87	62 - 120
Benzoic acid	2490	1810		ug/Kg		73	51 - 120
Benzyl alcohol	2490	1940		ug/Kg		78	61 - 120
Bis(2-chloroethoxy)methane	2490	1820		ug/Kg		73	58 - 120
Bis(2-chloroethyl)ether	2490	1910		ug/Kg		77	57 - 120
Bis(2-ethylhexyl) phthalate	2490	2350		ug/Kg		94	65 - 120
Butyl benzyl phthalate	2490	2230		ug/Kg		89	65 - 120
Caprolactam	2490	2170		ug/Kg		87	20 - 138
Carbazole	2490	2100		ug/Kg		84	65 - 120
Chrysene	2490	2120		ug/Kg		85	65 - 120
Dibenz(a,h)anthracene	2490	2190		ug/Kg		88	56 - 120
Dibenzofuran	2490	1990		ug/Kg		80	65 - 120
Diethyl phthalate	2490	2050		ug/Kg		82	68 - 120
Dimethyl phthalate	2490	2070		ug/Kg		83	66 - 120
Di-n-butyl phthalate	2490	2140		ug/Kg		86	66 - 120
Di-n-octyl phthalate	2490	2110		ug/Kg		85	55 - 120
Diphenylamine	2120	1810		ug/Kg		86	30 - 150
Fluoranthene	2490	2050		ug/Kg		82	64 - 120
Fluorene	2490	2080		ug/Kg		84	66 - 120
Hexachlorobenzene	2490	1990		ug/Kg		80	65 - 120
Hexachlorobutadiene	2490	1500		ug/Kg		60	58 - 120
Hexachlorocyclopentadiene	4980	2700		ug/Kg		54	43 - 120
Hexachloroethane	2490	1580		ug/Kg		63	56 - 120
Hexadecane	2490	2040		ug/Kg		82	45 - 135
Indeno[1,2,3-cd]pyrene	2490	2180		ug/Kg		88	46 - 120
Isophorone	2490	1660		ug/Kg		67	56 - 120
Naphthalene	2490	1740		ug/Kg		70	59 - 120
Nitrobenzene	2490	1690		ug/Kg		68	55 - 120
N-Nitrosodimethylamine	2490	1740		ug/Kg		70	50 - 120
N-Nitrosodi-n-propylamine	2490	1820		ug/Kg		73	52 - 120
N-Nitrosodiphenylamine	2490	2100		ug/Kg		84	65 - 120
Pentachlorophenol	4980	3790		ug/Kg		76	50 - 120
Phenanthrene	2490	2080		ug/Kg		83	67 - 120
Phenol	2490	1780		ug/Kg		72	63 - 120
Pyrene	2490	2160		ug/Kg		87	66 - 120
Pyridine	4980	2860		ug/Kg		57	37 - 120

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl	67		46 - 120
2-Fluorophenol (Surr)	70		43 - 120
2,4,6-Tribromophenol (Surr)	75		35 - 120
Nitrobenzene-d5 (Surr)	63		46 - 120
Phenol-d5 (Surr)	73		46 - 120
Terphenyl-d14 (Surr)	91		46 - 120

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Lab Sample ID: MB 280-499325/22
Matrix: Water
Analysis Batch: 499325

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		25	10	ug/L			06/19/20 05:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	96		82 - 110		06/19/20 05:24	1

Lab Sample ID: LCS 280-499325/20
Matrix: Water
Analysis Batch: 499325

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C6-C10	76.9	64.4		ug/L		84	79 - 149

Surrogate	LCS %Recovery	LCS Qualifier	Limits
a,a,a-Trifluorotoluene	95		82 - 110

Lab Sample ID: LCSD 280-499325/21
Matrix: Water
Analysis Batch: 499325

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C10	76.9	63.4		ug/L		82	79 - 149	2	27

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
a,a,a-Trifluorotoluene	97		82 - 110

Lab Sample ID: MB 280-499800/3-A
Matrix: Solid
Analysis Batch: 499884

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499800

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.0	0.76	mg/Kg		06/23/20 11:46	06/24/20 02:04	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	85		77 - 123	06/23/20 11:46	06/24/20 02:04	1

Lab Sample ID: LCS 280-499800/1-A
Matrix: Solid
Analysis Batch: 499884

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499800

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C6-C10	7.69	6.61		mg/Kg		86	75 - 135

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics) (Continued)

Lab Sample ID: LCS 280-499800/1-A
Matrix: Solid
Analysis Batch: 499884

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499800

Surrogate	LCS %Recovery	LCS Qualifier	Limits
a,a,a-Trifluorotoluene	89		77 - 123

Lab Sample ID: LCSD 280-499800/2-A
Matrix: Solid
Analysis Batch: 499884

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 499800

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C10	7.69	6.58		mg/Kg		86	75 - 135	0	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
a,a,a-Trifluorotoluene	88		77 - 123

Lab Sample ID: MB 280-500003/3-A
Matrix: Solid
Analysis Batch: 500020

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 500003

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.0	0.76	mg/Kg		06/24/20 16:05	06/25/20 05:50	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	83		77 - 123	06/24/20 16:05	06/25/20 05:50	1

Lab Sample ID: LCS 280-500003/1-A
Matrix: Solid
Analysis Batch: 500020

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500003

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C6-C10	8.54	8.95		mg/Kg		105	75 - 135

Surrogate	LCS %Recovery	LCS Qualifier	Limits
a,a,a-Trifluorotoluene	108		77 - 123

Lab Sample ID: LCSD 280-500003/2-A
Matrix: Solid
Analysis Batch: 500020

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 500003

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C10	8.54	8.50		mg/Kg		99	75 - 135	5	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
a,a,a-Trifluorotoluene	107		77 - 123

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Lab Sample ID: MB 280-498368/1-A
Matrix: Water
Analysis Batch: 498639

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498368

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Diesel Range Organics [C10-C28]	ND		0.25	0.033	mg/L		06/11/20 14:49	06/15/20 17:10	1
Motor Oil (C20-C38)	ND		0.50	0.056	mg/L		06/11/20 14:49	06/15/20 17:10	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
<i>o</i> -Terphenyl (Surr)	83		50 - 115			06/11/20 14:49	06/15/20 17:10	1	

Lab Sample ID: LCS 280-498368/2-A
Matrix: Water
Analysis Batch: 498639

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498368

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	Limits
		Result	Qualifier				
Diesel Range Organics [C10-C28]	1.98	2.00		mg/L		101	54 - 115
Surrogate	%Recovery	Qualifier	Limits				
<i>o</i> -Terphenyl (Surr)	92		50 - 115				

Lab Sample ID: LCS 280-498368/4-A
Matrix: Water
Analysis Batch: 498639

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498368

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	Limits
		Result	Qualifier				
Motor Oil (C20-C38)	5.02	4.82		mg/L		96	54 - 115
Surrogate	%Recovery	Qualifier	Limits				
<i>o</i> -Terphenyl (Surr)	93		50 - 115				

Lab Sample ID: LCSD 280-498368/3-A
Matrix: Water
Analysis Batch: 498639

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 498368

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	Limits	RPD	Limit
		Result	Qualifier						
Diesel Range Organics [C10-C28]	1.98	1.98		mg/L		100	54 - 115	1	31
Surrogate	%Recovery	Qualifier	Limits						
<i>o</i> -Terphenyl (Surr)	93		50 - 115						

Lab Sample ID: LCSD 280-498368/5-A
Matrix: Water
Analysis Batch: 498639

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 498368

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	Limits	RPD	Limit
		Result	Qualifier						
Motor Oil (C20-C38)	5.02	4.98		mg/L		99	54 - 115	3	31
Surrogate	%Recovery	Qualifier	Limits						
<i>o</i> -Terphenyl (Surr)	96		50 - 115						

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Lab Sample ID: MB 280-499194/1-A
Matrix: Solid
Analysis Batch: 499482

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499194

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		7.2	3.3	mg/Kg		06/18/20 06:56	06/20/20 21:18	1
Motor Oil (C20-C38)	ND		22	7.0	mg/Kg		06/18/20 06:56	06/20/20 21:18	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	68		49 - 115				06/18/20 06:56	06/20/20 21:18	1

Lab Sample ID: LCS 280-499194/2-A
Matrix: Solid
Analysis Batch: 499482

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499194

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	132	103		mg/Kg		78	53 - 115
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
<i>o</i> -Terphenyl (Surr)	76		49 - 115				

Lab Sample ID: LCS 280-499194/3-A
Matrix: Solid
Analysis Batch: 499482

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499194

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Motor Oil (C20-C38)	302	109	*	mg/Kg		36	57 - 115
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
<i>o</i> -Terphenyl (Surr)	71		49 - 115				

Lab Sample ID: MB 280-500438/1-A
Matrix: Solid
Analysis Batch: 501533

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 500438

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	3.50	J	7.6	3.5	mg/Kg		06/29/20 07:41	07/08/20 21:30	1
Motor Oil (C20-C38)	ND		23	7.4	mg/Kg		06/29/20 07:41	07/08/20 21:30	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	72		49 - 115				06/29/20 07:41	07/08/20 21:30	1

Lab Sample ID: LCS 280-500438/2-A
Matrix: Solid
Analysis Batch: 501533

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500438

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	122	90.4		mg/Kg		74	53 - 115

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Lab Sample ID: LCS 280-500438/2-A
Matrix: Solid
Analysis Batch: 501533

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500438

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl (Surr)	84		49 - 115

Lab Sample ID: LCS 280-500438/3-A
Matrix: Solid
Analysis Batch: 501533

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500438

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Motor Oil (C20-C38)	310	250		mg/Kg		81	57 - 115

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl (Surr)	78		49 - 115

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-497866/1-A
Matrix: Water
Analysis Batch: 498301

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 497866

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared		Analyzed		Dil Fac
Arsenic	ND		5.0	0.33	ug/L		06/09/20 15:20	06/10/20 14:55		1	
Barium	ND		1.0	0.29	ug/L		06/09/20 15:20	06/10/20 14:55		1	
Cadmium	ND		1.0	0.27	ug/L		06/09/20 15:20	06/10/20 14:55		1	
Chromium	ND		2.0	0.50	ug/L		06/09/20 15:20	06/10/20 14:55		1	
Lead	ND		1.0	0.18	ug/L		06/09/20 15:20	06/10/20 14:55		1	
Selenium	0.777	J	5.0	0.37	ug/L		06/09/20 15:20	06/10/20 14:55		1	
Silver	ND		5.0	0.033	ug/L		06/09/20 15:20	06/10/20 14:55		1	

Lab Sample ID: LCS 280-497866/2-A
Matrix: Water
Analysis Batch: 498301

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 497866

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	40.0	38.6		ug/L		96	85 - 117
Barium	40.0	42.0		ug/L		105	85 - 118
Cadmium	40.0	38.9		ug/L		97	85 - 115
Chromium	40.0	40.8		ug/L		102	84 - 121
Lead	40.0	40.8		ug/L		102	85 - 118
Selenium	40.0	38.1		ug/L		95	77 - 122
Silver	40.0	37.1		ug/L		93	85 - 115

Lab Sample ID: MB 280-498036/1-A
Matrix: Solid
Analysis Batch: 498702

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498036

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared		Analyzed		Dil Fac
Silver	ND		100	7.8	ug/Kg		06/10/20 16:50	06/13/20 01:16		1	

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 280-498036/2-A
Matrix: Solid
Analysis Batch: 498702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498036
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Silver	20000	18400		ug/Kg		92	83 - 113

Lab Sample ID: MB 280-498069/1-A
Matrix: Solid
Analysis Batch: 499212

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498069

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.60	0.051	mg/Kg		06/11/20 08:30	06/17/20 17:08	1
Barium	ND	^	0.40	0.071	mg/Kg		06/11/20 08:30	06/17/20 17:08	1
Cadmium	ND		0.10	0.0094	mg/Kg		06/11/20 08:30	06/17/20 17:08	1
Chromium	ND		0.20	0.076	mg/Kg		06/11/20 08:30	06/17/20 17:08	1
Lead	ND		0.15	0.018	mg/Kg		06/11/20 08:30	06/17/20 17:08	1
Selenium	ND		0.50	0.13	mg/Kg		06/11/20 08:30	06/17/20 17:08	1

Lab Sample ID: LCS 280-498069/2-A
Matrix: Solid
Analysis Batch: 499212

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498069
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	20.0	17.1		mg/Kg		86	83 - 111
Barium	20.0	19.3	^	mg/Kg		96	86 - 120
Cadmium	20.0	17.6		mg/Kg		88	85 - 109
Chromium	20.0	17.4		mg/Kg		87	87 - 121
Lead	20.0	18.4		mg/Kg		92	81 - 125
Selenium	20.0	17.6		mg/Kg		88	78 - 108

Lab Sample ID: 280-137349-5 MS
Matrix: Solid
Analysis Batch: 499212

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-10-12
Prep Type: Total/NA
Prep Batch: 498069
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	0.97		19.8	19.6		mg/Kg	☼	94	83 - 111
Barium	55	^ F2 F1	19.8	106	^ F1	mg/Kg	☼	256	86 - 120
Cadmium	0.022	J	19.8	19.0		mg/Kg	☼	96	85 - 109
Chromium	4.0		19.8	25.8		mg/Kg	☼	110	87 - 121
Lead	3.7		19.8	24.0		mg/Kg	☼	102	81 - 125
Selenium	ND		19.8	18.1		mg/Kg	☼	91	78 - 108

Lab Sample ID: 280-137349-5 MSD
Matrix: Solid
Analysis Batch: 499212

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-10-12
Prep Type: Total/NA
Prep Batch: 498069
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	0.97		18.1	17.6		mg/Kg	☼	92	83 - 111	11	20
Barium	55	^ F2 F1	18.1	69.9	^ F2 F1	mg/Kg	☼	81	86 - 120	41	20
Cadmium	0.022	J	18.1	17.1		mg/Kg	☼	94	85 - 109	10	20
Chromium	4.0		18.1	21.6		mg/Kg	☼	97	87 - 121	18	20
Lead	3.7		18.1	21.0		mg/Kg	☼	95	81 - 125	13	20
Selenium	ND		18.1	16.5		mg/Kg	☼	91	78 - 108	9	20

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 280-499417/1-A
 Matrix: Water
 Analysis Batch: 499807

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 499417

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.027	ug/L		06/19/20 14:40	06/19/20 20:19	1

Lab Sample ID: LCS 280-499417/2-A
 Matrix: Water
 Analysis Batch: 499807

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 499417

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	5.00	4.59		ug/L		92	84 - 120

Lab Sample ID: LCSD 280-499417/3-A
 Matrix: Water
 Analysis Batch: 499807

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 499417

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	5.00	4.70		ug/L		94	84 - 120	2	15

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 280-498948/1-A
 Matrix: Solid
 Analysis Batch: 499327

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 498948

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		17	5.5	ug/Kg		06/18/20 13:50	06/18/20 15:09	1

Lab Sample ID: LCS 280-498948/2-A
 Matrix: Solid
 Analysis Batch: 499327

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 498948

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	333	352		ug/Kg		106	87 - 111

Lab Sample ID: LCSD 280-498948/3-A
 Matrix: Solid
 Analysis Batch: 499327

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 498948

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	333	349		ug/Kg		105	87 - 111	1	20

Method: Moisture - Percent Moisture

Lab Sample ID: 280-137349-1 DU
 Matrix: Solid
 Analysis Batch: 497797

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-DUP01
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Percent Moisture	5.2		6.0		%		14	20
Percent Solids	94.8		94.0		%		0.9	20

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QC Association Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

GC/MS VOA

Analysis Batch: 497699

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-1	CDOT I270 Env-05/06_2020-SB-16-DUP01	Total/NA	Solid	8260B	497700
280-137349-2	CDOT I270 Env-05/06_2020-SB-W-01-5-7	Total/NA	Solid	8260B	497700
280-137349-3	CDOT I270 Env-05/06_2020-SB-17-10-12	Total/NA	Solid	8260B	497700
280-137349-5	CDOT I270 Env-05/06_2020-SB-16-10-12	Total/NA	Solid	8260B	497700
280-137349-8	CDOT I270 Env-05/06_2020-SB-TB04	Total/NA	Solid	8260B	497700
MB 280-497700/2-A	Method Blank	Total/NA	Solid	8260B	497700
LCS 280-497700/1-A	Lab Control Sample	Total/NA	Solid	8260B	497700

Prep Batch: 497700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-1	CDOT I270 Env-05/06_2020-SB-16-DUP01	Total/NA	Solid	5035	
280-137349-2	CDOT I270 Env-05/06_2020-SB-W-01-5-7	Total/NA	Solid	5035	
280-137349-3	CDOT I270 Env-05/06_2020-SB-17-10-12	Total/NA	Solid	5035	
280-137349-5	CDOT I270 Env-05/06_2020-SB-16-10-12	Total/NA	Solid	5035	
280-137349-8	CDOT I270 Env-05/06_2020-SB-TB04	Total/NA	Solid	5035	
MB 280-497700/2-A	Method Blank	Total/NA	Solid	5035	
LCS 280-497700/1-A	Lab Control Sample	Total/NA	Solid	5035	

Analysis Batch: 498882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-4	CDOT I270 Env-05/06_2020-SB-17-GW	Total/NA	Water	8260B	
MB 280-498882/10	Method Blank	Total/NA	Water	8260B	
LCS 280-498882/5	Lab Control Sample	Total/NA	Water	8260B	
LCSD 280-498882/6	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 498883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-6	CDOT I270 Env-05/06_2020-SB-16-GW	Total/NA	Water	8260B	
280-137349-7	CDOT I270 Env-05/06_2020-SB-TB04	Total/NA	Water	8260B	
MB 280-498883/8	Method Blank	Total/NA	Water	8260B	
LCS 280-498883/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 280-498883/5	Lab Control Sample Dup	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 498333

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-4	CDOT I270 Env-05/06_2020-SB-17-GW	Total/NA	Water	3520C	
280-137349-6	CDOT I270 Env-05/06_2020-SB-16-GW	Total/NA	Water	3520C	
MB 280-498333/1-A	Method Blank	Total/NA	Water	3520C	
LCS 280-498333/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 280-498333/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Prep Batch: 499195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-1	CDOT I270 Env-05/06_2020-SB-16-DUP01	Total/NA	Solid	3550C	
280-137349-2	CDOT I270 Env-05/06_2020-SB-W-01-5-7	Total/NA	Solid	3550C	
280-137349-3	CDOT I270 Env-05/06_2020-SB-17-10-12	Total/NA	Solid	3550C	
280-137349-5	CDOT I270 Env-05/06_2020-SB-16-10-12	Total/NA	Solid	3550C	
MB 280-499195/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 280-499195/2-A	Lab Control Sample	Total/NA	Solid	3550C	

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QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

GC/MS Semi VOA

Analysis Batch: 499495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-4	CDOT I270 Env-05/06_2020-SB-17-GW	Total/NA	Water	8270D	498333
280-137349-6	CDOT I270 Env-05/06_2020-SB-16-GW	Total/NA	Water	8270D	498333
MB 280-498333/1-A	Method Blank	Total/NA	Water	8270D	498333
LCS 280-498333/2-A	Lab Control Sample	Total/NA	Water	8270D	498333
LCSD 280-498333/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	498333

Analysis Batch: 499913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-1	CDOT I270 Env-05/06_2020-SB-16-DUP01	Total/NA	Solid	8270D	499195
280-137349-2	CDOT I270 Env-05/06_2020-SB-W-01-5-7	Total/NA	Solid	8270D	499195
280-137349-3	CDOT I270 Env-05/06_2020-SB-17-10-12	Total/NA	Solid	8270D	499195
280-137349-5	CDOT I270 Env-05/06_2020-SB-16-10-12	Total/NA	Solid	8270D	499195
MB 280-499195/1-A	Method Blank	Total/NA	Solid	8270D	499195
LCS 280-499195/2-A	Lab Control Sample	Total/NA	Solid	8270D	499195

GC VOA

Analysis Batch: 499325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-4	CDOT I270 Env-05/06_2020-SB-17-GW	Total/NA	Water	8015C	
280-137349-6	CDOT I270 Env-05/06_2020-SB-16-GW	Total/NA	Water	8015C	
280-137349-7	CDOT I270 Env-05/06_2020-SB-TB04	Total/NA	Water	8015C	
MB 280-499325/22	Method Blank	Total/NA	Water	8015C	
LCS 280-499325/20	Lab Control Sample	Total/NA	Water	8015C	
LCSD 280-499325/21	Lab Control Sample Dup	Total/NA	Water	8015C	

Prep Batch: 499800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-1	CDOT I270 Env-05/06_2020-SB-16-DUP01	Total/NA	Solid	5035	
280-137349-2	CDOT I270 Env-05/06_2020-SB-W-01-5-7	Total/NA	Solid	5035	
280-137349-3	CDOT I270 Env-05/06_2020-SB-17-10-12	Total/NA	Solid	5035	
MB 280-499800/3-A	Method Blank	Total/NA	Solid	5035	
LCS 280-499800/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-499800/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 499884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-1	CDOT I270 Env-05/06_2020-SB-16-DUP01	Total/NA	Solid	8015C	499800
280-137349-2	CDOT I270 Env-05/06_2020-SB-W-01-5-7	Total/NA	Solid	8015C	499800
280-137349-3	CDOT I270 Env-05/06_2020-SB-17-10-12	Total/NA	Solid	8015C	499800
MB 280-499800/3-A	Method Blank	Total/NA	Solid	8015C	499800
LCS 280-499800/1-A	Lab Control Sample	Total/NA	Solid	8015C	499800
LCSD 280-499800/2-A	Lab Control Sample Dup	Total/NA	Solid	8015C	499800

Prep Batch: 500003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-5	CDOT I270 Env-05/06_2020-SB-16-10-12	Total/NA	Solid	5035	
280-137349-8	CDOT I270 Env-05/06_2020-SB-TB04	Total/NA	Solid	5035	
MB 280-500003/3-A	Method Blank	Total/NA	Solid	5035	
LCS 280-500003/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-500003/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

GC VOA

Analysis Batch: 500020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-5	CDOT I270 Env-05/06_2020-SB-16-10-12	Total/NA	Solid	8015C	500003
MB 280-500003/3-A	Method Blank	Total/NA	Solid	8015C	500003
LCS 280-500003/1-A	Lab Control Sample	Total/NA	Solid	8015C	500003
LCSD 280-500003/2-A	Lab Control Sample Dup	Total/NA	Solid	8015C	500003

Analysis Batch: 500486

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-8	CDOT I270 Env-05/06_2020-SB-TB04	Total/NA	Solid	8015C	500003

GC Semi VOA

Prep Batch: 498368

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-4	CDOT I270 Env-05/06_2020-SB-17-GW	Total/NA	Water	3510C	
280-137349-6	CDOT I270 Env-05/06_2020-SB-16-GW	Total/NA	Water	3510C	
MB 280-498368/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-498368/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCS 280-498368/4-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 280-498368/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
LCSD 280-498368/5-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 498639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-4	CDOT I270 Env-05/06_2020-SB-17-GW	Total/NA	Water	8015C	498368
280-137349-6	CDOT I270 Env-05/06_2020-SB-16-GW	Total/NA	Water	8015C	498368
MB 280-498368/1-A	Method Blank	Total/NA	Water	8015C	498368
LCS 280-498368/2-A	Lab Control Sample	Total/NA	Water	8015C	498368
LCS 280-498368/4-A	Lab Control Sample	Total/NA	Water	8015C	498368
LCSD 280-498368/3-A	Lab Control Sample Dup	Total/NA	Water	8015C	498368
LCSD 280-498368/5-A	Lab Control Sample Dup	Total/NA	Water	8015C	498368

Prep Batch: 499194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-1	CDOT I270 Env-05/06_2020-SB-16-DUP01	Total/NA	Solid	3546	
280-137349-2	CDOT I270 Env-05/06_2020-SB-W-01-5-7	Total/NA	Solid	3546	
280-137349-3	CDOT I270 Env-05/06_2020-SB-17-10-12	Total/NA	Solid	3546	
280-137349-5	CDOT I270 Env-05/06_2020-SB-16-10-12	Total/NA	Solid	3546	
MB 280-499194/1-A	Method Blank	Total/NA	Solid	3546	
LCS 280-499194/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCS 280-499194/3-A	Lab Control Sample	Total/NA	Solid	3546	

Analysis Batch: 499482

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-1	CDOT I270 Env-05/06_2020-SB-16-DUP01	Total/NA	Solid	8015C	499194
280-137349-2	CDOT I270 Env-05/06_2020-SB-W-01-5-7	Total/NA	Solid	8015C	499194
280-137349-3	CDOT I270 Env-05/06_2020-SB-17-10-12	Total/NA	Solid	8015C	499194
280-137349-5	CDOT I270 Env-05/06_2020-SB-16-10-12	Total/NA	Solid	8015C	499194
MB 280-499194/1-A	Method Blank	Total/NA	Solid	8015C	499194
LCS 280-499194/2-A	Lab Control Sample	Total/NA	Solid	8015C	499194
LCS 280-499194/3-A	Lab Control Sample	Total/NA	Solid	8015C	499194

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

GC Semi VOA

Prep Batch: 500438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-1 - RE	CDOT I270 Env-05/06_2020-SB-16-DUP01	Total/NA	Solid	3546	
280-137349-3 - RE	CDOT I270 Env-05/06_2020-SB-17-10-12	Total/NA	Solid	3546	
280-137349-5 - RE	CDOT I270 Env-05/06_2020-SB-16-10-12	Total/NA	Solid	3546	
MB 280-500438/1-A	Method Blank	Total/NA	Solid	3546	
LCS 280-500438/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCS 280-500438/3-A	Lab Control Sample	Total/NA	Solid	3546	

Analysis Batch: 501533

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-1 - RE	CDOT I270 Env-05/06_2020-SB-16-DUP01	Total/NA	Solid	8015C	500438
280-137349-3 - RE	CDOT I270 Env-05/06_2020-SB-17-10-12	Total/NA	Solid	8015C	500438
280-137349-5 - RE	CDOT I270 Env-05/06_2020-SB-16-10-12	Total/NA	Solid	8015C	500438
MB 280-500438/1-A	Method Blank	Total/NA	Solid	8015C	500438
LCS 280-500438/2-A	Lab Control Sample	Total/NA	Solid	8015C	500438
LCS 280-500438/3-A	Lab Control Sample	Total/NA	Solid	8015C	500438

Metals

Prep Batch: 497866

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-4	CDOT I270 Env-05/06_2020-SB-17-GW	Total/NA	Water	3020A	
280-137349-6	CDOT I270 Env-05/06_2020-SB-16-GW	Total/NA	Water	3020A	
MB 280-497866/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-497866/2-A	Lab Control Sample	Total/NA	Water	3020A	

Prep Batch: 498036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-1	CDOT I270 Env-05/06_2020-SB-16-DUP01	Total/NA	Solid	3050B-Sb	
280-137349-2	CDOT I270 Env-05/06_2020-SB-W-01-5-7	Total/NA	Solid	3050B-Sb	
280-137349-3	CDOT I270 Env-05/06_2020-SB-17-10-12	Total/NA	Solid	3050B-Sb	
280-137349-5	CDOT I270 Env-05/06_2020-SB-16-10-12	Total/NA	Solid	3050B-Sb	
MB 280-498036/1-A	Method Blank	Total/NA	Solid	3050B-Sb	
LCS 280-498036/2-A	Lab Control Sample	Total/NA	Solid	3050B-Sb	

Prep Batch: 498069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-1	CDOT I270 Env-05/06_2020-SB-16-DUP01	Total/NA	Solid	3050B	
280-137349-2	CDOT I270 Env-05/06_2020-SB-W-01-5-7	Total/NA	Solid	3050B	
280-137349-3	CDOT I270 Env-05/06_2020-SB-17-10-12	Total/NA	Solid	3050B	
280-137349-5	CDOT I270 Env-05/06_2020-SB-16-10-12	Total/NA	Solid	3050B	
MB 280-498069/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-498069/2-A	Lab Control Sample	Total/NA	Solid	3050B	
280-137349-5 MS	CDOT I270 Env-05/06_2020-SB-16-10-12	Total/NA	Solid	3050B	
280-137349-5 MSD	CDOT I270 Env-05/06_2020-SB-16-10-12	Total/NA	Solid	3050B	

Analysis Batch: 498301

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-4	CDOT I270 Env-05/06_2020-SB-17-GW	Total/NA	Water	6020A	497866
280-137349-6	CDOT I270 Env-05/06_2020-SB-16-GW	Total/NA	Water	6020A	497866
MB 280-497866/1-A	Method Blank	Total/NA	Water	6020A	497866
LCS 280-497866/2-A	Lab Control Sample	Total/NA	Water	6020A	497866

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Metals

Analysis Batch: 498702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-1	CDOT I270 Env-05/06_2020-SB-16-DUP01	Total/NA	Solid	6020A	498036
280-137349-2	CDOT I270 Env-05/06_2020-SB-W-01-5-7	Total/NA	Solid	6020A	498036
280-137349-3	CDOT I270 Env-05/06_2020-SB-17-10-12	Total/NA	Solid	6020A	498036
280-137349-5	CDOT I270 Env-05/06_2020-SB-16-10-12	Total/NA	Solid	6020A	498036
MB 280-498036/1-A	Method Blank	Total/NA	Solid	6020A	498036
LCS 280-498036/2-A	Lab Control Sample	Total/NA	Solid	6020A	498036

Prep Batch: 498948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-1	CDOT I270 Env-05/06_2020-SB-16-DUP01	Total/NA	Solid	7471B	
280-137349-2	CDOT I270 Env-05/06_2020-SB-W-01-5-7	Total/NA	Solid	7471B	
280-137349-3	CDOT I270 Env-05/06_2020-SB-17-10-12	Total/NA	Solid	7471B	
280-137349-5	CDOT I270 Env-05/06_2020-SB-16-10-12	Total/NA	Solid	7471B	
MB 280-498948/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 280-498948/2-A	Lab Control Sample	Total/NA	Solid	7471B	
LCSD 280-498948/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	

Analysis Batch: 499212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-1	CDOT I270 Env-05/06_2020-SB-16-DUP01	Total/NA	Solid	6020A	498069
280-137349-2	CDOT I270 Env-05/06_2020-SB-W-01-5-7	Total/NA	Solid	6020A	498069
280-137349-3	CDOT I270 Env-05/06_2020-SB-17-10-12	Total/NA	Solid	6020A	498069
280-137349-5	CDOT I270 Env-05/06_2020-SB-16-10-12	Total/NA	Solid	6020A	498069
MB 280-498069/1-A	Method Blank	Total/NA	Solid	6020A	498069
LCS 280-498069/2-A	Lab Control Sample	Total/NA	Solid	6020A	498069
280-137349-5 MS	CDOT I270 Env-05/06_2020-SB-16-10-12	Total/NA	Solid	6020A	498069
280-137349-5 MSD	CDOT I270 Env-05/06_2020-SB-16-10-12	Total/NA	Solid	6020A	498069

Analysis Batch: 499327

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-498948/1-A	Method Blank	Total/NA	Solid	7471B	498948
LCS 280-498948/2-A	Lab Control Sample	Total/NA	Solid	7471B	498948
LCSD 280-498948/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	498948

Analysis Batch: 499390

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-1	CDOT I270 Env-05/06_2020-SB-16-DUP01	Total/NA	Solid	7471B	498948
280-137349-2	CDOT I270 Env-05/06_2020-SB-W-01-5-7	Total/NA	Solid	7471B	498948
280-137349-3	CDOT I270 Env-05/06_2020-SB-17-10-12	Total/NA	Solid	7471B	498948
280-137349-5	CDOT I270 Env-05/06_2020-SB-16-10-12	Total/NA	Solid	7471B	498948

Prep Batch: 499417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-4	CDOT I270 Env-05/06_2020-SB-17-GW	Total/NA	Water	7470A	
280-137349-6	CDOT I270 Env-05/06_2020-SB-16-GW	Total/NA	Water	7470A	
MB 280-499417/1-A	Method Blank	Total/NA	Water	7470A	
LCS 280-499417/2-A	Lab Control Sample	Total/NA	Water	7470A	
LCSD 280-499417/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Metals

Analysis Batch: 499807

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-4	CDOT I270 Env-05/06_2020-SB-17-GW	Total/NA	Water	7470A	499417
280-137349-6	CDOT I270 Env-05/06_2020-SB-16-GW	Total/NA	Water	7470A	499417
MB 280-499417/1-A	Method Blank	Total/NA	Water	7470A	499417
LCS 280-499417/2-A	Lab Control Sample	Total/NA	Water	7470A	499417
LCSD 280-499417/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	499417

General Chemistry

Analysis Batch: 497797

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137349-1	CDOT I270 Env-05/06_2020-SB-16-DUP01	Total/NA	Solid	Moisture	
280-137349-2	CDOT I270 Env-05/06_2020-SB-W-01-5-7	Total/NA	Solid	Moisture	
280-137349-3	CDOT I270 Env-05/06_2020-SB-17-10-12	Total/NA	Solid	Moisture	
280-137349-5	CDOT I270 Env-05/06_2020-SB-16-10-12	Total/NA	Solid	Moisture	
280-137349-1 DU	CDOT I270 Env-05/06_2020-SB-16-DUP01	Total/NA	Solid	Moisture	

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

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Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-DUP01

Lab Sample ID: 280-137349-1

Date Collected: 06/05/20 12:30

Matrix: Solid

Date Received: 06/05/20 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			497797	06/08/20 11:14	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-DUP01

Lab Sample ID: 280-137349-1

Date Collected: 06/05/20 12:30

Matrix: Solid

Date Received: 06/05/20 14:25

Percent Solids: 94.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.557 g	5 mL	497700	06/05/20 12:30	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497699	06/07/20 06:54	GPM	TAL DEN
Total/NA	Prep	3550C			31.3 g	1 mL	499195	06/18/20 09:43	JT	TAL DEN
Total/NA	Analysis	8270D		1			499913	06/24/20 19:37	RDP	TAL DEN
Total/NA	Prep	5035			5.357 g	5 mL	499800	06/05/20 12:30	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	499884	06/24/20 00:03	GO	TAL DEN
Total/NA	Prep	3546			15.8 g	1 mL	499194	06/18/20 06:56	JT	TAL DEN
Total/NA	Analysis	8015C		1			499482	06/21/20 07:35	MAM	TAL DEN
Total/NA	Prep	3546	RE		16.3 g	1 mL	500438	06/29/20 07:41	JT	TAL DEN
Total/NA	Analysis	8015C	RE	1			501533	07/08/20 22:36	MAM	TAL DEN
Total/NA	Prep	3050B-Sb			1.075 g	100 mL	498036	06/10/20 16:50	EC	TAL DEN
Total/NA	Analysis	6020A		1			498702	06/13/20 02:22	LMT	TAL DEN
Total/NA	Prep	3050B			1.073 g	100 mL	498069	06/11/20 08:30	NK	TAL DEN
Total/NA	Analysis	6020A		1			499212	06/17/20 17:16	LMT	TAL DEN
Total/NA	Prep	7471B			.57 g	50 mL	498948	06/18/20 13:50	AL	TAL DEN
Total/NA	Analysis	7471B		1			499390	06/18/20 18:50	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-W-01-5-7

Lab Sample ID: 280-137349-2

Date Collected: 06/05/20 09:00

Matrix: Solid

Date Received: 06/05/20 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			497797	06/08/20 11:14	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-W-01-5-7

Lab Sample ID: 280-137349-2

Date Collected: 06/05/20 09:00

Matrix: Solid

Date Received: 06/05/20 14:25

Percent Solids: 76.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2.932 g	5 mL	497700	06/05/20 09:00	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497699	06/07/20 07:16	GPM	TAL DEN
Total/NA	Prep	3550C			30.4 g	1 mL	499195	06/18/20 09:43	JT	TAL DEN
Total/NA	Analysis	8270D		1	200 uL	1.0 mL	499913	06/24/20 20:04	RDP	TAL DEN
Total/NA	Prep	5035			2.106 g	5 mL	499800	06/05/20 09:00	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	499884	06/24/20 00:23	GO	TAL DEN
Total/NA	Prep	3546			15.7 g	1 mL	499194	06/18/20 06:56	JT	TAL DEN
Total/NA	Analysis	8015C		1			499482	06/21/20 07:58	MAM	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-W-01-5-7

Lab Sample ID: 280-137349-2

Date Collected: 06/05/20 09:00

Matrix: Solid

Date Received: 06/05/20 14:25

Percent Solids: 76.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B-Sb			1.485 g	100 mL	498036	06/10/20 16:50	EC	TAL DEN
Total/NA	Analysis	6020A		1			498702	06/13/20 02:26	LMT	TAL DEN
Total/NA	Prep	3050B			1.133 g	100 mL	498069	06/11/20 08:30	NK	TAL DEN
Total/NA	Analysis	6020A		1			499212	06/17/20 17:19	LMT	TAL DEN
Total/NA	Prep	7471B			.60 g	50 mL	498948	06/18/20 13:50	AL	TAL DEN
Total/NA	Analysis	7471B		1			499390	06/18/20 18:57	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-17-10-12

Lab Sample ID: 280-137349-3

Date Collected: 06/05/20 11:20

Matrix: Solid

Date Received: 06/05/20 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			497797	06/08/20 11:14	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-17-10-12

Lab Sample ID: 280-137349-3

Date Collected: 06/05/20 11:20

Matrix: Solid

Date Received: 06/05/20 14:25

Percent Solids: 92.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.788 g	5 mL	497700	06/05/20 11:20	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497699	06/07/20 07:39	GPM	TAL DEN
Total/NA	Prep	3550C			31.0 g	1 mL	499195	06/18/20 09:43	JT	TAL DEN
Total/NA	Analysis	8270D		1			499913	06/24/20 20:32	RDP	TAL DEN
Total/NA	Prep	5035			4.79 g	5 mL	499800	06/05/20 11:20	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	499884	06/24/20 00:43	GO	TAL DEN
Total/NA	Prep	3546			15.2 g	1 mL	499194	06/18/20 06:56	JT	TAL DEN
Total/NA	Analysis	8015C		1			499482	06/21/20 08:20	MAM	TAL DEN
Total/NA	Prep	3546	RE		16.8 g	1 mL	500438	06/29/20 07:41	JT	TAL DEN
Total/NA	Analysis	8015C	RE	1			501533	07/08/20 23:20	MAM	TAL DEN
Total/NA	Prep	3050B-Sb			1.260 g	100 mL	498036	06/10/20 16:50	EC	TAL DEN
Total/NA	Analysis	6020A		1			498702	06/13/20 02:30	LMT	TAL DEN
Total/NA	Prep	3050B			1.117 g	100 mL	498069	06/11/20 08:30	NK	TAL DEN
Total/NA	Analysis	6020A		1			499212	06/17/20 17:23	LMT	TAL DEN
Total/NA	Prep	7471B			.53 g	50 mL	498948	06/18/20 13:50	AL	TAL DEN
Total/NA	Analysis	7471B		1			499390	06/18/20 19:00	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-17-GW

Lab Sample ID: 280-137349-4

Date Collected: 06/05/20 11:35

Matrix: Water

Date Received: 06/05/20 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	498882	06/16/20 13:36	AJP	TAL DEN
Total/NA	Prep	3520C			1013.8 mL	1 mL	498333	06/11/20 14:55	FGL	TAL DEN
Total/NA	Analysis	8270D		1			499495	06/21/20 01:39	AJE	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	499325	06/19/20 06:33	CAS	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-17-GW

Lab Sample ID: 280-137349-4

Date Collected: 06/05/20 11:35

Matrix: Water

Date Received: 06/05/20 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1012.9 mL	1 mL	498368	06/11/20 14:49	AC	TAL DEN
Total/NA	Analysis	8015C		1			498639	06/15/20 22:40	MAM	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	497866	06/09/20 15:20	EC	TAL DEN
Total/NA	Analysis	6020A		1			498301	06/10/20 18:21	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	499417	06/19/20 14:40	AL	TAL DEN
Total/NA	Analysis	7470A		1			499807	06/19/20 20:50	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-10-12

Lab Sample ID: 280-137349-5

Date Collected: 06/05/20 12:30

Matrix: Solid

Date Received: 06/05/20 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			497797	06/08/20 11:14	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-10-12

Lab Sample ID: 280-137349-5

Date Collected: 06/05/20 12:30

Matrix: Solid

Date Received: 06/05/20 14:25

Percent Solids: 91.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.865 g	5 mL	497700	06/05/20 12:30	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497699	06/07/20 08:02	GPM	TAL DEN
Total/NA	Prep	3550C			30.1 g	1 mL	499195	06/18/20 09:43	JT	TAL DEN
Total/NA	Analysis	8270D		1			499913	06/24/20 21:00	RDP	TAL DEN
Total/NA	Prep	5035			4.814 g	5 mL	500003	06/05/20 12:30	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	500020	06/25/20 06:10	CAS	TAL DEN
Total/NA	Prep	3546			16.7 g	1 mL	499194	06/18/20 06:56	JT	TAL DEN
Total/NA	Analysis	8015C		1			499482	06/21/20 08:43	MAM	TAL DEN
Total/NA	Prep	3546	RE		15.2 g	1 mL	500438	06/29/20 07:41	JT	TAL DEN
Total/NA	Analysis	8015C	RE	1			501533	07/08/20 23:42	MAM	TAL DEN
Total/NA	Prep	3050B-Sb			1.187 g	100 mL	498036	06/10/20 16:50	EC	TAL DEN
Total/NA	Analysis	6020A		1			498702	06/13/20 02:34	LMT	TAL DEN
Total/NA	Prep	3050B			1.249 g	100 mL	498069	06/11/20 08:30	NK	TAL DEN
Total/NA	Analysis	6020A		1			499212	06/17/20 17:38	LMT	TAL DEN
Total/NA	Prep	7471B			.58 g	50 mL	498948	06/18/20 13:50	AL	TAL DEN
Total/NA	Analysis	7471B		1			499390	06/18/20 19:02	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-GW

Lab Sample ID: 280-137349-6

Date Collected: 06/05/20 13:10

Matrix: Water

Date Received: 06/05/20 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	498883	06/16/20 16:14	AJP	TAL DEN
Total/NA	Prep	3520C			1008 mL	1 mL	498333	06/11/20 14:55	FGL	TAL DEN
Total/NA	Analysis	8270D		1			499495	06/21/20 02:06	AJE	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	499325	06/19/20 06:57	CAS	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-16-GW

Lab Sample ID: 280-137349-6

Date Collected: 06/05/20 13:10

Matrix: Water

Date Received: 06/05/20 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1000.2 mL	1 mL	498368	06/11/20 14:49	AC	TAL DEN
Total/NA	Analysis	8015C		1			498639	06/15/20 23:24	MAM	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	497866	06/09/20 15:20	EC	TAL DEN
Total/NA	Analysis	6020A		1			498301	06/10/20 18:25	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	499417	06/19/20 14:40	AL	TAL DEN
Total/NA	Analysis	7470A		1			499807	06/19/20 20:52	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB04

Lab Sample ID: 280-137349-7

Date Collected: 06/05/20 08:00

Matrix: Water

Date Received: 06/05/20 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	498883	06/16/20 16:35	AJP	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	499325	06/19/20 05:47	CAS	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB04

Lab Sample ID: 280-137349-8

Date Collected: 06/05/20 08:00

Matrix: Solid

Date Received: 06/05/20 14:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	497700	06/05/20 08:00	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	497699	06/07/20 00:50	GPM	TAL DEN
Total/NA	Prep	5035			5 g	5 mL	500003	06/05/20 08:00	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	500486	06/29/20 11:54	CAS	TAL DEN

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137349-1

Laboratory: Eurofins TestAmerica, Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21
A2LA	ISO/IEC 17025	2907.01	10-31-21
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	02-08-21
Arizona	State	AZ0713	12-20-20
Arkansas DEQ	State	19-047-0	06-01-21
California	State	2513	01-08-21
Connecticut	State	PH-0686	09-30-20
Florida	NELAP	E87667-57	07-01-21
Georgia	State	4025-011	01-09-21
Illinois	NELAP	2000172019-1	04-30-21
Iowa	State	IA#370	12-01-20
Kansas	NELAP	E-10166	04-30-21
Louisiana	NELAP	30785	06-30-14 *
Louisiana	NELAP	30785	06-30-21
Maine	State	2019011 (231)	03-03-21
Minnesota	NELAP	1788752	12-31-20
Nevada	State	CO000262020-1	07-31-20
New Hampshire	NELAP	205319	04-29-21
New Jersey	NELAP	190002	06-30-21
New York	NELAP	59923	04-01-21
North Carolina (WW/SW)	State	358	12-31-20
North Dakota	State	R-034	01-08-21
Oklahoma	State	2018-006	08-31-20
Oregon	NELAP	4025-011	01-08-21
Pennsylvania	NELAP	013	08-01-20
South Carolina	State	72002001	01-08-21
Texas	NELAP	T104704183-19-17	09-30-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-18-00099	03-26-21
Utah	NELAP	CO000262019-11	07-31-20
Virginia	NELAP	10490	06-14-21
Washington	State	C583-19	08-05-20
West Virginia DEP	State	354	11-30-20
Wisconsin	State	999615430	08-31-20
Wyoming (UST)	A2LA	2907.01	10-31-21

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Client Information Client Contact: Mr. Jon Russ Company: Jacobs Engineering Group, Inc. Address: 707 17th Street Suite 2400 City: Denver State, Zip: CO, 80202 Phone: 720 286 3385 Email: jon.russ@jacobs.com Project Name: CDOT I-270 Interchange Improvements Site:		Lab PMT: Bandy, Darlene F E-Mail: darlene.bandy@testamericainc.com Phone: 720 286 3385 Project #: 28020733 SSOW#:		Carrier Tracking No(s): COC No: 280-99270-29871.4 Page: Job #:																					
Due Date Requested: TAT Requested (days): PO #: Purchase Order not required VO #:		Analysis Requested																							
Sample Identification CDOT 1270 Env-05/06_2020-SB-16-DUP 01 EDOT 1270 Env-05/06_2020-SB-MS EDOT 1270 Env-05/06_2020-SB-MSD		Sample Date 1230	Sample Time 6/5/20 0615	Sample Type (C=comp, G=grab) C/G	Matrix (Water, Soil, Sludge, Other) Solid	Preservation Code (A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z) X	Field Filtered Sample (Yes or No) X	Perform MS/MSD (Yes or No) X	J&FF X	8260B - VOCs - Soils X	8015C - GRO - TPH - GRO - Soils X	8015C - GRO - TPH - GRO - Waters X	8270D - SVOCs Waters X	8015C - DRO - TPH - DRO/RO X	6020A, 7471B RCRA Metals, Moisture X	8082A - PCBs - Soils X	8260B - VOCs - Waters X	8015C - GRO - TPH - GRO - Waters X	8270D - SVOCs Waters X	8015C - DRO - TPH - DRO/RO X	6020A, 7470A RCRA Metals X	8081B - Pesticides - Waters X	8082A - PCBs - Waters X	Total Number of Containers 2	Barcode: 280-137349 Chain of Custody Note:
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input checked="" type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements:		Empty Kit Relinquished by: Relinquished by: [Signature] Date/Time: 6/5/20 1425 Relinquished by: [Signature] Date/Time: Relinquished by: Date/Time:																					
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.: 1561236 R 8 to 6 6/5/20		Cooler Temperature(s) °C and Other Remarks:																					



Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 280-137349-1

Login Number: 137349

List Source: Eurofins TestAmerica, Denver

List Number: 1

Creator: Bentley, Beau J

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	Received same day of collection; chilling process has begun.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	False	Refer to Job Narrative for details.
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	



Consultant Work Product - Not CDOT Approved - Jacobs Engineering

ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-137759-1

Client Project/Site: CDOT I-270 Interchange Improvements

For:

Jacobs Engineering Group, Inc.
707 17th Street
Suite 2400
Denver, Colorado 80202

Attn: Mr. Jon Russ



Authorized for release by:
7/31/2020 11:42:16 PM

Darlene Bandy, Project Manager I
(303)736-0188
Darlene.Bandy@Eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*1	LCS/LCSD RPD exceeds control limits.
B	Compound was found in the blank and sample.
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate recovery exceeds control limits

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present

Eurofins TestAmerica, Denver

Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Job ID: 280-137759-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: Jacobs Engineering Group, Inc.

Project: CDOT I-270 Interchange Improvements

Report Number: 280-137759-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 6/17/2020 2:05 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 14.1° C and 16.0° C.

Receipt Exceptions

The following samples were received at the laboratory outside the required temperature criteria: CDOT I270 Env-05/06_2020-SB-PV-06-5-7 (280-137759-1), CDOT I270 Env-05/06_2020-SB-PV-06-20-22 (280-137759-2), CDOT I270 Env-05/06_2020-SB-PV-09-6-8 (280-137759-3), CDOT I270 Env-05/06_2020-SB-PV-09-GW (280-137759-4) and CDOT I270 Env-05/06_2020-SB-04-15-17 (280-137759-5). These samples were mixed with samples that were sampled the day of cooler drop off and had only a small bag of ice in the cooler.

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): CDOT I270 Env-05/06_2020-SB-10-10-12 (280-137759-7). The container labels for one of the DI water tared cores is labeled "SB-", while the COC lists "SB-10-10-12"

The following sample is biphasic: CDOT I270 Env-05/06_2020-SB-PV-09-GW (280-137759-4). The 5 1L ambers and 500mL (nitric) and all have about 10% of a fine silt that settles on the bottom.

Methods 8081B, 8082A: The following sample was collected in an improper container: CDOT I270 Env-05/06_2020-SB-PV-09-GW (280-137759-4). 8081B and 8082A are for the LVI prep; however, 1 x 1L amber bottle was submitted instead of 4 x 250mL bottles. The client was contacted regarding this issue, and the laboratory was instructed to proceed with the LVI analysis, taking 250mL out of the 1L amber. Client understands that the bottle will not be able to be rinsed with solvent per the SOP.

VOLATILE ORGANIC COMPOUNDS (GC-MS) - Soil

Samples CDOT I270 Env-05/06_2020-SB-PV-06-5-7 (280-137759-1), CDOT I270 Env-05/06_2020-SB-PV-06-20-22 (280-137759-2), CDOT I270 Env-05/06_2020-SB-04-15-17 (280-137759-5), CDOT I270 Env-05/06_2020-SB-04-25-27 (280-137759-6), CDOT I270 Env-05/06_2020-SB-10-10-12 (280-137759-7), CDOT I270 Env-05/06_2020-SB-10-25-27 (280-137759-8), CDOT I270 Env-05/06_2020-SB-19-10-12 (280-137759-9) and CDOT I270 Env-05/06_2020-SB-TB-05 (280-137759-11) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 06/15/2020, 06/16/2020 and 06/17/2020 and analyzed on 06/21/2020 and 06/28/2020.

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Job ID: 280-137759-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

The following analyte recovered outside control limits for the LCS associated with preparation batch 280-499554 and analytical batch 280-499557: Acetone @ 61% LCL is 65% MELCL 52%. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

CDOT I270 Env-05/06_2020-SB-PV-06-5-7 (280-137759-1), CDOT I270 Env-05/06_2020-SB-PV-06-20-22 (280-137759-2), CDOT I270 Env-05/06_2020-SB-04-15-17 (280-137759-5), CDOT I270 Env-05/06_2020-SB-04-25-27 (280-137759-6), CDOT I270 Env-05/06_2020-SB-10-25-27 (280-137759-8), CDOT I270 Env-05/06_2020-SB-19-10-12 (280-137759-9), CDOT I270 Env-05/06_2020-SB-TB-05 (280-137759-11) and (LCS 280-499554/1-A)

The following analyte recovered outside control limits for the LCS associated with preparation batch 280-500369 and 280-500369 and analytical batch 280-500416: 1,1-Dichloroethene @ 78% LCL is 79% MELCL is 70%. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.
CDOT I270 Env-05/06_2020-SB-10-10-12 (280-137759-7) and (LCS 280-500369/1-A)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GC-MS) - Water

Samples CDOT I270 Env-05/06_2020-SB-PV-09-GW (280-137759-4) and CDOT I270 Env-05/06_2020-SB-TB-05 (280-137759-10) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 06/24/2020.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 280-499914. An LCS/LCSD was analyzed instead.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GC/MS) - Soil

Samples CDOT I270 Env-05/06_2020-SB-PV-06-5-7 (280-137759-1), CDOT I270 Env-05/06_2020-SB-PV-06-20-22 (280-137759-2), CDOT I270 Env-05/06_2020-SB-04-15-17 (280-137759-5), CDOT I270 Env-05/06_2020-SB-04-25-27 (280-137759-6), CDOT I270 Env-05/06_2020-SB-10-10-12 (280-137759-7), CDOT I270 Env-05/06_2020-SB-10-25-27 (280-137759-8) and CDOT I270 Env-05/06_2020-SB-19-10-12 (280-137759-9) were analyzed for semivolatile organic compounds (GC/MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 06/18/2020 and analyzed on 06/24/2020.

4-Nitrophenol and Benzoic acid failed the recovery criteria low for the MS of sample CDOT I270 Env-05/06_2020-SB-19-10-12MS (280-137759-9) in batch 280-499913. Refer to the QC report for details.

The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount. Refer to the QC report for details.

The continuing calibration verification (CCV) associated with batch 280-499913 recovered above the upper control limit for Famphur (+44.2%D, limit +20%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-PV-06-5-7 (280-137759-1), CDOT I270 Env-05/06_2020-SB-PV-06-20-22 (280-137759-2), CDOT I270 Env-05/06_2020-SB-04-15-17 (280-137759-5), CDOT I270 Env-05/06_2020-SB-04-25-27 (280-137759-6), CDOT I270 Env-05/06_2020-SB-10-10-12 (280-137759-7), CDOT I270 Env-05/06_2020-SB-10-25-27 (280-137759-8), CDOT I270 Env-05/06_2020-SB-19-10-12 (280-137759-9) and (CCV 280-499913/5).

The continuing calibration verification (CCV) associated with batch 280-499913 recovered outside acceptance criteria, low biased, for 4-Nitrophenol (-22.6%D, limit -20%D). A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Associated samples: CDOT I270 Env-05/06_2020-SB-PV-06-5-7 (280-137759-1), CDOT I270 Env-05/06_2020-SB-PV-06-20-22 (280-137759-2), CDOT I270 Env-05/06_2020-SB-04-15-17 (280-137759-5), CDOT I270 Env-05/06_2020-SB-04-25-27 (280-137759-6), CDOT I270 Env-05/06_2020-SB-10-10-12 (280-137759-7), CDOT I270 Env-05/06_2020-SB-10-25-27 (280-137759-8), CDOT I270 Env-05/06_2020-SB-19-10-12 (280-137759-9), (CCV 280-499913/3) and (CCVL 280-499913/21)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Job ID: 280-137759-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS) - Water

Sample CDOT I270 Env-05/06_2020-SB-PV-09-GW (280-137759-4) was analyzed for semivolatile organic compounds (GC-MS) in accordance with SW-846 8270D. The samples were prepared on 06/18/2020 and analyzed on 07/03/2020.

The laboratory control sample duplicate (LCSD) for preparation batch 280-499228 and analytical batch 280-501084 recovered outside control limits for the following analytes: 2-Nitroaniline, Caprolactam, Bis(2-ethylhexyl) phthalate, 4-Nitroaniline, 1,2-Diphenylhydrazine(as Azobenzene) and Azobenzene. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 280-499228 and analytical batch 280-501084 recovered outside control limits for the following analytes: 1,3-Dichlorobenzene(30% limit 31).

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-499243.

CDOT I270 Env-05/06_2020-SB-PV-09-GW (280-137759-4)

The continuing calibration verification (CCV) associated with batch 280-501084 recovered above the upper control limit for 2-Nitroaniline(21.8% limit 20%), Bis(2-ethylhexyl) phthalate(38% limit 20%), Caprolactam(33.8% limit 20%) and Hexadecane(21.9% limit 20%). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data has been reported. The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-PV-09-GW (280-137759-4) and (CCV 280-501084/3).

The continuing calibration verification (CCV) associated with batch 280-501084 recovered above the upper control limit for Benzaldehyde(30.6% limit 20%). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-PV-09-GW (280-137759-4) and (CCV 280-501084/4).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GASOLINE RANGE ORGANICS (GRO) - Soil

Samples CDOT I270 Env-05/06_2020-SB-PV-06-5-7 (280-137759-1), CDOT I270 Env-05/06_2020-SB-PV-06-20-22 (280-137759-2), CDOT I270 Env-05/06_2020-SB-04-15-17 (280-137759-5), CDOT I270 Env-05/06_2020-SB-04-25-27 (280-137759-6), CDOT I270 Env-05/06_2020-SB-10-10-12 (280-137759-7), CDOT I270 Env-05/06_2020-SB-10-25-27 (280-137759-8), CDOT I270 Env-05/06_2020-SB-19-10-12 (280-137759-9) and CDOT I270 Env-05/06_2020-SB-TB-05 (280-137759-11) were analyzed for Gasoline Range Organics (GRO) in accordance with EPA SW-846 Method 8015C - GRO. The samples were prepared on 06/15/2020, 06/16/2020 and 06/17/2020 and analyzed on 06/27/2020 and 06/29/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GASOLINE RANGE ORGANICS (GRO) - Water

Samples CDOT I270 Env-05/06_2020-SB-PV-09-GW (280-137759-4) and CDOT I270 Env-05/06_2020-SB-TB-05 (280-137759-10) were analyzed for Gasoline Range Organics (GRO) in accordance with EPA SW-846 Method 8015C - GRO. The samples were analyzed on 06/24/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DIESEL RANGE ORGANICS - Soil

Samples CDOT I270 Env-05/06_2020-SB-PV-06-5-7 (280-137759-1), CDOT I270 Env-05/06_2020-SB-PV-06-20-22 (280-137759-2), CDOT I270 Env-05/06_2020-SB-04-15-17 (280-137759-5), CDOT I270 Env-05/06_2020-SB-04-25-27 (280-137759-6), CDOT I270 Env-05/06_2020-SB-10-10-12 (280-137759-7), CDOT I270 Env-05/06_2020-SB-10-25-27 (280-137759-8) and CDOT I270 Env-05/06_2020-SB-19-10-12 (280-137759-9) were analyzed for diesel range organics in accordance with EPA SW-846 Method 8015C - DRO. The samples were prepared on 06/24/2020 and 06/26/2020 and analyzed on 07/13/2020 and 07/15/2020.

Samples CDOT I270 Env-05/06_2020-SB-10-25-27 (280-137759-8)[2X] and CDOT I270 Env-05/06_2020-SB-19-10-12 (280-137759-9) [10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

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Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

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Job ID: 280-137759-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

The following sample was diluted to bring the concentration of target analytes within the calibration range: CDOT I270 Env-05/06_2020-SB-19-10-12 (280-137759-9). Elevated reporting limits (RLs) are provided. Because of this dilution, the surrogate spike concentration in the sample was diluted to a level where the recovery calculation does not provide useful information.

The continuing calibration verification (CCV) associated with batch 280-502159 recovered above the upper control limit (+/-20%D) for o-Terphenyl (Surr). The affected CCV and associated samples have surrogate recoveries well within acceptance criteria; therefore, the data have been reported.

Sequence goes:

CCVRT (DRO) in control

CCV (RRO) in control

MB,LCS,LCSD

CCV (DRO) in control

CCV (RRO) in control

280-137759-6,7,8

280-137854-3,4,5

CCV (DRO) o-Terphenyl +21.2%D (surrogate recovery 121%, limits 49-115%)

CCV (RRO) in control

The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-04-25-27 (280-137759-6), CDOT I270 Env-05/06_2020-SB-10-10-12 (280-137759-7), CDOT I270 Env-05/06_2020-SB-10-25-27 (280-137759-8) and (CCV 280-502159/31).

The continuing calibration verification (CCV) associated with batch 280-502375 recovered above the upper control limit for < o-Terphenyl (Surr). The associated samples have surrogate %R that have been impacted by dilution and/or have matrix interferences.

Sequence goes:

CCVRT(DRO) in control

CCV (RRO) in control

280-137759-9

280-137924-1

MB,LCS,LCSD

280-138458-1,2,2MS/MSD,3,4

CCV (DRO) o-Terphenyl +24.3%D

CCV (RRO) in control

280-138428-1,2,2MS/MSD,3,4,5,6,7,8

CCV (DRO) in control

CCV (RRO) in control

The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-19-10-12 (280-137759-9) and (CCV 280-502375/17).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DIESEL RANGE ORGANICS - Water

Sample CDOT I270 Env-05/06_2020-SB-PV-09-GW (280-137759-4) was analyzed for Diesel Range Organics in accordance with EPA SW-846 Method 8015C - DRO. The samples were prepared on 06/18/2020 and analyzed on 07/01/2020.

Diesel Range Organics [C10-C28] and Motor Oil (C20-C38) were detected in method blank MB 280-499277/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-499277 for either the DRO or RRO LCS spikes. LCSDs were prepared instead as per QA requirements.
CDOT I270 Env-05/06_2020-SB-PV-09-GW (280-137759-4)

The following sample contained sandy sediment: CDOT I270 Env-05/06_2020-SB-PV-09-GW (280-137759-4).

The continuing calibration verification (CCV) associated with batch 280-500853 recovered above the upper control limit (+/-20%D) for o-Terphenyl (Surr). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

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Client: Jacobs Engineering Group, Inc.
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Laboratory: Eurofins TestAmerica, Denver (Continued)

Sequence goes:

CCVRT o-Terphenyl (Surr) +22.3%D

CCV/17 +23.2%D

280-137592-10,11

CCV/33 in control

The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-PV-09-GW (280-137759-4), (CCV 280-500853/17) and (CCVRT 280-500853/4).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

CHLORINATED PESTICIDES - Soil

Sample CDOT I270 Env-05/06_2020-SB-PV-09-6-8 (280-137759-3) was analyzed for chlorinated pesticides in accordance with EPA SW-846 Method 8081B. The samples were prepared on 06/24/2020 and analyzed on 06/30/2020.

Sample CDOT I270 Env-05/06_2020-SB-PV-09-6-8 (280-137759-3)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

DCB Decachlorobiphenyl failed the surrogate recovery criteria low for CDOT I270 Env-05/06_2020-SB-PV-09-6-8 (280-137759-3). DCB Decachlorobiphenyl and Tetrachloro-m-xylene failed the surrogate recovery criteria low for CDOT I270 Env-05/06_2020-SB-PV-09-6-8MS (280-137759-3MS). DCB Decachlorobiphenyl failed the surrogate recovery criteria low for CDOT I270 Env-05/06_2020-SB-PV-09-6-8MSD (280-137759-3MSD). Refer to the QC report for details.

Endrin aldehyde failed the recovery criteria high for LCS 280-499974/2-A. Refer to the QC report for details.

Several analytes failed the recovery criteria low for the MS of sample CDOT I270 Env-05/06_2020-SB-PV-09-6-8MS (280-137759-3) in batch 280-500608. Heptachlor epoxide failed the recovery criteria high. Several analytes failed the recovery criteria low for the MSD of sample CDOT I270 Env-05/06_2020-SB-PV-09-6-8MSD (280-137759-3) in batch 280-500608. 4,4'-DDE and Heptachlor epoxide failed the recovery criteria high. Refer to the QC report for details.

Method 8081B: In preparation batch 280-499974 and analytical batch 280-500608 for Method 8081B, the following samples were diluted due to excess sulfur present in the extract: CDOT I270 Env-05/06_2020-SB-PV-09-6-8 (280-137759-3), (280-137759-A-3-B MS) and (280-137759-A-3-C MSD). Elevated reporting limits (RL) are provided. Samples 137759-3, 3 MS, and 3 MSD could not be analyzed lesser than a 10x dilution without contaminating the instrument.

Method 8081B: In preparation batch 280-499974 and analytical batch 280-500608 for Method 8081B, the following sample required a dilution due to the nature of the sample matrix: CDOT I270 Env-05/06_2020-SB-PV-09-6-8 (280-137759-3). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8081B: In preparation batch 280-499974 and analytical batch 280-500608 for Method 8081B, the following samples were diluted due to the nature of the sample matrix with excess sulfur: (280-137759-A-3-B MS) and (280-137759-A-3-C MSD). Because of this dilution, the surrogate spike and matrix spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8081B: For Method 8081B, the laboratory control sample (LCS) for preparation batch 280-499974 and analytical batch 280-500608 recovered outside control limits for the following analytes: Endrin aldehyde (88%) at 90%. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

For Method 8081B, the continuing calibration verification (CCV) associated with batch 280-500608 recovered outside of the control limits (20%) low on the back column for Toxaphene Peak 1 (front and back column), Toxaphene Peak 2 (front and back column), Toxaphene Peak 3 (front and back column), Toxaphene Peak 4, Toxaphene Peak 5 and Toxaphene but these analytes were reported as non-detected (ND) from the front column, which was within limits or high, and high on the front column for Toxaphene Peak 5 but the analyte was ND. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-PV-09-6-8 (280-137759-3), (CCV 280-500608/25), (CCV 280-500608/39) and (CCV 280-500608/48).

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Job ID: 280-137759-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ORGANOCHLORINE PESTICIDES (GC) - Water

Sample CDOT I270 Env-05/06_2020-SB-PV-09-GW (280-137759-4) was analyzed for Organochlorine Pesticides (GC) in accordance with SW 846 8081B. The samples were prepared on 06/18/2020 and analyzed on 06/26/2020.

The volume (250mL) of the following sample was taken out from 1L amber glass container in order to perform an extraction. CDOT I270 Env-05/06_2020-SB-PV-09-GW (280-137759-4)

For Method 8081B LVI, the RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 280-499243 and analytical batch 280-500220 recovered outside control limits for the following analytes: Endrin aldehyde (17%) at 36%. The recoveries for Endrin aldehyde were within limits for the LCS and LCSD.

For Method 8081B LVI, the continuing calibration verification (CCV) associated with batch 280-500220 recovered outside of the control limits (20%) low for Toxaphene, Toxaphene Peak 1, Toxaphene Peak 2, Toxaphene Peak 3, Toxaphene Peak 4, Toxaphene Peak 5, Tetrachloro-m-xylene, Endosulfan I, Endosulfan II, Aldrin, beta-BHC, cis-Chlordane, Endrin aldehyde, Methoxychlor and DCB Decachlorobiphenyl but were within limits on the front column or high with non-detect results in the associated samples. The front column was outside limits high for Endrin and Toxaphene Peak 1 but were non-detect in the associated samples. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-PV-09-GW (280-137759-4), (CCV 280-500220/4) and (CCVIS 280-500220/5).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS) - Soil

Sample CDOT I270 Env-05/06_2020-SB-PV-09-6-8 (280-137759-3) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082A. The samples were prepared on 06/24/2020 and analyzed on 07/16/2020.

The following samples required a sulfuric acid clean-up, via EPA Method 3665A, to reduce matrix interferences: CDOT I270 Env-05/06_2020-SB-PV-09-6-8 (280-137759-3), (280-137759-A-3-D MS) and (280-137759-A-3-E MSD).

The following samples required a mercury clean-up, via EPA Method 3660A, to reduce matrix interferences caused by sulfur: CDOT I270 Env-05/06_2020-SB-PV-09-6-8 (280-137759-3), (280-137759-A-3-D MS) and (280-137759-A-3-E MSD). The reagent lot number used was: SLBZ1323.

The continuing calibration verification (CCV) associated with batch 280-502308 recovered above the upper control limit (+/-20%D) for Aroclor-1260, Tetrachloro-m-xylene, DCB Decachlorobiphenyl and Aroclor-1016. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Sequence goes:

CCVIS front column Aroclor-1260 +24.9%D; back column %AVG passes

280-137759-3,3MS/MSD

CCV/26 in control

LCS,LCSD,MB

280-138002-1

CCV/37 front column DCB +40.4%D; Aroclor 1016 +23.9%D, Aroclor 1260 +39.6%D, TCMX +20.2%D; back column DCB +42.7%D, Aroclor 1260 +26.

The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-PV-09-6-8 (280-137759-3), (CCVIS 280-502308/3), (280-137759-A-3-D MS) and (280-137759-A-3-E MSD).

The continuing calibration verification (CCV) associated with batch 280-502308 was outside %D criteria for the individual peaks used for the quantitation of Aroclor 1254. The average %D is in control for this analyte; therefore, corrective action was not performed.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS) - Water

Sample CDOT I270 Env-05/06_2020-SB-PV-09-GW (280-137759-4) was analyzed for polychlorinated biphenyls (PCBs) in accordance

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Job ID: 280-137759-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

with SW 846 8082A. The samples were prepared on 06/18/2020 and analyzed on 07/14/2020.

The volume (250mL) of the following sample was taken out from 1L amber glass container in order to perform an extraction. CDOT I270 Env-05/06_2020-SB-PV-09-GW (280-137759-4)

The following samples required a sulfuric acid clean-up, via EPA Method 3665A, to reduce matrix interferences: CDOT I270 Env-05/06_2020-SB-PV-09-GW (280-137759-4), (LCS 280-499243/4-A), (LCS 280-499974/3-A), (LCSD 280-499243/5-A), (MB 280-499243/1-A) and (MB 280-499974/1-A).

The PCB-1260 recovery for the associated laboratory control sample (LCS) samples was outside acceptance limits (72-128%) on the primary column (71%) : (LCS 280-499243/4-A). The recovery is within acceptance limits on the other column (76%), indicating that the extraction process was in control. All other targets and surrogates for the LCS met acceptance criteria on both columns. The associated laboratory control sample duplicate (LCSD) met acceptance criteria for all compounds on both columns. The data have been reported.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

METALS (ICPMS) - Soil

Samples CDOT I270 Env-05/06_2020-SB-PV-06-5-7 (280-137759-1), CDOT I270 Env-05/06_2020-SB-PV-06-20-22 (280-137759-2), CDOT I270 Env-05/06_2020-SB-04-15-17 (280-137759-5), CDOT I270 Env-05/06_2020-SB-04-25-27 (280-137759-6), CDOT I270 Env-05/06_2020-SB-10-10-12 (280-137759-7), CDOT I270 Env-05/06_2020-SB-10-25-27 (280-137759-8) and CDOT I270 Env-05/06_2020-SB-19-10-12 (280-137759-9) were analyzed for metals (ICPMS) in accordance with SW 846 6020A. The samples were prepared on 06/24/2020 and analyzed on 06/26/2020 and 06/29/2020.

Barium failed the recovery criteria low for the MS of sample CDOT I270 Env-05/06_2020-SB-PV-06-5-7MS (280-137759-1) in batch 280-500310. Lead failed the recovery criteria high. For the MSD of sample CDOT I270 Env-05/06_2020-SB-PV-06-5-7MSD (280-137759-1) in batch 280-500310, Barium failed the recovery criteria low. Chromium failed the recovery criteria high. Also, Chromium exceeded the RPD limit. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP/MS) - Soil (Sb prep for Silver)

Samples CDOT I270 Env-05/06_2020-SB-PV-06-5-7 (280-137759-1), CDOT I270 Env-05/06_2020-SB-PV-06-20-22 (280-137759-2), CDOT I270 Env-05/06_2020-SB-04-15-17 (280-137759-5), CDOT I270 Env-05/06_2020-SB-04-25-27 (280-137759-6), CDOT I270 Env-05/06_2020-SB-10-10-12 (280-137759-7), CDOT I270 Env-05/06_2020-SB-10-25-27 (280-137759-8) and CDOT I270 Env-05/06_2020-SB-19-10-12 (280-137759-9) were analyzed for Total Metals (ICP/MS) in accordance with 6020A. The samples were prepared on 06/25/2020 and analyzed on 06/26/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICPMS) - Water

Sample CDOT I270 Env-05/06_2020-SB-PV-09-GW (280-137759-4) was analyzed for total metals (ICPMS) in accordance with EPA SW-846 6020A. The samples were prepared on 06/23/2020 and analyzed on 06/25/2020 and 06/26/2020.

Sample CDOT I270 Env-05/06_2020-SB-PV-09-GW (280-137759-4)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY - Water

Sample CDOT I270 Env-05/06_2020-SB-PV-09-GW (280-137759-4) was analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 07/02/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY (CVAA) - Soil

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Job ID: 280-137759-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Samples CDOT I270 Env-05/06_2020-SB-PV-06-5-7 (280-137759-1), CDOT I270 Env-05/06_2020-SB-PV-06-20-22 (280-137759-2), CDOT I270 Env-05/06_2020-SB-04-15-17 (280-137759-5), CDOT I270 Env-05/06_2020-SB-04-25-27 (280-137759-6), CDOT I270 Env-05/06_2020-SB-10-10-12 (280-137759-7), CDOT I270 Env-05/06_2020-SB-10-25-27 (280-137759-8) and CDOT I270 Env-05/06_2020-SB-19-10-12 (280-137759-9) were analyzed for total mercury (CVAA) in accordance with EPA SW-846 Method 7471B. The samples were prepared and analyzed on 07/01/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

Samples CDOT I270 Env-05/06_2020-SB-PV-06-5-7 (280-137759-1), CDOT I270 Env-05/06_2020-SB-PV-06-20-22 (280-137759-2), CDOT I270 Env-05/06_2020-SB-PV-09-6-8 (280-137759-3), CDOT I270 Env-05/06_2020-SB-04-15-17 (280-137759-5), CDOT I270 Env-05/06_2020-SB-04-25-27 (280-137759-6), CDOT I270 Env-05/06_2020-SB-10-10-12 (280-137759-7), CDOT I270 Env-05/06_2020-SB-10-25-27 (280-137759-8) and CDOT I270 Env-05/06_2020-SB-19-10-12 (280-137759-9) were analyzed for percent solids in accordance with ASTM D2216-90. The samples were analyzed on 06/18/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

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Detection Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-5-7

Lab Sample ID: 280-137759-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Hexadecane	38	J	320	13	ug/Kg	1	☒	8270D	Total/NA
Pyrene	15	J	320	12	ug/Kg	1	☒	8270D	Total/NA
Diesel Range Organics [C10-C28]	41		8.5	3.9	mg/Kg	1	☒	8015C	Total/NA
Motor Oil (C20-C38)	140		25	8.3	mg/Kg	1	☒	8015C	Total/NA
Arsenic	1.6		0.57	0.048	mg/Kg	1	☒	6020A	Total/NA
Silver	46	J	95	7.4	ug/Kg	1	☒	6020A	Total/NA
Barium	93		0.38	0.067	mg/Kg	1	☒	6020A	Total/NA
Cadmium	0.18		0.096	0.0090	mg/Kg	1	☒	6020A	Total/NA
Chromium	6.4	F2 F1	0.19	0.073	mg/Kg	1	☒	6020A	Total/NA
Lead	6.5	F1	0.14	0.017	mg/Kg	1	☒	6020A	Total/NA
Selenium	0.13	J	0.48	0.13	mg/Kg	1	☒	6020A	Total/NA
Mercury	6.0	J	18	6.0	ug/Kg	1	☒	7471B	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-20-22

Lab Sample ID: 280-137759-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	66	*	61	30	ug/Kg	1	☒	8260B	Total/NA
2-Butanone (MEK)	11	J	17	3.3	ug/Kg	1	☒	8260B	Total/NA
Benzene	0.35	J	4.2	0.13	ug/Kg	1	☒	8260B	Total/NA
Toluene	1.0	J	4.2	0.19	ug/Kg	1	☒	8260B	Total/NA
Benzo[a]anthracene	84	J	360	22	ug/Kg	1	☒	8270D	Total/NA
Benzo[a]pyrene	130	J	360	22	ug/Kg	1	☒	8270D	Total/NA
Benzo[b]fluoranthene	120	J	360	29	ug/Kg	1	☒	8270D	Total/NA
Benzo[g,h,i]perylene	65	J	360	18	ug/Kg	1	☒	8270D	Total/NA
Chrysene	99	J	360	30	ug/Kg	1	☒	8270D	Total/NA
Fluoranthene	75	J	360	39	ug/Kg	1	☒	8270D	Total/NA
Hexadecane	32	J	360	15	ug/Kg	1	☒	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	81	J	360	24	ug/Kg	1	☒	8270D	Total/NA
Phenanthrene	25	J	360	19	ug/Kg	1	☒	8270D	Total/NA
Pyrene	130	J	360	13	ug/Kg	1	☒	8270D	Total/NA
Diesel Range Organics [C10-C28]	29		8.3	3.8	mg/Kg	1	☒	8015C	Total/NA
Motor Oil (C20-C38)	71		25	8.1	mg/Kg	1	☒	8015C	Total/NA
Arsenic	6.0		0.58	0.049	mg/Kg	1	☒	6020A	Total/NA
Silver	400		87	6.8	ug/Kg	1	☒	6020A	Total/NA
Barium	130		0.39	0.068	mg/Kg	1	☒	6020A	Total/NA
Cadmium	1.3		0.097	0.0091	mg/Kg	1	☒	6020A	Total/NA
Chromium	9.6		0.19	0.073	mg/Kg	1	☒	6020A	Total/NA
Lead	72		0.15	0.018	mg/Kg	1	☒	6020A	Total/NA
Selenium	0.36	J	0.48	0.13	mg/Kg	1	☒	6020A	Total/NA
Mercury	390		19	6.3	ug/Kg	1	☒	7471B	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-09-6-8

Lab Sample ID: 280-137759-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
4,4'-DDD	29	J F1	37	12	ug/Kg	10	☒	8081B	Total/NA
4,4'-DDE	44	F1	37	5.1	ug/Kg	10	☒	8081B	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-09-GW

Lab Sample ID: 280-137759-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	2.9	J	10	1.9	ug/L	1		8260B	Total/NA
Toluene	0.37	J	1.0	0.17	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-09-GW
(Continued)

Lab Sample ID: 280-137759-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
m-Xylene & p-Xylene	0.27	J	2.0	0.15	ug/L	1		8260B	Total/NA
Diesel Range Organics [C10-C28]	0.16	J B	0.25	0.032	mg/L	1		8015C	Total/NA
Motor Oil (C20-C38)	0.25	J B	0.49	0.055	mg/L	1		8015C	Total/NA
Arsenic	84		5.0	0.33	ug/L	1		6020A	Total/NA
Barium	6000		10	2.9	ug/L	10		6020A	Total/NA
Cadmium	6.2		1.0	0.27	ug/L	1		6020A	Total/NA
Chromium	230		2.0	0.50	ug/L	1		6020A	Total/NA
Lead	260		1.0	0.18	ug/L	1		6020A	Total/NA
Selenium	6.1		5.0	0.37	ug/L	1		6020A	Total/NA
Silver	2.4	J	5.0	0.033	ug/L	1		6020A	Total/NA
Mercury	1.8		0.20	0.027	ug/L	1		7470A	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-15-17

Lab Sample ID: 280-137759-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	2.1	J	4.3	1.4	ug/Kg	1	☼	8260B	Total/NA
Diesel Range Organics [C10-C28]	25		9.1	4.2	mg/Kg	1	☼	8015C	Total/NA
Motor Oil (C20-C38)	41		27	8.9	mg/Kg	1	☼	8015C	Total/NA
Arsenic	3.5		0.64	0.054	mg/Kg	1	☼	6020A	Total/NA
Silver	42	J	99	7.8	ug/Kg	1	☼	6020A	Total/NA
Barium	120		0.43	0.075	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.30		0.11	0.010	mg/Kg	1	☼	6020A	Total/NA
Chromium	20		0.21	0.081	mg/Kg	1	☼	6020A	Total/NA
Lead	25		0.16	0.019	mg/Kg	1	☼	6020A	Total/NA
Selenium	0.24	J	0.53	0.14	mg/Kg	1	☼	6020A	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-25-27

Lab Sample ID: 280-137759-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.14	J	4.7	0.14	ug/Kg	1	☼	8260B	Total/NA
Toluene	0.56	J	4.7	0.22	ug/Kg	1	☼	8260B	Total/NA
Motor Oil (C20-C38)	12	J	25	8.0	mg/Kg	1	☼	8015C	Total/NA
Arsenic	3.1		0.53	0.045	mg/Kg	1	☼	6020A	Total/NA
Silver	11	J	92	7.2	ug/Kg	1	☼	6020A	Total/NA
Barium	100		0.36	0.063	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.23		0.089	0.0083	mg/Kg	1	☼	6020A	Total/NA
Chromium	11		0.18	0.068	mg/Kg	1	☼	6020A	Total/NA
Lead	21		0.13	0.016	mg/Kg	1	☼	6020A	Total/NA
Selenium	0.14	J	0.44	0.12	mg/Kg	1	☼	6020A	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-10-10-12

Lab Sample ID: 280-137759-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	0.45	J	4.9	0.22	ug/Kg	1	☼	8260B	Total/NA
Motor Oil (C20-C38)	9.4	J	23	7.5	mg/Kg	1	☼	8015C	Total/NA
Arsenic	1.3		0.58	0.049	mg/Kg	1	☼	6020A	Total/NA
Silver	13	J	88	6.9	ug/Kg	1	☼	6020A	Total/NA
Barium	46		0.39	0.068	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.057	J	0.097	0.0091	mg/Kg	1	☼	6020A	Total/NA
Chromium	2.7		0.19	0.074	mg/Kg	1	☼	6020A	Total/NA
Lead	3.4		0.15	0.018	mg/Kg	1	☼	6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-10-25-27

Lab Sample ID: 280-137759-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	0.44	J	4.7	0.21	ug/Kg	1	☼	8260B	Total/NA
Motor Oil (C20-C38)	22	J D	55	18	mg/Kg	2	☼	8015C	Total/NA
Arsenic	2.7		0.66	0.056	mg/Kg	1	☼	6020A	Total/NA
Silver	21	J	110	8.4	ug/Kg	1	☼	6020A	Total/NA
Barium	220		0.44	0.078	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.13		0.11	0.010	mg/Kg	1	☼	6020A	Total/NA
Chromium	15		0.22	0.084	mg/Kg	1	☼	6020A	Total/NA
Lead	11		0.17	0.020	mg/Kg	1	☼	6020A	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-10-12

Lab Sample ID: 280-137759-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	77	*	76	38	ug/Kg	1	☼	8260B	Total/NA
2-Butanone (MEK)	14	J	21	4.1	ug/Kg	1	☼	8260B	Total/NA
Benzene	1.4	J	5.3	0.16	ug/Kg	1	☼	8260B	Total/NA
Isopropylbenzene	4.0	J	5.3	2.5	ug/Kg	1	☼	8260B	Total/NA
Methyl acetate	5.4	J	11	2.9	ug/Kg	1	☼	8260B	Total/NA
Methylcyclohexane	2.8	J	5.3	0.44	ug/Kg	1	☼	8260B	Total/NA
Toluene	4.5	J	5.3	0.24	ug/Kg	1	☼	8260B	Total/NA
m-Xylene & p-Xylene	4.3		2.6	1.1	ug/Kg	1	☼	8260B	Total/NA
o-Xylene	3.0		2.6	0.28	ug/Kg	1	☼	8260B	Total/NA
1,4-Dichlorobenzene	24		5.3	0.26	ug/Kg	1	☼	8260B	Total/NA
cis-1,2-Dichloroethene	0.79	J	2.6	0.21	ug/Kg	1	☼	8260B	Total/NA
Ethylbenzene	2.8	J	5.3	0.32	ug/Kg	1	☼	8260B	Total/NA
Bis(2-ethylhexyl) phthalate	91	J	320	44	ug/Kg	1	☼	8270D	Total/NA
Butyl benzyl phthalate	47	J	320	41	ug/Kg	1	☼	8270D	Total/NA
Hexadecane	98	J	320	13	ug/Kg	1	☼	8270D	Total/NA
Gasoline Range Organics (GRO) -C6-C10	18		2.6	0.97	mg/Kg	1	☼	8015C	Total/NA
Diesel Range Organics [C10-C28]	4500	D	80	36	mg/Kg	10	☼	8015C	Total/NA
Motor Oil (C20-C38)	6400	D	240	78	mg/Kg	10	☼	8015C	Total/NA
Arsenic	2.0		0.56	0.048	mg/Kg	1	☼	6020A	Total/NA
Silver	180		87	6.8	ug/Kg	1	☼	6020A	Total/NA
Barium	100		0.38	0.066	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.33		0.094	0.0088	mg/Kg	1	☼	6020A	Total/NA
Chromium	6.6		0.19	0.071	mg/Kg	1	☼	6020A	Total/NA
Lead	23		0.14	0.017	mg/Kg	1	☼	6020A	Total/NA
Selenium	0.27	J	0.47	0.12	mg/Kg	1	☼	6020A	Total/NA
Mercury	11	J	18	5.8	ug/Kg	1	☼	7471B	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB-05

Lab Sample ID: 280-137759-10

No Detections.

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB-05

Lab Sample ID: 280-137759-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	1.9	J	5.0	1.6	ug/Kg	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Method Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL DEN
8015C	Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)	SW846	TAL DEN
8015C	Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)	SW846	TAL DEN
8081B	Organochlorine Pesticides (GC)	SW846	TAL DEN
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL DEN
6020A	Metals (ICP/MS)	SW846	TAL DEN
7470A	Mercury (CVAA)	SW846	TAL DEN
7471B	Mercury (CVAA)	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN
3020A	Preparation, Total Metals	SW846	TAL DEN
3050B	Preparation, Metals	SW846	TAL DEN
3050B-Sb	Preparation, Metals (Antimony)	SW846	TAL DEN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL DEN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL DEN
3546	Microwave Extraction	SW846	TAL DEN
3550C	Ultrasonic Extraction	SW846	TAL DEN
5030B	Purge and Trap	SW846	TAL DEN
5030C	Purge and Trap	SW846	TAL DEN
5035	Closed System Purge and Trap	SW846	TAL DEN
7470A	Preparation, Mercury	SW846	TAL DEN
7471B	Preparation, Mercury	SW846	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-137759-1	CDOT I270 Env-05/06_2020-SB-PV-06-5-7	Solid	06/15/20 22:30	06/17/20 14:05	
280-137759-2	CDOT I270 Env-05/06_2020-SB-PV-06-20-22	Solid	06/15/20 23:10	06/17/20 14:05	
280-137759-3	CDOT I270 Env-05/06_2020-SB-PV-09-6-8	Solid	06/16/20 03:00	06/17/20 14:05	
280-137759-4	CDOT I270 Env-05/06_2020-SB-PV-09-GW	Water	06/16/20 03:45	06/17/20 14:05	
280-137759-5	CDOT I270 Env-05/06_2020-SB-04-15-17	Solid	06/16/20 23:10	06/17/20 14:05	
280-137759-6	CDOT I270 Env-05/06_2020-SB-04-25-27	Solid	06/16/20 23:45	06/17/20 14:05	
280-137759-7	CDOT I270 Env-05/06_2020-SB-10-10-12	Solid	06/17/20 01:20	06/17/20 14:05	
280-137759-8	CDOT I270 Env-05/06_2020-SB-10-25-27	Solid	06/17/20 01:50	06/17/20 14:05	
280-137759-9	CDOT I270 Env-05/06_2020-SB-19-10-12	Solid	06/17/20 04:10	06/17/20 14:05	
280-137759-10	CDOT I270 Env-05/06_2020-SB-TB-05	Water	06/15/20 21:40	06/17/20 14:05	
280-137759-11	CDOT I270 Env-05/06_2020-SB-TB-05	Solid	06/15/20 21:40	06/17/20 14:05	

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-5-7

Lab Sample ID: 280-137759-1

Date Collected: 06/15/20 22:30

Matrix: Solid

Date Received: 06/17/20 14:05

Percent Solids: 94.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	*	66	33	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
2-Butanone (MEK)	ND		18	3.6	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
Benzene	ND		4.6	0.14	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
Chlorobenzene	ND		4.6	1.9	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
Carbon disulfide	ND		4.6	1.5	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
Carbon tetrachloride	ND		4.6	1.8	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
Cyclohexane	ND		4.6	1.6	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
1,2-Dibromo-3-Chloropropane	ND		9.2	3.4	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
Bromomethane	ND		9.2	1.2	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
Bromoform	ND		4.7	2.3	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
Chloroethane	ND		9.2	1.8	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
Chloroform	ND		9.2	0.27	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
Chlorobromomethane	ND		4.6	2.3	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
Dichlorobromomethane	ND		4.6	2.0	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
Chlorodibromomethane	ND		4.6	2.1	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
Isopropylbenzene	ND		4.6	2.2	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
2-Hexanone	ND		18	4.5	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
Chloromethane	ND		9.2	0.71	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
Dichlorodifluoromethane	ND		9.2	2.5	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
trans-1,2-Dichloroethene	ND		2.3	0.36	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
trans-1,3-Dichloropropene	ND		4.6	0.076	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
Methylene Chloride	ND		4.6	1.5	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
Methyl acetate	ND		9.2	2.5	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
Methyl tert-butyl ether	ND		18	1.9	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
4-Methyl-2-pentanone (MIBK)	ND		18	4.0	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
Methylcyclohexane	ND		4.6	0.39	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
Styrene	ND		4.6	0.26	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
1,1,2,2-Tetrachloroethane	ND		4.6	0.26	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
1,2,3-Trichlorobenzene	ND		4.6	0.74	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
1,2,4-Trichlorobenzene	ND		4.6	0.67	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
Toluene	ND		4.6	0.21	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
1,1,1-Trichloroethane	ND		4.6	1.8	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
1,1,2-Trichloroethane	ND		4.6	0.81	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
Trichloroethene	ND		4.6	1.8	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
1,1,2-Trichlorotrifluoroethane	ND		18	1.5	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
Vinyl chloride	ND		4.6	1.2	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
m-Xylene & p-Xylene	ND		2.3	0.95	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
o-Xylene	ND		2.3	0.24	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
Tetrachloroethene	ND		4.6	1.8	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
1,2-Dichlorobenzene	ND		4.6	1.7	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
1,3-Dichlorobenzene	ND		4.6	0.44	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
1,4-Dichlorobenzene	ND		4.6	0.22	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
cis-1,2-Dichloroethene	ND		2.3	0.18	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
cis-1,3-Dichloropropene	ND		4.6	0.092	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
1,1-Dichloroethane	ND		4.6	0.19	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
1,1-Dichloroethene	ND		4.6	0.54	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
1,2-Dichloroethane	ND		4.6	0.64	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
1,2-Dichloropropane	ND		4.6	0.50	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
1,4-Dioxane	ND		460	51	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-5-7

Date Collected: 06/15/20 22:30

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-1

Matrix: Solid

Percent Solids: 94.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		4.6	0.28	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
1,2-Dibromoethane	ND		4.6	0.48	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
Trichlorofluoromethane	ND		9.2	2.9	ug/Kg	☼	06/15/20 22:30	06/21/20 15:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		58 - 140				06/15/20 22:30	06/21/20 15:11	1
Toluene-d8 (Surr)	99		80 - 126				06/15/20 22:30	06/21/20 15:11	1
4-Bromofluorobenzene (Surr)	96		76 - 127				06/15/20 22:30	06/21/20 15:11	1
Dibromofluoromethane (Surr)	100		75 - 121				06/15/20 22:30	06/21/20 15:11	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-20-22

Date Collected: 06/15/20 23:10

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-2

Matrix: Solid

Percent Solids: 91.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	66	*	61	30	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
2-Butanone (MEK)	11	J	17	3.3	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
Benzene	0.35	J	4.2	0.13	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
Chlorobenzene	ND		4.2	1.7	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
Carbon disulfide	ND		4.2	1.4	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
Carbon tetrachloride	ND		4.2	1.7	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
Cyclohexane	ND		4.2	1.5	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
1,2-Dibromo-3-Chloropropane	ND		8.5	3.1	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
Bromomethane	ND		8.5	1.1	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
Bromoform	ND		4.3	2.2	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
Chloroethane	ND		8.5	1.7	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
Chloroform	ND		8.5	0.25	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
Chlorobromomethane	ND		4.2	2.1	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
Dichlorobromomethane	ND		4.2	1.8	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
Chlorodibromomethane	ND		4.2	1.9	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
Isopropylbenzene	ND		4.2	2.0	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
2-Hexanone	ND		17	4.1	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
Chloromethane	ND		8.5	0.65	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
Dichlorodifluoromethane	ND		8.5	2.3	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
trans-1,2-Dichloroethene	ND		2.1	0.33	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
trans-1,3-Dichloropropene	ND		4.2	0.070	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
Methylene Chloride	ND		4.2	1.4	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
Methyl acetate	ND		8.5	2.3	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
Methyl tert-butyl ether	ND		17	1.8	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
4-Methyl-2-pentanone (MIBK)	ND		17	3.7	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
Methylcyclohexane	ND		4.2	0.36	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
Styrene	ND		4.2	0.24	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
1,1,2,2-Tetrachloroethane	ND		4.2	0.24	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
1,2,3-Trichlorobenzene	ND		4.2	0.69	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
1,2,4-Trichlorobenzene	ND		4.2	0.62	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
Toluene	1.0	J	4.2	0.19	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
1,1,1-Trichloroethane	ND		4.2	1.7	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
1,1,2-Trichloroethane	ND		4.2	0.74	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
Trichloroethene	ND		4.2	1.6	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
1,1,2-Trichlorotrifluoroethane	ND		17	1.4	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
Vinyl chloride	ND		4.2	1.1	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-20-22

Date Collected: 06/15/20 23:10

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-2

Matrix: Solid

Percent Solids: 91.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		2.1	0.88	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
o-Xylene	ND		2.1	0.23	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
Tetrachloroethene	ND		4.2	1.6	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
1,2-Dichlorobenzene	ND		4.2	1.6	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
1,3-Dichlorobenzene	ND		4.2	0.41	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
1,4-Dichlorobenzene	ND		4.2	0.21	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
cis-1,2-Dichloroethene	ND		2.1	0.17	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
cis-1,3-Dichloropropene	ND		4.2	0.085	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
1,1-Dichloroethane	ND		4.2	0.18	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
1,1-Dichloroethene	ND		4.2	0.50	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
1,2-Dichloroethane	ND		4.2	0.59	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
1,2-Dichloropropane	ND		4.2	0.47	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
1,4-Dioxane	ND		420	47	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
Ethylbenzene	ND		4.2	0.26	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
1,2-Dibromoethane	ND		4.2	0.44	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1
Trichlorofluoromethane	ND		8.5	2.7	ug/Kg	☼	06/15/20 23:10	06/21/20 15:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		58 - 140	06/15/20 23:10	06/21/20 15:33	1
Toluene-d8 (Surr)	100		80 - 126	06/15/20 23:10	06/21/20 15:33	1
4-Bromofluorobenzene (Surr)	97		76 - 127	06/15/20 23:10	06/21/20 15:33	1
Dibromofluoromethane (Surr)	101		75 - 121	06/15/20 23:10	06/21/20 15:33	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-09-GW

Date Collected: 06/16/20 03:45

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	2.9	J	10	1.9	ug/L			06/24/20 11:03	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			06/24/20 11:03	1
Benzene	ND		1.0	0.16	ug/L			06/24/20 11:03	1
Chlorobenzene	ND		1.0	0.17	ug/L			06/24/20 11:03	1
Carbon disulfide	ND		2.0	0.17	ug/L			06/24/20 11:03	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			06/24/20 11:03	1
Cyclohexane	ND		2.0	0.28	ug/L			06/24/20 11:03	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			06/24/20 11:03	1
Bromomethane	ND		2.0	0.21	ug/L			06/24/20 11:03	1
Bromoform	ND		1.0	0.46	ug/L			06/24/20 11:03	1
Chloroethane	ND		2.0	0.41	ug/L			06/24/20 11:03	1
Chloroform	ND		1.0	0.16	ug/L			06/24/20 11:03	1
Chlorobromomethane	ND		1.0	0.10	ug/L			06/24/20 11:03	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			06/24/20 11:03	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			06/24/20 11:03	1
Isopropylbenzene	ND		1.0	0.19	ug/L			06/24/20 11:03	1
2-Hexanone	ND		5.0	1.7	ug/L			06/24/20 11:03	1
Chloromethane	ND		2.0	0.30	ug/L			06/24/20 11:03	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			06/24/20 11:03	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/24/20 11:03	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			06/24/20 11:03	1
Methylene Chloride	ND		2.0	0.94	ug/L			06/24/20 11:03	1
Methyl acetate	ND		5.0	1.6	ug/L			06/24/20 11:03	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-09-GW

Lab Sample ID: 280-137759-4

Date Collected: 06/16/20 03:45

Matrix: Water

Date Received: 06/17/20 14:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			06/24/20 11:03	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			06/24/20 11:03	1
Methylcyclohexane	ND		1.0	0.10	ug/L			06/24/20 11:03	1
Styrene	ND		1.0	0.36	ug/L			06/24/20 11:03	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			06/24/20 11:03	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			06/24/20 11:03	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			06/24/20 11:03	1
Toluene	0.37	J	1.0	0.17	ug/L			06/24/20 11:03	1
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			06/24/20 11:03	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			06/24/20 11:03	1
Trichloroethene	ND		1.0	0.16	ug/L			06/24/20 11:03	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			06/24/20 11:03	1
Vinyl chloride	ND		1.0	0.10	ug/L			06/24/20 11:03	1
m-Xylene & p-Xylene	0.27	J	2.0	0.15	ug/L			06/24/20 11:03	1
o-Xylene	ND		1.0	0.19	ug/L			06/24/20 11:03	1
Tetrachloroethene	ND		1.0	0.20	ug/L			06/24/20 11:03	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			06/24/20 11:03	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			06/24/20 11:03	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			06/24/20 11:03	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/24/20 11:03	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			06/24/20 11:03	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/24/20 11:03	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			06/24/20 11:03	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			06/24/20 11:03	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/24/20 11:03	1
1,4-Dioxane	ND		200	19	ug/L			06/24/20 11:03	1
Ethylbenzene	ND		1.0	0.16	ug/L			06/24/20 11:03	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			06/24/20 11:03	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			06/24/20 11:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		70 - 127					06/24/20 11:03	1
Toluene-d8 (Surr)	102		80 - 125					06/24/20 11:03	1
4-Bromofluorobenzene (Surr)	94		78 - 120					06/24/20 11:03	1
Dibromofluoromethane (Surr)	97		77 - 120					06/24/20 11:03	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-15-17

Lab Sample ID: 280-137759-5

Date Collected: 06/16/20 23:10

Matrix: Solid

Date Received: 06/17/20 14:05

Percent Solids: 87.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	*	62	31	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
2-Butanone (MEK)	ND		17	3.4	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
Benzene	ND		4.3	0.13	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
Chlorobenzene	ND		4.3	1.8	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
Carbon disulfide	ND		4.3	1.4	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
Carbon tetrachloride	ND		4.3	1.7	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
Cyclohexane	ND		4.3	1.5	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
1,2-Dibromo-3-Chloropropane	ND		8.7	3.2	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
Bromomethane	ND		8.7	1.2	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
Bromoform	ND		4.4	2.2	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-15-17

Date Collected: 06/16/20 23:10

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-5

Matrix: Solid

Percent Solids: 87.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND		8.7	1.7	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
Chloroform	ND		8.7	0.25	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
Chlorobromomethane	ND		4.3	2.1	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
Dichlorobromomethane	ND		4.3	1.8	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
Chlorodibromomethane	ND		4.3	2.0	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
Isopropylbenzene	ND		4.3	2.1	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
2-Hexanone	ND		17	4.2	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
Chloromethane	ND		8.7	0.67	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
Dichlorodifluoromethane	ND		8.7	2.4	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
trans-1,2-Dichloroethene	ND		2.2	0.34	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
trans-1,3-Dichloropropene	ND		4.3	0.072	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
Methylene Chloride	2.1	J	4.3	1.4	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
Methyl acetate	ND		8.7	2.4	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
Methyl tert-butyl ether	ND		17	1.8	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
4-Methyl-2-pentanone (MIBK)	ND		17	3.8	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
Methylcyclohexane	ND		4.3	0.36	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
Styrene	ND		4.3	0.24	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
1,1,2,2-Tetrachloroethane	ND		4.3	0.25	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
1,2,3-Trichlorobenzene	ND		4.3	0.70	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
1,2,4-Trichlorobenzene	ND		4.3	0.63	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
Toluene	ND		4.3	0.20	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
1,1,1-Trichloroethane	ND		4.3	1.7	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
1,1,2-Trichloroethane	ND		4.3	0.76	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
Trichloroethene	ND		4.3	1.7	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
1,1,2-Trichlorotrifluoroethane	ND		17	1.4	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
Vinyl chloride	ND		4.3	1.2	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
m-Xylene & p-Xylene	ND		2.2	0.90	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
o-Xylene	ND		2.2	0.23	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
Tetrachloroethene	ND		4.3	1.7	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
1,2-Dichlorobenzene	ND		4.3	1.6	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
1,3-Dichlorobenzene	ND		4.3	0.42	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
1,4-Dichlorobenzene	ND		4.3	0.21	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
cis-1,2-Dichloroethene	ND		2.2	0.17	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
cis-1,3-Dichloropropene	ND		4.3	0.087	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
1,1-Dichloroethane	ND		4.3	0.18	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
1,1-Dichloroethene	ND		4.3	0.51	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
1,2-Dichloroethane	ND		4.3	0.61	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
1,2-Dichloropropane	ND		4.3	0.48	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
1,4-Dioxane	ND		430	49	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
Ethylbenzene	ND		4.3	0.26	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
1,2-Dibromoethane	ND		4.3	0.45	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1
Trichlorofluoromethane	ND		8.7	2.8	ug/Kg	☼	06/16/20 23:10	06/21/20 15:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		58 - 140	06/16/20 23:10	06/21/20 15:56	1
Toluene-d8 (Surr)	98		80 - 126	06/16/20 23:10	06/21/20 15:56	1
4-Bromofluorobenzene (Surr)	95		76 - 127	06/16/20 23:10	06/21/20 15:56	1
Dibromofluoromethane (Surr)	102		75 - 121	06/16/20 23:10	06/21/20 15:56	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-25-27

Lab Sample ID: 280-137759-6

Date Collected: 06/16/20 23:45

Matrix: Solid

Date Received: 06/17/20 14:05

Percent Solids: 96.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	*	68	34	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
2-Butanone (MEK)	ND		19	3.7	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
Benzene	0.14	J	4.7	0.14	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
Chlorobenzene	ND		4.7	2.0	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
Carbon disulfide	ND		4.7	1.6	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
Carbon tetrachloride	ND		4.7	1.9	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
Cyclohexane	ND		4.7	1.7	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
1,2-Dibromo-3-Chloropropane	ND		9.5	3.5	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
Bromomethane	ND		9.5	1.3	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
Bromoform	ND		4.8	2.4	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
Chloroethane	ND		9.5	1.9	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
Chloroform	ND		9.5	0.28	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
Chlorobromomethane	ND		4.7	2.3	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
Dichlorobromomethane	ND		4.7	2.0	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
Chlorodibromomethane	ND		4.7	2.2	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
Isopropylbenzene	ND		4.7	2.3	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
2-Hexanone	ND		19	4.6	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
Chloromethane	ND		9.5	0.73	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
Dichlorodifluoromethane	ND		9.5	2.6	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
trans-1,2-Dichloroethene	ND		2.4	0.37	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
trans-1,3-Dichloropropene	ND		4.7	0.079	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
Methylene Chloride	ND		4.7	1.5	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
Methyl acetate	ND		9.5	2.6	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
Methyl tert-butyl ether	ND		19	2.0	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
4-Methyl-2-pentanone (MIBK)	ND		19	4.1	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
Methylcyclohexane	ND		4.7	0.40	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
Styrene	ND		4.7	0.27	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
1,1,2,2-Tetrachloroethane	ND		4.7	0.27	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
1,2,3-Trichlorobenzene	ND		4.7	0.77	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
1,2,4-Trichlorobenzene	ND		4.7	0.69	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
Toluene	0.56	J	4.7	0.22	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
1,1,1-Trichloroethane	ND		4.7	1.9	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
1,1,2-Trichloroethane	ND		4.7	0.84	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
Trichloroethene	ND		4.7	1.8	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
1,1,2-Trichlorotrifluoroethane	ND		19	1.6	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
Vinyl chloride	ND		4.7	1.3	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
m-Xylene & p-Xylene	ND		2.4	0.99	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
o-Xylene	ND		2.4	0.25	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
Tetrachloroethene	ND		4.7	1.8	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
1,2-Dichlorobenzene	ND		4.7	1.8	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
1,3-Dichlorobenzene	ND		4.7	0.46	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
1,4-Dichlorobenzene	ND		4.7	0.23	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
cis-1,2-Dichloroethene	ND		2.4	0.19	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
cis-1,3-Dichloropropene	ND		4.7	0.095	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
1,1-Dichloroethane	ND		4.7	0.20	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
1,1-Dichloroethene	ND		4.7	0.56	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
1,2-Dichloroethane	ND		4.7	0.66	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
1,2-Dichloropropane	ND		4.7	0.52	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
1,4-Dioxane	ND		470	53	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-25-27

Date Collected: 06/16/20 23:45

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-6

Matrix: Solid

Percent Solids: 96.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		4.7	0.29	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
1,2-Dibromoethane	ND		4.7	0.49	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
Trichlorofluoromethane	ND		9.5	3.0	ug/Kg	☼	06/16/20 23:45	06/21/20 16:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		58 - 140				06/16/20 23:45	06/21/20 16:19	1
Toluene-d8 (Surr)	99		80 - 126				06/16/20 23:45	06/21/20 16:19	1
4-Bromofluorobenzene (Surr)	97		76 - 127				06/16/20 23:45	06/21/20 16:19	1
Dibromofluoromethane (Surr)	100		75 - 121				06/16/20 23:45	06/21/20 16:19	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-10-10-12

Date Collected: 06/17/20 01:20

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-7

Matrix: Solid

Percent Solids: 96.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		71	35	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
2-Butanone (MEK)	ND		20	3.8	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
Benzene	ND		4.9	0.15	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
Chlorobenzene	ND		4.9	2.0	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
Carbon disulfide	ND		4.9	1.6	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
Carbon tetrachloride	ND		4.9	2.0	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
Cyclohexane	ND		4.9	1.7	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
1,2-Dibromo-3-Chloropropane	ND		9.9	3.6	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
Bromomethane	ND		9.9	1.3	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
Bromoform	ND		5.0	2.5	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
Chloroethane	ND		9.9	2.0	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
Chloroform	ND		9.9	0.29	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
Chlorobromomethane	ND		4.9	2.4	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
Dichlorobromomethane	ND		4.9	2.1	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
Chlorodibromomethane	ND		4.9	2.2	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
Isopropylbenzene	ND		4.9	2.4	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
2-Hexanone	ND		20	4.8	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
Chloromethane	ND		9.9	0.76	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
Dichlorodifluoromethane	ND		9.9	2.7	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
trans-1,2-Dichloroethene	ND		2.5	0.38	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
trans-1,3-Dichloropropene	ND		4.9	0.082	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
Methylene Chloride	ND		4.9	1.6	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
Methyl acetate	ND		9.9	2.7	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
Methyl tert-butyl ether	ND		20	2.1	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.3	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
Methylcyclohexane	ND		4.9	0.41	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
Styrene	ND		4.9	0.28	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
1,1,2,2-Tetrachloroethane	ND		4.9	0.28	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
1,2,3-Trichlorobenzene	ND		4.9	0.80	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
1,2,4-Trichlorobenzene	ND		4.9	0.72	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
Toluene	0.45	J	4.9	0.22	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
1,1,1-Trichloroethane	ND		4.9	2.0	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
1,1,2-Trichloroethane	ND		4.9	0.87	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
Trichloroethene	ND		4.9	1.9	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
1,1,2-Trichlorotrifluoroethane	ND		20	1.6	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
Vinyl chloride	ND		4.9	1.3	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-10-10-12

Date Collected: 06/17/20 01:20

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-7

Matrix: Solid

Percent Solids: 96.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		2.5	1.0	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
o-Xylene	ND		2.5	0.26	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
Tetrachloroethene	ND		4.9	1.9	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
1,2-Dichlorobenzene	ND		4.9	1.8	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
1,3-Dichlorobenzene	ND		4.9	0.47	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
1,4-Dichlorobenzene	ND		4.9	0.24	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
cis-1,2-Dichloroethene	ND		2.5	0.20	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
cis-1,3-Dichloropropene	ND		4.9	0.099	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
1,1-Dichloroethane	ND		4.9	0.21	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
1,1-Dichloroethene	ND	*	4.9	0.58	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
1,2-Dichloroethane	ND		4.9	0.69	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
1,2-Dichloropropane	ND		4.9	0.54	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
1,4-Dioxane	ND		490	55	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
Ethylbenzene	ND		4.9	0.30	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
1,2-Dibromoethane	ND		4.9	0.51	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1
Trichlorofluoromethane	ND		9.9	3.2	ug/Kg	☼	06/17/20 01:20	06/28/20 13:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		58 - 140	06/17/20 01:20	06/28/20 13:40	1
Toluene-d8 (Surr)	98		80 - 126	06/17/20 01:20	06/28/20 13:40	1
4-Bromofluorobenzene (Surr)	99		76 - 127	06/17/20 01:20	06/28/20 13:40	1
Dibromofluoromethane (Surr)	96		75 - 121	06/17/20 01:20	06/28/20 13:40	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-10-25-27

Date Collected: 06/17/20 01:50

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-8

Matrix: Solid

Percent Solids: 82.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	*	68	34	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
2-Butanone (MEK)	ND		19	3.7	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
Benzene	ND		4.7	0.14	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
Chlorobenzene	ND		4.7	1.9	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
Carbon disulfide	ND		4.7	1.6	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
Carbon tetrachloride	ND		4.7	1.9	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
Cyclohexane	ND		4.7	1.7	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
1,2-Dibromo-3-Chloropropane	ND		9.4	3.5	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
Bromomethane	ND		9.4	1.3	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
Bromoform	ND		4.8	2.4	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
Chloroethane	ND		9.4	1.9	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
Chloroform	ND		9.4	0.27	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
Chlorobromomethane	ND		4.7	2.3	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
Dichlorobromomethane	ND		4.7	2.0	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
Chlorodibromomethane	ND		4.7	2.1	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
Isopropylbenzene	ND		4.7	2.3	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
2-Hexanone	ND		19	4.6	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
Chloromethane	ND		9.4	0.73	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
Dichlorodifluoromethane	ND		9.4	2.6	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
trans-1,2-Dichloroethene	ND		2.4	0.37	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
trans-1,3-Dichloropropene	ND		4.7	0.078	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
Methylene Chloride	ND		4.7	1.5	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
Methyl acetate	ND		9.4	2.6	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-10-25-27

Date Collected: 06/17/20 01:50

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-8

Matrix: Solid

Percent Solids: 82.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		19	2.0	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
4-Methyl-2-pentanone (MIBK)	ND		19	4.1	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
Methylcyclohexane	ND		4.7	0.40	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
Styrene	ND		4.7	0.26	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
1,1,2,2-Tetrachloroethane	ND		4.7	0.27	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
1,2,3-Trichlorobenzene	ND		4.7	0.76	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
1,2,4-Trichlorobenzene	ND		4.7	0.69	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
Toluene	0.44	J	4.7	0.21	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
1,1,1-Trichloroethane	ND		4.7	1.9	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
1,1,2-Trichloroethane	ND		4.7	0.83	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
Trichloroethene	ND		4.7	1.8	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
1,1,2-Trichlorotrifluoroethane	ND		19	1.6	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
Vinyl chloride	ND		4.7	1.3	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
m-Xylene & p-Xylene	ND		2.4	0.98	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
o-Xylene	ND		2.4	0.25	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
Tetrachloroethene	ND		4.7	1.8	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
1,2-Dichlorobenzene	ND		4.7	1.8	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
1,3-Dichlorobenzene	ND		4.7	0.45	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
1,4-Dichlorobenzene	ND		4.7	0.23	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
cis-1,2-Dichloroethene	ND		2.4	0.19	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
cis-1,3-Dichloropropene	ND		4.7	0.094	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
1,1-Dichloroethane	ND		4.7	0.20	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
1,1-Dichloroethene	ND		4.7	0.56	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
1,2-Dichloroethane	ND		4.7	0.66	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
1,2-Dichloropropane	ND		4.7	0.52	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
1,4-Dioxane	ND		470	53	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
Ethylbenzene	ND		4.7	0.29	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
1,2-Dibromoethane	ND		4.7	0.49	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
Trichlorofluoromethane	ND		9.4	3.0	ug/Kg	☼	06/17/20 01:50	06/21/20 17:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		58 - 140				06/17/20 01:50	06/21/20 17:04	1
Toluene-d8 (Surr)	98		80 - 126				06/17/20 01:50	06/21/20 17:04	1
4-Bromofluorobenzene (Surr)	96		76 - 127				06/17/20 01:50	06/21/20 17:04	1
Dibromofluoromethane (Surr)	100		75 - 121				06/17/20 01:50	06/21/20 17:04	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-10-12

Date Collected: 06/17/20 04:10

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-9

Matrix: Solid

Percent Solids: 95.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	77	*	76	38	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
2-Butanone (MEK)	14	J	21	4.1	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
Benzene	1.4	J	5.3	0.16	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
Chlorobenzene	ND		5.3	2.2	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
Carbon disulfide	ND		5.3	1.8	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
Carbon tetrachloride	ND		5.3	2.1	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
Cyclohexane	ND		5.3	1.9	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
1,2-Dibromo-3-Chloropropane	ND		11	3.9	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
Bromomethane	ND		11	1.4	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
Bromoform	ND		5.4	2.7	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-10-12

Date Collected: 06/17/20 04:10

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-9

Matrix: Solid

Percent Solids: 95.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND		11	2.1	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
Chloroform	ND		11	0.31	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
Chlorobromomethane	ND		5.3	2.6	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
Dichlorobromomethane	ND		5.3	2.2	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
Chlorodibromomethane	ND		5.3	2.4	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
Isopropylbenzene	4.0	J	5.3	2.5	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
2-Hexanone	ND		21	5.2	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
Chloromethane	ND		11	0.81	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
Dichlorodifluoromethane	ND		11	2.9	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
trans-1,2-Dichloroethene	ND		2.6	0.41	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
trans-1,3-Dichloropropene	ND		5.3	0.088	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
Methylene Chloride	ND		5.3	1.7	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
Methyl acetate	5.4	J	11	2.9	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
Methyl tert-butyl ether	ND		21	2.2	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
4-Methyl-2-pentanone (MIBK)	ND		21	4.6	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
Methylcyclohexane	2.8	J	5.3	0.44	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
Styrene	ND		5.3	0.30	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
1,1,2,2-Tetrachloroethane	ND		5.3	0.30	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
1,2,3-Trichlorobenzene	ND		5.3	0.85	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
1,2,4-Trichlorobenzene	ND		5.3	0.77	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
Toluene	4.5	J	5.3	0.24	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
1,1,1-Trichloroethane	ND		5.3	2.1	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
1,1,2-Trichloroethane	ND		5.3	0.93	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
Trichloroethene	ND		5.3	2.0	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
1,1,2-Trichlorotrifluoroethane	ND		21	1.8	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
Vinyl chloride	ND		5.3	1.4	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
m-Xylene & p-Xylene	4.3		2.6	1.1	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
o-Xylene	3.0		2.6	0.28	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
Tetrachloroethene	ND		5.3	2.0	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
1,2-Dichlorobenzene	ND		5.3	2.0	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
1,3-Dichlorobenzene	ND		5.3	0.51	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
1,4-Dichlorobenzene	24		5.3	0.26	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
cis-1,2-Dichloroethene	0.79	J	2.6	0.21	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
cis-1,3-Dichloropropene	ND		5.3	0.11	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
1,1-Dichloroethane	ND		5.3	0.22	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
1,1-Dichloroethene	ND		5.3	0.62	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
1,2-Dichloroethane	ND		5.3	0.74	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
1,2-Dichloropropane	ND		5.3	0.58	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
1,4-Dioxane	ND		530	59	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
Ethylbenzene	2.8	J	5.3	0.32	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
1,2-Dibromoethane	ND		5.3	0.55	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
Trichlorofluoromethane	ND		11	3.4	ug/Kg	☼	06/17/20 04:10	06/21/20 17:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		58 - 140				06/17/20 04:10	06/21/20 17:27	1
Toluene-d8 (Surr)	101		80 - 126				06/17/20 04:10	06/21/20 17:27	1
4-Bromofluorobenzene (Surr)	123		76 - 127				06/17/20 04:10	06/21/20 17:27	1
Dibromofluoromethane (Surr)	99		75 - 121				06/17/20 04:10	06/21/20 17:27	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB-05

Lab Sample ID: 280-137759-10

Date Collected: 06/15/20 21:40

Matrix: Water

Date Received: 06/17/20 14:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		10	1.9	ug/L			06/24/20 11:24	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			06/24/20 11:24	1
Benzene	ND		1.0	0.16	ug/L			06/24/20 11:24	1
Chlorobenzene	ND		1.0	0.17	ug/L			06/24/20 11:24	1
Carbon disulfide	ND		2.0	0.17	ug/L			06/24/20 11:24	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			06/24/20 11:24	1
Cyclohexane	ND		2.0	0.28	ug/L			06/24/20 11:24	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			06/24/20 11:24	1
Bromomethane	ND		2.0	0.21	ug/L			06/24/20 11:24	1
Bromoform	ND		1.0	0.46	ug/L			06/24/20 11:24	1
Chloroethane	ND		2.0	0.41	ug/L			06/24/20 11:24	1
Chloroform	ND		1.0	0.16	ug/L			06/24/20 11:24	1
Chlorobromomethane	ND		1.0	0.10	ug/L			06/24/20 11:24	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			06/24/20 11:24	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			06/24/20 11:24	1
Isopropylbenzene	ND		1.0	0.19	ug/L			06/24/20 11:24	1
2-Hexanone	ND		5.0	1.7	ug/L			06/24/20 11:24	1
Chloromethane	ND		2.0	0.30	ug/L			06/24/20 11:24	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			06/24/20 11:24	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/24/20 11:24	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			06/24/20 11:24	1
Methylene Chloride	ND		2.0	0.94	ug/L			06/24/20 11:24	1
Methyl acetate	ND		5.0	1.6	ug/L			06/24/20 11:24	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			06/24/20 11:24	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			06/24/20 11:24	1
Methylcyclohexane	ND		1.0	0.10	ug/L			06/24/20 11:24	1
Styrene	ND		1.0	0.36	ug/L			06/24/20 11:24	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			06/24/20 11:24	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			06/24/20 11:24	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			06/24/20 11:24	1
Toluene	ND		1.0	0.17	ug/L			06/24/20 11:24	1
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			06/24/20 11:24	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			06/24/20 11:24	1
Trichloroethene	ND		1.0	0.16	ug/L			06/24/20 11:24	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			06/24/20 11:24	1
Vinyl chloride	ND		1.0	0.10	ug/L			06/24/20 11:24	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			06/24/20 11:24	1
o-Xylene	ND		1.0	0.19	ug/L			06/24/20 11:24	1
Tetrachloroethene	ND		1.0	0.20	ug/L			06/24/20 11:24	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			06/24/20 11:24	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			06/24/20 11:24	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			06/24/20 11:24	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/24/20 11:24	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			06/24/20 11:24	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/24/20 11:24	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			06/24/20 11:24	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			06/24/20 11:24	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/24/20 11:24	1
1,4-Dioxane	ND		200	19	ug/L			06/24/20 11:24	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB-05

Date Collected: 06/15/20 21:40

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-10

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		1.0	0.16	ug/L			06/24/20 11:24	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			06/24/20 11:24	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			06/24/20 11:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		70 - 127					06/24/20 11:24	1
Toluene-d8 (Surr)	101		80 - 125					06/24/20 11:24	1
4-Bromofluorobenzene (Surr)	95		78 - 120					06/24/20 11:24	1
Dibromofluoromethane (Surr)	96		77 - 120					06/24/20 11:24	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB-05

Date Collected: 06/15/20 21:40

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-11

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	*	72	36	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
2-Butanone (MEK)	ND		20	3.9	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
Benzene	ND		5.0	0.15	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
Chlorobenzene	ND		5.0	2.1	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
Carbon disulfide	ND		5.0	1.7	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
Carbon tetrachloride	ND		5.0	2.0	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
Cyclohexane	ND		5.0	1.8	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
1,2-Dibromo-3-Chloropropane	ND		10	3.7	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
Bromomethane	ND		10	1.4	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
Bromoform	ND		5.1	2.6	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
Chloroethane	ND		10	2.0	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
Chloroform	ND		10	0.29	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
Chlorobromomethane	ND		5.0	2.5	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
Dichlorobromomethane	ND		5.0	2.1	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
Chlorodibromomethane	ND		5.0	2.3	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
Isopropylbenzene	ND		5.0	2.4	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
2-Hexanone	ND		20	4.9	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
Chloromethane	ND		10	0.77	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
Dichlorodifluoromethane	ND		10	2.7	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
trans-1,2-Dichloroethene	ND		2.5	0.39	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
trans-1,3-Dichloropropene	ND		5.0	0.083	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
Methylene Chloride	1.9	J	5.0	1.6	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
Methyl acetate	ND		10	2.8	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
Methyl tert-butyl ether	ND		20	2.1	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.4	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
Methylcyclohexane	ND		5.0	0.42	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
Styrene	ND		5.0	0.28	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.29	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
1,2,3-Trichlorobenzene	ND		5.0	0.81	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
1,2,4-Trichlorobenzene	ND		5.0	0.73	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
Toluene	ND		5.0	0.23	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
1,1,1-Trichloroethane	ND		5.0	2.0	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
1,1,2-Trichloroethane	ND		5.0	0.88	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
Trichloroethene	ND		5.0	1.9	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
1,1,2-Trichlorotrifluoroethane	ND		20	1.7	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
Vinyl chloride	ND		5.0	1.3	ug/Kg		06/15/20 21:40	06/21/20 14:26	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB-05

Date Collected: 06/15/20 21:40

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-11

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		2.5	1.0	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
o-Xylene	ND		2.5	0.27	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
Tetrachloroethene	ND		5.0	1.9	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
1,2-Dichlorobenzene	ND		5.0	1.9	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
1,3-Dichlorobenzene	ND		5.0	0.48	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
1,4-Dichlorobenzene	ND		5.0	0.25	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
cis-1,2-Dichloroethene	ND		2.5	0.20	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
cis-1,3-Dichloropropene	ND		5.0	0.10	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
1,1-Dichloroethane	ND		5.0	0.21	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
1,1-Dichloroethene	ND		5.0	0.59	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
1,2-Dichloroethane	ND		5.0	0.70	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
1,2-Dichloropropane	ND		5.0	0.55	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
1,4-Dioxane	ND		500	56	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
Ethylbenzene	ND		5.0	0.31	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
1,2-Dibromoethane	ND		5.0	0.52	ug/Kg		06/15/20 21:40	06/21/20 14:26	1
Trichlorofluoromethane	ND		10	3.2	ug/Kg		06/15/20 21:40	06/21/20 14:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		58 - 140	06/15/20 21:40	06/21/20 14:26	1
Toluene-d8 (Surr)	99		80 - 126	06/15/20 21:40	06/21/20 14:26	1
4-Bromofluorobenzene (Surr)	96		76 - 127	06/15/20 21:40	06/21/20 14:26	1
Dibromofluoromethane (Surr)	100		75 - 121	06/15/20 21:40	06/21/20 14:26	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-5-7

Date Collected: 06/15/20 22:30

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-1

Matrix: Solid

Percent Solids: 94.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		320	23	ug/Kg	*	06/18/20 09:43	06/24/20 15:30	1
1,2,4,5-Tetrachlorobenzene	ND		320	48	ug/Kg	*	06/18/20 09:43	06/24/20 15:30	1
1,2,4-Trichlorobenzene	ND		320	27	ug/Kg	*	06/18/20 09:43	06/24/20 15:30	1
1,2-Dichlorobenzene	ND		320	21	ug/Kg	*	06/18/20 09:43	06/24/20 15:30	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		320	21	ug/Kg	*	06/18/20 09:43	06/24/20 15:30	1
1,3-Dichlorobenzene	ND		320	12	ug/Kg	*	06/18/20 09:43	06/24/20 15:30	1
1,3-Dinitrobenzene	ND		320	69	ug/Kg	*	06/18/20 09:43	06/24/20 15:30	1
1,4-Dichlorobenzene	ND		320	13	ug/Kg	*	06/18/20 09:43	06/24/20 15:30	1
1,4-Dioxane	ND		640	64	ug/Kg	*	06/18/20 09:43	06/24/20 15:30	1
1-Methylnaphthalene	ND		320	11	ug/Kg	*	06/18/20 09:43	06/24/20 15:30	1
2,2'-oxybis[1-chloropropane]	ND		320	22	ug/Kg	*	06/18/20 09:43	06/24/20 15:30	1
2,3,4,6-Tetrachlorophenol	ND		1600	130	ug/Kg	*	06/18/20 09:43	06/24/20 15:30	1
2,4,5-Trichlorophenol	ND		320	9.7	ug/Kg	*	06/18/20 09:43	06/24/20 15:30	1
2,4,6-Trichlorophenol	ND		320	9.7	ug/Kg	*	06/18/20 09:43	06/24/20 15:30	1
2,4-Dichlorophenol	ND		320	9.7	ug/Kg	*	06/18/20 09:43	06/24/20 15:30	1
2,4-Dimethylphenol	ND		320	64	ug/Kg	*	06/18/20 09:43	06/24/20 15:30	1
2,4-Dinitrophenol	ND		1600	320	ug/Kg	*	06/18/20 09:43	06/24/20 15:30	1
2,4-Dinitrotoluene	ND		320	64	ug/Kg	*	06/18/20 09:43	06/24/20 15:30	1
2,6-Dichlorophenol	ND		320	22	ug/Kg	*	06/18/20 09:43	06/24/20 15:30	1
2,6-Dinitrotoluene	ND		320	27	ug/Kg	*	06/18/20 09:43	06/24/20 15:30	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-5-7

Lab Sample ID: 280-137759-1

Date Collected: 06/15/20 22:30

Matrix: Solid

Date Received: 06/17/20 14:05

Percent Solids: 94.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloronaphthalene	ND		320	9.7	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
2-Chlorophenol	ND		320	20	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
2-Methylnaphthalene	ND		320	19	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
2-Methylphenol	ND		320	13	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
2-Nitroaniline	ND		1600	49	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
2-Nitrophenol	ND		320	9.7	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
3 & 4 Methylphenol	ND		320	32	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
3,3'-Dichlorobenzidine	ND		640	88	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
3-Methylphenol	ND		320	32	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
3-Nitroaniline	ND		1600	71	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
4,6-Dinitro-2-methylphenol	ND		1600	320	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
4-Bromophenyl phenyl ether	ND		320	19	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
4-Chloro-3-methylphenol	ND		320	24	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
4-Chloroaniline	ND		320	80	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
4-Chlorophenyl phenyl ether	ND		320	20	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
4-Methylphenol	ND		320	32	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
4-Nitroaniline	ND		1600	71	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
4-Nitrophenol	ND		1600	94	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Acenaphthene	ND		320	10	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Acenaphthylene	ND		320	80	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Acetophenone	ND		320	19	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Aniline	ND		320	130	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Anthracene	ND		320	17	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Azobenzene	ND		320	21	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Benzaldehyde	ND		320	65	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Benzidine	ND		3200	960	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Benzo[a]anthracene	ND		320	19	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Benzo[a]pyrene	ND		320	19	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Benzo[b]fluoranthene	ND		320	26	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Benzo[g,h,i]perylene	ND		320	16	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Benzo[k]fluoranthene	ND		320	39	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Benzoic acid	ND		1600	320	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Benzyl alcohol	ND		320	9.7	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Bis(2-chloroethoxy)methane	ND		320	22	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Bis(2-chloroethyl)ether	ND		320	16	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Bis(2-ethylhexyl) phthalate	ND		320	45	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Butyl benzyl phthalate	ND		320	42	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Caprolactam	ND		320	100	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Carbazole	ND		320	35	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Chrysene	ND		320	26	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Dibenz(a,h)anthracene	ND		320	19	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Dibenzofuran	ND		320	19	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Diethyl phthalate	ND		640	25	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Dimethyl phthalate	ND		320	22	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Di-n-butyl phthalate	ND		320	28	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Di-n-octyl phthalate	ND		320	39	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Diphenylamine	ND		320	43	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Famphur	ND		640	33	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Fluoranthene	ND		320	35	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-5-7

Date Collected: 06/15/20 22:30

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-1

Matrix: Solid

Percent Solids: 94.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	ND		320	18	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Hexachlorobenzene	ND		320	28	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Hexachlorobutadiene	ND		320	9.7	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Hexachlorocyclopentadiene	ND		1600	110	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Hexachloroethane	ND		320	21	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Hexadecane	38	J	320	13	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Indeno[1,2,3-cd]pyrene	ND		320	21	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Isophorone	ND		320	17	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Naphthalene	ND		320	30	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Nitrobenzene	ND		320	21	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
N-Nitrosodimethylamine	ND		320	36	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
N-Nitrosodi-n-propylamine	ND		320	66	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
N-Nitrosodiphenylamine	ND		320	20	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Pentachlorophenol	ND		1600	320	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Phenanthrene	ND		320	17	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Phenol	ND		320	18	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Pyrene	15	J	320	12	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1
Pyridine	ND		640	39	ug/Kg	☼	06/18/20 09:43	06/24/20 15:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	71		35 - 120	06/18/20 09:43	06/24/20 15:30	1
2-Fluorobiphenyl	76		46 - 120	06/18/20 09:43	06/24/20 15:30	1
2-Fluorophenol (Surr)	77		43 - 120	06/18/20 09:43	06/24/20 15:30	1
Nitrobenzene-d5 (Surr)	70		46 - 120	06/18/20 09:43	06/24/20 15:30	1
Phenol-d5 (Surr)	82		46 - 120	06/18/20 09:43	06/24/20 15:30	1
Terphenyl-d14 (Surr)	92		46 - 120	06/18/20 09:43	06/24/20 15:30	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-20-22

Date Collected: 06/15/20 23:10

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-2

Matrix: Solid

Percent Solids: 91.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		360	26	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
1,2,4,5-Tetrachlorobenzene	ND		360	54	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
1,2,4-Trichlorobenzene	ND		360	31	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
1,2-Dichlorobenzene	ND		360	24	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		360	24	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
1,3-Dichlorobenzene	ND		360	13	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
1,3-Dinitrobenzene	ND		360	78	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
1,4-Dichlorobenzene	ND		360	15	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
1,4-Dioxane	ND		720	72	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
1-Methylnaphthalene	ND		360	12	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
2,2'-oxybis[1-chloropropane]	ND		360	25	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
2,3,4,6-Tetrachlorophenol	ND		1800	150	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
2,4,5-Trichlorophenol	ND		360	11	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
2,4,6-Trichlorophenol	ND		360	11	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
2,4-Dichlorophenol	ND		360	11	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
2,4-Dimethylphenol	ND		360	72	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
2,4-Dinitrophenol	ND		1800	360	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
2,4-Dinitrotoluene	ND		360	72	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-20-22

Lab Sample ID: 280-137759-2

Date Collected: 06/15/20 23:10

Matrix: Solid

Date Received: 06/17/20 14:05

Percent Solids: 91.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dichlorophenol	ND		360	25	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
2,6-Dinitrotoluene	ND		360	31	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
2-Chloronaphthalene	ND		360	11	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
2-Chlorophenol	ND		360	23	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
2-Methylnaphthalene	ND		360	21	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
2-Methylphenol	ND		360	14	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
2-Nitroaniline	ND		1800	55	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
2-Nitrophenol	ND		360	11	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
3 & 4 Methylphenol	ND		360	36	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
3,3'-Dichlorobenzidine	ND		720	98	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
3-Methylphenol	ND		360	36	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
3-Nitroaniline	ND		1800	80	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
4,6-Dinitro-2-methylphenol	ND		1800	360	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
4-Bromophenyl phenyl ether	ND		360	21	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
4-Chloro-3-methylphenol	ND		360	27	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
4-Chloroaniline	ND		360	90	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
4-Chlorophenyl phenyl ether	ND		360	23	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
4-Methylphenol	ND		360	36	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
4-Nitroaniline	ND		1800	79	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
4-Nitrophenol	ND		1800	110	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Acenaphthene	ND		360	11	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Acenaphthylene	ND		360	90	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Acetophenone	ND		360	22	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Aniline	ND		360	140	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Anthracene	ND		360	19	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Azobenzene	ND		360	24	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Benzaldehyde	ND		360	73	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Benzidine	ND		3600	1100	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Benzo[a]anthracene	84	J	360	22	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Benzo[a]pyrene	130	J	360	22	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Benzo[b]fluoranthene	120	J	360	29	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Benzo[g,h,i]perylene	65	J	360	18	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Benzo[k]fluoranthene	ND		360	44	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Benzoic acid	ND		1800	360	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Benzyl alcohol	ND		360	11	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Bis(2-chloroethoxy)methane	ND		360	25	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Bis(2-chloroethyl)ether	ND		360	18	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Bis(2-ethylhexyl) phthalate	ND		360	50	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Butyl benzyl phthalate	ND		360	47	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Caprolactam	ND		360	120	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Carbazole	ND		360	39	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Chrysene	99	J	360	30	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Dibenz(a,h)anthracene	ND		360	21	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Dibenzofuran	ND		360	22	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Diethyl phthalate	ND		720	28	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Dimethyl phthalate	ND		360	25	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Di-n-butyl phthalate	ND		360	32	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Di-n-octyl phthalate	ND		360	44	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Diphenylamine	ND		360	48	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-20-22

Lab Sample ID: 280-137759-2

Date Collected: 06/15/20 23:10

Matrix: Solid

Date Received: 06/17/20 14:05

Percent Solids: 91.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Famphur	ND		720	37	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Fluoranthene	75	J	360	39	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Fluorene	ND		360	20	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Hexachlorobenzene	ND		360	32	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Hexachlorobutadiene	ND		360	11	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Hexachlorocyclopentadiene	ND		1800	120	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Hexachloroethane	ND		360	23	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Hexadecane	32	J	360	15	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Indeno[1,2,3-cd]pyrene	81	J	360	24	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Isophorone	ND		360	19	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Naphthalene	ND		360	34	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Nitrobenzene	ND		360	24	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
N-Nitrosodimethylamine	ND		360	40	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
N-Nitrosodi-n-propylamine	ND		360	74	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
N-Nitrosodiphenylamine	ND		360	23	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Pentachlorophenol	ND		1800	360	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Phenanthrene	25	J	360	19	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Phenol	ND		360	20	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Pyrene	130	J	360	13	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1
Pyridine	ND		720	44	ug/Kg	☼	06/18/20 09:43	06/24/20 15:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	76		35 - 120	06/18/20 09:43	06/24/20 15:57	1
2-Fluorobiphenyl	68		46 - 120	06/18/20 09:43	06/24/20 15:57	1
2-Fluorophenol (Surr)	69		43 - 120	06/18/20 09:43	06/24/20 15:57	1
Nitrobenzene-d5 (Surr)	62		46 - 120	06/18/20 09:43	06/24/20 15:57	1
Phenol-d5 (Surr)	75		46 - 120	06/18/20 09:43	06/24/20 15:57	1
Terphenyl-d14 (Surr)	92		46 - 120	06/18/20 09:43	06/24/20 15:57	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-09-GW

Lab Sample ID: 280-137759-4

Date Collected: 06/16/20 03:45

Matrix: Water

Date Received: 06/17/20 14:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		10	1.8	ug/L		06/18/20 12:02	07/03/20 23:15	1
1,2,4,5-Tetrachlorobenzene	ND		10	1.7	ug/L		06/18/20 12:02	07/03/20 23:15	1
1,2,4-Trichlorobenzene	ND		4.0	0.59	ug/L		06/18/20 12:02	07/03/20 23:15	1
1,2-Dichlorobenzene	ND		4.0	0.23	ug/L		06/18/20 12:02	07/03/20 23:15	1
1,2-Diphenylhydrazine(as Azobenzene)	ND	*	10	0.23	ug/L		06/18/20 12:02	07/03/20 23:15	1
1,3-Dichlorobenzene	ND	*1	10	0.30	ug/L		06/18/20 12:02	07/03/20 23:15	1
1,3-Dinitrobenzene	ND		10	2.0	ug/L		06/18/20 12:02	07/03/20 23:15	1
1,4-Dichlorobenzene	ND		4.0	1.3	ug/L		06/18/20 12:02	07/03/20 23:15	1
1,4-Dioxane	ND		20	0.45	ug/L		06/18/20 12:02	07/03/20 23:15	1
1-Methylnaphthalene	ND		4.0	0.23	ug/L		06/18/20 12:02	07/03/20 23:15	1
2,2'-oxybis[1-chloropropane]	ND		10	0.28	ug/L		06/18/20 12:02	07/03/20 23:15	1
2,3,4,6-Tetrachlorophenol	ND		50	2.0	ug/L		06/18/20 12:02	07/03/20 23:15	1
2,4,5-Trichlorophenol	ND		10	2.1	ug/L		06/18/20 12:02	07/03/20 23:15	1
2,4,6-Trichlorophenol	ND		10	0.29	ug/L		06/18/20 12:02	07/03/20 23:15	1
2,4-Dichlorophenol	ND		10	0.64	ug/L		06/18/20 12:02	07/03/20 23:15	1
2,4-Dimethylphenol	ND		10	0.58	ug/L		06/18/20 12:02	07/03/20 23:15	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-09-GW

Lab Sample ID: 280-137759-4

Date Collected: 06/16/20 03:45

Matrix: Water

Date Received: 06/17/20 14:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrophenol	ND		30	10	ug/L		06/18/20 12:02	07/03/20 23:15	1
2,4-Dinitrotoluene	ND		10	1.7	ug/L		06/18/20 12:02	07/03/20 23:15	1
2,6-Dichlorophenol	ND		10	1.4	ug/L		06/18/20 12:02	07/03/20 23:15	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		06/18/20 12:02	07/03/20 23:15	1
2-Chloronaphthalene	ND		4.0	0.26	ug/L		06/18/20 12:02	07/03/20 23:15	1
2-Chlorophenol	ND		10	2.0	ug/L		06/18/20 12:02	07/03/20 23:15	1
2-Methylnaphthalene	ND		4.0	1.5	ug/L		06/18/20 12:02	07/03/20 23:15	1
2-Methylphenol	ND		10	0.99	ug/L		06/18/20 12:02	07/03/20 23:15	1
2-Nitroaniline	ND	*	10	1.7	ug/L		06/18/20 12:02	07/03/20 23:15	1
2-Nitrophenol	ND		10	0.39	ug/L		06/18/20 12:02	07/03/20 23:15	1
3 & 4 Methylphenol	ND		10	0.25	ug/L		06/18/20 12:02	07/03/20 23:15	1
3,3'-Dichlorobenzidine	ND		50	2.0	ug/L		06/18/20 12:02	07/03/20 23:15	1
3-Methylphenol	ND		10	0.25	ug/L		06/18/20 12:02	07/03/20 23:15	1
3-Nitroaniline	ND		10	2.0	ug/L		06/18/20 12:02	07/03/20 23:15	1
4,6-Dinitro-2-methylphenol	ND		50	4.0	ug/L		06/18/20 12:02	07/03/20 23:15	1
4-Bromophenyl phenyl ether	ND		10	0.43	ug/L		06/18/20 12:02	07/03/20 23:15	1
4-Chloro-3-methylphenol	ND		10	2.4	ug/L		06/18/20 12:02	07/03/20 23:15	1
4-Chloroaniline	ND		10	2.2	ug/L		06/18/20 12:02	07/03/20 23:15	1
4-Chlorophenyl phenyl ether	ND		10	1.7	ug/L		06/18/20 12:02	07/03/20 23:15	1
4-Methylphenol	ND		10	0.25	ug/L		06/18/20 12:02	07/03/20 23:15	1
4-Nitroaniline	ND	*	10	2.0	ug/L		06/18/20 12:02	07/03/20 23:15	1
4-Nitrophenol	ND		10	1.2	ug/L		06/18/20 12:02	07/03/20 23:15	1
Acenaphthene	ND		4.0	0.28	ug/L		06/18/20 12:02	07/03/20 23:15	1
Acenaphthylene	ND		4.0	0.49	ug/L		06/18/20 12:02	07/03/20 23:15	1
Acetophenone	ND		10	0.24	ug/L		06/18/20 12:02	07/03/20 23:15	1
Aniline	ND		10	2.0	ug/L		06/18/20 12:02	07/03/20 23:15	1
Anthracene	ND		4.0	0.42	ug/L		06/18/20 12:02	07/03/20 23:15	1
Azobenzene	ND	*	4.0	0.23	ug/L		06/18/20 12:02	07/03/20 23:15	1
Benzaldehyde	ND		5.0	2.0	ug/L		06/18/20 12:02	07/03/20 23:15	1
Benzidine	ND		100	50	ug/L		06/18/20 12:02	07/03/20 23:15	1
Benzo[a]anthracene	ND		4.0	0.35	ug/L		06/18/20 12:02	07/03/20 23:15	1
Benzo[a]pyrene	ND		4.0	0.31	ug/L		06/18/20 12:02	07/03/20 23:15	1
Benzo[b]fluoranthene	ND		4.0	0.53	ug/L		06/18/20 12:02	07/03/20 23:15	1
Benzo[g,h,i]perylene	ND		4.0	0.50	ug/L		06/18/20 12:02	07/03/20 23:15	1
Benzo[k]fluoranthene	ND		4.0	0.46	ug/L		06/18/20 12:02	07/03/20 23:15	1
Benzoic acid	ND		25	10	ug/L		06/18/20 12:02	07/03/20 23:15	1
Benzyl alcohol	ND		10	0.23	ug/L		06/18/20 12:02	07/03/20 23:15	1
Bis(2-chloroethoxy)methane	ND		10	0.98	ug/L		06/18/20 12:02	07/03/20 23:15	1
Bis(2-chloroethyl)ether	ND		10	0.84	ug/L		06/18/20 12:02	07/03/20 23:15	1
Bis(2-ethylhexyl) phthalate	ND	*	10	0.56	ug/L		06/18/20 12:02	07/03/20 23:15	1
Butyl benzyl phthalate	ND		4.0	1.0	ug/L		06/18/20 12:02	07/03/20 23:15	1
Caprolactam	ND	*	5.0	2.5	ug/L		06/18/20 12:02	07/03/20 23:15	1
Carbazole	ND		4.0	0.43	ug/L		06/18/20 12:02	07/03/20 23:15	1
Chrysene	ND		4.0	0.54	ug/L		06/18/20 12:02	07/03/20 23:15	1
Dibenz(a,h)anthracene	ND		4.0	0.51	ug/L		06/18/20 12:02	07/03/20 23:15	1
Dibenzofuran	ND		4.0	0.29	ug/L		06/18/20 12:02	07/03/20 23:15	1
Diethyl phthalate	ND		4.0	0.38	ug/L		06/18/20 12:02	07/03/20 23:15	1
Dimethyl phthalate	ND		4.0	0.21	ug/L		06/18/20 12:02	07/03/20 23:15	1
Di-n-butyl phthalate	ND		4.0	1.2	ug/L		06/18/20 12:02	07/03/20 23:15	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-09-GW

Lab Sample ID: 280-137759-4

Date Collected: 06/16/20 03:45

Matrix: Water

Date Received: 06/17/20 14:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate	ND		4.0	0.35	ug/L		06/18/20 12:02	07/03/20 23:15	1
Diphenylamine	ND		10	1.1	ug/L		06/18/20 12:02	07/03/20 23:15	1
Famphur	ND		100	1.5	ug/L		06/18/20 12:02	07/03/20 23:15	1
Fluoranthene	ND		4.0	0.20	ug/L		06/18/20 12:02	07/03/20 23:15	1
Fluorene	ND		4.0	0.31	ug/L		06/18/20 12:02	07/03/20 23:15	1
Hexachlorobenzene	ND		10	0.66	ug/L		06/18/20 12:02	07/03/20 23:15	1
Hexachlorobutadiene	ND		10	3.3	ug/L		06/18/20 12:02	07/03/20 23:15	1
Hexachlorocyclopentadiene	ND		50	3.1	ug/L		06/18/20 12:02	07/03/20 23:15	1
Hexachloroethane	ND		10	0.99	ug/L		06/18/20 12:02	07/03/20 23:15	1
Hexadecane	ND		10	0.54	ug/L		06/18/20 12:02	07/03/20 23:15	1
Indeno[1,2,3-cd]pyrene	ND		4.0	0.65	ug/L		06/18/20 12:02	07/03/20 23:15	1
Isophorone	ND		10	0.21	ug/L		06/18/20 12:02	07/03/20 23:15	1
Naphthalene	ND		4.0	0.29	ug/L		06/18/20 12:02	07/03/20 23:15	1
Nitrobenzene	ND		10	0.82	ug/L		06/18/20 12:02	07/03/20 23:15	1
N-Nitrosodimethylamine	ND		10	0.29	ug/L		06/18/20 12:02	07/03/20 23:15	1
N-Nitrosodi-n-propylamine	ND		10	0.35	ug/L		06/18/20 12:02	07/03/20 23:15	1
N-Nitrosodiphenylamine	ND		10	0.44	ug/L		06/18/20 12:02	07/03/20 23:15	1
Pentachlorophenol	ND		50	20	ug/L		06/18/20 12:02	07/03/20 23:15	1
Phenanthrene	ND		4.0	0.26	ug/L		06/18/20 12:02	07/03/20 23:15	1
Phenol	ND		10	2.0	ug/L		06/18/20 12:02	07/03/20 23:15	1
Pyrene	ND		10	0.37	ug/L		06/18/20 12:02	07/03/20 23:15	1
Pyridine	ND		20	1.7	ug/L		06/18/20 12:02	07/03/20 23:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	75		42 - 131	06/18/20 12:02	07/03/20 23:15	1
2-Fluorobiphenyl	66		48 - 120	06/18/20 12:02	07/03/20 23:15	1
2-Fluorophenol (Surr)	57		41 - 120	06/18/20 12:02	07/03/20 23:15	1
Nitrobenzene-d5 (Surr)	65		42 - 120	06/18/20 12:02	07/03/20 23:15	1
Phenol-d5 (Surr)	66		45 - 124	06/18/20 12:02	07/03/20 23:15	1
Terphenyl-d14 (Surr)	24		20 - 130	06/18/20 12:02	07/03/20 23:15	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-15-17

Lab Sample ID: 280-137759-5

Date Collected: 06/16/20 23:10

Matrix: Solid

Date Received: 06/17/20 14:05

Percent Solids: 87.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		340	25	ug/Kg	*	06/18/20 09:43	06/24/20 16:25	1
1,2,4,5-Tetrachlorobenzene	ND		340	51	ug/Kg	*	06/18/20 09:43	06/24/20 16:25	1
1,2,4-Trichlorobenzene	ND		340	29	ug/Kg	*	06/18/20 09:43	06/24/20 16:25	1
1,2-Dichlorobenzene	ND		340	23	ug/Kg	*	06/18/20 09:43	06/24/20 16:25	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		340	23	ug/Kg	*	06/18/20 09:43	06/24/20 16:25	1
1,3-Dichlorobenzene	ND		340	13	ug/Kg	*	06/18/20 09:43	06/24/20 16:25	1
1,3-Dinitrobenzene	ND		340	74	ug/Kg	*	06/18/20 09:43	06/24/20 16:25	1
1,4-Dichlorobenzene	ND		340	14	ug/Kg	*	06/18/20 09:43	06/24/20 16:25	1
1,4-Dioxane	ND		690	69	ug/Kg	*	06/18/20 09:43	06/24/20 16:25	1
1-Methylnaphthalene	ND		340	12	ug/Kg	*	06/18/20 09:43	06/24/20 16:25	1
2,2'-oxybis[1-chloropropane]	ND		340	24	ug/Kg	*	06/18/20 09:43	06/24/20 16:25	1
2,3,4,6-Tetrachlorophenol	ND		1700	140	ug/Kg	*	06/18/20 09:43	06/24/20 16:25	1
2,4,5-Trichlorophenol	ND		340	10	ug/Kg	*	06/18/20 09:43	06/24/20 16:25	1
2,4,6-Trichlorophenol	ND		340	10	ug/Kg	*	06/18/20 09:43	06/24/20 16:25	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-15-17

Lab Sample ID: 280-137759-5

Date Collected: 06/16/20 23:10

Matrix: Solid

Date Received: 06/17/20 14:05

Percent Solids: 87.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND		340	10	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
2,4-Dimethylphenol	ND		340	69	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
2,4-Dinitrophenol	ND		1700	350	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
2,4-Dinitrotoluene	ND		340	69	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
2,6-Dichlorophenol	ND		340	23	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
2,6-Dinitrotoluene	ND		340	29	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
2-Chloronaphthalene	ND		340	10	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
2-Chlorophenol	ND		340	22	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
2-Methylnaphthalene	ND		340	20	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
2-Methylphenol	ND		340	14	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
2-Nitroaniline	ND		1700	52	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
2-Nitrophenol	ND		340	10	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
3 & 4 Methylphenol	ND		340	34	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
3,3'-Dichlorobenzidine	ND		690	94	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
3-Methylphenol	ND		340	34	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
3-Nitroaniline	ND		1700	76	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
4,6-Dinitro-2-methylphenol	ND		1700	340	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
4-Bromophenyl phenyl ether	ND		340	20	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
4-Chloro-3-methylphenol	ND		340	26	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
4-Chloroaniline	ND		340	85	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
4-Chlorophenyl phenyl ether	ND		340	22	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
4-Methylphenol	ND		340	34	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
4-Nitroaniline	ND		1700	76	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
4-Nitrophenol	ND		1700	100	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Acenaphthene	ND		340	11	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Acenaphthylene	ND		340	86	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Acetophenone	ND		340	21	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Aniline	ND		340	140	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Anthracene	ND		340	18	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Azobenzene	ND		340	23	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Benzaldehyde	ND		340	70	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Benzidine	ND		3400	1000	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Benzo[a]anthracene	ND		340	21	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Benzo[a]pyrene	ND		340	21	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Benzo[b]fluoranthene	ND		340	27	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Benzo[g,h,i]perylene	ND		340	17	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Benzo[k]fluoranthene	ND		340	42	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Benzoic acid	ND		1700	340	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Benzyl alcohol	ND		340	10	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Bis(2-chloroethoxy)methane	ND		340	24	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Bis(2-chloroethyl)ether	ND		340	17	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Bis(2-ethylhexyl) phthalate	ND		340	48	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Butyl benzyl phthalate	ND		340	45	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Caprolactam	ND		340	110	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Carbazole	ND		340	38	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Chrysene	ND		340	28	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Dibenz(a,h)anthracene	ND		340	20	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Dibenzofuran	ND		340	21	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Diethyl phthalate	ND		690	27	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-15-17

Date Collected: 06/16/20 23:10

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-5

Matrix: Solid

Percent Solids: 87.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl phthalate	ND		340	24	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Di-n-butyl phthalate	ND		340	30	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Di-n-octyl phthalate	ND		340	42	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Diphenylamine	ND		340	46	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Famphur	ND		690	35	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Fluoranthene	ND		340	38	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Fluorene	ND		340	19	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Hexachlorobenzene	ND		340	30	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Hexachlorobutadiene	ND		340	10	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Hexachlorocyclopentadiene	ND		1700	120	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Hexachloroethane	ND		340	22	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Hexadecane	ND		340	14	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Indeno[1,2,3-cd]pyrene	ND		340	23	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Isophorone	ND		340	18	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Naphthalene	ND		340	32	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Nitrobenzene	ND		340	23	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
N-Nitrosodimethylamine	ND		340	39	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
N-Nitrosodi-n-propylamine	ND		340	71	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
N-Nitrosodiphenylamine	ND		340	22	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Pentachlorophenol	ND		1700	340	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Phenanthrene	ND		340	18	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Phenol	ND		340	19	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Pyrene	ND		340	13	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1
Pyridine	ND		690	42	ug/Kg	☼	06/18/20 09:43	06/24/20 16:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	76		35 - 120	06/18/20 09:43	06/24/20 16:25	1
2-Fluorobiphenyl	72		46 - 120	06/18/20 09:43	06/24/20 16:25	1
2-Fluorophenol (Surr)	73		43 - 120	06/18/20 09:43	06/24/20 16:25	1
Nitrobenzene-d5 (Surr)	72		46 - 120	06/18/20 09:43	06/24/20 16:25	1
Phenol-d5 (Surr)	77		46 - 120	06/18/20 09:43	06/24/20 16:25	1
Terphenyl-d14 (Surr)	90		46 - 120	06/18/20 09:43	06/24/20 16:25	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-25-27

Date Collected: 06/16/20 23:45

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-6

Matrix: Solid

Percent Solids: 96.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		320	23	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
1,2,4,5-Tetrachlorobenzene	ND		320	47	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
1,2,4-Trichlorobenzene	ND		320	27	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
1,2-Dichlorobenzene	ND		320	21	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		320	21	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
1,3-Dichlorobenzene	ND		320	12	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
1,3-Dinitrobenzene	ND		320	69	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
1,4-Dichlorobenzene	ND		320	13	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
1,4-Dioxane	ND		640	64	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
1-Methylnaphthalene	ND		320	11	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
2,2'-oxybis[1-chloropropane]	ND		320	22	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
2,3,4,6-Tetrachlorophenol	ND		1500	130	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-25-27

Lab Sample ID: 280-137759-6

Date Collected: 06/16/20 23:45

Matrix: Solid

Date Received: 06/17/20 14:05

Percent Solids: 96.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		320	9.7	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
2,4,6-Trichlorophenol	ND		320	9.7	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
2,4-Dichlorophenol	ND		320	9.7	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
2,4-Dimethylphenol	ND		320	64	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
2,4-Dinitrophenol	ND		1500	320	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
2,4-Dinitrotoluene	ND		320	64	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
2,6-Dichlorophenol	ND		320	22	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
2,6-Dinitrotoluene	ND		320	27	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
2-Chloronaphthalene	ND		320	9.7	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
2-Chlorophenol	ND		320	20	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
2-Methylnaphthalene	ND		320	18	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
2-Methylphenol	ND		320	13	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
2-Nitroaniline	ND		1500	48	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
2-Nitrophenol	ND		320	9.7	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
3 & 4 Methylphenol	ND		320	32	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
3,3'-Dichlorobenzidine	ND		640	87	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
3-Methylphenol	ND		320	32	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
3-Nitroaniline	ND		1500	70	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
4,6-Dinitro-2-methylphenol	ND		1500	320	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
4-Bromophenyl phenyl ether	ND		320	18	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
4-Chloro-3-methylphenol	ND		320	24	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
4-Chloroaniline	ND		320	79	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
4-Chlorophenyl phenyl ether	ND		320	20	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
4-Methylphenol	ND		320	32	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
4-Nitroaniline	ND		1500	70	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
4-Nitrophenol	ND		1500	94	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Acenaphthene	ND		320	9.9	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Acenaphthylene	ND		320	79	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Acetophenone	ND		320	19	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Aniline	ND		320	130	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Anthracene	ND		320	16	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Azobenzene	ND		320	21	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Benzaldehyde	ND		320	65	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Benzidine	ND		3200	960	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Benzo[a]anthracene	ND		320	19	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Benzo[a]pyrene	ND		320	19	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Benzo[b]fluoranthene	ND		320	25	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Benzo[g,h,i]perylene	ND		320	15	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Benzo[k]fluoranthene	ND		320	39	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Benzoic acid	ND		1500	320	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Benzyl alcohol	ND		320	9.7	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Bis(2-chloroethoxy)methane	ND		320	22	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Bis(2-chloroethyl)ether	ND		320	16	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Bis(2-ethylhexyl) phthalate	ND		320	44	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Butyl benzyl phthalate	ND		320	42	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Caprolactam	ND		320	100	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Carbazole	ND		320	35	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Chrysene	ND		320	26	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Dibenz(a,h)anthracene	ND		320	18	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-25-27

Date Collected: 06/16/20 23:45

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-6

Matrix: Solid

Percent Solids: 96.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenzofuran	ND		320	19	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Diethyl phthalate	ND		640	25	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Dimethyl phthalate	ND		320	22	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Di-n-butyl phthalate	ND		320	28	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Di-n-octyl phthalate	ND		320	39	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Diphenylamine	ND		320	42	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Famphur	ND		640	33	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Fluoranthene	ND		320	35	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Fluorene	ND		320	17	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Hexachlorobenzene	ND		320	28	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Hexachlorobutadiene	ND		320	9.7	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Hexachlorocyclopentadiene	ND		1500	110	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Hexachloroethane	ND		320	21	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Hexadecane	ND		320	13	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Indeno[1,2,3-cd]pyrene	ND		320	21	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Isophorone	ND		320	16	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Naphthalene	ND		320	30	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Nitrobenzene	ND		320	21	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
N-Nitrosodimethylamine	ND		320	36	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
N-Nitrosodi-n-propylamine	ND		320	66	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
N-Nitrosodiphenylamine	ND		320	20	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Pentachlorophenol	ND		1500	320	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Phenanthrene	ND		320	16	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Phenol	ND		320	17	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Pyrene	ND		320	12	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1
Pyridine	ND		640	39	ug/Kg	☼	06/18/20 09:43	06/24/20 16:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	70		35 - 120	06/18/20 09:43	06/24/20 16:52	1
2-Fluorobiphenyl	67		46 - 120	06/18/20 09:43	06/24/20 16:52	1
2-Fluorophenol (Surr)	70		43 - 120	06/18/20 09:43	06/24/20 16:52	1
Nitrobenzene-d5 (Surr)	66		46 - 120	06/18/20 09:43	06/24/20 16:52	1
Phenol-d5 (Surr)	74		46 - 120	06/18/20 09:43	06/24/20 16:52	1
Terphenyl-d14 (Surr)	94		46 - 120	06/18/20 09:43	06/24/20 16:52	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-10-10-12

Date Collected: 06/17/20 01:20

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-7

Matrix: Solid

Percent Solids: 96.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		320	23	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
1,2,4,5-Tetrachlorobenzene	ND		320	47	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
1,2,4-Trichlorobenzene	ND		320	27	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
1,2-Dichlorobenzene	ND		320	21	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		320	21	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
1,3-Dichlorobenzene	ND		320	12	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
1,3-Dinitrobenzene	ND		320	68	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
1,4-Dichlorobenzene	ND		320	13	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
1,4-Dioxane	ND		640	64	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
1-Methylnaphthalene	ND		320	11	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-10-10-12

Lab Sample ID: 280-137759-7

Date Collected: 06/17/20 01:20

Matrix: Solid

Date Received: 06/17/20 14:05

Percent Solids: 96.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2'-oxybis[1-chloropropane]	ND		320	22	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
2,3,4,6-Tetrachlorophenol	ND		1500	130	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
2,4,5-Trichlorophenol	ND		320	9.6	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
2,4,6-Trichlorophenol	ND		320	9.6	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
2,4-Dichlorophenol	ND		320	9.6	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
2,4-Dimethylphenol	ND		320	64	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
2,4-Dinitrophenol	ND		1500	320	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
2,4-Dinitrotoluene	ND		320	64	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
2,6-Dichlorophenol	ND		320	22	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
2,6-Dinitrotoluene	ND		320	27	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
2-Chloronaphthalene	ND		320	9.6	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
2-Chlorophenol	ND		320	20	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
2-Methylnaphthalene	ND		320	18	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
2-Methylphenol	ND		320	13	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
2-Nitroaniline	ND		1500	48	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
2-Nitrophenol	ND		320	9.6	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
3 & 4 Methylphenol	ND		320	32	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
3,3'-Dichlorobenzidine	ND		640	87	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
3-Methylphenol	ND		320	32	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
3-Nitroaniline	ND		1500	70	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
4,6-Dinitro-2-methylphenol	ND		1500	320	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
4-Bromophenyl phenyl ether	ND		320	18	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
4-Chloro-3-methylphenol	ND		320	24	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
4-Chloroaniline	ND		320	79	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
4-Chlorophenyl phenyl ether	ND		320	20	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
4-Methylphenol	ND		320	32	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
4-Nitroaniline	ND		1500	70	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
4-Nitrophenol	ND		1500	94	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Acenaphthene	ND		320	9.9	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Acenaphthylene	ND		320	79	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Acetophenone	ND		320	19	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Aniline	ND		320	130	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Anthracene	ND		320	16	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Azobenzene	ND		320	21	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Benzaldehyde	ND		320	65	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Benzidine	ND		3200	960	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Benzo[a]anthracene	ND		320	19	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Benzo[a]pyrene	ND		320	19	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Benzo[b]fluoranthene	ND		320	25	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Benzo[g,h,i]perylene	ND		320	15	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Benzo[k]fluoranthene	ND		320	39	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Benzoic acid	ND		1500	320	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Benzyl alcohol	ND		320	9.6	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Bis(2-chloroethoxy)methane	ND		320	22	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Bis(2-chloroethyl)ether	ND		320	16	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Bis(2-ethylhexyl) phthalate	ND		320	44	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Butyl benzyl phthalate	ND		320	41	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Caprolactam	ND		320	100	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Carbazole	ND		320	35	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-10-10-12

Date Collected: 06/17/20 01:20

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-7

Matrix: Solid

Percent Solids: 96.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	ND		320	26	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Dibenz(a,h)anthracene	ND		320	18	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Dibenzofuran	ND		320	19	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Diethyl phthalate	ND		640	25	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Dimethyl phthalate	ND		320	22	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Di-n-butyl phthalate	ND		320	28	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Di-n-octyl phthalate	ND		320	39	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Diphenylamine	ND		320	42	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Famphur	ND		640	33	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Fluoranthene	ND		320	35	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Fluorene	ND		320	17	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Hexachlorobenzene	ND		320	28	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Hexachlorobutadiene	ND		320	9.6	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Hexachlorocyclopentadiene	ND		1500	110	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Hexachloroethane	ND		320	21	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Hexadecane	ND		320	13	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Indeno[1,2,3-cd]pyrene	ND		320	21	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Isophorone	ND		320	16	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Naphthalene	ND		320	30	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Nitrobenzene	ND		320	21	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
N-Nitrosodimethylamine	ND		320	36	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
N-Nitrosodi-n-propylamine	ND		320	66	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
N-Nitrosodiphenylamine	ND		320	20	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Pentachlorophenol	ND		1500	320	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Phenanthrene	ND		320	16	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Phenol	ND		320	17	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Pyrene	ND		320	12	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1
Pyridine	ND		640	39	ug/Kg	☼	06/18/20 09:43	06/24/20 17:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	66		35 - 120	06/18/20 09:43	06/24/20 17:20	1
2-Fluorobiphenyl	69		46 - 120	06/18/20 09:43	06/24/20 17:20	1
2-Fluorophenol (Surr)	72		43 - 120	06/18/20 09:43	06/24/20 17:20	1
Nitrobenzene-d5 (Surr)	68		46 - 120	06/18/20 09:43	06/24/20 17:20	1
Phenol-d5 (Surr)	76		46 - 120	06/18/20 09:43	06/24/20 17:20	1
Terphenyl-d14 (Surr)	89		46 - 120	06/18/20 09:43	06/24/20 17:20	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-10-25-27

Date Collected: 06/17/20 01:50

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-8

Matrix: Solid

Percent Solids: 82.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		380	28	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
1,2,4,5-Tetrachlorobenzene	ND		380	57	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
1,2,4-Trichlorobenzene	ND		380	32	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
1,2-Dichlorobenzene	ND		380	25	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		380	25	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
1,3-Dichlorobenzene	ND		380	14	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
1,3-Dinitrobenzene	ND		380	82	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
1,4-Dichlorobenzene	ND		380	16	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-10-25-27

Lab Sample ID: 280-137759-8

Date Collected: 06/17/20 01:50

Matrix: Solid

Date Received: 06/17/20 14:05

Percent Solids: 82.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		760	76	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
1-Methylnaphthalene	ND		380	13	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
2,2'-oxybis[1-chloropropane]	ND		380	27	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
2,3,4,6-Tetrachlorophenol	ND		1800	160	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
2,4,5-Trichlorophenol	ND		380	12	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
2,4,6-Trichlorophenol	ND		380	12	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
2,4-Dichlorophenol	ND		380	12	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
2,4-Dimethylphenol	ND		380	76	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
2,4-Dinitrophenol	ND		1800	380	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
2,4-Dinitrotoluene	ND		380	76	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
2,6-Dichlorophenol	ND		380	26	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
2,6-Dinitrotoluene	ND		380	32	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
2-Chloronaphthalene	ND		380	12	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
2-Chlorophenol	ND		380	24	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
2-Methylnaphthalene	ND		380	22	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
2-Methylphenol	ND		380	15	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
2-Nitroaniline	ND		1800	58	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
2-Nitrophenol	ND		380	12	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
3 & 4 Methylphenol	ND		380	38	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
3,3'-Dichlorobenzidine	ND		760	100	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
3-Methylphenol	ND		380	38	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
3-Nitroaniline	ND		1800	84	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
4,6-Dinitro-2-methylphenol	ND		1800	380	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
4-Bromophenyl phenyl ether	ND		380	22	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
4-Chloro-3-methylphenol	ND		380	29	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
4-Chloroaniline	ND		380	95	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
4-Chlorophenyl phenyl ether	ND		380	24	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
4-Methylphenol	ND		380	38	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
4-Nitroaniline	ND		1800	84	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
4-Nitrophenol	ND		1800	110	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Acenaphthene	ND		380	12	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Acenaphthylene	ND		380	95	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Acetophenone	ND		380	23	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Aniline	ND		380	150	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Anthracene	ND		380	20	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Azobenzene	ND		380	25	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Benzaldehyde	ND		380	77	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Benzidine	ND		3800	1100	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Benzo[a]anthracene	ND		380	23	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Benzo[a]pyrene	ND		380	23	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Benzo[b]fluoranthene	ND		380	30	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Benzo[g,h,i]perylene	ND		380	18	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Benzo[k]fluoranthene	ND		380	46	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Benzoic acid	ND		1800	380	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Benzyl alcohol	ND		380	12	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Bis(2-chloroethoxy)methane	ND		380	27	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Bis(2-chloroethyl)ether	ND		380	19	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Bis(2-ethylhexyl) phthalate	ND		380	53	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Butyl benzyl phthalate	ND		380	50	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-10-25-27

Date Collected: 06/17/20 01:50

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-8

Matrix: Solid

Percent Solids: 82.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Caprolactam	ND		380	120	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Carbazole	ND		380	42	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Chrysene	ND		380	31	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Dibenz(a,h)anthracene	ND		380	22	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Dibenzofuran	ND		380	23	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Diethyl phthalate	ND		760	30	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Dimethyl phthalate	ND		380	27	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Di-n-butyl phthalate	ND		380	34	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Di-n-octyl phthalate	ND		380	47	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Diphenylamine	ND		380	51	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Famphur	ND		760	39	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Fluoranthene	ND		380	42	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Fluorene	ND		380	21	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Hexachlorobenzene	ND		380	34	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Hexachlorobutadiene	ND		380	12	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Hexachlorocyclopentadiene	ND		1800	130	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Hexachloroethane	ND		380	25	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Hexadecane	ND		380	15	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Indeno[1,2,3-cd]pyrene	ND		380	25	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Isophorone	ND		380	20	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Naphthalene	ND		380	36	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Nitrobenzene	ND		380	25	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
N-Nitrosodimethylamine	ND		380	43	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
N-Nitrosodi-n-propylamine	ND		380	79	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
N-Nitrosodiphenylamine	ND		380	24	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Pentachlorophenol	ND		1800	380	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Phenanthrene	ND		380	20	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Phenol	ND		380	21	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Pyrene	ND		380	14	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1
Pyridine	ND		760	46	ug/Kg	☼	06/18/20 09:43	06/24/20 17:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	70		35 - 120	06/18/20 09:43	06/24/20 17:47	1
2-Fluorobiphenyl	63		46 - 120	06/18/20 09:43	06/24/20 17:47	1
2-Fluorophenol (Surr)	69		43 - 120	06/18/20 09:43	06/24/20 17:47	1
Nitrobenzene-d5 (Surr)	62		46 - 120	06/18/20 09:43	06/24/20 17:47	1
Phenol-d5 (Surr)	71		46 - 120	06/18/20 09:43	06/24/20 17:47	1
Terphenyl-d14 (Surr)	92		46 - 120	06/18/20 09:43	06/24/20 17:47	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-10-12

Date Collected: 06/17/20 04:10

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-9

Matrix: Solid

Percent Solids: 95.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		320	23	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
1,2,4,5-Tetrachlorobenzene	ND		320	47	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
1,2,4-Trichlorobenzene	ND		320	27	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
1,2-Dichlorobenzene	ND		320	21	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		320	21	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
1,3-Dichlorobenzene	ND		320	11	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-10-12

Lab Sample ID: 280-137759-9

Date Collected: 06/17/20 04:10

Matrix: Solid

Date Received: 06/17/20 14:05

Percent Solids: 95.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dinitrobenzene	ND		320	68	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
1,4-Dichlorobenzene	ND		320	13	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
1,4-Dioxane	ND		630	63	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
1-Methylnaphthalene	ND		320	11	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
2,2'-oxybis[1-chloropropane]	ND		320	22	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
2,3,4,6-Tetrachlorophenol	ND		1500	130	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
2,4,5-Trichlorophenol	ND		320	9.6	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
2,4,6-Trichlorophenol	ND		320	9.6	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
2,4-Dichlorophenol	ND		320	9.6	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
2,4-Dimethylphenol	ND		320	63	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
2,4-Dinitrophenol	ND		1500	320	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
2,4-Dinitrotoluene	ND		320	63	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
2,6-Dichlorophenol	ND		320	21	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
2,6-Dinitrotoluene	ND		320	27	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
2-Chloronaphthalene	ND		320	9.6	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
2-Chlorophenol	ND		320	20	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
2-Methylnaphthalene	ND		320	18	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
2-Methylphenol	ND		320	12	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
2-Nitroaniline	ND		1500	48	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
2-Nitrophenol	ND		320	9.6	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
3 & 4 Methylphenol	ND		320	32	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
3,3'-Dichlorobenzidine	ND		630	86	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
3-Methylphenol	ND		320	32	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
3-Nitroaniline	ND		1500	70	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
4,6-Dinitro-2-methylphenol	ND		1500	320	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
4-Bromophenyl phenyl ether	ND		320	18	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
4-Chloro-3-methylphenol	ND		320	24	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
4-Chloroaniline	ND		320	78	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
4-Chlorophenyl phenyl ether	ND		320	20	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
4-Methylphenol	ND		320	32	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
4-Nitroaniline	ND		1500	69	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
4-Nitrophenol	ND	F1	1500	93	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Acenaphthene	ND		320	9.8	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Acenaphthylene	ND		320	78	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Acetophenone	ND		320	19	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Aniline	ND		320	120	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Anthracene	ND		320	16	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Azobenzene	ND		320	21	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Benzaldehyde	ND		320	64	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Benzidine	ND		3200	950	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Benzo[a]anthracene	ND		320	19	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Benzo[a]pyrene	ND		320	19	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Benzo[b]fluoranthene	ND		320	25	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Benzo[g,h,i]perylene	ND		320	15	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Benzo[k]fluoranthene	ND		320	38	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Benzoic acid	ND	F1	1500	320	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Benzyl alcohol	ND		320	9.6	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Bis(2-chloroethoxy)methane	ND		320	22	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Bis(2-chloroethyl)ether	ND		320	16	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-10-12

Lab Sample ID: 280-137759-9

Date Collected: 06/17/20 04:10

Matrix: Solid

Date Received: 06/17/20 14:05

Percent Solids: 95.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	91	J	320	44	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Butyl benzyl phthalate	47	J	320	41	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Caprolactam	ND		320	100	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Carbazole	ND		320	34	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Chrysene	ND		320	26	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Dibenz(a,h)anthracene	ND		320	18	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Dibenzofuran	ND		320	19	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Diethyl phthalate	ND		630	25	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Dimethyl phthalate	ND		320	22	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Di-n-butyl phthalate	ND		320	28	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Di-n-octyl phthalate	ND		320	39	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Diphenylamine	ND		320	42	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Famphur	ND		630	33	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Fluoranthene	ND		320	34	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Fluorene	ND		320	17	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Hexachlorobenzene	ND		320	28	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Hexachlorobutadiene	ND		320	9.6	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Hexachlorocyclopentadiene	ND		1500	110	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Hexachloroethane	ND		320	20	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Hexadecane	98	J	320	13	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Indeno[1,2,3-cd]pyrene	ND		320	21	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Isophorone	ND		320	16	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Naphthalene	ND		320	30	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Nitrobenzene	ND		320	21	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
N-Nitrosodimethylamine	ND		320	35	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
N-Nitrosodi-n-propylamine	ND		320	65	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
N-Nitrosodiphenylamine	ND		320	20	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Pentachlorophenol	ND		1500	320	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Phenanthrene	ND		320	16	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Phenol	ND		320	17	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Pyrene	ND		320	12	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1
Pyridine	ND		630	38	ug/Kg	☼	06/18/20 09:43	06/24/20 18:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	76		35 - 120	06/18/20 09:43	06/24/20 18:15	1
2-Fluorobiphenyl	68		46 - 120	06/18/20 09:43	06/24/20 18:15	1
2-Fluorophenol (Surr)	64		43 - 120	06/18/20 09:43	06/24/20 18:15	1
Nitrobenzene-d5 (Surr)	60		46 - 120	06/18/20 09:43	06/24/20 18:15	1
Phenol-d5 (Surr)	68		46 - 120	06/18/20 09:43	06/24/20 18:15	1
Terphenyl-d14 (Surr)	93		46 - 120	06/18/20 09:43	06/24/20 18:15	1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-5-7

Lab Sample ID: 280-137759-1

Date Collected: 06/15/20 22:30

Matrix: Solid

Date Received: 06/17/20 14:05

Percent Solids: 94.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.2	0.82	mg/Kg	☼	06/15/20 22:30	06/27/20 10:50	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics) (Continued)

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
a,a,a-Trifluorotoluene	104		77 - 123				06/15/20 22:30	06/27/20 10:50	1	
Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-20-22							Lab Sample ID: 280-137759-2			
Date Collected: 06/15/20 23:10							Matrix: Solid			
Date Received: 06/17/20 14:05							Percent Solids: 91.1			
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO) -C6-C10	ND		2.0	0.75	mg/Kg	☼	06/15/20 23:10	06/27/20 11:10	1	
Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-09-GW							Lab Sample ID: 280-137759-4			
Date Collected: 06/16/20 03:45							Matrix: Water			
Date Received: 06/17/20 14:05										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO) -C6-C10	ND		25	10	ug/L			06/24/20 07:36	1	
Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-15-17							Lab Sample ID: 280-137759-5			
Date Collected: 06/16/20 23:10							Matrix: Solid			
Date Received: 06/17/20 14:05							Percent Solids: 87.5			
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO) -C6-C10	ND		2.3	0.87	mg/Kg	☼	06/16/20 23:10	06/29/20 12:14	1	
Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-25-27							Lab Sample ID: 280-137759-6			
Date Collected: 06/16/20 23:45							Matrix: Solid			
Date Received: 06/17/20 14:05							Percent Solids: 96.5			
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO) -C6-C10	ND		2.3	0.86	mg/Kg	☼	06/16/20 23:45	06/29/20 12:34	1	
Client Sample ID: CDOT I270 Env-05/06_2020-SB-10-10-12							Lab Sample ID: 280-137759-7			
Date Collected: 06/17/20 01:20							Matrix: Solid			
Date Received: 06/17/20 14:05							Percent Solids: 96.9			
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO) -C6-C10	ND		2.5	0.93	mg/Kg	☼	06/17/20 01:20	06/29/20 12:54	1	

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-10-25-27

Date Collected: 06/17/20 01:50

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-8

Matrix: Solid

Percent Solids: 82.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.5	0.94	mg/Kg	☼	06/17/20 01:50	06/29/20 13:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	100		77 - 123				06/17/20 01:50	06/29/20 13:14	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-10-12

Date Collected: 06/17/20 04:10

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-9

Matrix: Solid

Percent Solids: 95.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	18		2.6	0.97	mg/Kg	☼	06/17/20 04:10	06/29/20 13:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	97		77 - 123				06/17/20 04:10	06/29/20 13:34	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB-05

Date Collected: 06/15/20 21:40

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-10

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		25	10	ug/L	-		06/24/20 06:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	87		82 - 110					06/24/20 06:57	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB-05

Date Collected: 06/15/20 21:40

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-11

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.0	0.76	mg/Kg	-	06/15/20 21:40	06/27/20 11:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	103		77 - 123				06/15/20 21:40	06/27/20 11:30	1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-5-7

Date Collected: 06/15/20 22:30

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-1

Matrix: Solid

Percent Solids: 94.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	41		8.5	3.9	mg/Kg	☼	06/24/20 08:19	07/13/20 04:07	1
Motor Oil (C20-C38)	140		25	8.3	mg/Kg	☼	06/24/20 08:19	07/13/20 04:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	67		49 - 115				06/24/20 08:19	07/13/20 04:07	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-20-22

Date Collected: 06/15/20 23:10

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-2

Matrix: Solid

Percent Solids: 91.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	29		8.3	3.8	mg/Kg	☼	06/24/20 08:19	07/13/20 04:29	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-20-22

Date Collected: 06/15/20 23:10

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-2

Matrix: Solid

Percent Solids: 91.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil (C20-C38)	71		25	8.1	mg/Kg	☼	06/24/20 08:19	07/13/20 04:29	1
Surrogate	%Recovery	Qualifier	Limits						
<i>o</i> -Terphenyl (Surr)	74		49 - 115						
							Prepared	Analyzed	Dil Fac
							06/24/20 08:19	07/13/20 04:29	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-09-GW

Date Collected: 06/16/20 03:45

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	0.16	J B	0.25	0.032	mg/L		06/18/20 15:45	07/01/20 23:43	1
Motor Oil (C20-C38)	0.25	J B	0.49	0.055	mg/L		06/18/20 15:45	07/01/20 23:43	1
Surrogate	%Recovery	Qualifier	Limits						
<i>o</i> -Terphenyl (Surr)	75		50 - 115						
							Prepared	Analyzed	Dil Fac
							06/18/20 15:45	07/01/20 23:43	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-15-17

Date Collected: 06/16/20 23:10

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-5

Matrix: Solid

Percent Solids: 87.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	25		9.1	4.2	mg/Kg	☼	06/24/20 08:19	07/13/20 04:51	1
Motor Oil (C20-C38)	41		27	8.9	mg/Kg	☼	06/24/20 08:19	07/13/20 04:51	1
Surrogate	%Recovery	Qualifier	Limits						
<i>o</i> -Terphenyl (Surr)	77		49 - 115						
							Prepared	Analyzed	Dil Fac
							06/24/20 08:19	07/13/20 04:51	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-25-27

Date Collected: 06/16/20 23:45

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-6

Matrix: Solid

Percent Solids: 96.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		8.2	3.7	mg/Kg	☼	06/26/20 06:37	07/15/20 01:41	1
Motor Oil (C20-C38)	12	J	25	8.0	mg/Kg	☼	06/26/20 06:37	07/15/20 01:41	1
Surrogate	%Recovery	Qualifier	Limits						
<i>o</i> -Terphenyl (Surr)	67		49 - 115						
							Prepared	Analyzed	Dil Fac
							06/26/20 06:37	07/15/20 01:41	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-10-10-12

Date Collected: 06/17/20 01:20

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-7

Matrix: Solid

Percent Solids: 96.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		7.7	3.5	mg/Kg	☼	06/26/20 06:37	07/15/20 02:02	1
Motor Oil (C20-C38)	9.4	J	23	7.5	mg/Kg	☼	06/26/20 06:37	07/15/20 02:02	1
Surrogate	%Recovery	Qualifier	Limits						
<i>o</i> -Terphenyl (Surr)	67		49 - 115						
							Prepared	Analyzed	Dil Fac
							06/26/20 06:37	07/15/20 02:02	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-10-25-27

Date Collected: 06/17/20 01:50

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-8

Matrix: Solid

Percent Solids: 82.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND	D	18	8.4	mg/Kg	☼	06/26/20 06:37	07/15/20 02:24	2
Motor Oil (C20-C38)	22	J D	55	18	mg/Kg	☼	06/26/20 06:37	07/15/20 02:24	2

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	111		49 - 115	06/26/20 06:37	07/15/20 02:24	2

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-10-12

Lab Sample ID: 280-137759-9

Date Collected: 06/17/20 04:10

Matrix: Solid

Date Received: 06/17/20 14:05

Percent Solids: 95.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	4500	D	80	36	mg/Kg	☼	06/26/20 06:37	07/15/20 22:12	10
Motor Oil (C20-C38)	6400	D	240	78	mg/Kg	☼	06/26/20 06:37	07/15/20 22:12	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	103	D	49 - 115	06/26/20 06:37	07/15/20 22:12	10

Method: 8081B - Organochlorine Pesticides (GC)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-09-6-8

Lab Sample ID: 280-137759-3

Date Collected: 06/16/20 03:00

Matrix: Solid

Date Received: 06/17/20 14:05

Percent Solids: 92.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan I	ND		37	3.8	ug/Kg	☼	06/24/20 15:03	06/30/20 21:28	10
Endosulfan II	ND	F1	37	6.2	ug/Kg	☼	06/24/20 15:03	06/30/20 21:28	10
Endosulfan sulfate	ND	F1	37	5.9	ug/Kg	☼	06/24/20 15:03	06/30/20 21:28	10
Endrin	ND		37	6.6	ug/Kg	☼	06/24/20 15:03	06/30/20 21:28	10
Endrin aldehyde	ND	F1 *	37	12	ug/Kg	☼	06/24/20 15:03	06/30/20 21:28	10
Endrin ketone	ND	F1	37	4.3	ug/Kg	☼	06/24/20 15:03	06/30/20 21:28	10
beta-BHC	ND		37	14	ug/Kg	☼	06/24/20 15:03	06/30/20 21:28	10
alpha-BHC	ND		37	4.6	ug/Kg	☼	06/24/20 15:03	06/30/20 21:28	10
delta-BHC	ND		37	8.6	ug/Kg	☼	06/24/20 15:03	06/30/20 21:28	10
gamma-BHC (Lindane)	ND		37	4.2	ug/Kg	☼	06/24/20 15:03	06/30/20 21:28	10
trans-Chlordane	ND		37	5.7	ug/Kg	☼	06/24/20 15:03	06/30/20 21:28	10
Dieldrin	ND		37	4.5	ug/Kg	☼	06/24/20 15:03	06/30/20 21:28	10
Heptachlor epoxide	ND	F1	37	9.2	ug/Kg	☼	06/24/20 15:03	06/30/20 21:28	10
Heptachlor	ND		37	4.6	ug/Kg	☼	06/24/20 15:03	06/30/20 21:28	10
Aldrin	ND		37	5.4	ug/Kg	☼	06/24/20 15:03	06/30/20 21:28	10
4,4'-DDD	29	J F1	37	12	ug/Kg	☼	06/24/20 15:03	06/30/20 21:28	10
4,4'-DDE	44	F1	37	5.1	ug/Kg	☼	06/24/20 15:03	06/30/20 21:28	10
4,4'-DDT	ND	F1	37	13	ug/Kg	☼	06/24/20 15:03	06/30/20 21:28	10
Methoxychlor	ND	F1	71	9.7	ug/Kg	☼	06/24/20 15:03	06/30/20 21:28	10
Toxaphene	ND		1400	340	ug/Kg	☼	06/24/20 15:03	06/30/20 21:28	10
cis-Chlordane	ND		37	6.9	ug/Kg	☼	06/24/20 15:03	06/30/20 21:28	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	74		59 - 115	06/24/20 15:03	06/30/20 21:28	10
DCB Decachlorobiphenyl	0	X	63 - 124	06/24/20 15:03	06/30/20 21:28	10

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-09-GW

Lab Sample ID: 280-137759-4

Date Collected: 06/16/20 03:45

Matrix: Water

Date Received: 06/17/20 14:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan I	ND		0.050	0.0058	ug/L		06/18/20 12:12	06/26/20 13:13	1
Endosulfan II	ND		0.050	0.0066	ug/L		06/18/20 12:12	06/26/20 13:13	1
Endosulfan sulfate	ND		0.050	0.0049	ug/L		06/18/20 12:12	06/26/20 13:13	1
Endrin	ND		0.050	0.0086	ug/L		06/18/20 12:12	06/26/20 13:13	1
Endrin aldehyde	ND	*1	0.050	0.0087	ug/L		06/18/20 12:12	06/26/20 13:13	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-09-GW

Date Collected: 06/16/20 03:45

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endrin ketone	ND		0.050	0.013	ug/L		06/18/20 12:12	06/26/20 13:13	1
beta-BHC	ND		0.050	0.0091	ug/L		06/18/20 12:12	06/26/20 13:13	1
alpha-BHC	ND		0.050	0.0097	ug/L		06/18/20 12:12	06/26/20 13:13	1
delta-BHC	ND		0.050	0.0078	ug/L		06/18/20 12:12	06/26/20 13:13	1
gamma-BHC (Lindane)	ND		0.050	0.010	ug/L		06/18/20 12:12	06/26/20 13:13	1
trans-Chlordane	ND		0.050	0.0072	ug/L		06/18/20 12:12	06/26/20 13:13	1
Dieldrin	ND		0.050	0.0046	ug/L		06/18/20 12:12	06/26/20 13:13	1
Heptachlor epoxide	ND		0.050	0.0032	ug/L		06/18/20 12:12	06/26/20 13:13	1
Heptachlor	ND		0.050	0.010	ug/L		06/18/20 12:12	06/26/20 13:13	1
Aldrin	ND		0.050	0.0062	ug/L		06/18/20 12:12	06/26/20 13:13	1
4,4'-DDD	ND		0.050	0.0042	ug/L		06/18/20 12:12	06/26/20 13:13	1
4,4'-DDE	ND		0.050	0.0042	ug/L		06/18/20 12:12	06/26/20 13:13	1
4,4'-DDT	ND		0.050	0.024	ug/L		06/18/20 12:12	06/26/20 13:13	1
Methoxychlor	ND		0.10	0.014	ug/L		06/18/20 12:12	06/26/20 13:13	1
Toxaphene	ND		3.0	1.5	ug/L		06/18/20 12:12	06/26/20 13:13	1
cis-Chlordane	ND		0.050	0.0088	ug/L		06/18/20 12:12	06/26/20 13:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	68		28 - 115				06/18/20 12:12	06/26/20 13:13	1
DCB Decachlorobiphenyl	35		34 - 122				06/18/20 12:12	06/26/20 13:13	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-09-6-8

Date Collected: 06/16/20 03:00

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-3

Matrix: Solid

Percent Solids: 92.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND		100	34	ug/Kg	*	06/24/20 15:03	07/16/20 10:29	1
PCB-1016	ND		71	11	ug/Kg	*	06/24/20 15:03	07/16/20 10:29	1
PCB-1232	ND		71	11	ug/Kg	*	06/24/20 15:03	07/16/20 10:29	1
PCB-1242	ND		71	20	ug/Kg	*	06/24/20 15:03	07/16/20 10:29	1
PCB-1248	ND		71	5.1	ug/Kg	*	06/24/20 15:03	07/16/20 10:29	1
PCB-1254	ND		71	12	ug/Kg	*	06/24/20 15:03	07/16/20 10:29	1
PCB-1260	ND		71	2.5	ug/Kg	*	06/24/20 15:03	07/16/20 10:29	1
PCB-1262	ND		71	5.9	ug/Kg	*	06/24/20 15:03	07/16/20 10:29	1
PCB-1268	ND		71	2.9	ug/Kg	*	06/24/20 15:03	07/16/20 10:29	1
Polychlorinated biphenyls, Total	ND		71	5.7	ug/Kg	*	06/24/20 15:03	07/16/20 10:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	95		53 - 128				06/24/20 15:03	07/16/20 10:29	1
DCB Decachlorobiphenyl	81		59 - 130				06/24/20 15:03	07/16/20 10:29	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-09-GW

Date Collected: 06/16/20 03:45

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND		1.0	0.18	ug/L		06/18/20 12:12	07/14/20 08:25	1
PCB-1016	ND		1.0	0.17	ug/L		06/18/20 12:12	07/14/20 08:25	1
PCB-1232	ND		1.0	0.13	ug/L		06/18/20 12:12	07/14/20 08:25	1
PCB-1242	ND		1.0	0.10	ug/L		06/18/20 12:12	07/14/20 08:25	1
PCB-1248	ND		1.0	0.17	ug/L		06/18/20 12:12	07/14/20 08:25	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-09-GW

Lab Sample ID: 280-137759-4

Date Collected: 06/16/20 03:45

Matrix: Water

Date Received: 06/17/20 14:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1254	ND		1.0	0.14	ug/L		06/18/20 12:12	07/14/20 08:25	1
PCB-1260	ND		1.0	0.089	ug/L		06/18/20 12:12	07/14/20 08:25	1
PCB-1262	ND		1.0	0.094	ug/L		06/18/20 12:12	07/14/20 08:25	1
PCB-1268	ND		1.0	0.37	ug/L		06/18/20 12:12	07/14/20 08:25	1
Polychlorinated biphenyls, Total	ND		1.0	0.073	ug/L		06/18/20 12:12	07/14/20 08:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	72		29 - 115				06/18/20 12:12	07/14/20 08:25	1
DCB Decachlorobiphenyl	27		26 - 135				06/18/20 12:12	07/14/20 08:25	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-5-7

Lab Sample ID: 280-137759-1

Date Collected: 06/15/20 22:30

Matrix: Solid

Date Received: 06/17/20 14:05

Percent Solids: 94.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.6		0.57	0.048	mg/Kg	☼	06/24/20 09:15	06/26/20 05:45	1
Silver	46	J	95	7.4	ug/Kg	☼	06/25/20 10:00	06/26/20 11:27	1
Barium	93		0.38	0.067	mg/Kg	☼	06/24/20 09:15	06/26/20 05:45	1
Cadmium	0.18		0.096	0.0090	mg/Kg	☼	06/24/20 09:15	06/29/20 15:39	1
Chromium	6.4	F2 F1	0.19	0.073	mg/Kg	☼	06/24/20 09:15	06/26/20 05:45	1
Lead	6.5	F1	0.14	0.017	mg/Kg	☼	06/24/20 09:15	06/26/20 05:45	1
Selenium	0.13	J	0.48	0.13	mg/Kg	☼	06/24/20 09:15	06/26/20 05:45	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-20-22

Lab Sample ID: 280-137759-2

Date Collected: 06/15/20 23:10

Matrix: Solid

Date Received: 06/17/20 14:05

Percent Solids: 91.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.0		0.58	0.049	mg/Kg	☼	06/24/20 09:15	06/26/20 06:04	1
Silver	400		87	6.8	ug/Kg	☼	06/25/20 10:00	06/26/20 14:40	1
Barium	130		0.39	0.068	mg/Kg	☼	06/24/20 09:15	06/26/20 06:04	1
Cadmium	1.3		0.097	0.0091	mg/Kg	☼	06/24/20 09:15	06/29/20 16:09	1
Chromium	9.6		0.19	0.073	mg/Kg	☼	06/24/20 09:15	06/26/20 06:04	1
Lead	72		0.15	0.018	mg/Kg	☼	06/24/20 09:15	06/26/20 06:04	1
Selenium	0.36	J	0.48	0.13	mg/Kg	☼	06/24/20 09:15	06/26/20 06:04	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-09-GW

Lab Sample ID: 280-137759-4

Date Collected: 06/16/20 03:45

Matrix: Water

Date Received: 06/17/20 14:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	84		5.0	0.33	ug/L		06/23/20 09:00	06/25/20 21:14	1
Barium	6000		10	2.9	ug/L		06/23/20 09:00	06/26/20 12:25	10
Cadmium	6.2		1.0	0.27	ug/L		06/23/20 09:00	06/25/20 21:14	1
Chromium	230		2.0	0.50	ug/L		06/23/20 09:00	06/25/20 21:14	1
Lead	260		1.0	0.18	ug/L		06/23/20 09:00	06/25/20 21:14	1
Selenium	6.1		5.0	0.37	ug/L		06/23/20 09:00	06/25/20 21:14	1
Silver	2.4	J	5.0	0.033	ug/L		06/23/20 09:00	06/25/20 21:14	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-15-17

Date Collected: 06/16/20 23:10

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-5

Matrix: Solid

Percent Solids: 87.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.5		0.64	0.054	mg/Kg	☼	06/24/20 09:15	06/26/20 06:19	1
Silver	42	J	99	7.8	ug/Kg	☼	06/25/20 10:00	06/26/20 12:04	1
Barium	120		0.43	0.075	mg/Kg	☼	06/24/20 09:15	06/26/20 06:19	1
Cadmium	0.30		0.11	0.010	mg/Kg	☼	06/24/20 09:15	06/29/20 16:13	1
Chromium	20		0.21	0.081	mg/Kg	☼	06/24/20 09:15	06/26/20 06:19	1
Lead	25		0.16	0.019	mg/Kg	☼	06/24/20 09:15	06/26/20 06:19	1
Selenium	0.24	J	0.53	0.14	mg/Kg	☼	06/24/20 09:15	06/26/20 06:19	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-25-27

Date Collected: 06/16/20 23:45

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-6

Matrix: Solid

Percent Solids: 96.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.1		0.53	0.045	mg/Kg	☼	06/24/20 09:15	06/26/20 06:23	1
Silver	11	J	92	7.2	ug/Kg	☼	06/25/20 10:00	06/26/20 12:08	1
Barium	100		0.36	0.063	mg/Kg	☼	06/24/20 09:15	06/26/20 06:23	1
Cadmium	0.23		0.089	0.0083	mg/Kg	☼	06/24/20 09:15	06/29/20 16:16	1
Chromium	11		0.18	0.068	mg/Kg	☼	06/24/20 09:15	06/26/20 06:23	1
Lead	21		0.13	0.016	mg/Kg	☼	06/24/20 09:15	06/26/20 06:23	1
Selenium	0.14	J	0.44	0.12	mg/Kg	☼	06/24/20 09:15	06/26/20 06:23	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-10-10-12

Date Collected: 06/17/20 01:20

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-7

Matrix: Solid

Percent Solids: 96.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.3		0.58	0.049	mg/Kg	☼	06/24/20 09:15	06/26/20 06:26	1
Silver	13	J	88	6.9	ug/Kg	☼	06/25/20 10:00	06/26/20 12:12	1
Barium	46		0.39	0.068	mg/Kg	☼	06/24/20 09:15	06/26/20 06:26	1
Cadmium	0.057	J	0.097	0.0091	mg/Kg	☼	06/24/20 09:15	06/29/20 16:20	1
Chromium	2.7		0.19	0.074	mg/Kg	☼	06/24/20 09:15	06/26/20 06:26	1
Lead	3.4		0.15	0.018	mg/Kg	☼	06/24/20 09:15	06/26/20 06:26	1
Selenium	ND		0.48	0.13	mg/Kg	☼	06/24/20 09:15	06/26/20 06:26	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-10-25-27

Date Collected: 06/17/20 01:50

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-8

Matrix: Solid

Percent Solids: 82.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.7		0.66	0.056	mg/Kg	☼	06/24/20 09:15	06/26/20 06:30	1
Silver	21	J	110	8.4	ug/Kg	☼	06/25/20 10:00	06/26/20 12:17	1
Barium	220		0.44	0.078	mg/Kg	☼	06/24/20 09:15	06/26/20 06:30	1
Cadmium	0.13		0.11	0.010	mg/Kg	☼	06/24/20 09:15	06/29/20 16:24	1
Chromium	15		0.22	0.084	mg/Kg	☼	06/24/20 09:15	06/26/20 06:30	1
Lead	11		0.17	0.020	mg/Kg	☼	06/24/20 09:15	06/26/20 06:30	1
Selenium	ND		0.55	0.15	mg/Kg	☼	06/24/20 09:15	06/26/20 06:30	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-10-12

Date Collected: 06/17/20 04:10

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-9

Matrix: Solid

Percent Solids: 95.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.0		0.56	0.048	mg/Kg	☼	06/24/20 09:15	06/26/20 06:34	1
Silver	180		87	6.8	ug/Kg	☼	06/25/20 10:00	06/26/20 12:21	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 6020A - Metals (ICP/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-10-12

Date Collected: 06/17/20 04:10

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-9

Matrix: Solid

Percent Solids: 95.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	100		0.38	0.066	mg/Kg	☼	06/24/20 09:15	06/26/20 06:34	1
Cadmium	0.33		0.094	0.0088	mg/Kg	☼	06/24/20 09:15	06/29/20 16:27	1
Chromium	6.6		0.19	0.071	mg/Kg	☼	06/24/20 09:15	06/26/20 06:34	1
Lead	23		0.14	0.017	mg/Kg	☼	06/24/20 09:15	06/26/20 06:34	1
Selenium	0.27	J	0.47	0.12	mg/Kg	☼	06/24/20 09:15	06/26/20 06:34	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-09-GW

Date Collected: 06/16/20 03:45

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	1.8		0.20	0.027	ug/L		07/02/20 13:24	07/02/20 17:36	1

Method: 7471B - Mercury (CVAA)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-5-7

Date Collected: 06/15/20 22:30

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-1

Matrix: Solid

Percent Solids: 94.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	6.0	J	18	6.0	ug/Kg	☼	07/01/20 13:20	07/01/20 17:08	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-20-22

Date Collected: 06/15/20 23:10

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-2

Matrix: Solid

Percent Solids: 91.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	390		19	6.3	ug/Kg	☼	07/01/20 13:20	07/01/20 17:11	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-15-17

Date Collected: 06/16/20 23:10

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-5

Matrix: Solid

Percent Solids: 87.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		19	6.3	ug/Kg	☼	07/01/20 13:20	07/01/20 17:18	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-25-27

Date Collected: 06/16/20 23:45

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-6

Matrix: Solid

Percent Solids: 96.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		21	6.7	ug/Kg	☼	07/01/20 13:20	07/01/20 17:21	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-10-10-12

Date Collected: 06/17/20 01:20

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-7

Matrix: Solid

Percent Solids: 96.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		19	6.2	ug/Kg	☼	07/01/20 13:20	07/01/20 17:24	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-10-25-27

Date Collected: 06/17/20 01:50

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-8

Matrix: Solid

Percent Solids: 82.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		23	7.6	ug/Kg	☼	07/01/20 13:20	07/01/20 17:26	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 7471B - Mercury (CVAA)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-10-12

Date Collected: 06/17/20 04:10

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-9

Matrix: Solid

Percent Solids: 95.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	11	J	18	5.8	ug/Kg	☼	07/01/20 13:20	07/01/20 17:29	1

General Chemistry

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-5-7

Date Collected: 06/15/20 22:30

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-1

Matrix: Solid

Percent Solids: 94.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	5.8		0.1	0.1	%			06/18/20 09:39	1
Percent Solids	94.2		0.1	0.1	%			06/18/20 09:39	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-20-22

Date Collected: 06/15/20 23:10

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-2

Matrix: Solid

Percent Solids: 91.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	8.9		0.1	0.1	%			06/18/20 09:39	1
Percent Solids	91.1		0.1	0.1	%			06/18/20 09:39	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-09-6-8

Date Collected: 06/16/20 03:00

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-3

Matrix: Solid

Percent Solids: 92.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	7.6		0.1	0.1	%			06/18/20 09:39	1
Percent Solids	92.4		0.1	0.1	%			06/18/20 09:39	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-15-17

Date Collected: 06/16/20 23:10

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-5

Matrix: Solid

Percent Solids: 87.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	12.5		0.1	0.1	%			06/18/20 09:39	1
Percent Solids	87.5		0.1	0.1	%			06/18/20 09:39	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-25-27

Date Collected: 06/16/20 23:45

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-6

Matrix: Solid

Percent Solids: 96.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.5		0.1	0.1	%			06/18/20 09:39	1
Percent Solids	96.5		0.1	0.1	%			06/18/20 09:39	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-10-10-12

Date Collected: 06/17/20 01:20

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-7

Matrix: Solid

Percent Solids: 96.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.1		0.1	0.1	%			06/18/20 09:39	1
Percent Solids	96.9		0.1	0.1	%			06/18/20 09:39	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-10-25-27

Date Collected: 06/17/20 01:50

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-8

Matrix: Solid

Percent Solids: 82.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	17.4		0.1	0.1	%			06/18/20 09:39	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

General Chemistry (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-10-25-27

Date Collected: 06/17/20 01:50

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-8

Matrix: Solid

Percent Solids: 82.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82.6		0.1	0.1	%			06/18/20 09:39	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-10-12

Date Collected: 06/17/20 04:10

Date Received: 06/17/20 14:05

Lab Sample ID: 280-137759-9

Matrix: Solid

Percent Solids: 95.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.3		0.1	0.1	%			06/18/20 09:39	1
Percent Solids	95.7		0.1	0.1	%			06/18/20 09:39	1

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (58-140)	TOL (80-126)	BFB (76-127)	DBFM (75-121)
280-137759-1	CDOT I270 Env-05/06_2020-SB	101	99	96	100
280-137759-2	CDOT I270 Env-05/06_2020-SB-PV-06-20-22	103	100	97	101
280-137759-5	CDOT I270 Env-05/06_2020-SB-04-15-17	104	98	95	102
280-137759-6	CDOT I270 Env-05/06_2020-SB-04-25-27	102	99	97	100
280-137759-7	CDOT I270 Env-05/06_2020-SB-10-10-12	105	98	99	96
280-137759-8	CDOT I270 Env-05/06_2020-SB-10-25-27	105	98	96	100
280-137759-9	CDOT I270 Env-05/06_2020-SB-19-10-12	101	101	123	99
280-137759-11	CDOT I270 Env-05/06_2020-SB-TB-05	98	99	96	100
LCS 280-499554/1-A	Lab Control Sample	99	99	96	100
LCS 280-500369/1-A	Lab Control Sample	104	99	99	100
LCSD 280-499554/2-A	Lab Control Sample Dup	101	100	95	102
LCSD 280-500369/2-A	Lab Control Sample Dup	104	100	99	99
MB 280-499554/3-A	Method Blank	100	100	95	100
MB 280-500369/3-A	Method Blank	103	97	100	96

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (70-127)	TOL (80-125)	BFB (78-120)	DBFM (77-120)
280-137759-4	CDOT I270 Env-05/06_2020-SB	96	102	94	97
280-137759-10	CDOT I270 Env-05/06_2020-SB-TB-05	96	101	95	96
LCS 280-499914/6	Lab Control Sample	92	104	97	94
LCSD 280-499914/7	Lab Control Sample Dup	94	103	96	96
MB 280-499914/11	Method Blank	98	103	93	98

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (35-120)	FBP (46-120)	2FP (43-120)	NBZ (46-120)	PHL (46-120)	TPHL (46-120)
280-137759-1	CDOT I270 Env-05/06_2020-SB	71	76	77	70	82	92
280-137759-2	CDOT I270 Env-05/06_2020-SB-PV-06-20-22	76	68	69	62	75	92
280-137759-5	CDOT I270 Env-05/06_2020-SB-04-15-17	76	72	73	72	77	90
280-137759-6	CDOT I270 Env-05/06_2020-SB-04-25-27	70	67	70	66	74	94
280-137759-7	CDOT I270 Env-05/06_2020-SB-10-10-12	66	69	72	68	76	89
280-137759-8	CDOT I270 Env-05/06_2020-SB-10-25-27	70	63	69	62	71	92
280-137759-9	CDOT I270 Env-05/06_2020-SB-19-10-12	76	68	64	60	68	93
280-137759-9 MS	CDOT I270 Env-05/06_2020-SB-19-10-12	74	74	72	69	74	91
280-137759-9 MSD	CDOT I270 Env-05/06_2020-SB-19-10-12	76	79	75	70	78	95
LCS 280-499195/2-A	Lab Control Sample	75	67	70	63	73	91
MB 280-499195/1-A	Method Blank	68	66	67	63	70	86

Surrogate Legend

- TBP = 2,4,6-Tribromophenol (Surr)
- FBP = 2-Fluorobiphenyl
- 2FP = 2-Fluorophenol (Surr)
- NBZ = Nitrobenzene-d5 (Surr)
- PHL = Phenol-d5 (Surr)
- TPHL = Terphenyl-d14 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (42-131)	FBP (48-120)	2FP (41-120)	NBZ (42-120)	PHL (45-124)	TPHL (20-130)
280-137759-4	CDOT I270 Env-05/06_2020-SB	75	66	57	65	66	24
LCS 280-499228/2-A	Lab Control Sample	72	69	63	71	66	93
LCSD 280-499228/3-A	Lab Control Sample Dup	82	83	81	88	88	101
MB 280-499228/1-A	Method Blank	75	67	68	79	74	102

Surrogate Legend

- TBP = 2,4,6-Tribromophenol (Surr)
- FBP = 2-Fluorobiphenyl
- 2FP = 2-Fluorophenol (Surr)
- NBZ = Nitrobenzene-d5 (Surr)
- PHL = Phenol-d5 (Surr)
- TPHL = Terphenyl-d14 (Surr)

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)
Matrix: Solid **Prep Type: Total/NA**

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TFT1 (77-123)
280-137759-1	CDOT I270 Env-05/06_2020-SB	104
280-137759-2	CDOT I270 Env-05/06_2020-SB-PV-06-20-22	104
280-137759-5	CDOT I270 Env-05/06_2020-SB-04-15-17	100
280-137759-6	CDOT I270 Env-05/06_2020-SB-04-25-27	100
280-137759-7	CDOT I270 Env-05/06_2020-SB-10-10-12	99
280-137759-8	CDOT I270 Env-05/06_2020-SB-10-25-27	100
280-137759-9	CDOT I270 Env-05/06_2020-SB-19-10-12	97
280-137759-11	CDOT I270 Env-05/06_2020-SB-TB-05	103
LCS 280-500121/1-A	Lab Control Sample	100
LCS 280-500304/1-A	Lab Control Sample	103
LCSD 280-500121/2-A	Lab Control Sample Dup	99
LCSD 280-500304/2-A	Lab Control Sample Dup	104
MB 280-500121/3-A	Method Blank	98
MB 280-500304/3-A	Method Blank	100

Surrogate Legend

TFT = a,a,a-Trifluorotoluene

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)
Matrix: Water **Prep Type: Total/NA**

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TFT1 (82-110)
280-137759-4	CDOT I270 Env-05/06_2020-SB	86
280-137759-10	CDOT I270 Env-05/06_2020-SB-TB-05	87
LCS 280-499873/34	Lab Control Sample	90
LCSD 280-499873/35	Lab Control Sample Dup	93
MB 280-499873/36	Method Blank	90

Surrogate Legend

TFT = a,a,a-Trifluorotoluene

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)
Matrix: Solid **Prep Type: Total/NA**

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTPH1 (49-115)
280-137759-1	CDOT I270 Env-05/06_2020-SB	67
280-137759-2	CDOT I270 Env-05/06_2020-SB-PV-06-20-22	74
280-137759-5	CDOT I270 Env-05/06_2020-SB-04-15-17	77

Eurofins TestAmerica, Denver

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

(Continued)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	OTPH1 (49-115)	
280-137759-5 MS	CDOT I270 Env-05/06_2020-SB	79	
280-137759-5 MS	CDOT I270	79	
280-137759-5 MSD	Env-05/06_2020-SB-04-15-17		
	CDOT I270	85	
280-137759-5 MSD	Env-05/06_2020-SB-04-15-17		
	CDOT I270	69	
280-137759-6	Env-05/06_2020-SB-04-15-17		
	CDOT I270	67	
280-137759-7	Env-05/06_2020-SB-04-25-27		
	CDOT I270	67	
280-137759-8	Env-05/06_2020-SB-10-10-12		
	CDOT I270	111	
280-137759-9	Env-05/06_2020-SB-10-25-27		
	CDOT I270	103 D	
LCS 280-499900/2-A	Lab Control Sample	79	
LCS 280-499900/3-A	Lab Control Sample	80	
LCS 280-500213/2-A	Lab Control Sample	78	
LCS 280-500213/3-A	Lab Control Sample	86	
MB 280-499900/1-A	Method Blank	72	
MB 280-499900/1-A	Method Blank	71	
MB 280-500213/1-A	Method Blank	68	
Surrogate Legend			
OTPH = o-Terphenyl (Surr)			

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	OTPH1 (50-115)	
280-137759-4	CDOT I270 Env-05/06_2020-SB	75	
LCS 280-499277/4-A	Lab Control Sample	77	
LCSD 280-499277/3-A	Lab Control Sample Dup	95	
LCSD 280-499277/5-A	Lab Control Sample Dup	82	
MB 280-499277/1-A	Method Blank	84	
Surrogate Legend			
OTPH = o-Terphenyl (Surr)			

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	TCX1 (59-115)	DCBP1 (63-124)
280-137759-3	CDOT I270 Env-05/06_2020-SB	74	0 X
280-137759-3 MS	CDOT I270	55 X	0 X
280-137759-3 MSD	Env-05/06_2020-SB-PV-09-6-8		
	CDOT I270	62	0 X
	Env-05/06_2020-SB-PV-09-6-8		
LCS 280-499974/2-A	Lab Control Sample	86	78

Eurofins TestAmerica, Denver

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCX1 (59-115)	DCBP1 (63-124)
MB 280-499974/1-A	Method Blank	75	77

Surrogate Legend

TCX = Tetrachloro-m-xylene
 DCBP = DCB Decachlorobiphenyl

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCX1 (28-115)	DCBP1 (34-122)
280-137759-4	CDOT I270 Env-05/06_2020-SB	68	35
LCS 280-499243/2-A	Lab Control Sample	67	92
LCSD 280-499243/3-A	Lab Control Sample Dup	63	91
MB 280-499243/1-A	Method Blank	71	76

Surrogate Legend

TCX = Tetrachloro-m-xylene
 DCBP = DCB Decachlorobiphenyl

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCX1 (53-128)	DCBP1 (59-130)
280-137759-3	CDOT I270 Env-05/06_2020-SB	95	81
280-137759-3 MS	CDOT I270 Env-05/06_2020-SB-PV-09-6-8	99	80
280-137759-3 MSD	CDOT I270 Env-05/06_2020-SB-PV-09-6-8	100	92
LCS 280-499974/3-A	Lab Control Sample	83	67
MB 280-499974/1-A	Method Blank	82	80

Surrogate Legend

TCX = Tetrachloro-m-xylene
 DCBP = DCB Decachlorobiphenyl

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCX1 (29-115)	DCBP1 (26-135)
280-137759-4	CDOT I270 Env-05/06_2020-SB	72	27
LCS 280-499243/4-A	Lab Control Sample	67	75
LCSD 280-499243/5-A	Lab Control Sample Dup	83	69
MB 280-499243/1-A	Method Blank	74	72

Surrogate Legend

TCX = Tetrachloro-m-xylene
 DCBP = DCB Decachlorobiphenyl

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-499554/3-A
Matrix: Solid
Analysis Batch: 499557

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499554

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		72	36	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
2-Butanone (MEK)	ND		20	3.9	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Benzene	ND		5.0	0.15	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Chlorobenzene	ND		5.0	2.1	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Carbon disulfide	ND		5.0	1.7	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Carbon tetrachloride	ND		5.0	2.0	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Cyclohexane	ND		5.0	1.8	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,2-Dibromo-3-Chloropropane	ND		10	3.7	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Bromomethane	ND		10	1.4	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Bromoform	ND		5.1	2.6	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Chloroethane	ND		10	2.0	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Chloroform	ND		10	0.29	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Chlorobromomethane	ND		5.0	2.5	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Dichlorobromomethane	ND		5.0	2.1	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Chlorodibromomethane	ND		5.0	2.3	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Isopropylbenzene	ND		5.0	2.4	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
2-Hexanone	ND		20	4.9	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Chloromethane	ND		10	0.77	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Dichlorodifluoromethane	ND		10	2.7	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
trans-1,2-Dichloroethene	ND		2.5	0.39	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
trans-1,3-Dichloropropene	ND		5.0	0.083	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Methylene Chloride	ND		5.0	1.6	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Methyl acetate	ND		10	2.8	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Methyl tert-butyl ether	ND		20	2.1	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.4	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Methylcyclohexane	ND		5.0	0.42	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Styrene	ND		5.0	0.28	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.29	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,2,3-Trichlorobenzene	ND		5.0	0.81	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,2,4-Trichlorobenzene	ND		5.0	0.73	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Toluene	ND		5.0	0.23	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,1,1-Trichloroethane	ND		5.0	2.0	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,1,2-Trichloroethane	ND		5.0	0.88	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Trichloroethene	ND		5.0	1.9	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,1,2-Trichlorotrifluoroethane	ND		20	1.7	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Vinyl chloride	ND		5.0	1.3	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
m-Xylene & p-Xylene	ND		2.5	1.0	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
o-Xylene	ND		2.5	0.27	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Tetrachloroethene	ND		5.0	1.9	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,2-Dichlorobenzene	ND		5.0	1.9	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,3-Dichlorobenzene	ND		5.0	0.48	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,4-Dichlorobenzene	ND		5.0	0.25	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
cis-1,2-Dichloroethene	ND		2.5	0.20	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
cis-1,3-Dichloropropene	ND		5.0	0.10	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,1-Dichloroethane	ND		5.0	0.21	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,1-Dichloroethene	ND		5.0	0.59	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,2-Dichloroethane	ND		5.0	0.70	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,2-Dichloropropane	ND		5.0	0.55	ug/Kg		06/21/20 10:02	06/21/20 11:24	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-499554/3-A
Matrix: Solid
Analysis Batch: 499557

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499554

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,4-Dioxane	ND		500	56	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Ethylbenzene	ND		5.0	0.31	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,2-Dibromoethane	ND		5.0	0.52	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Trichlorofluoromethane	ND		10	3.2	ug/Kg		06/21/20 10:02	06/21/20 11:24	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	100		58 - 140	06/21/20 10:02	06/21/20 11:24	1
Toluene-d8 (Surr)	100		80 - 126	06/21/20 10:02	06/21/20 11:24	1
4-Bromofluorobenzene (Surr)	95		76 - 127	06/21/20 10:02	06/21/20 11:24	1
Dibromofluoromethane (Surr)	100		75 - 121	06/21/20 10:02	06/21/20 11:24	1

Lab Sample ID: LCS 280-499554/1-A
Matrix: Solid
Analysis Batch: 499557

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499554

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
		Result	Qualifier					
Acetone	200	122	*	ug/Kg		61		65 - 150
2-Butanone (MEK)	200	141		ug/Kg		70		45 - 177
Benzene	50.0	44.5		ug/Kg		89		75 - 135
Chlorobenzene	50.0	45.9		ug/Kg		92		78 - 135
Carbon disulfide	50.0	35.7		ug/Kg		71		45 - 150
Carbon tetrachloride	50.0	44.0		ug/Kg		88		69 - 138
Cyclohexane	50.0	33.0		ug/Kg		66		50 - 150
1,2-Dibromo-3-Chloropropane	50.0	42.4		ug/Kg		85		66 - 150
Bromomethane	50.0	51.4		ug/Kg		103		52 - 135
Bromoform	50.0	43.8		ug/Kg		88		77 - 135
Chloroethane	50.0	46.4		ug/Kg		93		51 - 145
Chloroform	50.0	43.5		ug/Kg		87		73 - 123
Chlorobromomethane	50.0	43.0		ug/Kg		86		74 - 135
Dichlorobromomethane	50.0	42.9		ug/Kg		86		73 - 135
Chlorodibromomethane	50.0	44.0		ug/Kg		88		77 - 135
Isopropylbenzene	50.0	45.0		ug/Kg		90		74 - 137
2-Hexanone	200	136		ug/Kg		68		67 - 150
Chloromethane	50.0	36.8		ug/Kg		74		41 - 138
Dichlorodifluoromethane	50.0	47.5		ug/Kg		95		32 - 152
trans-1,2-Dichloroethene	50.0	42.1		ug/Kg		84		77 - 135
trans-1,3-Dichloropropene	50.0	44.0		ug/Kg		88		71 - 135
Methylene Chloride	50.0	42.0		ug/Kg		84		76 - 136
Methyl acetate	100	65.9		ug/Kg		66		50 - 150
Methyl tert-butyl ether	50.0	41.1		ug/Kg		82		71 - 141
4-Methyl-2-pentanone (MIBK)	200	142		ug/Kg		71		69 - 150
Methylcyclohexane	50.0	33.6		ug/Kg		67		50 - 150
Styrene	50.0	46.4		ug/Kg		93		76 - 135
1,1,2,2-Tetrachloroethane	50.0	40.5		ug/Kg		81		65 - 135
1,2,3-Trichlorobenzene	50.0	49.6		ug/Kg		99		62 - 135
1,2,4-Trichlorobenzene	50.0	49.5		ug/Kg		99		65 - 135
Toluene	50.0	44.2		ug/Kg		88		77 - 122
1,1,1-Trichloroethane	50.0	43.0		ug/Kg		86		70 - 135

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-499554/1-A
Matrix: Solid
Analysis Batch: 499557

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499554

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	%Rec.
1,1,2-Trichloroethane	50.0	41.7		ug/Kg		83	78 - 135	
Trichloroethene	50.0	43.1		ug/Kg		86	77 - 135	
1,1,2-Trichlorotrifluoroethane	50.0	37.7		ug/Kg		75	50 - 150	
Vinyl chloride	50.0	45.2		ug/Kg		90	43 - 145	
m-Xylene & p-Xylene	50.0	46.1		ug/Kg		92	77 - 135	
o-Xylene	50.0	46.6		ug/Kg		93	75 - 135	
Tetrachloroethene	50.0	48.3		ug/Kg		97	76 - 135	
1,2-Dichlorobenzene	50.0	44.1		ug/Kg		88	73 - 135	
1,3-Dichlorobenzene	50.0	46.0		ug/Kg		92	69 - 135	
1,4-Dichlorobenzene	50.0	46.0		ug/Kg		92	73 - 135	
cis-1,2-Dichloroethene	50.0	44.3		ug/Kg		89	76 - 135	
cis-1,3-Dichloropropene	50.0	46.3		ug/Kg		93	71 - 135	
1,1-Dichloroethane	50.0	40.9		ug/Kg		82	70 - 135	
1,1-Dichloroethene	50.0	40.7		ug/Kg		81	79 - 135	
1,2-Dichloroethane	50.0	40.3		ug/Kg		81	69 - 135	
1,2-Dichloropropane	50.0	41.4		ug/Kg		83	72 - 121	
1,4-Dioxane	1000	772		ug/Kg		77	52 - 135	
Ethylbenzene	50.0	47.0		ug/Kg		94	73 - 125	
1,2-Dibromoethane	50.0	46.4		ug/Kg		93	76 - 135	
Trichlorofluoromethane	50.0	52.8		ug/Kg		106	48 - 150	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		58 - 140
Toluene-d8 (Surr)	99		80 - 126
4-Bromofluorobenzene (Surr)	96		76 - 127
Dibromofluoromethane (Surr)	100		75 - 121

Lab Sample ID: LCSD 280-499554/2-A
Matrix: Solid
Analysis Batch: 499557

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 499554

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Acetone	200	133		ug/Kg		66	65 - 150	8	28
2-Butanone (MEK)	200	147		ug/Kg		73	45 - 177	4	32
Benzene	50.0	46.8		ug/Kg		94	75 - 135	5	20
Chlorobenzene	50.0	48.3		ug/Kg		97	78 - 135	5	20
Carbon disulfide	50.0	37.3		ug/Kg		75	45 - 150	5	24
Carbon tetrachloride	50.0	46.2		ug/Kg		92	69 - 138	5	20
Cyclohexane	50.0	34.9		ug/Kg		70	50 - 150	6	30
1,2-Dibromo-3-Chloropropane	50.0	43.9		ug/Kg		88	66 - 150	4	28
Bromomethane	50.0	49.9		ug/Kg		100	52 - 135	3	22
Bromoform	50.0	46.5		ug/Kg		93	77 - 135	6	20
Chloroethane	50.0	46.1		ug/Kg		92	51 - 145	1	22
Chloroform	50.0	45.8		ug/Kg		92	73 - 123	5	20
Chlorobromomethane	50.0	46.5		ug/Kg		93	74 - 135	8	21
Dichlorobromomethane	50.0	45.8		ug/Kg		92	73 - 135	6	20
Chlorodibromomethane	50.0	47.0		ug/Kg		94	77 - 135	7	20
Isopropylbenzene	50.0	47.5		ug/Kg		95	74 - 137	6	20

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-499554/2-A
Matrix: Solid
Analysis Batch: 499557

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 499554

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Hexanone	200	142		ug/Kg		71	67 - 150	4	29
Chloromethane	50.0	36.2		ug/Kg		72	41 - 138	2	25
Dichlorodifluoromethane	50.0	44.2		ug/Kg		88	32 - 152	7	28
trans-1,2-Dichloroethene	50.0	44.5		ug/Kg		89	77 - 135	6	20
trans-1,3-Dichloropropene	50.0	46.7		ug/Kg		93	71 - 135	6	20
Methylene Chloride	50.0	44.5		ug/Kg		89	76 - 136	6	21
Methyl acetate	100	69.6		ug/Kg		70	50 - 150	6	30
Methyl tert-butyl ether	50.0	43.6		ug/Kg		87	71 - 141	6	20
4-Methyl-2-pentanone (MIBK)	200	151		ug/Kg		76	69 - 150	6	25
Methylcyclohexane	50.0	35.7		ug/Kg		71	50 - 150	6	30
Styrene	50.0	48.5		ug/Kg		97	76 - 135	5	20
1,1,1,2-Tetrachloroethane	50.0	41.5		ug/Kg		83	65 - 135	2	21
1,2,3-Trichlorobenzene	50.0	51.2		ug/Kg		102	62 - 135	3	31
1,2,4-Trichlorobenzene	50.0	51.0		ug/Kg		102	65 - 135	3	26
Toluene	50.0	46.5		ug/Kg		93	77 - 122	5	20
1,1,1-Trichloroethane	50.0	45.0		ug/Kg		90	70 - 135	5	20
1,1,2-Trichloroethane	50.0	44.0		ug/Kg		88	78 - 135	5	20
Trichloroethene	50.0	46.1		ug/Kg		92	77 - 135	7	20
1,1,2-Trichlorotrifluoroethane	50.0	40.8		ug/Kg		82	50 - 150	8	20
Vinyl chloride	50.0	43.7		ug/Kg		87	43 - 145	4	24
m-Xylene & p-Xylene	50.0	49.1		ug/Kg		98	77 - 135	6	20
o-Xylene	50.0	48.9		ug/Kg		98	75 - 135	5	20
Tetrachloroethene	50.0	51.4		ug/Kg		103	76 - 135	6	20
1,2-Dichlorobenzene	50.0	46.6		ug/Kg		93	73 - 135	6	20
1,3-Dichlorobenzene	50.0	47.9		ug/Kg		96	69 - 135	4	20
1,4-Dichlorobenzene	50.0	47.4		ug/Kg		95	73 - 135	3	22
cis-1,2-Dichloroethene	50.0	47.4		ug/Kg		95	76 - 135	7	20
cis-1,3-Dichloropropene	50.0	48.8		ug/Kg		98	71 - 135	5	20
1,1-Dichloroethane	50.0	43.7		ug/Kg		87	70 - 135	7	20
1,1-Dichloroethene	50.0	43.1		ug/Kg		86	79 - 135	6	20
1,2-Dichloroethane	50.0	42.7		ug/Kg		85	69 - 135	6	20
1,2-Dichloropropane	50.0	44.3		ug/Kg		89	72 - 121	7	20
1,4-Dioxane	1000	832		ug/Kg		83	52 - 135	8	30
Ethylbenzene	50.0	48.8		ug/Kg		98	73 - 125	4	20
1,2-Dibromoethane	50.0	48.6		ug/Kg		97	76 - 135	5	20
Trichlorofluoromethane	50.0	49.4		ug/Kg		99	48 - 150	7	33

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	101		58 - 140
Toluene-d8 (Surr)	100		80 - 126
4-Bromofluorobenzene (Surr)	95		76 - 127
Dibromofluoromethane (Surr)	102		75 - 121

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-499914/11
Matrix: Water
Analysis Batch: 499914

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		10	1.9	ug/L			06/24/20 10:00	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			06/24/20 10:00	1
Benzene	ND		1.0	0.16	ug/L			06/24/20 10:00	1
Chlorobenzene	ND		1.0	0.17	ug/L			06/24/20 10:00	1
Carbon disulfide	ND		2.0	0.17	ug/L			06/24/20 10:00	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			06/24/20 10:00	1
Cyclohexane	ND		2.0	0.28	ug/L			06/24/20 10:00	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			06/24/20 10:00	1
Bromomethane	ND		2.0	0.21	ug/L			06/24/20 10:00	1
Bromoform	ND		1.0	0.46	ug/L			06/24/20 10:00	1
Chloroethane	ND		2.0	0.41	ug/L			06/24/20 10:00	1
Chloroform	ND		1.0	0.16	ug/L			06/24/20 10:00	1
Chlorobromomethane	ND		1.0	0.10	ug/L			06/24/20 10:00	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			06/24/20 10:00	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			06/24/20 10:00	1
Isopropylbenzene	ND		1.0	0.19	ug/L			06/24/20 10:00	1
2-Hexanone	ND		5.0	1.7	ug/L			06/24/20 10:00	1
Chloromethane	ND		2.0	0.30	ug/L			06/24/20 10:00	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			06/24/20 10:00	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/24/20 10:00	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			06/24/20 10:00	1
Methylene Chloride	ND		2.0	0.94	ug/L			06/24/20 10:00	1
Methyl acetate	ND		5.0	1.6	ug/L			06/24/20 10:00	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			06/24/20 10:00	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			06/24/20 10:00	1
Methylcyclohexane	ND		1.0	0.10	ug/L			06/24/20 10:00	1
Styrene	ND		1.0	0.36	ug/L			06/24/20 10:00	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			06/24/20 10:00	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			06/24/20 10:00	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			06/24/20 10:00	1
Toluene	ND		1.0	0.17	ug/L			06/24/20 10:00	1
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			06/24/20 10:00	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			06/24/20 10:00	1
Trichloroethene	ND		1.0	0.16	ug/L			06/24/20 10:00	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			06/24/20 10:00	1
Vinyl chloride	ND		1.0	0.10	ug/L			06/24/20 10:00	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			06/24/20 10:00	1
o-Xylene	ND		1.0	0.19	ug/L			06/24/20 10:00	1
Tetrachloroethene	ND		1.0	0.20	ug/L			06/24/20 10:00	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			06/24/20 10:00	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			06/24/20 10:00	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			06/24/20 10:00	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/24/20 10:00	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			06/24/20 10:00	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/24/20 10:00	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			06/24/20 10:00	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			06/24/20 10:00	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/24/20 10:00	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-499914/11
Matrix: Water
Analysis Batch: 499914

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		200	19	ug/L			06/24/20 10:00	1
Ethylbenzene	ND		1.0	0.16	ug/L			06/24/20 10:00	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			06/24/20 10:00	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			06/24/20 10:00	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		70 - 127		06/24/20 10:00	1
Toluene-d8 (Surr)	103		80 - 125		06/24/20 10:00	1
4-Bromofluorobenzene (Surr)	93		78 - 120		06/24/20 10:00	1
Dibromofluoromethane (Surr)	98		77 - 120		06/24/20 10:00	1

Lab Sample ID: LCS 280-499914/6
Matrix: Water
Analysis Batch: 499914

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	77.6		ug/L		78	39 - 156
2-Butanone (MEK)	100	87.3		ug/L		87	44 - 177
Benzene	25.0	21.9		ug/L		88	65 - 135
Chlorobenzene	25.0	24.1		ug/L		97	65 - 135
Carbon disulfide	25.0	16.8		ug/L		67	55 - 143
Carbon tetrachloride	25.0	22.5		ug/L		90	65 - 135
Cyclohexane	25.0	18.7		ug/L		75	62 - 135
1,2-Dibromo-3-Chloropropane	25.0	20.1		ug/L		80	57 - 135
Bromomethane	25.0	18.4		ug/L		74	45 - 135
Bromoform	25.0	23.6		ug/L		94	62 - 135
Chloroethane	25.0	18.1		ug/L		72	46 - 136
Chloroform	25.0	22.0		ug/L		88	65 - 135
Chlorobromomethane	25.0	22.1		ug/L		88	65 - 135
Dichlorobromomethane	25.0	23.6		ug/L		95	65 - 135
Chlorodibromomethane	25.0	26.3		ug/L		105	65 - 135
Isopropylbenzene	25.0	26.0		ug/L		104	65 - 135
2-Hexanone	100	88.6		ug/L		89	57 - 139
Chloromethane	25.0	16.4		ug/L		66	34 - 145
Dichlorodifluoromethane	25.0	12.0		ug/L		48	43 - 142
trans-1,2-Dichloroethene	25.0	21.8		ug/L		87	65 - 135
trans-1,3-Dichloropropene	25.0	18.6		ug/L		75	65 - 135
Methylene Chloride	25.0	20.9		ug/L		84	54 - 141
Methyl acetate	50.0	42.2		ug/L		84	52 - 135
Methyl tert-butyl ether	25.0	22.0		ug/L		88	54 - 135
4-Methyl-2-pentanone (MIBK)	100	80.9		ug/L		81	60 - 150
Methylcyclohexane	25.0	19.5		ug/L		78	63 - 135
Styrene	25.0	26.1		ug/L		104	65 - 135
1,1,2,2-Tetrachloroethane	25.0	24.9		ug/L		100	58 - 135
1,2,3-Trichlorobenzene	25.0	24.2		ug/L		97	60 - 135
1,2,4-Trichlorobenzene	25.0	21.8		ug/L		87	58 - 135
Toluene	25.0	22.2		ug/L		89	65 - 135
1,1,1-Trichloroethane	25.0	22.2		ug/L		89	65 - 135

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-499914/6

Matrix: Water

Analysis Batch: 499914

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloroethane	25.0	22.8		ug/L		91	64 - 135
Trichloroethene	25.0	22.7		ug/L		91	65 - 135
1,1,2-Trichlorotrifluoroethane	25.0	17.3		ug/L		69	65 - 140
Vinyl chloride	25.0	17.7		ug/L		71	40 - 137
m-Xylene & p-Xylene	25.0	25.4		ug/L		102	65 - 135
o-Xylene	25.0	26.0		ug/L		104	65 - 135
Tetrachloroethene	25.0	25.9		ug/L		104	65 - 135
1,2-Dichlorobenzene	25.0	24.9		ug/L		99	65 - 135
1,3-Dichlorobenzene	25.0	25.2		ug/L		101	65 - 135
1,4-Dichlorobenzene	25.0	24.6		ug/L		98	65 - 135
cis-1,2-Dichloroethene	25.0	22.4		ug/L		90	65 - 135
cis-1,3-Dichloropropene	25.0	24.8		ug/L		99	65 - 135
1,1-Dichloroethane	25.0	20.5		ug/L		82	65 - 135
1,1-Dichloroethene	25.0	19.9		ug/L		79	65 - 136
1,2-Dichloroethane	25.0	20.6		ug/L		82	65 - 135
1,2-Dichloropropane	25.0	22.1		ug/L		88	64 - 135
1,4-Dioxane	500	413		ug/L		83	31 - 147
Ethylbenzene	25.0	25.3		ug/L		101	65 - 135
1,2-Dibromoethane	25.0	25.7		ug/L		103	65 - 135
Trichlorofluoromethane	25.0	20.1		ug/L		81	53 - 137

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	92		70 - 127
Toluene-d8 (Surr)	104		80 - 125
4-Bromofluorobenzene (Surr)	97		78 - 120
Dibromofluoromethane (Surr)	94		77 - 120

Lab Sample ID: LCSD 280-499914/7

Matrix: Water

Analysis Batch: 499914

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	100	74.6		ug/L		75	39 - 156	4	23
2-Butanone (MEK)	100	89.1		ug/L		89	44 - 177	2	32
Benzene	25.0	22.2		ug/L		89	65 - 135	1	20
Chlorobenzene	25.0	23.8		ug/L		95	65 - 135	1	20
Carbon disulfide	25.0	16.8		ug/L		67	55 - 143	0	20
Carbon tetrachloride	25.0	21.8		ug/L		87	65 - 135	3	21
Cyclohexane	25.0	18.7		ug/L		75	62 - 135	0	20
1,2-Dibromo-3-Chloropropane	25.0	20.4		ug/L		81	57 - 135	1	22
Bromomethane	25.0	18.2		ug/L		73	45 - 135	1	33
Bromoform	25.0	22.3		ug/L		89	62 - 135	5	27
Chloroethane	25.0	17.8		ug/L		71	46 - 136	2	25
Chloroform	25.0	22.4		ug/L		90	65 - 135	2	20
Chlorobromomethane	25.0	23.0		ug/L		92	65 - 135	4	29
Dichlorobromomethane	25.0	23.7		ug/L		95	65 - 135	0	20
Chlorodibromomethane	25.0	25.2		ug/L		101	65 - 135	4	20
Isopropylbenzene	25.0	25.0		ug/L		100	65 - 135	4	20

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-499914/7

Client Sample ID: Lab Control Sample Dup

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 499914

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Hexanone	100	86.6		ug/L		87	57 - 139	2	25
Chloromethane	25.0	16.1		ug/L		64	34 - 145	2	24
Dichlorodifluoromethane	25.0	11.0		ug/L		44	43 - 142	8	30
trans-1,2-Dichloroethene	25.0	21.8		ug/L		87	65 - 135	0	24
trans-1,3-Dichloropropene	25.0	18.1		ug/L		72	65 - 135	3	26
Methylene Chloride	25.0	21.3		ug/L		85	54 - 141	2	26
Methyl acetate	50.0	42.1		ug/L		84	52 - 135	0	27
Methyl tert-butyl ether	25.0	21.8		ug/L		87	54 - 135	1	21
4-Methyl-2-pentanone (MIBK)	100	81.0		ug/L		81	60 - 150	0	22
Methylcyclohexane	25.0	19.9		ug/L		80	63 - 135	2	20
Styrene	25.0	25.6		ug/L		102	65 - 135	2	26
1,1,2,2-Tetrachloroethane	25.0	24.6		ug/L		98	58 - 135	1	20
1,2,3-Trichlorobenzene	25.0	24.6		ug/L		98	60 - 135	2	36
1,2,4-Trichlorobenzene	25.0	21.6		ug/L		86	58 - 135	1	25
Toluene	25.0	22.0		ug/L		88	65 - 135	1	20
1,1,1-Trichloroethane	25.0	21.9		ug/L		87	65 - 135	2	20
1,1,2-Trichloroethane	25.0	22.7		ug/L		91	64 - 135	1	27
Trichloroethene	25.0	22.7		ug/L		91	65 - 135	0	20
1,1,2-Trichlorotrifluoroethane	25.0	17.8		ug/L		71	65 - 140	3	20
Vinyl chloride	25.0	17.2		ug/L		69	40 - 137	3	24
m-Xylene & p-Xylene	25.0	25.2		ug/L		101	65 - 135	1	20
o-Xylene	25.0	26.1		ug/L		104	65 - 135	0	20
Tetrachloroethene	25.0	25.9		ug/L		104	65 - 135	0	20
1,2-Dichlorobenzene	25.0	23.6		ug/L		94	65 - 135	5	20
1,3-Dichlorobenzene	25.0	23.9		ug/L		96	65 - 135	5	20
1,4-Dichlorobenzene	25.0	23.9		ug/L		96	65 - 135	3	23
cis-1,2-Dichloroethene	25.0	22.8		ug/L		91	65 - 135	2	20
cis-1,3-Dichloropropene	25.0	23.6		ug/L		94	65 - 135	5	26
1,1-Dichloroethane	25.0	20.6		ug/L		83	65 - 135	1	21
1,1-Dichloroethene	25.0	19.7		ug/L		79	65 - 136	1	20
1,2-Dichloroethane	25.0	20.7		ug/L		83	65 - 135	0	20
1,2-Dichloropropane	25.0	22.6		ug/L		90	64 - 135	2	20
1,4-Dioxane	500	436		ug/L		87	31 - 147	5	30
Ethylbenzene	25.0	24.8		ug/L		99	65 - 135	2	20
1,2-Dibromoethane	25.0	25.0		ug/L		100	65 - 135	3	27
Trichlorofluoromethane	25.0	19.6		ug/L		79	53 - 137	2	27

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	94		70 - 127
Toluene-d8 (Surr)	103		80 - 125
4-Bromofluorobenzene (Surr)	96		78 - 120
Dibromofluoromethane (Surr)	96		77 - 120

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-500369/3-A
Matrix: Solid
Analysis Batch: 500416

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 500369

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acetone	ND		72	36	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
2-Butanone (MEK)	ND		20	3.9	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
Benzene	ND		5.0	0.15	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
Chlorobenzene	ND		5.0	2.1	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
Carbon disulfide	ND		5.0	1.7	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
Carbon tetrachloride	ND		5.0	2.0	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
Cyclohexane	ND		5.0	1.8	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
1,2-Dibromo-3-Chloropropane	ND		10	3.7	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
Bromomethane	ND		10	1.4	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
Bromoform	ND		5.1	2.6	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
Chloroethane	ND		10	2.0	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
Chloroform	ND		10	0.29	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
Chlorobromomethane	ND		5.0	2.5	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
Dichlorobromomethane	ND		5.0	2.1	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
Chlorodibromomethane	ND		5.0	2.3	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
Isopropylbenzene	ND		5.0	2.4	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
2-Hexanone	ND		20	4.9	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
Chloromethane	ND		10	0.77	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
Dichlorodifluoromethane	ND		10	2.7	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
trans-1,2-Dichloroethene	ND		2.5	0.39	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
trans-1,3-Dichloropropene	ND		5.0	0.083	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
Methylene Chloride	ND		5.0	1.6	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
Methyl acetate	ND		10	2.8	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
Methyl tert-butyl ether	ND		20	2.1	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.4	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
Methylcyclohexane	ND		5.0	0.42	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
Styrene	ND		5.0	0.28	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.29	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
1,2,3-Trichlorobenzene	ND		5.0	0.81	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
1,2,4-Trichlorobenzene	ND		5.0	0.73	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
Toluene	ND		5.0	0.23	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
1,1,1-Trichloroethane	ND		5.0	2.0	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
1,1,2-Trichloroethane	ND		5.0	0.88	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
Trichloroethene	ND		5.0	1.9	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
1,1,2-Trichlorotrifluoroethane	ND		20	1.7	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
Vinyl chloride	ND		5.0	1.3	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
m-Xylene & p-Xylene	ND		2.5	1.0	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
o-Xylene	ND		2.5	0.27	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
Tetrachloroethene	ND		5.0	1.9	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
1,2-Dichlorobenzene	ND		5.0	1.9	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
1,3-Dichlorobenzene	ND		5.0	0.48	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
1,4-Dichlorobenzene	ND		5.0	0.25	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
cis-1,2-Dichloroethene	ND		2.5	0.20	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
cis-1,3-Dichloropropene	ND		5.0	0.10	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
1,1-Dichloroethane	ND		5.0	0.21	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
1,1-Dichloroethene	ND		5.0	0.59	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
1,2-Dichloroethane	ND		5.0	0.70	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
1,2-Dichloropropane	ND		5.0	0.55	ug/Kg		06/27/20 08:00	06/28/20 12:54	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-500369/3-A
Matrix: Solid
Analysis Batch: 500416

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 500369

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,4-Dioxane	ND		500	56	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
Ethylbenzene	ND		5.0	0.31	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
1,2-Dibromoethane	ND		5.0	0.52	ug/Kg		06/27/20 08:00	06/28/20 12:54	1
Trichlorofluoromethane	ND		10	3.2	ug/Kg		06/27/20 08:00	06/28/20 12:54	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	103		58 - 140	06/27/20 08:00	06/28/20 12:54	1
Toluene-d8 (Surr)	97		80 - 126	06/27/20 08:00	06/28/20 12:54	1
4-Bromofluorobenzene (Surr)	100		76 - 127	06/27/20 08:00	06/28/20 12:54	1
Dibromofluoromethane (Surr)	96		75 - 121	06/27/20 08:00	06/28/20 12:54	1

Lab Sample ID: LCS 280-500369/1-A
Matrix: Solid
Analysis Batch: 500416

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500369

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
		Result	Qualifier					
Acetone	200	169		ug/Kg		85		65 - 150
2-Butanone (MEK)	200	144		ug/Kg		72		45 - 177
Benzene	50.0	44.0		ug/Kg		88		75 - 135
Chlorobenzene	50.0	42.8		ug/Kg		86		78 - 135
Carbon disulfide	50.0	35.8		ug/Kg		72		45 - 150
Carbon tetrachloride	50.0	43.6		ug/Kg		87		69 - 138
Cyclohexane	50.0	33.8		ug/Kg		68		50 - 150
1,2-Dibromo-3-Chloropropane	50.0	38.9		ug/Kg		78		66 - 150
Bromomethane	50.0	51.5		ug/Kg		103		52 - 135
Bromoform	50.0	40.9		ug/Kg		82		77 - 135
Chloroethane	50.0	46.8		ug/Kg		94		51 - 145
Chloroform	50.0	44.3		ug/Kg		89		73 - 123
Chlorobromomethane	50.0	41.2		ug/Kg		82		74 - 135
Dichlorobromomethane	50.0	44.2		ug/Kg		88		73 - 135
Chlorodibromomethane	50.0	41.1		ug/Kg		82		77 - 135
Isopropylbenzene	50.0	43.8		ug/Kg		88		74 - 137
2-Hexanone	200	137		ug/Kg		69		67 - 150
Chloromethane	50.0	41.9		ug/Kg		84		41 - 138
Dichlorodifluoromethane	50.0	52.5		ug/Kg		105		32 - 152
trans-1,2-Dichloroethene	50.0	43.0		ug/Kg		86		77 - 135
trans-1,3-Dichloropropene	50.0	44.6		ug/Kg		89		71 - 135
Methylene Chloride	50.0	41.8		ug/Kg		84		76 - 136
Methyl acetate	100	75.9		ug/Kg		76		50 - 150
Methyl tert-butyl ether	50.0	44.7		ug/Kg		89		71 - 141
4-Methyl-2-pentanone (MIBK)	200	149		ug/Kg		74		69 - 150
Methylcyclohexane	50.0	34.9		ug/Kg		70		50 - 150
Styrene	50.0	43.6		ug/Kg		87		76 - 135
1,1,2,2-Tetrachloroethane	50.0	39.0		ug/Kg		78		65 - 135
1,2,3-Trichlorobenzene	50.0	46.7		ug/Kg		93		62 - 135
1,2,4-Trichlorobenzene	50.0	47.1		ug/Kg		94		65 - 135
Toluene	50.0	44.2		ug/Kg		88		77 - 122
1,1,1-Trichloroethane	50.0	44.7		ug/Kg		89		70 - 135

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-500369/1-A
Matrix: Solid
Analysis Batch: 500416

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500369

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloroethane	50.0	40.9		ug/Kg		82	78 - 135
Trichloroethene	50.0	43.2		ug/Kg		86	77 - 135
1,1,2-Trichlorotrifluoroethane	50.0	34.4		ug/Kg		69	50 - 150
Vinyl chloride	50.0	48.3		ug/Kg		97	43 - 145
m-Xylene & p-Xylene	50.0	44.2		ug/Kg		88	77 - 135
o-Xylene	50.0	44.0		ug/Kg		88	75 - 135
Tetrachloroethene	50.0	44.9		ug/Kg		90	76 - 135
1,2-Dichlorobenzene	50.0	42.7		ug/Kg		85	73 - 135
1,3-Dichlorobenzene	50.0	43.1		ug/Kg		86	69 - 135
1,4-Dichlorobenzene	50.0	43.2		ug/Kg		86	73 - 135
cis-1,2-Dichloroethene	50.0	44.9		ug/Kg		90	76 - 135
cis-1,3-Dichloropropene	50.0	44.2		ug/Kg		88	71 - 135
1,1-Dichloroethane	50.0	42.5		ug/Kg		85	70 - 135
1,1-Dichloroethene	50.0	38.9	*	ug/Kg		78	79 - 135
1,2-Dichloroethane	50.0	42.3		ug/Kg		85	69 - 135
1,2-Dichloropropane	50.0	43.9		ug/Kg		88	72 - 121
1,4-Dioxane	1000	860		ug/Kg		86	52 - 135
Ethylbenzene	50.0	43.7		ug/Kg		87	73 - 125
1,2-Dibromoethane	50.0	42.9		ug/Kg		86	76 - 135
Trichlorofluoromethane	50.0	51.4		ug/Kg		103	48 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	104		58 - 140
Toluene-d8 (Surr)	99		80 - 126
4-Bromofluorobenzene (Surr)	99		76 - 127
Dibromofluoromethane (Surr)	100		75 - 121

Lab Sample ID: LCSD 280-500369/2-A
Matrix: Solid
Analysis Batch: 500416

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 500369

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Acetone	200	179		ug/Kg		89	65 - 150	5	28
2-Butanone (MEK)	200	155		ug/Kg		77	45 - 177	7	32
Benzene	50.0	46.0		ug/Kg		92	75 - 135	4	20
Chlorobenzene	50.0	45.8		ug/Kg		92	78 - 135	7	20
Carbon disulfide	50.0	37.4		ug/Kg		75	45 - 150	4	24
Carbon tetrachloride	50.0	46.0		ug/Kg		92	69 - 138	5	20
Cyclohexane	50.0	35.2		ug/Kg		70	50 - 150	4	30
1,2-Dibromo-3-Chloropropane	50.0	42.3		ug/Kg		85	66 - 150	8	28
Bromomethane	50.0	53.4		ug/Kg		107	52 - 135	4	22
Bromoform	50.0	44.1		ug/Kg		88	77 - 135	8	20
Chloroethane	50.0	49.0		ug/Kg		98	51 - 145	5	22
Chloroform	50.0	46.7		ug/Kg		93	73 - 123	5	20
Chlorobromomethane	50.0	43.8		ug/Kg		88	74 - 135	6	21
Dichlorobromomethane	50.0	46.1		ug/Kg		92	73 - 135	4	20
Chlorodibromomethane	50.0	44.6		ug/Kg		89	77 - 135	8	20
Isopropylbenzene	50.0	46.8		ug/Kg		94	74 - 137	7	20

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-500369/2-A

Matrix: Solid

Analysis Batch: 500416

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 500369

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Hexanone	200	151		ug/Kg		75	67 - 150	9	29
Chloromethane	50.0	43.8		ug/Kg		88	41 - 138	4	25
Dichlorodifluoromethane	50.0	52.9		ug/Kg		106	32 - 152	1	28
trans-1,2-Dichloroethene	50.0	45.7		ug/Kg		91	77 - 135	6	20
trans-1,3-Dichloropropene	50.0	47.4		ug/Kg		95	71 - 135	6	20
Methylene Chloride	50.0	44.0		ug/Kg		88	76 - 136	5	21
Methyl acetate	100	79.8		ug/Kg		80	50 - 150	5	30
Methyl tert-butyl ether	50.0	47.3		ug/Kg		95	71 - 141	6	20
4-Methyl-2-pentanone (MIBK)	200	160		ug/Kg		80	69 - 150	7	25
Methylcyclohexane	50.0	36.0		ug/Kg		72	50 - 150	3	30
Styrene	50.0	47.1		ug/Kg		94	76 - 135	8	20
1,1,1,2-Tetrachloroethane	50.0	41.9		ug/Kg		84	65 - 135	7	21
1,2,3-Trichlorobenzene	50.0	49.6		ug/Kg		99	62 - 135	6	31
1,2,4-Trichlorobenzene	50.0	49.7		ug/Kg		99	65 - 135	5	26
Toluene	50.0	46.9		ug/Kg		94	77 - 122	6	20
1,1,1-Trichloroethane	50.0	47.1		ug/Kg		94	70 - 135	5	20
1,1,2-Trichloroethane	50.0	43.5		ug/Kg		87	78 - 135	6	20
Trichloroethene	50.0	45.8		ug/Kg		92	77 - 135	6	20
1,1,2-Trichlorotrifluoroethane	50.0	35.7		ug/Kg		71	50 - 150	4	20
Vinyl chloride	50.0	50.1		ug/Kg		100	43 - 145	4	24
m-Xylene & p-Xylene	50.0	47.2		ug/Kg		94	77 - 135	7	20
o-Xylene	50.0	47.0		ug/Kg		94	75 - 135	7	20
Tetrachloroethene	50.0	47.8		ug/Kg		96	76 - 135	6	20
1,2-Dichlorobenzene	50.0	45.8		ug/Kg		92	73 - 135	7	20
1,3-Dichlorobenzene	50.0	45.8		ug/Kg		92	69 - 135	6	20
1,4-Dichlorobenzene	50.0	45.7		ug/Kg		91	73 - 135	6	22
cis-1,2-Dichloroethene	50.0	46.7		ug/Kg		93	76 - 135	4	20
cis-1,3-Dichloropropene	50.0	48.3		ug/Kg		97	71 - 135	9	20
1,1-Dichloroethane	50.0	44.3		ug/Kg		89	70 - 135	4	20
1,1-Dichloroethene	50.0	41.3		ug/Kg		83	79 - 135	6	20
1,2-Dichloroethane	50.0	44.8		ug/Kg		90	69 - 135	6	20
1,2-Dichloropropane	50.0	45.6		ug/Kg		91	72 - 121	4	20
1,4-Dioxane	1000	859		ug/Kg		86	52 - 135	0	30
Ethylbenzene	50.0	46.3		ug/Kg		93	73 - 125	6	20
1,2-Dibromoethane	50.0	45.9		ug/Kg		92	76 - 135	7	20
Trichlorofluoromethane	50.0	52.5		ug/Kg		105	48 - 150	2	33

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	104		58 - 140
Toluene-d8 (Surr)	100		80 - 126
4-Bromofluorobenzene (Surr)	99		76 - 127
Dibromofluoromethane (Surr)	99		75 - 121

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-499195/1-A
Matrix: Solid
Analysis Batch: 499913

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499195

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		310	23	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
1,2,4,5-Tetrachlorobenzene	ND		310	46	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
1,2,4-Trichlorobenzene	ND		310	26	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
1,2-Dichlorobenzene	ND		310	21	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		310	21	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
1,3-Dichlorobenzene	ND		310	11	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
1,3-Dinitrobenzene	ND		310	67	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
1,4-Dichlorobenzene	ND		310	13	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
1,4-Dioxane	ND		620	62	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
1-Methylnaphthalene	ND		310	11	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2,2'-oxybis[1-chloropropane]	ND		310	22	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2,3,4,6-Tetrachlorophenol	ND		1500	130	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2,4,5-Trichlorophenol	ND		310	9.4	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2,4,6-Trichlorophenol	ND		310	9.4	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2,4-Dichlorophenol	ND		310	9.4	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2,4-Dimethylphenol	ND		310	62	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2,4-Dinitrophenol	ND		1500	310	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2,4-Dinitrotoluene	ND		310	62	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2,6-Dichlorophenol	ND		310	21	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2,6-Dinitrotoluene	ND		310	26	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2-Chloronaphthalene	ND		310	9.4	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2-Chlorophenol	ND		310	20	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2-Methylnaphthalene	ND		310	18	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2-Methylphenol	ND		310	12	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2-Nitroaniline	ND		1500	47	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
2-Nitrophenol	ND		310	9.4	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
3 & 4 Methylphenol	ND		310	31	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
3,3'-Dichlorobenzidine	ND		620	85	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
3-Methylphenol	ND		310	31	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
3-Nitroaniline	ND		1500	69	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
4,6-Dinitro-2-methylphenol	ND		1500	310	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
4-Bromophenyl phenyl ether	ND		310	18	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
4-Chloro-3-methylphenol	ND		310	23	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
4-Chloroaniline	ND		310	77	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
4-Chlorophenyl phenyl ether	ND		310	20	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
4-Methylphenol	ND		310	31	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
4-Nitroaniline	ND		1500	68	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
4-Nitrophenol	ND		1500	92	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Acenaphthene	ND		310	9.7	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Acenaphthylene	ND		310	77	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Acetophenone	ND		310	19	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Aniline	ND		310	120	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Anthracene	ND		310	16	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Azobenzene	ND		310	21	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Benzaldehyde	ND		310	63	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Benzidine	ND		3100	930	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Benzo[a]anthracene	ND		310	19	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Benzo[a]pyrene	ND		310	19	ug/Kg		06/18/20 09:43	06/24/20 14:35	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-499195/1-A
Matrix: Solid
Analysis Batch: 499913

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499195

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND		310	25	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Benzo[g,h,i]perylene	ND		310	15	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Benzo[k]fluoranthene	ND		310	38	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Benzoic acid	ND		1500	310	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Benzyl alcohol	ND		310	9.4	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Bis(2-chloroethoxy)methane	ND		310	22	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Bis(2-chloroethyl)ether	ND		310	16	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Bis(2-ethylhexyl) phthalate	ND		310	43	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Butyl benzyl phthalate	ND		310	41	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Caprolactam	ND		310	100	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Carbazole	ND		310	34	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Chrysene	ND		310	25	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Dibenz(a,h)anthracene	ND		310	18	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Dibenzofuran	ND		310	19	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Diethyl phthalate	ND		620	25	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Dimethyl phthalate	ND		310	22	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Di-n-butyl phthalate	ND		310	27	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Di-n-octyl phthalate	ND		310	38	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Diphenylamine	ND		310	42	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Famphur	ND		620	32	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Fluoranthene	ND		310	34	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Fluorene	ND		310	17	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Hexachlorobenzene	ND		310	27	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Hexachlorobutadiene	ND		310	9.4	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Hexachlorocyclopentadiene	ND		1500	100	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Hexachloroethane	ND		310	20	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Hexadecane	ND		310	13	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Indeno[1,2,3-cd]pyrene	ND		310	21	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Isophorone	ND		310	16	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Naphthalene	ND		310	29	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Nitrobenzene	ND		310	21	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
N-Nitrosodimethylamine	ND		310	35	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
N-Nitrosodi-n-propylamine	ND		310	64	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
N-Nitrosodiphenylamine	ND		310	20	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Pentachlorophenol	ND		1500	310	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Phenanthrene	ND		310	16	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Phenol	ND		310	17	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Pyrene	ND		310	11	ug/Kg		06/18/20 09:43	06/24/20 14:35	1
Pyridine	ND		620	38	ug/Kg		06/18/20 09:43	06/24/20 14:35	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	68		35 - 120	06/18/20 09:43	06/24/20 14:35	1
2-Fluorobiphenyl	66		46 - 120	06/18/20 09:43	06/24/20 14:35	1
2-Fluorophenol (Surr)	67		43 - 120	06/18/20 09:43	06/24/20 14:35	1
Nitrobenzene-d5 (Surr)	63		46 - 120	06/18/20 09:43	06/24/20 14:35	1
Phenol-d5 (Surr)	70		46 - 120	06/18/20 09:43	06/24/20 14:35	1
Terphenyl-d14 (Surr)	86		46 - 120	06/18/20 09:43	06/24/20 14:35	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-499195/2-A
Matrix: Solid
Analysis Batch: 499913

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499195
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1'-Biphenyl	2490	1870		ug/Kg		75	60 - 120
1,2,4,5-Tetrachlorobenzene	2490	1710		ug/Kg		69	60 - 120
1,2,4-Trichlorobenzene	2490	1680		ug/Kg		67	59 - 120
1,2-Dichlorobenzene	2490	1740		ug/Kg		70	57 - 120
1,2-Diphenylhydrazine(as Azobenzene)	2520	2050		ug/Kg		81	60 - 120
1,3-Dichlorobenzene	2490	1680		ug/Kg		68	56 - 120
1,3-Dinitrobenzene	2490	2120		ug/Kg		85	66 - 120
1,4-Dichlorobenzene	2490	1710		ug/Kg		68	57 - 120
1,4-Dioxane	2490	1010		ug/Kg		40	28 - 120
1-Methylnaphthalene	2490	1850		ug/Kg		74	57 - 120
2,2'-oxybis[1-chloropropane]	2490	1950		ug/Kg		78	46 - 120
2,3,4,6-Tetrachlorophenol	2490	2060		ug/Kg		82	63 - 120
2,4,5-Trichlorophenol	2490	2060		ug/Kg		83	65 - 120
2,4,6-Trichlorophenol	2490	2040		ug/Kg		82	64 - 120
2,4-Dichlorophenol	2490	1830		ug/Kg		73	64 - 120
2,4-Dimethylphenol	2490	1710		ug/Kg		68	60 - 120
2,4-Dinitrophenol	4980	4200		ug/Kg		84	52 - 120
2,4-Dinitrotoluene	2490	2260		ug/Kg		91	68 - 120
2,6-Dichlorophenol	2490	1820		ug/Kg		73	30 - 150
2,6-Dinitrotoluene	2490	2260		ug/Kg		91	68 - 120
2-Chloronaphthalene	2490	1850		ug/Kg		74	61 - 120
2-Chlorophenol	2490	1860		ug/Kg		75	62 - 120
2-Methylnaphthalene	2490	1780		ug/Kg		72	60 - 120
2-Methylphenol	2490	1940		ug/Kg		78	61 - 120
2-Nitroaniline	2490	2110		ug/Kg		85	63 - 120
2-Nitrophenol	2490	1900		ug/Kg		76	61 - 120
3 & 4 Methylphenol	2490	1970		ug/Kg		79	62 - 120
3,3'-Dichlorobenzidine	4980	4040		ug/Kg		81	22 - 120
3-Methylphenol	2490	1970		ug/Kg		79	62 - 120
3-Nitroaniline	2490	2110		ug/Kg		85	40 - 120
4,6-Dinitro-2-methylphenol	4980	4020		ug/Kg		81	60 - 120
4-Bromophenyl phenyl ether	2490	2010		ug/Kg		81	66 - 120
4-Chloro-3-methylphenol	2490	1970		ug/Kg		79	62 - 120
4-Chloroaniline	2490	1650		ug/Kg		66	33 - 120
4-Chlorophenyl phenyl ether	2490	2020		ug/Kg		81	63 - 120
4-Methylphenol	2490	1970		ug/Kg		79	62 - 120
4-Nitroaniline	2490	2210		ug/Kg		89	58 - 120
4-Nitrophenol	4980	3340		ug/Kg		67	67 - 120
Acenaphthene	2490	1970		ug/Kg		79	62 - 120
Acenaphthylene	2490	1970		ug/Kg		79	64 - 120
Acetophenone	2490	1400		ug/Kg		56	48 - 120
Aniline	2490	1430		ug/Kg		57	21 - 120
Anthracene	2490	2100		ug/Kg		84	66 - 120
Azobenzene	2490	2030		ug/Kg		81	59 - 120
Benzaldehyde	2490	1970		ug/Kg		79	30 - 150
Benzidine	4980	2490	J	ug/Kg		50	5 - 120
Benzo[a]anthracene	2490	2110		ug/Kg		85	64 - 120
Benzo[a]pyrene	2490	2170		ug/Kg		87	65 - 120

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-499195/2-A

Matrix: Solid

Analysis Batch: 499913

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 499195

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[b]fluoranthene	2490	2210		ug/Kg		88	58 - 120
Benzo[g,h,i]perylene	2490	2140		ug/Kg		86	58 - 120
Benzo[k]fluoranthene	2490	2160		ug/Kg		87	62 - 120
Benzoic acid	2490	1810		ug/Kg		73	51 - 120
Benzyl alcohol	2490	1940		ug/Kg		78	61 - 120
Bis(2-chloroethoxy)methane	2490	1820		ug/Kg		73	58 - 120
Bis(2-chloroethyl)ether	2490	1910		ug/Kg		77	57 - 120
Bis(2-ethylhexyl) phthalate	2490	2350		ug/Kg		94	65 - 120
Butyl benzyl phthalate	2490	2230		ug/Kg		89	65 - 120
Caprolactam	2490	2170		ug/Kg		87	20 - 138
Carbazole	2490	2100		ug/Kg		84	65 - 120
Chrysene	2490	2120		ug/Kg		85	65 - 120
Dibenz(a,h)anthracene	2490	2190		ug/Kg		88	56 - 120
Dibenzofuran	2490	1990		ug/Kg		80	65 - 120
Diethyl phthalate	2490	2050		ug/Kg		82	68 - 120
Dimethyl phthalate	2490	2070		ug/Kg		83	66 - 120
Di-n-butyl phthalate	2490	2140		ug/Kg		86	66 - 120
Di-n-octyl phthalate	2490	2110		ug/Kg		85	55 - 120
Diphenylamine	2120	1810		ug/Kg		86	30 - 150
Fluoranthene	2490	2050		ug/Kg		82	64 - 120
Fluorene	2490	2080		ug/Kg		84	66 - 120
Hexachlorobenzene	2490	1990		ug/Kg		80	65 - 120
Hexachlorobutadiene	2490	1500		ug/Kg		60	58 - 120
Hexachlorocyclopentadiene	4980	2700		ug/Kg		54	43 - 120
Hexachloroethane	2490	1580		ug/Kg		63	56 - 120
Hexadecane	2490	2040		ug/Kg		82	45 - 135
Indeno[1,2,3-cd]pyrene	2490	2180		ug/Kg		88	46 - 120
Isophorone	2490	1660		ug/Kg		67	56 - 120
Naphthalene	2490	1740		ug/Kg		70	59 - 120
Nitrobenzene	2490	1690		ug/Kg		68	55 - 120
N-Nitrosodimethylamine	2490	1740		ug/Kg		70	50 - 120
N-Nitrosodi-n-propylamine	2490	1820		ug/Kg		73	52 - 120
N-Nitrosodiphenylamine	2490	2100		ug/Kg		84	65 - 120
Pentachlorophenol	4980	3790		ug/Kg		76	50 - 120
Phenanthrene	2490	2080		ug/Kg		83	67 - 120
Phenol	2490	1780		ug/Kg		72	63 - 120
Pyrene	2490	2160		ug/Kg		87	66 - 120
Pyridine	4980	2860		ug/Kg		57	37 - 120

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	75		35 - 120
2-Fluorobiphenyl	67		46 - 120
2-Fluorophenol (Surr)	70		43 - 120
Nitrobenzene-d5 (Surr)	63		46 - 120
Phenol-d5 (Surr)	73		46 - 120
Terphenyl-d14 (Surr)	91		46 - 120

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-137759-9 MS

Matrix: Solid

Analysis Batch: 499913

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-10-12

Prep Type: Total/NA

Prep Batch: 499195

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
1,1'-Biphenyl	ND		2760	2260		ug/Kg	*	82	60 - 120
1,2,4,5-Tetrachlorobenzene	ND		2760	2060		ug/Kg	*	75	60 - 120
1,2,4-Trichlorobenzene	ND		2760	1980		ug/Kg	*	72	59 - 120
1,2-Dichlorobenzene	ND		2760	1980		ug/Kg	*	72	57 - 120
1,2-Diphenylhydrazine(as Azobenzene)	ND		2790	2350		ug/Kg	*	84	60 - 120
1,3-Dichlorobenzene	ND		2760	1920		ug/Kg	*	70	56 - 120
1,3-Dinitrobenzene	ND		2760	2430		ug/Kg	*	88	66 - 120
1,4-Dichlorobenzene	ND		2760	1910		ug/Kg	*	69	57 - 120
1,4-Dioxane	ND		2760	1110		ug/Kg	*	40	28 - 120
1-Methylnaphthalene	ND		2760	2200		ug/Kg	*	80	57 - 120
2,2'-oxybis[1-chloropropane]	ND		2760	2200		ug/Kg	*	80	46 - 120
2,3,4,6-Tetrachlorophenol	ND		2760	2390		ug/Kg	*	87	63 - 120
2,4,5-Trichlorophenol	ND		2760	2390		ug/Kg	*	87	65 - 120
2,4,6-Trichlorophenol	ND		2760	2350		ug/Kg	*	85	64 - 120
2,4-Dichlorophenol	ND		2760	2140		ug/Kg	*	77	64 - 120
2,4-Dimethylphenol	ND		2760	2110		ug/Kg	*	76	60 - 120
2,4-Dinitrophenol	ND		5520	3580		ug/Kg	*	65	52 - 120
2,4-Dinitrotoluene	ND		2760	2500		ug/Kg	*	91	68 - 120
2,6-Dichlorophenol	ND		2760	2260		ug/Kg	*	82	30 - 150
2,6-Dinitrotoluene	ND		2760	2570		ug/Kg	*	93	68 - 120
2-Chloronaphthalene	ND		2760	2210		ug/Kg	*	80	61 - 120
2-Chlorophenol	ND		2760	2090		ug/Kg	*	76	62 - 120
2-Methylnaphthalene	ND		2760	2200		ug/Kg	*	80	60 - 120
2-Methylphenol	ND		2760	2170		ug/Kg	*	79	61 - 120
2-Nitroaniline	ND		2760	2410		ug/Kg	*	87	63 - 120
2-Nitrophenol	ND		2760	2250		ug/Kg	*	82	61 - 120
3 & 4 Methylphenol	ND		2760	2260		ug/Kg	*	82	62 - 120
3,3'-Dichlorobenzidine	ND		5520	4360		ug/Kg	*	79	22 - 120
3-Methylphenol	ND		2760	2260		ug/Kg	*	82	62 - 120
3-Nitroaniline	ND		2760	2340		ug/Kg	*	85	40 - 120
4,6-Dinitro-2-methylphenol	ND		5520	3970		ug/Kg	*	72	60 - 120
4-Bromophenyl phenyl ether	ND		2760	2420		ug/Kg	*	88	66 - 120
4-Chloro-3-methylphenol	ND		2760	2240		ug/Kg	*	81	62 - 120
4-Chloroaniline	ND		2760	1800		ug/Kg	*	65	33 - 120
4-Chlorophenyl phenyl ether	ND		2760	2350		ug/Kg	*	85	63 - 120
4-Methylphenol	ND		2760	2260		ug/Kg	*	82	62 - 120
4-Nitroaniline	ND		2760	2400		ug/Kg	*	87	58 - 120
4-Nitrophenol	ND	F1	5520	3630	F1	ug/Kg	*	66	67 - 120
Acenaphthene	ND		2760	2310		ug/Kg	*	84	62 - 120
Acenaphthylene	ND		2760	2310		ug/Kg	*	84	64 - 120
Acetophenone	ND		2760	1560		ug/Kg	*	57	48 - 120
Aniline	ND		2760	1340		ug/Kg	*	49	21 - 120
Anthracene	ND		2760	2300		ug/Kg	*	83	66 - 120
Azobenzene	ND		2760	2320		ug/Kg	*	84	59 - 120
Benzaldehyde	ND		2760	2170		ug/Kg	*	78	30 - 150
Benzidine	ND		5520	1750	J	ug/Kg	*	32	5 - 120
Benzo[a]anthracene	ND		2760	2400		ug/Kg	*	87	64 - 120
Benzo[a]pyrene	ND		2760	2330		ug/Kg	*	84	65 - 120

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-137759-9 MS

Matrix: Solid

Analysis Batch: 499913

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-10-12

Prep Type: Total/NA

Prep Batch: 499195

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
Benzo[b]fluoranthene	ND		2760	2390		ug/Kg	☼	87	58 - 120
Benzo[g,h,i]perylene	ND		2760	2270		ug/Kg	☼	82	58 - 120
Benzo[k]fluoranthene	ND		2760	2330		ug/Kg	☼	84	62 - 120
Benzoic acid	ND	F1	2760	1360	J F1	ug/Kg	☼	49	51 - 120
Benzyl alcohol	ND		2760	2210		ug/Kg	☼	80	61 - 120
Bis(2-chloroethoxy)methane	ND		2760	2110		ug/Kg	☼	77	58 - 120
Bis(2-chloroethyl)ether	ND		2760	2140		ug/Kg	☼	78	57 - 120
Bis(2-ethylhexyl) phthalate	91	J	2760	2840		ug/Kg	☼	100	65 - 120
Butyl benzyl phthalate	47	J	2760	2610		ug/Kg	☼	93	65 - 120
Caprolactam	ND		2760	2510		ug/Kg	☼	91	20 - 138
Carbazole	ND		2760	2330		ug/Kg	☼	85	65 - 120
Chrysene	ND		2760	2380		ug/Kg	☼	86	65 - 120
Dibenz(a,h)anthracene	ND		2760	2360		ug/Kg	☼	86	56 - 120
Dibenzofuran	ND		2760	2310		ug/Kg	☼	84	65 - 120
Diethyl phthalate	ND		2760	2320		ug/Kg	☼	84	68 - 120
Dimethyl phthalate	ND		2760	2390		ug/Kg	☼	87	66 - 120
Di-n-butyl phthalate	ND		2760	2370		ug/Kg	☼	86	66 - 120
Di-n-octyl phthalate	ND		2760	2530		ug/Kg	☼	92	55 - 120
Diphenylamine	ND		2350	2060		ug/Kg	☼	88	30 - 150
Fluoranthene	ND		2760	2190		ug/Kg	☼	79	64 - 120
Fluorene	ND		2760	2330		ug/Kg	☼	85	66 - 120
Hexachlorobenzene	ND		2760	2230		ug/Kg	☼	81	65 - 120
Hexachlorobutadiene	ND		2760	1840		ug/Kg	☼	67	58 - 120
Hexachlorocyclopentadiene	ND		5520	2930		ug/Kg	☼	53	43 - 120
Hexachloroethane	ND		2760	1840		ug/Kg	☼	67	56 - 120
Hexadecane	98	J	2760	2660		ug/Kg	☼	93	45 - 135
Indeno[1,2,3-cd]pyrene	ND		2760	2440		ug/Kg	☼	88	46 - 120
Isophorone	ND		2760	1930		ug/Kg	☼	70	56 - 120
Naphthalene	ND		2760	2090		ug/Kg	☼	76	59 - 120
Nitrobenzene	ND		2760	1950		ug/Kg	☼	71	55 - 120
N-Nitrosodimethylamine	ND		2760	2000		ug/Kg	☼	73	50 - 120
N-Nitrosodi-n-propylamine	ND		2760	2070		ug/Kg	☼	75	52 - 120
N-Nitrosodiphenylamine	ND		2760	2420		ug/Kg	☼	88	65 - 120
Pentachlorophenol	ND		5520	4210		ug/Kg	☼	76	50 - 120
Phenanthrene	ND		2760	2380		ug/Kg	☼	86	67 - 120
Phenol	ND		2760	2000		ug/Kg	☼	72	63 - 120
Pyrene	ND		2760	2430		ug/Kg	☼	88	66 - 120
Pyridine	ND		5520	3180		ug/Kg	☼	58	37 - 120
		MS MS							
Surrogate		%Recovery	Qualifier	Limits					
2,4,6-Tribromophenol (Surr)		74		35 - 120					
2-Fluorobiphenyl		74		46 - 120					
2-Fluorophenol (Surr)		72		43 - 120					
Nitrobenzene-d5 (Surr)		69		46 - 120					
Phenol-d5 (Surr)		74		46 - 120					
Terphenyl-d14 (Surr)		91		46 - 120					

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-137759-9 MSD

Matrix: Solid

Analysis Batch: 499913

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-10-12

Prep Type: Total/NA

Prep Batch: 499195

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
1,1'-Biphenyl	ND		2740	2330		ug/Kg	☼	85	60 - 120	3	30
1,2,4,5-Tetrachlorobenzene	ND		2740	2070		ug/Kg	☼	76	60 - 120	1	30
1,2,4-Trichlorobenzene	ND		2740	2070		ug/Kg	☼	76	59 - 120	4	30
1,2-Dichlorobenzene	ND		2740	2100		ug/Kg	☼	77	57 - 120	6	30
1,2-Diphenylhydrazine(as Azobenzene)	ND		2770	2450		ug/Kg	☼	88	60 - 120	4	30
1,3-Dichlorobenzene	ND		2740	2000		ug/Kg	☼	73	56 - 120	4	30
1,3-Dinitrobenzene	ND		2740	2430		ug/Kg	☼	89	66 - 120	0	30
1,4-Dichlorobenzene	ND		2740	2020		ug/Kg	☼	74	57 - 120	6	30
1,4-Dioxane	ND		2740	1100		ug/Kg	☼	40	28 - 120	1	30
1-Methylnaphthalene	ND		2740	2290		ug/Kg	☼	84	57 - 120	4	30
2,2'-oxybis[1-chloropropane]	ND		2740	2300		ug/Kg	☼	84	46 - 120	4	30
2,3,4,6-Tetrachlorophenol	ND		2740	2490		ug/Kg	☼	91	63 - 120	4	30
2,4,5-Trichlorophenol	ND		2740	2460		ug/Kg	☼	90	65 - 120	3	30
2,4,6-Trichlorophenol	ND		2740	2440		ug/Kg	☼	89	64 - 120	4	30
2,4-Dichlorophenol	ND		2740	2170		ug/Kg	☼	79	64 - 120	1	30
2,4-Dimethylphenol	ND		2740	2140		ug/Kg	☼	78	60 - 120	2	30
2,4-Dinitrophenol	ND		5480	3330		ug/Kg	☼	61	52 - 120	7	30
2,4-Dinitrotoluene	ND		2740	2600		ug/Kg	☼	95	68 - 120	4	30
2,6-Dichlorophenol	ND		2740	2220		ug/Kg	☼	81	30 - 150	2	30
2,6-Dinitrotoluene	ND		2740	2470		ug/Kg	☼	90	68 - 120	4	30
2-Chloronaphthalene	ND		2740	2370		ug/Kg	☼	86	61 - 120	7	30
2-Chlorophenol	ND		2740	2230		ug/Kg	☼	81	62 - 120	6	30
2-Methylnaphthalene	ND		2740	2260		ug/Kg	☼	82	60 - 120	3	30
2-Methylphenol	ND		2740	2230		ug/Kg	☼	81	61 - 120	3	30
2-Nitroaniline	ND		2740	2480		ug/Kg	☼	90	63 - 120	3	30
2-Nitrophenol	ND		2740	2350		ug/Kg	☼	86	61 - 120	4	30
3 & 4 Methylphenol	ND		2740	2350		ug/Kg	☼	86	62 - 120	4	30
3,3'-Dichlorobenzidine	ND		5480	4400		ug/Kg	☼	80	22 - 120	1	30
3-Methylphenol	ND		2740	2350		ug/Kg	☼	86	62 - 120	4	30
3-Nitroaniline	ND		2740	2360		ug/Kg	☼	86	40 - 120	1	30
4,6-Dinitro-2-methylphenol	ND		5480	4180		ug/Kg	☼	76	60 - 120	5	30
4-Bromophenyl phenyl ether	ND		2740	2510		ug/Kg	☼	92	66 - 120	3	30
4-Chloro-3-methylphenol	ND		2740	2250		ug/Kg	☼	82	62 - 120	1	30
4-Chloroaniline	ND		2740	1810		ug/Kg	☼	66	33 - 120	1	30
4-Chlorophenyl phenyl ether	ND		2740	2370		ug/Kg	☼	86	63 - 120	1	30
4-Methylphenol	ND		2740	2350		ug/Kg	☼	86	62 - 120	4	30
4-Nitroaniline	ND		2740	2450		ug/Kg	☼	89	58 - 120	2	30
4-Nitrophenol	ND	F1	5480	3660		ug/Kg	☼	67	67 - 120	1	30
Acenaphthene	ND		2740	2410		ug/Kg	☼	88	62 - 120	4	30
Acenaphthylene	ND		2740	2400		ug/Kg	☼	88	64 - 120	4	30
Acetophenone	ND		2740	1620		ug/Kg	☼	59	48 - 120	4	30
Aniline	ND		2740	1400		ug/Kg	☼	51	21 - 120	4	30
Anthracene	ND		2740	2470		ug/Kg	☼	90	66 - 120	7	30
Azobenzene	ND		2740	2420		ug/Kg	☼	88	59 - 120	4	30
Benzaldehyde	ND		2740	2130		ug/Kg	☼	78	30 - 150	2	50
Benzidine	ND		5480	1880	J	ug/Kg	☼	34	5 - 120	7	50
Benzo[a]anthracene	ND		2740	2470		ug/Kg	☼	90	64 - 120	3	30
Benzo[a]pyrene	ND		2740	2400		ug/Kg	☼	88	65 - 120	3	30

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-137759-9 MSD

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-10-12

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 499913

Prep Batch: 499195

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier						
Benzo[b]fluoranthene	ND		2740	2330		ug/Kg	☼	85	58 - 120	3	30
Benzo[g,h,i]perylene	ND		2740	2160		ug/Kg	☼	79	58 - 120	5	30
Benzo[k]fluoranthene	ND		2740	2440		ug/Kg	☼	89	62 - 120	5	30
Benzoic acid	ND	F1	2740	1470	J	ug/Kg	☼	54	51 - 120	8	30
Benzyl alcohol	ND		2740	2340		ug/Kg	☼	85	61 - 120	6	30
Bis(2-chloroethoxy)methane	ND		2740	2200		ug/Kg	☼	80	58 - 120	4	30
Bis(2-chloroethyl)ether	ND		2740	2250		ug/Kg	☼	82	57 - 120	5	30
Bis(2-ethylhexyl) phthalate	91	J	2740	3130		ug/Kg	☼	111	65 - 120	10	30
Butyl benzyl phthalate	47	J	2740	2790		ug/Kg	☼	100	65 - 120	7	30
Caprolactam	ND		2740	2570		ug/Kg	☼	94	20 - 138	2	30
Carbazole	ND		2740	2450		ug/Kg	☼	89	65 - 120	5	30
Chrysene	ND		2740	2460		ug/Kg	☼	90	65 - 120	3	30
Dibenz(a,h)anthracene	ND		2740	2240		ug/Kg	☼	82	56 - 120	5	30
Dibenzofuran	ND		2740	2370		ug/Kg	☼	87	65 - 120	3	30
Diethyl phthalate	ND		2740	2390		ug/Kg	☼	87	68 - 120	3	30
Dimethyl phthalate	ND		2740	2380		ug/Kg	☼	87	66 - 120	0	30
Di-n-butyl phthalate	ND		2740	2530		ug/Kg	☼	92	66 - 120	6	30
Di-n-octyl phthalate	ND		2740	2630		ug/Kg	☼	96	55 - 120	4	30
Diphenylamine	ND		2330	2090		ug/Kg	☼	90	30 - 150	1	50
Fluoranthene	ND		2740	2400		ug/Kg	☼	87	64 - 120	9	30
Fluorene	ND		2740	2430		ug/Kg	☼	89	66 - 120	4	30
Hexachlorobenzene	ND		2740	2320		ug/Kg	☼	85	65 - 120	4	30
Hexachlorobutadiene	ND		2740	1890		ug/Kg	☼	69	58 - 120	2	30
Hexachlorocyclopentadiene	ND		5480	2880		ug/Kg	☼	53	43 - 120	2	30
Hexachloroethane	ND		2740	1870		ug/Kg	☼	68	56 - 120	1	30
Hexadecane	98	J	2740	2900		ug/Kg	☼	102	45 - 135	9	30
Indeno[1,2,3-cd]pyrene	ND		2740	2450		ug/Kg	☼	89	46 - 120	1	30
Isophorone	ND		2740	2000		ug/Kg	☼	73	56 - 120	4	30
Naphthalene	ND		2740	2140		ug/Kg	☼	78	59 - 120	3	30
Nitrobenzene	ND		2740	2050		ug/Kg	☼	75	55 - 120	5	30
N-Nitrosodimethylamine	ND		2740	2020		ug/Kg	☼	74	50 - 120	1	30
N-Nitrosodi-n-propylamine	ND		2740	2140		ug/Kg	☼	78	52 - 120	3	30
N-Nitrosodiphenylamine	ND		2740	2550		ug/Kg	☼	93	65 - 120	5	30
Pentachlorophenol	ND		5480	4560		ug/Kg	☼	83	50 - 120	8	30
Phenanthrene	ND		2740	2490		ug/Kg	☼	91	67 - 120	4	30
Phenol	ND		2740	2070		ug/Kg	☼	76	63 - 120	3	30
Pyrene	ND		2740	2490		ug/Kg	☼	91	66 - 120	2	30
Pyridine	ND		5480	3200		ug/Kg	☼	58	37 - 120	1	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	76		35 - 120
2-Fluorobiphenyl	79		46 - 120
2-Fluorophenol (Surr)	75		43 - 120
Nitrobenzene-d5 (Surr)	70		46 - 120
Phenol-d5 (Surr)	78		46 - 120
Terphenyl-d14 (Surr)	95		46 - 120

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-499228/1-A
Matrix: Water
Analysis Batch: 501084

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499228

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1'-Biphenyl	ND		10	1.8	ug/L		06/18/20 12:02	07/03/20 21:53	1
1,2,4,5-Tetrachlorobenzene	ND		10	1.7	ug/L		06/18/20 12:02	07/03/20 21:53	1
1,2,4-Trichlorobenzene	ND		4.0	0.59	ug/L		06/18/20 12:02	07/03/20 21:53	1
1,2-Dichlorobenzene	ND		4.0	0.23	ug/L		06/18/20 12:02	07/03/20 21:53	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		10	0.23	ug/L		06/18/20 12:02	07/03/20 21:53	1
1,3-Dichlorobenzene	ND		10	0.30	ug/L		06/18/20 12:02	07/03/20 21:53	1
1,3-Dinitrobenzene	ND		10	2.0	ug/L		06/18/20 12:02	07/03/20 21:53	1
1,4-Dichlorobenzene	ND		4.0	1.3	ug/L		06/18/20 12:02	07/03/20 21:53	1
1,4-Dioxane	ND		20	0.45	ug/L		06/18/20 12:02	07/03/20 21:53	1
1-Methylnaphthalene	ND		4.0	0.23	ug/L		06/18/20 12:02	07/03/20 21:53	1
2,2'-oxybis[1-chloropropane]	ND		10	0.28	ug/L		06/18/20 12:02	07/03/20 21:53	1
2,3,4,6-Tetrachlorophenol	ND		50	2.0	ug/L		06/18/20 12:02	07/03/20 21:53	1
2,4,5-Trichlorophenol	ND		10	2.1	ug/L		06/18/20 12:02	07/03/20 21:53	1
2,4,6-Trichlorophenol	ND		10	0.29	ug/L		06/18/20 12:02	07/03/20 21:53	1
2,4-Dichlorophenol	ND		10	0.64	ug/L		06/18/20 12:02	07/03/20 21:53	1
2,4-Dimethylphenol	ND		10	0.58	ug/L		06/18/20 12:02	07/03/20 21:53	1
2,4-Dinitrophenol	ND		30	10	ug/L		06/18/20 12:02	07/03/20 21:53	1
2,4-Dinitrotoluene	ND		10	1.7	ug/L		06/18/20 12:02	07/03/20 21:53	1
2,6-Dichlorophenol	ND		10	1.4	ug/L		06/18/20 12:02	07/03/20 21:53	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		06/18/20 12:02	07/03/20 21:53	1
2-Chloronaphthalene	ND		4.0	0.26	ug/L		06/18/20 12:02	07/03/20 21:53	1
2-Chlorophenol	ND		10	2.0	ug/L		06/18/20 12:02	07/03/20 21:53	1
2-Methylnaphthalene	ND		4.0	1.5	ug/L		06/18/20 12:02	07/03/20 21:53	1
2-Methylphenol	ND		10	0.98	ug/L		06/18/20 12:02	07/03/20 21:53	1
2-Nitroaniline	ND		10	1.7	ug/L		06/18/20 12:02	07/03/20 21:53	1
2-Nitrophenol	ND		10	0.39	ug/L		06/18/20 12:02	07/03/20 21:53	1
3 & 4 Methylphenol	ND		10	0.25	ug/L		06/18/20 12:02	07/03/20 21:53	1
3,3'-Dichlorobenzidine	ND		50	2.0	ug/L		06/18/20 12:02	07/03/20 21:53	1
3-Methylphenol	ND		10	0.25	ug/L		06/18/20 12:02	07/03/20 21:53	1
3-Nitroaniline	ND		10	2.0	ug/L		06/18/20 12:02	07/03/20 21:53	1
4,6-Dinitro-2-methylphenol	ND		50	4.0	ug/L		06/18/20 12:02	07/03/20 21:53	1
4-Bromophenyl phenyl ether	ND		10	0.43	ug/L		06/18/20 12:02	07/03/20 21:53	1
4-Chloro-3-methylphenol	ND		10	2.4	ug/L		06/18/20 12:02	07/03/20 21:53	1
4-Chloroaniline	ND		10	2.1	ug/L		06/18/20 12:02	07/03/20 21:53	1
4-Chlorophenyl phenyl ether	ND		10	1.7	ug/L		06/18/20 12:02	07/03/20 21:53	1
4-Methylphenol	ND		10	0.25	ug/L		06/18/20 12:02	07/03/20 21:53	1
4-Nitroaniline	ND		10	2.0	ug/L		06/18/20 12:02	07/03/20 21:53	1
4-Nitrophenol	ND		10	1.2	ug/L		06/18/20 12:02	07/03/20 21:53	1
Acenaphthene	ND		4.0	0.28	ug/L		06/18/20 12:02	07/03/20 21:53	1
Acenaphthylene	ND		4.0	0.49	ug/L		06/18/20 12:02	07/03/20 21:53	1
Acetophenone	ND		10	0.24	ug/L		06/18/20 12:02	07/03/20 21:53	1
Aniline	ND		10	2.0	ug/L		06/18/20 12:02	07/03/20 21:53	1
Anthracene	ND		4.0	0.42	ug/L		06/18/20 12:02	07/03/20 21:53	1
Azobenzene	ND		4.0	0.23	ug/L		06/18/20 12:02	07/03/20 21:53	1
Benzaldehyde	ND		5.0	2.0	ug/L		06/18/20 12:02	07/03/20 21:53	1
Benzidine	ND		100	50	ug/L		06/18/20 12:02	07/03/20 21:53	1
Benzo[a]anthracene	ND		4.0	0.35	ug/L		06/18/20 12:02	07/03/20 21:53	1
Benzo[a]pyrene	ND		4.0	0.31	ug/L		06/18/20 12:02	07/03/20 21:53	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-499228/1-A
Matrix: Water
Analysis Batch: 501084

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499228

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND		4.0	0.53	ug/L		06/18/20 12:02	07/03/20 21:53	1
Benzo[g,h,i]perylene	ND		4.0	0.50	ug/L		06/18/20 12:02	07/03/20 21:53	1
Benzo[k]fluoranthene	ND		4.0	0.46	ug/L		06/18/20 12:02	07/03/20 21:53	1
Benzoic acid	ND		25	10	ug/L		06/18/20 12:02	07/03/20 21:53	1
Benzyl alcohol	ND		10	0.23	ug/L		06/18/20 12:02	07/03/20 21:53	1
Bis(2-chloroethoxy)methane	ND		10	0.97	ug/L		06/18/20 12:02	07/03/20 21:53	1
Bis(2-chloroethyl)ether	ND		10	0.83	ug/L		06/18/20 12:02	07/03/20 21:53	1
Bis(2-ethylhexyl) phthalate	ND		10	0.56	ug/L		06/18/20 12:02	07/03/20 21:53	1
Butyl benzyl phthalate	ND		4.0	1.0	ug/L		06/18/20 12:02	07/03/20 21:53	1
Caprolactam	ND		5.0	2.5	ug/L		06/18/20 12:02	07/03/20 21:53	1
Carbazole	ND		4.0	0.43	ug/L		06/18/20 12:02	07/03/20 21:53	1
Chrysene	ND		4.0	0.54	ug/L		06/18/20 12:02	07/03/20 21:53	1
Dibenz(a,h)anthracene	ND		4.0	0.51	ug/L		06/18/20 12:02	07/03/20 21:53	1
Dibenzofuran	ND		4.0	0.29	ug/L		06/18/20 12:02	07/03/20 21:53	1
Diethyl phthalate	ND		4.0	0.38	ug/L		06/18/20 12:02	07/03/20 21:53	1
Dimethyl phthalate	ND		4.0	0.21	ug/L		06/18/20 12:02	07/03/20 21:53	1
Di-n-butyl phthalate	ND		4.0	1.2	ug/L		06/18/20 12:02	07/03/20 21:53	1
Di-n-octyl phthalate	ND		4.0	0.35	ug/L		06/18/20 12:02	07/03/20 21:53	1
Diphenylamine	ND		10	1.1	ug/L		06/18/20 12:02	07/03/20 21:53	1
Famphur	ND		100	1.5	ug/L		06/18/20 12:02	07/03/20 21:53	1
Fluoranthene	ND		4.0	0.20	ug/L		06/18/20 12:02	07/03/20 21:53	1
Fluorene	ND		4.0	0.31	ug/L		06/18/20 12:02	07/03/20 21:53	1
Hexachlorobenzene	ND		10	0.66	ug/L		06/18/20 12:02	07/03/20 21:53	1
Hexachlorobutadiene	ND		10	3.3	ug/L		06/18/20 12:02	07/03/20 21:53	1
Hexachlorocyclopentadiene	ND		50	3.1	ug/L		06/18/20 12:02	07/03/20 21:53	1
Hexachloroethane	ND		10	0.98	ug/L		06/18/20 12:02	07/03/20 21:53	1
Hexadecane	ND		10	0.54	ug/L		06/18/20 12:02	07/03/20 21:53	1
Indeno[1,2,3-cd]pyrene	ND		4.0	0.65	ug/L		06/18/20 12:02	07/03/20 21:53	1
Isophorone	ND		10	0.21	ug/L		06/18/20 12:02	07/03/20 21:53	1
Naphthalene	ND		4.0	0.29	ug/L		06/18/20 12:02	07/03/20 21:53	1
Nitrobenzene	ND		10	0.81	ug/L		06/18/20 12:02	07/03/20 21:53	1
N-Nitrosodimethylamine	ND		10	0.29	ug/L		06/18/20 12:02	07/03/20 21:53	1
N-Nitrosodi-n-propylamine	ND		10	0.35	ug/L		06/18/20 12:02	07/03/20 21:53	1
N-Nitrosodiphenylamine	ND		10	0.44	ug/L		06/18/20 12:02	07/03/20 21:53	1
Pentachlorophenol	ND		50	20	ug/L		06/18/20 12:02	07/03/20 21:53	1
Phenanthrene	ND		4.0	0.26	ug/L		06/18/20 12:02	07/03/20 21:53	1
Phenol	ND		10	2.0	ug/L		06/18/20 12:02	07/03/20 21:53	1
Pyrene	ND		10	0.37	ug/L		06/18/20 12:02	07/03/20 21:53	1
Pyridine	ND		20	1.7	ug/L		06/18/20 12:02	07/03/20 21:53	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	75		42 - 131	06/18/20 12:02	07/03/20 21:53	1
2-Fluorobiphenyl	67		48 - 120	06/18/20 12:02	07/03/20 21:53	1
2-Fluorophenol (Surr)	68		41 - 120	06/18/20 12:02	07/03/20 21:53	1
Nitrobenzene-d5 (Surr)	79		42 - 120	06/18/20 12:02	07/03/20 21:53	1
Phenol-d5 (Surr)	74		45 - 124	06/18/20 12:02	07/03/20 21:53	1
Terphenyl-d14 (Surr)	102		20 - 130	06/18/20 12:02	07/03/20 21:53	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-499228/2-A
Matrix: Water
Analysis Batch: 501084

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499228
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1'-Biphenyl	80.0	63.3		ug/L		79	63 - 99
1,2,4,5-Tetrachlorobenzene	80.0	52.8		ug/L		66	57 - 100
1,2,4-Trichlorobenzene	80.0	46.3		ug/L		58	41 - 99
1,2-Dichlorobenzene	80.0	44.1		ug/L		55	37 - 97
1,2-Diphenylhydrazine(as Azobenzene)	80.9	76.4		ug/L		94	66 - 104
1,3-Dichlorobenzene	80.0	41.3		ug/L		52	34 - 96
1,3-Dinitrobenzene	80.0	69.4		ug/L		87	72 - 114
1,4-Dichlorobenzene	80.0	43.1		ug/L		54	35 - 96
1,4-Dioxane	80.0	45.4		ug/L		57	46 - 94
1-Methylnaphthalene	80.0	55.7		ug/L		70	56 - 102
2,2'-oxybis[1-chloropropane]	80.0	65.4		ug/L		82	52 - 108
2,3,4,6-Tetrachlorophenol	80.0	69.6		ug/L		87	71 - 111
2,4,5-Trichlorophenol	80.0	65.2		ug/L		81	70 - 109
2,4,6-Trichlorophenol	80.0	66.6		ug/L		83	71 - 113
2,4-Dichlorophenol	80.0	56.7		ug/L		71	65 - 109
2,4-Dimethylphenol	80.0	42.8		ug/L		53	46 - 100
2,4-Dinitrophenol	160	145		ug/L		91	60 - 110
2,4-Dinitrotoluene	80.0	74.0		ug/L		93	72 - 110
2,6-Dichlorophenol	80.0	57.1		ug/L		71	64 - 109
2,6-Dinitrotoluene	80.0	68.7		ug/L		86	70 - 109
2-Chloronaphthalene	80.0	61.3		ug/L		77	61 - 98
2-Chlorophenol	80.0	55.4		ug/L		69	59 - 107
2-Methylnaphthalene	80.0	55.0		ug/L		69	55 - 100
2-Methylphenol	80.0	58.4		ug/L		73	61 - 105
2-Nitroaniline	80.0	75.2		ug/L		94	65 - 110
2-Nitrophenol	80.0	59.8		ug/L		75	63 - 108
3 & 4 Methylphenol	80.0	70.3		ug/L		88	58 - 107
3,3'-Dichlorobenzidine	160	117		ug/L		73	39 - 105
3-Methylphenol	80.0	70.3		ug/L		88	58 - 107
3-Nitroaniline	80.0	66.2		ug/L		83	37 - 94
4,6-Dinitro-2-methylphenol	160	135		ug/L		84	67 - 109
4-Bromophenyl phenyl ether	80.0	64.9		ug/L		81	67 - 105
4-Chloro-3-methylphenol	80.0	64.8		ug/L		81	68 - 110
4-Chloroaniline	80.0	50.4		ug/L		63	34 - 97
4-Chlorophenyl phenyl ether	80.0	63.8		ug/L		80	69 - 100
4-Methylphenol	80.0	70.3		ug/L		88	58 - 107
4-Nitroaniline	80.0	74.0		ug/L		93	64 - 103
4-Nitrophenol	160	128		ug/L		80	60 - 120
Acenaphthene	80.0	64.5		ug/L		81	63 - 99
Acenaphthylene	80.0	62.7		ug/L		78	66 - 98
Acetophenone	80.0	59.7		ug/L		75	59 - 106
Aniline	80.0	44.1		ug/L		55	40 - 96
Anthracene	80.0	66.0		ug/L		82	65 - 105
Azobenzene	80.0	75.6		ug/L		94	66 - 104
Benzaldehyde	80.0	52.8		ug/L		66	10 - 89
Benzidine	160	ND		ug/L		29	10 - 52
Benzo[a]anthracene	80.0	67.9		ug/L		85	68 - 104
Benzo[a]pyrene	80.0	61.6		ug/L		77	66 - 102

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-499228/2-A
Matrix: Water
Analysis Batch: 501084

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499228

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[b]fluoranthene	80.0	71.3		ug/L		89	67 - 107
Benzo[g,h,i]perylene	80.0	64.1		ug/L		80	65 - 106
Benzo[k]fluoranthene	80.0	68.4		ug/L		85	71 - 109
Benzoic acid	80.0	60.4		ug/L		76	29 - 120
Benzyl alcohol	80.0	64.7		ug/L		81	61 - 107
Bis(2-chloroethoxy)methane	80.0	62.4		ug/L		78	62 - 106
Bis(2-chloroethyl)ether	80.0	57.3		ug/L		72	59 - 110
Bis(2-ethylhexyl) phthalate	80.0	82.0		ug/L		102	65 - 106
Butyl benzyl phthalate	80.0	82.2		ug/L		103	66 - 107
Caprolactam	80.0	82.2		ug/L		103	60 - 107
Carbazole	80.0	67.5		ug/L		84	66 - 109
Chrysene	80.0	74.9		ug/L		94	70 - 105
Dibenz(a,h)anthracene	80.0	66.0		ug/L		82	64 - 106
Dibenzofuran	80.0	64.6		ug/L		81	68 - 99
Diethyl phthalate	80.0	73.2		ug/L		91	71 - 105
Dimethyl phthalate	80.0	67.0		ug/L		84	70 - 107
Di-n-butyl phthalate	80.0	71.6		ug/L		89	75 - 120
Di-n-octyl phthalate	80.0	82.9		ug/L		104	71 - 120
Diphenylamine	68.0	55.3		ug/L		81	67 - 103
Fluoranthene	80.0	70.1		ug/L		88	66 - 107
Fluorene	80.0	68.4		ug/L		85	67 - 100
Hexachlorobenzene	80.0	59.7		ug/L		75	66 - 106
Hexachlorobutadiene	80.0	40.1		ug/L		50	33 - 98
Hexachlorocyclopentadiene	160	26.8	J	ug/L		17	10 - 67
Hexachloroethane	80.0	46.0		ug/L		58	24 - 98
Hexadecane	80.0	75.8		ug/L		95	50 - 150
Indeno[1,2,3-cd]pyrene	80.0	70.2		ug/L		88	56 - 104
Isophorone	80.0	57.5		ug/L		72	59 - 102
Naphthalene	80.0	50.6		ug/L		63	39 - 120
Nitrobenzene	80.0	57.6		ug/L		72	58 - 108
N-Nitrosodimethylamine	80.0	54.7		ug/L		68	53 - 106
N-Nitrosodi-n-propylamine	80.0	64.9		ug/L		81	57 - 106
N-Nitrosodiphenylamine	80.0	62.7		ug/L		78	65 - 104
Pentachlorophenol	160	118		ug/L		74	55 - 109
Phenanthrene	80.0	65.4		ug/L		82	67 - 106
Phenol	80.0	52.1		ug/L		65	60 - 108
Pyrene	80.0	73.1		ug/L		91	69 - 105
Pyridine	160	99.8		ug/L		62	46 - 88

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	72		42 - 131
2-Fluorobiphenyl	69		48 - 120
2-Fluorophenol (Surr)	63		41 - 120
Nitrobenzene-d5 (Surr)	71		42 - 120
Phenol-d5 (Surr)	66		45 - 124
Terphenyl-d14 (Surr)	93		20 - 130

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-499228/3-A

Matrix: Water

Analysis Batch: 501084

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 499228

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit	
									%Rec.	RPD
1,1'-Biphenyl	80.0	69.7		ug/L		87	63 - 99	10		30
1,2,4,5-Tetrachlorobenzene	80.0	62.9		ug/L		79	57 - 100	18		30
1,2,4-Trichlorobenzene	80.0	57.9		ug/L		72	41 - 99	22		30
1,2-Dichlorobenzene	80.0	56.9		ug/L		71	37 - 97	26		30
1,2-Diphenylhydrazine(as Azobenzene)	80.9	84.8	*	ug/L		105	66 - 104	10		30
1,3-Dichlorobenzene	80.0	56.7	*1	ug/L		71	34 - 96	31		30
1,3-Dinitrobenzene	80.0	76.0		ug/L		95	72 - 114	9		30
1,4-Dichlorobenzene	80.0	56.3		ug/L		70	35 - 96	27		30
1,4-Dioxane	80.0	52.7		ug/L		66	46 - 94	15		30
1-Methylnaphthalene	80.0	72.1		ug/L		90	56 - 102	26		30
2,2'-oxybis[1-chloropropane]	80.0	85.6		ug/L		107	52 - 108	27		30
2,3,4,6-Tetrachlorophenol	80.0	79.3		ug/L		99	71 - 111	13		30
2,4,5-Trichlorophenol	80.0	79.1		ug/L		99	70 - 109	19		30
2,4,6-Trichlorophenol	80.0	76.2		ug/L		95	71 - 113	13		30
2,4-Dichlorophenol	80.0	68.7		ug/L		86	65 - 109	19		30
2,4-Dimethylphenol	80.0	46.5		ug/L		58	46 - 100	8		30
2,4-Dinitrophenol	160	167		ug/L		104	60 - 110	14		30
2,4-Dinitrotoluene	80.0	81.5		ug/L		102	72 - 110	10		30
2,6-Dichlorophenol	80.0	69.9		ug/L		87	64 - 109	20		50
2,6-Dinitrotoluene	80.0	78.3		ug/L		98	70 - 109	13		30
2-Chloronaphthalene	80.0	68.7		ug/L		86	61 - 98	11		30
2-Chlorophenol	80.0	70.6		ug/L		88	59 - 107	24		30
2-Methylnaphthalene	80.0	67.1		ug/L		84	55 - 100	20		30
2-Methylphenol	80.0	70.5		ug/L		88	61 - 105	19		30
2-Nitroaniline	80.0	92.6	*	ug/L		116	65 - 110	21		30
2-Nitrophenol	80.0	72.6		ug/L		91	63 - 108	19		30
3 & 4 Methylphenol	80.0	73.0		ug/L		91	58 - 107	4		30
3,3'-Dichlorobenzidine	160	132		ug/L		82	39 - 105	12		30
3-Methylphenol	80.0	73.0		ug/L		91	58 - 107	4		30
3-Nitroaniline	80.0	69.0		ug/L		86	37 - 94	4		30
4,6-Dinitro-2-methylphenol	160	157		ug/L		98	67 - 109	15		30
4-Bromophenyl phenyl ether	80.0	73.7		ug/L		92	67 - 105	13		30
4-Chloro-3-methylphenol	80.0	80.1		ug/L		100	68 - 110	21		30
4-Chloroaniline	80.0	59.3		ug/L		74	34 - 97	16		30
4-Chlorophenyl phenyl ether	80.0	75.8		ug/L		95	69 - 100	17		30
4-Methylphenol	80.0	73.0		ug/L		91	58 - 107	4		30
4-Nitroaniline	80.0	86.5	*	ug/L		108	64 - 103	16		30
4-Nitrophenol	160	152		ug/L		95	60 - 120	17		30
Acenaphthene	80.0	75.0		ug/L		94	63 - 99	15		30
Acenaphthylene	80.0	71.5		ug/L		89	66 - 98	13		30
Acetophenone	80.0	71.8		ug/L		90	59 - 106	18		30
Aniline	80.0	54.4		ug/L		68	40 - 96	21		30
Anthracene	80.0	75.5		ug/L		94	65 - 105	13		30
Azobenzene	80.0	83.8	*	ug/L		105	66 - 104	10		30
Benzaldehyde	80.0	60.5		ug/L		76	10 - 89	14		50
Benzidine	160	52.8	J	ug/L		33	10 - 52	14		50
Benzo[a]anthracene	80.0	78.3		ug/L		98	68 - 104	14		30
Benzo[a]pyrene	80.0	73.7		ug/L		92	66 - 102	18		30

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-499228/3-A
Matrix: Water
Analysis Batch: 501084

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 499228

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[b]fluoranthene	80.0	77.2		ug/L		97	67 - 107	8	30
Benzo[g,h,i]perylene	80.0	73.3		ug/L		92	65 - 106	13	30
Benzo[k]fluoranthene	80.0	77.2		ug/L		96	71 - 109	12	30
Benzoic acid	80.0	74.9		ug/L		94	29 - 120	21	30
Benzyl alcohol	80.0	76.2		ug/L		95	61 - 107	16	30
Bis(2-chloroethoxy)methane	80.0	83.3		ug/L		104	62 - 106	29	30
Bis(2-chloroethyl)ether	80.0	76.2		ug/L		95	59 - 110	28	30
Bis(2-ethylhexyl) phthalate	80.0	87.3	*	ug/L		109	65 - 106	6	30
Butyl benzyl phthalate	80.0	84.6		ug/L		106	66 - 107	3	30
Caprolactam	80.0	98.6	*	ug/L		123	60 - 107	18	30
Carbazole	80.0	81.7		ug/L		102	66 - 109	19	30
Chrysene	80.0	77.2		ug/L		97	70 - 105	3	30
Dibenz(a,h)anthracene	80.0	74.1		ug/L		93	64 - 106	12	30
Dibenzofuran	80.0	74.3		ug/L		93	68 - 99	14	30
Diethyl phthalate	80.0	76.7		ug/L		96	71 - 105	5	30
Dimethyl phthalate	80.0	75.0		ug/L		94	70 - 107	11	30
Di-n-butyl phthalate	80.0	79.3		ug/L		99	75 - 120	10	30
Di-n-octyl phthalate	80.0	78.3		ug/L		98	71 - 120	6	30
Diphenylamine	68.0	67.3		ug/L		99	67 - 103	20	50
Fluoranthene	80.0	81.5		ug/L		102	66 - 107	15	30
Fluorene	80.0	73.9		ug/L		92	67 - 100	8	30
Hexachlorobenzene	80.0	69.5		ug/L		87	66 - 106	15	30
Hexachlorobutadiene	80.0	53.6		ug/L		67	33 - 98	29	30
Hexachlorocyclopentadiene	160	36.1	J	ug/L		23	10 - 67	29	50
Hexachloroethane	80.0	53.7		ug/L		67	24 - 98	15	30
Hexadecane	80.0	84.2		ug/L		105	50 - 150	10	30
Indeno[1,2,3-cd]pyrene	80.0	71.1		ug/L		89	56 - 104	1	30
Isophorone	80.0	73.5		ug/L		92	59 - 102	24	30
Naphthalene	80.0	63.7		ug/L		80	39 - 120	23	30
Nitrobenzene	80.0	73.6		ug/L		92	58 - 108	24	30
N-Nitrosodimethylamine	80.0	70.9		ug/L		89	53 - 106	26	34
N-Nitrosodi-n-propylamine	80.0	78.9		ug/L		99	57 - 106	19	30
N-Nitrosodiphenylamine	80.0	77.8		ug/L		97	65 - 104	21	30
Pentachlorophenol	160	140		ug/L		87	55 - 109	17	30
Phenanthrene	80.0	75.8		ug/L		95	67 - 106	15	30
Phenol	80.0	69.4		ug/L		87	60 - 108	29	30
Pyrene	80.0	83.5		ug/L		104	69 - 105	13	30
Pyridine	160	113		ug/L		71	46 - 88	12	41

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2,4,6-Tribromophenol (Surr)	82		42 - 131
2-Fluorobiphenyl	83		48 - 120
2-Fluorophenol (Surr)	81		41 - 120
Nitrobenzene-d5 (Surr)	88		42 - 120
Phenol-d5 (Surr)	88		45 - 124
Terphenyl-d14 (Surr)	101		20 - 130

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Lab Sample ID: MB 280-499873/36
Matrix: Water
Analysis Batch: 499873

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		25	10	ug/L			06/24/20 09:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	90		82 - 110		06/24/20 09:14	1

Lab Sample ID: LCS 280-499873/34
Matrix: Water
Analysis Batch: 499873

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C6-C10	214	173		ug/L		81	79 - 149

Surrogate	LCS %Recovery	LCS Qualifier	Limits
a,a,a-Trifluorotoluene	90		82 - 110

Lab Sample ID: LCSD 280-499873/35
Matrix: Water
Analysis Batch: 499873

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C10	214	198		ug/L		93	79 - 149	13	27

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
a,a,a-Trifluorotoluene	93		82 - 110

Lab Sample ID: MB 280-500121/3-A
Matrix: Solid
Analysis Batch: 500332

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 500121

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.0	0.76	mg/Kg		06/25/20 12:21	06/26/20 23:54	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	98		77 - 123	06/25/20 12:21	06/26/20 23:54	1

Lab Sample ID: LCS 280-500121/1-A
Matrix: Solid
Analysis Batch: 500332

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500121

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C6-C10	8.54	8.32		mg/Kg		97	75 - 135

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics) (Continued)

Lab Sample ID: LCS 280-500121/1-A
Matrix: Solid
Analysis Batch: 500332

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500121

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
a,a,a-Trifluorotoluene	100		77 - 123

Lab Sample ID: LCSD 280-500121/2-A
Matrix: Solid
Analysis Batch: 500332

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 500121

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD	Limit
									%Rec.	Limit
Gasoline Range Organics (GRO) -C6-C10	8.54	8.19		mg/Kg		96	75 - 135	2		30

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
a,a,a-Trifluorotoluene	99		77 - 123

Lab Sample ID: MB 280-500304/3-A
Matrix: Solid
Analysis Batch: 500486

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 500304

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
a,a,a-Trifluorotoluene	100		77 - 123	06/26/20 14:07	06/29/20 11:19	1

Lab Sample ID: LCS 280-500304/1-A
Matrix: Solid
Analysis Batch: 500486

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500304

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
a,a,a-Trifluorotoluene	103		77 - 123

Lab Sample ID: LCSD 280-500304/2-A
Matrix: Solid
Analysis Batch: 500486

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 500304

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD	Limit
									%Rec.	Limit
Gasoline Range Organics (GRO) -C6-C10	8.54	7.47		mg/Kg		87	75 - 135	9		30

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
a,a,a-Trifluorotoluene	104		77 - 123

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Lab Sample ID: MB 280-499277/1-A
Matrix: Water
Analysis Batch: 500427

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499277

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Diesel Range Organics [C10-C28]	0.0697	J	0.25	0.033	mg/L		06/18/20 15:45	06/30/20 14:53	1
Motor Oil (C20-C38)	0.394	J	0.50	0.056	mg/L		06/18/20 15:45	06/30/20 14:53	1
Surrogate	MB	MB	Limits			Prepared	Analyzed	Dil Fac	
	%Recovery	Qualifier							
<i>o</i> -Terphenyl (Surr)	84		50 - 115			06/18/20 15:45	06/30/20 14:53	1	

Lab Sample ID: LCS 280-499277/4-A
Matrix: Water
Analysis Batch: 501914

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499277

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	Limits
		Result	Qualifier				
Motor Oil (C20-C38)	5.02	4.22		mg/L		84	54 - 115
Surrogate	LCS	LCS	Limits				
	%Recovery	Qualifier					
<i>o</i> -Terphenyl (Surr)	77		50 - 115				

Lab Sample ID: LCSD 280-499277/3-A
Matrix: Water
Analysis Batch: 500427

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 499277

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	Limits	RPD	Limit
		Result	Qualifier						
Diesel Range Organics [C10-C28]	1.98	1.80		mg/L		91	54 - 115	12	31
Surrogate	LCSD	LCSD	Limits						
	%Recovery	Qualifier							
<i>o</i> -Terphenyl (Surr)	95		50 - 115						

Lab Sample ID: LCSD 280-499277/5-A
Matrix: Water
Analysis Batch: 501914

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 499277

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	Limits	RPD	Limit
		Result	Qualifier						
Motor Oil (C20-C38)	5.02	4.44		mg/L		88	54 - 115	5	31
Surrogate	LCSD	LCSD	Limits						
	%Recovery	Qualifier							
<i>o</i> -Terphenyl (Surr)	82		50 - 115						

Lab Sample ID: MB 280-499900/1-A
Matrix: Solid
Analysis Batch: 501686

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499900

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Motor Oil (C20-C38)	ND		21	6.9	mg/Kg		06/24/20 08:19	07/10/20 19:11	1
Surrogate	MB	MB	Limits			Prepared	Analyzed	Dil Fac	
	%Recovery	Qualifier							
<i>o</i> -Terphenyl (Surr)	72		49 - 115			06/24/20 08:19	07/10/20 19:11	1	

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Lab Sample ID: MB 280-499900/1-A
Matrix: Solid
Analysis Batch: 501914

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499900

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		7.1	3.2	mg/Kg		06/24/20 08:19	07/12/20 20:26	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	71		49 - 115				06/24/20 08:19	07/12/20 20:26	1

Lab Sample ID: LCS 280-499900/2-A
Matrix: Solid
Analysis Batch: 501914

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499900

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Diesel Range Organics [C10-C28]	132	103		mg/Kg		78	53 - 115
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
<i>o</i> -Terphenyl (Surr)	79		49 - 115				

Lab Sample ID: LCS 280-499900/3-A
Matrix: Solid
Analysis Batch: 501686

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499900

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Motor Oil (C20-C38)	310	261		mg/Kg		84	57 - 115
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
<i>o</i> -Terphenyl (Surr)	80		49 - 115				

Lab Sample ID: 280-137759-5 MS
Matrix: Solid
Analysis Batch: 501914

Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-15-17
Prep Type: Total/NA
Prep Batch: 499900

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Diesel Range Organics [C10-C28]	25		134	111		mg/Kg	☼	64	56 - 115
Surrogate	MS %Recovery	MS Qualifier	Limits						
<i>o</i> -Terphenyl (Surr)	79		49 - 115						

Lab Sample ID: 280-137759-5 MS
Matrix: Solid
Analysis Batch: 501914

Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-15-17
Prep Type: Total/NA
Prep Batch: 499900

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Motor Oil (C20-C38)	41		356	337		mg/Kg	☼	83	57 - 115
Surrogate	MS %Recovery	MS Qualifier	Limits						
<i>o</i> -Terphenyl (Surr)	79		49 - 115						

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Lab Sample ID: 280-137759-5 MSD
Matrix: Solid
Analysis Batch: 501914

Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-15-17
Prep Type: Total/NA
Prep Batch: 499900

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	25		142	124		mg/Kg	☒	70	56 - 115	10	23
Surrogate	%Recovery	MSD Qualifier	Limits								
<i>o-Terphenyl (Surr)</i>	85		49 - 115								

Lab Sample ID: 280-137759-5 MSD
Matrix: Solid
Analysis Batch: 501914

Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-15-17
Prep Type: Total/NA
Prep Batch: 499900

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Motor Oil (C20-C38)	41		379	312		mg/Kg	☒	71	57 - 115	8	30
Surrogate	%Recovery	MSD Qualifier	Limits								
<i>o-Terphenyl (Surr)</i>	69		49 - 115								

Lab Sample ID: MB 280-500213/1-A
Matrix: Solid
Analysis Batch: 502159

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 500213

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		7.2	3.3	mg/Kg		06/26/20 06:37	07/14/20 20:56	1
Motor Oil (C20-C38)	ND		22	7.1	mg/Kg		06/26/20 06:37	07/14/20 20:56	1
Surrogate	%Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac			
<i>o-Terphenyl (Surr)</i>	68		49 - 115	06/26/20 06:37	07/14/20 20:56	1			

Lab Sample ID: LCS 280-500213/2-A
Matrix: Solid
Analysis Batch: 502159

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500213

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	117	89.1		mg/Kg		76	53 - 115
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
<i>o-Terphenyl (Surr)</i>	78		49 - 115				

Lab Sample ID: LCS 280-500213/3-A
Matrix: Solid
Analysis Batch: 502159

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500213

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Motor Oil (C20-C38)	321	283		mg/Kg		88	57 - 115

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Lab Sample ID: LCS 280-500213/3-A
Matrix: Solid
Analysis Batch: 502159

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500213

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
<i>o</i> -Terphenyl (Surr)	86		49 - 115

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 280-499243/1-A
Matrix: Water
Analysis Batch: 500220

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499243

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Endosulfan I	ND		0.050	0.0058	ug/L		06/18/20 12:12	06/26/20 13:31	1
Endosulfan II	ND		0.050	0.0066	ug/L		06/18/20 12:12	06/26/20 13:31	1
Endosulfan sulfate	ND		0.050	0.0049	ug/L		06/18/20 12:12	06/26/20 13:31	1
Endrin	ND		0.050	0.0086	ug/L		06/18/20 12:12	06/26/20 13:31	1
Endrin aldehyde	ND		0.050	0.0087	ug/L		06/18/20 12:12	06/26/20 13:31	1
Endrin ketone	ND		0.050	0.013	ug/L		06/18/20 12:12	06/26/20 13:31	1
beta-BHC	ND		0.050	0.0091	ug/L		06/18/20 12:12	06/26/20 13:31	1
alpha-BHC	ND		0.050	0.0097	ug/L		06/18/20 12:12	06/26/20 13:31	1
delta-BHC	ND		0.050	0.0078	ug/L		06/18/20 12:12	06/26/20 13:31	1
gamma-BHC (Lindane)	ND		0.050	0.010	ug/L		06/18/20 12:12	06/26/20 13:31	1
trans-Chlordane	ND		0.050	0.0072	ug/L		06/18/20 12:12	06/26/20 13:31	1
Dieldrin	ND		0.050	0.0046	ug/L		06/18/20 12:12	06/26/20 13:31	1
Heptachlor epoxide	ND		0.050	0.0032	ug/L		06/18/20 12:12	06/26/20 13:31	1
Heptachlor	ND		0.050	0.010	ug/L		06/18/20 12:12	06/26/20 13:31	1
Aldrin	ND		0.050	0.0062	ug/L		06/18/20 12:12	06/26/20 13:31	1
4,4'-DDD	ND		0.050	0.0042	ug/L		06/18/20 12:12	06/26/20 13:31	1
4,4'-DDE	ND		0.050	0.0042	ug/L		06/18/20 12:12	06/26/20 13:31	1
4,4'-DDT	ND		0.050	0.024	ug/L		06/18/20 12:12	06/26/20 13:31	1
Methoxychlor	ND		0.10	0.014	ug/L		06/18/20 12:12	06/26/20 13:31	1
Toxaphene	ND		3.0	1.5	ug/L		06/18/20 12:12	06/26/20 13:31	1
cis-Chlordane	ND		0.050	0.0088	ug/L		06/18/20 12:12	06/26/20 13:31	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Tetrachloro- <i>m</i> -xylene	71		28 - 115	06/18/20 12:12	06/26/20 13:31	1
DCB Decachlorobiphenyl	76		34 - 122	06/18/20 12:12	06/26/20 13:31	1

Lab Sample ID: LCS 280-499243/2-A
Matrix: Water
Analysis Batch: 500220

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499243

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
Endosulfan I	0.500	0.542		ug/L		108	46 - 125
Endosulfan II	0.500	0.535		ug/L		107	37 - 132
Endosulfan sulfate	0.500	0.582		ug/L		116	49 - 132
Endrin	0.500	0.601		ug/L		120	52 - 139
Endrin aldehyde	0.500	0.501		ug/L		100	38 - 123
Endrin ketone	0.500	0.503		ug/L		101	47 - 119
beta-BHC	0.500	0.492		ug/L		98	40 - 125

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 280-499243/2-A
Matrix: Water
Analysis Batch: 500220

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499243

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
alpha-BHC	0.500	0.484		ug/L		97	49 - 117
delta-BHC	0.500	0.496		ug/L		99	49 - 119
gamma-BHC (Lindane)	0.500	0.492		ug/L		98	51 - 117
trans-Chlordane	0.500	0.531		ug/L		106	52 - 120
Dieldrin	0.500	0.570		ug/L		114	60 - 123
Heptachlor epoxide	0.500	0.545		ug/L		109	54 - 122
Heptachlor	0.500	0.441		ug/L		88	41 - 121
Aldrin	0.500	0.305		ug/L		61	41 - 109
4,4'-DDD	0.500	0.547		ug/L		109	61 - 126
4,4'-DDE	0.500	0.507		ug/L		101	56 - 122
4,4'-DDT	0.500	0.590		ug/L		118	55 - 129
Methoxychlor	0.500	0.550		ug/L		110	54 - 126
cis-Chlordane	0.500	0.531		ug/L		106	54 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	67		28 - 115
DCB Decachlorobiphenyl	92		34 - 122

Lab Sample ID: LCSD 280-499243/3-A
Matrix: Water
Analysis Batch: 500220

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 499243

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Endosulfan I	0.500	0.513		ug/L		103	46 - 125	6	18
Endosulfan II	0.500	0.511		ug/L		102	37 - 132	5	23
Endosulfan sulfate	0.500	0.534		ug/L		107	49 - 132	8	13
Endrin	0.500	0.567		ug/L		113	52 - 139	6	17
Endrin aldehyde	0.500	0.347	*1	ug/L		69	38 - 123	36	17
Endrin ketone	0.500	0.510		ug/L		102	47 - 119	1	25
beta-BHC	0.500	0.469		ug/L		94	40 - 125	5	16
alpha-BHC	0.500	0.460		ug/L		92	49 - 117	5	16
delta-BHC	0.500	0.471		ug/L		94	49 - 119	5	16
gamma-BHC (Lindane)	0.500	0.469		ug/L		94	51 - 117	5	19
trans-Chlordane	0.500	0.495		ug/L		99	52 - 120	7	27
Dieldrin	0.500	0.543		ug/L		109	60 - 123	5	14
Heptachlor epoxide	0.500	0.517		ug/L		103	54 - 122	5	14
Heptachlor	0.500	0.404		ug/L		81	41 - 121	9	41
Aldrin	0.500	0.286		ug/L		57	41 - 109	7	42
4,4'-DDD	0.500	0.520		ug/L		104	61 - 126	5	14
4,4'-DDE	0.500	0.472		ug/L		94	56 - 122	7	20
4,4'-DDT	0.500	0.553		ug/L		111	55 - 129	7	19
Methoxychlor	0.500	0.534		ug/L		107	54 - 126	3	22
cis-Chlordane	0.500	0.495		ug/L		99	54 - 120	7	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene	63		28 - 115
DCB Decachlorobiphenyl	91		34 - 122

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 280-499974/1-A
Matrix: Solid
Analysis Batch: 500608

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499974

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan I	ND		3.4	0.35	ug/Kg		06/24/20 15:03	06/30/20 19:26	1
Endosulfan II	ND		3.4	0.57	ug/Kg		06/24/20 15:03	06/30/20 19:26	1
Endosulfan sulfate	ND		3.4	0.55	ug/Kg		06/24/20 15:03	06/30/20 19:26	1
Endrin	ND		3.4	0.61	ug/Kg		06/24/20 15:03	06/30/20 19:26	1
Endrin aldehyde	ND		3.4	1.1	ug/Kg		06/24/20 15:03	06/30/20 19:26	1
Endrin ketone	ND		3.4	0.40	ug/Kg		06/24/20 15:03	06/30/20 19:26	1
beta-BHC	ND		3.4	1.3	ug/Kg		06/24/20 15:03	06/30/20 19:26	1
alpha-BHC	ND		3.4	0.43	ug/Kg		06/24/20 15:03	06/30/20 19:26	1
delta-BHC	ND		3.4	0.80	ug/Kg		06/24/20 15:03	06/30/20 19:26	1
gamma-BHC (Lindane)	ND		3.4	0.39	ug/Kg		06/24/20 15:03	06/30/20 19:26	1
trans-Chlordane	ND		3.4	0.53	ug/Kg		06/24/20 15:03	06/30/20 19:26	1
Dieldrin	ND		3.4	0.42	ug/Kg		06/24/20 15:03	06/30/20 19:26	1
Heptachlor epoxide	ND		3.4	0.85	ug/Kg		06/24/20 15:03	06/30/20 19:26	1
Heptachlor	ND		3.4	0.43	ug/Kg		06/24/20 15:03	06/30/20 19:26	1
Aldrin	ND		3.4	0.50	ug/Kg		06/24/20 15:03	06/30/20 19:26	1
4,4'-DDD	ND		3.4	1.1	ug/Kg		06/24/20 15:03	06/30/20 19:26	1
4,4'-DDE	ND		3.4	0.48	ug/Kg		06/24/20 15:03	06/30/20 19:26	1
4,4'-DDT	ND		3.4	1.2	ug/Kg		06/24/20 15:03	06/30/20 19:26	1
Methoxychlor	ND		6.6	0.90	ug/Kg		06/24/20 15:03	06/30/20 19:26	1
Toxaphene	ND		130	32	ug/Kg		06/24/20 15:03	06/30/20 19:26	1
cis-Chlordane	ND		3.4	0.65	ug/Kg		06/24/20 15:03	06/30/20 19:26	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	75		59 - 115	06/24/20 15:03	06/30/20 19:26	1
DCB Decachlorobiphenyl	77		63 - 124	06/24/20 15:03	06/30/20 19:26	1

Lab Sample ID: LCS 280-499974/2-A
Matrix: Solid
Analysis Batch: 500608

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499974

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Endosulfan I	33.3	28.0		ug/Kg		84	60 - 101
Endosulfan II	33.3	30.1		ug/Kg		90	60 - 100
Endosulfan sulfate	33.3	33.0		ug/Kg		99	63 - 105
Endrin	33.3	30.6		ug/Kg		92	62 - 111
Endrin aldehyde	33.3	30.2	*	ug/Kg		90	53 - 88
Endrin ketone	33.3	29.7		ug/Kg		89	62 - 98
beta-BHC	33.3	31.3		ug/Kg		94	60 - 99
alpha-BHC	33.3	29.4		ug/Kg		88	61 - 101
delta-BHC	33.3	30.6		ug/Kg		92	62 - 103
gamma-BHC (Lindane)	33.3	31.0		ug/Kg		93	61 - 102
trans-Chlordane	33.3	31.0		ug/Kg		93	59 - 109
Dieldrin	33.3	31.5		ug/Kg		95	64 - 106
Heptachlor epoxide	33.3	31.0		ug/Kg		93	61 - 105
Heptachlor	33.3	30.8		ug/Kg		92	59 - 109
Aldrin	33.3	30.2		ug/Kg		91	59 - 104
4,4'-DDD	33.3	34.1		ug/Kg		102	63 - 104
4,4'-DDE	33.3	30.6		ug/Kg		92	63 - 105

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 280-499974/2-A
Matrix: Solid
Analysis Batch: 500608

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499974

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDT	33.3	25.4		ug/Kg		76	63 - 106
Methoxychlor	33.3	26.1		ug/Kg		78	62 - 110
cis-Chlordane	33.3	30.7		ug/Kg		92	60 - 104

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	86		59 - 115
DCB Decachlorobiphenyl	78		63 - 124

Lab Sample ID: 280-137759-3 MS
Matrix: Solid
Analysis Batch: 500608

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-09-6-8
Prep Type: Total/NA
Prep Batch: 499974

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Endosulfan I	ND		34.0	26.0	J	ug/Kg	*	77	60 - 101
Endosulfan II	ND	F1	34.0	ND	F1	ug/Kg	*	0	60 - 100
Endosulfan sulfate	ND	F1	34.0	ND	F1	ug/Kg	*	0	63 - 105
Endrin	ND		34.0	27.0	J	ug/Kg	*	79	62 - 111
Endrin aldehyde	ND	F1 *	34.0	ND	F1	ug/Kg	*	0	53 - 88
Endrin ketone	ND	F1	34.0	ND	F1	ug/Kg	*	0	62 - 98
beta-BHC	ND		34.0	28.6	J	ug/Kg	*	84	60 - 99
alpha-BHC	ND		34.0	29.2	J	ug/Kg	*	86	61 - 101
delta-BHC	ND		34.0	30.8	J	ug/Kg	*	90	62 - 103
gamma-BHC (Lindane)	ND		34.0	28.2	J	ug/Kg	*	83	61 - 102
trans-Chlordane	ND		34.0	31.1	J	ug/Kg	*	91	59 - 109
Dieldrin	ND		34.0	26.5	J	ug/Kg	*	78	64 - 106
Heptachlor epoxide	ND	F1	34.0	36.0	F1	ug/Kg	*	106	61 - 105
Heptachlor	ND		34.0	27.8	J	ug/Kg	*	82	59 - 109
Aldrin	ND		34.0	27.6	J	ug/Kg	*	81	59 - 104
4,4'-DDD	29	J F1	34.0	ND	F1	ug/Kg	*	0	63 - 104
4,4'-DDE	44	F1	34.0	77.5		ug/Kg	*	100	63 - 105
4,4'-DDT	ND	F1	34.0	ND	F1	ug/Kg	*	0	63 - 106
Methoxychlor	ND	F1	34.0	ND	F1	ug/Kg	*	0	62 - 110
cis-Chlordane	ND		34.0	31.2	J	ug/Kg	*	92	60 - 104

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	55	X	59 - 115
DCB Decachlorobiphenyl	0	X	63 - 124

Lab Sample ID: 280-137759-3 MSD
Matrix: Solid
Analysis Batch: 500608

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-09-6-8
Prep Type: Total/NA
Prep Batch: 499974

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Endosulfan I	ND		33.4	28.4	J	ug/Kg	*	85	60 - 101	9	26
Endosulfan II	ND	F1	33.4	33.5	J	ug/Kg	*	100	60 - 100	NC	20
Endosulfan sulfate	ND	F1	33.4	ND	F1	ug/Kg	*	0	63 - 105	NC	22
Endrin	ND		33.4	28.3	J	ug/Kg	*	85	62 - 111	5	30
Endrin aldehyde	ND	F1 *	33.4	ND	F1	ug/Kg	*	0	53 - 88	NC	29

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 280-137759-3 MSD

Matrix: Solid

Analysis Batch: 500608

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-09-6-8

Prep Type: Total/NA

Prep Batch: 499974

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Endrin ketone	ND	F1	33.4	ND	F1	ug/Kg	☼	0	62 - 98	NC	20
beta-BHC	ND		33.4	31.7	J	ug/Kg	☼	95	60 - 99	10	17
alpha-BHC	ND		33.4	25.9	J	ug/Kg	☼	77	61 - 101	12	17
delta-BHC	ND		33.4	30.2	J	ug/Kg	☼	90	62 - 103	2	19
gamma-BHC (Lindane)	ND		33.4	28.3	J	ug/Kg	☼	85	61 - 102	0	24
trans-Chlordane	ND		33.4	32.3	J	ug/Kg	☼	97	59 - 109	4	21
Dieldrin	ND		33.4	29.7	J	ug/Kg	☼	89	64 - 106	11	25
Heptachlor epoxide	ND	F1	33.4	37.2	F1	ug/Kg	☼	111	61 - 105	3	18
Heptachlor	ND		33.4	29.6	J	ug/Kg	☼	89	59 - 109	7	18
Aldrin	ND		33.4	29.3	J	ug/Kg	☼	88	59 - 104	6	50
4,4'-DDD	29	J F1	33.4	61.6		ug/Kg	☼	96	63 - 104	NC	20
4,4'-DDE	44	F1	33.4	78.8	F1	ug/Kg	☼	106	63 - 105	2	15
4,4'-DDT	ND	F1	33.4	ND	F1	ug/Kg	☼	0	63 - 106	NC	29
Methoxychlor	ND	F1	33.4	ND	F1	ug/Kg	☼	0	62 - 110	NC	23
cis-Chlordane	ND		33.4	33.1	J	ug/Kg	☼	99	60 - 104	6	18

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Tetrachloro-m-xylene	62		59 - 115
DCB Decachlorobiphenyl	0	X	63 - 124

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 280-499243/1-A

Matrix: Water

Analysis Batch: 502028

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 499243

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND		1.0	0.18	ug/L		06/18/20 12:12	07/14/20 08:01	1
PCB-1016	ND		1.0	0.17	ug/L		06/18/20 12:12	07/14/20 08:01	1
PCB-1232	ND		1.0	0.13	ug/L		06/18/20 12:12	07/14/20 08:01	1
PCB-1242	ND		1.0	0.10	ug/L		06/18/20 12:12	07/14/20 08:01	1
PCB-1248	ND		1.0	0.17	ug/L		06/18/20 12:12	07/14/20 08:01	1
PCB-1254	ND		1.0	0.14	ug/L		06/18/20 12:12	07/14/20 08:01	1
PCB-1260	ND		1.0	0.089	ug/L		06/18/20 12:12	07/14/20 08:01	1
PCB-1262	ND		1.0	0.094	ug/L		06/18/20 12:12	07/14/20 08:01	1
PCB-1268	ND		1.0	0.37	ug/L		06/18/20 12:12	07/14/20 08:01	1
Polychlorinated biphenyls, Total	ND		1.0	0.073	ug/L		06/18/20 12:12	07/14/20 08:01	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	74		29 - 115	06/18/20 12:12	07/14/20 08:01	1
DCB Decachlorobiphenyl	72		26 - 135	06/18/20 12:12	07/14/20 08:01	1

Lab Sample ID: LCS 280-499243/4-A

Matrix: Water

Analysis Batch: 502028

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 499243

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
PCB-1016	2.00	1.44		ug/L		72	58 - 125

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 280-499243/4-A
Matrix: Water
Analysis Batch: 502028

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499243

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1260	2.00	1.52		ug/L		76	72 - 128

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	67		29 - 115
DCB Decachlorobiphenyl	75		26 - 135

Lab Sample ID: LCSD 280-499243/5-A
Matrix: Water
Analysis Batch: 502028

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 499243

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
PCB-1016	2.00	1.72		ug/L		86	58 - 125	18	25
PCB-1260	2.00	1.67		ug/L		83	72 - 128	9	23

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene	83		29 - 115
DCB Decachlorobiphenyl	69		26 - 135

Lab Sample ID: MB 280-499974/1-A
Matrix: Solid
Analysis Batch: 502028

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499974

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND		94	31	ug/Kg		06/24/20 15:03	07/14/20 01:45	1
PCB-1016	ND		66	10	ug/Kg		06/24/20 15:03	07/14/20 01:45	1
PCB-1232	ND		66	10	ug/Kg		06/24/20 15:03	07/14/20 01:45	1
PCB-1242	ND		66	18	ug/Kg		06/24/20 15:03	07/14/20 01:45	1
PCB-1248	ND		66	4.8	ug/Kg		06/24/20 15:03	07/14/20 01:45	1
PCB-1254	ND		66	11	ug/Kg		06/24/20 15:03	07/14/20 01:45	1
PCB-1260	ND		66	2.3	ug/Kg		06/24/20 15:03	07/14/20 01:45	1
PCB-1262	ND		66	5.5	ug/Kg		06/24/20 15:03	07/14/20 01:45	1
PCB-1268	ND		66	2.7	ug/Kg		06/24/20 15:03	07/14/20 01:45	1
Polychlorinated biphenyls, Total	ND		66	5.3	ug/Kg		06/24/20 15:03	07/14/20 01:45	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	82		53 - 128	06/24/20 15:03	07/14/20 01:45	1
DCB Decachlorobiphenyl	80		59 - 130	06/24/20 15:03	07/14/20 01:45	1

Lab Sample ID: LCS 280-499974/3-A
Matrix: Solid
Analysis Batch: 502028

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499974

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	133	114		ug/Kg		85	54 - 132
PCB-1260	133	103		ug/Kg		77	62 - 129

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 280-499974/3-A
Matrix: Solid
Analysis Batch: 502028

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499974

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	83		53 - 128
DCB Decachlorobiphenyl	67		59 - 130

Lab Sample ID: 280-137759-3 MS
Matrix: Solid
Analysis Batch: 502308

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-09-6-8
Prep Type: Total/NA
Prep Batch: 499974

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
PCB-1016	ND		143	180		ug/Kg	☼	125	54 - 132
PCB-1260	ND		143	126		ug/Kg	☼	88	62 - 129

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	99		53 - 128
DCB Decachlorobiphenyl	80		59 - 130

Lab Sample ID: 280-137759-3 MSD
Matrix: Solid
Analysis Batch: 502308

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-09-6-8
Prep Type: Total/NA
Prep Batch: 499974

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
PCB-1016	ND		134	162		ug/Kg	☼	121	54 - 132	10	36
PCB-1260	ND		134	135		ug/Kg	☼	101	62 - 129	7	44

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Tetrachloro-m-xylene	100		53 - 128
DCB Decachlorobiphenyl	92		59 - 130

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-499453/1-A
Matrix: Solid
Analysis Batch: 500310

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499453

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.60	0.051	mg/Kg		06/24/20 09:15	06/26/20 05:37	1
Barium	ND		0.40	0.071	mg/Kg		06/24/20 09:15	06/26/20 05:37	1
Chromium	ND		0.20	0.076	mg/Kg		06/24/20 09:15	06/26/20 05:37	1
Lead	ND		0.15	0.018	mg/Kg		06/24/20 09:15	06/26/20 05:37	1
Selenium	ND		0.50	0.13	mg/Kg		06/24/20 09:15	06/26/20 05:37	1

Lab Sample ID: MB 280-499453/1-A
Matrix: Solid
Analysis Batch: 500570

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499453

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.10	0.0094	mg/Kg		06/24/20 09:15	06/29/20 15:32	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 280-499453/2-A
Matrix: Solid
Analysis Batch: 500310

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499453
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	20.0	21.1		mg/Kg		105	83 - 111
Barium	20.0	22.7		mg/Kg		113	86 - 120
Chromium	20.0	22.0		mg/Kg		110	87 - 121
Lead	20.0	21.8		mg/Kg		109	81 - 125
Selenium	20.0	20.7		mg/Kg		104	78 - 108

Lab Sample ID: LCS 280-499453/2-A
Matrix: Solid
Analysis Batch: 500570

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499453
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Cadmium	20.0	20.0		mg/Kg		100	85 - 109

Lab Sample ID: 280-137759-1 MS
Matrix: Solid
Analysis Batch: 500310

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-5-7
Prep Type: Total/NA
Prep Batch: 499453
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	1.6		18.7	21.2		mg/Kg	☼	105	83 - 111
Barium	93		18.7	88.1	4	mg/Kg	☼	-23	86 - 120
Chromium	6.4	F2 F1	18.7	27.8		mg/Kg	☼	114	87 - 121
Lead	6.5	F1	18.7	30.7	F1	mg/Kg	☼	129	81 - 125
Selenium	0.13	J	18.7	18.7		mg/Kg	☼	100	78 - 108

Lab Sample ID: 280-137759-1 MS
Matrix: Solid
Analysis Batch: 500570

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-5-7
Prep Type: Total/NA
Prep Batch: 499453
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cadmium	0.18		18.7	18.6		mg/Kg	☼	98	85 - 109

Lab Sample ID: 280-137759-1 MSD
Matrix: Solid
Analysis Batch: 500310

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-5-7
Prep Type: Total/NA
Prep Batch: 499453
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	1.6		19.7	23.0		mg/Kg	☼	109	83 - 111	8	20
Barium	93		19.7	99.9	4	mg/Kg	☼	38	86 - 120	13	20
Chromium	6.4	F2 F1	19.7	45.3	F1 F2	mg/Kg	☼	197	87 - 121	48	20
Lead	6.5	F1	19.7	31.1		mg/Kg	☼	125	81 - 125	1	20
Selenium	0.13	J	19.7	20.7		mg/Kg	☼	105	78 - 108	10	20

Lab Sample ID: 280-137759-1 MSD
Matrix: Solid
Analysis Batch: 500570

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-5-7
Prep Type: Total/NA
Prep Batch: 499453
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Cadmium	0.18		19.7	20.2		mg/Kg	☼	102	85 - 109	8	20

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 280-499456/1-A
Matrix: Solid
Analysis Batch: 500310

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499456

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		100	7.8	ug/Kg		06/25/20 10:00	06/26/20 11:19	1

Lab Sample ID: LCS 280-499456/2-A
Matrix: Solid
Analysis Batch: 500310

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499456

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Silver	20000	21400		ug/Kg		107	83 - 113

Lab Sample ID: 280-137759-2 MS
Matrix: Solid
Analysis Batch: 500329

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-20-22
Prep Type: Total/NA
Prep Batch: 499456

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Silver	400		19400	20800		ug/Kg	☼	105	83 - 113

Lab Sample ID: 280-137759-2 MSD
Matrix: Solid
Analysis Batch: 500329

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-20-22
Prep Type: Total/NA
Prep Batch: 499456

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Silver	400		18500	20100		ug/Kg	☼	106	83 - 113	4	20

Lab Sample ID: MB 280-499620/1-A
Matrix: Water
Analysis Batch: 500252

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499620

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.33	ug/L		06/23/20 09:00	06/25/20 20:44	1
Barium	ND		1.0	0.29	ug/L		06/23/20 09:00	06/25/20 20:44	1
Cadmium	ND		1.0	0.27	ug/L		06/23/20 09:00	06/25/20 20:44	1
Chromium	ND		2.0	0.50	ug/L		06/23/20 09:00	06/25/20 20:44	1
Lead	ND		1.0	0.18	ug/L		06/23/20 09:00	06/25/20 20:44	1
Selenium	ND		5.0	0.37	ug/L		06/23/20 09:00	06/25/20 20:44	1
Silver	ND		5.0	0.033	ug/L		06/23/20 09:00	06/25/20 20:44	1

Lab Sample ID: LCS 280-499620/2-A
Matrix: Water
Analysis Batch: 500252

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499620

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	40.0	42.3		ug/L		106	85 - 117
Barium	40.0	41.2		ug/L		103	85 - 118
Cadmium	40.0	39.8		ug/L		100	85 - 115
Chromium	40.0	42.8		ug/L		107	84 - 121
Lead	40.0	42.3		ug/L		106	85 - 118
Selenium	40.0	41.9		ug/L		105	77 - 122
Silver	40.0	40.3		ug/L		101	85 - 115

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 280-500960/1-A
Matrix: Water
Analysis Batch: 501160

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 500960

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.027	ug/L		07/02/20 13:24	07/02/20 17:31	1

Lab Sample ID: LCS 280-500960/2-A
Matrix: Water
Analysis Batch: 501160

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500960
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	5.00	4.94		ug/L		99	84 - 120

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 280-500708/1-A
Matrix: Solid
Analysis Batch: 500950

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 500708

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		17	5.5	ug/Kg		07/01/20 13:20	07/01/20 16:48	1

Lab Sample ID: LCS 280-500708/2-A
Matrix: Solid
Analysis Batch: 500950

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500708
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	333	354		ug/Kg		106	87 - 111

Lab Sample ID: LCSD 280-500708/3-A
Matrix: Solid
Analysis Batch: 500950

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 500708
%Rec.

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	333	348		ug/Kg		105	87 - 111	2	20

Consultant Work Product - Jacobs Engineering - Not CDOT Approved

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

GC/MS VOA

Prep Batch: 499554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-1	CDOT I270 Env-05/06_2020-SB-PV-06-5-7	Total/NA	Solid	5035	
280-137759-2	CDOT I270 Env-05/06_2020-SB-PV-06-20-22	Total/NA	Solid	5035	
280-137759-5	CDOT I270 Env-05/06_2020-SB-04-15-17	Total/NA	Solid	5035	
280-137759-6	CDOT I270 Env-05/06_2020-SB-04-25-27	Total/NA	Solid	5035	
280-137759-8	CDOT I270 Env-05/06_2020-SB-10-25-27	Total/NA	Solid	5035	
280-137759-9	CDOT I270 Env-05/06_2020-SB-19-10-12	Total/NA	Solid	5035	
280-137759-11	CDOT I270 Env-05/06_2020-SB-TB-05	Total/NA	Solid	5035	
MB 280-499554/3-A	Method Blank	Total/NA	Solid	5035	
LCS 280-499554/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-499554/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 499557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-1	CDOT I270 Env-05/06_2020-SB-PV-06-5-7	Total/NA	Solid	8260B	499554
280-137759-2	CDOT I270 Env-05/06_2020-SB-PV-06-20-22	Total/NA	Solid	8260B	499554
280-137759-5	CDOT I270 Env-05/06_2020-SB-04-15-17	Total/NA	Solid	8260B	499554
280-137759-6	CDOT I270 Env-05/06_2020-SB-04-25-27	Total/NA	Solid	8260B	499554
280-137759-8	CDOT I270 Env-05/06_2020-SB-10-25-27	Total/NA	Solid	8260B	499554
280-137759-9	CDOT I270 Env-05/06_2020-SB-19-10-12	Total/NA	Solid	8260B	499554
280-137759-11	CDOT I270 Env-05/06_2020-SB-TB-05	Total/NA	Solid	8260B	499554
MB 280-499554/3-A	Method Blank	Total/NA	Solid	8260B	499554
LCS 280-499554/1-A	Lab Control Sample	Total/NA	Solid	8260B	499554
LCSD 280-499554/2-A	Lab Control Sample Dup	Total/NA	Solid	8260B	499554

Analysis Batch: 499914

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-4	CDOT I270 Env-05/06_2020-SB-PV-09-GW	Total/NA	Water	8260B	
280-137759-10	CDOT I270 Env-05/06_2020-SB-TB-05	Total/NA	Water	8260B	
MB 280-499914/11	Method Blank	Total/NA	Water	8260B	
LCS 280-499914/6	Lab Control Sample	Total/NA	Water	8260B	
LCSD 280-499914/7	Lab Control Sample Dup	Total/NA	Water	8260B	

Prep Batch: 500369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-7	CDOT I270 Env-05/06_2020-SB-10-10-12	Total/NA	Solid	5035	
MB 280-500369/3-A	Method Blank	Total/NA	Solid	5035	
LCS 280-500369/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-500369/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 500416

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-7	CDOT I270 Env-05/06_2020-SB-10-10-12	Total/NA	Solid	8260B	500369
MB 280-500369/3-A	Method Blank	Total/NA	Solid	8260B	500369
LCS 280-500369/1-A	Lab Control Sample	Total/NA	Solid	8260B	500369
LCSD 280-500369/2-A	Lab Control Sample Dup	Total/NA	Solid	8260B	500369

GC/MS Semi VOA

Prep Batch: 499195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-1	CDOT I270 Env-05/06_2020-SB-PV-06-5-7	Total/NA	Solid	3550C	

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

GC/MS Semi VOA (Continued)

Prep Batch: 499195 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-2	CDOT I270 Env-05/06_2020-SB-PV-06-20-22	Total/NA	Solid	3550C	
280-137759-5	CDOT I270 Env-05/06_2020-SB-04-15-17	Total/NA	Solid	3550C	
280-137759-6	CDOT I270 Env-05/06_2020-SB-04-25-27	Total/NA	Solid	3550C	
280-137759-7	CDOT I270 Env-05/06_2020-SB-10-10-12	Total/NA	Solid	3550C	
280-137759-8	CDOT I270 Env-05/06_2020-SB-10-25-27	Total/NA	Solid	3550C	
280-137759-9	CDOT I270 Env-05/06_2020-SB-19-10-12	Total/NA	Solid	3550C	
MB 280-499195/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 280-499195/2-A	Lab Control Sample	Total/NA	Solid	3550C	
280-137759-9 MS	CDOT I270 Env-05/06_2020-SB-19-10-12	Total/NA	Solid	3550C	
280-137759-9 MSD	CDOT I270 Env-05/06_2020-SB-19-10-12	Total/NA	Solid	3550C	

Prep Batch: 499228

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-4	CDOT I270 Env-05/06_2020-SB-PV-09-GW	Total/NA	Water	3520C	
MB 280-499228/1-A	Method Blank	Total/NA	Water	3520C	
LCS 280-499228/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 280-499228/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 499913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-1	CDOT I270 Env-05/06_2020-SB-PV-06-5-7	Total/NA	Solid	8270D	499195
280-137759-2	CDOT I270 Env-05/06_2020-SB-PV-06-20-22	Total/NA	Solid	8270D	499195
280-137759-5	CDOT I270 Env-05/06_2020-SB-04-15-17	Total/NA	Solid	8270D	499195
280-137759-6	CDOT I270 Env-05/06_2020-SB-04-25-27	Total/NA	Solid	8270D	499195
280-137759-7	CDOT I270 Env-05/06_2020-SB-10-10-12	Total/NA	Solid	8270D	499195
280-137759-8	CDOT I270 Env-05/06_2020-SB-10-25-27	Total/NA	Solid	8270D	499195
280-137759-9	CDOT I270 Env-05/06_2020-SB-19-10-12	Total/NA	Solid	8270D	499195
MB 280-499195/1-A	Method Blank	Total/NA	Solid	8270D	499195
LCS 280-499195/2-A	Lab Control Sample	Total/NA	Solid	8270D	499195
280-137759-9 MS	CDOT I270 Env-05/06_2020-SB-19-10-12	Total/NA	Solid	8270D	499195
280-137759-9 MSD	CDOT I270 Env-05/06_2020-SB-19-10-12	Total/NA	Solid	8270D	499195

Analysis Batch: 501084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-4	CDOT I270 Env-05/06_2020-SB-PV-09-GW	Total/NA	Water	8270D	499228
MB 280-499228/1-A	Method Blank	Total/NA	Water	8270D	499228
LCS 280-499228/2-A	Lab Control Sample	Total/NA	Water	8270D	499228
LCSD 280-499228/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	499228

GC VOA

Analysis Batch: 499873

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-4	CDOT I270 Env-05/06_2020-SB-PV-09-GW	Total/NA	Water	8015C	
280-137759-10	CDOT I270 Env-05/06_2020-SB-TB-05	Total/NA	Water	8015C	
MB 280-499873/36	Method Blank	Total/NA	Water	8015C	
LCS 280-499873/34	Lab Control Sample	Total/NA	Water	8015C	
LCSD 280-499873/35	Lab Control Sample Dup	Total/NA	Water	8015C	

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

GC VOA

Prep Batch: 500121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-1	CDOT I270 Env-05/06_2020-SB-PV-06-5-7	Total/NA	Solid	5035	
280-137759-2	CDOT I270 Env-05/06_2020-SB-PV-06-20-22	Total/NA	Solid	5035	
280-137759-11	CDOT I270 Env-05/06_2020-SB-TB-05	Total/NA	Solid	5035	
MB 280-500121/3-A	Method Blank	Total/NA	Solid	5035	
LCS 280-500121/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-500121/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Prep Batch: 500304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-5	CDOT I270 Env-05/06_2020-SB-04-15-17	Total/NA	Solid	5035	
280-137759-6	CDOT I270 Env-05/06_2020-SB-04-25-27	Total/NA	Solid	5035	
280-137759-7	CDOT I270 Env-05/06_2020-SB-10-10-12	Total/NA	Solid	5035	
280-137759-8	CDOT I270 Env-05/06_2020-SB-10-25-27	Total/NA	Solid	5035	
280-137759-9	CDOT I270 Env-05/06_2020-SB-19-10-12	Total/NA	Solid	5035	
MB 280-500304/3-A	Method Blank	Total/NA	Solid	5035	
LCS 280-500304/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-500304/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 500332

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-1	CDOT I270 Env-05/06_2020-SB-PV-06-5-7	Total/NA	Solid	8015C	500121
280-137759-2	CDOT I270 Env-05/06_2020-SB-PV-06-20-22	Total/NA	Solid	8015C	500121
280-137759-11	CDOT I270 Env-05/06_2020-SB-TB-05	Total/NA	Solid	8015C	500121
MB 280-500121/3-A	Method Blank	Total/NA	Solid	8015C	500121
LCS 280-500121/1-A	Lab Control Sample	Total/NA	Solid	8015C	500121
LCSD 280-500121/2-A	Lab Control Sample Dup	Total/NA	Solid	8015C	500121

Analysis Batch: 500486

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-5	CDOT I270 Env-05/06_2020-SB-04-15-17	Total/NA	Solid	8015C	500304
280-137759-6	CDOT I270 Env-05/06_2020-SB-04-25-27	Total/NA	Solid	8015C	500304
280-137759-7	CDOT I270 Env-05/06_2020-SB-10-10-12	Total/NA	Solid	8015C	500304
280-137759-8	CDOT I270 Env-05/06_2020-SB-10-25-27	Total/NA	Solid	8015C	500304
280-137759-9	CDOT I270 Env-05/06_2020-SB-19-10-12	Total/NA	Solid	8015C	500304
MB 280-500304/3-A	Method Blank	Total/NA	Solid	8015C	500304
LCS 280-500304/1-A	Lab Control Sample	Total/NA	Solid	8015C	500304
LCSD 280-500304/2-A	Lab Control Sample Dup	Total/NA	Solid	8015C	500304

GC Semi VOA

Prep Batch: 499243

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-4	CDOT I270 Env-05/06_2020-SB-PV-09-GW	Total/NA	Water	3510C	
MB 280-499243/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-499243/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCS 280-499243/4-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 280-499243/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
LCSD 280-499243/5-A	Lab Control Sample Dup	Total/NA	Water	3510C	

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QC Association Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

GC Semi VOA

Prep Batch: 499277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-4	CDOT I270 Env-05/06_2020-SB-PV-09-GW	Total/NA	Water	3510C	
MB 280-499277/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-499277/4-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 280-499277/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
LCSD 280-499277/5-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Prep Batch: 499900

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-1	CDOT I270 Env-05/06_2020-SB-PV-06-5-7	Total/NA	Solid	3546	
280-137759-2	CDOT I270 Env-05/06_2020-SB-PV-06-20-22	Total/NA	Solid	3546	
280-137759-5	CDOT I270 Env-05/06_2020-SB-04-15-17	Total/NA	Solid	3546	
MB 280-499900/1-A	Method Blank	Total/NA	Solid	3546	
LCS 280-499900/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCS 280-499900/3-A	Lab Control Sample	Total/NA	Solid	3546	
280-137759-5 MS	CDOT I270 Env-05/06_2020-SB-04-15-17	Total/NA	Solid	3546	
280-137759-5 MS	CDOT I270 Env-05/06_2020-SB-04-15-17	Total/NA	Solid	3546	
280-137759-5 MSD	CDOT I270 Env-05/06_2020-SB-04-15-17	Total/NA	Solid	3546	
280-137759-5 MSD	CDOT I270 Env-05/06_2020-SB-04-15-17	Total/NA	Solid	3546	

Prep Batch: 499974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-3	CDOT I270 Env-05/06_2020-SB-PV-09-6-8	Total/NA	Solid	3546	
MB 280-499974/1-A	Method Blank	Total/NA	Solid	3546	
LCS 280-499974/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCS 280-499974/3-A	Lab Control Sample	Total/NA	Solid	3546	
280-137759-3 MS	CDOT I270 Env-05/06_2020-SB-PV-09-6-8	Total/NA	Solid	3546	
280-137759-3 MS	CDOT I270 Env-05/06_2020-SB-PV-09-6-8	Total/NA	Solid	3546	
280-137759-3 MSD	CDOT I270 Env-05/06_2020-SB-PV-09-6-8	Total/NA	Solid	3546	
280-137759-3 MSD	CDOT I270 Env-05/06_2020-SB-PV-09-6-8	Total/NA	Solid	3546	

Prep Batch: 500213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-6	CDOT I270 Env-05/06_2020-SB-04-25-27	Total/NA	Solid	3546	
280-137759-7	CDOT I270 Env-05/06_2020-SB-10-10-12	Total/NA	Solid	3546	
280-137759-8	CDOT I270 Env-05/06_2020-SB-10-25-27	Total/NA	Solid	3546	
280-137759-9	CDOT I270 Env-05/06_2020-SB-19-10-12	Total/NA	Solid	3546	
MB 280-500213/1-A	Method Blank	Total/NA	Solid	3546	
LCS 280-500213/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCS 280-500213/3-A	Lab Control Sample	Total/NA	Solid	3546	

Analysis Batch: 500220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-4	CDOT I270 Env-05/06_2020-SB-PV-09-GW	Total/NA	Water	8081B	499243
MB 280-499243/1-A	Method Blank	Total/NA	Water	8081B	499243
LCS 280-499243/2-A	Lab Control Sample	Total/NA	Water	8081B	499243
LCSD 280-499243/3-A	Lab Control Sample Dup	Total/NA	Water	8081B	499243

Analysis Batch: 500427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-499277/1-A	Method Blank	Total/NA	Water	8015C	499277
LCSD 280-499277/3-A	Lab Control Sample Dup	Total/NA	Water	8015C	499277

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

GC Semi VOA

Analysis Batch: 500608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-3	CDOT I270 Env-05/06_2020-SB-PV-09-6-8	Total/NA	Solid	8081B	499974
MB 280-499974/1-A	Method Blank	Total/NA	Solid	8081B	499974
LCS 280-499974/2-A	Lab Control Sample	Total/NA	Solid	8081B	499974
280-137759-3 MS	CDOT I270 Env-05/06_2020-SB-PV-09-6-8	Total/NA	Solid	8081B	499974
280-137759-3 MSD	CDOT I270 Env-05/06_2020-SB-PV-09-6-8	Total/NA	Solid	8081B	499974

Analysis Batch: 500853

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-4	CDOT I270 Env-05/06_2020-SB-PV-09-GW	Total/NA	Water	8015C	499277

Analysis Batch: 501686

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-499900/1-A	Method Blank	Total/NA	Solid	8015C	499900
LCS 280-499900/3-A	Lab Control Sample	Total/NA	Solid	8015C	499900

Analysis Batch: 501914

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-1	CDOT I270 Env-05/06_2020-SB-PV-06-5-7	Total/NA	Solid	8015C	499900
280-137759-2	CDOT I270 Env-05/06_2020-SB-PV-06-20-22	Total/NA	Solid	8015C	499900
280-137759-5	CDOT I270 Env-05/06_2020-SB-04-15-17	Total/NA	Solid	8015C	499900
MB 280-499900/1-A	Method Blank	Total/NA	Solid	8015C	499900
LCS 280-499277/4-A	Lab Control Sample	Total/NA	Water	8015C	499277
LCS 280-499900/2-A	Lab Control Sample	Total/NA	Solid	8015C	499900
LCSD 280-499277/5-A	Lab Control Sample Dup	Total/NA	Water	8015C	499277
280-137759-5 MS	CDOT I270 Env-05/06_2020-SB-04-15-17	Total/NA	Solid	8015C	499900
280-137759-5 MS	CDOT I270 Env-05/06_2020-SB-04-15-17	Total/NA	Solid	8015C	499900
280-137759-5 MSD	CDOT I270 Env-05/06_2020-SB-04-15-17	Total/NA	Solid	8015C	499900
280-137759-5 MSD	CDOT I270 Env-05/06_2020-SB-04-15-17	Total/NA	Solid	8015C	499900

Analysis Batch: 502028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-4	CDOT I270 Env-05/06_2020-SB-PV-09-GW	Total/NA	Water	8082A	499243
MB 280-499243/1-A	Method Blank	Total/NA	Water	8082A	499243
MB 280-499974/1-A	Method Blank	Total/NA	Solid	8082A	499974
LCS 280-499243/4-A	Lab Control Sample	Total/NA	Water	8082A	499243
LCS 280-499974/3-A	Lab Control Sample	Total/NA	Solid	8082A	499974
LCSD 280-499243/5-A	Lab Control Sample Dup	Total/NA	Water	8082A	499243

Analysis Batch: 502159

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-6	CDOT I270 Env-05/06_2020-SB-04-25-27	Total/NA	Solid	8015C	500213
280-137759-7	CDOT I270 Env-05/06_2020-SB-10-10-12	Total/NA	Solid	8015C	500213
280-137759-8	CDOT I270 Env-05/06_2020-SB-10-25-27	Total/NA	Solid	8015C	500213
MB 280-500213/1-A	Method Blank	Total/NA	Solid	8015C	500213
LCS 280-500213/2-A	Lab Control Sample	Total/NA	Solid	8015C	500213
LCS 280-500213/3-A	Lab Control Sample	Total/NA	Solid	8015C	500213

Analysis Batch: 502308

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-3	CDOT I270 Env-05/06_2020-SB-PV-09-6-8	Total/NA	Solid	8082A	499974
280-137759-3 MS	CDOT I270 Env-05/06_2020-SB-PV-09-6-8	Total/NA	Solid	8082A	499974

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

GC Semi VOA (Continued)

Analysis Batch: 502308 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-3 MSD	CDOT I270 Env-05/06_2020-SB-PV-09-6-8	Total/NA	Solid	8082A	499974

Analysis Batch: 502375

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-9	CDOT I270 Env-05/06_2020-SB-19-10-12	Total/NA	Solid	8015C	500213

Metals

Prep Batch: 499453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-1	CDOT I270 Env-05/06_2020-SB-PV-06-5-7	Total/NA	Solid	3050B	
280-137759-2	CDOT I270 Env-05/06_2020-SB-PV-06-20-22	Total/NA	Solid	3050B	
280-137759-5	CDOT I270 Env-05/06_2020-SB-04-15-17	Total/NA	Solid	3050B	
280-137759-6	CDOT I270 Env-05/06_2020-SB-04-25-27	Total/NA	Solid	3050B	
280-137759-7	CDOT I270 Env-05/06_2020-SB-10-10-12	Total/NA	Solid	3050B	
280-137759-8	CDOT I270 Env-05/06_2020-SB-10-25-27	Total/NA	Solid	3050B	
280-137759-9	CDOT I270 Env-05/06_2020-SB-19-10-12	Total/NA	Solid	3050B	
MB 280-499453/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-499453/2-A	Lab Control Sample	Total/NA	Solid	3050B	
280-137759-1 MS	CDOT I270 Env-05/06_2020-SB-PV-06-5-7	Total/NA	Solid	3050B	
280-137759-1 MSD	CDOT I270 Env-05/06_2020-SB-PV-06-5-7	Total/NA	Solid	3050B	

Prep Batch: 499456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-1	CDOT I270 Env-05/06_2020-SB-PV-06-5-7	Total/NA	Solid	3050B-Sb	
280-137759-2	CDOT I270 Env-05/06_2020-SB-PV-06-20-22	Total/NA	Solid	3050B-Sb	
280-137759-5	CDOT I270 Env-05/06_2020-SB-04-15-17	Total/NA	Solid	3050B-Sb	
280-137759-6	CDOT I270 Env-05/06_2020-SB-04-25-27	Total/NA	Solid	3050B-Sb	
280-137759-7	CDOT I270 Env-05/06_2020-SB-10-10-12	Total/NA	Solid	3050B-Sb	
280-137759-8	CDOT I270 Env-05/06_2020-SB-10-25-27	Total/NA	Solid	3050B-Sb	
280-137759-9	CDOT I270 Env-05/06_2020-SB-19-10-12	Total/NA	Solid	3050B-Sb	
MB 280-499456/1-A	Method Blank	Total/NA	Solid	3050B-Sb	
LCS 280-499456/2-A	Lab Control Sample	Total/NA	Solid	3050B-Sb	
280-137759-2 MS	CDOT I270 Env-05/06_2020-SB-PV-06-20-22	Total/NA	Solid	3050B-Sb	
280-137759-2 MSD	CDOT I270 Env-05/06_2020-SB-PV-06-20-22	Total/NA	Solid	3050B-Sb	

Prep Batch: 499620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-4	CDOT I270 Env-05/06_2020-SB-PV-09-GW	Total/NA	Water	3020A	
MB 280-499620/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-499620/2-A	Lab Control Sample	Total/NA	Water	3020A	

Analysis Batch: 500252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-4	CDOT I270 Env-05/06_2020-SB-PV-09-GW	Total/NA	Water	6020A	499620
MB 280-499620/1-A	Method Blank	Total/NA	Water	6020A	499620
LCS 280-499620/2-A	Lab Control Sample	Total/NA	Water	6020A	499620

Analysis Batch: 500310

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-1	CDOT I270 Env-05/06_2020-SB-PV-06-5-7	Total/NA	Solid	6020A	499453

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QC Association Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Metals (Continued)

Analysis Batch: 500310 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-1	CDOT I270 Env-05/06_2020-SB-PV-06-5-7	Total/NA	Solid	6020A	499456
280-137759-2	CDOT I270 Env-05/06_2020-SB-PV-06-20-22	Total/NA	Solid	6020A	499453
280-137759-4	CDOT I270 Env-05/06_2020-SB-PV-09-GW	Total/NA	Water	6020A	499620
280-137759-5	CDOT I270 Env-05/06_2020-SB-04-15-17	Total/NA	Solid	6020A	499453
280-137759-5	CDOT I270 Env-05/06_2020-SB-04-15-17	Total/NA	Solid	6020A	499456
280-137759-6	CDOT I270 Env-05/06_2020-SB-04-25-27	Total/NA	Solid	6020A	499453
280-137759-6	CDOT I270 Env-05/06_2020-SB-04-25-27	Total/NA	Solid	6020A	499456
280-137759-7	CDOT I270 Env-05/06_2020-SB-10-10-12	Total/NA	Solid	6020A	499453
280-137759-7	CDOT I270 Env-05/06_2020-SB-10-10-12	Total/NA	Solid	6020A	499456
280-137759-8	CDOT I270 Env-05/06_2020-SB-10-25-27	Total/NA	Solid	6020A	499453
280-137759-8	CDOT I270 Env-05/06_2020-SB-10-25-27	Total/NA	Solid	6020A	499456
280-137759-9	CDOT I270 Env-05/06_2020-SB-19-10-12	Total/NA	Solid	6020A	499453
280-137759-9	CDOT I270 Env-05/06_2020-SB-19-10-12	Total/NA	Solid	6020A	499456
MB 280-499453/1-A	Method Blank	Total/NA	Solid	6020A	499453
MB 280-499456/1-A	Method Blank	Total/NA	Solid	6020A	499456
LCS 280-499453/2-A	Lab Control Sample	Total/NA	Solid	6020A	499453
LCS 280-499456/2-A	Lab Control Sample	Total/NA	Solid	6020A	499456
280-137759-1 MS	CDOT I270 Env-05/06_2020-SB-PV-06-5-7	Total/NA	Solid	6020A	499453
280-137759-1 MSD	CDOT I270 Env-05/06_2020-SB-PV-06-5-7	Total/NA	Solid	6020A	499453

Analysis Batch: 500329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-2	CDOT I270 Env-05/06_2020-SB-PV-06-20-22	Total/NA	Solid	6020A	499456
280-137759-2 MS	CDOT I270 Env-05/06_2020-SB-PV-06-20-22	Total/NA	Solid	6020A	499456
280-137759-2 MSD	CDOT I270 Env-05/06_2020-SB-PV-06-20-22	Total/NA	Solid	6020A	499456

Analysis Batch: 500570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-1	CDOT I270 Env-05/06_2020-SB-PV-06-5-7	Total/NA	Solid	6020A	499453
280-137759-2	CDOT I270 Env-05/06_2020-SB-PV-06-20-22	Total/NA	Solid	6020A	499453
280-137759-5	CDOT I270 Env-05/06_2020-SB-04-15-17	Total/NA	Solid	6020A	499453
280-137759-6	CDOT I270 Env-05/06_2020-SB-04-25-27	Total/NA	Solid	6020A	499453
280-137759-7	CDOT I270 Env-05/06_2020-SB-10-10-12	Total/NA	Solid	6020A	499453
280-137759-8	CDOT I270 Env-05/06_2020-SB-10-25-27	Total/NA	Solid	6020A	499453
280-137759-9	CDOT I270 Env-05/06_2020-SB-19-10-12	Total/NA	Solid	6020A	499453
MB 280-499453/1-A	Method Blank	Total/NA	Solid	6020A	499453
LCS 280-499453/2-A	Lab Control Sample	Total/NA	Solid	6020A	499453
280-137759-1 MS	CDOT I270 Env-05/06_2020-SB-PV-06-5-7	Total/NA	Solid	6020A	499453
280-137759-1 MSD	CDOT I270 Env-05/06_2020-SB-PV-06-5-7	Total/NA	Solid	6020A	499453

Prep Batch: 500708

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-1	CDOT I270 Env-05/06_2020-SB-PV-06-5-7	Total/NA	Solid	7471B	
280-137759-2	CDOT I270 Env-05/06_2020-SB-PV-06-20-22	Total/NA	Solid	7471B	
280-137759-5	CDOT I270 Env-05/06_2020-SB-04-15-17	Total/NA	Solid	7471B	
280-137759-6	CDOT I270 Env-05/06_2020-SB-04-25-27	Total/NA	Solid	7471B	
280-137759-7	CDOT I270 Env-05/06_2020-SB-10-10-12	Total/NA	Solid	7471B	
280-137759-8	CDOT I270 Env-05/06_2020-SB-10-25-27	Total/NA	Solid	7471B	
280-137759-9	CDOT I270 Env-05/06_2020-SB-19-10-12	Total/NA	Solid	7471B	
MB 280-500708/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 280-500708/2-A	Lab Control Sample	Total/NA	Solid	7471B	

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Metals (Continued)

Prep Batch: 500708 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 280-500708/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	

Analysis Batch: 500950

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-1	CDOT I270 Env-05/06_2020-SB-PV-06-5-7	Total/NA	Solid	7471B	500708
280-137759-2	CDOT I270 Env-05/06_2020-SB-PV-06-20-22	Total/NA	Solid	7471B	500708
280-137759-5	CDOT I270 Env-05/06_2020-SB-04-15-17	Total/NA	Solid	7471B	500708
280-137759-6	CDOT I270 Env-05/06_2020-SB-04-25-27	Total/NA	Solid	7471B	500708
280-137759-7	CDOT I270 Env-05/06_2020-SB-10-10-12	Total/NA	Solid	7471B	500708
280-137759-8	CDOT I270 Env-05/06_2020-SB-10-25-27	Total/NA	Solid	7471B	500708
280-137759-9	CDOT I270 Env-05/06_2020-SB-19-10-12	Total/NA	Solid	7471B	500708
MB 280-500708/1-A	Method Blank	Total/NA	Solid	7471B	500708
LCS 280-500708/2-A	Lab Control Sample	Total/NA	Solid	7471B	500708
LCSD 280-500708/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	500708

Prep Batch: 500960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-4	CDOT I270 Env-05/06_2020-SB-PV-09-GW	Total/NA	Water	7470A	
MB 280-500960/1-A	Method Blank	Total/NA	Water	7470A	
LCS 280-500960/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 501160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-4	CDOT I270 Env-05/06_2020-SB-PV-09-GW	Total/NA	Water	7470A	500960
MB 280-500960/1-A	Method Blank	Total/NA	Water	7470A	500960
LCS 280-500960/2-A	Lab Control Sample	Total/NA	Water	7470A	500960

General Chemistry

Analysis Batch: 499220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137759-1	CDOT I270 Env-05/06_2020-SB-PV-06-5-7	Total/NA	Solid	Moisture	
280-137759-2	CDOT I270 Env-05/06_2020-SB-PV-06-20-22	Total/NA	Solid	Moisture	
280-137759-3	CDOT I270 Env-05/06_2020-SB-PV-09-6-8	Total/NA	Solid	Moisture	
280-137759-5	CDOT I270 Env-05/06_2020-SB-04-15-17	Total/NA	Solid	Moisture	
280-137759-6	CDOT I270 Env-05/06_2020-SB-04-25-27	Total/NA	Solid	Moisture	
280-137759-7	CDOT I270 Env-05/06_2020-SB-10-10-12	Total/NA	Solid	Moisture	
280-137759-8	CDOT I270 Env-05/06_2020-SB-10-25-27	Total/NA	Solid	Moisture	
280-137759-9	CDOT I270 Env-05/06_2020-SB-19-10-12	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-5-7

Lab Sample ID: 280-137759-1

Date Collected: 06/15/20 22:30

Matrix: Solid

Date Received: 06/17/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			499220	06/18/20 09:39	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-5-7

Lab Sample ID: 280-137759-1

Date Collected: 06/15/20 22:30

Matrix: Solid

Date Received: 06/17/20 14:05

Percent Solids: 94.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.783 g	5 mL	499554	06/15/20 22:30	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	499557	06/21/20 15:11	GPM	TAL DEN
Total/NA	Prep	3550C			32.7 g	1 mL	499195	06/18/20 09:43	JT	TAL DEN
Total/NA	Analysis	8270D		1			499913	06/24/20 15:30	RDP	TAL DEN
Total/NA	Prep	5035			5.216 g	5 mL	500121	06/15/20 22:30	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	500332	06/27/20 10:50	CAS	TAL DEN
Total/NA	Prep	3546			15.0 g	1 mL	499900	06/24/20 08:19	JT	TAL DEN
Total/NA	Analysis	8015C		1			501914	07/13/20 04:07	MAM	TAL DEN
Total/NA	Prep	3050B			1.109 g	100 mL	499453	06/24/20 09:15	NK	TAL DEN
Total/NA	Analysis	6020A		1			500310	06/26/20 05:45	LMT	TAL DEN
Total/NA	Prep	3050B-Sb			1.122 g	100 mL	499456	06/25/20 10:00	NK	TAL DEN
Total/NA	Analysis	6020A		1			500310	06/26/20 11:27	LMT	TAL DEN
Total/NA	Prep	3050B			1.109 g	100 mL	499453	06/24/20 09:15	NK	TAL DEN
Total/NA	Analysis	6020A		1			500570	06/29/20 15:39	LMT	TAL DEN
Total/NA	Prep	7471B			.59 g	50 mL	500708	07/01/20 13:20	AL	TAL DEN
Total/NA	Analysis	7471B		1			500950	07/01/20 17:08	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-20-22

Lab Sample ID: 280-137759-2

Date Collected: 06/15/20 23:10

Matrix: Solid

Date Received: 06/17/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			499220	06/18/20 09:39	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-20-22

Lab Sample ID: 280-137759-2

Date Collected: 06/15/20 23:10

Matrix: Solid

Date Received: 06/17/20 14:05

Percent Solids: 91.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.484 g	5 mL	499554	06/15/20 23:10	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	499557	06/21/20 15:33	GPM	TAL DEN
Total/NA	Prep	3550C			30.1 g	1 mL	499195	06/18/20 09:43	JT	TAL DEN
Total/NA	Analysis	8270D		1			499913	06/24/20 15:57	RDP	TAL DEN
Total/NA	Prep	5035			6.119 g	5 mL	500121	06/15/20 23:10	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	500332	06/27/20 11:10	CAS	TAL DEN
Total/NA	Prep	3546			15.8 g	1 mL	499900	06/24/20 08:19	JT	TAL DEN
Total/NA	Analysis	8015C		1			501914	07/13/20 04:29	MAM	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-06-20-22

Lab Sample ID: 280-137759-2

Date Collected: 06/15/20 23:10

Matrix: Solid

Date Received: 06/17/20 14:05

Percent Solids: 91.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.135 g	100 mL	499453	06/24/20 09:15	NK	TAL DEN
Total/NA	Analysis	6020A		1			500310	06/26/20 06:04	LMT	TAL DEN
Total/NA	Prep	3050B-Sb			1.267 g	100 mL	499456	06/25/20 10:00	NK	TAL DEN
Total/NA	Analysis	6020A		1			500329	06/26/20 14:40	LMT	TAL DEN
Total/NA	Prep	3050B			1.135 g	100 mL	499453	06/24/20 09:15	NK	TAL DEN
Total/NA	Analysis	6020A		1			500570	06/29/20 16:09	LMT	TAL DEN
Total/NA	Prep	7471B			.58 g	50 mL	500708	07/01/20 13:20	AL	TAL DEN
Total/NA	Analysis	7471B		1			500950	07/01/20 17:11	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-09-6-8

Lab Sample ID: 280-137759-3

Date Collected: 06/16/20 03:00

Matrix: Solid

Date Received: 06/17/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			499220	06/18/20 09:39	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-09-6-8

Lab Sample ID: 280-137759-3

Date Collected: 06/16/20 03:00

Matrix: Solid

Date Received: 06/17/20 14:05

Percent Solids: 92.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15.1 g	10 mL	499974	06/24/20 15:03	DCL	TAL DEN
Total/NA	Analysis	8081B		10			500608	06/30/20 21:28	MD	TAL DEN
Total/NA	Prep	3546			15.1 g	10 mL	499974	06/24/20 15:03	DCL	TAL DEN
Total/NA	Analysis	8082A		1			502308	07/16/20 10:29	MAM	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-09-GW

Lab Sample ID: 280-137759-4

Date Collected: 06/16/20 03:45

Matrix: Water

Date Received: 06/17/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	499914	06/24/20 11:03	JLS	TAL DEN
Total/NA	Prep	3520C			993.7 mL	1 mL	499228	06/18/20 12:02	JNM	TAL DEN
Total/NA	Analysis	8270D		1			501084	07/03/20 23:15	AJE	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	499873	06/24/20 07:36	GO	TAL DEN
Total/NA	Prep	3510C			1018.6 mL	1 mL	499277	06/18/20 15:45	NMC	TAL DEN
Total/NA	Analysis	8015C		1			500853	07/01/20 23:43	MAM	TAL DEN
Total/NA	Prep	3510C			250 mL	5 mL	499243	06/18/20 12:12	NMC	TAL DEN
Total/NA	Analysis	8081B		1			500220	06/26/20 13:13	MD	TAL DEN
Total/NA	Prep	3510C			250 mL	5 mL	499243	06/18/20 12:12	NMC	TAL DEN
Total/NA	Analysis	8082A		1			502028	07/14/20 08:25	MAM	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	499620	06/23/20 09:00	NK	TAL DEN
Total/NA	Analysis	6020A		1			500252	06/25/20 21:14	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	499620	06/23/20 09:00	NK	TAL DEN
Total/NA	Analysis	6020A		10			500310	06/26/20 12:25	LMT	TAL DEN

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Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-PV-09-GW

Lab Sample ID: 280-137759-4

Date Collected: 06/16/20 03:45

Matrix: Water

Date Received: 06/17/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			30 mL	50 mL	500960	07/02/20 13:24	AL	TAL DEN
Total/NA	Analysis	7470A		1			501160	07/02/20 17:36	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-15-17

Lab Sample ID: 280-137759-5

Date Collected: 06/16/20 23:10

Matrix: Solid

Date Received: 06/17/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			499220	06/18/20 09:39	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-15-17

Lab Sample ID: 280-137759-5

Date Collected: 06/16/20 23:10

Matrix: Solid

Date Received: 06/17/20 14:05

Percent Solids: 87.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.581 g	5 mL	499554	06/16/20 23:10	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	499557	06/21/20 15:56	GPM	TAL DEN
Total/NA	Prep	3550C			32.9 g	1 mL	499195	06/18/20 09:43	JT	TAL DEN
Total/NA	Analysis	8270D		1			499913	06/24/20 16:25	RDP	TAL DEN
Total/NA	Prep	5035			5.72 g	5 mL	500304	06/16/20 23:10	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	500486	06/29/20 12:14	CAS	TAL DEN
Total/NA	Prep	3546			15.0 g	1 mL	499900	06/24/20 08:19	JT	TAL DEN
Total/NA	Analysis	8015C		1			501914	07/13/20 04:51	MAM	TAL DEN
Total/NA	Prep	3050B			1.075 g	100 mL	499453	06/24/20 09:15	NK	TAL DEN
Total/NA	Analysis	6020A		1			500310	06/26/20 06:19	LMT	TAL DEN
Total/NA	Prep	3050B-Sb			1.154 g	100 mL	499456	06/25/20 10:00	NK	TAL DEN
Total/NA	Analysis	6020A		1			500310	06/26/20 12:04	LMT	TAL DEN
Total/NA	Prep	3050B			1.075 g	100 mL	499453	06/24/20 09:15	NK	TAL DEN
Total/NA	Analysis	6020A		1			500570	06/29/20 16:13	LMT	TAL DEN
Total/NA	Prep	7471B			.60 g	50 mL	500708	07/01/20 13:20	AL	TAL DEN
Total/NA	Analysis	7471B		1			500950	07/01/20 17:18	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-25-27

Lab Sample ID: 280-137759-6

Date Collected: 06/16/20 23:45

Matrix: Solid

Date Received: 06/17/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			499220	06/18/20 09:39	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-25-27

Lab Sample ID: 280-137759-6

Date Collected: 06/16/20 23:45

Matrix: Solid

Date Received: 06/17/20 14:05

Percent Solids: 96.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.457 g	5 mL	499554	06/16/20 23:45	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	499557	06/21/20 16:19	GPM	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-04-25-27

Lab Sample ID: 280-137759-6

Date Collected: 06/16/20 23:45

Matrix: Solid

Date Received: 06/17/20 14:05

Percent Solids: 96.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			32.2 g	1 mL	499195	06/18/20 09:43	JT	TAL DEN
Total/NA	Analysis	8270D		1			499913	06/24/20 16:52	RDP	TAL DEN
Total/NA	Prep	5035			4.7 g	5 mL	500304	06/16/20 23:45	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	500486	06/29/20 12:34	CAS	TAL DEN
Total/NA	Prep	3546			15.2 g	1 mL	500213	06/26/20 06:37	JT	TAL DEN
Total/NA	Analysis	8015C		1			502159	07/15/20 01:41	MAM	TAL DEN
Total/NA	Prep	3050B			1.166 g	100 mL	499453	06/24/20 09:15	NK	TAL DEN
Total/NA	Analysis	6020A		1			500310	06/26/20 06:23	LMT	TAL DEN
Total/NA	Prep	3050B-Sb			1.126 g	100 mL	499456	06/25/20 10:00	NK	TAL DEN
Total/NA	Analysis	6020A		1			500310	06/26/20 12:08	LMT	TAL DEN
Total/NA	Prep	3050B			1.166 g	100 mL	499453	06/24/20 09:15	NK	TAL DEN
Total/NA	Analysis	6020A		1			500570	06/29/20 16:16	LMT	TAL DEN
Total/NA	Prep	7471B			.51 g	50 mL	500708	07/01/20 13:20	AL	TAL DEN
Total/NA	Analysis	7471B		1			500950	07/01/20 17:21	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-10-10-12

Lab Sample ID: 280-137759-7

Date Collected: 06/17/20 01:20

Matrix: Solid

Date Received: 06/17/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			499220	06/18/20 09:39	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-10-10-12

Lab Sample ID: 280-137759-7

Date Collected: 06/17/20 01:20

Matrix: Solid

Date Received: 06/17/20 14:05

Percent Solids: 96.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.231 g	5 mL	500369	06/17/20 01:20	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	500416	06/28/20 13:40	GPM	TAL DEN
Total/NA	Prep	3550C			32.1 g	1 mL	499195	06/18/20 09:43	JT	TAL DEN
Total/NA	Analysis	8270D		1			499913	06/24/20 17:20	RDP	TAL DEN
Total/NA	Prep	5035			4.316 g	5 mL	500304	06/17/20 01:20	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	500486	06/29/20 12:54	CAS	TAL DEN
Total/NA	Prep	3546			16.1 g	1 mL	500213	06/26/20 06:37	JT	TAL DEN
Total/NA	Analysis	8015C		1			502159	07/15/20 02:02	MAM	TAL DEN
Total/NA	Prep	3050B			1.065 g	100 mL	499453	06/24/20 09:15	NK	TAL DEN
Total/NA	Analysis	6020A		1			500310	06/26/20 06:26	LMT	TAL DEN
Total/NA	Prep	3050B-Sb			1.179 g	100 mL	499456	06/25/20 10:00	NK	TAL DEN
Total/NA	Analysis	6020A		1			500310	06/26/20 12:12	LMT	TAL DEN
Total/NA	Prep	3050B			1.065 g	100 mL	499453	06/24/20 09:15	NK	TAL DEN
Total/NA	Analysis	6020A		1			500570	06/29/20 16:20	LMT	TAL DEN
Total/NA	Prep	7471B			.55 g	50 mL	500708	07/01/20 13:20	AL	TAL DEN
Total/NA	Analysis	7471B		1			500950	07/01/20 17:24	AL	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-10-25-27

Lab Sample ID: 280-137759-8

Date Collected: 06/17/20 01:50

Matrix: Solid

Date Received: 06/17/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			499220	06/18/20 09:39	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-10-25-27

Lab Sample ID: 280-137759-8

Date Collected: 06/17/20 01:50

Matrix: Solid

Date Received: 06/17/20 14:05

Percent Solids: 82.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.411 g	5 mL	499554	06/17/20 01:50	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	499557	06/21/20 17:04	GPM	TAL DEN
Total/NA	Prep	3550C			31.4 g	1 mL	499195	06/18/20 09:43	JT	TAL DEN
Total/NA	Analysis	8270D		1			499913	06/24/20 17:47	RDP	TAL DEN
Total/NA	Prep	5035			5.899 g	5 mL	500304	06/17/20 01:50	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	500486	06/29/20 13:14	CAS	TAL DEN
Total/NA	Prep	3546			15.8 g	1 mL	500213	06/26/20 06:37	JT	TAL DEN
Total/NA	Analysis	8015C		2			502159	07/15/20 02:24	MAM	TAL DEN
Total/NA	Prep	3050B			1.094 g	100 mL	499453	06/24/20 09:15	NK	TAL DEN
Total/NA	Analysis	6020A		1			500310	06/26/20 06:30	LMT	TAL DEN
Total/NA	Prep	3050B-Sb			1.124 g	100 mL	499456	06/25/20 10:00	NK	TAL DEN
Total/NA	Analysis	6020A		1			500310	06/26/20 12:17	LMT	TAL DEN
Total/NA	Prep	3050B			1.094 g	100 mL	499453	06/24/20 09:15	NK	TAL DEN
Total/NA	Analysis	6020A		1			500570	06/29/20 16:24	LMT	TAL DEN
Total/NA	Prep	7471B			.53 g	50 mL	500708	07/01/20 13:20	AL	TAL DEN
Total/NA	Analysis	7471B		1			500950	07/01/20 17:26	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-10-12

Lab Sample ID: 280-137759-9

Date Collected: 06/17/20 04:10

Matrix: Solid

Date Received: 06/17/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			499220	06/18/20 09:39	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-10-12

Lab Sample ID: 280-137759-9

Date Collected: 06/17/20 04:10

Matrix: Solid

Date Received: 06/17/20 14:05

Percent Solids: 95.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.955 g	5 mL	499554	06/17/20 04:10	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	499557	06/21/20 17:27	GPM	TAL DEN
Total/NA	Prep	3550C			32.8 g	1 mL	499195	06/18/20 09:43	JT	TAL DEN
Total/NA	Analysis	8270D		1			499913	06/24/20 18:15	RDP	TAL DEN
Total/NA	Prep	5035			4.245 g	5 mL	500304	06/17/20 04:10	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	500486	06/29/20 13:34	CAS	TAL DEN
Total/NA	Prep	3546			15.7 g	1 mL	500213	06/26/20 06:37	JT	TAL DEN
Total/NA	Analysis	8015C		10			502375	07/15/20 22:12	MAM	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-10-12

Lab Sample ID: 280-137759-9

Date Collected: 06/17/20 04:10

Matrix: Solid

Date Received: 06/17/20 14:05

Percent Solids: 95.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.113 g	100 mL	499453	06/24/20 09:15	NK	TAL DEN
Total/NA	Analysis	6020A		1			500310	06/26/20 06:34	LMT	TAL DEN
Total/NA	Prep	3050B-Sb			1.203 g	100 mL	499456	06/25/20 10:00	NK	TAL DEN
Total/NA	Analysis	6020A		1			500310	06/26/20 12:21	LMT	TAL DEN
Total/NA	Prep	3050B			1.113 g	100 mL	499453	06/24/20 09:15	NK	TAL DEN
Total/NA	Analysis	6020A		1			500570	06/29/20 16:27	LMT	TAL DEN
Total/NA	Prep	7471B			.60 g	50 mL	500708	07/01/20 13:20	AL	TAL DEN
Total/NA	Analysis	7471B		1			500950	07/01/20 17:29	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB-05

Lab Sample ID: 280-137759-10

Date Collected: 06/15/20 21:40

Matrix: Water

Date Received: 06/17/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	499914	06/24/20 11:24	JLS	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	499873	06/24/20 06:57	GO	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB-05

Lab Sample ID: 280-137759-11

Date Collected: 06/15/20 21:40

Matrix: Solid

Date Received: 06/17/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	499554	06/15/20 21:40	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	499557	06/21/20 14:26	GPM	TAL DEN
Total/NA	Prep	5035			5 g	5 mL	500121	06/15/20 21:40	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	500332	06/27/20 11:30	CAS	TAL DEN

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137759-1

Laboratory: Eurofins TestAmerica, Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21
A2LA	ISO/IEC 17025	2907.01	10-31-21
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	02-08-21
Arizona	State	AZ0713	12-20-20
Arkansas DEQ	State	19-047-0	06-01-21
California	State	2513	01-08-21
Connecticut	State	PH-0686	09-30-20
Florida	NELAP	E87667-57	07-01-21
Georgia	State	4025-011	01-09-21
Illinois	NELAP	2000172019-1	04-30-21
Iowa	State	IA#370	12-01-20
Kansas	NELAP	E-10166	04-30-21
Louisiana	NELAP	30785	06-30-14 *
Louisiana	NELAP	30785	06-30-21
Maine	State	2019011 (231)	03-03-21
Minnesota	NELAP	1788752	12-31-20
Nevada	State	CO000262020-1	07-31-20
New Hampshire	NELAP	205319	04-29-21
New Jersey	NELAP	190002	06-30-21
New York	NELAP	59923	04-01-21
North Carolina (WW/SW)	State	358	12-31-20
North Dakota	State	R-034	01-08-21
Oklahoma	State	2018-006	08-31-20
Oregon	NELAP	4025-011	01-08-21
Pennsylvania	NELAP	013	07-20-20
South Carolina	State	72002001	01-08-21
Texas	NELAP	T104704183-19-17	09-30-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-18-00099	03-26-21
Utah	NELAP	CO000262019-11	07-31-20
Virginia	NELAP	10490	06-14-21
Washington	State	C583-19	08-05-20
West Virginia DEP	State	354	11-30-20
Wisconsin	State	999615430	08-31-20
Wyoming (UST)	A2LA	2907.01	10-31-21

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Client Information		Lab PM: Bandy, Darlene F		Carrier Tracking No(s):		COC No: 280-99270-29871.2	
Client Contact: Mr. Jon Russ		E-Mail: darlene.bandy@testamericainc.com		Page: 1		Page: 1	
Company: Jacobs Engineering Group, Inc.		Address: 707 17th Street Suite 2400		City: Denver		State, Zip: CO, 80202	
Phone: 720 286 3385		Email: jon.russ@jacobs.com		Project Name: CDOT I-270 Interchange Improvements		Site:	
Due Date Requested:		TAT Requested (days): standard		PO #: Purchase Order not required		WO #:	
Project #: 28020783		SSOW#:		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)	
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, G=soil, I=ice, A=air)	Preservation Code: (in freeze, at rt)	J&F
CDOT I270 Env-05/06_2020-SB-AV-06-5-7	6/15/20	2230	C/G	Solid			X
CDOT I270 Env-05/06_2020-SB-AV-06-20-22	6/15/20	2310	C/G	Solid			X
CDOT I270 Env-05/06_2020-SB-AV-09-6-8	6/16/20	0300	C/G	Solid			X
CDOT I270 Env-05/06_2020-SB-AV-09-6-5	6/16/20	0345	C/G	Solid			X
CDOT I270 Env-05/06_2020-SB-04-15-17	6/16/20	2310	C/G	Solid			X
CDOT I270 Env-05/06_2020-SB-04-25-27	6/16/20	2345	C/G	Solid			X
CDOT I270 Env-05/06_2020-SB-10-10-12	6/17/20	0120	C/G	Solid			X
CDOT I270 Env-05/06_2020-SB-10-25-27	6/17/20	0150	C/G	Solid			X
CDOT I270 Env-05/06_2020-SB-19-10-12	6/17/20	0410	C/G	Solid			X
CDOT I270 Env-05/06_2020-SB-TB-05	6/15/20	2140	C/G	Solid			X
CDOT I270 Env-05/06_2020-SB-							
Possible Hazard Identification		<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		<input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab	
Deliverable Requested: I, II, III, IV, Other (specify)		Empty Kit Relinquished by:		Date: 6/17/20		Time: 1405	
Relinquished by:		Date/Time:		Company: Jacobs		Received by: J. Shanna	
Relinquished by:		Date/Time:		Company:		Received by:	
Relinquished by:		Date/Time:		Company:		Received by:	
Custody Seals Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Custody Seal No.: 1305130		Cooling Temperature(s): 15.4°C, 3.5°C		Other Remarks: TR8 +0.6	



- Preser:
 A - HCl
 B - NaCl
 C - Zn
 D - Ni/n
 E - NaF
 F - MeC
 G - Arnk
 H - Asc
 I - Ice
 J - DIW
 K - EDT
 L - EDA
 Other:

8082A - PCBs - Waters	N	X
8081B - Pesticides - Waters	N	X
6020A, 7470A RCRA Metals	D	X
8015C_DRO - TPH - DRO/RO	N	X
8270D - SVOCs Waters	N	X
8015C_GRO - TPH - GRO - Waters	A	X
8260B - VOCs - Waters	A	X
8082A - PCBs - Soils	N	X
8081B - Pesticides - Soils	N	X
6020A, 7471B RCRA Metals, Moisture	N	X
8015C_TPH-DRO/RO/DRO, 8270D SVOCs - Soils	N	X
8015C_GRO - TPH - GRO - Soils	F	X
8260B - VOCs - Soils	F	X

Special Instructions/Note:
 groundwater
 Trip Blank 5 suit
 voc
 voc

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab

Special Instructions/QC Requirements:
 Method of Shipment:
 Date/Time: 6-17-20 1405
 Company: ETA Den
 Date/Time:
 Company:
 Date/Time:
 Company:

Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 280-137759-1

Login Number: 137759

List Source: Eurofins TestAmerica, Denver

List Number: 1

Creator: Bentley, Beau J

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	Refer to Job Narrative for details.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Consultant Work Product - Not CDOT Approved - Jacobs Engineering

ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-137854-1

Client Project/Site: CDOT I-270 Interchange Improvements

For:

Jacobs Engineering Group, Inc.
707 17th Street
Suite 2400
Denver, Colorado 80202

Attn: Mr. Jon Russ



Authorized for release by:
8/1/2020 12:02:44 AM

Darlene Bandy, Project Manager I
(303)736-0188
Darlene.Bandy@Eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*1	LCS/LCSD RPD exceeds control limits.
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate recovery exceeds control limits

GC Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate recovery exceeds control limits

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present

Eurofins TestAmerica, Denver

Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Job ID: 280-137854-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: Jacobs Engineering Group, Inc.

Project: CDOT I-270 Interchange Improvements

Report Number: 280-137854-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 6/19/2020 12:56 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 12.2° C.

Receipt Exceptions

The following sample was received at the laboratory outside the required temperature criteria at 12.2 degrees Celsius: CDOT I270 Env-05/06_2020-SB-19-GW (280-137854-1). The packaging of the samples was observed to be insulating them from the ice and unable to sufficiently chill. It can be noted that the samples collected on 6/19 are acceptable as they were collected and submitted to the laboratory on the same day. The laboratory will proceed with analysis unless instructed otherwise.

A trip blank was submitted for analysis with these samples; however, it was not listed on the Chain of Custody (COC): TRIP BLANK 2 (280-137854-6). The trip blank was logged for 8260B VOCs and 8015C GRO per solid volume received.

VOLATILE ORGANIC COMPOUNDS (GC-MS) - Soil

Samples CDOT I270 Env-05/06_2020-SB-24-7-9 (280-137854-3), CDOT I270 Env-05/06_2020-SB-23-5-7 (280-137854-4), CDOT I270 Env-05/06_2020-SB-23-20-22 (280-137854-5) and TRIP BLANK 2 (280-137854-6) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 06/19/2020 and analyzed on 06/21/2020.

Method 8260B: The following analyte recovered outside control limits for the LCS associated with preparation batch 280-499554 and analytical batch 280-499557: Acetone @ 61% LCL is 65% MELCL 52% This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

CDOT I270 Env-05/06_2020-SB-24-7-9 (280-137854-3), CDOT I270 Env-05/06_2020-SB-23-5-7 (280-137854-4), CDOT I270 Env-05/06_2020-SB-23-20-22 (280-137854-5), TRIP BLANK 2 (280-137854-6) and (LCS 280-499554/1-A)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GC-MS) - Water

Samples CDOT I270 Env-05/06_2020-SB-19-GW (280-137854-1) and CDOT I270 Env-05/06_2020-SB-TB-06 (280-137854-2) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 06/26/2020.

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Job ID: 280-137854-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Method 8260B: The following sample(s) was collected in a properly preserved vial; however, the pH was outside the required criteria when verified by the laboratory. The sample was analyzed outside the 7-day holding time specified for unpreserved samples but within the 14-day holding time specified for preserved samples: CDOT I270 Env-05/06_2020-SB-19-GW (280-137854-1).

Methods 8260B, 8260C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 280-500231.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GC/MS) - Soil

Samples CDOT I270 Env-05/06_2020-SB-24-7-9 (280-137854-3), CDOT I270 Env-05/06_2020-SB-23-5-7 (280-137854-4) and CDOT I270 Env-05/06_2020-SB-23-20-22 (280-137854-5) were analyzed for semivolatile organic compounds (GC/MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 06/26/2020 and analyzed on 07/08/2020.

Benzidine failed the recovery criteria low for the MS of sample CDOT I270 Env-05/06_2020-SB-23-20-22MS (280-137854-5) in batch 280-501478. Several analytes failed the recovery criteria low for the MSD of sample CDOT I270 Env-05/06_2020-SB-23-20-22MSD (280-137854-5) in batch 280-501478. 1,4-Dioxane, Hexachlorocyclopentadiene and Hexachloroethane exceeded the RPD limit. Refer to the QC report for details.

Sample CDOT I270 Env-05/06_2020-SB-24-7-9 (280-137854-3)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method 8270D: The following sample was diluted due to color and viscosity: CDOT I270 Env-05/06_2020-SB-24-7-9 (280-137854-3). Elevated reporting limits (RL) are provided.
preparation batch 280-500214 and analytical batch 280-501478
8270D

Method 8270D: The continuing calibration verification (CCV) associated with batch 280-501478 recovered above the upper control limit for 4-Nitrophenol (29.9% limit 20%), Pentachlorophenol (23% limit 20%), 2-Nitroaniline (38.8% limit 20%) and 4-Nitroaniline (21.2% limit 20%). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data has been reported. The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-24-7-9 (280-137854-3), CDOT I270 Env-05/06_2020-SB-23-5-7 (280-137854-4), CDOT I270 Env-05/06_2020-SB-23-20-22 (280-137854-5) and (CCV 280-501478/3).
8270D

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS) - Water

Sample CDOT I270 Env-05/06_2020-SB-19-GW (280-137854-1) was analyzed for semivolatile organic compounds (GC-MS) in accordance with SW-846 8270D. The samples were prepared on 06/23/2020 and analyzed on 07/04/2020.

2-Fluorobiphenyl failed the surrogate recovery criteria low for CDOT I270 Env-05/06_2020-SB-19-GW (280-137854-1). Refer to the QC report for details.

2,4-Dinitrophenol, 2,4-Dinitrotoluene, 4-Nitroaniline and Bis(2-ethylhexyl) phthalate failed the recovery criteria high for LCS 280-499759/2-A. 2-Nitroaniline, Bis(2-ethylhexyl) phthalate, Butyl benzyl phthalate and Caprolactam failed the recovery criteria high for LCSD 280-499759/3-A. Hexachlorobutadiene exceeded the RPD limit. Refer to the QC report for details.

Method 8270D: The continuing calibration verification (CCV) associated with batch 280-501084 recovered above the upper control limit for 2-Nitroaniline(21.8% limit 20%), Bis(2-ethylhexyl) phthalate(38% limit 20%), Caprolactam(33.8% limit 20%) and Hexadecane(21.9% limit 20%). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data has been reported. The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-19-GW (280-137854-1) and (CCV 280-501084/3).
8270D

Method 8270D: The continuing calibration verification (CCV) associated with batch 280-501084 recovered above the upper control limit for Benzaldehyde(30.6% limit 20%). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Job ID: 280-137854-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

have been reported. The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-19-GW (280-137854-1) and (CCV 280-501084/4).

Method 8270D: Surrogate recovery for the following sample was outside control limits for 2-Fluorobiphenyl(43% limit 48-120): CDOT I270 Env-05/06_2020-SB-19-GW (280-137854-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

preparation batch 280-499759 and analytical batch 280-501084
8270D

Method 8270D: The laboratory control sample (LCS) for preparation batch 280-499759 and analytical batch 280-501084 recovered outside control limits for the following analytes: 2,4-Dinitrophenol(116% limit 110), 2,4-Dinitrotoluene(115% limit 110), Bis(2-ethylhexyl) phthalate(112% limit 106) and 4-Nitroaniline(104% limit 103). These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

8270D

Method 8270D: The laboratory control sample duplicate (LCSD) for preparation batch 280-499759 and analytical batch 280-501084 recovered outside control limits for the following analytes: 2-Nitroaniline(114% limit 110), Bis(2-ethylhexyl) phthalate(113% limit 106), Butyl benzyl phthalate(109% limit 107) and Caprolactam(131% limit 107). These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

8270D

Method 8270D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 280-499759 and analytical batch 280-501084 recovered outside control limits for the following analytes: Hexachlorobutadiene(36% limit 30).

8270D

Method 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-499759.

CDOT I270 Env-05/06_2020-SB-19-GW (280-137854-1)
Method: 3520C/8270D

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GASOLINE RANGE ORGANICS (GRO) - Soil

Samples CDOT I270 Env-05/06_2020-SB-24-7-9 (280-137854-3), CDOT I270 Env-05/06_2020-SB-23-5-7 (280-137854-4), CDOT I270 Env-05/06_2020-SB-23-20-22 (280-137854-5) and TRIP BLANK 2 (280-137854-6) were analyzed for Gasoline Range Organics (GRO) in accordance with EPA SW-846 Method 8015C - GRO. The samples were prepared on 06/19/2020 and analyzed on 06/29/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GASOLINE RANGE ORGANICS (GRO) - Water

Samples CDOT I270 Env-05/06_2020-SB-19-GW (280-137854-1) and CDOT I270 Env-05/06_2020-SB-TB-06 (280-137854-2) were analyzed for Gasoline Range Organics (GRO) in accordance with EPA SW-846 Method 8015C - GRO. The samples were analyzed on 06/24/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DIESEL RANGE ORGANICS - Soil

Samples CDOT I270 Env-05/06_2020-SB-24-7-9 (280-137854-3), CDOT I270 Env-05/06_2020-SB-23-5-7 (280-137854-4) and CDOT I270 Env-05/06_2020-SB-23-20-22 (280-137854-5) were analyzed for diesel range organics in accordance with EPA SW-846 Method 8015C - DRO. The samples were prepared on 06/26/2020 and analyzed on 07/15/2020.

Method 8015C: The continuing calibration verification (CCV) associated with batch 280-502159 recovered above the upper control limit (+/-20%D) for o-Terphenyl (Surr). The affected CCV and associated samples have surrogate recoveries well within acceptance criteria; therefore, the data have been reported.

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Job ID: 280-137854-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Sequence goes:

CCVRT (DRO) in control

CCV (RRO) in control

MB,LCS,LCSD

CCV (DRO) in control

CCV (RRO) in control

280-137759-6,7,8

280-137854-3,4,5

CCV (DRO) o-Terphenyl +21.2%D (surrogate recovery 121%, limits 49-115%)

CCV (RRO) in control

8015 DRO

preparation batch 280-500213 and analytical batch 280-502159

The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-24-7-9 (280-137854-3), CDOT I270 Env-05/06_2020-SB-23-5-7 (280-137854-4), CDOT I270 Env-05/06_2020-SB-23-20-22 (280-137854-5) and (CCV 280-502159/31).

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DIESEL RANGE ORGANICS - Water

Sample CDOT I270 Env-05/06_2020-SB-19-GW (280-137854-1) was analyzed for Diesel Range Organics in accordance with EPA SW-846 Method 8015C - DRO. The samples were prepared on 06/22/2020 and analyzed on 07/02/2020.

Motor Oil (C20-C38) was detected in method blank MB 280-499577/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Motor Oil (C20-C38) failed the recovery criteria low for LCS 280-499577/4-A. Motor Oil (C20-C38) failed the recovery criteria low for LCSD 280-499577/5-A. Refer to the QC report for details.

Method 8015C: The laboratory control sample (LCS) for preparation batch 280-499577 and analytical batch 280-500853 recovered outside control limits for the following analytes: Motor Oil (C20-C38). The associated Diesel Range Organics [C10-C28] met acceptance criteria. The surrogate recoveries are well within acceptance criteria. Surrogate recoveries in the associated sample(s) are well within acceptance criteria. The samples are out of hold; therefore, re-extraction has not been initiated.

8015 DRO

CDOT I270 Env-05/06_2020-SB-19-GW (280-137854-1), (LCS 280-499577/4-A) and (LCSD 280-499577/5-A)

Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-499577 for either the DRO or RRO LCS spikes. LCSDs were prepared instead as per QA requirements.

CDOT I270 Env-05/06_2020-SB-19-GW (280-137854-1)

preparation batch 280-499577

3510C/8015B_DRO_DOD5/8015C_DRO

Methods 8015B, 8015B DRO, 8015C: The continuing calibration verification (CCV) associated with batch 280-500853 recovered above the upper control limit (+/-20%D) for o-Terphenyl (Surr). The affected CCV and associated samples have surrogate recoveries well within acceptance criteria (45-130%). The n-Octacosane met acceptance criteria for %D and surrogate recovery in the affected CCVs. The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-19-GW (280-137854-1), (CCV 280-500853/17) and (CCVRT 280-500853/4).

Sequence goes:

CCVRT DRO o-Terphenyl (Surr) +22.3 (surrogate recovery 122%)

CCV RRO in control

280-137471-8,9,10,11,12,13,14,15

CCV DRO o-Terphenyl (Surr) +23.2%D (surrogate recovery 123%)

CCV RRO in control

MB,LCS,LCSD

280-137696-1,2,3,4

280-137821-1

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Job ID: 280-137854-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

CCV DRO in control
CCV RRO in control
MB,LCS,LCSD
CCV DRO in control
CCV RRO in control
280-137471-8
280-137567-7,7MS/MSD (DRO); MS/MSD (RRO), 8, 9
CCV DRO o-Terphenyl (Surr) +20.2%D (surrogate recovery 120%)
CCV RRO in control
8015 DRO
preparation batch 280-499577 and analytical batch 280-500853
CDOT I270 Env-05/06_2020-SB-19-GW (280-137854-1), (CCV 280-500853/17) and (CCVRT 280-500853/4)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ORGANOCHLORINE PESTICIDES (GC) - Water

Sample CDOT I270 Env-05/06_2020-SB-19-GW (280-137854-1) was analyzed for Organochlorine Pesticides (GC) in accordance with SW 846 8081B. The samples were prepared on 06/23/2020 and analyzed on 06/26/2020.

DCB Decachlorobiphenyl failed the surrogate recovery criteria low for CDOT I270 Env-05/06_2020-SB-19-GW (280-137854-1). Refer to the QC report for details.

Method 8081B: In preparation batch 280-499791 and analytical batch 280-500220 for Method 8081B LVI, surrogate recovery for the following sample was outside control limits for DCB Decachlorobiphenyl (34%-122%) at 32%: CDOT I270 Env-05/06_2020-SB-19-GW (280-137854-1). Evidence of matrix interference is present with a rise in baseline in the chromatogram; therefore, re-extraction and/or re-analysis was not performed.

Method 8081B: For Method 8081B LVI, the continuing calibration verification (CCV) associated with batch 280-500220 recovered outside of the control limits (20%) low for Toxaphene, Toxaphene Peak 1, Toxaphene Peak 2, Toxaphene Peak 3, Toxaphene Peak 4, Toxaphene Peak 5, Tetrachloro-m-xylene, Endosulfan I, Endosulfan II, Aldrin, beta-BHC, cis-Chlordane, Endrin aldehyde, Methoxychlor and DCB Decachlorobiphenyl but were within limits on the front column or high with non-detect results in the associated samples. The front column was outside limits high for Endrin and Toxaphene Peak 1 but were non-detect in the associated samples. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: CDOT I270 Env-05/06_2020-SB-19-GW (280-137854-1), (CCV 280-500220/4) and (CCVIS 280-500220/5).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS) - Water

Sample CDOT I270 Env-05/06_2020-SB-19-GW (280-137854-1) was analyzed for polychlorinated biphenyls (PCBs) in accordance with SW 846 8082A. The samples were prepared on 06/23/2020 and analyzed on 07/14/2020.

Method 8082A: The following samples required a sulfuric acid clean-up, via EPA Method 3665A, to reduce matrix interferences: CDOT I270 Env-05/06_2020-SB-19-GW (280-137854-1), (LCS 280-499791/4-A), (LCSD 280-499791/5-A) and (MB 280-499791/1-A).

8082A
preparation batch 280-499791 and analytical batch 280-502028

Method 8082A: The DCB Decachlorobiphenyl surrogate recovery for the following samples was outside acceptance limits (low biased) on the primary column. : CDOT I270 Env-05/06_2020-SB-19-GW (280-137854-1). The recovery is within acceptance limits on the other column, indicating that the extraction process was in control.

Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-499791.

CDOT I270 Env-05/06_2020-SB-19-GW (280-137854-1)

<PrepAnalyticalBatch>

Method: 3510C_LVI/8081B/8082A

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Job ID: 280-137854-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Method 3510C: ~ 7 mL of the method blank was spilled when pouring in concentrations. The method blank began with ~80 mL. CDOT I270 Env-05/06_2020-SB-19-GW (280-137854-1) preparation batch 280-499791 3510C_LVI/8082

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

METALS (ICPMS) - Soil

Samples CDOT I270 Env-05/06_2020-SB-24-7-9 (280-137854-3), CDOT I270 Env-05/06_2020-SB-23-5-7 (280-137854-4) and CDOT I270 Env-05/06_2020-SB-23-20-22 (280-137854-5) were analyzed for metals (ICPMS) in accordance with SW 846 6020A. The samples were prepared on 06/27/2020 and analyzed on 07/01/2020 and 07/06/2020.

Barium and Lead failed the recovery criteria low for the MS/MSD of sample CDOT I270 Env-05/06_2020-SB-24-7-9MSD (280-137854-3) in batch 280-500895. Barium exceeded the RPD limit. Refer to the QC report for details.

Method 6020A: The low level continuing calibration verification (CCVL) associated with batch 280-500895 recovered (133%) above the upper control limit (130%) for Ba. The samples associated with this CCVL were >10x the level of the CCVL for the affected analytes; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP/MS) - Soil (Sb prep for Silver)

Samples CDOT I270 Env-05/06_2020-SB-24-7-9 (280-137854-3), CDOT I270 Env-05/06_2020-SB-23-5-7 (280-137854-4) and CDOT I270 Env-05/06_2020-SB-23-20-22 (280-137854-5) were analyzed for Total Metals (ICP/MS) in accordance with 6020A. The samples were prepared on 06/27/2020 and analyzed on 06/30/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICPMS) - Water

Sample CDOT I270 Env-05/06_2020-SB-19-GW (280-137854-1) was analyzed for total metals (ICPMS) in accordance with EPA SW-846 6020A. The samples were prepared on 06/26/2020 and analyzed on 06/30/2020 and 07/06/2020.

Barium failed the recovery criteria low for the MS of sample CDOT I270 Env-05/06_2020-SB-19-GWMS (280-137854-1) in batch 280-500670. Barium failed the recovery criteria high for the MSD of sample CDOT I270 Env-05/06_2020-SB-19-GWMSD (280-137854-1) in batch 280-500670. Refer to the QC report for details.

The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY - Water

Sample CDOT I270 Env-05/06_2020-SB-19-GW (280-137854-1) was analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 07/07/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY (CVAA) - Soil

Samples CDOT I270 Env-05/06_2020-SB-24-7-9 (280-137854-3), CDOT I270 Env-05/06_2020-SB-23-5-7 (280-137854-4) and CDOT I270 Env-05/06_2020-SB-23-20-22 (280-137854-5) were analyzed for total mercury (CVAA) in accordance with EPA SW-846 Method 7471B. The samples were prepared and analyzed on 07/01/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Job ID: 280-137854-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

PERCENT SOLIDS

Samples CDOT I270 Env-05/06_2020-SB-24-7-9 (280-137854-3), CDOT I270 Env-05/06_2020-SB-23-5-7 (280-137854-4) and CDOT I270 Env-05/06_2020-SB-23-20-22 (280-137854-5) were analyzed for percent solids in accordance with ASTM D2216-90. The samples were analyzed on 06/22/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

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Detection Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-GW

Lab Sample ID: 280-137854-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	2.8	J	10	1.9	ug/L	1		8260B	Total/NA
Diesel Range Organics [C10-C28]	0.50		0.25	0.033	mg/L	1		8015C	Total/NA
Motor Oil (C20-C38)	0.72	* B	0.51	0.057	mg/L	1		8015C	Total/NA
Arsenic	54		5.0	0.33	ug/L	1		6020A	Total/NA
Barium	3700		1.0	0.29	ug/L	1		6020A	Total/NA
Chromium	76		2.0	0.50	ug/L	1		6020A	Total/NA
Lead	120		1.0	0.18	ug/L	1		6020A	Total/NA
Selenium	3.2	J	5.0	0.37	ug/L	1		6020A	Total/NA
Silver	0.43	J	5.0	0.033	ug/L	1		6020A	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB-06

Lab Sample ID: 280-137854-2

No Detections.

Client Sample ID: CDOT I270 Env-05/06_2020-SB-24-7-9

Lab Sample ID: 280-137854-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.63	J	9.5	0.27	ug/Kg	1	☒	8260B	Total/NA
Toluene	0.55	J	4.7	0.22	ug/Kg	1	☒	8260B	Total/NA
Benzo[a]anthracene	320	J	3300	200	ug/Kg	10	☒	8270D	Total/NA
Benzo[b]fluoranthene	390	J	3300	260	ug/Kg	10	☒	8270D	Total/NA
Chrysene	400	J	3300	270	ug/Kg	10	☒	8270D	Total/NA
Fluoranthene	410	J	3300	360	ug/Kg	10	☒	8270D	Total/NA
Phenanthrene	230	J	3300	170	ug/Kg	10	☒	8270D	Total/NA
Pyrene	560	J	3300	120	ug/Kg	10	☒	8270D	Total/NA
Diesel Range Organics [C10-C28]	130		7.8	3.6	mg/Kg	1	☒	8015C	Total/NA
Motor Oil (C20-C38)	260		23	7.6	mg/Kg	1	☒	8015C	Total/NA
Arsenic	2.6		0.59	0.049	mg/Kg	1	☒	6020A	Total/NA
Silver	72	J	110	8.3	ug/Kg	1	☒	6020A	Total/NA
Barium	280	^ F2	0.39	0.069	mg/Kg	1	☒	6020A	Total/NA
Cadmium	0.39		0.098	0.0091	mg/Kg	1	☒	6020A	Total/NA
Chromium	7.5		0.20	0.074	mg/Kg	1	☒	6020A	Total/NA
Lead	140		0.15	0.018	mg/Kg	1	☒	6020A	Total/NA
Selenium	0.20	J	0.49	0.13	mg/Kg	1	☒	6020A	Total/NA
Mercury	120		19	6.2	ug/Kg	1	☒	7471B	Total/NA

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-5-7

Lab Sample ID: 280-137854-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	3.7	J	17	3.4	ug/Kg	1	☒	8260B	Total/NA
Benzene	0.13	J	4.4	0.13	ug/Kg	1	☒	8260B	Total/NA
cis-1,2-Dichloroethene	0.43	J	2.2	0.18	ug/Kg	1	☒	8260B	Total/NA
Diesel Range Organics [C10-C28]	16		9.2	4.2	mg/Kg	1	☒	8015C	Total/NA
Motor Oil (C20-C38)	56		28	9.0	mg/Kg	1	☒	8015C	Total/NA
Arsenic	1.7		0.63	0.053	mg/Kg	1	☒	6020A	Total/NA
Silver	87	J	97	7.6	ug/Kg	1	☒	6020A	Total/NA
Barium	55	^	0.42	0.074	mg/Kg	1	☒	6020A	Total/NA
Cadmium	0.26		0.11	0.0099	mg/Kg	1	☒	6020A	Total/NA
Chromium	7.8		0.21	0.080	mg/Kg	1	☒	6020A	Total/NA
Lead	17		0.16	0.019	mg/Kg	1	☒	6020A	Total/NA
Selenium	0.36	J	0.53	0.14	mg/Kg	1	☒	6020A	Total/NA
Mercury	40		23	7.5	ug/Kg	1	☒	7471B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-20-22

Lab Sample ID: 280-137854-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.17	J	5.6	0.17	ug/Kg	1	☼	8260B	Total/NA
Methylene Chloride	1.8	J	5.6	1.8	ug/Kg	1	☼	8260B	Total/NA
Toluene	0.42	J	5.6	0.25	ug/Kg	1	☼	8260B	Total/NA
Diesel Range Organics [C10-C28]	8.6		8.2	3.7	mg/Kg	1	☼	8015C	Total/NA
Motor Oil (C20-C38)	30		25	8.0	mg/Kg	1	☼	8015C	Total/NA
Arsenic	0.86		0.56	0.047	mg/Kg	1	☼	6020A	Total/NA
Barium	36	^	0.37	0.066	mg/Kg	1	☼	6020A	Total/NA
Cadmium	0.049	J	0.094	0.0088	mg/Kg	1	☼	6020A	Total/NA
Chromium	2.2		0.19	0.071	mg/Kg	1	☼	6020A	Total/NA
Lead	2.5		0.14	0.017	mg/Kg	1	☼	6020A	Total/NA
Selenium	0.18	J	0.47	0.12	mg/Kg	1	☼	6020A	Total/NA

Client Sample ID: TRIP BLANK 2

Lab Sample ID: 280-137854-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.36	J	5.0	0.15	ug/Kg	1		8260B	Total/NA
Methylene Chloride	1.8	J	5.0	1.6	ug/Kg	1		8260B	Total/NA
Toluene	1.0	J	5.0	0.23	ug/Kg	1		8260B	Total/NA

Consultant Work Product - Jacobs Engineering
 -Not CDOT Approved-

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

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Method Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL DEN
8015C	Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)	SW846	TAL DEN
8015C	Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)	SW846	TAL DEN
8081B	Organochlorine Pesticides (GC)	SW846	TAL DEN
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL DEN
6020A	Metals (ICP/MS)	SW846	TAL DEN
7470A	Mercury (CVAA)	SW846	TAL DEN
7471B	Mercury (CVAA)	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN
3020A	Preparation, Total Metals	SW846	TAL DEN
3050B	Preparation, Metals	SW846	TAL DEN
3050B-Sb	Preparation, Metals (Antimony)	SW846	TAL DEN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL DEN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL DEN
3546	Microwave Extraction	SW846	TAL DEN
3550C	Ultrasonic Extraction	SW846	TAL DEN
5030B	Purge and Trap	SW846	TAL DEN
5030C	Purge and Trap	SW846	TAL DEN
5035	Closed System Purge and Trap	SW846	TAL DEN
7470A	Preparation, Mercury	SW846	TAL DEN
7471B	Preparation, Mercury	SW846	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Consultant Work Product - Jacobs Engineering
 -Not CDOT Approved-

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Sample Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-137854-1	CDOT I270 Env-05/06_2020-SB-19-GW	Water	06/17/20 23:00	06/19/20 12:56	
280-137854-2	CDOT I270 Env-05/06_2020-SB-TB-06	Water	06/19/20 08:30	06/19/20 12:56	
280-137854-3	CDOT I270 Env-05/06_2020-SB-24-7-9	Solid	06/19/20 09:25	06/19/20 12:56	
280-137854-4	CDOT I270 Env-05/06_2020-SB-23-5-7	Solid	06/19/20 10:30	06/19/20 12:56	
280-137854-5	CDOT I270 Env-05/06_2020-SB-23-20-22	Solid	06/19/20 11:20	06/19/20 12:56	
280-137854-6	TRIP BLANK 2	Solid	06/19/20 11:20	06/19/20 12:56	

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-GW

Lab Sample ID: 280-137854-1

Date Collected: 06/17/20 23:00

Matrix: Water

Date Received: 06/19/20 12:56

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	2.8	J	10	1.9	ug/L			06/26/20 10:39	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			06/26/20 10:39	1
Benzene	ND		1.0	0.16	ug/L			06/26/20 10:39	1
Chlorobenzene	ND		1.0	0.17	ug/L			06/26/20 10:39	1
Carbon disulfide	ND		2.0	0.17	ug/L			06/26/20 10:39	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			06/26/20 10:39	1
Cyclohexane	ND		2.0	0.28	ug/L			06/26/20 10:39	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			06/26/20 10:39	1
Bromomethane	ND		2.0	0.21	ug/L			06/26/20 10:39	1
Bromoform	ND		1.0	0.46	ug/L			06/26/20 10:39	1
Chloroethane	ND		2.0	0.41	ug/L			06/26/20 10:39	1
Chloroform	ND		1.0	0.16	ug/L			06/26/20 10:39	1
Chlorobromomethane	ND		1.0	0.10	ug/L			06/26/20 10:39	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			06/26/20 10:39	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			06/26/20 10:39	1
Isopropylbenzene	ND		1.0	0.19	ug/L			06/26/20 10:39	1
2-Hexanone	ND		5.0	1.7	ug/L			06/26/20 10:39	1
Chloromethane	ND		2.0	0.30	ug/L			06/26/20 10:39	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			06/26/20 10:39	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/26/20 10:39	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			06/26/20 10:39	1
Methylene Chloride	ND		2.0	0.94	ug/L			06/26/20 10:39	1
Methyl acetate	ND		5.0	1.6	ug/L			06/26/20 10:39	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			06/26/20 10:39	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			06/26/20 10:39	1
Methylcyclohexane	ND		1.0	0.10	ug/L			06/26/20 10:39	1
Styrene	ND		1.0	0.36	ug/L			06/26/20 10:39	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			06/26/20 10:39	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			06/26/20 10:39	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			06/26/20 10:39	1
Toluene	ND		1.0	0.17	ug/L			06/26/20 10:39	1
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			06/26/20 10:39	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			06/26/20 10:39	1
Trichloroethene	ND		1.0	0.16	ug/L			06/26/20 10:39	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			06/26/20 10:39	1
Vinyl chloride	ND		1.0	0.10	ug/L			06/26/20 10:39	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			06/26/20 10:39	1
o-Xylene	ND		1.0	0.19	ug/L			06/26/20 10:39	1
Tetrachloroethene	ND		1.0	0.20	ug/L			06/26/20 10:39	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			06/26/20 10:39	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			06/26/20 10:39	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			06/26/20 10:39	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/26/20 10:39	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			06/26/20 10:39	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/26/20 10:39	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			06/26/20 10:39	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			06/26/20 10:39	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/26/20 10:39	1
1,4-Dioxane	ND		200	19	ug/L			06/26/20 10:39	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-GW

Date Collected: 06/17/20 23:00

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		1.0	0.16	ug/L			06/26/20 10:39	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			06/26/20 10:39	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			06/26/20 10:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		70 - 127					06/26/20 10:39	1
Toluene-d8 (Surr)	96		80 - 125					06/26/20 10:39	1
4-Bromofluorobenzene (Surr)	96		78 - 120					06/26/20 10:39	1
Dibromofluoromethane (Surr)	105		77 - 120					06/26/20 10:39	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB-06

Date Collected: 06/19/20 08:30

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		10	1.9	ug/L			06/26/20 15:59	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			06/26/20 15:59	1
Benzene	ND		1.0	0.16	ug/L			06/26/20 15:59	1
Chlorobenzene	ND		1.0	0.17	ug/L			06/26/20 15:59	1
Carbon disulfide	ND		2.0	0.17	ug/L			06/26/20 15:59	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			06/26/20 15:59	1
Cyclohexane	ND		2.0	0.28	ug/L			06/26/20 15:59	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			06/26/20 15:59	1
Bromomethane	ND		2.0	0.21	ug/L			06/26/20 15:59	1
Bromoform	ND		1.0	0.46	ug/L			06/26/20 15:59	1
Chloroethane	ND		2.0	0.41	ug/L			06/26/20 15:59	1
Chloroform	ND		1.0	0.16	ug/L			06/26/20 15:59	1
Chlorobromomethane	ND		1.0	0.10	ug/L			06/26/20 15:59	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			06/26/20 15:59	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			06/26/20 15:59	1
Isopropylbenzene	ND		1.0	0.19	ug/L			06/26/20 15:59	1
2-Hexanone	ND		5.0	1.7	ug/L			06/26/20 15:59	1
Chloromethane	ND		2.0	0.30	ug/L			06/26/20 15:59	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			06/26/20 15:59	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/26/20 15:59	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			06/26/20 15:59	1
Methylene Chloride	ND		2.0	0.94	ug/L			06/26/20 15:59	1
Methyl acetate	ND		5.0	1.6	ug/L			06/26/20 15:59	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			06/26/20 15:59	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			06/26/20 15:59	1
Methylcyclohexane	ND		1.0	0.10	ug/L			06/26/20 15:59	1
Styrene	ND		1.0	0.36	ug/L			06/26/20 15:59	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			06/26/20 15:59	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			06/26/20 15:59	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			06/26/20 15:59	1
Toluene	ND		1.0	0.17	ug/L			06/26/20 15:59	1
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			06/26/20 15:59	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			06/26/20 15:59	1
Trichloroethene	ND		1.0	0.16	ug/L			06/26/20 15:59	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			06/26/20 15:59	1
Vinyl chloride	ND		1.0	0.10	ug/L			06/26/20 15:59	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB-06

Date Collected: 06/19/20 08:30

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			06/26/20 15:59	1
o-Xylene	ND		1.0	0.19	ug/L			06/26/20 15:59	1
Tetrachloroethene	ND		1.0	0.20	ug/L			06/26/20 15:59	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			06/26/20 15:59	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			06/26/20 15:59	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			06/26/20 15:59	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/26/20 15:59	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			06/26/20 15:59	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/26/20 15:59	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			06/26/20 15:59	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			06/26/20 15:59	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/26/20 15:59	1
1,4-Dioxane	ND		200	19	ug/L			06/26/20 15:59	1
Ethylbenzene	ND		1.0	0.16	ug/L			06/26/20 15:59	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			06/26/20 15:59	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			06/26/20 15:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		70 - 127		06/26/20 15:59	1
Toluene-d8 (Surr)	100		80 - 125		06/26/20 15:59	1
4-Bromofluorobenzene (Surr)	97		78 - 120		06/26/20 15:59	1
Dibromofluoromethane (Surr)	98		77 - 120		06/26/20 15:59	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-24-7-9

Date Collected: 06/19/20 09:25

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-3

Matrix: Solid

Percent Solids: 92.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	*	68	34	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
2-Butanone (MEK)	ND		19	3.7	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
Benzene	ND		4.7	0.14	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
Chlorobenzene	ND		4.7	2.0	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
Carbon disulfide	ND		4.7	1.6	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
Carbon tetrachloride	ND		4.7	1.9	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
Cyclohexane	ND		4.7	1.7	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
1,2-Dibromo-3-Chloropropane	ND		9.5	3.5	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
Bromomethane	ND		9.5	1.3	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
Bromoform	ND		4.8	2.4	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
Chloroethane	ND		9.5	1.9	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
Chloroform	0.63	J	9.5	0.27	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
Chlorobromomethane	ND		4.7	2.3	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
Dichlorobromomethane	ND		4.7	2.0	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
Chlorodibromomethane	ND		4.7	2.2	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
Isopropylbenzene	ND		4.7	2.3	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
2-Hexanone	ND		19	4.6	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
Chloromethane	ND		9.5	0.73	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
Dichlorodifluoromethane	ND		9.5	2.6	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
trans-1,2-Dichloroethene	ND		2.4	0.37	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
trans-1,3-Dichloropropene	ND		4.7	0.079	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
Methylene Chloride	ND		4.7	1.5	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
Methyl acetate	ND		9.5	2.6	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-24-7-9

Date Collected: 06/19/20 09:25

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-3

Matrix: Solid

Percent Solids: 92.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		19	2.0	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
4-Methyl-2-pentanone (MIBK)	ND		19	4.1	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
Methylcyclohexane	ND		4.7	0.40	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
Styrene	ND		4.7	0.27	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
1,1,2,2-Tetrachloroethane	ND		4.7	0.27	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
1,2,3-Trichlorobenzene	ND		4.7	0.77	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
1,2,4-Trichlorobenzene	ND		4.7	0.69	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
Toluene	0.55	J	4.7	0.22	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
1,1,1-Trichloroethane	ND		4.7	1.9	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
1,1,2-Trichloroethane	ND		4.7	0.83	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
Trichloroethene	ND		4.7	1.8	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
1,1,2-Trichlorotrifluoroethane	ND		19	1.6	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
Vinyl chloride	ND		4.7	1.3	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
m-Xylene & p-Xylene	ND		2.4	0.99	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
o-Xylene	ND		2.4	0.25	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
Tetrachloroethene	ND		4.7	1.8	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
1,2-Dichlorobenzene	ND		4.7	1.8	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
1,3-Dichlorobenzene	ND		4.7	0.45	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
1,4-Dichlorobenzene	ND		4.7	0.23	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
cis-1,2-Dichloroethene	ND		2.4	0.19	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
cis-1,3-Dichloropropene	ND		4.7	0.095	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
1,1-Dichloroethane	ND		4.7	0.20	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
1,1-Dichloroethene	ND		4.7	0.56	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
1,2-Dichloroethane	ND		4.7	0.66	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
1,2-Dichloropropane	ND		4.7	0.52	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
1,4-Dioxane	ND		470	53	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
Ethylbenzene	ND		4.7	0.29	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
1,2-Dibromoethane	ND		4.7	0.49	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1
Trichlorofluoromethane	ND		9.5	3.0	ug/Kg	☼	06/19/20 09:25	06/21/20 17:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		58 - 140	06/19/20 09:25	06/21/20 17:50	1
Toluene-d8 (Surr)	99		80 - 126	06/19/20 09:25	06/21/20 17:50	1
4-Bromofluorobenzene (Surr)	101		76 - 127	06/19/20 09:25	06/21/20 17:50	1
Dibromofluoromethane (Surr)	100		75 - 121	06/19/20 09:25	06/21/20 17:50	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-5-7

Date Collected: 06/19/20 10:30

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-4

Matrix: Solid

Percent Solids: 85.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	*	63	31	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
2-Butanone (MEK)	3.7	J	17	3.4	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
Benzene	0.13	J	4.4	0.13	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
Chlorobenzene	ND		4.4	1.8	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
Carbon disulfide	ND		4.4	1.4	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
Carbon tetrachloride	ND		4.4	1.8	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
Cyclohexane	ND		4.4	1.5	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
1,2-Dibromo-3-Chloropropane	ND		8.7	3.2	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
Bromomethane	ND		8.7	1.2	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
Bromoform	ND		4.5	2.2	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-5-7

Lab Sample ID: 280-137854-4

Date Collected: 06/19/20 10:30

Matrix: Solid

Date Received: 06/19/20 12:56

Percent Solids: 85.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND		8.7	1.7	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
Chloroform	ND		8.7	0.25	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
Chlorobromomethane	ND		4.4	2.1	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
Dichlorobromomethane	ND		4.4	1.9	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
Chlorodibromomethane	ND		4.4	2.0	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
Isopropylbenzene	ND		4.4	2.1	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
2-Hexanone	ND		17	4.3	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
Chloromethane	ND		8.7	0.67	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
Dichlorodifluoromethane	ND		8.7	2.4	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
trans-1,2-Dichloroethene	ND		2.2	0.34	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
trans-1,3-Dichloropropene	ND		4.4	0.072	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
Methylene Chloride	ND		4.4	1.4	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
Methyl acetate	ND		8.7	2.4	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
Methyl tert-butyl ether	ND		17	1.8	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
4-Methyl-2-pentanone (MIBK)	ND		17	3.8	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
Methylcyclohexane	ND		4.4	0.37	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
Styrene	ND		4.4	0.24	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
1,1,2,2-Tetrachloroethane	ND		4.4	0.25	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
1,2,3-Trichlorobenzene	ND		4.4	0.71	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
1,2,4-Trichlorobenzene	ND		4.4	0.64	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
Toluene	ND		4.4	0.20	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
1,1,1-Trichloroethane	ND		4.4	1.7	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
1,1,2-Trichloroethane	ND		4.4	0.77	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
Trichloroethene	ND		4.4	1.7	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
1,1,2-Trichlorotrifluoroethane	ND		17	1.4	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
Vinyl chloride	ND		4.4	1.2	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
m-Xylene & p-Xylene	ND		2.2	0.91	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
o-Xylene	ND		2.2	0.23	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
Tetrachloroethene	ND		4.4	1.7	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
1,2-Dichlorobenzene	ND		4.4	1.6	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
1,3-Dichlorobenzene	ND		4.4	0.42	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
1,4-Dichlorobenzene	ND		4.4	0.21	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
cis-1,2-Dichloroethene	0.43	J	2.2	0.18	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
cis-1,3-Dichloropropene	ND		4.4	0.087	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
1,1-Dichloroethane	ND		4.4	0.18	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
1,1-Dichloroethene	ND		4.4	0.52	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
1,2-Dichloroethane	ND		4.4	0.61	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
1,2-Dichloropropane	ND		4.4	0.48	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
1,4-Dioxane	ND		440	49	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
Ethylbenzene	ND		4.4	0.27	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
1,2-Dibromoethane	ND		4.4	0.45	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1
Trichlorofluoromethane	ND		8.7	2.8	ug/Kg	☼	06/19/20 10:30	06/21/20 18:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		58 - 140	06/19/20 10:30	06/21/20 18:12	1
Toluene-d8 (Surr)	97		80 - 126	06/19/20 10:30	06/21/20 18:12	1
4-Bromofluorobenzene (Surr)	99		76 - 127	06/19/20 10:30	06/21/20 18:12	1
Dibromofluoromethane (Surr)	101		75 - 121	06/19/20 10:30	06/21/20 18:12	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-20-22

Lab Sample ID: 280-137854-5

Date Collected: 06/19/20 11:20

Matrix: Solid

Date Received: 06/19/20 12:56

Percent Solids: 95.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	*	80	40	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
2-Butanone (MEK)	ND		22	4.3	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
Benzene	0.17	J	5.6	0.17	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
Chlorobenzene	ND		5.6	2.3	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
Carbon disulfide	ND		5.6	1.9	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
Carbon tetrachloride	ND		5.6	2.2	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
Cyclohexane	ND		5.6	2.0	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
1,2-Dibromo-3-Chloropropane	ND		11	4.1	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
Bromomethane	ND		11	1.5	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
Bromoform	ND		5.7	2.8	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
Chloroethane	ND		11	2.2	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
Chloroform	ND		11	0.32	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
Chlorobromomethane	ND		5.6	2.7	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
Dichlorobromomethane	ND		5.6	2.4	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
Chlorodibromomethane	ND		5.6	2.5	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
Isopropylbenzene	ND		5.6	2.7	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
2-Hexanone	ND		22	5.5	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
Chloromethane	ND		11	0.86	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
Dichlorodifluoromethane	ND		11	3.1	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
trans-1,2-Dichloroethene	ND		2.8	0.44	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
trans-1,3-Dichloropropene	ND		5.6	0.093	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
Methylene Chloride	1.8	J	5.6	1.8	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
Methyl acetate	ND		11	3.1	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
Methyl tert-butyl ether	ND		22	2.4	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
4-Methyl-2-pentanone (MIBK)	ND		22	4.9	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
Methylcyclohexane	ND		5.6	0.47	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
Styrene	ND		5.6	0.31	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
1,1,2,2-Tetrachloroethane	ND		5.6	0.32	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
1,2,3-Trichlorobenzene	ND		5.6	0.90	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
1,2,4-Trichlorobenzene	ND		5.6	0.82	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
Toluene	0.42	J	5.6	0.25	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
1,1,1-Trichloroethane	ND		5.6	2.2	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
1,1,2-Trichloroethane	ND		5.6	0.98	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
Trichloroethene	ND		5.6	2.1	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
1,1,2-Trichlorotrifluoroethane	ND		22	1.9	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
Vinyl chloride	ND		5.6	1.5	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
m-Xylene & p-Xylene	ND		2.8	1.2	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
o-Xylene	ND		2.8	0.30	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
Tetrachloroethene	ND		5.6	2.1	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
1,2-Dichlorobenzene	ND		5.6	2.1	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
1,3-Dichlorobenzene	ND		5.6	0.54	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
1,4-Dichlorobenzene	ND		5.6	0.27	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
cis-1,2-Dichloroethene	ND		2.8	0.22	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
cis-1,3-Dichloropropene	ND		5.6	0.11	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
1,1-Dichloroethane	ND		5.6	0.23	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
1,1-Dichloroethene	ND		5.6	0.66	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
1,2-Dichloroethane	ND		5.6	0.78	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
1,2-Dichloropropane	ND		5.6	0.61	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
1,4-Dioxane	ND		560	63	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-20-22

Date Collected: 06/19/20 11:20

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-5

Matrix: Solid

Percent Solids: 95.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		5.6	0.34	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
1,2-Dibromoethane	ND		5.6	0.58	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
Trichlorofluoromethane	ND		11	3.6	ug/Kg	☼	06/19/20 11:20	06/21/20 18:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		58 - 140				06/19/20 11:20	06/21/20 18:35	1
Toluene-d8 (Surr)	98		80 - 126				06/19/20 11:20	06/21/20 18:35	1
4-Bromofluorobenzene (Surr)	95		76 - 127				06/19/20 11:20	06/21/20 18:35	1
Dibromofluoromethane (Surr)	100		75 - 121				06/19/20 11:20	06/21/20 18:35	1

Client Sample ID: TRIP BLANK 2

Date Collected: 06/19/20 11:20

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-6

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	*	72	36	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
2-Butanone (MEK)	ND		20	3.9	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
Benzene	0.36	J	5.0	0.15	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
Chlorobenzene	ND		5.0	2.1	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
Carbon disulfide	ND		5.0	1.7	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
Carbon tetrachloride	ND		5.0	2.0	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
Cyclohexane	ND		5.0	1.8	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
1,2-Dibromo-3-Chloropropane	ND		10	3.7	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
Bromomethane	ND		10	1.4	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
Bromoform	ND		5.1	2.6	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
Chloroethane	ND		10	2.0	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
Chloroform	ND		10	0.29	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
Chlorobromomethane	ND		5.0	2.5	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
Dichlorobromomethane	ND		5.0	2.1	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
Chlorodibromomethane	ND		5.0	2.3	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
Isopropylbenzene	ND		5.0	2.4	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
2-Hexanone	ND		20	4.9	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
Chloromethane	ND		10	0.77	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
Dichlorodifluoromethane	ND		10	2.7	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
trans-1,2-Dichloroethene	ND		2.5	0.39	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
trans-1,3-Dichloropropene	ND		5.0	0.083	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
Methylene Chloride	1.8	J	5.0	1.6	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
Methyl acetate	ND		10	2.8	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
Methyl tert-butyl ether	ND		20	2.1	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.4	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
Methylcyclohexane	ND		5.0	0.42	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
Styrene	ND		5.0	0.28	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.29	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
1,2,3-Trichlorobenzene	ND		5.0	0.81	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
1,2,4-Trichlorobenzene	ND		5.0	0.73	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
Toluene	1.0	J	5.0	0.23	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
1,1,1-Trichloroethane	ND		5.0	2.0	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
1,1,2-Trichloroethane	ND		5.0	0.88	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
Trichloroethene	ND		5.0	1.9	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
1,1,2-Trichlorotrifluoroethane	ND		20	1.7	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
Vinyl chloride	ND		5.0	1.3	ug/Kg		06/19/20 11:20	06/21/20 14:48	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: TRIP BLANK 2

Date Collected: 06/19/20 11:20

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-6

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		2.5	1.0	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
o-Xylene	ND		2.5	0.27	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
Tetrachloroethene	ND		5.0	1.9	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
1,2-Dichlorobenzene	ND		5.0	1.9	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
1,3-Dichlorobenzene	ND		5.0	0.48	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
1,4-Dichlorobenzene	ND		5.0	0.25	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
cis-1,2-Dichloroethene	ND		2.5	0.20	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
cis-1,3-Dichloropropene	ND		5.0	0.10	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
1,1-Dichloroethane	ND		5.0	0.21	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
1,1-Dichloroethene	ND		5.0	0.59	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
1,2-Dichloroethane	ND		5.0	0.70	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
1,2-Dichloropropane	ND		5.0	0.55	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
1,4-Dioxane	ND		500	56	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
Ethylbenzene	ND		5.0	0.31	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
1,2-Dibromoethane	ND		5.0	0.52	ug/Kg		06/19/20 11:20	06/21/20 14:48	1
Trichlorofluoromethane	ND		10	3.2	ug/Kg		06/19/20 11:20	06/21/20 14:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		58 - 140	06/19/20 11:20	06/21/20 14:48	1
Toluene-d8 (Surr)	99		80 - 126	06/19/20 11:20	06/21/20 14:48	1
4-Bromofluorobenzene (Surr)	98		76 - 127	06/19/20 11:20	06/21/20 14:48	1
Dibromofluoromethane (Surr)	99		75 - 121	06/19/20 11:20	06/21/20 14:48	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-GW

Date Collected: 06/17/20 23:00

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		10	1.7	ug/L		06/23/20 11:27	07/04/20 01:04	1
1,2,4,5-Tetrachlorobenzene	ND		10	1.7	ug/L		06/23/20 11:27	07/04/20 01:04	1
1,2,4-Trichlorobenzene	ND		4.0	0.59	ug/L		06/23/20 11:27	07/04/20 01:04	1
1,2-Dichlorobenzene	ND		4.0	0.23	ug/L		06/23/20 11:27	07/04/20 01:04	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		10	0.23	ug/L		06/23/20 11:27	07/04/20 01:04	1
1,3-Dichlorobenzene	ND		10	0.30	ug/L		06/23/20 11:27	07/04/20 01:04	1
1,3-Dinitrobenzene	ND		10	2.0	ug/L		06/23/20 11:27	07/04/20 01:04	1
1,4-Dichlorobenzene	ND		4.0	1.3	ug/L		06/23/20 11:27	07/04/20 01:04	1
1,4-Dioxane	ND		20	0.45	ug/L		06/23/20 11:27	07/04/20 01:04	1
1-Methylnaphthalene	ND		4.0	0.23	ug/L		06/23/20 11:27	07/04/20 01:04	1
2,2'-oxybis[1-chloropropane]	ND		10	0.28	ug/L		06/23/20 11:27	07/04/20 01:04	1
2,3,4,6-Tetrachlorophenol	ND		50	2.0	ug/L		06/23/20 11:27	07/04/20 01:04	1
2,4,5-Trichlorophenol	ND		10	2.1	ug/L		06/23/20 11:27	07/04/20 01:04	1
2,4,6-Trichlorophenol	ND		10	0.29	ug/L		06/23/20 11:27	07/04/20 01:04	1
2,4-Dichlorophenol	ND		10	0.64	ug/L		06/23/20 11:27	07/04/20 01:04	1
2,4-Dimethylphenol	ND		10	0.58	ug/L		06/23/20 11:27	07/04/20 01:04	1
2,4-Dinitrophenol	ND *		30	10	ug/L		06/23/20 11:27	07/04/20 01:04	1
2,4-Dinitrotoluene	ND *		10	1.7	ug/L		06/23/20 11:27	07/04/20 01:04	1
2,6-Dichlorophenol	ND		10	1.3	ug/L		06/23/20 11:27	07/04/20 01:04	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		06/23/20 11:27	07/04/20 01:04	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-GW

Lab Sample ID: 280-137854-1

Date Collected: 06/17/20 23:00

Matrix: Water

Date Received: 06/19/20 12:56

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloronaphthalene	ND		4.0	0.26	ug/L		06/23/20 11:27	07/04/20 01:04	1
2-Chlorophenol	ND		10	2.0	ug/L		06/23/20 11:27	07/04/20 01:04	1
2-Methylnaphthalene	ND		4.0	1.5	ug/L		06/23/20 11:27	07/04/20 01:04	1
2-Methylphenol	ND		10	0.98	ug/L		06/23/20 11:27	07/04/20 01:04	1
2-Nitroaniline	ND	*	10	1.7	ug/L		06/23/20 11:27	07/04/20 01:04	1
2-Nitrophenol	ND		10	0.39	ug/L		06/23/20 11:27	07/04/20 01:04	1
3 & 4 Methylphenol	ND		10	0.25	ug/L		06/23/20 11:27	07/04/20 01:04	1
3,3'-Dichlorobenzidine	ND		50	2.0	ug/L		06/23/20 11:27	07/04/20 01:04	1
3-Methylphenol	ND		10	0.25	ug/L		06/23/20 11:27	07/04/20 01:04	1
3-Nitroaniline	ND		10	2.0	ug/L		06/23/20 11:27	07/04/20 01:04	1
4,6-Dinitro-2-methylphenol	ND		50	4.0	ug/L		06/23/20 11:27	07/04/20 01:04	1
4-Bromophenyl phenyl ether	ND		10	0.43	ug/L		06/23/20 11:27	07/04/20 01:04	1
4-Chloro-3-methylphenol	ND		10	2.4	ug/L		06/23/20 11:27	07/04/20 01:04	1
4-Chloroaniline	ND		10	2.1	ug/L		06/23/20 11:27	07/04/20 01:04	1
4-Chlorophenyl phenyl ether	ND		10	1.7	ug/L		06/23/20 11:27	07/04/20 01:04	1
4-Methylphenol	ND		10	0.25	ug/L		06/23/20 11:27	07/04/20 01:04	1
4-Nitroaniline	ND	*	10	2.0	ug/L		06/23/20 11:27	07/04/20 01:04	1
4-Nitrophenol	ND		10	1.2	ug/L		06/23/20 11:27	07/04/20 01:04	1
Acenaphthene	ND		4.0	0.28	ug/L		06/23/20 11:27	07/04/20 01:04	1
Acenaphthylene	ND		4.0	0.49	ug/L		06/23/20 11:27	07/04/20 01:04	1
Acetophenone	ND		10	0.24	ug/L		06/23/20 11:27	07/04/20 01:04	1
Aniline	ND		10	2.0	ug/L		06/23/20 11:27	07/04/20 01:04	1
Anthracene	ND		4.0	0.42	ug/L		06/23/20 11:27	07/04/20 01:04	1
Azobenzene	ND		4.0	0.23	ug/L		06/23/20 11:27	07/04/20 01:04	1
Benzaldehyde	ND		5.0	2.0	ug/L		06/23/20 11:27	07/04/20 01:04	1
Benzidine	ND		100	50	ug/L		06/23/20 11:27	07/04/20 01:04	1
Benzo[a]anthracene	ND		4.0	0.35	ug/L		06/23/20 11:27	07/04/20 01:04	1
Benzo[a]pyrene	ND		4.0	0.31	ug/L		06/23/20 11:27	07/04/20 01:04	1
Benzo[b]fluoranthene	ND		4.0	0.53	ug/L		06/23/20 11:27	07/04/20 01:04	1
Benzo[g,h,i]perylene	ND		4.0	0.50	ug/L		06/23/20 11:27	07/04/20 01:04	1
Benzo[k]fluoranthene	ND		4.0	0.46	ug/L		06/23/20 11:27	07/04/20 01:04	1
Benzoic acid	ND		25	10	ug/L		06/23/20 11:27	07/04/20 01:04	1
Benzyl alcohol	ND		10	0.23	ug/L		06/23/20 11:27	07/04/20 01:04	1
Bis(2-chloroethoxy)methane	ND		10	0.97	ug/L		06/23/20 11:27	07/04/20 01:04	1
Bis(2-chloroethyl)ether	ND		10	0.83	ug/L		06/23/20 11:27	07/04/20 01:04	1
Bis(2-ethylhexyl) phthalate	ND	*	10	0.56	ug/L		06/23/20 11:27	07/04/20 01:04	1
Butyl benzyl phthalate	ND	*	4.0	1.0	ug/L		06/23/20 11:27	07/04/20 01:04	1
Caprolactam	ND	*	5.0	2.5	ug/L		06/23/20 11:27	07/04/20 01:04	1
Carbazole	ND		4.0	0.43	ug/L		06/23/20 11:27	07/04/20 01:04	1
Chrysene	ND		4.0	0.54	ug/L		06/23/20 11:27	07/04/20 01:04	1
Dibenz(a,h)anthracene	ND		4.0	0.51	ug/L		06/23/20 11:27	07/04/20 01:04	1
Dibenzofuran	ND		4.0	0.29	ug/L		06/23/20 11:27	07/04/20 01:04	1
Diethyl phthalate	ND		4.0	0.38	ug/L		06/23/20 11:27	07/04/20 01:04	1
Dimethyl phthalate	ND		4.0	0.21	ug/L		06/23/20 11:27	07/04/20 01:04	1
Di-n-butyl phthalate	ND		4.0	1.2	ug/L		06/23/20 11:27	07/04/20 01:04	1
Di-n-octyl phthalate	ND		4.0	0.35	ug/L		06/23/20 11:27	07/04/20 01:04	1
Diphenylamine	ND		10	1.1	ug/L		06/23/20 11:27	07/04/20 01:04	1
Famphur	ND		100	1.5	ug/L		06/23/20 11:27	07/04/20 01:04	1
Fluoranthene	ND		4.0	0.20	ug/L		06/23/20 11:27	07/04/20 01:04	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-GW

Date Collected: 06/17/20 23:00

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	ND		4.0	0.31	ug/L		06/23/20 11:27	07/04/20 01:04	1
Hexachlorobenzene	ND		10	0.66	ug/L		06/23/20 11:27	07/04/20 01:04	1
Hexachlorobutadiene	ND	*1	10	3.3	ug/L		06/23/20 11:27	07/04/20 01:04	1
Hexachlorocyclopentadiene	ND		50	3.1	ug/L		06/23/20 11:27	07/04/20 01:04	1
Hexachloroethane	ND		10	0.98	ug/L		06/23/20 11:27	07/04/20 01:04	1
Hexadecane	ND		10	0.54	ug/L		06/23/20 11:27	07/04/20 01:04	1
Indeno[1,2,3-cd]pyrene	ND		4.0	0.65	ug/L		06/23/20 11:27	07/04/20 01:04	1
Isophorone	ND		10	0.21	ug/L		06/23/20 11:27	07/04/20 01:04	1
Naphthalene	ND		4.0	0.29	ug/L		06/23/20 11:27	07/04/20 01:04	1
Nitrobenzene	ND		10	0.81	ug/L		06/23/20 11:27	07/04/20 01:04	1
N-Nitrosodimethylamine	ND		10	0.29	ug/L		06/23/20 11:27	07/04/20 01:04	1
N-Nitrosodi-n-propylamine	ND		10	0.35	ug/L		06/23/20 11:27	07/04/20 01:04	1
N-Nitrosodiphenylamine	ND		10	0.44	ug/L		06/23/20 11:27	07/04/20 01:04	1
Pentachlorophenol	ND		50	20	ug/L		06/23/20 11:27	07/04/20 01:04	1
Phenanthrene	ND		4.0	0.26	ug/L		06/23/20 11:27	07/04/20 01:04	1
Phenol	ND		10	2.0	ug/L		06/23/20 11:27	07/04/20 01:04	1
Pyrene	ND		10	0.37	ug/L		06/23/20 11:27	07/04/20 01:04	1
Pyridine	ND		20	1.7	ug/L		06/23/20 11:27	07/04/20 01:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	67		42 - 131	06/23/20 11:27	07/04/20 01:04	1
2-Fluorobiphenyl	43	X	48 - 120	06/23/20 11:27	07/04/20 01:04	1
2-Fluorophenol (Surr)	49		41 - 120	06/23/20 11:27	07/04/20 01:04	1
Nitrobenzene-d5 (Surr)	55		42 - 120	06/23/20 11:27	07/04/20 01:04	1
Phenol-d5 (Surr)	55		45 - 124	06/23/20 11:27	07/04/20 01:04	1
Terphenyl-d14 (Surr)	20		20 - 130	06/23/20 11:27	07/04/20 01:04	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-24-7-9

Date Collected: 06/19/20 09:25

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-3

Matrix: Solid

Percent Solids: 92.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		3300	240	ug/Kg	✱	06/26/20 06:45	07/08/20 18:04	10
1,2,4,5-Tetrachlorobenzene	ND		3300	490	ug/Kg	✱	06/26/20 06:45	07/08/20 18:04	10
1,2,4-Trichlorobenzene	ND		3300	280	ug/Kg	✱	06/26/20 06:45	07/08/20 18:04	10
1,2-Dichlorobenzene	ND		3300	220	ug/Kg	✱	06/26/20 06:45	07/08/20 18:04	10
1,2-Diphenylhydrazine(as Azobenzene)	ND		3300	220	ug/Kg	✱	06/26/20 06:45	07/08/20 18:04	10
1,3-Dichlorobenzene	ND		3300	120	ug/Kg	✱	06/26/20 06:45	07/08/20 18:04	10
1,3-Dinitrobenzene	ND		3300	710	ug/Kg	✱	06/26/20 06:45	07/08/20 18:04	10
1,4-Dichlorobenzene	ND		3300	140	ug/Kg	✱	06/26/20 06:45	07/08/20 18:04	10
1,4-Dioxane	ND		6600	660	ug/Kg	✱	06/26/20 06:45	07/08/20 18:04	10
1-Methylnaphthalene	ND		3300	110	ug/Kg	✱	06/26/20 06:45	07/08/20 18:04	10
2,2'-oxybis[1-chloropropane]	ND		3300	230	ug/Kg	✱	06/26/20 06:45	07/08/20 18:04	10
2,3,4,6-Tetrachlorophenol	ND		16000	1400	ug/Kg	✱	06/26/20 06:45	07/08/20 18:04	10
2,4,5-Trichlorophenol	ND		3300	100	ug/Kg	✱	06/26/20 06:45	07/08/20 18:04	10
2,4,6-Trichlorophenol	ND		3300	100	ug/Kg	✱	06/26/20 06:45	07/08/20 18:04	10
2,4-Dichlorophenol	ND		3300	100	ug/Kg	✱	06/26/20 06:45	07/08/20 18:04	10
2,4-Dimethylphenol	ND		3300	660	ug/Kg	✱	06/26/20 06:45	07/08/20 18:04	10
2,4-Dinitrophenol	ND		16000	3300	ug/Kg	✱	06/26/20 06:45	07/08/20 18:04	10
2,4-Dinitrotoluene	ND		3300	660	ug/Kg	✱	06/26/20 06:45	07/08/20 18:04	10

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-24-7-9

Date Collected: 06/19/20 09:25

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-3

Matrix: Solid

Percent Solids: 92.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dichlorophenol	ND		3300	220	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
2,6-Dinitrotoluene	ND		3300	280	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
2-Chloronaphthalene	ND		3300	100	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
2-Chlorophenol	ND		3300	210	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
2-Methylnaphthalene	ND		3300	190	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
2-Methylphenol	ND		3300	130	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
2-Nitroaniline	ND		16000	500	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
2-Nitrophenol	ND		3300	100	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
3 & 4 Methylphenol	ND		3300	330	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
3,3'-Dichlorobenzidine	ND		6600	900	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
3-Methylphenol	ND		3300	330	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
3-Nitroaniline	ND		16000	730	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
4,6-Dinitro-2-methylphenol	ND		16000	3300	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
4-Bromophenyl phenyl ether	ND		3300	190	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
4-Chloro-3-methylphenol	ND		3300	250	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
4-Chloroaniline	ND		3300	820	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
4-Chlorophenyl phenyl ether	ND		3300	210	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
4-Methylphenol	ND		3300	330	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
4-Nitroaniline	ND		16000	730	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
4-Nitrophenol	ND		16000	970	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Acenaphthene	ND		3300	100	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Acenaphthylene	ND		3300	820	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Acetophenone	ND		3300	200	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Aniline	ND		3300	1300	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Anthracene	ND		3300	170	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Azobenzene	ND		3300	220	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Benzaldehyde	ND		3300	670	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Benzidine	ND		33000	9900	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Benzo[a]anthracene	320	J	3300	200	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Benzo[a]pyrene	ND		3300	200	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Benzo[b]fluoranthene	390	J	3300	260	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Benzo[g,h,i]perylene	ND		3300	160	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Benzo[k]fluoranthene	ND		3300	400	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Benzoic acid	ND		16000	3300	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Benzyl alcohol	ND		3300	100	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Bis(2-chloroethoxy)methane	ND		3300	230	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Bis(2-chloroethyl)ether	ND		3300	170	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Bis(2-ethylhexyl) phthalate	ND		3300	460	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Butyl benzyl phthalate	ND		3300	430	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Caprolactam	ND		3300	1100	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Carbazole	ND		3300	360	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Chrysene	400	J	3300	270	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Dibenz(a,h)anthracene	ND		3300	190	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Dibenzofuran	ND		3300	200	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Diethyl phthalate	ND		6600	260	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Dimethyl phthalate	ND		3300	230	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Di-n-butyl phthalate	ND		3300	290	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Di-n-octyl phthalate	ND		3300	410	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Diphenylamine	ND		3300	440	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-24-7-9

Date Collected: 06/19/20 09:25

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-3

Matrix: Solid

Percent Solids: 92.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Famphur	ND		6600	340	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Fluoranthene	410	J	3300	360	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Fluorene	ND		3300	180	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Hexachlorobenzene	ND		3300	290	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Hexachlorobutadiene	ND		3300	100	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Hexachlorocyclopentadiene	ND		16000	1100	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Hexachloroethane	ND		3300	210	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Hexadecane	ND		3300	130	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Indeno[1,2,3-cd]pyrene	ND		3300	220	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Isophorone	ND		3300	170	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Naphthalene	ND		3300	310	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Nitrobenzene	ND		3300	220	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
N-Nitrosodimethylamine	ND		3300	370	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
N-Nitrosodi-n-propylamine	ND		3300	680	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
N-Nitrosodiphenylamine	ND		3300	210	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Pentachlorophenol	ND		16000	3300	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Phenanthrene	230	J	3300	170	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Phenol	ND		3300	180	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Pyrene	560	J	3300	120	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10
Pyridine	ND		6600	400	ug/Kg	☼	06/26/20 06:45	07/08/20 18:04	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	51	D	35 - 120	06/26/20 06:45	07/08/20 18:04	10
2-Fluorobiphenyl	76	D	46 - 120	06/26/20 06:45	07/08/20 18:04	10
2-Fluorophenol (Surr)	66	D	43 - 120	06/26/20 06:45	07/08/20 18:04	10
Nitrobenzene-d5 (Surr)	74	D	46 - 120	06/26/20 06:45	07/08/20 18:04	10
Phenol-d5 (Surr)	77	D	46 - 120	06/26/20 06:45	07/08/20 18:04	10
Terphenyl-d14 (Surr)	86	D	46 - 120	06/26/20 06:45	07/08/20 18:04	10

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-5-7

Date Collected: 06/19/20 10:30

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-4

Matrix: Solid

Percent Solids: 85.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		360	26	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
1,2,4,5-Tetrachlorobenzene	ND		360	53	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
1,2,4-Trichlorobenzene	ND		360	30	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
1,2-Dichlorobenzene	ND		360	24	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		360	24	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
1,3-Dichlorobenzene	ND		360	13	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
1,3-Dinitrobenzene	ND		360	77	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
1,4-Dichlorobenzene	ND		360	15	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
1,4-Dioxane	ND		710	71	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
1-Methylnaphthalene	ND		360	12	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
2,2'-oxybis[1-chloropropane]	ND		360	25	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
2,3,4,6-Tetrachlorophenol	ND		1700	150	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
2,4,5-Trichlorophenol	ND		360	11	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
2,4,6-Trichlorophenol	ND		360	11	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
2,4-Dichlorophenol	ND		360	11	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
2,4-Dimethylphenol	ND		360	71	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-5-7

Lab Sample ID: 280-137854-4

Date Collected: 06/19/20 10:30

Matrix: Solid

Date Received: 06/19/20 12:56

Percent Solids: 85.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrophenol	ND		1700	360	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
2,4-Dinitrotoluene	ND		360	71	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
2,6-Dichlorophenol	ND		360	24	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
2,6-Dinitrotoluene	ND		360	30	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
2-Chloronaphthalene	ND		360	11	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
2-Chlorophenol	ND		360	23	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
2-Methylnaphthalene	ND		360	21	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
2-Methylphenol	ND		360	14	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
2-Nitroaniline	ND		1700	54	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
2-Nitrophenol	ND		360	11	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
3 & 4 Methylphenol	ND		360	36	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
3,3'-Dichlorobenzidine	ND		710	97	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
3-Methylphenol	ND		360	36	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
3-Nitroaniline	ND		1700	79	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
4,6-Dinitro-2-methylphenol	ND		1700	360	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
4-Bromophenyl phenyl ether	ND		360	21	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
4-Chloro-3-methylphenol	ND		360	27	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
4-Chloroaniline	ND		360	88	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
4-Chlorophenyl phenyl ether	ND		360	23	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
4-Methylphenol	ND		360	36	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
4-Nitroaniline	ND		1700	78	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
4-Nitrophenol	ND		1700	100	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Acenaphthene	ND		360	11	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Acenaphthylene	ND		360	89	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Acetophenone	ND		360	22	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Aniline	ND		360	140	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Anthracene	ND		360	18	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Azobenzene	ND		360	24	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Benzaldehyde	ND		360	72	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Benazidine	ND		3600	1100	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Benzo[a]anthracene	ND		360	22	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Benzo[a]pyrene	ND		360	22	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Benzo[b]fluoranthene	ND		360	28	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Benzo[g,h,i]perylene	ND		360	17	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Benzo[k]fluoranthene	ND		360	43	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Benzoic acid	ND		1700	360	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Benzyl alcohol	ND		360	11	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Bis(2-chloroethoxy)methane	ND		360	25	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Bis(2-chloroethyl)ether	ND		360	18	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Bis(2-ethylhexyl) phthalate	ND		360	50	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Butyl benzyl phthalate	ND		360	46	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Caprolactam	ND		360	110	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Carbazole	ND		360	39	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Chrysene	ND		360	29	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Dibenz(a,h)anthracene	ND		360	21	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Dibenzofuran	ND		360	22	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Diethyl phthalate	ND		710	28	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Dimethyl phthalate	ND		360	25	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Di-n-butyl phthalate	ND		360	31	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-5-7

Date Collected: 06/19/20 10:30

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-4

Matrix: Solid

Percent Solids: 85.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate	ND		360	44	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Diphenylamine	ND		360	48	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Famphur	ND		710	37	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Fluoranthene	ND		360	39	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Fluorene	ND		360	19	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Hexachlorobenzene	ND		360	31	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Hexachlorobutadiene	ND		360	11	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Hexachlorocyclopentadiene	ND		1700	120	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Hexachloroethane	ND		360	23	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Hexadecane	ND		360	14	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Indeno[1,2,3-cd]pyrene	ND		360	24	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Isophorone	ND		360	18	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Naphthalene	ND		360	33	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Nitrobenzene	ND		360	24	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
N-Nitrosodimethylamine	ND		360	40	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
N-Nitrosodi-n-propylamine	ND		360	73	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
N-Nitrosodiphenylamine	ND		360	23	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Pentachlorophenol	ND		1700	360	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Phenanthrene	ND		360	18	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Phenol	ND		360	19	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Pyrene	ND		360	13	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1
Pyridine	ND		710	43	ug/Kg	☼	06/26/20 06:45	07/08/20 18:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	63		35 - 120	06/26/20 06:45	07/08/20 18:33	1
2-Fluorobiphenyl	59		46 - 120	06/26/20 06:45	07/08/20 18:33	1
2-Fluorophenol (Surr)	63		43 - 120	06/26/20 06:45	07/08/20 18:33	1
Nitrobenzene-d5 (Surr)	74		46 - 120	06/26/20 06:45	07/08/20 18:33	1
Phenol-d5 (Surr)	74		46 - 120	06/26/20 06:45	07/08/20 18:33	1
Terphenyl-d14 (Surr)	85		46 - 120	06/26/20 06:45	07/08/20 18:33	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-20-22

Date Collected: 06/19/20 11:20

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-5

Matrix: Solid

Percent Solids: 95.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		320	23	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
1,2,4,5-Tetrachlorobenzene	ND	F1	320	47	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
1,2,4-Trichlorobenzene	ND	F1	320	27	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
1,2-Dichlorobenzene	ND	F1	320	21	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		320	21	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
1,3-Dichlorobenzene	ND	F1	320	11	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
1,3-Dinitrobenzene	ND		320	68	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
1,4-Dichlorobenzene	ND	F1	320	13	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
1,4-Dioxane	ND	F2	630	63	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
1-Methylnaphthalene	ND		320	11	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
2,2'-oxybis[1-chloropropane]	ND		320	22	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
2,3,4,6-Tetrachlorophenol	ND		1500	130	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
2,4,5-Trichlorophenol	ND		320	9.5	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
2,4,6-Trichlorophenol	ND		320	9.5	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-20-22

Lab Sample ID: 280-137854-5

Date Collected: 06/19/20 11:20

Matrix: Solid

Date Received: 06/19/20 12:56

Percent Solids: 95.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenol	ND		320	9.5	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
2,4-Dimethylphenol	ND		320	63	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
2,4-Dinitrophenol	ND		1500	320	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
2,4-Dinitrotoluene	ND		320	63	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
2,6-Dichlorophenol	ND		320	21	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
2,6-Dinitrotoluene	ND		320	27	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
2-Chloronaphthalene	ND		320	9.5	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
2-Chlorophenol	ND	F1	320	20	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
2-Methylnaphthalene	ND		320	18	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
2-Methylphenol	ND		320	12	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
2-Nitroaniline	ND		1500	48	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
2-Nitrophenol	ND	F1	320	9.5	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
3 & 4 Methylphenol	ND		320	32	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
3,3'-Dichlorobenzidine	ND		630	86	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
3-Methylphenol	ND		320	32	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
3-Nitroaniline	ND		1500	70	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
4,6-Dinitro-2-methylphenol	ND		1500	320	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
4-Bromophenyl phenyl ether	ND		320	18	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
4-Chloro-3-methylphenol	ND		320	24	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
4-Chloroaniline	ND		320	78	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
4-Chlorophenyl phenyl ether	ND		320	20	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
4-Methylphenol	ND		320	32	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
4-Nitroaniline	ND		1500	69	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
4-Nitrophenol	ND		1500	93	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
Acenaphthene	ND		320	9.8	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
Acenaphthylene	ND		320	78	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
Acetophenone	ND		320	19	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
Aniline	ND		320	120	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
Anthracene	ND		320	16	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
Azobenzene	ND		320	21	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
Benzaldehyde	ND		320	64	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
Benzidine	ND	F1	3200	950	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
Benzo[a]anthracene	ND		320	19	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
Benzo[a]pyrene	ND		320	19	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
Benzo[b]fluoranthene	ND		320	25	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
Benzo[g,h,i]perylene	ND		320	15	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
Benzo[k]fluoranthene	ND		320	38	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
Benzoic acid	ND		1500	320	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
Benzyl alcohol	ND		320	9.5	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
Bis(2-chloroethoxy)methane	ND		320	22	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
Bis(2-chloroethyl)ether	ND		320	16	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
Bis(2-ethylhexyl) phthalate	ND		320	44	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
Butyl benzyl phthalate	ND		320	41	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
Caprolactam	ND		320	100	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
Carbazole	ND		320	34	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
Chrysene	ND		320	26	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
Dibenz(a,h)anthracene	ND		320	18	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
Dibenzofuran	ND		320	19	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1
Diethyl phthalate	ND		630	25	ug/Kg	☼	06/26/20 06:45	07/08/20 19:02	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-20-22

Date Collected: 06/19/20 11:20

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-5

Matrix: Solid

Percent Solids: 95.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl phthalate	ND		320	22	ug/Kg	*	06/26/20 06:45	07/08/20 19:02	1
Di-n-butyl phthalate	ND		320	28	ug/Kg	*	06/26/20 06:45	07/08/20 19:02	1
Di-n-octyl phthalate	ND		320	39	ug/Kg	*	06/26/20 06:45	07/08/20 19:02	1
Diphenylamine	ND		320	42	ug/Kg	*	06/26/20 06:45	07/08/20 19:02	1
Famphur	ND		630	32	ug/Kg	*	06/26/20 06:45	07/08/20 19:02	1
Fluoranthene	ND		320	34	ug/Kg	*	06/26/20 06:45	07/08/20 19:02	1
Fluorene	ND		320	17	ug/Kg	*	06/26/20 06:45	07/08/20 19:02	1
Hexachlorobenzene	ND		320	28	ug/Kg	*	06/26/20 06:45	07/08/20 19:02	1
Hexachlorobutadiene	ND	F1	320	9.5	ug/Kg	*	06/26/20 06:45	07/08/20 19:02	1
Hexachlorocyclopentadiene	ND	F1 F2	1500	110	ug/Kg	*	06/26/20 06:45	07/08/20 19:02	1
Hexachloroethane	ND	F1 F2	320	20	ug/Kg	*	06/26/20 06:45	07/08/20 19:02	1
Hexadecane	ND		320	13	ug/Kg	*	06/26/20 06:45	07/08/20 19:02	1
Indeno[1,2,3-cd]pyrene	ND		320	21	ug/Kg	*	06/26/20 06:45	07/08/20 19:02	1
Isophorone	ND		320	16	ug/Kg	*	06/26/20 06:45	07/08/20 19:02	1
Naphthalene	ND	F1	320	30	ug/Kg	*	06/26/20 06:45	07/08/20 19:02	1
Nitrobenzene	ND		320	21	ug/Kg	*	06/26/20 06:45	07/08/20 19:02	1
N-Nitrosodimethylamine	ND		320	35	ug/Kg	*	06/26/20 06:45	07/08/20 19:02	1
N-Nitrosodi-n-propylamine	ND		320	65	ug/Kg	*	06/26/20 06:45	07/08/20 19:02	1
N-Nitrosodiphenylamine	ND		320	20	ug/Kg	*	06/26/20 06:45	07/08/20 19:02	1
Pentachlorophenol	ND		1500	320	ug/Kg	*	06/26/20 06:45	07/08/20 19:02	1
Phenanthrene	ND		320	16	ug/Kg	*	06/26/20 06:45	07/08/20 19:02	1
Phenol	ND		320	17	ug/Kg	*	06/26/20 06:45	07/08/20 19:02	1
Pyrene	ND		320	12	ug/Kg	*	06/26/20 06:45	07/08/20 19:02	1
Pyridine	ND		630	38	ug/Kg	*	06/26/20 06:45	07/08/20 19:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	71		35 - 120	06/26/20 06:45	07/08/20 19:02	1
2-Fluorobiphenyl	57		46 - 120	06/26/20 06:45	07/08/20 19:02	1
2-Fluorophenol (Surr)	65		43 - 120	06/26/20 06:45	07/08/20 19:02	1
Nitrobenzene-d5 (Surr)	73		46 - 120	06/26/20 06:45	07/08/20 19:02	1
Phenol-d5 (Surr)	71		46 - 120	06/26/20 06:45	07/08/20 19:02	1
Terphenyl-d14 (Surr)	84		46 - 120	06/26/20 06:45	07/08/20 19:02	1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-GW

Date Collected: 06/17/20 23:00

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		25	10	ug/L	-		06/24/20 07:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	87		82 - 110		06/24/20 07:56	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB-06

Date Collected: 06/19/20 08:30

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		25	10	ug/L	-		06/24/20 07:17	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	88		82 - 110		06/24/20 07:17	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-24-7-9 **Lab Sample ID: 280-137854-3**
Date Collected: 06/19/20 09:25 **Matrix: Solid**
Date Received: 06/19/20 12:56 **Percent Solids: 92.4**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		3.1	1.2	mg/Kg	☼	06/19/20 09:25	06/29/20 13:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	98		77 - 123	06/19/20 09:25	06/29/20 13:53	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-5-7 **Lab Sample ID: 280-137854-4**
Date Collected: 06/19/20 10:30 **Matrix: Solid**
Date Received: 06/19/20 12:56 **Percent Solids: 85.4**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		3.1	1.2	mg/Kg	☼	06/19/20 10:30	06/29/20 14:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	99		77 - 123	06/19/20 10:30	06/29/20 14:13	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-20-22 **Lab Sample ID: 280-137854-5**
Date Collected: 06/19/20 11:20 **Matrix: Solid**
Date Received: 06/19/20 12:56 **Percent Solids: 95.8**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		0.048	0.018	mg/Kg	☼	06/19/20 11:20	06/29/20 14:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	99		77 - 123	06/19/20 11:20	06/29/20 14:33	1

Client Sample ID: TRIP BLANK 2 **Lab Sample ID: 280-137854-6**
Date Collected: 06/19/20 11:20 **Matrix: Solid**
Date Received: 06/19/20 12:56

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.0	0.76	mg/Kg	-	06/19/20 11:20	06/29/20 14:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	99		77 - 123	06/19/20 11:20	06/29/20 14:53	1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-GW **Lab Sample ID: 280-137854-1**
Date Collected: 06/17/20 23:00 **Matrix: Water**
Date Received: 06/19/20 12:56

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	0.50		0.25	0.033	mg/L	-	06/22/20 06:45	07/02/20 03:00	1
Motor Oil (C20-C38)	0.72	* B	0.51	0.057	mg/L	-	06/22/20 06:45	07/02/20 03:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	68		50 - 115	06/22/20 06:45	07/02/20 03:00	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-24-7-9

Date Collected: 06/19/20 09:25

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-3

Matrix: Solid

Percent Solids: 92.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	130		7.8	3.6	mg/Kg	☼	06/26/20 06:37	07/15/20 03:08	1
Motor Oil (C20-C38)	260		23	7.6	mg/Kg	☼	06/26/20 06:37	07/15/20 03:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	77		49 - 115				06/26/20 06:37	07/15/20 03:08	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-5-7

Date Collected: 06/19/20 10:30

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-4

Matrix: Solid

Percent Solids: 85.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	16		9.2	4.2	mg/Kg	☼	06/26/20 06:37	07/15/20 03:30	1
Motor Oil (C20-C38)	56		28	9.0	mg/Kg	☼	06/26/20 06:37	07/15/20 03:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	62		49 - 115				06/26/20 06:37	07/15/20 03:30	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-20-22

Date Collected: 06/19/20 11:20

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-5

Matrix: Solid

Percent Solids: 95.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	8.6		8.2	3.7	mg/Kg	☼	06/26/20 06:37	07/15/20 03:51	1
Motor Oil (C20-C38)	30		25	8.0	mg/Kg	☼	06/26/20 06:37	07/15/20 03:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	69		49 - 115				06/26/20 06:37	07/15/20 03:51	1

Method: 8081B - Organochlorine Pesticides (GC)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-GW

Date Collected: 06/17/20 23:00

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan I	ND		0.052	0.0060	ug/L		06/23/20 13:38	06/26/20 14:24	1
Endosulfan II	ND		0.052	0.0068	ug/L		06/23/20 13:38	06/26/20 14:24	1
Endosulfan sulfate	ND		0.052	0.0051	ug/L		06/23/20 13:38	06/26/20 14:24	1
Endrin	ND		0.052	0.0089	ug/L		06/23/20 13:38	06/26/20 14:24	1
Endrin aldehyde	ND		0.052	0.0089	ug/L		06/23/20 13:38	06/26/20 14:24	1
Endrin ketone	ND		0.052	0.013	ug/L		06/23/20 13:38	06/26/20 14:24	1
beta-BHC	ND		0.052	0.0094	ug/L		06/23/20 13:38	06/26/20 14:24	1
alpha-BHC	ND		0.052	0.010	ug/L		06/23/20 13:38	06/26/20 14:24	1
delta-BHC	ND		0.052	0.0081	ug/L		06/23/20 13:38	06/26/20 14:24	1
gamma-BHC (Lindane)	ND		0.052	0.011	ug/L		06/23/20 13:38	06/26/20 14:24	1
trans-Chlordane	ND		0.052	0.0074	ug/L		06/23/20 13:38	06/26/20 14:24	1
Dieldrin	ND		0.052	0.0048	ug/L		06/23/20 13:38	06/26/20 14:24	1
Heptachlor epoxide	ND		0.052	0.0033	ug/L		06/23/20 13:38	06/26/20 14:24	1
Heptachlor	ND		0.052	0.010	ug/L		06/23/20 13:38	06/26/20 14:24	1
Aldrin	ND		0.052	0.0064	ug/L		06/23/20 13:38	06/26/20 14:24	1
4,4'-DDD	ND		0.052	0.0043	ug/L		06/23/20 13:38	06/26/20 14:24	1
4,4'-DDE	ND		0.052	0.0043	ug/L		06/23/20 13:38	06/26/20 14:24	1
4,4'-DDT	ND		0.052	0.025	ug/L		06/23/20 13:38	06/26/20 14:24	1
Methoxychlor	ND		0.10	0.014	ug/L		06/23/20 13:38	06/26/20 14:24	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-GW

Date Collected: 06/17/20 23:00

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene	ND		3.1	1.5	ug/L		06/23/20 13:38	06/26/20 14:24	1
cis-Chlordane	ND		0.052	0.0091	ug/L		06/23/20 13:38	06/26/20 14:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	47		28 - 115				06/23/20 13:38	06/26/20 14:24	1
DCB Decachlorobiphenyl	32	X	34 - 122				06/23/20 13:38	06/26/20 14:24	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-GW

Date Collected: 06/17/20 23:00

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND		1.0	0.19	ug/L		06/23/20 13:38	07/14/20 12:21	1
PCB-1016	ND		1.0	0.18	ug/L		06/23/20 13:38	07/14/20 12:21	1
PCB-1232	ND		1.0	0.13	ug/L		06/23/20 13:38	07/14/20 12:21	1
PCB-1242	ND		1.0	0.11	ug/L		06/23/20 13:38	07/14/20 12:21	1
PCB-1248	ND		1.0	0.18	ug/L		06/23/20 13:38	07/14/20 12:21	1
PCB-1254	ND		1.0	0.14	ug/L		06/23/20 13:38	07/14/20 12:21	1
PCB-1260	ND		1.0	0.092	ug/L		06/23/20 13:38	07/14/20 12:21	1
PCB-1262	ND		1.0	0.097	ug/L		06/23/20 13:38	07/14/20 12:21	1
PCB-1268	ND		1.0	0.38	ug/L		06/23/20 13:38	07/14/20 12:21	1
Polychlorinated biphenyls, Total	ND		1.0	0.075	ug/L		06/23/20 13:38	07/14/20 12:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	52		29 - 115				06/23/20 13:38	07/14/20 12:21	1
DCB Decachlorobiphenyl	25	X	26 - 135				06/23/20 13:38	07/14/20 12:21	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-GW

Date Collected: 06/17/20 23:00

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	54		5.0	0.33	ug/L		06/26/20 09:10	06/30/20 09:06	1
Barium	3700		1.0	0.29	ug/L		06/26/20 09:10	06/30/20 09:06	1
Cadmium	ND		1.0	0.27	ug/L		06/26/20 09:10	07/06/20 13:18	1
Chromium	76		2.0	0.50	ug/L		06/26/20 09:10	06/30/20 09:06	1
Lead	120		1.0	0.18	ug/L		06/26/20 09:10	06/30/20 09:06	1
Selenium	3.2	J	5.0	0.37	ug/L		06/26/20 09:10	06/30/20 09:06	1
Silver	0.43	J	5.0	0.033	ug/L		06/26/20 09:10	06/30/20 09:06	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-24-7-9

Date Collected: 06/19/20 09:25

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-3

Matrix: Solid

Percent Solids: 92.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.6		0.59	0.049	mg/Kg	✱	06/27/20 09:35	07/01/20 22:02	1
Silver	72	J	110	8.3	ug/Kg	✱	06/27/20 10:55	06/30/20 11:56	1
Barium	280	^ F2	0.39	0.069	mg/Kg	✱	06/27/20 09:35	07/01/20 22:02	1
Cadmium	0.39		0.098	0.0091	mg/Kg	✱	06/27/20 09:35	07/06/20 13:54	1
Chromium	7.5		0.20	0.074	mg/Kg	✱	06/27/20 09:35	07/01/20 22:02	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 6020A - Metals (ICP/MS) (Continued)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-24-7-9

Date Collected: 06/19/20 09:25

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-3

Matrix: Solid

Percent Solids: 92.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	140		0.15	0.018	mg/Kg	☼	06/27/20 09:35	07/01/20 22:02	1
Selenium	0.20	J	0.49	0.13	mg/Kg	☼	06/27/20 09:35	07/01/20 22:02	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-5-7

Date Collected: 06/19/20 10:30

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-4

Matrix: Solid

Percent Solids: 85.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.7		0.63	0.053	mg/Kg	☼	06/27/20 09:35	07/01/20 22:20	1
Silver	87	J	97	7.6	ug/Kg	☼	06/27/20 10:55	06/30/20 12:16	1
Barium	55	^	0.42	0.074	mg/Kg	☼	06/27/20 09:35	07/01/20 22:20	1
Cadmium	0.26		0.11	0.0099	mg/Kg	☼	06/27/20 09:35	07/06/20 14:16	1
Chromium	7.8		0.21	0.080	mg/Kg	☼	06/27/20 09:35	07/01/20 22:20	1
Lead	17		0.16	0.019	mg/Kg	☼	06/27/20 09:35	07/01/20 22:20	1
Selenium	0.36	J	0.53	0.14	mg/Kg	☼	06/27/20 09:35	07/01/20 22:20	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-20-22

Date Collected: 06/19/20 11:20

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-5

Matrix: Solid

Percent Solids: 95.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.86		0.56	0.047	mg/Kg	☼	06/27/20 09:35	07/01/20 22:24	1
Silver	ND		86	6.7	ug/Kg	☼	06/27/20 10:55	06/30/20 12:20	1
Barium	36	^	0.37	0.066	mg/Kg	☼	06/27/20 09:35	07/01/20 22:24	1
Cadmium	0.049	J	0.094	0.0088	mg/Kg	☼	06/27/20 09:35	07/06/20 14:20	1
Chromium	2.2		0.19	0.071	mg/Kg	☼	06/27/20 09:35	07/01/20 22:24	1
Lead	2.5		0.14	0.017	mg/Kg	☼	06/27/20 09:35	07/01/20 22:24	1
Selenium	0.18	J	0.47	0.12	mg/Kg	☼	06/27/20 09:35	07/01/20 22:24	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-GW

Date Collected: 06/17/20 23:00

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.027	ug/L		07/07/20 09:30	07/07/20 16:02	1

Method: 7471B - Mercury (CVAA)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-24-7-9

Date Collected: 06/19/20 09:25

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-3

Matrix: Solid

Percent Solids: 92.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	120		19	6.2	ug/Kg	☼	07/01/20 13:20	07/01/20 17:31	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-5-7

Date Collected: 06/19/20 10:30

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-4

Matrix: Solid

Percent Solids: 85.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	40		23	7.5	ug/Kg	☼	07/01/20 13:20	07/01/20 17:34	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 7471B - Mercury (CVAA)

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-20-22

Date Collected: 06/19/20 11:20

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-5

Matrix: Solid

Percent Solids: 95.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		18	5.8	ug/Kg	☼	07/01/20 13:20	07/01/20 17:36	1

General Chemistry

Client Sample ID: CDOT I270 Env-05/06_2020-SB-24-7-9

Date Collected: 06/19/20 09:25

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-3

Matrix: Solid

Percent Solids: 92.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	7.5		0.1	0.1	%			06/22/20 11:25	1
Percent Solids	92.5		0.1	0.1	%			06/22/20 11:25	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-5-7

Date Collected: 06/19/20 10:30

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-4

Matrix: Solid

Percent Solids: 85.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	14.6		0.1	0.1	%			06/22/20 11:25	1
Percent Solids	85.4		0.1	0.1	%			06/22/20 11:25	1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-20-22

Date Collected: 06/19/20 11:20

Date Received: 06/19/20 12:56

Lab Sample ID: 280-137854-5

Matrix: Solid

Percent Solids: 95.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.2		0.1	0.1	%			06/22/20 11:25	1
Percent Solids	95.8		0.1	0.1	%			06/22/20 11:25	1

Consultant Work Product - Jacobs Engineering Group, Inc.
 -Not CDOT Approved-

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA (58-140)	TOL (80-126)	BFB (76-127)	DBFM (75-121)
280-137854-3	CDOT I270 Env-05/06_2020-SB	103	99	101	100
280-137854-4	CDOT I270 Env-05/06_2020-SB-23-5-7	103	97	99	101
280-137854-5	CDOT I270 Env-05/06_2020-SB-23-20-22	101	98	95	100
280-137854-6	TRIP BLANK 2	95	99	98	99
LCS 280-499554/1-A	Lab Control Sample	99	99	96	100
LCSD 280-499554/2-A	Lab Control Sample Dup	101	100	95	102
MB 280-499554/3-A	Method Blank	100	100	95	100

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA (70-127)	TOL (80-125)	BFB (78-120)	DBFM (77-120)
280-137854-1	CDOT I270 Env-05/06_2020-SB	105	96	96	105
280-137854-2	CDOT I270 Env-05/06_2020-SB-TB-06	95	100	97	98
LCS 280-500231/5	Lab Control Sample	96	97	98	100
LCSD 280-500231/6	Lab Control Sample Dup	98	98	97	101
MB 280-500231/10	Method Blank	98	99	96	100

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TBP (35-120)	FBP (46-120)	2FP (43-120)	NBZ (46-120)	PHL (46-120)	TPHL (46-120)
280-137854-3	CDOT I270 Env-05/06_2020-SB	51 D	76 D	66 D	74 D	77 D	86 D
280-137854-4	CDOT I270 Env-05/06_2020-SB-23-5-7	63	59	63	74	74	85
280-137854-5	CDOT I270 Env-05/06_2020-SB-23-20-22	71	57	65	73	71	84
280-137854-5 MS	CDOT I270 Env-05/06_2020-SB-23-20-22	79	65	68	79	75	83
280-137854-5 MSD	CDOT I270 Env-05/06_2020-SB-23-20-22	77	58	52	62	61	84
LCS 280-500214/2-A	Lab Control Sample	75	63	66	77	72	82
MB 280-500214/1-A	Method Blank	68	65	69	81	80	89

Surrogate Legend

Eurofins TestAmerica, Denver

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements
 TBP = 2,4,6-Tribromophenol (Surr)
 FBP = 2-Fluorobiphenyl
 2FP = 2-Fluorophenol (Surr)
 NBZ = Nitrobenzene-d5 (Surr)
 PHL = Phenol-d5 (Surr)
 TPHL = Terphenyl-d14 (Surr)

Job ID: 280-137854-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (42-131)	FBP (48-120)	2FP (41-120)	NBZ (42-120)	PHL (45-124)	TPHL (20-130)
280-137854-1	CDOT I270 Env-05/06_2020-SB	67	43 X	49	55	55	20
LCS 280-499759/2-A	Lab Control Sample	84	74	72	77	75	100
LCSD 280-499759/3-A	Lab Control Sample Dup	77	77	78	92	82	104
MB 280-499759/1-A	Method Blank	71	57	74	81	81	93

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
 FBP = 2-Fluorobiphenyl
 2FP = 2-Fluorophenol (Surr)
 NBZ = Nitrobenzene-d5 (Surr)
 PHL = Phenol-d5 (Surr)
 TPHL = Terphenyl-d14 (Surr)

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		TFT1 (77-123)
280-137854-3	CDOT I270 Env-05/06_2020-SB	98
280-137854-4	CDOT I270 Env-05/06_2020-SB-23-5-7	99
280-137854-5	CDOT I270 Env-05/06_2020-SB-23-20-22	99
280-137854-6	TRIP BLANK 2	99
LCS 280-500304/1-A	Lab Control Sample	103
LCSD 280-500304/2-A	Lab Control Sample Dup	104
MB 280-500304/3-A	Method Blank	100

Surrogate Legend

TFT = a,a,a-Trifluorotoluene

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		TFT1 (82-110)
280-137854-1	CDOT I270 Env-05/06_2020-SB	87
280-137854-2	CDOT I270 Env-05/06_2020-SB-TB-06	88
LCS 280-499873/34	Lab Control Sample	90
LCSD 280-499873/35	Lab Control Sample Dup	93
MB 280-499873/36	Method Blank	90

Surrogate Legend

TFT = a,a,a-Trifluorotoluene

Eurofins TestAmerica, Denver

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Matrix: Solid

Prep Type: Total/NA

			Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	OTPH1 (49-115)		
280-137854-3	CDOT I270 Env-05/06_2020-SB	77		
280-137854-4	CDOT I270 Env-05/06_2020-SB-23-5-7	62		
280-137854-5	CDOT I270 Env-05/06_2020-SB-23-20-22	69		
LCS 280-500213/2-A	Lab Control Sample	78		
LCS 280-500213/3-A	Lab Control Sample	86		
MB 280-500213/1-A	Method Blank	68		
Surrogate Legend				
OTPH = o-Terphenyl (Surr)				

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Matrix: Water

Prep Type: Total/NA

			Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	OTPH1 (50-115)		
280-137854-1	CDOT I270 Env-05/06_2020-SB	68		
LCS 280-499577/2-A	Lab Control Sample	79		
LCS 280-499577/4-A	Lab Control Sample	93		
LCSD 280-499577/3-A	Lab Control Sample Dup	93		
LCSD 280-499577/5-A	Lab Control Sample Dup	96		
MB 280-499577/1-A	Method Blank	85		
Surrogate Legend				
OTPH = o-Terphenyl (Surr)				

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Water

Prep Type: Total/NA

			Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	TCX1 (28-115)	DCBP1 (34-122)		
280-137854-1	CDOT I270 Env-05/06_2020-SB	47	32 X		
LCS 280-499791/2-A	Lab Control Sample	68	84		
LCSD 280-499791/3-A	Lab Control Sample Dup	57	70		
MB 280-499791/1-A	Method Blank	70	83		
Surrogate Legend					
TCX = Tetrachloro-m-xylene					
DCBP = DCB Decachlorobiphenyl					

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water

Prep Type: Total/NA

			Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	TCX1 (29-115)	DCBP1 (26-135)		
280-137854-1	CDOT I270 Env-05/06_2020-SB	52	25 X		
LCS 280-499791/4-A	Lab Control Sample	74	61		
LCSD 280-499791/5-A	Lab Control Sample Dup	79	79		
MB 280-499791/1-A	Method Blank	75	83		

Eurofins TestAmerica, Denver

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
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- 10
- 11
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- 13
- 14
- 15

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-499554/3-A
Matrix: Solid
Analysis Batch: 499557

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499554

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		72	36	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
2-Butanone (MEK)	ND		20	3.9	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Benzene	ND		5.0	0.15	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Chlorobenzene	ND		5.0	2.1	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Carbon disulfide	ND		5.0	1.7	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Carbon tetrachloride	ND		5.0	2.0	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Cyclohexane	ND		5.0	1.8	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,2-Dibromo-3-Chloropropane	ND		10	3.7	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Bromomethane	ND		10	1.4	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Bromoform	ND		5.1	2.6	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Chloroethane	ND		10	2.0	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Chloroform	ND		10	0.29	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Chlorobromomethane	ND		5.0	2.5	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Dichlorobromomethane	ND		5.0	2.1	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Chlorodibromomethane	ND		5.0	2.3	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Isopropylbenzene	ND		5.0	2.4	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
2-Hexanone	ND		20	4.9	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Chloromethane	ND		10	0.77	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Dichlorodifluoromethane	ND		10	2.7	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
trans-1,2-Dichloroethene	ND		2.5	0.39	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
trans-1,3-Dichloropropene	ND		5.0	0.083	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Methylene Chloride	ND		5.0	1.6	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Methyl acetate	ND		10	2.8	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Methyl tert-butyl ether	ND		20	2.1	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.4	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Methylcyclohexane	ND		5.0	0.42	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Styrene	ND		5.0	0.28	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.29	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,2,3-Trichlorobenzene	ND		5.0	0.81	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,2,4-Trichlorobenzene	ND		5.0	0.73	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Toluene	ND		5.0	0.23	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,1,1-Trichloroethane	ND		5.0	2.0	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,1,2-Trichloroethane	ND		5.0	0.88	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Trichloroethene	ND		5.0	1.9	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,1,2-Trichlorotrifluoroethane	ND		20	1.7	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Vinyl chloride	ND		5.0	1.3	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
m-Xylene & p-Xylene	ND		2.5	1.0	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
o-Xylene	ND		2.5	0.27	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Tetrachloroethene	ND		5.0	1.9	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,2-Dichlorobenzene	ND		5.0	1.9	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,3-Dichlorobenzene	ND		5.0	0.48	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,4-Dichlorobenzene	ND		5.0	0.25	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
cis-1,2-Dichloroethene	ND		2.5	0.20	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
cis-1,3-Dichloropropene	ND		5.0	0.10	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,1-Dichloroethane	ND		5.0	0.21	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,1-Dichloroethene	ND		5.0	0.59	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,2-Dichloroethane	ND		5.0	0.70	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,2-Dichloropropane	ND		5.0	0.55	ug/Kg		06/21/20 10:02	06/21/20 11:24	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-499554/3-A
Matrix: Solid
Analysis Batch: 499557

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499554

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,4-Dioxane	ND		500	56	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Ethylbenzene	ND		5.0	0.31	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
1,2-Dibromoethane	ND		5.0	0.52	ug/Kg		06/21/20 10:02	06/21/20 11:24	1
Trichlorofluoromethane	ND		10	3.2	ug/Kg		06/21/20 10:02	06/21/20 11:24	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	100		58 - 140	06/21/20 10:02	06/21/20 11:24	1
Toluene-d8 (Surr)	100		80 - 126	06/21/20 10:02	06/21/20 11:24	1
4-Bromofluorobenzene (Surr)	95		76 - 127	06/21/20 10:02	06/21/20 11:24	1
Dibromofluoromethane (Surr)	100		75 - 121	06/21/20 10:02	06/21/20 11:24	1

Lab Sample ID: LCS 280-499554/1-A
Matrix: Solid
Analysis Batch: 499557

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499554

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
		Result	Qualifier					
Acetone	200	122	*	ug/Kg		61		65 - 150
2-Butanone (MEK)	200	141		ug/Kg		70		45 - 177
Benzene	50.0	44.5		ug/Kg		89		75 - 135
Chlorobenzene	50.0	45.9		ug/Kg		92		78 - 135
Carbon disulfide	50.0	35.7		ug/Kg		71		45 - 150
Carbon tetrachloride	50.0	44.0		ug/Kg		88		69 - 138
Cyclohexane	50.0	33.0		ug/Kg		66		50 - 150
1,2-Dibromo-3-Chloropropane	50.0	42.4		ug/Kg		85		66 - 150
Bromomethane	50.0	51.4		ug/Kg		103		52 - 135
Bromoform	50.0	43.8		ug/Kg		88		77 - 135
Chloroethane	50.0	46.4		ug/Kg		93		51 - 145
Chloroform	50.0	43.5		ug/Kg		87		73 - 123
Chlorobromomethane	50.0	43.0		ug/Kg		86		74 - 135
Dichlorobromomethane	50.0	42.9		ug/Kg		86		73 - 135
Chlorodibromomethane	50.0	44.0		ug/Kg		88		77 - 135
Isopropylbenzene	50.0	45.0		ug/Kg		90		74 - 137
2-Hexanone	200	136		ug/Kg		68		67 - 150
Chloromethane	50.0	36.8		ug/Kg		74		41 - 138
Dichlorodifluoromethane	50.0	47.5		ug/Kg		95		32 - 152
trans-1,2-Dichloroethene	50.0	42.1		ug/Kg		84		77 - 135
trans-1,3-Dichloropropene	50.0	44.0		ug/Kg		88		71 - 135
Methylene Chloride	50.0	42.0		ug/Kg		84		76 - 136
Methyl acetate	100	65.9		ug/Kg		66		50 - 150
Methyl tert-butyl ether	50.0	41.1		ug/Kg		82		71 - 141
4-Methyl-2-pentanone (MIBK)	200	142		ug/Kg		71		69 - 150
Methylcyclohexane	50.0	33.6		ug/Kg		67		50 - 150
Styrene	50.0	46.4		ug/Kg		93		76 - 135
1,1,2,2-Tetrachloroethane	50.0	40.5		ug/Kg		81		65 - 135
1,2,3-Trichlorobenzene	50.0	49.6		ug/Kg		99		62 - 135
1,2,4-Trichlorobenzene	50.0	49.5		ug/Kg		99		65 - 135
Toluene	50.0	44.2		ug/Kg		88		77 - 122
1,1,1-Trichloroethane	50.0	43.0		ug/Kg		86		70 - 135

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-499554/1-A
Matrix: Solid
Analysis Batch: 499557

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499554

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	%Rec.
1,1,2-Trichloroethane	50.0	41.7		ug/Kg		83	78 - 135	
Trichloroethene	50.0	43.1		ug/Kg		86	77 - 135	
1,1,2-Trichlorotrifluoroethane	50.0	37.7		ug/Kg		75	50 - 150	
Vinyl chloride	50.0	45.2		ug/Kg		90	43 - 145	
m-Xylene & p-Xylene	50.0	46.1		ug/Kg		92	77 - 135	
o-Xylene	50.0	46.6		ug/Kg		93	75 - 135	
Tetrachloroethene	50.0	48.3		ug/Kg		97	76 - 135	
1,2-Dichlorobenzene	50.0	44.1		ug/Kg		88	73 - 135	
1,3-Dichlorobenzene	50.0	46.0		ug/Kg		92	69 - 135	
1,4-Dichlorobenzene	50.0	46.0		ug/Kg		92	73 - 135	
cis-1,2-Dichloroethene	50.0	44.3		ug/Kg		89	76 - 135	
cis-1,3-Dichloropropene	50.0	46.3		ug/Kg		93	71 - 135	
1,1-Dichloroethane	50.0	40.9		ug/Kg		82	70 - 135	
1,1-Dichloroethene	50.0	40.7		ug/Kg		81	79 - 135	
1,2-Dichloroethane	50.0	40.3		ug/Kg		81	69 - 135	
1,2-Dichloropropane	50.0	41.4		ug/Kg		83	72 - 121	
1,4-Dioxane	1000	772		ug/Kg		77	52 - 135	
Ethylbenzene	50.0	47.0		ug/Kg		94	73 - 125	
1,2-Dibromoethane	50.0	46.4		ug/Kg		93	76 - 135	
Trichlorofluoromethane	50.0	52.8		ug/Kg		106	48 - 150	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		58 - 140
Toluene-d8 (Surr)	99		80 - 126
4-Bromofluorobenzene (Surr)	96		76 - 127
Dibromofluoromethane (Surr)	100		75 - 121

Lab Sample ID: LCSD 280-499554/2-A
Matrix: Solid
Analysis Batch: 499557

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 499554

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Acetone	200	133		ug/Kg		66	65 - 150	8	28
2-Butanone (MEK)	200	147		ug/Kg		73	45 - 177	4	32
Benzene	50.0	46.8		ug/Kg		94	75 - 135	5	20
Chlorobenzene	50.0	48.3		ug/Kg		97	78 - 135	5	20
Carbon disulfide	50.0	37.3		ug/Kg		75	45 - 150	5	24
Carbon tetrachloride	50.0	46.2		ug/Kg		92	69 - 138	5	20
Cyclohexane	50.0	34.9		ug/Kg		70	50 - 150	6	30
1,2-Dibromo-3-Chloropropane	50.0	43.9		ug/Kg		88	66 - 150	4	28
Bromomethane	50.0	49.9		ug/Kg		100	52 - 135	3	22
Bromoform	50.0	46.5		ug/Kg		93	77 - 135	6	20
Chloroethane	50.0	46.1		ug/Kg		92	51 - 145	1	22
Chloroform	50.0	45.8		ug/Kg		92	73 - 123	5	20
Chlorobromomethane	50.0	46.5		ug/Kg		93	74 - 135	8	21
Dichlorobromomethane	50.0	45.8		ug/Kg		92	73 - 135	6	20
Chlorodibromomethane	50.0	47.0		ug/Kg		94	77 - 135	7	20
Isopropylbenzene	50.0	47.5		ug/Kg		95	74 - 137	6	20

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-499554/2-A
Matrix: Solid
Analysis Batch: 499557

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 499554

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Hexanone	200	142		ug/Kg		71	67 - 150	4	29
Chloromethane	50.0	36.2		ug/Kg		72	41 - 138	2	25
Dichlorodifluoromethane	50.0	44.2		ug/Kg		88	32 - 152	7	28
trans-1,2-Dichloroethene	50.0	44.5		ug/Kg		89	77 - 135	6	20
trans-1,3-Dichloropropene	50.0	46.7		ug/Kg		93	71 - 135	6	20
Methylene Chloride	50.0	44.5		ug/Kg		89	76 - 136	6	21
Methyl acetate	100	69.6		ug/Kg		70	50 - 150	6	30
Methyl tert-butyl ether	50.0	43.6		ug/Kg		87	71 - 141	6	20
4-Methyl-2-pentanone (MIBK)	200	151		ug/Kg		76	69 - 150	6	25
Methylcyclohexane	50.0	35.7		ug/Kg		71	50 - 150	6	30
Styrene	50.0	48.5		ug/Kg		97	76 - 135	5	20
1,1,1,2-Tetrachloroethane	50.0	41.5		ug/Kg		83	65 - 135	2	21
1,2,3-Trichlorobenzene	50.0	51.2		ug/Kg		102	62 - 135	3	31
1,2,4-Trichlorobenzene	50.0	51.0		ug/Kg		102	65 - 135	3	26
Toluene	50.0	46.5		ug/Kg		93	77 - 122	5	20
1,1,1-Trichloroethane	50.0	45.0		ug/Kg		90	70 - 135	5	20
1,1,2-Trichloroethane	50.0	44.0		ug/Kg		88	78 - 135	5	20
Trichloroethene	50.0	46.1		ug/Kg		92	77 - 135	7	20
1,1,2-Trichlorotrifluoroethane	50.0	40.8		ug/Kg		82	50 - 150	8	20
Vinyl chloride	50.0	43.7		ug/Kg		87	43 - 145	4	24
m-Xylene & p-Xylene	50.0	49.1		ug/Kg		98	77 - 135	6	20
o-Xylene	50.0	48.9		ug/Kg		98	75 - 135	5	20
Tetrachloroethene	50.0	51.4		ug/Kg		103	76 - 135	6	20
1,2-Dichlorobenzene	50.0	46.6		ug/Kg		93	73 - 135	6	20
1,3-Dichlorobenzene	50.0	47.9		ug/Kg		96	69 - 135	4	20
1,4-Dichlorobenzene	50.0	47.4		ug/Kg		95	73 - 135	3	22
cis-1,2-Dichloroethene	50.0	47.4		ug/Kg		95	76 - 135	7	20
cis-1,3-Dichloropropene	50.0	48.8		ug/Kg		98	71 - 135	5	20
1,1-Dichloroethane	50.0	43.7		ug/Kg		87	70 - 135	7	20
1,1-Dichloroethene	50.0	43.1		ug/Kg		86	79 - 135	6	20
1,2-Dichloroethane	50.0	42.7		ug/Kg		85	69 - 135	6	20
1,2-Dichloropropane	50.0	44.3		ug/Kg		89	72 - 121	7	20
1,4-Dioxane	1000	832		ug/Kg		83	52 - 135	8	30
Ethylbenzene	50.0	48.8		ug/Kg		98	73 - 125	4	20
1,2-Dibromoethane	50.0	48.6		ug/Kg		97	76 - 135	5	20
Trichlorofluoromethane	50.0	49.4		ug/Kg		99	48 - 150	7	33

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	101		58 - 140
Toluene-d8 (Surr)	100		80 - 126
4-Bromofluorobenzene (Surr)	95		76 - 127
Dibromofluoromethane (Surr)	102		75 - 121

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-500231/10
Matrix: Water
Analysis Batch: 500231

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		10	1.9	ug/L			06/26/20 09:56	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			06/26/20 09:56	1
Benzene	ND		1.0	0.16	ug/L			06/26/20 09:56	1
Chlorobenzene	ND		1.0	0.17	ug/L			06/26/20 09:56	1
Carbon disulfide	ND		2.0	0.17	ug/L			06/26/20 09:56	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			06/26/20 09:56	1
Cyclohexane	ND		2.0	0.28	ug/L			06/26/20 09:56	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			06/26/20 09:56	1
Bromomethane	ND		2.0	0.21	ug/L			06/26/20 09:56	1
Bromoform	ND		1.0	0.46	ug/L			06/26/20 09:56	1
Chloroethane	ND		2.0	0.41	ug/L			06/26/20 09:56	1
Chloroform	ND		1.0	0.16	ug/L			06/26/20 09:56	1
Chlorobromomethane	ND		1.0	0.10	ug/L			06/26/20 09:56	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			06/26/20 09:56	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			06/26/20 09:56	1
Isopropylbenzene	ND		1.0	0.19	ug/L			06/26/20 09:56	1
2-Hexanone	ND		5.0	1.7	ug/L			06/26/20 09:56	1
Chloromethane	ND		2.0	0.30	ug/L			06/26/20 09:56	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			06/26/20 09:56	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/26/20 09:56	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			06/26/20 09:56	1
Methylene Chloride	ND		2.0	0.94	ug/L			06/26/20 09:56	1
Methyl acetate	ND		5.0	1.6	ug/L			06/26/20 09:56	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			06/26/20 09:56	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			06/26/20 09:56	1
Methylcyclohexane	ND		1.0	0.10	ug/L			06/26/20 09:56	1
Styrene	ND		1.0	0.36	ug/L			06/26/20 09:56	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			06/26/20 09:56	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			06/26/20 09:56	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			06/26/20 09:56	1
Toluene	ND		1.0	0.17	ug/L			06/26/20 09:56	1
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			06/26/20 09:56	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			06/26/20 09:56	1
Trichloroethene	ND		1.0	0.16	ug/L			06/26/20 09:56	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			06/26/20 09:56	1
Vinyl chloride	ND		1.0	0.10	ug/L			06/26/20 09:56	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			06/26/20 09:56	1
o-Xylene	ND		1.0	0.19	ug/L			06/26/20 09:56	1
Tetrachloroethene	ND		1.0	0.20	ug/L			06/26/20 09:56	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			06/26/20 09:56	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			06/26/20 09:56	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			06/26/20 09:56	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			06/26/20 09:56	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			06/26/20 09:56	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/26/20 09:56	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			06/26/20 09:56	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			06/26/20 09:56	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/26/20 09:56	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-500231/10
Matrix: Water
Analysis Batch: 500231

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		200	19	ug/L			06/26/20 09:56	1
Ethylbenzene	ND		1.0	0.16	ug/L			06/26/20 09:56	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			06/26/20 09:56	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			06/26/20 09:56	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		70 - 127		06/26/20 09:56	1
Toluene-d8 (Surr)	99		80 - 125		06/26/20 09:56	1
4-Bromofluorobenzene (Surr)	96		78 - 120		06/26/20 09:56	1
Dibromofluoromethane (Surr)	100		77 - 120		06/26/20 09:56	1

Lab Sample ID: LCS 280-500231/5
Matrix: Water
Analysis Batch: 500231

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	83.6		ug/L		84	39 - 156
2-Butanone (MEK)	100	92.2		ug/L		92	44 - 177
Benzene	25.0	21.8		ug/L		87	65 - 135
Chlorobenzene	25.0	23.1		ug/L		92	65 - 135
Carbon disulfide	25.0	22.3		ug/L		89	55 - 143
Carbon tetrachloride	25.0	21.7		ug/L		87	65 - 135
Cyclohexane	25.0	21.7		ug/L		87	62 - 135
1,2-Dibromo-3-Chloropropane	25.0	21.3		ug/L		85	57 - 135
Bromomethane	25.0	20.6		ug/L		82	45 - 135
Bromoform	25.0	20.8		ug/L		83	62 - 135
Chloroethane	25.0	22.1		ug/L		88	46 - 136
Chloroform	25.0	22.1		ug/L		89	65 - 135
Chlorobromomethane	25.0	24.9		ug/L		99	65 - 135
Dichlorobromomethane	25.0	24.0		ug/L		96	65 - 135
Chlorodibromomethane	25.0	21.2		ug/L		85	65 - 135
Isopropylbenzene	25.0	22.1		ug/L		89	65 - 135
2-Hexanone	100	84.7		ug/L		85	57 - 139
Chloromethane	25.0	18.7		ug/L		75	34 - 145
Dichlorodifluoromethane	25.0	16.2		ug/L		65	43 - 142
trans-1,2-Dichloroethene	25.0	23.6		ug/L		94	65 - 135
trans-1,3-Dichloropropene	25.0	20.1		ug/L		81	65 - 135
Methylene Chloride	25.0	23.0		ug/L		92	54 - 141
Methyl acetate	50.0	45.5		ug/L		91	52 - 135
Methyl tert-butyl ether	25.0	22.5		ug/L		90	54 - 135
4-Methyl-2-pentanone (MIBK)	100	81.7		ug/L		82	60 - 150
Methylcyclohexane	25.0	20.9		ug/L		84	63 - 135
Styrene	25.0	24.1		ug/L		96	65 - 135
1,1,2,2-Tetrachloroethane	25.0	21.6		ug/L		86	58 - 135
1,2,3-Trichlorobenzene	25.0	22.5		ug/L		90	60 - 135
1,2,4-Trichlorobenzene	25.0	21.2		ug/L		85	58 - 135
Toluene	25.0	21.8		ug/L		87	65 - 135
1,1,1-Trichloroethane	25.0	19.8		ug/L		79	65 - 135

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-500231/5
Matrix: Water
Analysis Batch: 500231

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloroethane	25.0	24.9		ug/L		100	64 - 135
Trichloroethene	25.0	22.5		ug/L		90	65 - 135
1,1,2-Trichlorotrifluoroethane	25.0	23.4		ug/L		94	65 - 140
Vinyl chloride	25.0	20.0		ug/L		80	40 - 137
m-Xylene & p-Xylene	25.0	21.1		ug/L		84	65 - 135
o-Xylene	25.0	21.3		ug/L		85	65 - 135
Tetrachloroethene	25.0	20.7		ug/L		83	65 - 135
1,2-Dichlorobenzene	25.0	23.2		ug/L		93	65 - 135
1,3-Dichlorobenzene	25.0	23.1		ug/L		92	65 - 135
1,4-Dichlorobenzene	25.0	23.4		ug/L		94	65 - 135
cis-1,2-Dichloroethene	25.0	23.5		ug/L		94	65 - 135
cis-1,3-Dichloropropene	25.0	21.6		ug/L		87	65 - 135
1,1-Dichloroethane	25.0	21.9		ug/L		88	65 - 135
1,1-Dichloroethene	25.0	23.2		ug/L		93	65 - 136
1,2-Dichloroethane	25.0	23.9		ug/L		96	65 - 135
1,2-Dichloropropane	25.0	21.9		ug/L		88	64 - 135
1,4-Dioxane	500	454		ug/L		91	31 - 147
Ethylbenzene	25.0	24.3		ug/L		97	65 - 135
1,2-Dibromoethane	25.0	22.3		ug/L		89	65 - 135
Trichlorofluoromethane	25.0	21.0		ug/L		84	53 - 137

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	96		70 - 127
Toluene-d8 (Surr)	97		80 - 125
4-Bromofluorobenzene (Surr)	98		78 - 120
Dibromofluoromethane (Surr)	100		77 - 120

Lab Sample ID: LCSD 280-500231/6
Matrix: Water
Analysis Batch: 500231

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	100	92.4		ug/L		92	39 - 156	10	23
2-Butanone (MEK)	100	102		ug/L		102	44 - 177	10	32
Benzene	25.0	24.7		ug/L		99	65 - 135	12	20
Chlorobenzene	25.0	25.2		ug/L		101	65 - 135	9	20
Carbon disulfide	25.0	25.5		ug/L		102	55 - 143	13	20
Carbon tetrachloride	25.0	25.2		ug/L		101	65 - 135	15	21
Cyclohexane	25.0	26.2		ug/L		105	62 - 135	19	20
1,2-Dibromo-3-Chloropropane	25.0	22.7		ug/L		91	57 - 135	7	22
Bromomethane	25.0	21.6		ug/L		86	45 - 135	5	33
Bromoform	25.0	22.5		ug/L		90	62 - 135	8	27
Chloroethane	25.0	23.8		ug/L		95	46 - 136	8	25
Chloroform	25.0	25.1		ug/L		101	65 - 135	13	20
Chlorobromomethane	25.0	25.7		ug/L		103	65 - 135	3	29
Dichlorobromomethane	25.0	26.6		ug/L		106	65 - 135	10	20
Chlorodibromomethane	25.0	22.9		ug/L		92	65 - 135	8	20
Isopropylbenzene	25.0	25.4		ug/L		102	65 - 135	14	20

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-500231/6
Matrix: Water
Analysis Batch: 500231

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Hexanone	100	97.2		ug/L		97	57 - 139	14	25
Chloromethane	25.0	19.8		ug/L		79	34 - 145	6	24
Dichlorodifluoromethane	25.0	18.0		ug/L		72	43 - 142	11	30
trans-1,2-Dichloroethene	25.0	26.6		ug/L		106	65 - 135	12	24
trans-1,3-Dichloropropene	25.0	21.1		ug/L		84	65 - 135	5	26
Methylene Chloride	25.0	25.7		ug/L		103	54 - 141	11	26
Methyl acetate	50.0	49.5		ug/L		99	52 - 135	8	27
Methyl tert-butyl ether	25.0	24.2		ug/L		97	54 - 135	7	21
4-Methyl-2-pentanone (MIBK)	100	91.8		ug/L		92	60 - 150	12	22
Methylcyclohexane	25.0	25.1		ug/L		100	63 - 135	18	20
Styrene	25.0	26.7		ug/L		107	65 - 135	10	26
1,1,2,2-Tetrachloroethane	25.0	23.7		ug/L		95	58 - 135	9	20
1,2,3-Trichlorobenzene	25.0	25.6		ug/L		102	60 - 135	13	36
1,2,4-Trichlorobenzene	25.0	23.2		ug/L		93	58 - 135	9	25
Toluene	25.0	25.6		ug/L		102	65 - 135	16	20
1,1,1-Trichloroethane	25.0	23.5		ug/L		94	65 - 135	17	20
1,1,2-Trichloroethane	25.0	26.9		ug/L		108	64 - 135	8	27
Trichloroethene	25.0	25.5		ug/L		102	65 - 135	12	20
1,1,2-Trichlorotrifluoroethane	25.0	26.9		ug/L		108	65 - 140	14	20
Vinyl chloride	25.0	22.0		ug/L		88	40 - 137	9	24
m-Xylene & p-Xylene	25.0	23.4		ug/L		93	65 - 135	10	20
o-Xylene	25.0	23.6		ug/L		94	65 - 135	11	20
Tetrachloroethene	25.0	24.7		ug/L		99	65 - 135	18	20
1,2-Dichlorobenzene	25.0	25.7		ug/L		103	65 - 135	10	20
1,3-Dichlorobenzene	25.0	26.2		ug/L		105	65 - 135	13	20
1,4-Dichlorobenzene	25.0	25.4		ug/L		101	65 - 135	8	23
cis-1,2-Dichloroethene	25.0	27.4		ug/L		110	65 - 135	15	20
cis-1,3-Dichloropropene	25.0	23.3		ug/L		93	65 - 135	7	26
1,1-Dichloroethane	25.0	25.2		ug/L		101	65 - 135	14	21
1,1-Dichloroethene	25.0	27.2		ug/L		109	65 - 136	16	20
1,2-Dichloroethane	25.0	25.2		ug/L		101	65 - 135	6	20
1,2-Dichloropropane	25.0	24.2		ug/L		97	64 - 135	10	20
1,4-Dioxane	500	546		ug/L		109	31 - 147	18	30
Ethylbenzene	25.0	27.2		ug/L		109	65 - 135	11	20
1,2-Dibromoethane	25.0	24.2		ug/L		97	65 - 135	8	27
Trichlorofluoromethane	25.0	24.7		ug/L		99	53 - 137	16	27

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	98		70 - 127
Toluene-d8 (Surr)	98		80 - 125
4-Bromofluorobenzene (Surr)	97		78 - 120
Dibromofluoromethane (Surr)	101		77 - 120

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-499759/1-A
Matrix: Water
Analysis Batch: 501084

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499759

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1'-Biphenyl	ND		10	1.8	ug/L		06/23/20 11:27	07/03/20 23:42	1
1,2,4,5-Tetrachlorobenzene	ND		10	1.7	ug/L		06/23/20 11:27	07/03/20 23:42	1
1,2,4-Trichlorobenzene	ND		4.0	0.59	ug/L		06/23/20 11:27	07/03/20 23:42	1
1,2-Dichlorobenzene	ND		4.0	0.23	ug/L		06/23/20 11:27	07/03/20 23:42	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		10	0.23	ug/L		06/23/20 11:27	07/03/20 23:42	1
1,3-Dichlorobenzene	ND		10	0.30	ug/L		06/23/20 11:27	07/03/20 23:42	1
1,3-Dinitrobenzene	ND		10	2.0	ug/L		06/23/20 11:27	07/03/20 23:42	1
1,4-Dichlorobenzene	ND		4.0	1.3	ug/L		06/23/20 11:27	07/03/20 23:42	1
1,4-Dioxane	ND		20	0.45	ug/L		06/23/20 11:27	07/03/20 23:42	1
1-Methylnaphthalene	ND		4.0	0.23	ug/L		06/23/20 11:27	07/03/20 23:42	1
2,2'-oxybis[1-chloropropane]	ND		10	0.28	ug/L		06/23/20 11:27	07/03/20 23:42	1
2,3,4,6-Tetrachlorophenol	ND		50	2.0	ug/L		06/23/20 11:27	07/03/20 23:42	1
2,4,5-Trichlorophenol	ND		10	2.1	ug/L		06/23/20 11:27	07/03/20 23:42	1
2,4,6-Trichlorophenol	ND		10	0.29	ug/L		06/23/20 11:27	07/03/20 23:42	1
2,4-Dichlorophenol	ND		10	0.64	ug/L		06/23/20 11:27	07/03/20 23:42	1
2,4-Dimethylphenol	ND		10	0.58	ug/L		06/23/20 11:27	07/03/20 23:42	1
2,4-Dinitrophenol	ND		30	10	ug/L		06/23/20 11:27	07/03/20 23:42	1
2,4-Dinitrotoluene	ND		10	1.7	ug/L		06/23/20 11:27	07/03/20 23:42	1
2,6-Dichlorophenol	ND		10	1.4	ug/L		06/23/20 11:27	07/03/20 23:42	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		06/23/20 11:27	07/03/20 23:42	1
2-Chloronaphthalene	ND		4.0	0.26	ug/L		06/23/20 11:27	07/03/20 23:42	1
2-Chlorophenol	ND		10	2.0	ug/L		06/23/20 11:27	07/03/20 23:42	1
2-Methylnaphthalene	ND		4.0	1.5	ug/L		06/23/20 11:27	07/03/20 23:42	1
2-Methylphenol	ND		10	0.98	ug/L		06/23/20 11:27	07/03/20 23:42	1
2-Nitroaniline	ND		10	1.7	ug/L		06/23/20 11:27	07/03/20 23:42	1
2-Nitrophenol	ND		10	0.39	ug/L		06/23/20 11:27	07/03/20 23:42	1
3 & 4 Methylphenol	ND		10	0.25	ug/L		06/23/20 11:27	07/03/20 23:42	1
3,3'-Dichlorobenzidine	ND		50	2.0	ug/L		06/23/20 11:27	07/03/20 23:42	1
3-Methylphenol	ND		10	0.25	ug/L		06/23/20 11:27	07/03/20 23:42	1
3-Nitroaniline	ND		10	2.0	ug/L		06/23/20 11:27	07/03/20 23:42	1
4,6-Dinitro-2-methylphenol	ND		50	4.0	ug/L		06/23/20 11:27	07/03/20 23:42	1
4-Bromophenyl phenyl ether	ND		10	0.43	ug/L		06/23/20 11:27	07/03/20 23:42	1
4-Chloro-3-methylphenol	ND		10	2.4	ug/L		06/23/20 11:27	07/03/20 23:42	1
4-Chloroaniline	ND		10	2.1	ug/L		06/23/20 11:27	07/03/20 23:42	1
4-Chlorophenyl phenyl ether	ND		10	1.7	ug/L		06/23/20 11:27	07/03/20 23:42	1
4-Methylphenol	ND		10	0.25	ug/L		06/23/20 11:27	07/03/20 23:42	1
4-Nitroaniline	ND		10	2.0	ug/L		06/23/20 11:27	07/03/20 23:42	1
4-Nitrophenol	ND		10	1.2	ug/L		06/23/20 11:27	07/03/20 23:42	1
Acenaphthene	ND		4.0	0.28	ug/L		06/23/20 11:27	07/03/20 23:42	1
Acenaphthylene	ND		4.0	0.49	ug/L		06/23/20 11:27	07/03/20 23:42	1
Acetophenone	ND		10	0.24	ug/L		06/23/20 11:27	07/03/20 23:42	1
Aniline	ND		10	2.0	ug/L		06/23/20 11:27	07/03/20 23:42	1
Anthracene	ND		4.0	0.42	ug/L		06/23/20 11:27	07/03/20 23:42	1
Azobenzene	ND		4.0	0.23	ug/L		06/23/20 11:27	07/03/20 23:42	1
Benzaldehyde	ND		5.0	2.0	ug/L		06/23/20 11:27	07/03/20 23:42	1
Benzidine	ND		100	50	ug/L		06/23/20 11:27	07/03/20 23:42	1
Benzo[a]anthracene	ND		4.0	0.35	ug/L		06/23/20 11:27	07/03/20 23:42	1
Benzo[a]pyrene	ND		4.0	0.31	ug/L		06/23/20 11:27	07/03/20 23:42	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-499759/1-A
Matrix: Water
Analysis Batch: 501084

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499759

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND		4.0	0.53	ug/L		06/23/20 11:27	07/03/20 23:42	1
Benzo[g,h,i]perylene	ND		4.0	0.50	ug/L		06/23/20 11:27	07/03/20 23:42	1
Benzo[k]fluoranthene	ND		4.0	0.46	ug/L		06/23/20 11:27	07/03/20 23:42	1
Benzoic acid	ND		25	10	ug/L		06/23/20 11:27	07/03/20 23:42	1
Benzyl alcohol	ND		10	0.23	ug/L		06/23/20 11:27	07/03/20 23:42	1
Bis(2-chloroethoxy)methane	ND		10	0.97	ug/L		06/23/20 11:27	07/03/20 23:42	1
Bis(2-chloroethyl)ether	ND		10	0.83	ug/L		06/23/20 11:27	07/03/20 23:42	1
Bis(2-ethylhexyl) phthalate	ND		10	0.56	ug/L		06/23/20 11:27	07/03/20 23:42	1
Butyl benzyl phthalate	ND		4.0	1.0	ug/L		06/23/20 11:27	07/03/20 23:42	1
Caprolactam	ND		5.0	2.5	ug/L		06/23/20 11:27	07/03/20 23:42	1
Carbazole	ND		4.0	0.43	ug/L		06/23/20 11:27	07/03/20 23:42	1
Chrysene	ND		4.0	0.54	ug/L		06/23/20 11:27	07/03/20 23:42	1
Dibenz(a,h)anthracene	ND		4.0	0.51	ug/L		06/23/20 11:27	07/03/20 23:42	1
Dibenzofuran	ND		4.0	0.29	ug/L		06/23/20 11:27	07/03/20 23:42	1
Diethyl phthalate	ND		4.0	0.38	ug/L		06/23/20 11:27	07/03/20 23:42	1
Dimethyl phthalate	ND		4.0	0.21	ug/L		06/23/20 11:27	07/03/20 23:42	1
Di-n-butyl phthalate	ND		4.0	1.2	ug/L		06/23/20 11:27	07/03/20 23:42	1
Di-n-octyl phthalate	ND		4.0	0.35	ug/L		06/23/20 11:27	07/03/20 23:42	1
Diphenylamine	ND		10	1.1	ug/L		06/23/20 11:27	07/03/20 23:42	1
Famphur	ND		100	1.5	ug/L		06/23/20 11:27	07/03/20 23:42	1
Fluoranthene	ND		4.0	0.20	ug/L		06/23/20 11:27	07/03/20 23:42	1
Fluorene	ND		4.0	0.31	ug/L		06/23/20 11:27	07/03/20 23:42	1
Hexachlorobenzene	ND		10	0.66	ug/L		06/23/20 11:27	07/03/20 23:42	1
Hexachlorobutadiene	ND		10	3.3	ug/L		06/23/20 11:27	07/03/20 23:42	1
Hexachlorocyclopentadiene	ND		50	3.1	ug/L		06/23/20 11:27	07/03/20 23:42	1
Hexachloroethane	ND		10	0.98	ug/L		06/23/20 11:27	07/03/20 23:42	1
Hexadecane	ND		10	0.54	ug/L		06/23/20 11:27	07/03/20 23:42	1
Indeno[1,2,3-cd]pyrene	ND		4.0	0.65	ug/L		06/23/20 11:27	07/03/20 23:42	1
Isophorone	ND		10	0.21	ug/L		06/23/20 11:27	07/03/20 23:42	1
Naphthalene	ND		4.0	0.29	ug/L		06/23/20 11:27	07/03/20 23:42	1
Nitrobenzene	ND		10	0.81	ug/L		06/23/20 11:27	07/03/20 23:42	1
N-Nitrosodimethylamine	ND		10	0.29	ug/L		06/23/20 11:27	07/03/20 23:42	1
N-Nitrosodi-n-propylamine	ND		10	0.35	ug/L		06/23/20 11:27	07/03/20 23:42	1
N-Nitrosodiphenylamine	ND		10	0.44	ug/L		06/23/20 11:27	07/03/20 23:42	1
Pentachlorophenol	ND		50	20	ug/L		06/23/20 11:27	07/03/20 23:42	1
Phenanthrene	ND		4.0	0.26	ug/L		06/23/20 11:27	07/03/20 23:42	1
Phenol	ND		10	2.0	ug/L		06/23/20 11:27	07/03/20 23:42	1
Pyrene	ND		10	0.37	ug/L		06/23/20 11:27	07/03/20 23:42	1
Pyridine	ND		20	1.7	ug/L		06/23/20 11:27	07/03/20 23:42	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	71		42 - 131	06/23/20 11:27	07/03/20 23:42	1
2-Fluorobiphenyl	57		48 - 120	06/23/20 11:27	07/03/20 23:42	1
2-Fluorophenol (Surr)	74		41 - 120	06/23/20 11:27	07/03/20 23:42	1
Nitrobenzene-d5 (Surr)	81		42 - 120	06/23/20 11:27	07/03/20 23:42	1
Phenol-d5 (Surr)	81		45 - 124	06/23/20 11:27	07/03/20 23:42	1
Terphenyl-d14 (Surr)	93		20 - 130	06/23/20 11:27	07/03/20 23:42	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-499759/2-A
Matrix: Water
Analysis Batch: 501084

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499759
%Rec. Limits

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1'-Biphenyl	80.0	62.2		ug/L		78	63 - 99
1,2,4,5-Tetrachlorobenzene	80.0	51.3		ug/L		64	57 - 100
1,2,4-Trichlorobenzene	80.0	46.8		ug/L		59	41 - 99
1,2-Dichlorobenzene	80.0	44.3		ug/L		55	37 - 97
1,2-Diphenylhydrazine(as Azobenzene)	80.9	82.6		ug/L		102	66 - 104
1,3-Dichlorobenzene	80.0	39.3		ug/L		49	34 - 96
1,3-Dinitrobenzene	80.0	78.3		ug/L		98	72 - 114
1,4-Dichlorobenzene	80.0	40.5		ug/L		51	35 - 96
1,4-Dioxane	80.0	47.4		ug/L		59	46 - 94
1-Methylnaphthalene	80.0	55.1		ug/L		69	56 - 102
2,2'-oxybis[1-chloropropane]	80.0	73.2		ug/L		91	52 - 108
2,3,4,6-Tetrachlorophenol	80.0	79.8		ug/L		100	71 - 111
2,4,5-Trichlorophenol	80.0	76.5		ug/L		96	70 - 109
2,4,6-Trichlorophenol	80.0	76.6		ug/L		96	71 - 113
2,4-Dichlorophenol	80.0	64.7		ug/L		81	65 - 109
2,4-Dimethylphenol	80.0	47.5		ug/L		59	46 - 100
2,4-Dinitrophenol	160	186	*	ug/L		116	60 - 110
2,4-Dinitrotoluene	80.0	92.0	*	ug/L		115	72 - 110
2,6-Dichlorophenol	80.0	61.5		ug/L		77	64 - 109
2,6-Dinitrotoluene	80.0	84.0		ug/L		105	70 - 109
2-Chloronaphthalene	80.0	62.9		ug/L		79	61 - 98
2-Chlorophenol	80.0	63.0		ug/L		79	59 - 107
2-Methylnaphthalene	80.0	54.3		ug/L		68	55 - 100
2-Methylphenol	80.0	62.2		ug/L		78	61 - 105
2-Nitroaniline	80.0	86.1		ug/L		108	65 - 110
2-Nitrophenol	80.0	67.0		ug/L		84	63 - 108
3 & 4 Methylphenol	80.0	67.5		ug/L		84	58 - 107
3,3'-Dichlorobenzidine	160	131		ug/L		82	39 - 105
3-Methylphenol	80.0	67.5		ug/L		84	58 - 107
3-Nitroaniline	80.0	74.7		ug/L		93	37 - 94
4,6-Dinitro-2-methylphenol	160	156		ug/L		97	67 - 109
4-Bromophenyl phenyl ether	80.0	71.0		ug/L		89	67 - 105
4-Chloro-3-methylphenol	80.0	71.5		ug/L		89	68 - 110
4-Chloroaniline	80.0	52.9		ug/L		66	34 - 97
4-Chlorophenyl phenyl ether	80.0	73.2		ug/L		91	69 - 100
4-Methylphenol	80.0	67.5		ug/L		84	58 - 107
4-Nitroaniline	80.0	83.3	*	ug/L		104	64 - 103
4-Nitrophenol	160	171		ug/L		107	60 - 120
Acenaphthene	80.0	68.0		ug/L		85	63 - 99
Acenaphthylene	80.0	68.2		ug/L		85	66 - 98
Acetophenone	80.0	70.6		ug/L		88	59 - 106
Aniline	80.0	49.2		ug/L		61	40 - 96
Anthracene	80.0	70.3		ug/L		88	65 - 105
Azobenzene	80.0	81.7		ug/L		102	66 - 104
Benzaldehyde	80.0	47.3		ug/L		59	10 - 89
Benzidine	160	65.0	J	ug/L		41	10 - 52
Benzo[a]anthracene	80.0	74.7		ug/L		93	68 - 104
Benzo[a]pyrene	80.0	67.7		ug/L		85	66 - 102

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-499759/2-A
Matrix: Water
Analysis Batch: 501084

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499759

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[b]fluoranthene	80.0	75.8		ug/L		95	67 - 107
Benzo[g,h,i]perylene	80.0	67.5		ug/L		84	65 - 106
Benzo[k]fluoranthene	80.0	75.3		ug/L		94	71 - 109
Benzoic acid	80.0	70.0		ug/L		88	29 - 120
Benzyl alcohol	80.0	72.5		ug/L		91	61 - 107
Bis(2-chloroethoxy)methane	80.0	65.4		ug/L		82	62 - 106
Bis(2-chloroethyl)ether	80.0	66.8		ug/L		84	59 - 110
Bis(2-ethylhexyl) phthalate	80.0	89.2	*	ug/L		112	65 - 106
Butyl benzyl phthalate	80.0	77.7		ug/L		97	66 - 107
Caprolactam	80.0	83.9		ug/L		105	60 - 107
Carbazole	80.0	75.4		ug/L		94	66 - 109
Chrysene	80.0	75.9		ug/L		95	70 - 105
Dibenz(a,h)anthracene	80.0	73.9		ug/L		92	64 - 106
Dibenzofuran	80.0	77.9		ug/L		97	68 - 99
Diethyl phthalate	80.0	84.4		ug/L		105	71 - 105
Dimethyl phthalate	80.0	75.4		ug/L		94	70 - 107
Di-n-butyl phthalate	80.0	86.1		ug/L		108	75 - 120
Di-n-octyl phthalate	80.0	90.3		ug/L		113	71 - 120
Diphenylamine	68.0	62.9		ug/L		93	67 - 103
Fluoranthene	80.0	75.8		ug/L		95	66 - 107
Fluorene	80.0	77.2		ug/L		96	67 - 100
Hexachlorobenzene	80.0	64.4		ug/L		80	66 - 106
Hexachlorobutadiene	80.0	35.1		ug/L		44	33 - 98
Hexachlorocyclopentadiene	160	29.6	J	ug/L		18	10 - 67
Hexachloroethane	80.0	38.7		ug/L		48	24 - 98
Hexadecane	80.0	89.8		ug/L		112	50 - 150
Indeno[1,2,3-cd]pyrene	80.0	79.2		ug/L		99	56 - 104
Isophorone	80.0	60.0		ug/L		75	59 - 102
Naphthalene	80.0	53.8		ug/L		67	39 - 120
Nitrobenzene	80.0	64.1		ug/L		80	58 - 108
N-Nitrosodimethylamine	80.0	59.6		ug/L		74	53 - 106
N-Nitrosodi-n-propylamine	80.0	76.2		ug/L		95	57 - 106
N-Nitrosodiphenylamine	80.0	72.0		ug/L		90	65 - 104
Pentachlorophenol	160	136		ug/L		85	55 - 109
Phenanthrene	80.0	72.9		ug/L		91	67 - 106
Phenol	80.0	60.6		ug/L		76	60 - 108
Pyrene	80.0	84.3		ug/L		105	69 - 105
Pyridine	160	103		ug/L		64	46 - 88

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	84		42 - 131
2-Fluorobiphenyl	74		48 - 120
2-Fluorophenol (Surr)	72		41 - 120
Nitrobenzene-d5 (Surr)	77		42 - 120
Phenol-d5 (Surr)	75		45 - 124
Terphenyl-d14 (Surr)	100		20 - 130

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-499759/3-A

Matrix: Water

Analysis Batch: 501084

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 499759

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit	
									%Rec.	RPD
1,1'-Biphenyl	80.0	64.4		ug/L		80	63 - 99	3		30
1,2,4,5-Tetrachlorobenzene	80.0	61.4		ug/L		77	57 - 100	18		30
1,2,4-Trichlorobenzene	80.0	51.4		ug/L		64	41 - 99	9		30
1,2-Dichlorobenzene	80.0	53.2		ug/L		67	37 - 97	18		30
1,2-Diphenylhydrazine(as Azobenzene)	80.9	84.3		ug/L		104	66 - 104	2		30
1,3-Dichlorobenzene	80.0	52.1		ug/L		65	34 - 96	28		30
1,3-Dinitrobenzene	80.0	75.8		ug/L		95	72 - 114	3		30
1,4-Dichlorobenzene	80.0	52.5		ug/L		66	35 - 96	26		30
1,4-Dioxane	80.0	55.1		ug/L		69	46 - 94	15		30
1-Methylnaphthalene	80.0	69.8		ug/L		87	56 - 102	24		30
2,2'-oxybis[1-chloropropane]	80.0	80.0		ug/L		100	52 - 108	9		30
2,3,4,6-Tetrachlorophenol	80.0	73.4		ug/L		92	71 - 111	8		30
2,4,5-Trichlorophenol	80.0	69.6		ug/L		87	70 - 109	10		30
2,4,6-Trichlorophenol	80.0	68.4		ug/L		86	71 - 113	11		30
2,4-Dichlorophenol	80.0	66.6		ug/L		83	65 - 109	3		30
2,4-Dimethylphenol	80.0	49.9		ug/L		62	46 - 100	5		30
2,4-Dinitrophenol	160	162		ug/L		101	60 - 110	14		30
2,4-Dinitrotoluene	80.0	80.5		ug/L		101	72 - 110	13		30
2,6-Dichlorophenol	80.0	73.1		ug/L		91	64 - 109	17		50
2,6-Dinitrotoluene	80.0	78.4		ug/L		98	70 - 109	7		30
2-Chloronaphthalene	80.0	64.8		ug/L		81	61 - 98	3		30
2-Chlorophenol	80.0	68.5		ug/L		86	59 - 107	8		30
2-Methylnaphthalene	80.0	66.5		ug/L		83	55 - 100	20		30
2-Methylphenol	80.0	66.7		ug/L		83	61 - 105	7		30
2-Nitroaniline	80.0	91.2	*	ug/L		114	65 - 110	6		30
2-Nitrophenol	80.0	73.1		ug/L		91	63 - 108	9		30
3 & 4 Methylphenol	80.0	70.0		ug/L		87	58 - 107	4		30
3,3'-Dichlorobenzidine	160	129		ug/L		81	39 - 105	1		30
3-Methylphenol	80.0	70.0		ug/L		87	58 - 107	4		30
3-Nitroaniline	80.0	69.9		ug/L		87	37 - 94	7		30
4,6-Dinitro-2-methylphenol	160	156		ug/L		97	67 - 109	0		30
4-Bromophenyl phenyl ether	80.0	69.7		ug/L		87	67 - 105	2		30
4-Chloro-3-methylphenol	80.0	80.6		ug/L		101	68 - 110	12		30
4-Chloroaniline	80.0	62.5		ug/L		78	34 - 97	17		30
4-Chlorophenyl phenyl ether	80.0	68.8		ug/L		86	69 - 100	6		30
4-Methylphenol	80.0	70.0		ug/L		87	58 - 107	4		30
4-Nitroaniline	80.0	79.9		ug/L		100	64 - 103	4		30
4-Nitrophenol	160	149		ug/L		93	60 - 120	14		30
Acenaphthene	80.0	70.5		ug/L		88	63 - 99	4		30
Acenaphthylene	80.0	68.5		ug/L		86	66 - 98	1		30
Acetophenone	80.0	68.1		ug/L		85	59 - 106	3		30
Aniline	80.0	53.8		ug/L		67	40 - 96	9		30
Anthracene	80.0	74.0		ug/L		92	65 - 105	5		30
Azobenzene	80.0	83.4		ug/L		104	66 - 104	2		30
Benzaldehyde	80.0	47.5		ug/L		59	10 - 89	0		50
Benzidine	160	61.3	J	ug/L		38	10 - 52	6		50
Benzo[a]anthracene	80.0	74.4		ug/L		93	68 - 104	0		30
Benzo[a]pyrene	80.0	71.7		ug/L		90	66 - 102	6		30

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-499759/3-A
Matrix: Water
Analysis Batch: 501084

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 499759

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[b]fluoranthene	80.0	72.7		ug/L		91	67 - 107	4	30
Benzo[g,h,i]perylene	80.0	67.5		ug/L		84	65 - 106	0	30
Benzo[k]fluoranthene	80.0	73.1		ug/L		91	71 - 109	3	30
Benzoic acid	80.0	58.7		ug/L		73	29 - 120	18	30
Benzyl alcohol	80.0	71.7		ug/L		90	61 - 107	1	30
Bis(2-chloroethoxy)methane	80.0	74.8		ug/L		93	62 - 106	13	30
Bis(2-chloroethyl)ether	80.0	72.0		ug/L		90	59 - 110	7	30
Bis(2-ethylhexyl) phthalate	80.0	90.4	*	ug/L		113	65 - 106	1	30
Butyl benzyl phthalate	80.0	86.9	*	ug/L		109	66 - 107	11	30
Caprolactam	80.0	105	*	ug/L		131	60 - 107	22	30
Carbazole	80.0	76.6		ug/L		96	66 - 109	2	30
Chrysene	80.0	77.0		ug/L		96	70 - 105	1	30
Dibenz(a,h)anthracene	80.0	70.0		ug/L		88	64 - 106	5	30
Dibenzofuran	80.0	68.7		ug/L		86	68 - 99	13	30
Diethyl phthalate	80.0	76.3		ug/L		95	71 - 105	10	30
Dimethyl phthalate	80.0	74.0		ug/L		93	70 - 107	2	30
Di-n-butyl phthalate	80.0	78.9		ug/L		99	75 - 120	9	30
Di-n-octyl phthalate	80.0	83.0		ug/L		104	71 - 120	8	30
Diphenylamine	68.0	61.6		ug/L		91	67 - 103	2	50
Fluoranthene	80.0	74.7		ug/L		93	66 - 107	2	30
Fluorene	80.0	73.3		ug/L		92	67 - 100	5	30
Hexachlorobenzene	80.0	64.8		ug/L		81	66 - 106	1	30
Hexachlorobutadiene	80.0	50.5	*1	ug/L		63	33 - 98	36	30
Hexachlorocyclopentadiene	160	29.3	J	ug/L		18	10 - 67	1	50
Hexachloroethane	80.0	50.0		ug/L		63	24 - 98	26	30
Hexadecane	80.0	88.5		ug/L		111	50 - 150	1	30
Indeno[1,2,3-cd]pyrene	80.0	75.7		ug/L		95	56 - 104	4	30
Isophorone	80.0	66.1		ug/L		83	59 - 102	10	30
Naphthalene	80.0	65.6		ug/L		82	39 - 120	20	30
Nitrobenzene	80.0	70.8		ug/L		88	58 - 108	10	30
N-Nitrosodimethylamine	80.0	70.2		ug/L		88	53 - 106	16	34
N-Nitrosodi-n-propylamine	80.0	73.9		ug/L		92	57 - 106	3	30
N-Nitrosodiphenylamine	80.0	74.0		ug/L		93	65 - 104	3	30
Pentachlorophenol	160	130		ug/L		81	55 - 109	5	30
Phenanthrene	80.0	73.1		ug/L		91	67 - 106	0	30
Phenol	80.0	64.2		ug/L		80	60 - 108	6	30
Pyrene	80.0	83.2		ug/L		104	69 - 105	1	30
Pyridine	160	123		ug/L		77	46 - 88	17	41

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2,4,6-Tribromophenol (Surr)	77		42 - 131
2-Fluorobiphenyl	77		48 - 120
2-Fluorophenol (Surr)	78		41 - 120
Nitrobenzene-d5 (Surr)	92		42 - 120
Phenol-d5 (Surr)	82		45 - 124
Terphenyl-d14 (Surr)	104		20 - 130

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-500214/1-A
Matrix: Solid
Analysis Batch: 501478

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 500214

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		320	23	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
1,2,4,5-Tetrachlorobenzene	ND		320	48	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
1,2,4-Trichlorobenzene	ND		320	27	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
1,2-Dichlorobenzene	ND		320	21	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		320	21	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
1,3-Dichlorobenzene	ND		320	12	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
1,3-Dinitrobenzene	ND		320	69	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
1,4-Dichlorobenzene	ND		320	13	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
1,4-Dioxane	ND		640	64	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
1-Methylnaphthalene	ND		320	11	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
2,2'-oxybis[1-chloropropane]	ND		320	22	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
2,3,4,6-Tetrachlorophenol	ND		1600	130	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
2,4,5-Trichlorophenol	ND		320	9.7	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
2,4,6-Trichlorophenol	ND		320	9.7	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
2,4-Dichlorophenol	ND		320	9.7	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
2,4-Dimethylphenol	ND		320	64	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
2,4-Dinitrophenol	ND		1600	320	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
2,4-Dinitrotoluene	ND		320	64	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
2,6-Dichlorophenol	ND		320	22	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
2,6-Dinitrotoluene	ND		320	27	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
2-Chloronaphthalene	ND		320	9.7	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
2-Chlorophenol	ND		320	20	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
2-Methylnaphthalene	ND		320	19	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
2-Methylphenol	ND		320	13	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
2-Nitroaniline	ND		1600	49	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
2-Nitrophenol	ND		320	9.7	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
3 & 4 Methylphenol	ND		320	32	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
3,3'-Dichlorobenzidine	ND		640	88	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
3-Methylphenol	ND		320	32	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
3-Nitroaniline	ND		1600	71	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
4,6-Dinitro-2-methylphenol	ND		1600	320	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
4-Bromophenyl phenyl ether	ND		320	19	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
4-Chloro-3-methylphenol	ND		320	24	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
4-Chloroaniline	ND		320	80	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
4-Chlorophenyl phenyl ether	ND		320	20	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
4-Methylphenol	ND		320	32	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
4-Nitroaniline	ND		1600	71	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
4-Nitrophenol	ND		1600	94	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Acenaphthene	ND		320	10	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Acenaphthylene	ND		320	80	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Acetophenone	ND		320	19	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Aniline	ND		320	130	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Anthracene	ND		320	17	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Azobenzene	ND		320	21	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Benzaldehyde	ND		320	65	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Benzidine	ND		3200	960	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Benzo[a]anthracene	ND		320	19	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Benzo[a]pyrene	ND		320	19	ug/Kg		06/26/20 06:45	07/08/20 17:06	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-500214/1-A
Matrix: Solid
Analysis Batch: 501478

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 500214

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND		320	26	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Benzo[g,h,i]perylene	ND		320	16	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Benzo[k]fluoranthene	ND		320	39	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Benzoic acid	ND		1600	320	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Benzyl alcohol	ND		320	9.7	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Bis(2-chloroethoxy)methane	ND		320	22	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Bis(2-chloroethyl)ether	ND		320	16	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Bis(2-ethylhexyl) phthalate	ND		320	45	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Butyl benzyl phthalate	ND		320	42	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Caprolactam	ND		320	100	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Carbazole	ND		320	35	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Chrysene	ND		320	26	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Dibenz(a,h)anthracene	ND		320	19	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Dibenzofuran	ND		320	19	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Diethyl phthalate	ND		640	25	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Dimethyl phthalate	ND		320	22	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Di-n-butyl phthalate	ND		320	28	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Di-n-octyl phthalate	ND		320	39	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Diphenylamine	ND		320	43	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Famphur	ND		640	33	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Fluoranthene	ND		320	35	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Fluorene	ND		320	18	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Hexachlorobenzene	ND		320	28	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Hexachlorobutadiene	ND		320	9.7	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Hexachlorocyclopentadiene	ND		1600	110	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Hexachloroethane	ND		320	21	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Hexadecane	ND		320	13	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Indeno[1,2,3-cd]pyrene	ND		320	21	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Isophorone	ND		320	17	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Naphthalene	ND		320	30	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Nitrobenzene	ND		320	21	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
N-Nitrosodimethylamine	ND		320	36	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
N-Nitrosodi-n-propylamine	ND		320	66	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
N-Nitrosodiphenylamine	ND		320	20	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Pentachlorophenol	ND		1600	320	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Phenanthrene	ND		320	17	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Phenol	ND		320	18	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Pyrene	ND		320	12	ug/Kg		06/26/20 06:45	07/08/20 17:06	1
Pyridine	ND		640	39	ug/Kg		06/26/20 06:45	07/08/20 17:06	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	68		35 - 120	06/26/20 06:45	07/08/20 17:06	1
2-Fluorobiphenyl	65		46 - 120	06/26/20 06:45	07/08/20 17:06	1
2-Fluorophenol (Surr)	69		43 - 120	06/26/20 06:45	07/08/20 17:06	1
Nitrobenzene-d5 (Surr)	81		46 - 120	06/26/20 06:45	07/08/20 17:06	1
Phenol-d5 (Surr)	80		46 - 120	06/26/20 06:45	07/08/20 17:06	1
Terphenyl-d14 (Surr)	89		46 - 120	06/26/20 06:45	07/08/20 17:06	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-500214/2-A
Matrix: Solid
Analysis Batch: 501478

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500214
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1'-Biphenyl	2440	1700		ug/Kg		70	60 - 120
1,2,4,5-Tetrachlorobenzene	2440	1600		ug/Kg		66	60 - 120
1,2,4-Trichlorobenzene	2440	1560		ug/Kg		64	59 - 120
1,2-Dichlorobenzene	2440	1540		ug/Kg		63	57 - 120
1,2-Diphenylhydrazine(as Azobenzene)	2470	2220		ug/Kg		90	60 - 120
1,3-Dichlorobenzene	2440	1500		ug/Kg		62	56 - 120
1,3-Dinitrobenzene	2440	2130		ug/Kg		87	66 - 120
1,4-Dichlorobenzene	2440	1510		ug/Kg		62	57 - 120
1,4-Dioxane	2440	964		ug/Kg		40	28 - 120
1-Methylnaphthalene	2440	1720		ug/Kg		70	57 - 120
2,2'-oxybis[1-chloropropane]	2440	1850		ug/Kg		76	46 - 120
2,3,4,6-Tetrachlorophenol	2440	1950		ug/Kg		80	63 - 120
2,4,5-Trichlorophenol	2440	1870		ug/Kg		77	65 - 120
2,4,6-Trichlorophenol	2440	1770		ug/Kg		73	64 - 120
2,4-Dichlorophenol	2440	1730		ug/Kg		71	64 - 120
2,4-Dimethylphenol	2440	1890		ug/Kg		78	60 - 120
2,4-Dinitrophenol	4880	4580		ug/Kg		94	52 - 120
2,4-Dinitrotoluene	2440	2080		ug/Kg		85	68 - 120
2,6-Dichlorophenol	2440	1690		ug/Kg		69	30 - 150
2,6-Dinitrotoluene	2440	2000		ug/Kg		82	68 - 120
2-Chloronaphthalene	2440	1610		ug/Kg		66	61 - 120
2-Chlorophenol	2440	1680		ug/Kg		69	62 - 120
2-Methylnaphthalene	2440	1730		ug/Kg		71	60 - 120
2-Methylphenol	2440	1780		ug/Kg		73	61 - 120
2-Nitroaniline	2440	2600		ug/Kg		107	63 - 120
2-Nitrophenol	2440	1760		ug/Kg		72	61 - 120
3 & 4 Methylphenol	2440	1880		ug/Kg		77	62 - 120
3,3'-Dichlorobenzidine	4880	4090		ug/Kg		84	22 - 120
3-Methylphenol	2440	1880		ug/Kg		77	62 - 120
3-Nitroaniline	2440	1940		ug/Kg		79	40 - 120
4,6-Dinitro-2-methylphenol	4880	3910		ug/Kg		80	60 - 120
4-Bromophenyl phenyl ether	2440	1820		ug/Kg		75	66 - 120
4-Chloro-3-methylphenol	2440	2080		ug/Kg		85	62 - 120
4-Chloroaniline	2440	1390		ug/Kg		57	33 - 120
4-Chlorophenyl phenyl ether	2440	1790		ug/Kg		73	63 - 120
4-Methylphenol	2440	1880		ug/Kg		77	62 - 120
4-Nitroaniline	2440	2190		ug/Kg		90	58 - 120
4-Nitrophenol	4880	5070		ug/Kg		104	67 - 120
Acenaphthene	2440	1750		ug/Kg		72	62 - 120
Acenaphthylene	2440	1740		ug/Kg		71	64 - 120
Acetophenone	2440	1420		ug/Kg		58	48 - 120
Aniline	2440	1150		ug/Kg		47	21 - 120
Anthracene	2440	1840		ug/Kg		76	66 - 120
Azobenzene	2440	2200		ug/Kg		90	59 - 120
Benzaldehyde	2440	1390		ug/Kg		57	30 - 150
Benzidine	4880	ND		ug/Kg		15	5 - 120
Benzo[a]anthracene	2440	1860		ug/Kg		76	64 - 120
Benzo[a]pyrene	2440	1830		ug/Kg		75	65 - 120

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-500214/2-A

Matrix: Solid

Analysis Batch: 501478

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 500214

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[b]fluoranthene	2440	1980		ug/Kg		81	58 - 120
Benzo[g,h,i]perylene	2440	1910		ug/Kg		78	58 - 120
Benzo[k]fluoranthene	2440	2000		ug/Kg		82	62 - 120
Benzoic acid	2440	2040		ug/Kg		83	51 - 120
Benzyl alcohol	2440	1930		ug/Kg		79	61 - 120
Bis(2-chloroethoxy)methane	2440	1890		ug/Kg		77	58 - 120
Bis(2-chloroethyl)ether	2440	1800		ug/Kg		74	57 - 120
Bis(2-ethylhexyl) phthalate	2440	2010		ug/Kg		82	65 - 120
Butyl benzyl phthalate	2440	2010		ug/Kg		82	65 - 120
Caprolactam	2440	2330		ug/Kg		96	20 - 138
Carbazole	2440	1930		ug/Kg		79	65 - 120
Chrysene	2440	1900		ug/Kg		78	65 - 120
Dibenz(a,h)anthracene	2440	1910		ug/Kg		78	56 - 120
Dibenzofuran	2440	1780		ug/Kg		73	65 - 120
Diethyl phthalate	2440	1910		ug/Kg		79	68 - 120
Dimethyl phthalate	2440	1850		ug/Kg		76	66 - 120
Di-n-butyl phthalate	2440	1960		ug/Kg		80	66 - 120
Di-n-octyl phthalate	2440	1890		ug/Kg		78	55 - 120
Diphenylamine	2070	1620		ug/Kg		78	30 - 150
Fluoranthene	2440	1900		ug/Kg		78	64 - 120
Fluorene	2440	1800		ug/Kg		74	66 - 120
Hexachlorobenzene	2440	1780		ug/Kg		73	65 - 120
Hexachlorobutadiene	2440	1600		ug/Kg		66	58 - 120
Hexachlorocyclopentadiene	4880	2750		ug/Kg		56	43 - 120
Hexachloroethane	2440	1650		ug/Kg		68	56 - 120
Hexadecane	2440	2030		ug/Kg		83	45 - 135
Indeno[1,2,3-cd]pyrene	2440	1670		ug/Kg		68	46 - 120
Isophorone	2440	1820		ug/Kg		75	56 - 120
Naphthalene	2440	1660		ug/Kg		68	59 - 120
Nitrobenzene	2440	1950		ug/Kg		80	55 - 120
N-Nitrosodimethylamine	2440	1710		ug/Kg		70	50 - 120
N-Nitrosodi-n-propylamine	2440	2010		ug/Kg		82	52 - 120
N-Nitrosodiphenylamine	2440	1870		ug/Kg		76	65 - 120
Pentachlorophenol	4880	4200		ug/Kg		86	50 - 120
Phenanthrene	2440	1830		ug/Kg		75	67 - 120
Phenol	2440	1730		ug/Kg		71	63 - 120
Pyrene	2440	1880		ug/Kg		77	66 - 120
Pyridine	4880	2670		ug/Kg		55	37 - 120

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	75		35 - 120
2-Fluorobiphenyl	63		46 - 120
2-Fluorophenol (Surr)	66		43 - 120
Nitrobenzene-d5 (Surr)	77		46 - 120
Phenol-d5 (Surr)	72		46 - 120
Terphenyl-d14 (Surr)	82		46 - 120

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-137854-5 MS

Matrix: Solid

Analysis Batch: 501478

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-20-22

Prep Type: Total/NA

Prep Batch: 500214

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
1,1'-Biphenyl	ND		2570	1850		ug/Kg	*	72	60 - 120
1,2,4,5-Tetrachlorobenzene	ND	F1	2570	1700		ug/Kg	*	66	60 - 120
1,2,4-Trichlorobenzene	ND	F1	2570	1650		ug/Kg	*	64	59 - 120
1,2-Dichlorobenzene	ND	F1	2570	1700		ug/Kg	*	66	57 - 120
1,2-Diphenylhydrazine(as Azobenzene)	ND		2600	2480		ug/Kg	*	96	60 - 120
1,3-Dichlorobenzene	ND	F1	2570	1630		ug/Kg	*	63	56 - 120
1,3-Dinitrobenzene	ND		2570	2410		ug/Kg	*	94	66 - 120
1,4-Dichlorobenzene	ND	F1	2570	1660		ug/Kg	*	65	57 - 120
1,4-Dioxane	ND	F2	2570	1090		ug/Kg	*	43	28 - 120
1-Methylnaphthalene	ND		2570	1820		ug/Kg	*	71	57 - 120
2,2'-oxybis[1-chloropropane]	ND		2570	2060		ug/Kg	*	80	46 - 120
2,3,4,6-Tetrachlorophenol	ND		2570	2200		ug/Kg	*	86	63 - 120
2,4,5-Trichlorophenol	ND		2570	2060		ug/Kg	*	80	65 - 120
2,4,6-Trichlorophenol	ND		2570	1970		ug/Kg	*	77	64 - 120
2,4-Dichlorophenol	ND		2570	1830		ug/Kg	*	71	64 - 120
2,4-Dimethylphenol	ND		2570	1990		ug/Kg	*	78	60 - 120
2,4-Dinitrophenol	ND		5140	4570		ug/Kg	*	89	52 - 120
2,4-Dinitrotoluene	ND		2570	2280		ug/Kg	*	89	68 - 120
2,6-Dichlorophenol	ND		2570	1790		ug/Kg	*	70	30 - 150
2,6-Dinitrotoluene	ND		2570	2190		ug/Kg	*	85	68 - 120
2-Chloronaphthalene	ND		2570	1790		ug/Kg	*	70	61 - 120
2-Chlorophenol	ND	F1	2570	1830		ug/Kg	*	71	62 - 120
2-Methylnaphthalene	ND		2570	1790		ug/Kg	*	70	60 - 120
2-Methylphenol	ND		2570	1990		ug/Kg	*	77	61 - 120
2-Nitroaniline	ND		2570	2930		ug/Kg	*	114	63 - 120
2-Nitrophenol	ND	F1	2570	1900		ug/Kg	*	74	61 - 120
3 & 4 Methylphenol	ND		2570	2080		ug/Kg	*	81	62 - 120
3,3'-Dichlorobenzidine	ND		5140	4820		ug/Kg	*	94	22 - 120
3-Methylphenol	ND		2570	2080		ug/Kg	*	81	62 - 120
3-Nitroaniline	ND		2570	2170		ug/Kg	*	85	40 - 120
4,6-Dinitro-2-methylphenol	ND		5140	4030		ug/Kg	*	78	60 - 120
4-Bromophenyl phenyl ether	ND		2570	1960		ug/Kg	*	76	66 - 120
4-Chloro-3-methylphenol	ND		2570	2220		ug/Kg	*	86	62 - 120
4-Chloroaniline	ND		2570	1490		ug/Kg	*	58	33 - 120
4-Chlorophenyl phenyl ether	ND		2570	1950		ug/Kg	*	76	63 - 120
4-Methylphenol	ND		2570	2080		ug/Kg	*	81	62 - 120
4-Nitroaniline	ND		2570	2410		ug/Kg	*	94	58 - 120
4-Nitrophenol	ND		5140	5760		ug/Kg	*	112	67 - 120
Acenaphthene	ND		2570	1920		ug/Kg	*	75	62 - 120
Acenaphthylene	ND		2570	1900		ug/Kg	*	74	64 - 120
Acetophenone	ND		2570	1510		ug/Kg	*	59	48 - 120
Aniline	ND		2570	1260		ug/Kg	*	49	21 - 120
Anthracene	ND		2570	1990		ug/Kg	*	78	66 - 120
Azobenzene	ND		2570	2460		ug/Kg	*	96	59 - 120
Benzaldehyde	ND		2570	1690		ug/Kg	*	66	30 - 150
Benzidine	ND	F1	5140		ND F1	ug/Kg	*	0	5 - 120
Benzo[a]anthracene	ND		2570	2040		ug/Kg	*	79	64 - 120
Benzo[a]pyrene	ND		2570	2000		ug/Kg	*	78	65 - 120

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-137854-5 MS

Matrix: Solid

Analysis Batch: 501478

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-20-22

Prep Type: Total/NA

Prep Batch: 500214

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Benzo[b]fluoranthene	ND		2570	2080		ug/Kg	*	81		58 - 120
Benzo[g,h,i]perylene	ND		2570	1960		ug/Kg	*	76		58 - 120
Benzo[k]fluoranthene	ND		2570	2130		ug/Kg	*	83		62 - 120
Benzoic acid	ND		2570	1920		ug/Kg	*	75		51 - 120
Benzyl alcohol	ND		2570	2120		ug/Kg	*	83		61 - 120
Bis(2-chloroethoxy)methane	ND		2570	1990		ug/Kg	*	77		58 - 120
Bis(2-chloroethyl)ether	ND		2570	2000		ug/Kg	*	78		57 - 120
Bis(2-ethylhexyl) phthalate	ND		2570	2350		ug/Kg	*	92		65 - 120
Butyl benzyl phthalate	ND		2570	2350		ug/Kg	*	91		65 - 120
Caprolactam	ND		2570	2590		ug/Kg	*	101		20 - 138
Carbazole	ND		2570	2080		ug/Kg	*	81		65 - 120
Chrysene	ND		2570	2030		ug/Kg	*	79		65 - 120
Dibenz(a,h)anthracene	ND		2570	2030		ug/Kg	*	79		56 - 120
Dibenzofuran	ND		2570	1960		ug/Kg	*	76		65 - 120
Diethyl phthalate	ND		2570	2140		ug/Kg	*	83		68 - 120
Dimethyl phthalate	ND		2570	2050		ug/Kg	*	80		66 - 120
Di-n-butyl phthalate	ND		2570	2180		ug/Kg	*	85		66 - 120
Di-n-octyl phthalate	ND		2570	2380		ug/Kg	*	92		55 - 120
Diphenylamine	ND		2180	1770		ug/Kg	*	81		30 - 150
Fluoranthene	ND		2570	2060		ug/Kg	*	80		64 - 120
Fluorene	ND		2570	1950		ug/Kg	*	76		66 - 120
Hexachlorobenzene	ND		2570	1940		ug/Kg	*	76		65 - 120
Hexachlorobutadiene	ND	F1	2570	1640		ug/Kg	*	64		58 - 120
Hexachlorocyclopentadiene	ND	F1 F2	5140	2440		ug/Kg	*	47		43 - 120
Hexachloroethane	ND	F1 F2	2570	1770		ug/Kg	*	69		56 - 120
Hexadecane	ND		2570	2310		ug/Kg	*	90		45 - 135
Indeno[1,2,3-cd]pyrene	ND		2570	1960		ug/Kg	*	76		46 - 120
Isophorone	ND		2570	1930		ug/Kg	*	75		56 - 120
Naphthalene	ND	F1	2570	1750		ug/Kg	*	68		59 - 120
Nitrobenzene	ND		2570	2090		ug/Kg	*	81		55 - 120
N-Nitrosodimethylamine	ND		2570	1920		ug/Kg	*	75		50 - 120
N-Nitrosodi-n-propylamine	ND		2570	2230		ug/Kg	*	87		52 - 120
N-Nitrosodiphenylamine	ND		2570	2020		ug/Kg	*	78		65 - 120
Pentachlorophenol	ND		5140	5060		ug/Kg	*	98		50 - 120
Phenanthrene	ND		2570	1970		ug/Kg	*	77		67 - 120
Phenol	ND		2570	2020		ug/Kg	*	79		63 - 120
Pyrene	ND		2570	2020		ug/Kg	*	79		66 - 120
Pyridine	ND		5140	2980		ug/Kg	*	58		37 - 120

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	79		35 - 120
2-Fluorobiphenyl	65		46 - 120
2-Fluorophenol (Surr)	68		43 - 120
Nitrobenzene-d5 (Surr)	79		46 - 120
Phenol-d5 (Surr)	75		46 - 120
Terphenyl-d14 (Surr)	83		46 - 120

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-137854-5 MSD

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-20-22

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 501478

Prep Batch: 500214

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
1,1'-Biphenyl	ND		2550	1690		ug/Kg	☼	66	60 - 120	10	30
1,2,4,5-Tetrachlorobenzene	ND	F1	2550	1490	F1	ug/Kg	☼	58	60 - 120	13	30
1,2,4-Trichlorobenzene	ND	F1	2550	1280	F1	ug/Kg	☼	50	59 - 120	25	30
1,2-Dichlorobenzene	ND	F1	2550	1280	F1	ug/Kg	☼	50	57 - 120	28	30
1,2-Diphenylhydrazine(as Azobenzene)	ND		2580	2420		ug/Kg	☼	94	60 - 120	3	30
1,3-Dichlorobenzene	ND	F1	2550	1230	F1	ug/Kg	☼	48	56 - 120	27	30
1,3-Dinitrobenzene	ND		2550	2360		ug/Kg	☼	92	66 - 120	2	30
1,4-Dichlorobenzene	ND	F1	2550	1260	F1	ug/Kg	☼	50	57 - 120	27	30
1,4-Dioxane	ND	F2	2550	767	F2	ug/Kg	☼	30	28 - 120	35	30
1-Methylnaphthalene	ND		2550	1620		ug/Kg	☼	64	57 - 120	11	30
2,2'-oxybis[1-chloropropane]	ND		2550	1600		ug/Kg	☼	63	46 - 120	25	30
2,3,4,6-Tetrachlorophenol	ND		2550	2100		ug/Kg	☼	82	63 - 120	5	30
2,4,5-Trichlorophenol	ND		2550	1950		ug/Kg	☼	76	65 - 120	5	30
2,4,6-Trichlorophenol	ND		2550	1840		ug/Kg	☼	72	64 - 120	7	30
2,4-Dichlorophenol	ND		2550	1630		ug/Kg	☼	64	64 - 120	12	30
2,4-Dimethylphenol	ND		2550	1800		ug/Kg	☼	71	60 - 120	10	30
2,4-Dinitrophenol	ND		5110	4450		ug/Kg	☼	87	52 - 120	3	30
2,4-Dinitrotoluene	ND		2550	2250		ug/Kg	☼	88	68 - 120	1	30
2,6-Dichlorophenol	ND		2550	1580		ug/Kg	☼	62	30 - 150	12	30
2,6-Dinitrotoluene	ND		2550	2130		ug/Kg	☼	84	68 - 120	3	30
2-Chloronaphthalene	ND		2550	1620		ug/Kg	☼	63	61 - 120	10	30
2-Chlorophenol	ND	F1	2550	1390	F1	ug/Kg	☼	54	62 - 120	27	30
2-Methylnaphthalene	ND		2550	1540		ug/Kg	☼	60	60 - 120	15	30
2-Methylphenol	ND		2550	1620		ug/Kg	☼	63	61 - 120	21	30
2-Nitroaniline	ND		2550	2890		ug/Kg	☼	113	63 - 120	1	30
2-Nitrophenol	ND	F1	2550	1480	F1	ug/Kg	☼	58	61 - 120	25	30
3 & 4 Methylphenol	ND		2550	1800		ug/Kg	☼	70	62 - 120	14	30
3,3'-Dichlorobenzidine	ND		5110	4950		ug/Kg	☼	97	22 - 120	3	30
3-Methylphenol	ND		2550	1800		ug/Kg	☼	70	62 - 120	14	30
3-Nitroaniline	ND		2550	2150		ug/Kg	☼	84	40 - 120	1	30
4,6-Dinitro-2-methylphenol	ND		5110	4010		ug/Kg	☼	79	60 - 120	0	30
4-Bromophenyl phenyl ether	ND		2550	1960		ug/Kg	☼	77	66 - 120	0	30
4-Chloro-3-methylphenol	ND		2550	2170		ug/Kg	☼	85	62 - 120	2	30
4-Chloroaniline	ND		2550	1410		ug/Kg	☼	55	33 - 120	5	30
4-Chlorophenyl phenyl ether	ND		2550	1890		ug/Kg	☼	74	63 - 120	3	30
4-Methylphenol	ND		2550	1800		ug/Kg	☼	70	62 - 120	14	30
4-Nitroaniline	ND		2550	2350		ug/Kg	☼	92	58 - 120	2	30
4-Nitrophenol	ND		5110	5540		ug/Kg	☼	108	67 - 120	4	30
Acenaphthene	ND		2550	1790		ug/Kg	☼	70	62 - 120	7	30
Acenaphthylene	ND		2550	1750		ug/Kg	☼	69	64 - 120	8	30
Acetophenone	ND		2550	1230		ug/Kg	☼	48	48 - 120	21	30
Aniline	ND		2550	1080		ug/Kg	☼	42	21 - 120	16	30
Anthracene	ND		2550	1990		ug/Kg	☼	78	66 - 120	0	30
Azobenzene	ND		2550	2390		ug/Kg	☼	94	59 - 120	3	30
Benzaldehyde	ND		2550	1300		ug/Kg	☼	51	30 - 150	26	50
Benzidine	ND	F1	5110	ND	F1	ug/Kg	☼	0	5 - 120	NC	50
Benzo[a]anthracene	ND		2550	2050		ug/Kg	☼	80	64 - 120	1	30
Benzo[a]pyrene	ND		2550	1990		ug/Kg	☼	78	65 - 120	1	30

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-137854-5 MSD

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-20-22

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 501478

Prep Batch: 500214

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Benzo[b]fluoranthene	ND		2550	2090		ug/Kg	*	82	58 - 120	0	30
Benzo[g,h,i]perylene	ND		2550	1960		ug/Kg	*	77	58 - 120	0	30
Benzo[k]fluoranthene	ND		2550	2120		ug/Kg	*	83	62 - 120	1	30
Benzoic acid	ND		2550	1730		ug/Kg	*	68	51 - 120	10	30
Benzyl alcohol	ND		2550	1740		ug/Kg	*	68	61 - 120	20	30
Bis(2-chloroethoxy)methane	ND		2550	1670		ug/Kg	*	65	58 - 120	17	30
Bis(2-chloroethyl)ether	ND		2550	1510		ug/Kg	*	59	57 - 120	28	30
Bis(2-ethylhexyl) phthalate	ND		2550	2370		ug/Kg	*	93	65 - 120	1	30
Butyl benzyl phthalate	ND		2550	2350		ug/Kg	*	92	65 - 120	0	30
Caprolactam	ND		2550	2520		ug/Kg	*	99	20 - 138	3	30
Carbazole	ND		2550	2080		ug/Kg	*	82	65 - 120	0	30
Chrysene	ND		2550	2050		ug/Kg	*	80	65 - 120	1	30
Dibenz(a,h)anthracene	ND		2550	2030		ug/Kg	*	79	56 - 120	0	30
Dibenzofuran	ND		2550	1830		ug/Kg	*	72	65 - 120	7	30
Diethyl phthalate	ND		2550	2100		ug/Kg	*	82	68 - 120	2	30
Dimethyl phthalate	ND		2550	2000		ug/Kg	*	78	66 - 120	2	30
Di-n-butyl phthalate	ND		2550	2170		ug/Kg	*	85	66 - 120	0	30
Di-n-octyl phthalate	ND		2550	2350		ug/Kg	*	92	55 - 120	1	30
Diphenylamine	ND		2170	1720		ug/Kg	*	79	30 - 150	3	50
Fluoranthene	ND		2550	2080		ug/Kg	*	81	64 - 120	1	30
Fluorene	ND		2550	1890		ug/Kg	*	74	66 - 120	3	30
Hexachlorobenzene	ND		2550	1950		ug/Kg	*	76	65 - 120	1	30
Hexachlorobutadiene	ND	F1	2550	1250	F1	ug/Kg	*	49	58 - 120	27	30
Hexachlorocyclopentadiene	ND	F1 F2	5110	1680	F1 F2	ug/Kg	*	33	43 - 120	37	30
Hexachloroethane	ND	F1 F2	2550	1300	F1 F2	ug/Kg	*	51	56 - 120	31	30
Hexadecane	ND		2550	2070		ug/Kg	*	81	45 - 135	11	30
Indeno[1,2,3-cd]pyrene	ND		2550	1950		ug/Kg	*	76	46 - 120	0	30
Isophorone	ND		2550	1730		ug/Kg	*	68	56 - 120	11	30
Naphthalene	ND	F1	2550	1410	F1	ug/Kg	*	55	59 - 120	21	30
Nitrobenzene	ND		2550	1680		ug/Kg	*	66	55 - 120	22	30
N-Nitrosodimethylamine	ND		2550	1470		ug/Kg	*	57	50 - 120	27	30
N-Nitrosodi-n-propylamine	ND		2550	1880		ug/Kg	*	73	52 - 120	17	30
N-Nitrosodiphenylamine	ND		2550	1990		ug/Kg	*	78	65 - 120	1	30
Pentachlorophenol	ND		5110	4810		ug/Kg	*	94	50 - 120	5	30
Phenanthrene	ND		2550	1980		ug/Kg	*	77	67 - 120	0	30
Phenol	ND		2550	1610		ug/Kg	*	63	63 - 120	23	30
Pyrene	ND		2550	2060		ug/Kg	*	81	66 - 120	2	30
Pyridine	ND		5110	2260		ug/Kg	*	44	37 - 120	27	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	77		35 - 120
2-Fluorobiphenyl	58		46 - 120
2-Fluorophenol (Surr)	52		43 - 120
Nitrobenzene-d5 (Surr)	62		46 - 120
Phenol-d5 (Surr)	61		46 - 120
Terphenyl-d14 (Surr)	84		46 - 120

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Lab Sample ID: MB 280-499873/36
Matrix: Water
Analysis Batch: 499873

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		25	10	ug/L			06/24/20 09:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	90		82 - 110		06/24/20 09:14	1

Lab Sample ID: LCS 280-499873/34
Matrix: Water
Analysis Batch: 499873

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C6-C10	214	173		ug/L		81	79 - 149

Surrogate	LCS %Recovery	LCS Qualifier	Limits
a,a,a-Trifluorotoluene	90		82 - 110

Lab Sample ID: LCSD 280-499873/35
Matrix: Water
Analysis Batch: 499873

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C10	214	198		ug/L		93	79 - 149	13	27

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
a,a,a-Trifluorotoluene	93		82 - 110

Lab Sample ID: MB 280-500304/3-A
Matrix: Solid
Analysis Batch: 500486

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 500304

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		2.0	0.76	mg/Kg		06/26/20 14:07	06/29/20 11:19	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	100		77 - 123	06/26/20 14:07	06/29/20 11:19	1

Lab Sample ID: LCS 280-500304/1-A
Matrix: Solid
Analysis Batch: 500486

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500304

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C6-C10	8.54	8.19		mg/Kg		96	75 - 135

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics) (Continued)

Lab Sample ID: LCS 280-500304/1-A
Matrix: Solid
Analysis Batch: 500486

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500304

Surrogate	LCS %Recovery	LCS Qualifier	Limits
a,a,a-Trifluorotoluene	103		77 - 123

Lab Sample ID: LCSD 280-500304/2-A
Matrix: Solid
Analysis Batch: 500486

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 500304

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C10	8.54	7.47		mg/Kg		87	75 - 135	9	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
a,a,a-Trifluorotoluene	104		77 - 123

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Lab Sample ID: MB 280-499577/1-A
Matrix: Water
Analysis Batch: 500853

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499577

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.25	0.033	mg/L		06/22/20 06:45	07/02/20 00:49	1
Motor Oil (C20-C38)	0.0731	J	0.50	0.056	mg/L		06/22/20 06:45	07/02/20 00:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	85		50 - 115	06/22/20 06:45	07/02/20 00:49	1

Lab Sample ID: LCS 280-499577/2-A
Matrix: Water
Analysis Batch: 500853

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499577

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	1.98	1.34		mg/L		67	54 - 115

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl (Surr)	79		50 - 115

Lab Sample ID: LCS 280-499577/4-A
Matrix: Water
Analysis Batch: 500853

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499577

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Motor Oil (C20-C38)	5.02	2.45	*	mg/L		49	54 - 115

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl (Surr)	93		50 - 115

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Lab Sample ID: LCSD 280-499577/3-A
Matrix: Water
Analysis Batch: 500853

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 499577

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	1.98	1.55		mg/L		78	54 - 115	15	31
Surrogate	%Recovery	LCSD Qualifier	Limits						
<i>o-Terphenyl (Surr)</i>	93		50 - 115						

Lab Sample ID: LCSD 280-499577/5-A
Matrix: Water
Analysis Batch: 500853

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 499577

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Motor Oil (C20-C38)	5.02	2.53	*	mg/L		51	54 - 115	3	31
Surrogate	%Recovery	LCSD Qualifier	Limits						
<i>o-Terphenyl (Surr)</i>	96		50 - 115						

Lab Sample ID: MB 280-500213/1-A
Matrix: Solid
Analysis Batch: 502159

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 500213

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		7.2	3.3	mg/Kg		06/26/20 06:37	07/14/20 20:56	1
Motor Oil (C20-C38)	ND		22	7.1	mg/Kg		06/26/20 06:37	07/14/20 20:56	1
Surrogate	%Recovery	MB Qualifier	Limits						
<i>o-Terphenyl (Surr)</i>	68		49 - 115						
							Prepared	Analyzed	Dil Fac
							06/26/20 06:37	07/14/20 20:56	1

Lab Sample ID: LCS 280-500213/2-A
Matrix: Solid
Analysis Batch: 502159

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500213

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]	117	89.1		mg/Kg		76	53 - 115		
Surrogate	%Recovery	LCS Qualifier	Limits						
<i>o-Terphenyl (Surr)</i>	78		49 - 115						

Lab Sample ID: LCS 280-500213/3-A
Matrix: Solid
Analysis Batch: 502159

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500213

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Motor Oil (C20-C38)	321	283		mg/Kg		88	57 - 115		

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Lab Sample ID: LCS 280-500213/3-A
Matrix: Solid
Analysis Batch: 502159

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500213

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
<i>o</i> -Terphenyl (Surr)	86		49 - 115

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 280-499791/1-A
Matrix: Water
Analysis Batch: 500220

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499791

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Endosulfan I	ND		0.050	0.0058	ug/L		06/23/20 13:38	06/26/20 14:42	1
Endosulfan II	ND		0.050	0.0066	ug/L		06/23/20 13:38	06/26/20 14:42	1
Endosulfan sulfate	ND		0.050	0.0049	ug/L		06/23/20 13:38	06/26/20 14:42	1
Endrin	ND		0.050	0.0086	ug/L		06/23/20 13:38	06/26/20 14:42	1
Endrin aldehyde	ND		0.050	0.0087	ug/L		06/23/20 13:38	06/26/20 14:42	1
Endrin ketone	ND		0.050	0.013	ug/L		06/23/20 13:38	06/26/20 14:42	1
beta-BHC	ND		0.050	0.0091	ug/L		06/23/20 13:38	06/26/20 14:42	1
alpha-BHC	ND		0.050	0.0097	ug/L		06/23/20 13:38	06/26/20 14:42	1
delta-BHC	ND		0.050	0.0078	ug/L		06/23/20 13:38	06/26/20 14:42	1
gamma-BHC (Lindane)	ND		0.050	0.010	ug/L		06/23/20 13:38	06/26/20 14:42	1
trans-Chlordane	ND		0.050	0.0072	ug/L		06/23/20 13:38	06/26/20 14:42	1
Dieldrin	ND		0.050	0.0046	ug/L		06/23/20 13:38	06/26/20 14:42	1
Heptachlor epoxide	ND		0.050	0.0032	ug/L		06/23/20 13:38	06/26/20 14:42	1
Heptachlor	ND		0.050	0.010	ug/L		06/23/20 13:38	06/26/20 14:42	1
Aldrin	ND		0.050	0.0062	ug/L		06/23/20 13:38	06/26/20 14:42	1
4,4'-DDD	ND		0.050	0.0042	ug/L		06/23/20 13:38	06/26/20 14:42	1
4,4'-DDE	ND		0.050	0.0042	ug/L		06/23/20 13:38	06/26/20 14:42	1
4,4'-DDT	ND		0.050	0.024	ug/L		06/23/20 13:38	06/26/20 14:42	1
Methoxychlor	ND		0.10	0.014	ug/L		06/23/20 13:38	06/26/20 14:42	1
Toxaphene	ND		3.0	1.5	ug/L		06/23/20 13:38	06/26/20 14:42	1
cis-Chlordane	ND		0.050	0.0088	ug/L		06/23/20 13:38	06/26/20 14:42	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Tetrachloro- <i>m</i> -xylene	70		28 - 115	06/23/20 13:38	06/26/20 14:42	1
DCB Decachlorobiphenyl	83		34 - 122	06/23/20 13:38	06/26/20 14:42	1

Lab Sample ID: LCS 280-499791/2-A
Matrix: Water
Analysis Batch: 500220

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499791

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
Endosulfan I	0.500	0.498		ug/L		100	46 - 125
Endosulfan II	0.500	0.511		ug/L		102	37 - 132
Endosulfan sulfate	0.500	0.565		ug/L		113	49 - 132
Endrin	0.500	0.597		ug/L		119	52 - 139
Endrin aldehyde	0.500	0.464		ug/L		93	38 - 123
Endrin ketone	0.500	0.527		ug/L		105	47 - 119
beta-BHC	0.500	0.498		ug/L		100	40 - 125

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 280-499791/2-A
Matrix: Water
Analysis Batch: 500220

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499791

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
alpha-BHC	0.500	0.479		ug/L		96	49 - 117
delta-BHC	0.500	0.489		ug/L		98	49 - 119
gamma-BHC (Lindane)	0.500	0.488		ug/L		98	51 - 117
trans-Chlordane	0.500	0.506		ug/L		101	52 - 120
Dieldrin	0.500	0.551		ug/L		110	60 - 123
Heptachlor epoxide	0.500	0.524		ug/L		105	54 - 122
Heptachlor	0.500	0.463		ug/L		93	41 - 121
Aldrin	0.500	0.337		ug/L		67	41 - 109
4,4'-DDD	0.500	0.540		ug/L		108	61 - 126
4,4'-DDE	0.500	0.469		ug/L		94	56 - 122
4,4'-DDT	0.500	0.581		ug/L		116	55 - 129
Methoxychlor	0.500	0.595		ug/L		119	54 - 126
cis-Chlordane	0.500	0.502		ug/L		100	54 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	68		28 - 115
DCB Decachlorobiphenyl	84		34 - 122

Lab Sample ID: LCSD 280-499791/3-A
Matrix: Water
Analysis Batch: 500220

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 499791

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Endosulfan I	0.500	0.473		ug/L		95	46 - 125	5	18
Endosulfan II	0.500	0.466		ug/L		93	37 - 132	9	23
Endosulfan sulfate	0.500	0.507		ug/L		101	49 - 132	11	13
Endrin	0.500	0.544		ug/L		109	52 - 139	9	17
Endrin aldehyde	0.500	0.434		ug/L		87	38 - 123	7	17
Endrin ketone	0.500	0.456		ug/L		91	47 - 119	14	25
beta-BHC	0.500	0.450		ug/L		90	40 - 125	10	16
alpha-BHC	0.500	0.434		ug/L		87	49 - 117	10	16
delta-BHC	0.500	0.446		ug/L		89	49 - 119	9	16
gamma-BHC (Lindane)	0.500	0.441		ug/L		88	51 - 117	10	19
trans-Chlordane	0.500	0.475		ug/L		95	52 - 120	6	27
Dieldrin	0.500	0.515		ug/L		103	60 - 123	7	14
Heptachlor epoxide	0.500	0.495		ug/L		99	54 - 122	6	14
Heptachlor	0.500	0.432		ug/L		86	41 - 121	7	41
Aldrin	0.500	0.320		ug/L		64	41 - 109	5	42
4,4'-DDD	0.500	0.495		ug/L		99	61 - 126	9	14
4,4'-DDE	0.500	0.451		ug/L		90	56 - 122	4	20
4,4'-DDT	0.500	0.521		ug/L		104	55 - 129	11	19
Methoxychlor	0.500	0.486		ug/L		97	54 - 126	20	22
cis-Chlordane	0.500	0.476		ug/L		95	54 - 120	5	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene	57		28 - 115
DCB Decachlorobiphenyl	70		34 - 122

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 280-499791/1-A
Matrix: Water
Analysis Batch: 502028

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 499791

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND		1.0	0.18	ug/L		06/23/20 13:38	07/14/20 11:57	1
PCB-1016	ND		1.0	0.17	ug/L		06/23/20 13:38	07/14/20 11:57	1
PCB-1232	ND		1.0	0.13	ug/L		06/23/20 13:38	07/14/20 11:57	1
PCB-1242	ND		1.0	0.10	ug/L		06/23/20 13:38	07/14/20 11:57	1
PCB-1248	ND		1.0	0.17	ug/L		06/23/20 13:38	07/14/20 11:57	1
PCB-1254	ND		1.0	0.14	ug/L		06/23/20 13:38	07/14/20 11:57	1
PCB-1260	ND		1.0	0.089	ug/L		06/23/20 13:38	07/14/20 11:57	1
PCB-1262	ND		1.0	0.094	ug/L		06/23/20 13:38	07/14/20 11:57	1
PCB-1268	ND		1.0	0.37	ug/L		06/23/20 13:38	07/14/20 11:57	1
Polychlorinated biphenyls, Total	ND		1.0	0.073	ug/L		06/23/20 13:38	07/14/20 11:57	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	75		29 - 115	06/23/20 13:38	07/14/20 11:57	1
DCB Decachlorobiphenyl	83		26 - 135	06/23/20 13:38	07/14/20 11:57	1

Lab Sample ID: LCS 280-499791/4-A
Matrix: Water
Analysis Batch: 502028

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 499791

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
PCB-1016	2.00	1.55		ug/L		77	58 - 125
PCB-1260	2.00	1.50		ug/L		75	72 - 128

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	74		29 - 115
DCB Decachlorobiphenyl	61		26 - 135

Lab Sample ID: LCSD 280-499791/5-A
Matrix: Water
Analysis Batch: 502028

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 499791

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
PCB-1016	2.00	1.71		ug/L		85	58 - 125	10	25
PCB-1260	2.00	1.70		ug/L		85	72 - 128	13	23

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene	79		29 - 115
DCB Decachlorobiphenyl	79		26 - 135

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-500181/1-A
Matrix: Solid
Analysis Batch: 500670

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 500181

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		100	7.8	ug/Kg		06/27/20 10:55	06/30/20 11:48	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 280-500181/2-A
Matrix: Solid
Analysis Batch: 500670

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500181
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Silver	20000	20500		ug/Kg		102	83 - 113

Lab Sample ID: 280-137854-3 MS
Matrix: Solid
Analysis Batch: 500670

Client Sample ID: CDOT I270 Env-05/06_2020-SB-24-7-9
Prep Type: Total/NA
Prep Batch: 500181
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Silver	72	J	19000	19400		ug/Kg	*	102	83 - 113

Lab Sample ID: 280-137854-3 MSD
Matrix: Solid
Analysis Batch: 500670

Client Sample ID: CDOT I270 Env-05/06_2020-SB-24-7-9
Prep Type: Total/NA
Prep Batch: 500181
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Silver	72	J	15700	16200		ug/Kg	*	103	83 - 113	18	20

Lab Sample ID: MB 280-500182/1-A
Matrix: Solid
Analysis Batch: 500895

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 500182

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.60	0.051	mg/Kg		06/27/20 09:35	07/01/20 21:54	1
Barium	ND	^	0.40	0.071	mg/Kg		06/27/20 09:35	07/01/20 21:54	1
Chromium	ND		0.20	0.076	mg/Kg		06/27/20 09:35	07/01/20 21:54	1
Lead	ND		0.15	0.018	mg/Kg		06/27/20 09:35	07/01/20 21:54	1
Selenium	ND		0.50	0.13	mg/Kg		06/27/20 09:35	07/01/20 21:54	1

Lab Sample ID: MB 280-500182/1-A
Matrix: Solid
Analysis Batch: 501285

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 500182

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.10	0.0094	mg/Kg		06/27/20 09:35	07/06/20 13:47	1

Lab Sample ID: LCS 280-500182/2-A
Matrix: Solid
Analysis Batch: 500895

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500182
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	20.0	19.7		mg/Kg		99	83 - 111
Barium	20.0	20.6	^	mg/Kg		103	86 - 120
Chromium	20.0	20.1		mg/Kg		100	87 - 121
Lead	20.0	20.4		mg/Kg		102	81 - 125
Selenium	20.0	19.8		mg/Kg		99	78 - 108

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 280-500182/2-A
Matrix: Solid
Analysis Batch: 501285

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500182
%Rec. Limits

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Cadmium	20.0	20.3		mg/Kg		102	85 - 109

Lab Sample ID: 280-137854-3 MS
Matrix: Solid
Analysis Batch: 500895

Client Sample ID: CDOT I270 Env-05/06_2020-SB-24-7-9
Prep Type: Total/NA
Prep Batch: 500182
%Rec. Limits

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	2.6		18.4	20.1		mg/Kg	☼	95	83 - 111
Barium	280	^ F2	18.4	279	^ 4	mg/Kg	☼	-0.7	86 - 120
Chromium	7.5		18.4	27.1		mg/Kg	☼	106	87 - 121
Lead	140		18.4	133	4	mg/Kg	☼	-29	81 - 125
Selenium	0.20	J	18.4	17.9		mg/Kg	☼	96	78 - 108

Lab Sample ID: 280-137854-3 MS
Matrix: Solid
Analysis Batch: 501285

Client Sample ID: CDOT I270 Env-05/06_2020-SB-24-7-9
Prep Type: Total/NA
Prep Batch: 500182
%Rec. Limits

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cadmium	0.39		18.4	19.2		mg/Kg	☼	102	85 - 109

Lab Sample ID: 280-137854-3 MSD
Matrix: Solid
Analysis Batch: 500895

Client Sample ID: CDOT I270 Env-05/06_2020-SB-24-7-9
Prep Type: Total/NA
Prep Batch: 500182
%Rec. RPD Limit

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	2.6		21.2	22.8		mg/Kg	☼	95	83 - 111	12	20
Barium	280	^ F2	21.2	157	^ 4 F2	mg/Kg	☼	-573	86 - 120	56	20
Chromium	7.5		21.2	30.7		mg/Kg	☼	109	87 - 121	13	20
Lead	140		21.2	147	4	mg/Kg	☼	39	81 - 125	10	20
Selenium	0.20	J	21.2	20.2		mg/Kg	☼	94	78 - 108	12	20

Lab Sample ID: 280-137854-3 MSD
Matrix: Solid
Analysis Batch: 501285

Client Sample ID: CDOT I270 Env-05/06_2020-SB-24-7-9
Prep Type: Total/NA
Prep Batch: 500182
%Rec. RPD Limit

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Cadmium	0.39		21.2	22.0		mg/Kg	☼	102	85 - 109	14	20

Lab Sample ID: MB 280-500186/1-A
Matrix: Water
Analysis Batch: 500670

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 500186

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.33	ug/L		06/26/20 09:10	06/30/20 08:58	1
Barium	ND		1.0	0.29	ug/L		06/26/20 09:10	06/30/20 08:58	1
Chromium	ND		2.0	0.50	ug/L		06/26/20 09:10	06/30/20 08:58	1
Lead	ND		1.0	0.18	ug/L		06/26/20 09:10	06/30/20 08:58	1
Selenium	ND		5.0	0.37	ug/L		06/26/20 09:10	06/30/20 08:58	1
Silver	ND		5.0	0.033	ug/L		06/26/20 09:10	06/30/20 08:58	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 280-500186/1-A
Matrix: Water
Analysis Batch: 501285

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 500186

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.27	ug/L		06/26/20 09:10	07/06/20 13:10	1

Lab Sample ID: LCS 280-500186/2-A
Matrix: Water
Analysis Batch: 500670

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500186

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	40.0	38.8		ug/L		97	85 - 117
Barium	40.0	40.2		ug/L		100	85 - 118
Chromium	40.0	39.6		ug/L		99	84 - 121
Lead	40.0	40.4		ug/L		101	85 - 118
Selenium	40.0	38.2		ug/L		95	77 - 122
Silver	40.0	38.1		ug/L		95	85 - 115

Lab Sample ID: LCS 280-500186/2-A
Matrix: Water
Analysis Batch: 501285

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500186

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Cadmium	40.0	42.2		ug/L		105	85 - 115

Lab Sample ID: 280-137854-1 MS
Matrix: Water
Analysis Batch: 500670

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-GW
Prep Type: Total/NA
Prep Batch: 500186

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	54		40.0	90.0		ug/L		91	85 - 117
Barium	3700		40.0	3630	4	ug/L		-281	85 - 118
Chromium	76		40.0	114		ug/L		94	84 - 121
Lead	120		40.0	157		ug/L		89	85 - 118
Selenium	3.2	J	40.0	38.2		ug/L		87	77 - 122
Silver	0.43	J	40.0	38.3		ug/L		95	85 - 115

Lab Sample ID: 280-137854-1 MS
Matrix: Water
Analysis Batch: 501285

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-GW
Prep Type: Total/NA
Prep Batch: 500186

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cadmium	ND		40.0	42.2		ug/L		106	85 - 115

Lab Sample ID: 280-137854-1 MSD
Matrix: Water
Analysis Batch: 500670

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-GW
Prep Type: Total/NA
Prep Batch: 500186

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	54		40.0	92.3		ug/L		96	85 - 117	3	20
Barium	3700		40.0	3800	4	ug/L		148	85 - 118	5	20
Chromium	76		40.0	118		ug/L		105	84 - 121	4	20
Lead	120		40.0	160		ug/L		98	85 - 118	2	20
Selenium	3.2	J	40.0	40.0		ug/L		92	77 - 122	4	20

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 280-137854-1 MSD
Matrix: Water
Analysis Batch: 500670

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-GW
Prep Type: Total/NA
Prep Batch: 500186

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silver	0.43	J	40.0	39.8		ug/L		98	85 - 115	4	20

Lab Sample ID: 280-137854-1 MSD
Matrix: Water
Analysis Batch: 501285

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-GW
Prep Type: Total/NA
Prep Batch: 500186

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	ND		40.0	44.5		ug/L		111	85 - 115	5	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 280-501175/1-A
Matrix: Water
Analysis Batch: 501394

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 501175

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.027	ug/L		07/07/20 09:30	07/07/20 15:50	1

Lab Sample ID: LCS 280-501175/2-A
Matrix: Water
Analysis Batch: 501394

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 501175

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	5.07		ug/L		101	84 - 120

Lab Sample ID: LCSD 280-501175/3-A
Matrix: Water
Analysis Batch: 501394

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 501175

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	5.00	5.13		ug/L		103	84 - 120	1	15

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 280-500708/1-A
Matrix: Solid
Analysis Batch: 500950

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 500708

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		17	5.5	ug/Kg		07/01/20 13:20	07/01/20 16:48	1

Lab Sample ID: LCS 280-500708/2-A
Matrix: Solid
Analysis Batch: 500950

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 500708

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	333	354		ug/Kg		106	87 - 111

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: LCSD 280-500708/3-A
Matrix: Solid
Analysis Batch: 500950

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 500708

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	333	348		ug/Kg		105	87 - 111	2	20

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

GC/MS VOA

Prep Batch: 499554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137854-3	CDOT I270 Env-05/06_2020-SB-24-7-9	Total/NA	Solid	5035	
280-137854-4	CDOT I270 Env-05/06_2020-SB-23-5-7	Total/NA	Solid	5035	
280-137854-5	CDOT I270 Env-05/06_2020-SB-23-20-22	Total/NA	Solid	5035	
280-137854-6	TRIP BLANK 2	Total/NA	Solid	5035	
MB 280-499554/3-A	Method Blank	Total/NA	Solid	5035	
LCS 280-499554/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-499554/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 499557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137854-3	CDOT I270 Env-05/06_2020-SB-24-7-9	Total/NA	Solid	8260B	499554
280-137854-4	CDOT I270 Env-05/06_2020-SB-23-5-7	Total/NA	Solid	8260B	499554
280-137854-5	CDOT I270 Env-05/06_2020-SB-23-20-22	Total/NA	Solid	8260B	499554
280-137854-6	TRIP BLANK 2	Total/NA	Solid	8260B	499554
MB 280-499554/3-A	Method Blank	Total/NA	Solid	8260B	499554
LCS 280-499554/1-A	Lab Control Sample	Total/NA	Solid	8260B	499554
LCSD 280-499554/2-A	Lab Control Sample Dup	Total/NA	Solid	8260B	499554

Analysis Batch: 500231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137854-1	CDOT I270 Env-05/06_2020-SB-19-GW	Total/NA	Water	8260B	
280-137854-2	CDOT I270 Env-05/06_2020-SB-TB-06	Total/NA	Water	8260B	
MB 280-500231/10	Method Blank	Total/NA	Water	8260B	
LCS 280-500231/5	Lab Control Sample	Total/NA	Water	8260B	
LCSD 280-500231/6	Lab Control Sample Dup	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 499759

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137854-1	CDOT I270 Env-05/06_2020-SB-19-GW	Total/NA	Water	3520C	
MB 280-499759/1-A	Method Blank	Total/NA	Water	3520C	
LCS 280-499759/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 280-499759/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Prep Batch: 500214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137854-3	CDOT I270 Env-05/06_2020-SB-24-7-9	Total/NA	Solid	3550C	
280-137854-4	CDOT I270 Env-05/06_2020-SB-23-5-7	Total/NA	Solid	3550C	
280-137854-5	CDOT I270 Env-05/06_2020-SB-23-20-22	Total/NA	Solid	3550C	
MB 280-500214/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 280-500214/2-A	Lab Control Sample	Total/NA	Solid	3550C	
280-137854-5 MS	CDOT I270 Env-05/06_2020-SB-23-20-22	Total/NA	Solid	3550C	
280-137854-5 MSD	CDOT I270 Env-05/06_2020-SB-23-20-22	Total/NA	Solid	3550C	

Analysis Batch: 501084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137854-1	CDOT I270 Env-05/06_2020-SB-19-GW	Total/NA	Water	8270D	499759
MB 280-499759/1-A	Method Blank	Total/NA	Water	8270D	499759
LCS 280-499759/2-A	Lab Control Sample	Total/NA	Water	8270D	499759
LCSD 280-499759/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	499759

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

GC/MS Semi VOA

Analysis Batch: 501478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137854-3	CDOT I270 Env-05/06_2020-SB-24-7-9	Total/NA	Solid	8270D	500214
280-137854-4	CDOT I270 Env-05/06_2020-SB-23-5-7	Total/NA	Solid	8270D	500214
280-137854-5	CDOT I270 Env-05/06_2020-SB-23-20-22	Total/NA	Solid	8270D	500214
MB 280-500214/1-A	Method Blank	Total/NA	Solid	8270D	500214
LCS 280-500214/2-A	Lab Control Sample	Total/NA	Solid	8270D	500214
280-137854-5 MS	CDOT I270 Env-05/06_2020-SB-23-20-22	Total/NA	Solid	8270D	500214
280-137854-5 MSD	CDOT I270 Env-05/06_2020-SB-23-20-22	Total/NA	Solid	8270D	500214

GC VOA

Analysis Batch: 499873

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137854-1	CDOT I270 Env-05/06_2020-SB-19-GW	Total/NA	Water	8015C	
280-137854-2	CDOT I270 Env-05/06_2020-SB-TB-06	Total/NA	Water	8015C	
MB 280-499873/36	Method Blank	Total/NA	Water	8015C	
LCS 280-499873/34	Lab Control Sample	Total/NA	Water	8015C	
LCSD 280-499873/35	Lab Control Sample Dup	Total/NA	Water	8015C	

Prep Batch: 500304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137854-3	CDOT I270 Env-05/06_2020-SB-24-7-9	Total/NA	Solid	5035	
280-137854-4	CDOT I270 Env-05/06_2020-SB-23-5-7	Total/NA	Solid	5035	
280-137854-5	CDOT I270 Env-05/06_2020-SB-23-20-22	Total/NA	Solid	5035	
280-137854-6	TRIP BLANK 2	Total/NA	Solid	5035	
MB 280-500304/3-A	Method Blank	Total/NA	Solid	5035	
LCS 280-500304/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-500304/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 500486

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137854-3	CDOT I270 Env-05/06_2020-SB-24-7-9	Total/NA	Solid	8015C	500304
280-137854-4	CDOT I270 Env-05/06_2020-SB-23-5-7	Total/NA	Solid	8015C	500304
280-137854-5	CDOT I270 Env-05/06_2020-SB-23-20-22	Total/NA	Solid	8015C	500304
280-137854-6	TRIP BLANK 2	Total/NA	Solid	8015C	500304
MB 280-500304/3-A	Method Blank	Total/NA	Solid	8015C	500304
LCS 280-500304/1-A	Lab Control Sample	Total/NA	Solid	8015C	500304
LCSD 280-500304/2-A	Lab Control Sample Dup	Total/NA	Solid	8015C	500304

GC Semi VOA

Prep Batch: 499577

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137854-1	CDOT I270 Env-05/06_2020-SB-19-GW	Total/NA	Water	3510C	
MB 280-499577/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-499577/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCS 280-499577/4-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 280-499577/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
LCSD 280-499577/5-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Prep Batch: 499791

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137854-1	CDOT I270 Env-05/06_2020-SB-19-GW	Total/NA	Water	3510C	

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QC Association Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

GC Semi VOA (Continued)

Prep Batch: 499791 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-499791/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-499791/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCS 280-499791/4-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 280-499791/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
LCSD 280-499791/5-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Prep Batch: 500213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137854-3	CDOT I270 Env-05/06_2020-SB-24-7-9	Total/NA	Solid	3546	
280-137854-4	CDOT I270 Env-05/06_2020-SB-23-5-7	Total/NA	Solid	3546	
280-137854-5	CDOT I270 Env-05/06_2020-SB-23-20-22	Total/NA	Solid	3546	
MB 280-500213/1-A	Method Blank	Total/NA	Solid	3546	
LCS 280-500213/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCS 280-500213/3-A	Lab Control Sample	Total/NA	Solid	3546	

Analysis Batch: 500220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137854-1	CDOT I270 Env-05/06_2020-SB-19-GW	Total/NA	Water	8081B	499791
MB 280-499791/1-A	Method Blank	Total/NA	Water	8081B	499791
LCS 280-499791/2-A	Lab Control Sample	Total/NA	Water	8081B	499791
LCSD 280-499791/3-A	Lab Control Sample Dup	Total/NA	Water	8081B	499791

Analysis Batch: 500853

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137854-1	CDOT I270 Env-05/06_2020-SB-19-GW	Total/NA	Water	8015C	499577
MB 280-499577/1-A	Method Blank	Total/NA	Water	8015C	499577
LCS 280-499577/2-A	Lab Control Sample	Total/NA	Water	8015C	499577
LCS 280-499577/4-A	Lab Control Sample	Total/NA	Water	8015C	499577
LCSD 280-499577/3-A	Lab Control Sample Dup	Total/NA	Water	8015C	499577
LCSD 280-499577/5-A	Lab Control Sample Dup	Total/NA	Water	8015C	499577

Analysis Batch: 502028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137854-1	CDOT I270 Env-05/06_2020-SB-19-GW	Total/NA	Water	8082A	499791
MB 280-499791/1-A	Method Blank	Total/NA	Water	8082A	499791
LCS 280-499791/4-A	Lab Control Sample	Total/NA	Water	8082A	499791
LCSD 280-499791/5-A	Lab Control Sample Dup	Total/NA	Water	8082A	499791

Analysis Batch: 502159

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137854-3	CDOT I270 Env-05/06_2020-SB-24-7-9	Total/NA	Solid	8015C	500213
280-137854-4	CDOT I270 Env-05/06_2020-SB-23-5-7	Total/NA	Solid	8015C	500213
280-137854-5	CDOT I270 Env-05/06_2020-SB-23-20-22	Total/NA	Solid	8015C	500213
MB 280-500213/1-A	Method Blank	Total/NA	Solid	8015C	500213
LCS 280-500213/2-A	Lab Control Sample	Total/NA	Solid	8015C	500213
LCS 280-500213/3-A	Lab Control Sample	Total/NA	Solid	8015C	500213

QC Association Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Metals

Prep Batch: 500181

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137854-3	CDOT I270 Env-05/06_2020-SB-24-7-9	Total/NA	Solid	3050B-Sb	
280-137854-4	CDOT I270 Env-05/06_2020-SB-23-5-7	Total/NA	Solid	3050B-Sb	
280-137854-5	CDOT I270 Env-05/06_2020-SB-23-20-22	Total/NA	Solid	3050B-Sb	
MB 280-500181/1-A	Method Blank	Total/NA	Solid	3050B-Sb	
LCS 280-500181/2-A	Lab Control Sample	Total/NA	Solid	3050B-Sb	
280-137854-3 MS	CDOT I270 Env-05/06_2020-SB-24-7-9	Total/NA	Solid	3050B-Sb	
280-137854-3 MSD	CDOT I270 Env-05/06_2020-SB-24-7-9	Total/NA	Solid	3050B-Sb	

Prep Batch: 500182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137854-3	CDOT I270 Env-05/06_2020-SB-24-7-9	Total/NA	Solid	3050B	
280-137854-4	CDOT I270 Env-05/06_2020-SB-23-5-7	Total/NA	Solid	3050B	
280-137854-5	CDOT I270 Env-05/06_2020-SB-23-20-22	Total/NA	Solid	3050B	
MB 280-500182/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-500182/2-A	Lab Control Sample	Total/NA	Solid	3050B	
280-137854-3 MS	CDOT I270 Env-05/06_2020-SB-24-7-9	Total/NA	Solid	3050B	
280-137854-3 MSD	CDOT I270 Env-05/06_2020-SB-24-7-9	Total/NA	Solid	3050B	

Prep Batch: 500186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137854-1	CDOT I270 Env-05/06_2020-SB-19-GW	Total/NA	Water	3020A	
MB 280-500186/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-500186/2-A	Lab Control Sample	Total/NA	Water	3020A	
280-137854-1 MS	CDOT I270 Env-05/06_2020-SB-19-GW	Total/NA	Water	3020A	
280-137854-1 MSD	CDOT I270 Env-05/06_2020-SB-19-GW	Total/NA	Water	3020A	

Analysis Batch: 500670

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137854-1	CDOT I270 Env-05/06_2020-SB-19-GW	Total/NA	Water	6020A	500186
280-137854-3	CDOT I270 Env-05/06_2020-SB-24-7-9	Total/NA	Solid	6020A	500181
280-137854-4	CDOT I270 Env-05/06_2020-SB-23-5-7	Total/NA	Solid	6020A	500181
280-137854-5	CDOT I270 Env-05/06_2020-SB-23-20-22	Total/NA	Solid	6020A	500181
MB 280-500181/1-A	Method Blank	Total/NA	Solid	6020A	500181
MB 280-500186/1-A	Method Blank	Total/NA	Water	6020A	500186
LCS 280-500181/2-A	Lab Control Sample	Total/NA	Solid	6020A	500181
LCS 280-500186/2-A	Lab Control Sample	Total/NA	Water	6020A	500186
280-137854-1 MS	CDOT I270 Env-05/06_2020-SB-19-GW	Total/NA	Water	6020A	500186
280-137854-1 MSD	CDOT I270 Env-05/06_2020-SB-19-GW	Total/NA	Water	6020A	500186
280-137854-3 MS	CDOT I270 Env-05/06_2020-SB-24-7-9	Total/NA	Solid	6020A	500181
280-137854-3 MSD	CDOT I270 Env-05/06_2020-SB-24-7-9	Total/NA	Solid	6020A	500181

Prep Batch: 500708

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137854-3	CDOT I270 Env-05/06_2020-SB-24-7-9	Total/NA	Solid	7471B	
280-137854-4	CDOT I270 Env-05/06_2020-SB-23-5-7	Total/NA	Solid	7471B	
280-137854-5	CDOT I270 Env-05/06_2020-SB-23-20-22	Total/NA	Solid	7471B	
MB 280-500708/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 280-500708/2-A	Lab Control Sample	Total/NA	Solid	7471B	
LCSD 280-500708/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	

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QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Metals

Analysis Batch: 500895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137854-3	CDOT I270 Env-05/06_2020-SB-24-7-9	Total/NA	Solid	6020A	500182
280-137854-4	CDOT I270 Env-05/06_2020-SB-23-5-7	Total/NA	Solid	6020A	500182
280-137854-5	CDOT I270 Env-05/06_2020-SB-23-20-22	Total/NA	Solid	6020A	500182
MB 280-500182/1-A	Method Blank	Total/NA	Solid	6020A	500182
LCS 280-500182/2-A	Lab Control Sample	Total/NA	Solid	6020A	500182
280-137854-3 MS	CDOT I270 Env-05/06_2020-SB-24-7-9	Total/NA	Solid	6020A	500182
280-137854-3 MSD	CDOT I270 Env-05/06_2020-SB-24-7-9	Total/NA	Solid	6020A	500182

Analysis Batch: 500950

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137854-3	CDOT I270 Env-05/06_2020-SB-24-7-9	Total/NA	Solid	7471B	500708
280-137854-4	CDOT I270 Env-05/06_2020-SB-23-5-7	Total/NA	Solid	7471B	500708
280-137854-5	CDOT I270 Env-05/06_2020-SB-23-20-22	Total/NA	Solid	7471B	500708
MB 280-500708/1-A	Method Blank	Total/NA	Solid	7471B	500708
LCS 280-500708/2-A	Lab Control Sample	Total/NA	Solid	7471B	500708
LCSD 280-500708/3-A	Lab Control Sample Dup	Total/NA	Solid	7471B	500708

Prep Batch: 501175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137854-1	CDOT I270 Env-05/06_2020-SB-19-GW	Total/NA	Water	7470A	
MB 280-501175/1-A	Method Blank	Total/NA	Water	7470A	
LCS 280-501175/2-A	Lab Control Sample	Total/NA	Water	7470A	
LCSD 280-501175/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	

Analysis Batch: 501285

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137854-1	CDOT I270 Env-05/06_2020-SB-19-GW	Total/NA	Water	6020A	500186
280-137854-3	CDOT I270 Env-05/06_2020-SB-24-7-9	Total/NA	Solid	6020A	500182
280-137854-4	CDOT I270 Env-05/06_2020-SB-23-5-7	Total/NA	Solid	6020A	500182
280-137854-5	CDOT I270 Env-05/06_2020-SB-23-20-22	Total/NA	Solid	6020A	500182
MB 280-500182/1-A	Method Blank	Total/NA	Solid	6020A	500182
MB 280-500186/1-A	Method Blank	Total/NA	Water	6020A	500186
LCS 280-500182/2-A	Lab Control Sample	Total/NA	Solid	6020A	500182
LCS 280-500186/2-A	Lab Control Sample	Total/NA	Water	6020A	500186
280-137854-1 MS	CDOT I270 Env-05/06_2020-SB-19-GW	Total/NA	Water	6020A	500186
280-137854-1 MSD	CDOT I270 Env-05/06_2020-SB-19-GW	Total/NA	Water	6020A	500186
280-137854-3 MS	CDOT I270 Env-05/06_2020-SB-24-7-9	Total/NA	Solid	6020A	500182
280-137854-3 MSD	CDOT I270 Env-05/06_2020-SB-24-7-9	Total/NA	Solid	6020A	500182

Analysis Batch: 501394

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137854-1	CDOT I270 Env-05/06_2020-SB-19-GW	Total/NA	Water	7470A	501175
MB 280-501175/1-A	Method Blank	Total/NA	Water	7470A	501175
LCS 280-501175/2-A	Lab Control Sample	Total/NA	Water	7470A	501175
LCSD 280-501175/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	501175

General Chemistry

Analysis Batch: 499644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137854-3	CDOT I270 Env-05/06_2020-SB-24-7-9	Total/NA	Solid	Moisture	

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QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

General Chemistry (Continued)

Analysis Batch: 499644 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137854-4	CDOT I270 Env-05/06_2020-SB-23-5-7	Total/NA	Solid	Moisture	
280-137854-5	CDOT I270 Env-05/06_2020-SB-23-20-22	Total/NA	Solid	Moisture	

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

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Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-19-GW

Lab Sample ID: 280-137854-1

Date Collected: 06/17/20 23:00

Matrix: Water

Date Received: 06/19/20 12:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	500231	06/26/20 10:39	AJP	TAL DEN
Total/NA	Prep	3520C			1001.4 mL	1 mL	499759	06/23/20 11:27	JNM	TAL DEN
Total/NA	Analysis	8270D		1			501084	07/04/20 01:04	AJE	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	499873	06/24/20 07:56	GO	TAL DEN
Total/NA	Prep	3510C			988 mL	1 mL	499577	06/22/20 06:45	JT	TAL DEN
Total/NA	Analysis	8015C		1			500853	07/02/20 03:00	MAM	TAL DEN
Total/NA	Prep	3510C			242.1 mL	5 mL	499791	06/23/20 13:38	NMC	TAL DEN
Total/NA	Analysis	8081B		1			500220	06/26/20 14:24	MD	TAL DEN
Total/NA	Prep	3510C			242.1 mL	5 mL	499791	06/23/20 13:38	NMC	TAL DEN
Total/NA	Analysis	8082A		1	1 mL	1.0 mL	502028	07/14/20 12:21	MAM	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	500186	06/26/20 09:10	NK	TAL DEN
Total/NA	Analysis	6020A		1			500670	06/30/20 09:06	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	500186	06/26/20 09:10	NK	TAL DEN
Total/NA	Analysis	6020A		1			501285	07/06/20 13:18	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	501175	07/07/20 09:30	MRJ	TAL DEN
Total/NA	Analysis	7470A		1			501394	07/07/20 16:02	MRJ	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-TB-06

Lab Sample ID: 280-137854-2

Date Collected: 06/19/20 08:30

Matrix: Water

Date Received: 06/19/20 12:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	500231	06/26/20 15:59	AJP	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	499873	06/24/20 07:17	GO	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-24-7-9

Lab Sample ID: 280-137854-3

Date Collected: 06/19/20 09:25

Matrix: Solid

Date Received: 06/19/20 12:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			499644	06/22/20 11:25	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-24-7-9

Lab Sample ID: 280-137854-3

Date Collected: 06/19/20 09:25

Matrix: Solid

Date Received: 06/19/20 12:56

Percent Solids: 92.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.708 g	5 mL	499554	06/19/20 09:25	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	499557	06/21/20 17:50	GPM	TAL DEN
Total/NA	Prep	3550C			32.4 g	1 mL	500214	06/26/20 06:45	JT	TAL DEN
Total/NA	Analysis	8270D		10			501478	07/08/20 18:04	AJE	TAL DEN
Total/NA	Prep	5035			3.701 g	5 mL	500304	06/19/20 09:25	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	500486	06/29/20 13:53	CAS	TAL DEN
Total/NA	Prep	3546			16.6 g	1 mL	500213	06/26/20 06:37	JT	TAL DEN
Total/NA	Analysis	8015C		1			502159	07/15/20 03:08	MAM	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-24-7-9

Lab Sample ID: 280-137854-3

Date Collected: 06/19/20 09:25

Matrix: Solid

Date Received: 06/19/20 12:56

Percent Solids: 92.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B-Sb			1.022 g	100 mL	500181	06/27/20 10:55	NK	TAL DEN
Total/NA	Analysis	6020A		1			500670	06/30/20 11:56	LMT	TAL DEN
Total/NA	Prep	3050B			1.109 g	100 mL	500182	06/27/20 09:35	NK	TAL DEN
Total/NA	Analysis	6020A		1			500895	07/01/20 22:02	LMT	TAL DEN
Total/NA	Prep	3050B			1.109 g	100 mL	500182	06/27/20 09:35	NK	TAL DEN
Total/NA	Analysis	6020A		1			501285	07/06/20 13:54	LMT	TAL DEN
Total/NA	Prep	7471B			.58 g	50 mL	500708	07/01/20 13:20	AL	TAL DEN
Total/NA	Analysis	7471B		1			500950	07/01/20 17:31	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-5-7

Lab Sample ID: 280-137854-4

Date Collected: 06/19/20 10:30

Matrix: Solid

Date Received: 06/19/20 12:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			499644	06/22/20 11:25	DLB	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-5-7

Lab Sample ID: 280-137854-4

Date Collected: 06/19/20 10:30

Matrix: Solid

Date Received: 06/19/20 12:56

Percent Solids: 85.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.701 g	5 mL	499554	06/19/20 10:30	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	499557	06/21/20 18:12	GPM	TAL DEN
Total/NA	Prep	3550C			32.5 g	1 mL	500214	06/26/20 06:45	JT	TAL DEN
Total/NA	Analysis	8270D		1			501478	07/08/20 18:33	AJE	TAL DEN
Total/NA	Prep	5035			4.291 g	5 mL	500304	06/19/20 10:30	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	500486	06/29/20 14:13	CAS	TAL DEN
Total/NA	Prep	3546			15.3 g	1 mL	500213	06/26/20 06:37	JT	TAL DEN
Total/NA	Analysis	8015C		1			502159	07/15/20 03:30	MAM	TAL DEN
Total/NA	Prep	3050B-Sb			1.202 g	100 mL	500181	06/27/20 10:55	NK	TAL DEN
Total/NA	Analysis	6020A		1			500670	06/30/20 12:16	LMT	TAL DEN
Total/NA	Prep	3050B			1.111 g	100 mL	500182	06/27/20 09:35	NK	TAL DEN
Total/NA	Analysis	6020A		1			500895	07/01/20 22:20	LMT	TAL DEN
Total/NA	Prep	3050B			1.111 g	100 mL	500182	06/27/20 09:35	NK	TAL DEN
Total/NA	Analysis	6020A		1			501285	07/06/20 14:16	LMT	TAL DEN
Total/NA	Prep	7471B			.52 g	50 mL	500708	07/01/20 13:20	AL	TAL DEN
Total/NA	Analysis	7471B		1			500950	07/01/20 17:34	AL	TAL DEN

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-20-22

Lab Sample ID: 280-137854-5

Date Collected: 06/19/20 11:20

Matrix: Solid

Date Received: 06/19/20 12:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			499644	06/22/20 11:25	DLB	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Client Sample ID: CDOT I270 Env-05/06_2020-SB-23-20-22

Lab Sample ID: 280-137854-5

Date Collected: 06/19/20 11:20

Matrix: Solid

Date Received: 06/19/20 12:56

Percent Solids: 95.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.672 g	5 mL	499554	06/19/20 11:20	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	499557	06/21/20 18:35	GPM	TAL DEN
Total/NA	Prep	3550C			32.8 g	1 mL	500214	06/26/20 06:45	JT	TAL DEN
Total/NA	Analysis	8270D		1			501478	07/08/20 19:02	AJE	TAL DEN
Total/NA	Prep	5035			4.494 g	5 mL	500304	06/19/20 11:20	AAR	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	500486	06/29/20 14:33	CAS	TAL DEN
Total/NA	Prep	3546			15.3 g	1 mL	500213	06/26/20 06:37	JT	TAL DEN
Total/NA	Analysis	8015C		1			502159	07/15/20 03:51	MAM	TAL DEN
Total/NA	Prep	3050B-Sb			1.214 g	100 mL	500181	06/27/20 10:55	NK	TAL DEN
Total/NA	Analysis	6020A		1			500670	06/30/20 12:20	LMT	TAL DEN
Total/NA	Prep	3050B			1.115 g	100 mL	500182	06/27/20 09:35	NK	TAL DEN
Total/NA	Analysis	6020A		1			500895	07/01/20 22:24	LMT	TAL DEN
Total/NA	Prep	3050B			1.115 g	100 mL	500182	06/27/20 09:35	NK	TAL DEN
Total/NA	Analysis	6020A		1			501285	07/06/20 14:20	LMT	TAL DEN
Total/NA	Prep	7471B			.60 g	50 mL	500708	07/01/20 13:20	AL	TAL DEN
Total/NA	Analysis	7471B		1			500950	07/01/20 17:36	AL	TAL DEN

Client Sample ID: TRIP BLANK 2

Lab Sample ID: 280-137854-6

Date Collected: 06/19/20 11:20

Matrix: Solid

Date Received: 06/19/20 12:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	499554	06/19/20 11:20	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	499557	06/21/20 14:48	GPM	TAL DEN
Total/NA	Prep	5035			5 g	5 mL	500304	06/19/20 11:20	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	500486	06/29/20 14:53	CAS	TAL DEN

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Interchange Improvements

Job ID: 280-137854-1

Laboratory: Eurofins TestAmerica, Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21
A2LA	ISO/IEC 17025	2907.01	10-31-21
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	02-08-21
Arizona	State	AZ0713	12-20-20
Arkansas DEQ	State	19-047-0	06-01-21
California	State	2513	01-08-21
Connecticut	State	PH-0686	09-30-20
Florida	NELAP	E87667-57	07-01-21
Georgia	State	4025-011	01-09-21
Illinois	NELAP	2000172019-1	04-30-21
Iowa	State	IA#370	12-01-20
Kansas	NELAP	E-10166	04-30-21
Louisiana	NELAP	30785	06-30-14 *
Louisiana	NELAP	30785	06-30-21
Maine	State	2019011 (231)	03-03-21
Minnesota	NELAP	1788752	12-31-20
Nevada	State	CO000262020-1	07-31-20
New Hampshire	NELAP	205319	04-29-21
New Jersey	NELAP	190002	06-30-21
New York	NELAP	59923	04-01-21
North Carolina (WW/SW)	State	358	12-31-20
North Dakota	State	R-034	01-08-21
Oklahoma	State	2018-006	08-31-20
Oregon	NELAP	4025-011	01-08-21
Pennsylvania	NELAP	013	07-20-20
South Carolina	State	72002001	01-08-21
Texas	NELAP	T104704183-19-17	09-30-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-18-00099	03-26-21
Utah	NELAP	CO000262019-11	07-31-20
Virginia	NELAP	10490	06-14-21
Washington	State	C583-19	08-05-20
West Virginia DEP	State	354	11-30-20
Wisconsin	State	999615430	08-31-20
Wyoming (UST)	A2LA	2907.01	10-31-21

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Chain of Custody Record

Client Information Client Contact: Mr. Jon Russ Company: Jacobs Engineering Group, Inc. Address: 707 17th Street, Suite 2400 City: Denver State, Zip: CO, 80202 Phone: 720 286 3385 Email: jon.russ@jacobs.com Project Name: CDOT I-270 Interchange Improvements Site:		Lab PM: Bandy, Darlene F E-Mail: darlene.bandy@teslamerica.com Carrier Tracking No(s): COC No: 280-99270-29871.8 Page: Page: Job #:				
Due Date Requested: TAT Requested (days): Standard TAT PO #: Purchase Order not required WO #:		Analysis Requested Total Number of Containers:				
Sample Identification CDOT I270 Env-05/06_2020-SB-19-6-W CDOT I270 Env-05/06_2020-SB-TB-06 CDOT I270 Env-05/06_2020-SB-24-7-9 CDOT I270 Env-05/06_2020-SB-23-5-7 CDOT I270 Env-05/06_2020-SB-23-20-22 CDOT I270 Env-05/06_2020-SB- CDOT I270 Env-05/06_2020-SB- CDOT I270 Env-05/06_2020-SB- CDOT I270 Env-05/06_2020-SB- CDOT I270 Env-05/06_2020-SB-DUP CDOT I270 Env-05/06_2020-SB-MS		Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> J&FF Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/>				
Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Soil, Sludge, Other)	Preservation Code: (see instructions)	Analysis Requested	Special Instructions/Note:
6/17/20	2300	W	Water		8082A - PCBs - Soils	
6/19/20	0830	W	Water		8081B - Pesticides - Soils	
6/19/20	0925	W	Water		6020A, 7471B RCRA Metals, Moisture	
6/19/20	1030	W	Water		8015C TPH-DRO/RO/DRO, 8270D SVOCs - Soils	
6/19/20	1120	W	Water		8015C GRO - TPH - GRO - Soils	
					8260B - VOCs - Soils	
					8082A - PCBs - Soils	
					8260B - VOCs - Waters	
					8015C GRO - TPH - GRO - Waters	
					8270D - SVOCs Waters	
					8015C DRO - TPH - DRO/RO	
					6020A, 7470A RCRA Metals	
					8081B - Pesticides - Waters	
					8082A - PCBs - Waters	



Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
 Special Instructions/QC Requirements:

Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input checked="" type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Deliverable Requested: I, II, III, IV, Other (specify)	
Empty Kit Relinquished by:		Method of Shipment:	
Relinquished by:	Date/Time:	Relinquished by:	Date/Time:
Relinquished by:	Date/Time:	Relinquished by:	Date/Time:
Relinquished by:	Date/Time:	Relinquished by:	Date/Time:
Custody Seal No.: 1305129		Cooler Temperature(s) °C and Other Remarks: 11.0, 12.8, 10.6, 11.8, 6-19-20	

Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 280-137854-1

Login Number: 137854

List Source: Eurofins TestAmerica, Denver

List Number: 1

Creator: Bentley, Beau J

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	Refer to Job Narrative for details.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Consultant Work Product - Not CDOT Approved - Jacobs Engineering

ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-143333-1
Client Project/Site: CDOT I-270 Env-Dec 2020

For:

Jacobs Engineering Group, Inc.
707 17th Street
Suite 2400
Denver, Colorado 80202

Attn: Mr. Jon Russ



Authorized for release by:
12/21/2020 1:31:56 PM

Michelle Johnston, Project Manager II
(303)736-0110
Michelle.Johnston@Eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*1	LCS/LCSD RPD exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate recovery exceeds control limits

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent

Eurofins TestAmerica, Denver

Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

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Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Job ID: 280-143333-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: Jacobs Engineering Group, Inc.
Project: CDOT I-270 Env-Dec 2020
Report Number: 280-143333-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 12/2/2020 1:12 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 3.5° C and 6.8° C.

The following samples were received at the laboratory outside the required temperature criteria: CDOT I270 12-2020-SB31-9-11 (280-143333-1), CDOT I270 12-2020-SB31-15-17 (280-143333-2), CDOT I270 12-2020-SB31-GW (280-143333-3), CDOT I270 12-2020-SB30-5-10 (280-143333-4) and CDOT I270 12-2020-SB30-10-15 (280-143333-5).

The following samples contained some sediment in all containers received: CDOT I270 12-2020-SB31-GW (280-143333-3) and CDOT I270 12-2020-SB29-GW (280-143333-7). In addition, 1 of 4 amber 1L bottles for sample CDOT I270 12-2020-SB31-GW (280-143333-3) was filled to the shoulder.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples CDOT I270 12-2020-SB31-9-11 (280-143333-1), CDOT I270 12-2020-SB31-15-17 (280-143333-2), CDOT I270 12-2020-SB30-5-10 (280-143333-4), CDOT I270 12-2020-SB30-10-15 (280-143333-5) and CDOT I270 12-2020-SB29-10-12 (280-143333-6) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 12/01/2020 and 12/02/2020 and analyzed on 12/03/2020.

Methyl tert-butyl ether failed the recovery criteria high for LCSD 280-519140/2-A. Several analytes exceeded the RPD limit. Refer to the QC report for details. The LCS/LCSD percent recoveries are within control limits, except for Methyl tert-butyl ether which also failed high in the LCSD. Methyl tert-butyl was biased high in the LCSD and was not detected in the associated samples; therefore, the data have been reported and flagged accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples CDOT I270 12-2020-SB31-GW (280-143333-3), CDOT I270 12-2020-SB29-GW (280-143333-7) and TRIP BLANK 01 (280-143333-8) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 12/04/2020 and 12/05/2020.

1,2-Dichloropropane was detected in method blank MB 280-519284/10 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GC/MS)

Samples CDOT I270 12-2020-SB31-15-17 (280-143333-2), CDOT I270 12-2020-SB30-5-10 (280-143333-4), CDOT I270

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Job ID: 280-143333-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

12-2020-SB30-10-15 (280-143333-5) and CDOT I270 12-2020-SB29-10-12 (280-143333-6) were analyzed for semivolatile organic compounds (GC/MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 12/15/2020 and analyzed on 12/18/2020.

The following samples could not be thoroughly homogenized before sub-sampling was performed due to sample matrix: CDOT I270 12-2020-SB30-5-10 (280-143333-4) and CDOT I270 12-2020-SB29-10-12 (280-143333-6). The samples were clay.

2,4-Dinitrophenol and Benzaldehyde failed the recovery criteria low for LCS 280-520466/2-A. These analytes have been identified as poor performing analytes when analyzed using this method; therefore, re-extraction/re-analysis was not performed. The data have been reported and flagged accordingly.

Benzoic acid failed the recovery criteria low for the MS of sample CDOT I270 12-2020-SB31-15-17MS (280-143333-2) in batch 280-520995. Benzoic acid failed the recovery criteria low for the MSD of sample CDOT I270 12-2020-SB31-15-17MSD (280-143333-2) in batch 280-520995. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action was deemed unnecessary.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GASOLINE RANGE ORGANICS (GRO)

Samples CDOT I270 12-2020-SB31-9-11 (280-143333-1), CDOT I270 12-2020-SB31-15-17 (280-143333-2), CDOT I270 12-2020-SB30-5-10 (280-143333-4), CDOT I270 12-2020-SB30-10-15 (280-143333-5) and CDOT I270 12-2020-SB29-10-12 (280-143333-6) were analyzed for Gasoline Range Organics (GRO) in accordance with EPA SW-846 Method 8015C - GRO. The samples were prepared and analyzed on 12/15/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GASOLINE RANGE ORGANICS (GRO)

Samples CDOT I270 12-2020-SB31-GW (280-143333-3), CDOT I270 12-2020-SB29-GW (280-143333-7) and TRIP BLANK 01 (280-143333-8) were analyzed for Gasoline Range Organics (GRO) in accordance with EPA SW-846 Method 8015C - GRO. The samples were analyzed on 12/10/2020.

The following samples required decanting due to abundance of soil/solids in the vials: CDOT I270 12-2020-SB31-GW (280-143333-3) and CDOT I270 12-2020-SB29-GW (280-143333-7).

The following samples were collected in a properly preserved vials; however, the pH was outside the required criteria when verified by the laboratory: CDOT I270 12-2020-SB31-GW (280-143333-3) and CDOT I270 12-2020-SB29-GW (280-143333-7). The samples were analyzed outside the 7-day holding time specified for unpreserved samples but within the 14-day holding time specified for preserved samples.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DIESEL RANGE ORGANICS

Samples CDOT I270 12-2020-SB31-9-11 (280-143333-1), CDOT I270 12-2020-SB31-15-17 (280-143333-2), CDOT I270 12-2020-SB30-5-10 (280-143333-4), CDOT I270 12-2020-SB30-10-15 (280-143333-5) and CDOT I270 12-2020-SB29-10-12 (280-143333-6) were analyzed for diesel range organics in accordance with EPA SW-846 Method 8015C - DRO. The samples were prepared on 12/04/2020 and analyzed on 12/12/2020 and 12/15/2020.

The initial aliquot and surrogate aliquot used for extraction of the following sample was split between two extraction vessels with the routine volume of solvent added to each vessel: CDOT I270 12-2020-SB31-9-11 (280-143333-1). After the extraction, the extracts from both vessels were combined and concentrated. This was performed due to the sample matrix being low density.

The following samples could not be thoroughly homogenized before sub-sampling was performed due to sample matrix: CDOT I270 12-2020-SB31-9-11 (280-143333-1), CDOT I270 12-2020-SB31-15-17 (280-143333-2), CDOT I270 12-2020-SB30-5-10 (280-143333-4), CDOT I270 12-2020-SB30-10-15 (280-143333-5) and CDOT I270 12-2020-SB29-10-12 (280-143333-6). Sample 280-143333-1 contained vegetation and was low density. The other samples contained rocks.

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Job ID: 280-143333-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Due to the matrix, the following sample could not be concentrated to the final method required volume: CDOT I270 12-2020-SB31-9-11 (280-143333-1). The reporting limits (RLs) are elevated proportionately. The sample began to turn into a solid on the N-evap stage during sample concentration.

Due to the matrix, the following sample could not be concentrated to the final method required volume: CDOT I270 12-2020-SB30-5-10 (280-143333-4). The reporting limits (RLs) are elevated proportionately. The sample was dark and viscous.

o-Terphenyl (Surr) failed the surrogate recovery criteria low for CDOT I270 12-2020-SB30-5-10 (280-143333-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Motor Oil (C20-C38) was detected in method blank MB 280-519246/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DIESEL RANGE ORGANICS

Samples CDOT I270 12-2020-SB31-GW (280-143333-3) and CDOT I270 12-2020-SB29-GW (280-143333-7) were analyzed for Diesel Range Organics in accordance with EPA SW-846 Method 8015C - DRO. The samples were prepared on 12/05/2020 and analyzed on 12/13/2020.

The following sample is yellow in color: CDOT I270 12-2020-SB31-GW (280-143333-3).

The following sample is brown and contains sediment: CDOT I270 12-2020-SB29-GW (280-143333-7).

The peak profile present in the following sample is atypical of a hydrocarbon pattern and consists of several discrete peaks: CDOT I270 12-2020-SB29-GW (280-143333-7).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

METALS (ICPMS)

Samples CDOT I270 12-2020-SB31-15-17 (280-143333-2), CDOT I270 12-2020-SB30-5-10 (280-143333-4), CDOT I270 12-2020-SB30-10-15 (280-143333-5) and CDOT I270 12-2020-SB29-10-12 (280-143333-6) were analyzed for metals (ICPMS) in accordance with SW 846 6020A. The samples were prepared on 12/07/2020 and analyzed on 12/10/2020.

Barium and Lead failed the recovery criteria low for the MS of sample CDOT I270 12-2020-SB31-15-17MS (280-143333-2) in batch 280-520055. Barium failed the recovery criteria low for the MSD of sample CDOT I270 12-2020-SB31-15-17MSD (280-143333-2) in batch 280-520055. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action was deemed unnecessary.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP/MS)

Samples CDOT I270 12-2020-SB31-15-17 (280-143333-2), CDOT I270 12-2020-SB30-5-10 (280-143333-4), CDOT I270 12-2020-SB30-10-15 (280-143333-5) and CDOT I270 12-2020-SB29-10-12 (280-143333-6) were analyzed for Total Metals (ICP/MS) in accordance with 6020A. The samples were prepared on 12/07/2020 and analyzed on 12/10/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED METALS (ICPMS)

Samples CDOT I270 12-2020-SB31-GW (280-143333-3) and CDOT I270 12-2020-SB29-GW (280-143333-7) were analyzed for dissolved metals (ICPMS) in accordance with EPA SW-846 Methods 6020A. The samples were prepared on 12/10/2020 and analyzed on 12/11/2020.

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Job ID: 280-143333-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Barium, Dissolved was detected in method blank MB 280-519506/1-E at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Associated samples were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Chromium, Dissolved was detected in method blank MB 280-519506/1-E at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Chromium, Dissolved failed the recovery criteria high for the MSD of sample CDOT I270 12-2020-SB31-GWMSD (280-143333-3) in batch 280-520315. Chromium, Dissolved exceeded the RPD limit. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action was deemed unnecessary.

The low level continuing calibration verification (CCVL) associated with batch 280-520315 recovered above the upper control limit (130%) for Cadmium (138%D). The samples associated with this CCVL were non-detect for the affected analyte; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICPMS)

Samples CDOT I270 12-2020-SB31-GW (280-143333-3) and CDOT I270 12-2020-SB29-GW (280-143333-7) were analyzed for total metals (ICPMS) in accordance with EPA SW-846 6020A. The samples were prepared on 12/07/2020 and analyzed on 12/14/2020.

The following samples were diluted due to the nature of the sample matrix: CDOT I270 12-2020-SB31-GW (280-143333-3), CDOT I270 12-2020-SB29-GW (280-143333-7), (280-143333-E-3-C MS ^5), (280-143333-E-3-D MSD ^5), (280-143333-E-3-B PDS ^5) and (280-143333-E-3-B SD ^25). Elevated reporting limits (RLs) are provided.

Barium was detected in method blank MB 280-519270/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Arsenic, Barium and Selenium failed the recovery criteria low for the MS of sample CDOT I270 12-2020-SB31-GWMS (280-143333-3) in batch 280-520413. Chromium and Lead failed the recovery criteria high. Barium and Selenium failed the recovery criteria low for the MSD of sample CDOT I270 12-2020-SB31-GWMSD (280-143333-3) in batch 280-520413. Chromium and Lead failed the recovery criteria high. The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action was deemed unnecessary.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED MERCURY

Samples CDOT I270 12-2020-SB31-GW (280-143333-3) and CDOT I270 12-2020-SB29-GW (280-143333-7) were analyzed for dissolved mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 12/09/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Samples CDOT I270 12-2020-SB31-GW (280-143333-3) and CDOT I270 12-2020-SB29-GW (280-143333-7) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 12/04/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY (CVAA)

Samples CDOT I270 12-2020-SB31-15-17 (280-143333-2), CDOT I270 12-2020-SB30-5-10 (280-143333-4), CDOT I270 12-2020-SB30-10-15 (280-143333-5) and CDOT I270 12-2020-SB29-10-12 (280-143333-6) were analyzed for total mercury (CVAA) in accordance with EPA SW-846 Method 7471B. The samples were prepared and analyzed on 12/10/2020.

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Job ID: 280-143333-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

Samples CDOT I270 12-2020-SB31-9-11 (280-143333-1), CDOT I270 12-2020-SB31-15-17 (280-143333-2), CDOT I270 12-2020-SB30-5-10 (280-143333-4), CDOT I270 12-2020-SB30-10-15 (280-143333-5) and CDOT I270 12-2020-SB29-10-12 (280-143333-6) were analyzed for percent solids in accordance with ASTM D2216-90. The samples were analyzed on 12/04/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

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Detection Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Client Sample ID: CDOT I270 12-2020-SB31-9-11

Lab Sample ID: 280-143333-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichlorobenzene	17		7.2	2.7	ug/Kg	1	✳	8260B	Total/NA
1,4-Dichlorobenzene	9.4		7.2	0.35	ug/Kg	1	✳	8260B	Total/NA
2-Butanone (MEK)	44		29	5.6	ug/Kg	1	✳	8260B	Total/NA
Acetone	230	*1	100	51	ug/Kg	1	✳	8260B	Total/NA
Benzene	7.7		7.2	0.22	ug/Kg	1	✳	8260B	Total/NA
Carbon disulfide	4.3	J *1	7.2	2.4	ug/Kg	1	✳	8260B	Total/NA
Ethylbenzene	50		7.2	0.44	ug/Kg	1	✳	8260B	Total/NA
Isopropylbenzene	9.3		7.2	3.5	ug/Kg	1	✳	8260B	Total/NA
Methylcyclohexane	5.3	J	7.2	0.61	ug/Kg	1	✳	8260B	Total/NA
m-Xylene & p-Xylene	83		3.6	1.5	ug/Kg	1	✳	8260B	Total/NA
o-Xylene	55		3.6	0.38	ug/Kg	1	✳	8260B	Total/NA
Toluene	4.4	J	7.2	0.33	ug/Kg	1	✳	8260B	Total/NA
Gasoline Range Organics (GRO)-C6-C10	5.0		3.2	1.2	mg/Kg	1	✳	8015C	Total/NA
Diesel Range Organics [C10-C28]	13000		230	100	mg/Kg	1	✳	8015C	Total/NA
Motor Oil (C20-C38)	16000	B	680	220	mg/Kg	1	✳	8015C	Total/NA

Client Sample ID: CDOT I270 12-2020-SB31-15-17

Lab Sample ID: 280-143333-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dichlorobenzene	0.68	J	4.3	0.21	ug/Kg	1	✳	8260B	Total/NA
2-Butanone (MEK)	4.4	J	17	3.4	ug/Kg	1	✳	8260B	Total/NA
Acetone	110	*1	63	31	ug/Kg	1	✳	8260B	Total/NA
Carbon disulfide	1.6	J *1	4.3	1.4	ug/Kg	1	✳	8260B	Total/NA
Ethylbenzene	0.77	J	4.3	0.26	ug/Kg	1	✳	8260B	Total/NA
m-Xylene & p-Xylene	1.4	J	2.2	0.90	ug/Kg	1	✳	8260B	Total/NA
o-Xylene	1.3	J	2.2	0.23	ug/Kg	1	✳	8260B	Total/NA
Toluene	0.32	J	4.3	0.20	ug/Kg	1	✳	8260B	Total/NA
Hexadecane	16	J	330	13	ug/Kg	1	✳	8270D	Total/NA
Motor Oil (C20-C38)	11	J B	24	8.0	mg/Kg	1	✳	8015C	Total/NA
Arsenic	1.3		0.57	0.048	mg/Kg	1	✳	6020A	Total/NA
Silver	23	J	97	7.6	ug/Kg	1	✳	6020A	Total/NA
Barium	34	F1	0.38	0.067	mg/Kg	1	✳	6020A	Total/NA
Cadmium	0.36		0.096	0.0090	mg/Kg	1	✳	6020A	Total/NA
Chromium	3.7		0.19	0.073	mg/Kg	1	✳	6020A	Total/NA
Lead	5.8	F1	0.14	0.017	mg/Kg	1	✳	6020A	Total/NA
Selenium	0.20	J	0.48	0.13	mg/Kg	1	✳	6020A	Total/NA

Client Sample ID: CDOT I270 12-2020-SB31-GW

Lab Sample ID: 280-143333-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.5	J	10	1.9	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	0.17	J	1.0	0.15	ug/L	1		8260B	Total/NA
Ethylbenzene	0.17	J	1.0	0.16	ug/L	1		8260B	Total/NA
m-Xylene & p-Xylene	0.79	J	2.0	0.15	ug/L	1		8260B	Total/NA
o-Xylene	0.56	J	1.0	0.19	ug/L	1		8260B	Total/NA
Toluene	0.29	J	1.0	0.17	ug/L	1		8260B	Total/NA
Gasoline Range Organics (GRO)-C6-C10	17	J	25	10	ug/L	1		8015C	Total/NA
Diesel Range Organics [C10-C28]	1.3		0.25	0.033	mg/L	1		8015C	Total/NA
Motor Oil (C20-C38)	1.2		0.50	0.056	mg/L	1		8015C	Total/NA
Arsenic	170		25	1.7	ug/L	5		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Client Sample ID: CDOT I270 12-2020-SB31-GW (Continued)

Lab Sample ID: 280-143333-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	5600	B	5.0	1.5	ug/L	5		6020A	Total/NA
Cadmium	10		5.0	1.3	ug/L	5		6020A	Total/NA
Chromium	1800		10	2.5	ug/L	5		6020A	Total/NA
Lead	410		5.0	0.90	ug/L	5		6020A	Total/NA
Selenium	22	J F1	25	1.9	ug/L	5		6020A	Total/NA
Silver	3.7	J	25	0.17	ug/L	5		6020A	Total/NA
Barium, Dissolved	86	B	1.0	0.29	ug/L	1		6020A	Dissolved
Selenium, Dissolved	0.51	J	5.0	0.37	ug/L	1		6020A	Dissolved
Mercury	1.2		1.0	0.14	ug/L	1		7470A	Total/NA

Client Sample ID: CDOT I270 12-2020-SB30-5-10

Lab Sample ID: 280-143333-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	100		32	6.2	ug/Kg	1	✳	8260B	Total/NA
Acetone	560	*1	120	57	ug/Kg	1	✳	8260B	Total/NA
Benzene	1.5	J	8.0	0.24	ug/Kg	1	✳	8260B	Total/NA
Carbon disulfide	18	*1	8.0	2.7	ug/Kg	1	✳	8260B	Total/NA
Ethylbenzene	3.2	J	8.0	0.49	ug/Kg	1	✳	8260B	Total/NA
Isopropylbenzene	8.6		8.0	3.9	ug/Kg	1	✳	8260B	Total/NA
Methylcyclohexane	1.7	J	8.0	0.67	ug/Kg	1	✳	8260B	Total/NA
m-Xylene & p-Xylene	7.1		4.0	1.7	ug/Kg	1	✳	8260B	Total/NA
o-Xylene	3.7	J	4.0	0.43	ug/Kg	1	✳	8260B	Total/NA
Toluene	3.8	J	8.0	0.36	ug/Kg	1	✳	8260B	Total/NA
1,1'-Biphenyl	120	J	430	32	ug/Kg	1	✳	8270D	Total/NA
1-Methylnaphthalene	510		430	15	ug/Kg	1	✳	8270D	Total/NA
2-Methylnaphthalene	580		430	25	ug/Kg	1	✳	8270D	Total/NA
Acenaphthene	440		430	13	ug/Kg	1	✳	8270D	Total/NA
Anthracene	27	J	430	22	ug/Kg	1	✳	8270D	Total/NA
Benzo[a]anthracene	86	J	430	26	ug/Kg	1	✳	8270D	Total/NA
Benzo[a]pyrene	74	J	430	26	ug/Kg	1	✳	8270D	Total/NA
Benzo[b]fluoranthene	110	J	430	34	ug/Kg	1	✳	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	3900		430	60	ug/Kg	1	✳	8270D	Total/NA
Chrysene	110	J	430	35	ug/Kg	1	✳	8270D	Total/NA
Dibenzofuran	74	J	430	26	ug/Kg	1	✳	8270D	Total/NA
Fluoranthene	260	J	430	47	ug/Kg	1	✳	8270D	Total/NA
Fluorene	51	J	430	24	ug/Kg	1	✳	8270D	Total/NA
Hexadecane	150	J	430	17	ug/Kg	1	✳	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	45	J	430	29	ug/Kg	1	✳	8270D	Total/NA
Naphthalene	3700		430	41	ug/Kg	1	✳	8270D	Total/NA
N-Nitrosodiphenylamine	28	J	430	27	ug/Kg	1	✳	8270D	Total/NA
Phenanthrene	280	J	430	22	ug/Kg	1	✳	8270D	Total/NA
Pyrene	260	J	430	16	ug/Kg	1	✳	8270D	Total/NA
Gasoline Range Organics (GRO)-C6-C10	16		3.8	1.4	mg/Kg	1	✳	8015C	Total/NA
Diesel Range Organics [C10-C28]	210		21	9.4	mg/Kg	1	✳	8015C	Total/NA
Motor Oil (C20-C38)	330	B	62	20	mg/Kg	1	✳	8015C	Total/NA
Arsenic	10		0.62	0.052	mg/Kg	1	✳	6020A	Total/NA
Silver	170		130	10	ug/Kg	1	✳	6020A	Total/NA
Barium	280		0.41	0.073	mg/Kg	1	✳	6020A	Total/NA
Cadmium	0.64		0.10	0.0097	mg/Kg	1	✳	6020A	Total/NA
Chromium	18		0.21	0.078	mg/Kg	1	✳	6020A	Total/NA
Lead	34		0.15	0.019	mg/Kg	1	✳	6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Client Sample ID: CDOT I270 12-2020-SB30-5-10 (Continued)

Lab Sample ID: 280-143333-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Selenium	0.34	J	0.51	0.14	mg/Kg	1	☒	6020A	Total/NA
Mercury	130		24	7.7	ug/Kg	1	☒	7471B	Total/NA

Client Sample ID: CDOT I270 12-2020-SB30-10-15

Lab Sample ID: 280-143333-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dichlorobenzene	8.2		5.0	0.25	ug/Kg	1	☒	8260B	Total/NA
2-Butanone (MEK)	9.9	J	20	3.9	ug/Kg	1	☒	8260B	Total/NA
Acetone	51	J *1	72	36	ug/Kg	1	☒	8260B	Total/NA
Benzene	2.4	J	5.0	0.15	ug/Kg	1	☒	8260B	Total/NA
Carbon disulfide	7.6	*1	5.0	1.7	ug/Kg	1	☒	8260B	Total/NA
Ethylbenzene	0.74	J	5.0	0.31	ug/Kg	1	☒	8260B	Total/NA
Isopropylbenzene	6.8		5.0	2.4	ug/Kg	1	☒	8260B	Total/NA
Methylcyclohexane	2.0	J	5.0	0.42	ug/Kg	1	☒	8260B	Total/NA
m-Xylene & p-Xylene	14		2.5	1.0	ug/Kg	1	☒	8260B	Total/NA
o-Xylene	16		2.5	0.27	ug/Kg	1	☒	8260B	Total/NA
Toluene	0.58	J	5.0	0.23	ug/Kg	1	☒	8260B	Total/NA
1,4-Dichlorobenzene	29	J	350	14	ug/Kg	1	☒	8270D	Total/NA
1-Methylnaphthalene	76	J	350	12	ug/Kg	1	☒	8270D	Total/NA
2-Methylnaphthalene	100	J	350	20	ug/Kg	1	☒	8270D	Total/NA
4-Chloro-3-methylphenol	31	J	350	26	ug/Kg	1	☒	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	96	J	350	49	ug/Kg	1	☒	8270D	Total/NA
Chrysene	42	J	350	28	ug/Kg	1	☒	8270D	Total/NA
Diphenylamine	360		350	46	ug/Kg	1	☒	8270D	Total/NA
Hexadecane	140	J	350	14	ug/Kg	1	☒	8270D	Total/NA
Naphthalene	170	J	350	33	ug/Kg	1	☒	8270D	Total/NA
N-Nitrosodiphenylamine	440		350	22	ug/Kg	1	☒	8270D	Total/NA
Phenanthrene	55	J	350	18	ug/Kg	1	☒	8270D	Total/NA
Pyrene	73	J	350	13	ug/Kg	1	☒	8270D	Total/NA
Gasoline Range Organics (GRO)-C6-C10	14		2.2	0.85	mg/Kg	1	☒	8015C	Total/NA
Diesel Range Organics [C10-C28]	95		8.5	3.9	mg/Kg	1	☒	8015C	Total/NA
Motor Oil (C20-C38)	190	B	25	8.3	mg/Kg	1	☒	8015C	Total/NA
Arsenic	1.6		0.54	0.046	mg/Kg	1	☒	6020A	Total/NA
Silver	17	J	93	7.3	ug/Kg	1	☒	6020A	Total/NA
Barium	56		0.36	0.064	mg/Kg	1	☒	6020A	Total/NA
Cadmium	0.14		0.090	0.0085	mg/Kg	1	☒	6020A	Total/NA
Chromium	4.5		0.18	0.069	mg/Kg	1	☒	6020A	Total/NA
Lead	7.1		0.14	0.016	mg/Kg	1	☒	6020A	Total/NA
Selenium	0.16	J	0.45	0.12	mg/Kg	1	☒	6020A	Total/NA

Client Sample ID: CDOT I270 12-2020-SB29-10-12

Lab Sample ID: 280-143333-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO)-C6-C10	1.9	J	2.2	0.82	mg/Kg	1	☒	8015C	Total/NA
Motor Oil (C20-C38)	19	J B	29	9.5	mg/Kg	1	☒	8015C	Total/NA
Arsenic	2.0		0.55	0.046	mg/Kg	1	☒	6020A	Total/NA
Silver	34	J	120	9.2	ug/Kg	1	☒	6020A	Total/NA
Barium	130		0.37	0.064	mg/Kg	1	☒	6020A	Total/NA
Cadmium	0.13		0.091	0.0086	mg/Kg	1	☒	6020A	Total/NA
Chromium	9.1		0.18	0.069	mg/Kg	1	☒	6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Client Sample ID: CDOT I270 12-2020-SB29-10-12 (Continued)

Lab Sample ID: 280-143333-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	7.9		0.14	0.017	mg/Kg	1	☼	6020A	Total/NA
Selenium	0.25	J	0.46	0.12	mg/Kg	1	☼	6020A	Total/NA

Client Sample ID: CDOT I270 12-2020-SB29-GW

Lab Sample ID: 280-143333-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.17	J	1.0	0.15	ug/L	1		8260B	Total/NA
Gasoline Range Organics (GRO)-C6-C10	38		25	10	ug/L	1		8015C	Total/NA
Diesel Range Organics [C10-C28]	0.47		0.26	0.034	mg/L	1		8015C	Total/NA
Motor Oil (C20-C38)	0.36	J	0.52	0.058	mg/L	1		8015C	Total/NA
Arsenic	220		25	1.7	ug/L	5		6020A	Total/NA
Barium	5700	B	5.0	1.5	ug/L	5		6020A	Total/NA
Cadmium	36		5.0	1.3	ug/L	5		6020A	Total/NA
Chromium	1800		10	2.5	ug/L	5		6020A	Total/NA
Lead	1200		5.0	0.90	ug/L	5		6020A	Total/NA
Selenium	17	J	25	1.9	ug/L	5		6020A	Total/NA
Silver	5.8	J	25	0.17	ug/L	5		6020A	Total/NA
Arsenic, Dissolved	0.89	J	5.0	0.33	ug/L	1		6020A	Dissolved
Barium, Dissolved	120	B	1.0	0.29	ug/L	1		6020A	Dissolved
Chromium, Dissolved	0.56	J B	2.0	0.50	ug/L	1		6020A	Dissolved
Selenium, Dissolved	0.47	J	5.0	0.37	ug/L	1		6020A	Dissolved
Mercury	7.1		1.0	0.14	ug/L	1		7470A	Total/NA

Client Sample ID: TRIP BLANK 01

Lab Sample ID: 280-143333-8

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Method Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL DEN
8015C	Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)	SW846	TAL DEN
8015C	Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)	SW846	TAL DEN
6020A	Metals (ICP/MS)	SW846	TAL DEN
7470A	Mercury (CVAA)	SW846	TAL DEN
7471B	Mercury (CVAA)	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL DEN
3020A	Preparation, Total Metals	SW846	TAL DEN
3050B	Preparation, Metals	SW846	TAL DEN
3050B-Sb	Preparation, Metals (Antimony)	SW846	TAL DEN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL DEN
3546	Microwave Extraction	SW846	TAL DEN
3550C	Ultrasonic Extraction	SW846	TAL DEN
5030B	Purge and Trap	SW846	TAL DEN
5030C	Purge and Trap	SW846	TAL DEN
5035	Closed System Purge and Trap	SW846	TAL DEN
7470A	Preparation, Mercury	SW846	TAL DEN
7471B	Preparation, Mercury	SW846	TAL DEN
FILTRATION	Sample Filtration	None	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-143333-1	CDOT I270 12-2020-SB31-9-11	Solid	12/01/20 09:30	12/02/20 13:12	
280-143333-2	CDOT I270 12-2020-SB31-15-17	Solid	12/01/20 09:55	12/02/20 13:12	
280-143333-3	CDOT I270 12-2020-SB31-GW	Water	12/01/20 11:45	12/02/20 13:12	
280-143333-4	CDOT I270 12-2020-SB30-5-10	Solid	12/02/20 08:40	12/02/20 13:12	
280-143333-5	CDOT I270 12-2020-SB30-10-15	Solid	12/02/20 09:05	12/02/20 13:12	
280-143333-6	CDOT I270 12-2020-SB29-10-12	Solid	12/02/20 11:00	12/02/20 13:12	
280-143333-7	CDOT I270 12-2020-SB29-GW	Water	12/02/20 11:50	12/02/20 13:12	
280-143333-8	TRIP BLANK 01	Water	12/01/20 08:00	12/02/20 13:12	

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 12-2020-SB31-9-11

Date Collected: 12/01/20 09:30

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-1

Matrix: Solid

Percent Solids: 67.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		7.2	2.9	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
1,1,2,2-Tetrachloroethane	ND		7.2	0.41	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
1,1,2-Trichloroethane	ND		7.2	1.3	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
1,1,2-Trichlorotrifluoroethane	ND	*1	29	2.4	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
1,1-Dichloroethane	ND		7.2	0.30	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
1,1-Dichloroethene	ND	*1	7.2	0.85	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
1,2,3-Trichlorobenzene	ND		7.2	1.2	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
1,2,4-Trichlorobenzene	ND		7.2	1.1	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
1,2-Dibromo-3-Chloropropane	ND		14	5.3	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
1,2-Dibromoethane	ND		7.2	0.75	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
1,2-Dichlorobenzene	17		7.2	2.7	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
1,2-Dichloroethane	ND		7.2	1.0	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
1,2-Dichloropropane	ND		7.2	0.79	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
1,3-Dichlorobenzene	ND		7.2	0.69	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
1,4-Dichlorobenzene	9.4		7.2	0.35	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
1,4-Dioxane	ND		720	81	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
2-Butanone (MEK)	44		29	5.6	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
2-Hexanone	ND		29	7.1	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
4-Methyl-2-pentanone (MIBK)	ND		29	6.3	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
Acetone	230	*1	100	51	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
Benzene	7.7		7.2	0.22	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
Bromoform	ND		7.4	3.7	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
Bromomethane	ND		14	1.9	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
Carbon disulfide	4.3	J *1	7.2	2.4	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
Carbon tetrachloride	ND		7.2	2.9	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
Chlorobenzene	ND		7.2	3.0	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
Chlorobromomethane	ND		7.2	3.6	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
Chlorodibromomethane	ND		7.2	3.3	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
Chloroethane	ND		14	2.9	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
Chloroform	ND		14	0.42	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
Chloromethane	ND		14	1.1	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
cis-1,2-Dichloroethene	ND		3.6	0.29	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
cis-1,3-Dichloropropene	ND		7.2	0.14	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
Cyclohexane	ND		7.2	2.5	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
Dichlorobromomethane	ND		7.2	3.1	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
Dichlorodifluoromethane	ND		14	4.0	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
Ethylbenzene	50		7.2	0.44	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
Isopropylbenzene	9.3		7.2	3.5	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
Methyl acetate	ND	*1	14	4.0	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
Methyl tert-butyl ether	ND	**1	29	3.0	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
Methylcyclohexane	5.3	J	7.2	0.61	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
Methylene Chloride	ND	*1	7.2	2.3	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
m-Xylene & p-Xylene	83		3.6	1.5	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
o-Xylene	55		3.6	0.38	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
Styrene	ND		7.2	0.40	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
Tetrachloroethene	ND		7.2	2.8	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
Toluene	4.4	J	7.2	0.33	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
trans-1,2-Dichloroethene	ND	*1	3.6	0.56	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
trans-1,3-Dichloropropene	ND		7.2	0.12	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 12-2020-SB31-9-11

Date Collected: 12/01/20 09:30

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-1

Matrix: Solid

Percent Solids: 67.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		7.2	2.8	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
Trichlorofluoromethane	ND		14	4.6	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
Vinyl chloride	ND		7.2	1.9	ug/Kg	✳	12/01/20 09:30	12/03/20 21:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		58 - 140				12/01/20 09:30	12/03/20 21:37	1
4-Bromofluorobenzene (Surr)	102		76 - 127				12/01/20 09:30	12/03/20 21:37	1
Dibromofluoromethane (Surr)	95		75 - 121				12/01/20 09:30	12/03/20 21:37	1
Toluene-d8 (Surr)	108		80 - 126				12/01/20 09:30	12/03/20 21:37	1

Client Sample ID: CDOT I270 12-2020-SB31-15-17

Date Collected: 12/01/20 09:55

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-2

Matrix: Solid

Percent Solids: 96.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.3	1.7	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
1,1,2,2-Tetrachloroethane	ND		4.3	0.25	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
1,1,2-Trichloroethane	ND		4.3	0.76	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
1,1,2-Trichlorotrifluoroethane	ND	*1	17	1.4	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
1,1-Dichloroethane	ND		4.3	0.18	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
1,1-Dichloroethene	ND	*1	4.3	0.51	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
1,2,3-Trichlorobenzene	ND		4.3	0.70	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
1,2,4-Trichlorobenzene	ND		4.3	0.63	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
1,2-Dibromo-3-Chloropropane	ND		8.7	3.2	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
1,2-Dibromoethane	ND		4.3	0.45	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
1,2-Dichlorobenzene	ND		4.3	1.6	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
1,2-Dichloroethane	ND		4.3	0.61	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
1,2-Dichloropropane	ND		4.3	0.48	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
1,3-Dichlorobenzene	ND		4.3	0.42	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
1,4-Dichlorobenzene	0.68	J	4.3	0.21	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
1,4-Dioxane	ND		430	49	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
2-Butanone (MEK)	4.4	J	17	3.4	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
2-Hexanone	ND		17	4.2	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
4-Methyl-2-pentanone (MIBK)	ND		17	3.8	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
Acetone	110	*1	63	31	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
Benzene	ND		4.3	0.13	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
Bromoform	ND		4.4	2.2	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
Bromomethane	ND		8.7	1.2	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
Carbon disulfide	1.6	J *1	4.3	1.4	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
Carbon tetrachloride	ND		4.3	1.7	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
Chlorobenzene	ND		4.3	1.8	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
Chlorobromomethane	ND		4.3	2.1	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
Chlorodibromomethane	ND		4.3	2.0	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
Chloroethane	ND		8.7	1.7	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
Chloroform	ND		8.7	0.25	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
Chloromethane	ND		8.7	0.67	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
cis-1,2-Dichloroethene	ND		2.2	0.17	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
cis-1,3-Dichloropropene	ND		4.3	0.087	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
Cyclohexane	ND		4.3	1.5	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
Dichlorobromomethane	ND		4.3	1.9	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1
Dichlorodifluoromethane	ND		8.7	2.4	ug/Kg	✳	12/01/20 09:55	12/03/20 21:59	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 12-2020-SB31-15-17

Date Collected: 12/01/20 09:55

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-2

Matrix: Solid

Percent Solids: 96.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	0.77	J	4.3	0.26	ug/Kg	☼	12/01/20 09:55	12/03/20 21:59	1
Isopropylbenzene	ND		4.3	2.1	ug/Kg	☼	12/01/20 09:55	12/03/20 21:59	1
Methyl acetate	ND	*1	8.7	2.4	ug/Kg	☼	12/01/20 09:55	12/03/20 21:59	1
Methyl tert-butyl ether	ND	**1	17	1.8	ug/Kg	☼	12/01/20 09:55	12/03/20 21:59	1
Methylcyclohexane	ND		4.3	0.36	ug/Kg	☼	12/01/20 09:55	12/03/20 21:59	1
Methylene Chloride	ND	*1	4.3	1.4	ug/Kg	☼	12/01/20 09:55	12/03/20 21:59	1
m-Xylene & p-Xylene	1.4	J	2.2	0.90	ug/Kg	☼	12/01/20 09:55	12/03/20 21:59	1
o-Xylene	1.3	J	2.2	0.23	ug/Kg	☼	12/01/20 09:55	12/03/20 21:59	1
Styrene	ND		4.3	0.24	ug/Kg	☼	12/01/20 09:55	12/03/20 21:59	1
Tetrachloroethene	ND		4.3	1.7	ug/Kg	☼	12/01/20 09:55	12/03/20 21:59	1
Toluene	0.32	J	4.3	0.20	ug/Kg	☼	12/01/20 09:55	12/03/20 21:59	1
trans-1,2-Dichloroethene	ND	*1	2.2	0.34	ug/Kg	☼	12/01/20 09:55	12/03/20 21:59	1
trans-1,3-Dichloropropene	ND		4.3	0.072	ug/Kg	☼	12/01/20 09:55	12/03/20 21:59	1
Trichloroethene	ND		4.3	1.7	ug/Kg	☼	12/01/20 09:55	12/03/20 21:59	1
Trichlorofluoromethane	ND		8.7	2.8	ug/Kg	☼	12/01/20 09:55	12/03/20 21:59	1
Vinyl chloride	ND		4.3	1.2	ug/Kg	☼	12/01/20 09:55	12/03/20 21:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		58 - 140				12/01/20 09:55	12/03/20 21:59	1
4-Bromofluorobenzene (Surr)	110		76 - 127				12/01/20 09:55	12/03/20 21:59	1
Dibromofluoromethane (Surr)	96		75 - 121				12/01/20 09:55	12/03/20 21:59	1
Toluene-d8 (Surr)	103		80 - 126				12/01/20 09:55	12/03/20 21:59	1

Client Sample ID: CDOT I270 12-2020-SB31-GW

Date Collected: 12/01/20 11:45

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			12/05/20 05:57	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.21	ug/L			12/05/20 05:57	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			12/05/20 05:57	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			12/05/20 05:57	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			12/05/20 05:57	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			12/05/20 05:57	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			12/05/20 05:57	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			12/05/20 05:57	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			12/05/20 05:57	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			12/05/20 05:57	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			12/05/20 05:57	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/05/20 05:57	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			12/05/20 05:57	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/05/20 05:57	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			12/05/20 05:57	1
1,4-Dioxane	ND		200	19	ug/L			12/05/20 05:57	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			12/05/20 05:57	1
2-Hexanone	ND		5.0	1.7	ug/L			12/05/20 05:57	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			12/05/20 05:57	1
Acetone	3.5	J	10	1.9	ug/L			12/05/20 05:57	1
Benzene	ND		1.0	0.16	ug/L			12/05/20 05:57	1
Bromoform	ND		1.0	0.46	ug/L			12/05/20 05:57	1
Bromomethane	ND		2.0	0.21	ug/L			12/05/20 05:57	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 12-2020-SB31-GW

Date Collected: 12/01/20 11:45

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		2.0	0.17	ug/L			12/05/20 05:57	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			12/05/20 05:57	1
Chlorobenzene	ND		1.0	0.17	ug/L			12/05/20 05:57	1
Chlorobromomethane	ND		1.0	0.10	ug/L			12/05/20 05:57	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			12/05/20 05:57	1
Chloroethane	ND		2.0	0.41	ug/L			12/05/20 05:57	1
Chloroform	ND		1.0	0.16	ug/L			12/05/20 05:57	1
Chloromethane	ND		2.0	0.30	ug/L			12/05/20 05:57	1
cis-1,2-Dichloroethene	0.17	J	1.0	0.15	ug/L			12/05/20 05:57	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			12/05/20 05:57	1
Cyclohexane	ND		2.0	0.28	ug/L			12/05/20 05:57	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			12/05/20 05:57	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			12/05/20 05:57	1
Ethylbenzene	0.17	J	1.0	0.16	ug/L			12/05/20 05:57	1
Isopropylbenzene	ND		1.0	0.19	ug/L			12/05/20 05:57	1
Methyl acetate	ND		5.0	1.6	ug/L			12/05/20 05:57	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			12/05/20 05:57	1
Methylcyclohexane	ND		1.0	0.10	ug/L			12/05/20 05:57	1
Methylene Chloride	ND		2.0	0.94	ug/L			12/05/20 05:57	1
m-Xylene & p-Xylene	0.79	J	2.0	0.15	ug/L			12/05/20 05:57	1
o-Xylene	0.56	J	1.0	0.19	ug/L			12/05/20 05:57	1
Styrene	ND		1.0	0.36	ug/L			12/05/20 05:57	1
Tetrachloroethene	ND		1.0	0.20	ug/L			12/05/20 05:57	1
Toluene	0.29	J	1.0	0.17	ug/L			12/05/20 05:57	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			12/05/20 05:57	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			12/05/20 05:57	1
Trichloroethene	ND		1.0	0.16	ug/L			12/05/20 05:57	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			12/05/20 05:57	1
Vinyl chloride	ND		1.0	0.10	ug/L			12/05/20 05:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		70 - 127					12/05/20 05:57	1
4-Bromofluorobenzene (Surr)	102		78 - 120					12/05/20 05:57	1
Dibromofluoromethane (Surr)	100		77 - 120					12/05/20 05:57	1
Toluene-d8 (Surr)	101		80 - 125					12/05/20 05:57	1

Client Sample ID: CDOT I270 12-2020-SB30-5-10

Date Collected: 12/02/20 08:40

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-4

Matrix: Solid

Percent Solids: 73.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		8.0	3.2	ug/Kg	*	12/02/20 08:40	12/03/20 22:22	1
1,1,2,2-Tetrachloroethane	ND		8.0	0.46	ug/Kg	*	12/02/20 08:40	12/03/20 22:22	1
1,1,2-Trichloroethane	ND		8.0	1.4	ug/Kg	*	12/02/20 08:40	12/03/20 22:22	1
1,1,2-Trichlorotrifluoroethane	ND	*1	32	2.7	ug/Kg	*	12/02/20 08:40	12/03/20 22:22	1
1,1-Dichloroethane	ND		8.0	0.34	ug/Kg	*	12/02/20 08:40	12/03/20 22:22	1
1,1-Dichloroethene	ND	*1	8.0	0.94	ug/Kg	*	12/02/20 08:40	12/03/20 22:22	1
1,2,3-Trichlorobenzene	ND		8.0	1.3	ug/Kg	*	12/02/20 08:40	12/03/20 22:22	1
1,2,4-Trichlorobenzene	ND		8.0	1.2	ug/Kg	*	12/02/20 08:40	12/03/20 22:22	1
1,2-Dibromo-3-Chloropropane	ND		16	5.8	ug/Kg	*	12/02/20 08:40	12/03/20 22:22	1
1,2-Dibromoethane	ND		8.0	0.83	ug/Kg	*	12/02/20 08:40	12/03/20 22:22	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 12-2020-SB30-5-10

Lab Sample ID: 280-143333-4

Date Collected: 12/02/20 08:40

Matrix: Solid

Date Received: 12/02/20 13:12

Percent Solids: 73.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		8.0	3.0	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
1,2-Dichloroethane	ND		8.0	1.1	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
1,2-Dichloropropane	ND		8.0	0.88	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
1,3-Dichlorobenzene	ND		8.0	0.77	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
1,4-Dichlorobenzene	ND		8.0	0.39	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
1,4-Dioxane	ND		800	90	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
2-Butanone (MEK)	100		32	6.2	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
2-Hexanone	ND		32	7.8	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
4-Methyl-2-pentanone (MIBK)	ND		32	7.0	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
Acetone	560	*1	120	57	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
Benzene	1.5	J	8.0	0.24	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
Bromoform	ND		8.2	4.1	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
Bromomethane	ND		16	2.2	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
Carbon disulfide	18	*1	8.0	2.7	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
Carbon tetrachloride	ND		8.0	3.2	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
Chlorobenzene	ND		8.0	3.3	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
Chlorobromomethane	ND		8.0	3.9	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
Chlorodibromomethane	ND		8.0	3.6	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
Chloroethane	ND		16	3.2	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
Chloroform	ND		16	0.46	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
Chloromethane	ND		16	1.2	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
cis-1,2-Dichloroethene	ND		4.0	0.32	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
cis-1,3-Dichloropropene	ND		8.0	0.16	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
Cyclohexane	ND		8.0	2.8	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
Dichlorobromomethane	ND		8.0	3.4	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
Dichlorodifluoromethane	ND		16	4.4	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
Ethylbenzene	3.2	J	8.0	0.49	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
Isopropylbenzene	8.6		8.0	3.9	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
Methyl acetate	ND	*1	16	4.4	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
Methyl tert-butyl ether	ND	**1	32	3.4	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
Methylcyclohexane	1.7	J	8.0	0.67	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
Methylene Chloride	ND	*1	8.0	2.6	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
m-Xylene & p-Xylene	7.1		4.0	1.7	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
o-Xylene	3.7	J	4.0	0.43	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
Styrene	ND		8.0	0.45	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
Tetrachloroethene	ND		8.0	3.1	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
Toluene	3.8	J	8.0	0.36	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
trans-1,2-Dichloroethene	ND	*1	4.0	0.62	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
trans-1,3-Dichloropropene	ND		8.0	0.13	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
Trichloroethene	ND		8.0	3.1	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
Trichlorofluoromethane	ND		16	5.1	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
Vinyl chloride	ND		8.0	2.1	ug/Kg	☼	12/02/20 08:40	12/03/20 22:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>1,2-Dichloroethane-d4 (Surr)</i>	114		58 - 140				12/02/20 08:40	12/03/20 22:22	1
<i>4-Bromofluorobenzene (Surr)</i>	98		76 - 127				12/02/20 08:40	12/03/20 22:22	1
<i>Dibromofluoromethane (Surr)</i>	98		75 - 121				12/02/20 08:40	12/03/20 22:22	1
<i>Toluene-d8 (Surr)</i>	111		80 - 126				12/02/20 08:40	12/03/20 22:22	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 12-2020-SB30-10-15

Date Collected: 12/02/20 09:05

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-5

Matrix: Solid

Percent Solids: 88.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	2.0	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.29	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
1,1,2-Trichloroethane	ND		5.0	0.88	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
1,1,2-Trichlorotrifluoroethane	ND	*1	20	1.7	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
1,1-Dichloroethane	ND		5.0	0.21	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
1,1-Dichloroethene	ND	*1	5.0	0.59	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
1,2,3-Trichlorobenzene	ND		5.0	0.81	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
1,2,4-Trichlorobenzene	ND		5.0	0.73	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
1,2-Dibromo-3-Chloropropane	ND		10	3.7	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
1,2-Dibromoethane	ND		5.0	0.52	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
1,2-Dichlorobenzene	ND		5.0	1.9	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
1,2-Dichloroethane	ND		5.0	0.70	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
1,2-Dichloropropane	ND		5.0	0.55	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
1,3-Dichlorobenzene	ND		5.0	0.48	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
1,4-Dichlorobenzene	8.2		5.0	0.25	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
1,4-Dioxane	ND		500	56	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
2-Butanone (MEK)	9.9	J	20	3.9	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
2-Hexanone	ND		20	4.9	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.4	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
Acetone	51	J *1	72	36	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
Benzene	2.4	J	5.0	0.15	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
Bromoform	ND		5.1	2.6	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
Bromomethane	ND		10	1.4	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
Carbon disulfide	7.6	*1	5.0	1.7	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
Carbon tetrachloride	ND		5.0	2.0	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
Chlorobenzene	ND		5.0	2.1	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
Chlorobromomethane	ND		5.0	2.5	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
Chlorodibromomethane	ND		5.0	2.3	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
Chloroethane	ND		10	2.0	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
Chloroform	ND		10	0.29	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
Chloromethane	ND		10	0.77	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
cis-1,2-Dichloroethene	ND		2.5	0.20	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
cis-1,3-Dichloropropene	ND		5.0	0.10	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
Cyclohexane	ND		5.0	1.8	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
Dichlorobromomethane	ND		5.0	2.1	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
Dichlorodifluoromethane	ND		10	2.7	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
Ethylbenzene	0.74	J	5.0	0.31	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
Isopropylbenzene	6.8		5.0	2.4	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
Methyl acetate	ND	*1	10	2.8	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
Methyl tert-butyl ether	ND	**1	20	2.1	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
Methylcyclohexane	2.0	J	5.0	0.42	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
Methylene Chloride	ND	*1	5.0	1.6	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
m-Xylene & p-Xylene	14		2.5	1.0	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
o-Xylene	16		2.5	0.27	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
Styrene	ND		5.0	0.28	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
Tetrachloroethene	ND		5.0	1.9	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
Toluene	0.58	J	5.0	0.23	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
trans-1,2-Dichloroethene	ND	*1	2.5	0.39	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
trans-1,3-Dichloropropene	ND		5.0	0.083	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 12-2020-SB30-10-15

Date Collected: 12/02/20 09:05

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-5

Matrix: Solid

Percent Solids: 88.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		5.0	1.9	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
Trichlorofluoromethane	ND		10	3.2	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
Vinyl chloride	ND		5.0	1.3	ug/Kg	☼	12/02/20 09:05	12/03/20 22:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	116		58 - 140				12/02/20 09:05	12/03/20 22:44	1
4-Bromofluorobenzene (Surr)	104		76 - 127				12/02/20 09:05	12/03/20 22:44	1
Dibromofluoromethane (Surr)	98		75 - 121				12/02/20 09:05	12/03/20 22:44	1
Toluene-d8 (Surr)	101		80 - 126				12/02/20 09:05	12/03/20 22:44	1

Client Sample ID: CDOT I270 12-2020-SB29-10-12

Date Collected: 12/02/20 11:00

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-6

Matrix: Solid

Percent Solids: 80.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.4	2.1	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
1,1,2,2-Tetrachloroethane	ND		5.4	0.31	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
1,1,2-Trichloroethane	ND		5.4	0.95	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
1,1,2-Trichlorotrifluoroethane	ND	*1	22	1.8	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
1,1-Dichloroethane	ND		5.4	0.23	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
1,1-Dichloroethene	ND	*1	5.4	0.64	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
1,2,3-Trichlorobenzene	ND		5.4	0.87	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
1,2,4-Trichlorobenzene	ND		5.4	0.79	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
1,2-Dibromo-3-Chloropropane	ND		11	4.0	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
1,2-Dibromoethane	ND		5.4	0.56	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
1,2-Dichlorobenzene	ND		5.4	2.0	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
1,2-Dichloroethane	ND		5.4	0.76	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
1,2-Dichloropropane	ND		5.4	0.59	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
1,3-Dichlorobenzene	ND		5.4	0.52	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
1,4-Dichlorobenzene	ND		5.4	0.26	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
1,4-Dioxane	ND		540	61	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
2-Butanone (MEK)	ND		22	4.2	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
2-Hexanone	ND		22	5.3	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
4-Methyl-2-pentanone (MIBK)	ND		22	4.7	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
Acetone	ND	*1	78	38	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
Benzene	ND		5.4	0.16	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
Bromoform	ND		5.5	2.8	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
Bromomethane	ND		11	1.5	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
Carbon disulfide	ND	*1	5.4	1.8	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
Carbon tetrachloride	ND		5.4	2.2	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
Chlorobenzene	ND		5.4	2.2	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
Chlorobromomethane	ND		5.4	2.7	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
Chlorodibromomethane	ND		5.4	2.5	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
Chloroethane	ND		11	2.1	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
Chloroform	ND		11	0.31	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
Chloromethane	ND		11	0.83	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
cis-1,2-Dichloroethene	ND		2.7	0.22	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
cis-1,3-Dichloropropene	ND		5.4	0.11	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
Cyclohexane	ND		5.4	1.9	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
Dichlorobromomethane	ND		5.4	2.3	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
Dichlorodifluoromethane	ND		11	3.0	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 12-2020-SB29-10-12

Date Collected: 12/02/20 11:00

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-6

Matrix: Solid

Percent Solids: 80.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		5.4	0.33	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
Isopropylbenzene	ND		5.4	2.6	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
Methyl acetate	ND	*1	11	3.0	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
Methyl tert-butyl ether	ND	**1	22	2.3	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
Methylcyclohexane	ND		5.4	0.45	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
Methylene Chloride	ND	*1	5.4	1.7	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
m-Xylene & p-Xylene	ND		2.7	1.1	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
o-Xylene	ND		2.7	0.29	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
Styrene	ND		5.4	0.30	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
Tetrachloroethene	ND		5.4	2.1	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
Toluene	ND		5.4	0.25	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
trans-1,2-Dichloroethene	ND	*1	2.7	0.42	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
trans-1,3-Dichloropropene	ND		5.4	0.090	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
Trichloroethene	ND		5.4	2.1	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
Trichlorofluoromethane	ND		11	3.5	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1
Vinyl chloride	ND		5.4	1.4	ug/Kg	☼	12/02/20 11:00	12/03/20 23:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		58 - 140	12/02/20 11:00	12/03/20 23:06	1
4-Bromofluorobenzene (Surr)	86		76 - 127	12/02/20 11:00	12/03/20 23:06	1
Dibromofluoromethane (Surr)	100		75 - 121	12/02/20 11:00	12/03/20 23:06	1
Toluene-d8 (Surr)	103		80 - 126	12/02/20 11:00	12/03/20 23:06	1

Client Sample ID: CDOT I270 12-2020-SB29-GW

Date Collected: 12/02/20 11:50

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			12/05/20 06:20	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			12/05/20 06:20	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			12/05/20 06:20	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			12/05/20 06:20	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			12/05/20 06:20	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			12/05/20 06:20	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			12/05/20 06:20	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			12/05/20 06:20	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			12/05/20 06:20	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			12/05/20 06:20	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			12/05/20 06:20	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/05/20 06:20	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			12/05/20 06:20	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/05/20 06:20	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			12/05/20 06:20	1
1,4-Dioxane	ND		200	19	ug/L			12/05/20 06:20	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			12/05/20 06:20	1
2-Hexanone	ND		5.0	1.7	ug/L			12/05/20 06:20	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			12/05/20 06:20	1
Acetone	ND		10	1.9	ug/L			12/05/20 06:20	1
Benzene	ND		1.0	0.16	ug/L			12/05/20 06:20	1
Bromoform	ND		1.0	0.46	ug/L			12/05/20 06:20	1
Bromomethane	ND		2.0	0.21	ug/L			12/05/20 06:20	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 12-2020-SB29-GW

Date Collected: 12/02/20 11:50

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		2.0	0.17	ug/L			12/05/20 06:20	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			12/05/20 06:20	1
Chlorobenzene	ND		1.0	0.17	ug/L			12/05/20 06:20	1
Chlorobromomethane	ND		1.0	0.10	ug/L			12/05/20 06:20	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			12/05/20 06:20	1
Chloroethane	ND		2.0	0.41	ug/L			12/05/20 06:20	1
Chloroform	ND		1.0	0.16	ug/L			12/05/20 06:20	1
Chloromethane	ND		2.0	0.30	ug/L			12/05/20 06:20	1
cis-1,2-Dichloroethene	0.17	J	1.0	0.15	ug/L			12/05/20 06:20	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			12/05/20 06:20	1
Cyclohexane	ND		2.0	0.28	ug/L			12/05/20 06:20	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			12/05/20 06:20	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			12/05/20 06:20	1
Ethylbenzene	ND		1.0	0.16	ug/L			12/05/20 06:20	1
Isopropylbenzene	ND		1.0	0.19	ug/L			12/05/20 06:20	1
Methyl acetate	ND		5.0	1.6	ug/L			12/05/20 06:20	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			12/05/20 06:20	1
Methylcyclohexane	ND		1.0	0.10	ug/L			12/05/20 06:20	1
Methylene Chloride	ND		2.0	0.94	ug/L			12/05/20 06:20	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			12/05/20 06:20	1
o-Xylene	ND		1.0	0.19	ug/L			12/05/20 06:20	1
Styrene	ND		1.0	0.36	ug/L			12/05/20 06:20	1
Tetrachloroethene	ND		1.0	0.20	ug/L			12/05/20 06:20	1
Toluene	ND		1.0	0.17	ug/L			12/05/20 06:20	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			12/05/20 06:20	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			12/05/20 06:20	1
Trichloroethene	ND		1.0	0.16	ug/L			12/05/20 06:20	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			12/05/20 06:20	1
Vinyl chloride	ND		1.0	0.10	ug/L			12/05/20 06:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		70 - 127					12/05/20 06:20	1
4-Bromofluorobenzene (Surr)	100		78 - 120					12/05/20 06:20	1
Dibromofluoromethane (Surr)	101		77 - 120					12/05/20 06:20	1
Toluene-d8 (Surr)	100		80 - 125					12/05/20 06:20	1

Client Sample ID: TRIP BLANK 01

Date Collected: 12/01/20 08:00

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			12/04/20 23:50	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			12/04/20 23:50	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			12/04/20 23:50	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			12/04/20 23:50	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			12/04/20 23:50	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			12/04/20 23:50	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			12/04/20 23:50	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			12/04/20 23:50	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			12/04/20 23:50	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			12/04/20 23:50	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: TRIP BLANK 01

Date Collected: 12/01/20 08:00

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			12/04/20 23:50	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/04/20 23:50	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			12/04/20 23:50	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/04/20 23:50	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			12/04/20 23:50	1
1,4-Dioxane	ND		200	19	ug/L			12/04/20 23:50	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			12/04/20 23:50	1
2-Hexanone	ND		5.0	1.7	ug/L			12/04/20 23:50	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			12/04/20 23:50	1
Acetone	ND		10	1.9	ug/L			12/04/20 23:50	1
Benzene	ND		1.0	0.16	ug/L			12/04/20 23:50	1
Bromoform	ND		1.0	0.46	ug/L			12/04/20 23:50	1
Bromomethane	ND		2.0	0.21	ug/L			12/04/20 23:50	1
Carbon disulfide	ND		2.0	0.17	ug/L			12/04/20 23:50	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			12/04/20 23:50	1
Chlorobenzene	ND		1.0	0.17	ug/L			12/04/20 23:50	1
Chlorobromomethane	ND		1.0	0.10	ug/L			12/04/20 23:50	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			12/04/20 23:50	1
Chloroethane	ND		2.0	0.41	ug/L			12/04/20 23:50	1
Chloroform	ND		1.0	0.16	ug/L			12/04/20 23:50	1
Chloromethane	ND		2.0	0.30	ug/L			12/04/20 23:50	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			12/04/20 23:50	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			12/04/20 23:50	1
Cyclohexane	ND		2.0	0.28	ug/L			12/04/20 23:50	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			12/04/20 23:50	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			12/04/20 23:50	1
Ethylbenzene	ND		1.0	0.16	ug/L			12/04/20 23:50	1
Isopropylbenzene	ND		1.0	0.19	ug/L			12/04/20 23:50	1
Methyl acetate	ND		5.0	1.6	ug/L			12/04/20 23:50	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			12/04/20 23:50	1
Methylcyclohexane	ND		1.0	0.10	ug/L			12/04/20 23:50	1
Methylene Chloride	ND		2.0	0.94	ug/L			12/04/20 23:50	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			12/04/20 23:50	1
o-Xylene	ND		1.0	0.19	ug/L			12/04/20 23:50	1
Styrene	ND		1.0	0.36	ug/L			12/04/20 23:50	1
Tetrachloroethene	ND		1.0	0.20	ug/L			12/04/20 23:50	1
Toluene	ND		1.0	0.17	ug/L			12/04/20 23:50	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			12/04/20 23:50	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			12/04/20 23:50	1
Trichloroethene	ND		1.0	0.16	ug/L			12/04/20 23:50	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			12/04/20 23:50	1
Vinyl chloride	ND		1.0	0.10	ug/L			12/04/20 23:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		70 - 127		12/04/20 23:50	1
4-Bromofluorobenzene (Surr)	100		78 - 120		12/04/20 23:50	1
Dibromofluoromethane (Surr)	99		77 - 120		12/04/20 23:50	1
Toluene-d8 (Surr)	101		80 - 125		12/04/20 23:50	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 12-2020-SB31-15-17

Date Collected: 12/01/20 09:55

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-2

Matrix: Solid

Percent Solids: 96.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		330	24	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
1,2,4,5-Tetrachlorobenzene	ND		330	49	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
1,2,4-Trichlorobenzene	ND		330	28	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
1,2-Dichlorobenzene	ND		330	22	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		330	22	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
1,3-Dichlorobenzene	ND		330	12	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
1,3-Dinitrobenzene	ND		330	71	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
1,4-Dichlorobenzene	ND		330	14	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
1,4-Dioxane	ND		660	66	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
1-Methylnaphthalene	ND		330	11	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
2,2'-oxybis[1-chloropropane]	ND		330	23	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
2,3,4,6-Tetrachlorophenol	ND		1600	140	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
2,4,5-Trichlorophenol	ND		330	10	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
2,4,6-Trichlorophenol	ND		330	10	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
2,4-Dichlorophenol	ND		330	10	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
2,4-Dimethylphenol	ND		330	66	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
2,4-Dinitrophenol	ND	*	1600	330	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
2,4-Dinitrotoluene	ND		330	66	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
2,6-Dichlorophenol	ND		330	22	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
2,6-Dinitrotoluene	ND		330	28	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
2-Chloronaphthalene	ND		330	10	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
2-Chlorophenol	ND		330	21	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
2-Methylnaphthalene	ND		330	19	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
2-Methylphenol	ND		330	13	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
2-Nitroaniline	ND		1600	50	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
2-Nitrophenol	ND		330	10	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
3 & 4 Methylphenol	ND		330	33	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
3,3'-Dichlorobenzidine	ND		660	90	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
3-Methylphenol	ND		330	33	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
3-Nitroaniline	ND		1600	73	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
4,6-Dinitro-2-methylphenol	ND		1600	330	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
4-Bromophenyl phenyl ether	ND		330	19	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
4-Chloro-3-methylphenol	ND		330	25	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
4-Chloroaniline	ND		330	82	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
4-Chlorophenyl phenyl ether	ND		330	21	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
4-Methylphenol	ND		330	33	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
4-Nitroaniline	ND		1600	73	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
4-Nitrophenol	ND		1600	97	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Acenaphthene	ND		330	10	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Acenaphthylene	ND		330	82	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Acetophenone	ND		330	20	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Aniline	ND		330	130	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Anthracene	ND		330	17	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Azobenzene	ND		330	22	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Benzaldehyde	ND	*	330	67	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Benzidine	ND		3300	990	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Benzo[a]anthracene	ND		330	20	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Benzo[a]pyrene	ND		330	20	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Benzo[b]fluoranthene	ND		330	26	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 12-2020-SB31-15-17

Date Collected: 12/01/20 09:55

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-2

Matrix: Solid

Percent Solids: 96.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		330	16	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Benzo[k]fluoranthene	ND		330	40	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Benzoic acid	ND	F1	1600	330	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Benzyl alcohol	ND		330	10	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Bis(2-chloroethoxy)methane	ND		330	23	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Bis(2-chloroethyl)ether	ND		330	17	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Bis(2-ethylhexyl) phthalate	ND		330	46	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Butyl benzyl phthalate	ND		330	43	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Caprolactam	ND		330	110	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Carbazole	ND		330	36	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Chrysene	ND		330	27	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Dibenz(a,h)anthracene	ND		330	19	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Dibenzofuran	ND		330	20	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Diethyl phthalate	ND		660	26	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Dimethyl phthalate	ND		330	23	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Di-n-butyl phthalate	ND		330	29	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Di-n-octyl phthalate	ND		330	41	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Diphenylamine	ND		330	44	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Famphur	ND		660	34	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Fluoranthene	ND		330	36	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Fluorene	ND		330	18	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Hexachlorobenzene	ND		330	29	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Hexachlorobutadiene	ND		330	10	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Hexachlorocyclopentadiene	ND		1600	110	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Hexachloroethane	ND		330	21	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Hexadecane	16	J	330	13	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Indeno[1,2,3-cd]pyrene	ND		330	22	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Isophorone	ND		330	17	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Naphthalene	ND		330	31	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Nitrobenzene	ND		330	22	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
N-Nitrosodimethylamine	ND		330	37	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
N-Nitrosodi-n-propylamine	ND		330	68	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
N-Nitrosodiphenylamine	ND		330	21	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Pentachlorophenol	ND		1600	330	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Phenanthrene	ND		330	17	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Phenol	ND		330	18	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Pyrene	ND		330	12	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1
Pyridine	ND		660	40	ug/Kg	☼	12/15/20 12:41	12/18/20 17:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	72		35 - 120	12/15/20 12:41	12/18/20 17:16	1
2-Fluorobiphenyl	72		46 - 120	12/15/20 12:41	12/18/20 17:16	1
2-Fluorophenol (Surr)	75		43 - 120	12/15/20 12:41	12/18/20 17:16	1
Nitrobenzene-d5 (Surr)	65		46 - 120	12/15/20 12:41	12/18/20 17:16	1
Phenol-d5 (Surr)	73		46 - 120	12/15/20 12:41	12/18/20 17:16	1
Terphenyl-d14 (Surr)	89		46 - 120	12/15/20 12:41	12/18/20 17:16	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 12-2020-SB30-5-10

Lab Sample ID: 280-143333-4

Date Collected: 12/02/20 08:40

Matrix: Solid

Date Received: 12/02/20 13:12

Percent Solids: 73.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	120	J	430	32	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
1,2,4,5-Tetrachlorobenzene	ND		430	64	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
1,2,4-Trichlorobenzene	ND		430	37	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
1,2-Dichlorobenzene	ND		430	29	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		430	29	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
1,3-Dichlorobenzene	ND		430	16	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
1,3-Dinitrobenzene	ND		430	93	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
1,4-Dichlorobenzene	ND		430	18	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
1,4-Dioxane	ND		860	86	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
1-Methylnaphthalene	510		430	15	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
2,2'-oxybis[1-chloropropane]	ND		430	30	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
2,3,4,6-Tetrachlorophenol	ND		2100	180	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
2,4,5-Trichlorophenol	ND		430	13	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
2,4,6-Trichlorophenol	ND		430	13	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
2,4-Dichlorophenol	ND		430	13	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
2,4-Dimethylphenol	ND		430	86	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
2,4-Dinitrophenol	ND	*	2100	440	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
2,4-Dinitrotoluene	ND		430	86	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
2,6-Dichlorophenol	ND		430	29	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
2,6-Dinitrotoluene	ND		430	37	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
2-Chloronaphthalene	ND		430	13	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
2-Chlorophenol	ND		430	27	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
2-Methylnaphthalene	580		430	25	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
2-Methylphenol	ND		430	17	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
2-Nitroaniline	ND		2100	65	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
2-Nitrophenol	ND		430	13	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
3 & 4 Methylphenol	ND		430	43	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
3,3'-Dichlorobenzidine	ND		860	120	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
3-Methylphenol	ND		430	43	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
3-Nitroaniline	ND		2100	95	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
4,6-Dinitro-2-methylphenol	ND		2100	430	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
4-Bromophenyl phenyl ether	ND		430	25	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
4-Chloro-3-methylphenol	ND		430	32	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
4-Chloroaniline	ND		430	110	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
4-Chlorophenyl phenyl ether	ND		430	27	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
4-Methylphenol	ND		430	43	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
4-Nitroaniline	ND		2100	95	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
4-Nitrophenol	ND		2100	130	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Acenaphthene	440		430	13	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Acenaphthylene	ND		430	110	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Acetophenone	ND		430	26	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Aniline	ND		430	170	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Anthracene	27	J	430	22	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Azobenzene	ND		430	29	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Benzaldehyde	ND	*	430	88	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Benzidine	ND		4300	1300	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Benzo[a]anthracene	86	J	430	26	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Benzo[a]pyrene	74	J	430	26	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Benzo[b]fluoranthene	110	J	430	34	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 12-2020-SB30-5-10

Date Collected: 12/02/20 08:40

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-4

Matrix: Solid

Percent Solids: 73.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		430	21	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Benzo[k]fluoranthene	ND		430	52	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Benzoic acid	ND		2100	430	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Benzyl alcohol	ND		430	13	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Bis(2-chloroethoxy)methane	ND		430	30	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Bis(2-chloroethyl)ether	ND		430	22	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Bis(2-ethylhexyl) phthalate	3900		430	60	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Butyl benzyl phthalate	ND		430	56	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Caprolactam	ND		430	140	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Carbazole	ND		430	47	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Chrysene	110	J	430	35	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Dibenz(a,h)anthracene	ND		430	25	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Dibenzofuran	74	J	430	26	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Diethyl phthalate	ND		860	34	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Dimethyl phthalate	ND		430	30	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Di-n-butyl phthalate	ND		430	38	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Di-n-octyl phthalate	ND		430	53	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Diphenylamine	ND		430	58	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Famphur	ND		860	44	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Fluoranthene	260	J	430	47	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Fluorene	51	J	430	24	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Hexachlorobenzene	ND		430	38	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Hexachlorobutadiene	ND		430	13	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Hexachlorocyclopentadiene	ND		2100	150	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Hexachloroethane	ND		430	28	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Hexadecane	150	J	430	17	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Indeno[1,2,3-cd]pyrene	45	J	430	29	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Isophorone	ND		430	22	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Naphthalene	3700		430	41	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Nitrobenzene	ND		430	29	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
N-Nitrosodimethylamine	ND		430	48	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
N-Nitrosodi-n-propylamine	ND		430	89	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
N-Nitrosodiphenylamine	28	J	430	27	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Pentachlorophenol	ND		2100	430	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Phenanthrene	280	J	430	22	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Phenol	ND		430	24	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Pyrene	260	J	430	16	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1
Pyridine	ND		860	52	ug/Kg	☼	12/15/20 12:41	12/18/20 19:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	58		35 - 120	12/15/20 12:41	12/18/20 19:20	1
2-Fluorobiphenyl	61		46 - 120	12/15/20 12:41	12/18/20 19:20	1
2-Fluorophenol (Surr)	60		43 - 120	12/15/20 12:41	12/18/20 19:20	1
Nitrobenzene-d5 (Surr)	53		46 - 120	12/15/20 12:41	12/18/20 19:20	1
Phenol-d5 (Surr)	61		46 - 120	12/15/20 12:41	12/18/20 19:20	1
Terphenyl-d14 (Surr)	72		46 - 120	12/15/20 12:41	12/18/20 19:20	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 12-2020-SB30-10-15

Lab Sample ID: 280-143333-5

Date Collected: 12/02/20 09:05

Matrix: Solid

Date Received: 12/02/20 13:12

Percent Solids: 88.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		350	25	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
1,2,4,5-Tetrachlorobenzene	ND		350	52	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
1,2,4-Trichlorobenzene	ND		350	30	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
1,2-Dichlorobenzene	ND		350	23	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		350	23	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
1,3-Dichlorobenzene	ND		350	13	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
1,3-Dinitrobenzene	ND		350	75	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
1,4-Dichlorobenzene	29	J	350	14	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
1,4-Dioxane	ND		700	70	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
1-Methylnaphthalene	76	J	350	12	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
2,2'-oxybis[1-chloropropane]	ND		350	24	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
2,3,4,6-Tetrachlorophenol	ND		1700	140	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
2,4,5-Trichlorophenol	ND		350	11	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
2,4,6-Trichlorophenol	ND		350	11	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
2,4-Dichlorophenol	ND		350	11	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
2,4-Dimethylphenol	ND		350	70	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
2,4-Dinitrophenol	ND	*	1700	350	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
2,4-Dinitrotoluene	ND		350	70	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
2,6-Dichlorophenol	ND		350	24	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
2,6-Dinitrotoluene	ND		350	30	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
2-Chloronaphthalene	ND		350	11	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
2-Chlorophenol	ND		350	22	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
2-Methylnaphthalene	100	J	350	20	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
2-Methylphenol	ND		350	14	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
2-Nitroaniline	ND		1700	53	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
2-Nitrophenol	ND		350	11	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
3 & 4 Methylphenol	ND		350	35	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
3,3'-Dichlorobenzidine	ND		700	95	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
3-Methylphenol	ND		350	35	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
3-Nitroaniline	ND		1700	77	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
4,6-Dinitro-2-methylphenol	ND		1700	350	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
4-Bromophenyl phenyl ether	ND		350	20	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
4-Chloro-3-methylphenol	31	J	350	26	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
4-Chloroaniline	ND		350	86	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
4-Chlorophenyl phenyl ether	ND		350	22	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
4-Methylphenol	ND		350	35	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
4-Nitroaniline	ND		1700	76	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
4-Nitrophenol	ND		1700	100	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Acenaphthene	ND		350	11	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Acenaphthylene	ND		350	87	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Acetophenone	ND		350	21	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Aniline	ND		350	140	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Anthracene	ND		350	18	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Azobenzene	ND		350	23	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Benzaldehyde	ND	*	350	71	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Benzidine	ND		3500	1000	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Benzo[a]anthracene	ND		350	21	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Benzo[a]pyrene	ND		350	21	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Benzo[b]fluoranthene	ND		350	28	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 12-2020-SB30-10-15

Date Collected: 12/02/20 09:05

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-5

Matrix: Solid

Percent Solids: 88.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		350	17	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Benzo[k]fluoranthene	ND		350	42	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Benzoic acid	ND		1700	350	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Benzyl alcohol	ND		350	11	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Bis(2-chloroethoxy)methane	ND		350	24	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Bis(2-chloroethyl)ether	ND		350	18	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Bis(2-ethylhexyl) phthalate	96	J	350	49	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Butyl benzyl phthalate	ND		350	45	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Caprolactam	ND		350	110	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Carbazole	ND		350	38	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Chrysene	42	J	350	28	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Dibenz(a,h)anthracene	ND		350	20	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Dibenzofuran	ND		350	21	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Diethyl phthalate	ND		700	27	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Dimethyl phthalate	ND		350	24	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Di-n-butyl phthalate	ND		350	31	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Di-n-octyl phthalate	ND		350	43	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Diphenylamine	360		350	46	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Famphur	ND		700	36	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Fluoranthene	ND		350	38	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Fluorene	ND		350	19	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Hexachlorobenzene	ND		350	31	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Hexachlorobutadiene	ND		350	11	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Hexachlorocyclopentadiene	ND		1700	120	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Hexachloroethane	ND		350	22	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Hexadecane	140	J	350	14	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Indeno[1,2,3-cd]pyrene	ND		350	23	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Isophorone	ND		350	18	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Naphthalene	170	J	350	33	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Nitrobenzene	ND		350	23	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
N-Nitrosodimethylamine	ND		350	39	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
N-Nitrosodi-n-propylamine	ND		350	72	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
N-Nitrosodiphenylamine	440		350	22	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Pentachlorophenol	ND		1700	350	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Phenanthrene	55	J	350	18	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Phenol	ND		350	19	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Pyrene	73	J	350	13	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1
Pyridine	ND		700	42	ug/Kg	☼	12/15/20 12:41	12/18/20 19:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	70		35 - 120	12/15/20 12:41	12/18/20 19:48	1
2-Fluorobiphenyl	72		46 - 120	12/15/20 12:41	12/18/20 19:48	1
2-Fluorophenol (Surr)	67		43 - 120	12/15/20 12:41	12/18/20 19:48	1
Nitrobenzene-d5 (Surr)	61		46 - 120	12/15/20 12:41	12/18/20 19:48	1
Phenol-d5 (Surr)	69		46 - 120	12/15/20 12:41	12/18/20 19:48	1
Terphenyl-d14 (Surr)	84		46 - 120	12/15/20 12:41	12/18/20 19:48	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 12-2020-SB29-10-12

Date Collected: 12/02/20 11:00

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-6

Matrix: Solid

Percent Solids: 80.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		380	28	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
1,2,4,5-Tetrachlorobenzene	ND		380	56	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
1,2,4-Trichlorobenzene	ND		380	32	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
1,2-Dichlorobenzene	ND		380	25	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		380	25	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
1,3-Dichlorobenzene	ND		380	14	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
1,3-Dinitrobenzene	ND		380	82	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
1,4-Dichlorobenzene	ND		380	16	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
1,4-Dioxane	ND		760	76	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
1-Methylnaphthalene	ND		380	13	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
2,2'-oxybis[1-chloropropane]	ND		380	26	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
2,3,4,6-Tetrachlorophenol	ND		1800	160	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
2,4,5-Trichlorophenol	ND		380	12	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
2,4,6-Trichlorophenol	ND		380	12	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
2,4-Dichlorophenol	ND		380	12	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
2,4-Dimethylphenol	ND		380	76	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
2,4-Dinitrophenol	ND	*	1800	380	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
2,4-Dinitrotoluene	ND		380	76	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
2,6-Dichlorophenol	ND		380	26	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
2,6-Dinitrotoluene	ND		380	32	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
2-Chloronaphthalene	ND		380	12	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
2-Chlorophenol	ND		380	24	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
2-Methylnaphthalene	ND		380	22	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
2-Methylphenol	ND		380	15	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
2-Nitroaniline	ND		1800	58	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
2-Nitrophenol	ND		380	12	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
3 & 4 Methylphenol	ND		380	38	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
3,3'-Dichlorobenzidine	ND		760	100	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
3-Methylphenol	ND		380	38	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
3-Nitroaniline	ND		1800	84	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
4,6-Dinitro-2-methylphenol	ND		1800	380	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
4-Bromophenyl phenyl ether	ND		380	22	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
4-Chloro-3-methylphenol	ND		380	29	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
4-Chloroaniline	ND		380	94	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
4-Chlorophenyl phenyl ether	ND		380	24	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
4-Methylphenol	ND		380	38	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
4-Nitroaniline	ND		1800	83	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
4-Nitrophenol	ND		1800	110	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Acenaphthene	ND		380	12	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Acenaphthylene	ND		380	94	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Acetophenone	ND		380	23	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Aniline	ND		380	150	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Anthracene	ND		380	20	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Azobenzene	ND		380	25	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Benzaldehyde	ND	*	380	77	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Benzidine	ND		3800	1100	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Benzo[a]anthracene	ND		380	23	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Benzo[a]pyrene	ND		380	23	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Benzo[b]fluoranthene	ND		380	30	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 12-2020-SB29-10-12

Date Collected: 12/02/20 11:00

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-6

Matrix: Solid

Percent Solids: 80.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		380	18	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Benzo[k]fluoranthene	ND		380	46	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Benzoic acid	ND		1800	380	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Benzyl alcohol	ND		380	12	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Bis(2-chloroethoxy)methane	ND		380	26	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Bis(2-chloroethyl)ether	ND		380	19	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Bis(2-ethylhexyl) phthalate	ND		380	53	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Butyl benzyl phthalate	ND		380	49	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Caprolactam	ND		380	120	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Carbazole	ND		380	41	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Chrysene	ND		380	31	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Dibenz(a,h)anthracene	ND		380	22	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Dibenzofuran	ND		380	23	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Diethyl phthalate	ND		760	30	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Dimethyl phthalate	ND		380	26	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Di-n-butyl phthalate	ND		380	33	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Di-n-octyl phthalate	ND		380	47	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Diphenylamine	ND		380	51	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Famphur	ND		760	39	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Fluoranthene	ND		380	41	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Fluorene	ND		380	21	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Hexachlorobenzene	ND		380	33	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Hexachlorobutadiene	ND		380	12	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Hexachlorocyclopentadiene	ND		1800	130	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Hexachloroethane	ND		380	25	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Hexadecane	ND		380	15	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Indeno[1,2,3-cd]pyrene	ND		380	25	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Isophorone	ND		380	20	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Naphthalene	ND		380	36	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Nitrobenzene	ND		380	25	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
N-Nitrosodimethylamine	ND		380	43	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
N-Nitrosodi-n-propylamine	ND		380	78	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
N-Nitrosodiphenylamine	ND		380	24	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Pentachlorophenol	ND		1800	380	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Phenanthrene	ND		380	20	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Phenol	ND		380	21	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Pyrene	ND		380	14	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1
Pyridine	ND		760	46	ug/Kg	☼	12/15/20 12:41	12/18/20 20:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	66		35 - 120	12/15/20 12:41	12/18/20 20:16	1
2-Fluorobiphenyl	67		46 - 120	12/15/20 12:41	12/18/20 20:16	1
2-Fluorophenol (Surr)	69		43 - 120	12/15/20 12:41	12/18/20 20:16	1
Nitrobenzene-d5 (Surr)	62		46 - 120	12/15/20 12:41	12/18/20 20:16	1
Phenol-d5 (Surr)	69		46 - 120	12/15/20 12:41	12/18/20 20:16	1
Terphenyl-d14 (Surr)	83		46 - 120	12/15/20 12:41	12/18/20 20:16	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Client Sample ID: CDOT I270 12-2020-SB31-9-11

Date Collected: 12/01/20 09:30

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-1

Matrix: Solid

Percent Solids: 67.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	5.0		3.2	1.2	mg/Kg	☼	12/15/20 09:02	12/15/20 17:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	89		77 - 123				12/15/20 09:02	12/15/20 17:47	1

Client Sample ID: CDOT I270 12-2020-SB31-15-17

Date Collected: 12/01/20 09:55

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-2

Matrix: Solid

Percent Solids: 96.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		2.0	0.75	mg/Kg	☼	12/15/20 09:02	12/15/20 18:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	91		77 - 123				12/15/20 09:02	12/15/20 18:11	1

Client Sample ID: CDOT I270 12-2020-SB31-GW

Date Collected: 12/01/20 11:45

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	17	J	25	10	ug/L			12/10/20 03:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	89		82 - 110					12/10/20 03:30	1

Client Sample ID: CDOT I270 12-2020-SB30-5-10

Date Collected: 12/02/20 08:40

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-4

Matrix: Solid

Percent Solids: 73.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	16		3.8	1.4	mg/Kg	☼	12/15/20 09:02	12/15/20 20:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	89		77 - 123				12/15/20 09:02	12/15/20 20:14	1

Client Sample ID: CDOT I270 12-2020-SB30-10-15

Date Collected: 12/02/20 09:05

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-5

Matrix: Solid

Percent Solids: 88.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	14		2.2	0.85	mg/Kg	☼	12/15/20 09:02	12/15/20 20:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	88		77 - 123				12/15/20 09:02	12/15/20 20:38	1

Client Sample ID: CDOT I270 12-2020-SB29-10-12

Date Collected: 12/02/20 11:00

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-6

Matrix: Solid

Percent Solids: 80.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	1.9	J	2.2	0.82	mg/Kg	☼	12/15/20 09:02	12/15/20 21:02	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
a,a,a-Trifluorotoluene	94		77 - 123	12/15/20 09:02	12/15/20 21:02	1			
Client Sample ID: CDOT I270 12-2020-SB29-GW Date Collected: 12/02/20 11:50 Date Received: 12/02/20 13:12				Lab Sample ID: 280-143333-7 Matrix: Water					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	38		25	10	ug/L			12/10/20 03:53	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
a,a,a-Trifluorotoluene	93		82 - 110		12/10/20 03:53	1			
Client Sample ID: TRIP BLANK 01 Date Collected: 12/01/20 08:00 Date Received: 12/02/20 13:12				Lab Sample ID: 280-143333-8 Matrix: Water					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		25	10	ug/L			12/10/20 01:14	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
a,a,a-Trifluorotoluene	83		82 - 110		12/10/20 01:14	1			

Consultant Work Product - Jacobs Engineering
 -Not CDOT Approved

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Client Sample ID: CDOT I270 12-2020-SB31-9-11

Date Collected: 12/01/20 09:30

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-1

Matrix: Solid

Percent Solids: 67.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	13000		230	100	mg/Kg	☼	12/04/20 15:12	12/12/20 07:06	1
Motor Oil (C20-C38)	16000	B	680	220	mg/Kg	☼	12/04/20 15:12	12/12/20 07:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	66		49 - 115				12/04/20 15:12	12/12/20 07:06	1

Client Sample ID: CDOT I270 12-2020-SB31-15-17

Date Collected: 12/01/20 09:55

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-2

Matrix: Solid

Percent Solids: 96.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		8.1	3.7	mg/Kg	☼	12/04/20 15:12	12/15/20 03:07	1
Motor Oil (C20-C38)	11	J B	24	8.0	mg/Kg	☼	12/04/20 15:12	12/15/20 03:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	62		49 - 115				12/04/20 15:12	12/15/20 03:07	1

Client Sample ID: CDOT I270 12-2020-SB31-GW

Date Collected: 12/01/20 11:45

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	1.3		0.25	0.033	mg/L		12/05/20 15:03	12/13/20 01:05	1
Motor Oil (C20-C38)	1.2		0.50	0.056	mg/L		12/05/20 15:03	12/13/20 01:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	64		50 - 115				12/05/20 15:03	12/13/20 01:05	1

Client Sample ID: CDOT I270 12-2020-SB30-5-10

Date Collected: 12/02/20 08:40

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-4

Matrix: Solid

Percent Solids: 73.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	210		21	9.4	mg/Kg	☼	12/04/20 15:12	12/12/20 08:07	1
Motor Oil (C20-C38)	330	B	62	20	mg/Kg	☼	12/04/20 15:12	12/12/20 08:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	40	X	49 - 115				12/04/20 15:12	12/12/20 08:07	1

Client Sample ID: CDOT I270 12-2020-SB30-10-15

Date Collected: 12/02/20 09:05

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-5

Matrix: Solid

Percent Solids: 88.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	95		8.5	3.9	mg/Kg	☼	12/04/20 15:12	12/15/20 02:44	1
Motor Oil (C20-C38)	190	B	25	8.3	mg/Kg	☼	12/04/20 15:12	12/15/20 02:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	64		49 - 115				12/04/20 15:12	12/15/20 02:44	1

Client Sample ID: CDOT I270 12-2020-SB29-10-12

Date Collected: 12/02/20 11:00

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-6

Matrix: Solid

Percent Solids: 80.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.7	4.4	mg/Kg	☼	12/04/20 15:12	12/15/20 02:21	1
Motor Oil (C20-C38)	19	J B	29	9.5	mg/Kg	☼	12/04/20 15:12	12/15/20 02:21	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

<u>Surrogate</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>			<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>	
<i>o</i> -Terphenyl (Surr)	56		49 - 115			12/04/20 15:12	12/15/20 02:21	1	
Client Sample ID: CDOT I270 12-2020-SB29-GW						Lab Sample ID: 280-143333-7			
Date Collected: 12/02/20 11:50						Matrix: Water			
Date Received: 12/02/20 13:12									
<u>Analyte</u>	<u>Result</u>	<u>Qualifier</u>	<u>RL</u>	<u>MDL</u>	<u>Unit</u>	<u>D</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
Diesel Range Organics [C10-C28]	0.47		0.26	0.034	mg/L		12/05/20 15:03	12/13/20 01:28	1
Motor Oil (C20-C38)	0.36	J	0.52	0.058	mg/L		12/05/20 15:03	12/13/20 01:28	1
<u>Surrogate</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>			<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>	
<i>o</i> -Terphenyl (Surr)	74		50 - 115			12/05/20 15:03	12/13/20 01:28	1	

Consultant Work Product - Jacobs Engineering
 -Not CDOT Approved-

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: CDOT I270 12-2020-SB31-15-17

Date Collected: 12/01/20 09:55

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-2

Matrix: Solid

Percent Solids: 96.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.3		0.57	0.048	mg/Kg	☼	12/07/20 15:50	12/10/20 19:37	1
Silver	23	J	97	7.6	ug/Kg	☼	12/07/20 16:15	12/10/20 08:46	1
Barium	34	F1	0.38	0.067	mg/Kg	☼	12/07/20 15:50	12/10/20 19:37	1
Cadmium	0.36		0.096	0.0090	mg/Kg	☼	12/07/20 15:50	12/10/20 19:37	1
Chromium	3.7		0.19	0.073	mg/Kg	☼	12/07/20 15:50	12/10/20 19:37	1
Lead	5.8	F1	0.14	0.017	mg/Kg	☼	12/07/20 15:50	12/10/20 19:37	1
Selenium	0.20	J	0.48	0.13	mg/Kg	☼	12/07/20 15:50	12/10/20 19:37	1

Client Sample ID: CDOT I270 12-2020-SB31-GW

Date Collected: 12/01/20 11:45

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	170		25	1.7	ug/L		12/07/20 08:19	12/14/20 15:26	5
Barium	5600	B	5.0	1.5	ug/L		12/07/20 08:19	12/14/20 15:26	5
Cadmium	10		5.0	1.3	ug/L		12/07/20 08:19	12/14/20 15:26	5
Chromium	1800		10	2.5	ug/L		12/07/20 08:19	12/14/20 15:26	5
Lead	410		5.0	0.90	ug/L		12/07/20 08:19	12/14/20 15:26	5
Selenium	22	J F1	25	1.9	ug/L		12/07/20 08:19	12/14/20 15:26	5
Silver	3.7	J	25	0.17	ug/L		12/07/20 08:19	12/14/20 15:26	5

Client Sample ID: CDOT I270 12-2020-SB30-5-10

Date Collected: 12/02/20 08:40

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-4

Matrix: Solid

Percent Solids: 73.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10		0.62	0.052	mg/Kg	☼	12/07/20 15:50	12/10/20 19:54	1
Silver	170		130	10	ug/Kg	☼	12/07/20 16:15	12/10/20 08:50	1
Barium	280		0.41	0.073	mg/Kg	☼	12/07/20 15:50	12/10/20 19:54	1
Cadmium	0.64		0.10	0.0097	mg/Kg	☼	12/07/20 15:50	12/10/20 19:54	1
Chromium	18		0.21	0.078	mg/Kg	☼	12/07/20 15:50	12/10/20 19:54	1
Lead	34		0.15	0.019	mg/Kg	☼	12/07/20 15:50	12/10/20 19:54	1
Selenium	0.34	J	0.51	0.14	mg/Kg	☼	12/07/20 15:50	12/10/20 19:54	1

Client Sample ID: CDOT I270 12-2020-SB30-10-15

Date Collected: 12/02/20 09:05

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-5

Matrix: Solid

Percent Solids: 88.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.6		0.54	0.046	mg/Kg	☼	12/07/20 15:50	12/10/20 19:58	1
Silver	17	J	93	7.3	ug/Kg	☼	12/07/20 16:15	12/10/20 10:19	1
Barium	56		0.36	0.064	mg/Kg	☼	12/07/20 15:50	12/10/20 19:58	1
Cadmium	0.14		0.090	0.0085	mg/Kg	☼	12/07/20 15:50	12/10/20 19:58	1
Chromium	4.5		0.18	0.069	mg/Kg	☼	12/07/20 15:50	12/10/20 19:58	1
Lead	7.1		0.14	0.016	mg/Kg	☼	12/07/20 15:50	12/10/20 19:58	1
Selenium	0.16	J	0.45	0.12	mg/Kg	☼	12/07/20 15:50	12/10/20 19:58	1

Client Sample ID: CDOT I270 12-2020-SB29-10-12

Date Collected: 12/02/20 11:00

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-6

Matrix: Solid

Percent Solids: 80.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.0		0.55	0.046	mg/Kg	☼	12/07/20 15:50	12/10/20 20:01	1
Silver	34	J	120	9.2	ug/Kg	☼	12/07/20 16:15	12/10/20 10:22	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 6020A - Metals (ICP/MS) (Continued)

Client Sample ID: CDOT I270 12-2020-SB29-10-12
Date Collected: 12/02/20 11:00
Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-6
Matrix: Solid
Percent Solids: 80.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	130		0.37	0.064	mg/Kg	☼	12/07/20 15:50	12/10/20 20:01	1
Cadmium	0.13		0.091	0.0086	mg/Kg	☼	12/07/20 15:50	12/10/20 20:01	1
Chromium	9.1		0.18	0.069	mg/Kg	☼	12/07/20 15:50	12/10/20 20:01	1
Lead	7.9		0.14	0.017	mg/Kg	☼	12/07/20 15:50	12/10/20 20:01	1
Selenium	0.25	J	0.46	0.12	mg/Kg	☼	12/07/20 15:50	12/10/20 20:01	1

Client Sample ID: CDOT I270 12-2020-SB29-GW
Date Collected: 12/02/20 11:50
Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	220		25	1.7	ug/L		12/07/20 08:19	12/14/20 15:44	5
Barium	5700	B	5.0	1.5	ug/L		12/07/20 08:19	12/14/20 15:44	5
Cadmium	36		5.0	1.3	ug/L		12/07/20 08:19	12/14/20 15:44	5
Chromium	1800		10	2.5	ug/L		12/07/20 08:19	12/14/20 15:44	5
Lead	1200		5.0	0.90	ug/L		12/07/20 08:19	12/14/20 15:44	5
Selenium	17	J	25	1.9	ug/L		12/07/20 08:19	12/14/20 15:44	5
Silver	5.8	J	25	0.17	ug/L		12/07/20 08:19	12/14/20 15:44	5

Consultant Work Product - Jacobs Engineering Group, Inc.
 -Not CDOT Approved

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 6020A - Metals (ICP/MS) - Dissolved

Client Sample ID: CDOT I270 12-2020-SB31-GW

Date Collected: 12/01/20 11:45

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic, Dissolved	ND		5.0	0.33	ug/L		12/10/20 08:14	12/11/20 23:27	1
Barium, Dissolved	86	B	1.0	0.29	ug/L		12/10/20 08:14	12/11/20 23:27	1
Cadmium, Dissolved	ND	^	1.0	0.27	ug/L		12/10/20 08:14	12/11/20 23:27	1
Chromium, Dissolved	ND	F2 F1	2.0	0.50	ug/L		12/10/20 08:14	12/11/20 23:27	1
Lead, Dissolved	ND		1.0	0.18	ug/L		12/10/20 08:14	12/11/20 23:27	1
Selenium, Dissolved	0.51	J	5.0	0.37	ug/L		12/10/20 08:14	12/11/20 23:27	1
Silver, Dissolved	ND		5.0	0.033	ug/L		12/10/20 08:14	12/11/20 23:27	1

Client Sample ID: CDOT I270 12-2020-SB29-GW

Date Collected: 12/02/20 11:50

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic, Dissolved	0.89	J	5.0	0.33	ug/L		12/10/20 08:14	12/11/20 23:45	1
Barium, Dissolved	120	B	1.0	0.29	ug/L		12/10/20 08:14	12/11/20 23:45	1
Cadmium, Dissolved	ND	^	1.0	0.27	ug/L		12/10/20 08:14	12/11/20 23:45	1
Chromium, Dissolved	0.56	J B	2.0	0.50	ug/L		12/10/20 08:14	12/11/20 23:45	1
Lead, Dissolved	ND		1.0	0.18	ug/L		12/10/20 08:14	12/11/20 23:45	1
Selenium, Dissolved	0.47	J	5.0	0.37	ug/L		12/10/20 08:14	12/11/20 23:45	1
Silver, Dissolved	ND		5.0	0.033	ug/L		12/10/20 08:14	12/11/20 23:45	1

Consultant Work Product - Jacobs Engineering
 -Not CDOT Approved

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 7470A - Mercury (CVAA)

Client Sample ID: CDOT I270 12-2020-SB31-GW

Date Collected: 12/01/20 11:45

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	1.2		1.0	0.14	ug/L		12/04/20 15:00	12/04/20 18:09	1

Client Sample ID: CDOT I270 12-2020-SB29-GW

Date Collected: 12/02/20 11:50

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	7.1		1.0	0.14	ug/L		12/04/20 15:00	12/04/20 18:11	1

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 7470A - Mercury (CVAA) - Dissolved

Client Sample ID: CDOT I270 12-2020-SB31-GW

Date Collected: 12/01/20 11:45

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury, Dissolved	ND		0.20	0.027	ug/L		12/09/20 12:45	12/09/20 15:51	1

Client Sample ID: CDOT I270 12-2020-SB29-GW

Date Collected: 12/02/20 11:50

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury, Dissolved	ND		0.20	0.027	ug/L		12/09/20 12:45	12/09/20 15:54	1

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 7471B - Mercury (CVAA)

Client Sample ID: CDOT I270 12-2020-SB31-15-17
Date Collected: 12/01/20 09:55
Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-2
Matrix: Solid
Percent Solids: 96.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		20	6.4	ug/Kg	☼	12/10/20 15:30	12/10/20 18:30	1

Client Sample ID: CDOT I270 12-2020-SB30-5-10
Date Collected: 12/02/20 08:40
Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-4
Matrix: Solid
Percent Solids: 73.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	130		24	7.7	ug/Kg	☼	12/10/20 15:30	12/10/20 18:33	1

Client Sample ID: CDOT I270 12-2020-SB30-10-15
Date Collected: 12/02/20 09:05
Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-5
Matrix: Solid
Percent Solids: 88.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		23	7.4	ug/Kg	☼	12/10/20 15:30	12/10/20 18:35	1

Client Sample ID: CDOT I270 12-2020-SB29-10-12
Date Collected: 12/02/20 11:00
Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-6
Matrix: Solid
Percent Solids: 80.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		24	7.8	ug/Kg	☼	12/10/20 15:30	12/10/20 18:38	1

Consultant Work Product - Jacobs Engineering Group, Inc.
 -Not CDOT Approved-

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

General Chemistry

Client Sample ID: CDOT I270 12-2020-SB31-9-11

Date Collected: 12/01/20 09:30

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-1

Matrix: Solid

Percent Solids: 67.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	32.7		0.1	0.1	%			12/04/20 12:34	1
Percent Solids	67.3		0.1	0.1	%			12/04/20 12:34	1

Client Sample ID: CDOT I270 12-2020-SB31-15-17

Date Collected: 12/01/20 09:55

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-2

Matrix: Solid

Percent Solids: 96.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.7		0.1	0.1	%			12/04/20 12:34	1
Percent Solids	96.3		0.1	0.1	%			12/04/20 12:34	1

Client Sample ID: CDOT I270 12-2020-SB30-5-10

Date Collected: 12/02/20 08:40

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-4

Matrix: Solid

Percent Solids: 73.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	26.9		0.1	0.1	%			12/04/20 12:34	1
Percent Solids	73.1		0.1	0.1	%			12/04/20 12:34	1

Client Sample ID: CDOT I270 12-2020-SB30-10-15

Date Collected: 12/02/20 09:05

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-5

Matrix: Solid

Percent Solids: 88.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	11.7		0.1	0.1	%			12/04/20 12:34	1
Percent Solids	88.3		0.1	0.1	%			12/04/20 12:34	1

Client Sample ID: CDOT I270 12-2020-SB29-10-12

Date Collected: 12/02/20 11:00

Date Received: 12/02/20 13:12

Lab Sample ID: 280-143333-6

Matrix: Solid

Percent Solids: 80.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	19.8		0.1	0.1	%			12/04/20 12:34	1
Percent Solids	80.2		0.1	0.1	%			12/04/20 12:34	1

Consultant Work Product - Jacobs Engineering Group, Inc. - Not CDOT Approved

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (58-140)	BFB (76-127)	DBFM (75-121)	TOL (80-126)
280-143333-1	CDOT I270 12-2020-SB31-9-11	107	102	95	108
280-143333-2	CDOT I270 12-2020-SB31-15-17	114	110	96	103
280-143333-4	CDOT I270 12-2020-SB30-5-10	114	98	98	111
280-143333-5	CDOT I270 12-2020-SB30-10-15	116	104	98	101
280-143333-6	CDOT I270 12-2020-SB29-10-12	114	86	100	103
LCS 280-519140/1-A	Lab Control Sample	103	101	91	94
LCSD 280-519140/2-A	Lab Control Sample Dup	111	108	95	105
MB 280-519140/3-A	Method Blank	111	110	97	96

Surrogate Legend
DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (70-127)	BFB (78-120)	DBFM (77-120)	TOL (80-125)
280-143333-3	CDOT I270 12-2020-SB31-GW	103	102	100	101
280-143333-7	CDOT I270 12-2020-SB29-GW	102	100	101	100
280-143333-8	TRIP BLANK 01	98	100	99	101
LCS 280-519284/5	Lab Control Sample	101	102	101	100
LCSD 280-519284/6	Lab Control Sample Dup	98	100	101	99
MB 280-519284/10	Method Blank	100	101	99	101

Surrogate Legend
DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (35-120)	FBP (46-120)	2FP (43-120)	NBZ (46-120)	PHL (46-120)	TPHL (46-120)
280-143333-2	CDOT I270 12-2020-SB31-15-17	72	72	75	65	73	89
280-143333-2 MS	CDOT I270 12-2020-SB31-15-17	71	72	71	64	71	85
280-143333-2 MSD	CDOT I270 12-2020-SB31-15-17	72	69	68	62	69	89
280-143333-4	CDOT I270 12-2020-SB30-5-10	58	61	60	53	61	72
280-143333-5	CDOT I270 12-2020-SB30-10-15	70	72	67	61	69	84
280-143333-6	CDOT I270 12-2020-SB29-10-12	66	67	69	62	69	83

Eurofins TestAmerica, Denver

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (35-120)	FBP (46-120)	2FP (43-120)	NBZ (46-120)	PHL (46-120)	TPHL (46-120)
LCS 280-520466/2-A	Lab Control Sample	72	70	72	63	71	86
MB 280-520466/1-A	Method Blank	66	73	71	62	70	91

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		TFT1 (77-123)
280-143333-1	CDOT I270 12-2020-SB31-9-11	89
280-143333-2	CDOT I270 12-2020-SB31-15-17	91
280-143333-4	CDOT I270 12-2020-SB30-5-10	89
280-143333-5	CDOT I270 12-2020-SB30-10-15	88
280-143333-6	CDOT I270 12-2020-SB29-10-12	94
LCS 280-520474/1-A	Lab Control Sample	93
LCSD 280-520474/2-A	Lab Control Sample Dup	93
MB 280-520474/3-A	Method Blank	89

Surrogate Legend

TFT = a,a,a-Trifluorotoluene

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		TFT1 (82-110)
280-143333-3	CDOT I270 12-2020-SB31-GW	89
280-143333-7	CDOT I270 12-2020-SB29-GW	93
280-143333-8	TRIP BLANK 01	83
LCS 280-519873/3	Lab Control Sample	84
LCSD 280-519873/4	Lab Control Sample Dup	82
MB 280-519873/5	Method Blank	87

Surrogate Legend

TFT = a,a,a-Trifluorotoluene

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTPH1 (49-115)
280-143333-1	CDOT I270 12-2020-SB31-9-11	66
280-143333-2	CDOT I270 12-2020-SB31-15-17	62
280-143333-4	CDOT I270 12-2020-SB30-5-10	40 X
280-143333-5	CDOT I270 12-2020-SB30-10-15	64
280-143333-6	CDOT I270 12-2020-SB29-10-12	56
LCS 280-519246/2-A	Lab Control Sample	94
LCS 280-519246/4-A	Lab Control Sample	88
LCSD 280-519246/3-A	Lab Control Sample Dup	90
LCSD 280-519246/5-A	Lab Control Sample Dup	92
MB 280-519246/1-A	Method Blank	71

Surrogate Legend

OTPH = o-Terphenyl (Surr)

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTPH1 (50-115)
280-143333-3	CDOT I270 12-2020-SB31-GW	64
280-143333-7	CDOT I270 12-2020-SB29-GW	74
LCS 280-519339/2-A	Lab Control Sample	106
LCS 280-519339/4-A	Lab Control Sample	91
LCSD 280-519339/3-A	Lab Control Sample Dup	98
LCSD 280-519339/5-A	Lab Control Sample Dup	90
MB 280-519339/1-A	Method Blank	72

Surrogate Legend

OTPH = o-Terphenyl (Surr)

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-519140/3-A
Matrix: Solid
Analysis Batch: 519328

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 519140

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1-Trichloroethane	ND		5.0	2.0	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.29	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
1,1,2-Trichloroethane	ND		5.0	0.88	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
1,1,2-Trichlorotrifluoroethane	ND		20	1.7	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
1,1-Dichloroethane	ND		5.0	0.21	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
1,1-Dichloroethene	ND		5.0	0.59	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
1,2,3-Trichlorobenzene	ND		5.0	0.81	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
1,2,4-Trichlorobenzene	ND		5.0	0.73	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
1,2-Dibromo-3-Chloropropane	ND		10	3.7	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
1,2-Dibromoethane	ND		5.0	0.52	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
1,2-Dichlorobenzene	ND		5.0	1.9	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
1,2-Dichloroethane	ND		5.0	0.70	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
1,2-Dichloropropane	ND		5.0	0.55	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
1,3-Dichlorobenzene	ND		5.0	0.48	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
1,4-Dichlorobenzene	ND		5.0	0.25	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
1,4-Dioxane	ND		500	56	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
2-Butanone (MEK)	ND		20	3.9	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
2-Hexanone	ND		20	4.9	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.4	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
Acetone	ND		72	36	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
Benzene	ND		5.0	0.15	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
Bromoform	ND		5.1	2.6	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
Bromomethane	ND		10	1.4	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
Carbon disulfide	ND		5.0	1.7	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
Carbon tetrachloride	ND		5.0	2.0	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
Chlorobenzene	ND		5.0	2.1	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
Chlorobromomethane	ND		5.0	2.5	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
Chlorodibromomethane	ND		5.0	2.3	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
Chloroethane	ND		10	2.0	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
Chloroform	ND		10	0.29	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
Chloromethane	ND		10	0.77	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
cis-1,2-Dichloroethene	ND		2.5	0.20	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
cis-1,3-Dichloropropene	ND		5.0	0.10	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
Cyclohexane	ND		5.0	1.8	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
Dichlorobromomethane	ND		5.0	2.1	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
Dichlorodifluoromethane	ND		10	2.7	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
Ethylbenzene	ND		5.0	0.31	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
Isopropylbenzene	ND		5.0	2.4	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
Methyl acetate	ND		10	2.8	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
Methyl tert-butyl ether	ND		20	2.1	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
Methylcyclohexane	ND		5.0	0.42	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
Methylene Chloride	ND		5.0	1.6	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
m-Xylene & p-Xylene	ND		2.5	1.0	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
o-Xylene	ND		2.5	0.27	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
Styrene	ND		5.0	0.28	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
Tetrachloroethene	ND		5.0	1.9	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
Toluene	ND		5.0	0.23	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
trans-1,2-Dichloroethene	ND		2.5	0.39	ug/Kg		12/03/20 16:13	12/03/20 17:33	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-519140/3-A
Matrix: Solid
Analysis Batch: 519328

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 519140

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		5.0	0.083	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
Trichloroethene	ND		5.0	1.9	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
Trichlorofluoromethane	ND		10	3.2	ug/Kg		12/03/20 16:13	12/03/20 17:33	1
Vinyl chloride	ND		5.0	1.3	ug/Kg		12/03/20 16:13	12/03/20 17:33	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		58 - 140	12/03/20 16:13	12/03/20 17:33	1
4-Bromofluorobenzene (Surr)	110		76 - 127	12/03/20 16:13	12/03/20 17:33	1
Dibromofluoromethane (Surr)	97		75 - 121	12/03/20 16:13	12/03/20 17:33	1
Toluene-d8 (Surr)	96		80 - 126	12/03/20 16:13	12/03/20 17:33	1

Lab Sample ID: LCS 280-519140/1-A
Matrix: Solid
Analysis Batch: 519328

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 519140

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	50.0	46.9		ug/Kg		94	70 - 135
1,1,2,2-Tetrachloroethane	50.0	49.8		ug/Kg		100	65 - 135
1,1,2-Trichloroethane	50.0	46.7		ug/Kg		93	78 - 135
1,1,2-Trichlorotrifluoroethane	50.0	41.3		ug/Kg		83	50 - 150
1,1-Dichloroethane	50.0	42.4		ug/Kg		85	70 - 135
1,1-Dichloroethene	50.0	43.5		ug/Kg		87	79 - 135
1,2,3-Trichlorobenzene	50.0	48.5		ug/Kg		97	62 - 135
1,2,4-Trichlorobenzene	50.0	51.4		ug/Kg		103	65 - 135
1,2-Dibromo-3-Chloropropane	50.0	49.4		ug/Kg		99	66 - 150
1,2-Dibromoethane	50.0	50.2		ug/Kg		100	76 - 135
1,2-Dichlorobenzene	50.0	42.8		ug/Kg		86	73 - 135
1,2-Dichloroethane	50.0	47.6		ug/Kg		95	69 - 135
1,2-Dichloropropane	50.0	46.1		ug/Kg		92	72 - 121
1,3-Dichlorobenzene	50.0	45.0		ug/Kg		90	69 - 135
1,4-Dichlorobenzene	50.0	44.0		ug/Kg		88	73 - 135
1,4-Dioxane	1000	1130		ug/Kg		113	52 - 135
2-Butanone (MEK)	200	155		ug/Kg		78	45 - 177
2-Hexanone	200	196		ug/Kg		98	67 - 150
4-Methyl-2-pentanone (MIBK)	200	177		ug/Kg		88	69 - 150
Acetone	200	181		ug/Kg		90	65 - 150
Benzene	50.0	45.3		ug/Kg		91	75 - 135
Bromoform	50.0	48.8		ug/Kg		98	77 - 135
Bromomethane	50.0	62.4		ug/Kg		125	52 - 135
Carbon disulfide	50.0	46.3		ug/Kg		93	45 - 150
Carbon tetrachloride	50.0	46.5		ug/Kg		93	69 - 138
Chlorobenzene	50.0	46.2		ug/Kg		92	78 - 135
Chlorobromomethane	50.0	39.8		ug/Kg		80	74 - 135
Chlorodibromomethane	50.0	45.1		ug/Kg		90	77 - 135
Chloroethane	50.0	66.6		ug/Kg		133	51 - 145
Chloroform	50.0	47.9		ug/Kg		96	73 - 123
Chloromethane	50.0	50.8		ug/Kg		102	41 - 138
cis-1,2-Dichloroethene	50.0	41.7		ug/Kg		83	76 - 135

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-519140/1-A
Matrix: Solid
Analysis Batch: 519328

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 519140

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,3-Dichloropropene	50.0	51.1		ug/Kg		102	71 - 135
Cyclohexane	50.0	40.3		ug/Kg		81	50 - 150
Dichlorobromomethane	50.0	54.8		ug/Kg		110	73 - 135
Dichlorodifluoromethane	50.0	51.8		ug/Kg		104	32 - 152
Ethylbenzene	50.0	48.8		ug/Kg		98	73 - 125
Isopropylbenzene	50.0	48.8		ug/Kg		98	74 - 137
Methyl acetate	100	79.4		ug/Kg		79	50 - 150
Methyl tert-butyl ether	50.0	64.4		ug/Kg		129	71 - 141
Methylcyclohexane	50.0	43.3		ug/Kg		87	50 - 150
Methylene Chloride	50.0	45.6		ug/Kg		91	76 - 136
m-Xylene & p-Xylene	50.0	48.7		ug/Kg		97	77 - 135
o-Xylene	50.0	47.5		ug/Kg		95	75 - 135
Styrene	50.0	51.2		ug/Kg		102	76 - 135
Tetrachloroethene	50.0	47.6		ug/Kg		95	76 - 135
Toluene	50.0	44.6		ug/Kg		89	77 - 122
trans-1,2-Dichloroethene	50.0	43.2		ug/Kg		86	77 - 135
trans-1,3-Dichloropropene	50.0	54.6		ug/Kg		109	71 - 135
Trichloroethene	50.0	47.9		ug/Kg		96	77 - 135
Trichlorofluoromethane	50.0	61.5		ug/Kg		123	48 - 150
Vinyl chloride	50.0	68.7		ug/Kg		137	43 - 145

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	103		58 - 140
4-Bromofluorobenzene (Surr)	101		76 - 127
Dibromofluoromethane (Surr)	91		75 - 121
Toluene-d8 (Surr)	94		80 - 126

Lab Sample ID: LCSD 280-519140/2-A
Matrix: Solid
Analysis Batch: 519328

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 519140

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	50.0	53.9		ug/Kg		108	70 - 135	14	20
1,1,2,2-Tetrachloroethane	50.0	55.1		ug/Kg		110	65 - 135	10	21
1,1,2-Trichloroethane	50.0	48.6		ug/Kg		97	78 - 135	4	20
1,1,2-Trichlorotrifluoroethane	50.0	57.5	*1	ug/Kg		115	50 - 150	33	20
1,1-Dichloroethane	50.0	50.8		ug/Kg		102	70 - 135	18	20
1,1-Dichloroethene	50.0	61.0	*1	ug/Kg		122	79 - 135	34	20
1,2,3-Trichlorobenzene	50.0	61.6		ug/Kg		123	62 - 135	24	31
1,2,4-Trichlorobenzene	50.0	62.7		ug/Kg		125	65 - 135	20	26
1,2-Dibromo-3-Chloropropane	50.0	56.2		ug/Kg		112	66 - 150	13	28
1,2-Dibromoethane	50.0	55.2		ug/Kg		110	76 - 135	9	20
1,2-Dichlorobenzene	50.0	48.4		ug/Kg		97	73 - 135	12	20
1,2-Dichloroethane	50.0	53.9		ug/Kg		108	69 - 135	12	20
1,2-Dichloropropane	50.0	49.5		ug/Kg		99	72 - 121	7	20
1,3-Dichlorobenzene	50.0	48.6		ug/Kg		97	69 - 135	8	20
1,4-Dichlorobenzene	50.0	47.5		ug/Kg		95	73 - 135	8	22
1,4-Dioxane	1000	1230		ug/Kg		123	52 - 135	9	30

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-519140/2-A
Matrix: Solid
Analysis Batch: 519328

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 519140

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Butanone (MEK)	200	175		ug/Kg		87	45 - 177	12	32
2-Hexanone	200	213		ug/Kg		107	67 - 150	8	29
4-Methyl-2-pentanone (MIBK)	200	196		ug/Kg		98	69 - 150	10	25
Acetone	200	257	*1	ug/Kg		129	65 - 150	35	28
Benzene	50.0	51.5		ug/Kg		103	75 - 135	13	20
Bromoform	50.0	57.9		ug/Kg		116	77 - 135	17	20
Bromomethane	50.0	65.4		ug/Kg		131	52 - 135	5	22
Carbon disulfide	50.0	67.4	*1	ug/Kg		135	45 - 150	37	24
Carbon tetrachloride	50.0	52.2		ug/Kg		104	69 - 138	12	20
Chlorobenzene	50.0	51.2		ug/Kg		102	78 - 135	10	20
Chlorobromomethane	50.0	45.0		ug/Kg		90	74 - 135	12	21
Chlorodibromomethane	50.0	51.1		ug/Kg		102	77 - 135	12	20
Chloroethane	50.0	69.8		ug/Kg		140	51 - 145	5	22
Chloroform	50.0	53.6		ug/Kg		107	73 - 123	11	20
Chloromethane	50.0	54.5		ug/Kg		109	41 - 138	7	25
cis-1,2-Dichloroethene	50.0	49.0		ug/Kg		98	76 - 135	16	20
cis-1,3-Dichloropropene	50.0	61.4		ug/Kg		123	71 - 135	18	20
Cyclohexane	50.0	44.4		ug/Kg		89	50 - 150	10	30
Dichlorobromomethane	50.0	58.9		ug/Kg		118	73 - 135	7	20
Dichlorodifluoromethane	50.0	57.6		ug/Kg		115	32 - 152	11	28
Ethylbenzene	50.0	55.5		ug/Kg		111	73 - 125	13	20
Isopropylbenzene	50.0	55.0		ug/Kg		110	74 - 137	12	20
Methyl acetate	100	119	*1	ug/Kg		119	50 - 150	40	30
Methyl tert-butyl ether	50.0	87.7	**1	ug/Kg		175	71 - 141	31	20
Methylcyclohexane	50.0	47.1		ug/Kg		94	50 - 150	8	30
Methylene Chloride	50.0	65.4	*1	ug/Kg		131	76 - 136	36	21
m-Xylene & p-Xylene	50.0	57.7		ug/Kg		115	77 - 135	17	20
o-Xylene	50.0	55.1		ug/Kg		110	75 - 135	15	20
Styrene	50.0	60.8		ug/Kg		122	76 - 135	17	20
Tetrachloroethene	50.0	51.3		ug/Kg		103	76 - 135	7	20
Toluene	50.0	49.0		ug/Kg		98	77 - 122	9	20
trans-1,2-Dichloroethene	50.0	59.3	*1	ug/Kg		119	77 - 135	31	20
trans-1,3-Dichloropropene	50.0	56.0		ug/Kg		112	71 - 135	2	20
Trichloroethene	50.0	56.2		ug/Kg		112	77 - 135	16	20
Trichlorofluoromethane	50.0	65.7		ug/Kg		131	48 - 150	7	33
Vinyl chloride	50.0	71.7		ug/Kg		143	43 - 145	4	24

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	111		58 - 140
4-Bromofluorobenzene (Surr)	108		76 - 127
Dibromofluoromethane (Surr)	95		75 - 121
Toluene-d8 (Surr)	105		80 - 126

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-519284/10
Matrix: Water
Analysis Batch: 519284

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			12/04/20 21:43	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.21	ug/L			12/04/20 21:43	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			12/04/20 21:43	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			12/04/20 21:43	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			12/04/20 21:43	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			12/04/20 21:43	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			12/04/20 21:43	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			12/04/20 21:43	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			12/04/20 21:43	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			12/04/20 21:43	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			12/04/20 21:43	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/04/20 21:43	1
1,2-Dichloropropane	0.444	J	1.0	0.18	ug/L			12/04/20 21:43	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/04/20 21:43	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			12/04/20 21:43	1
1,4-Dioxane	ND		200	19	ug/L			12/04/20 21:43	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			12/04/20 21:43	1
2-Hexanone	ND		5.0	1.7	ug/L			12/04/20 21:43	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			12/04/20 21:43	1
Acetone	ND		10	1.9	ug/L			12/04/20 21:43	1
Benzene	ND		1.0	0.16	ug/L			12/04/20 21:43	1
Bromoform	ND		1.0	0.46	ug/L			12/04/20 21:43	1
Bromomethane	ND		2.0	0.21	ug/L			12/04/20 21:43	1
Carbon disulfide	ND		2.0	0.17	ug/L			12/04/20 21:43	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			12/04/20 21:43	1
Chlorobenzene	ND		1.0	0.17	ug/L			12/04/20 21:43	1
Chlorobromomethane	ND		1.0	0.10	ug/L			12/04/20 21:43	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			12/04/20 21:43	1
Chloroethane	ND		2.0	0.41	ug/L			12/04/20 21:43	1
Chloroform	ND		1.0	0.16	ug/L			12/04/20 21:43	1
Chloromethane	ND		2.0	0.30	ug/L			12/04/20 21:43	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			12/04/20 21:43	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			12/04/20 21:43	1
Cyclohexane	ND		2.0	0.28	ug/L			12/04/20 21:43	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			12/04/20 21:43	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			12/04/20 21:43	1
Ethylbenzene	ND		1.0	0.16	ug/L			12/04/20 21:43	1
Isopropylbenzene	ND		1.0	0.19	ug/L			12/04/20 21:43	1
Methyl acetate	ND		5.0	1.6	ug/L			12/04/20 21:43	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			12/04/20 21:43	1
Methylcyclohexane	ND		1.0	0.10	ug/L			12/04/20 21:43	1
Methylene Chloride	ND		2.0	0.94	ug/L			12/04/20 21:43	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			12/04/20 21:43	1
o-Xylene	ND		1.0	0.19	ug/L			12/04/20 21:43	1
Styrene	ND		1.0	0.36	ug/L			12/04/20 21:43	1
Tetrachloroethene	ND		1.0	0.20	ug/L			12/04/20 21:43	1
Toluene	ND		1.0	0.17	ug/L			12/04/20 21:43	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			12/04/20 21:43	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-519284/10
Matrix: Water
Analysis Batch: 519284

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			12/04/20 21:43	1
Trichloroethene	ND		1.0	0.16	ug/L			12/04/20 21:43	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			12/04/20 21:43	1
Vinyl chloride	ND		1.0	0.10	ug/L			12/04/20 21:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		70 - 127		12/04/20 21:43	1
4-Bromofluorobenzene (Surr)	101		78 - 120		12/04/20 21:43	1
Dibromofluoromethane (Surr)	99		77 - 120		12/04/20 21:43	1
Toluene-d8 (Surr)	101		80 - 125		12/04/20 21:43	1

Lab Sample ID: LCS 280-519284/5
Matrix: Water
Analysis Batch: 519284

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	23.2		ug/L		93	65 - 135
1,1,2,2-Tetrachloroethane	25.0	21.6		ug/L		87	58 - 135
1,1,2-Trichloroethane	25.0	24.1		ug/L		96	64 - 135
1,1,2-Trichlorotrifluoroethane	25.0	25.8		ug/L		103	65 - 140
1,1-Dichloroethane	25.0	22.3		ug/L		89	65 - 135
1,1-Dichloroethene	25.0	23.8		ug/L		95	65 - 136
1,2,3-Trichlorobenzene	25.0	22.5		ug/L		90	60 - 135
1,2,4-Trichlorobenzene	25.0	22.4		ug/L		89	58 - 135
1,2-Dibromo-3-Chloropropane	25.0	24.3		ug/L		97	57 - 135
1,2-Dibromoethane	25.0	23.6		ug/L		94	65 - 135
1,2-Dichlorobenzene	25.0	22.6		ug/L		90	65 - 135
1,2-Dichloroethane	25.0	24.3		ug/L		97	65 - 135
1,2-Dichloropropane	25.0	21.9		ug/L		88	64 - 135
1,3-Dichlorobenzene	25.0	23.1		ug/L		92	65 - 135
1,4-Dichlorobenzene	25.0	24.2		ug/L		97	65 - 135
1,4-Dioxane	500	500		ug/L		100	31 - 147
2-Butanone (MEK)	100	102		ug/L		102	44 - 177
2-Hexanone	100	98.6		ug/L		99	57 - 139
4-Methyl-2-pentanone (MIBK)	100	101		ug/L		101	60 - 150
Acetone	100	101		ug/L		101	39 - 156
Benzene	25.0	24.1		ug/L		96	65 - 135
Bromoform	25.0	25.7		ug/L		103	62 - 135
Bromomethane	25.0	19.4		ug/L		78	45 - 135
Carbon disulfide	25.0	21.4		ug/L		86	55 - 143
Carbon tetrachloride	25.0	24.0		ug/L		96	65 - 135
Chlorobenzene	25.0	27.0		ug/L		108	65 - 135
Chlorobromomethane	25.0	26.5		ug/L		106	65 - 135
Chlorodibromomethane	25.0	24.7		ug/L		99	65 - 135
Chloroethane	25.0	26.3		ug/L		105	46 - 136
Chloroform	25.0	23.7		ug/L		95	65 - 135
Chloromethane	25.0	26.6		ug/L		107	34 - 145
cis-1,2-Dichloroethene	25.0	23.4		ug/L		93	65 - 135

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-519284/5
Matrix: Water
Analysis Batch: 519284

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,3-Dichloropropene	25.0	21.7		ug/L		87	65 - 135
Cyclohexane	25.0	22.4		ug/L		89	62 - 135
Dichlorobromomethane	25.0	23.4		ug/L		94	65 - 135
Dichlorodifluoromethane	25.0	28.7		ug/L		115	43 - 142
Ethylbenzene	25.0	25.5		ug/L		102	65 - 135
Isopropylbenzene	25.0	22.7		ug/L		91	65 - 135
Methyl acetate	50.0	51.5		ug/L		103	52 - 135
Methyl tert-butyl ether	25.0	21.0		ug/L		84	54 - 135
Methylcyclohexane	25.0	23.1		ug/L		92	63 - 135
Methylene Chloride	25.0	24.0		ug/L		96	54 - 141
m-Xylene & p-Xylene	25.0	23.7		ug/L		95	65 - 135
o-Xylene	25.0	24.1		ug/L		96	65 - 135
Styrene	25.0	24.5		ug/L		98	65 - 135
Tetrachloroethene	25.0	26.1		ug/L		104	65 - 135
Toluene	25.0	23.5		ug/L		94	65 - 135
trans-1,2-Dichloroethene	25.0	22.9		ug/L		92	65 - 135
trans-1,3-Dichloropropene	25.0	21.6		ug/L		86	65 - 135
Trichloroethene	25.0	23.9		ug/L		96	65 - 135
Trichlorofluoromethane	25.0	26.6		ug/L		106	53 - 137
Vinyl chloride	25.0	27.0		ug/L		108	40 - 137

Surrogate	LCS %Recovery	LCS Qualifier	LCS Limits
1,2-Dichloroethane-d4 (Surr)	101		70 - 127
4-Bromofluorobenzene (Surr)	102		78 - 120
Dibromofluoromethane (Surr)	101		77 - 120
Toluene-d8 (Surr)	100		80 - 125

Lab Sample ID: LCSD 280-519284/6
Matrix: Water
Analysis Batch: 519284

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	25.0	22.2		ug/L		89	65 - 135	4	20
1,1,2,2-Tetrachloroethane	25.0	20.1		ug/L		80	58 - 135	7	20
1,1,2-Trichloroethane	25.0	23.6		ug/L		94	64 - 135	2	27
1,1,2-Trichlorotrifluoroethane	25.0	25.4		ug/L		102	65 - 140	2	20
1,1-Dichloroethane	25.0	21.1		ug/L		84	65 - 135	5	21
1,1-Dichloroethene	25.0	22.7		ug/L		91	65 - 136	5	20
1,2,3-Trichlorobenzene	25.0	22.3		ug/L		89	60 - 135	1	36
1,2,4-Trichlorobenzene	25.0	22.2		ug/L		89	58 - 135	1	25
1,2-Dibromo-3-Chloropropane	25.0	23.3		ug/L		93	57 - 135	4	22
1,2-Dibromoethane	25.0	22.7		ug/L		91	65 - 135	4	27
1,2-Dichlorobenzene	25.0	22.1		ug/L		88	65 - 135	2	20
1,2-Dichloroethane	25.0	23.1		ug/L		92	65 - 135	5	20
1,2-Dichloropropane	25.0	21.0		ug/L		84	64 - 135	4	20
1,3-Dichlorobenzene	25.0	22.4		ug/L		90	65 - 135	3	20
1,4-Dichlorobenzene	25.0	23.4		ug/L		93	65 - 135	3	23
1,4-Dioxane	500	486		ug/L		97	31 - 147	3	30

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-519284/6
Matrix: Water
Analysis Batch: 519284

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Butanone (MEK)	100	97.0		ug/L		97	44 - 177	5	32
2-Hexanone	100	92.8		ug/L		93	57 - 139	6	25
4-Methyl-2-pentanone (MIBK)	100	94.7		ug/L		95	60 - 150	6	22
Acetone	100	93.9		ug/L		94	39 - 156	7	23
Benzene	25.0	23.2		ug/L		93	65 - 135	4	20
Bromoform	25.0	25.9		ug/L		104	62 - 135	1	27
Bromomethane	25.0	22.8		ug/L		91	45 - 135	16	33
Carbon disulfide	25.0	20.4		ug/L		81	55 - 143	5	20
Carbon tetrachloride	25.0	23.4		ug/L		93	65 - 135	3	21
Chlorobenzene	25.0	26.4		ug/L		106	65 - 135	2	20
Chlorobromomethane	25.0	25.9		ug/L		104	65 - 135	2	29
Chlorodibromomethane	25.0	24.1		ug/L		96	65 - 135	3	20
Chloroethane	25.0	24.2		ug/L		97	46 - 136	8	25
Chloroform	25.0	22.9		ug/L		92	65 - 135	4	20
Chloromethane	25.0	24.9		ug/L		99	34 - 145	7	24
cis-1,2-Dichloroethene	25.0	22.6		ug/L		90	65 - 135	3	20
cis-1,3-Dichloropropene	25.0	20.9		ug/L		83	65 - 135	4	26
Cyclohexane	25.0	21.0		ug/L		84	62 - 135	6	20
Dichlorobromomethane	25.0	22.6		ug/L		91	65 - 135	3	20
Dichlorodifluoromethane	25.0	27.5		ug/L		110	43 - 142	4	30
Ethylbenzene	25.0	24.9		ug/L		100	65 - 135	2	20
Isopropylbenzene	25.0	21.7		ug/L		87	65 - 135	4	20
Methyl acetate	50.0	48.7		ug/L		97	52 - 135	6	27
Methyl tert-butyl ether	25.0	20.5		ug/L		82	54 - 135	2	21
Methylcyclohexane	25.0	21.9		ug/L		87	63 - 135	5	20
Methylene Chloride	25.0	23.1		ug/L		93	54 - 141	4	26
m-Xylene & p-Xylene	25.0	22.8		ug/L		91	65 - 135	4	20
o-Xylene	25.0	23.6		ug/L		94	65 - 135	2	20
Styrene	25.0	23.9		ug/L		96	65 - 135	2	26
Tetrachloroethene	25.0	26.0		ug/L		104	65 - 135	0	20
Toluene	25.0	22.8		ug/L		91	65 - 135	3	20
trans-1,2-Dichloroethene	25.0	22.1		ug/L		88	65 - 135	4	24
trans-1,3-Dichloropropene	25.0	21.0		ug/L		84	65 - 135	3	26
Trichloroethene	25.0	23.2		ug/L		93	65 - 135	3	20
Trichlorofluoromethane	25.0	25.6		ug/L		102	53 - 137	4	27
Vinyl chloride	25.0	25.7		ug/L		103	40 - 137	5	24

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	98		70 - 127
4-Bromofluorobenzene (Surr)	100		78 - 120
Dibromofluoromethane (Surr)	101		77 - 120
Toluene-d8 (Surr)	99		80 - 125

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-520466/1-A

Matrix: Solid

Analysis Batch: 520995

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 520466

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1'-Biphenyl	ND		330	24	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
1,2,4,5-Tetrachlorobenzene	ND		330	49	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
1,2,4-Trichlorobenzene	ND		330	28	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
1,2-Dichlorobenzene	ND		330	22	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		330	22	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
1,3-Dichlorobenzene	ND		330	12	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
1,3-Dinitrobenzene	ND		330	71	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
1,4-Dichlorobenzene	ND		330	14	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
1,4-Dioxane	ND		660	66	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
1-Methylnaphthalene	ND		330	11	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
2,2'-oxybis[1-chloropropane]	ND		330	23	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
2,3,4,6-Tetrachlorophenol	ND		1600	140	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
2,4,5-Trichlorophenol	ND		330	10	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
2,4,6-Trichlorophenol	ND		330	10	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
2,4-Dichlorophenol	ND		330	10	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
2,4-Dimethylphenol	ND		330	66	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
2,4-Dinitrophenol	ND		1600	330	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
2,4-Dinitrotoluene	ND		330	66	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
2,6-Dichlorophenol	ND		330	22	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
2,6-Dinitrotoluene	ND		330	28	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
2-Chloronaphthalene	ND		330	10	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
2-Chlorophenol	ND		330	21	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
2-Methylnaphthalene	ND		330	19	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
2-Methylphenol	ND		330	13	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
2-Nitroaniline	ND		1600	50	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
2-Nitrophenol	ND		330	10	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
3 & 4 Methylphenol	ND		330	33	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
3,3'-Dichlorobenzidine	ND		660	90	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
3-Methylphenol	ND		330	33	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
3-Nitroaniline	ND		1600	73	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
4,6-Dinitro-2-methylphenol	ND		1600	330	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
4-Bromophenyl phenyl ether	ND		330	19	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
4-Chloro-3-methylphenol	ND		330	25	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
4-Chloroaniline	ND		330	82	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
4-Chlorophenyl phenyl ether	ND		330	21	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
4-Methylphenol	ND		330	33	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
4-Nitroaniline	ND		1600	73	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
4-Nitrophenol	ND		1600	97	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Acenaphthene	ND		330	10	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Acenaphthylene	ND		330	82	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Acetophenone	ND		330	20	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Aniline	ND		330	130	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Anthracene	ND		330	17	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Azobenzene	ND		330	22	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Benzaldehyde	ND		330	67	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Benzidine	ND		3300	990	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Benzo[a]anthracene	ND		330	20	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Benzo[a]pyrene	ND		330	20	ug/Kg		12/15/20 12:41	12/18/20 16:20	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-520466/1-A
Matrix: Solid
Analysis Batch: 520995

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 520466

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND		330	26	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Benzo[g,h,i]perylene	ND		330	16	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Benzo[k]fluoranthene	ND		330	40	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Benzoic acid	ND		1600	330	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Benzyl alcohol	ND		330	10	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Bis(2-chloroethoxy)methane	ND		330	23	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Bis(2-chloroethyl)ether	ND		330	17	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Bis(2-ethylhexyl) phthalate	ND		330	46	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Butyl benzyl phthalate	ND		330	43	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Caprolactam	ND		330	110	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Carbazole	ND		330	36	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Chrysene	ND		330	27	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Dibenz(a,h)anthracene	ND		330	19	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Dibenzofuran	ND		330	20	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Diethyl phthalate	ND		660	26	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Dimethyl phthalate	ND		330	23	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Di-n-butyl phthalate	ND		330	29	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Di-n-octyl phthalate	ND		330	41	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Diphenylamine	ND		330	44	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Famphur	ND		660	34	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Fluoranthene	ND		330	36	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Fluorene	ND		330	18	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Hexachlorobenzene	ND		330	29	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Hexachlorobutadiene	ND		330	10	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Hexachlorocyclopentadiene	ND		1600	110	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Hexachloroethane	ND		330	21	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Hexadecane	ND		330	13	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Indeno[1,2,3-cd]pyrene	ND		330	22	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Isophorone	ND		330	17	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Naphthalene	ND		330	31	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Nitrobenzene	ND		330	22	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
N-Nitrosodimethylamine	ND		330	37	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
N-Nitrosodi-n-propylamine	ND		330	68	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
N-Nitrosodiphenylamine	ND		330	21	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Pentachlorophenol	ND		1600	330	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Phenanthrene	ND		330	17	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Phenol	ND		330	18	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Pyrene	ND		330	12	ug/Kg		12/15/20 12:41	12/18/20 16:20	1
Pyridine	ND		660	40	ug/Kg		12/15/20 12:41	12/18/20 16:20	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	66		35 - 120	12/15/20 12:41	12/18/20 16:20	1
2-Fluorobiphenyl	73		46 - 120	12/15/20 12:41	12/18/20 16:20	1
2-Fluorophenol (Surr)	71		43 - 120	12/15/20 12:41	12/18/20 16:20	1
Nitrobenzene-d5 (Surr)	62		46 - 120	12/15/20 12:41	12/18/20 16:20	1
Phenol-d5 (Surr)	70		46 - 120	12/15/20 12:41	12/18/20 16:20	1
Terphenyl-d14 (Surr)	91		46 - 120	12/15/20 12:41	12/18/20 16:20	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-520466/2-A
Matrix: Solid
Analysis Batch: 520995

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 520466
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1'-Biphenyl	2670	2010		ug/Kg		75	60 - 120
1,2,4,5-Tetrachlorobenzene	2670	1780		ug/Kg		67	60 - 120
1,2,4-Trichlorobenzene	2670	1850		ug/Kg		69	59 - 120
1,2-Dichlorobenzene	2670	1770		ug/Kg		66	57 - 120
1,2-Diphenylhydrazine(as Azobenzene)	2700	1860		ug/Kg		69	60 - 120
1,3-Dichlorobenzene	2670	1740		ug/Kg		65	56 - 120
1,3-Dinitrobenzene	2670	2180		ug/Kg		82	66 - 120
1,4-Dichlorobenzene	2670	1760		ug/Kg		66	57 - 120
1,4-Dioxane	2670	831		ug/Kg		31	28 - 120
1-Methylnaphthalene	2670	1940		ug/Kg		73	57 - 120
2,2'-oxybis[1-chloropropane]	2670	2120		ug/Kg		79	46 - 120
2,3,4,6-Tetrachlorophenol	2670	1950		ug/Kg		73	63 - 120
2,4,5-Trichlorophenol	2670	1880		ug/Kg		71	65 - 120
2,4,6-Trichlorophenol	2670	1890		ug/Kg		71	64 - 120
2,4-Dichlorophenol	2670	1970		ug/Kg		74	64 - 120
2,4-Dimethylphenol	2670	1860		ug/Kg		70	60 - 120
2,4-Dinitrophenol	5330	2690	*-	ug/Kg		50	52 - 120
2,4-Dinitrotoluene	2670	2050		ug/Kg		77	68 - 120
2,6-Dichlorophenol	2670	1970		ug/Kg		74	30 - 150
2,6-Dinitrotoluene	2670	1990		ug/Kg		75	68 - 120
2-Chloronaphthalene	2670	1920		ug/Kg		72	61 - 120
2-Chlorophenol	2670	1950		ug/Kg		73	62 - 120
2-Methylnaphthalene	2670	1930		ug/Kg		72	60 - 120
2-Methylphenol	2670	1990		ug/Kg		75	61 - 120
2-Nitroaniline	2670	1870		ug/Kg		70	63 - 120
2-Nitrophenol	2670	1890		ug/Kg		71	61 - 120
3 & 4 Methylphenol	2670	1970		ug/Kg		74	62 - 120
3,3'-Dichlorobenzidine	5330	3640		ug/Kg		68	22 - 120
3-Methylphenol	2670	1970		ug/Kg		74	62 - 120
3-Nitroaniline	2670	1740		ug/Kg		65	40 - 120
4,6-Dinitro-2-methylphenol	5330	3800		ug/Kg		71	60 - 120
4-Bromophenyl phenyl ether	2670	1940		ug/Kg		73	66 - 120
4-Chloro-3-methylphenol	2670	1890		ug/Kg		71	62 - 120
4-Chloroaniline	2670	1520		ug/Kg		57	33 - 120
4-Chlorophenyl phenyl ether	2670	1920		ug/Kg		72	63 - 120
4-Methylphenol	2670	1970		ug/Kg		74	62 - 120
4-Nitroaniline	2670	1990		ug/Kg		75	58 - 120
4-Nitrophenol	5330	3600		ug/Kg		68	67 - 120
Acenaphthene	2670	1970		ug/Kg		74	62 - 120
Acenaphthylene	2670	1910		ug/Kg		72	64 - 120
Acetophenone	2670	1680		ug/Kg		63	48 - 120
Aniline	2670	1410		ug/Kg		53	21 - 120
Anthracene	2670	2060		ug/Kg		77	66 - 120
Azobenzene	2670	1840		ug/Kg		69	59 - 120
Benzaldehyde	2670	680	*-	ug/Kg		26	30 - 150
Benzidine	5330	1960	J	ug/Kg		37	5 - 120
Benzo[a]anthracene	2670	2110		ug/Kg		79	64 - 120
Benzo[a]pyrene	2670	2100		ug/Kg		79	65 - 120

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-520466/2-A
Matrix: Solid
Analysis Batch: 520995

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 520466

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[b]fluoranthene	2670	2130		ug/Kg		80	58 - 120
Benzo[g,h,i]perylene	2670	2120		ug/Kg		80	58 - 120
Benzo[k]fluoranthene	2670	2170		ug/Kg		81	62 - 120
Benzoic acid	2670	1500	J	ug/Kg		56	51 - 120
Benzyl alcohol	2670	1860		ug/Kg		70	61 - 120
Bis(2-chloroethoxy)methane	2670	1800		ug/Kg		68	58 - 120
Bis(2-chloroethyl)ether	2670	1830		ug/Kg		69	57 - 120
Bis(2-ethylhexyl) phthalate	2670	2130		ug/Kg		80	65 - 120
Butyl benzyl phthalate	2670	2160		ug/Kg		81	65 - 120
Caprolactam	2670	2210		ug/Kg		83	20 - 138
Carbazole	2670	2120		ug/Kg		79	65 - 120
Chrysene	2670	2140		ug/Kg		80	65 - 120
Dibenz(a,h)anthracene	2670	2110		ug/Kg		79	56 - 120
Dibenzofuran	2670	1960		ug/Kg		73	65 - 120
Diethyl phthalate	2670	1980		ug/Kg		74	68 - 120
Dimethyl phthalate	2670	1980		ug/Kg		74	66 - 120
Di-n-butyl phthalate	2670	2080		ug/Kg		78	66 - 120
Di-n-octyl phthalate	2670	2130		ug/Kg		80	55 - 120
Diphenylamine	2270	1720		ug/Kg		76	30 - 150
Fluoranthene	2670	2100		ug/Kg		79	64 - 120
Fluorene	2670	1960		ug/Kg		73	66 - 120
Hexachlorobenzene	2670	1850		ug/Kg		69	65 - 120
Hexachlorobutadiene	2670	1720		ug/Kg		64	58 - 120
Hexachlorocyclopentadiene	5330	3090		ug/Kg		58	43 - 120
Hexachloroethane	2670	1710		ug/Kg		64	56 - 120
Hexadecane	2670	2170		ug/Kg		81	45 - 135
Indeno[1,2,3-cd]pyrene	2670	2200		ug/Kg		82	46 - 120
Isophorone	2670	1690		ug/Kg		64	56 - 120
Naphthalene	2670	1910		ug/Kg		71	59 - 120
Nitrobenzene	2670	1710		ug/Kg		64	55 - 120
N-Nitrosodimethylamine	2670	1540		ug/Kg		58	50 - 120
N-Nitrosodi-n-propylamine	2670	1750		ug/Kg		66	52 - 120
N-Nitrosodiphenylamine	2670	2030		ug/Kg		76	65 - 120
Pentachlorophenol	5330	3110		ug/Kg		58	50 - 120
Phenanthrene	2670	2060		ug/Kg		77	67 - 120
Phenol	2670	1790		ug/Kg		67	63 - 120
Pyrene	2670	2180		ug/Kg		82	66 - 120
Pyridine	5330	2090		ug/Kg		39	37 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	72		35 - 120
2-Fluorobiphenyl	70		46 - 120
2-Fluorophenol (Surr)	72		43 - 120
Nitrobenzene-d5 (Surr)	63		46 - 120
Phenol-d5 (Surr)	71		46 - 120
Terphenyl-d14 (Surr)	86		46 - 120

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-143333-2 MS

Matrix: Solid

Analysis Batch: 520995

Client Sample ID: CDOT I270 12-2020-SB31-15-17

Prep Type: Total/NA

Prep Batch: 520466

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
1,1'-Biphenyl	ND		2680	2030		ug/Kg	*	76	60 - 120
1,2,4,5-Tetrachlorobenzene	ND		2680	1810		ug/Kg	*	68	60 - 120
1,2,4-Trichlorobenzene	ND		2680	1850		ug/Kg	*	69	59 - 120
1,2-Dichlorobenzene	ND		2680	1730		ug/Kg	*	65	57 - 120
1,2-Diphenylhydrazine(as Azobenzene)	ND		2710	1860		ug/Kg	*	69	60 - 120
1,3-Dichlorobenzene	ND		2680	1720		ug/Kg	*	64	56 - 120
1,3-Dinitrobenzene	ND		2680	2210		ug/Kg	*	83	66 - 120
1,4-Dichlorobenzene	ND		2680	1730		ug/Kg	*	64	57 - 120
1,4-Dioxane	ND		2680	907		ug/Kg	*	34	28 - 120
1-Methylnaphthalene	ND		2680	1970		ug/Kg	*	73	57 - 120
2,2'-oxybis[1-chloropropane]	ND		2680	2110		ug/Kg	*	79	46 - 120
2,3,4,6-Tetrachlorophenol	ND		2680	1940		ug/Kg	*	72	63 - 120
2,4,5-Trichlorophenol	ND		2680	1920		ug/Kg	*	72	65 - 120
2,4,6-Trichlorophenol	ND		2680	1920		ug/Kg	*	72	64 - 120
2,4-Dichlorophenol	ND		2680	1960		ug/Kg	*	73	64 - 120
2,4-Dimethylphenol	ND		2680	1860		ug/Kg	*	69	60 - 120
2,4-Dinitrophenol	ND	*	5360	3350		ug/Kg	*	63	52 - 120
2,4-Dinitrotoluene	ND		2680	2030		ug/Kg	*	76	68 - 120
2,6-Dichlorophenol	ND		2680	2000		ug/Kg	*	75	30 - 150
2,6-Dinitrotoluene	ND		2680	2030		ug/Kg	*	76	68 - 120
2-Chloronaphthalene	ND		2680	1950		ug/Kg	*	73	61 - 120
2-Chlorophenol	ND		2680	1960		ug/Kg	*	73	62 - 120
2-Methylnaphthalene	ND		2680	1930		ug/Kg	*	72	60 - 120
2-Methylphenol	ND		2680	1980		ug/Kg	*	74	61 - 120
2-Nitroaniline	ND		2680	1970		ug/Kg	*	74	63 - 120
2-Nitrophenol	ND		2680	1930		ug/Kg	*	72	61 - 120
3 & 4 Methylphenol	ND		2680	1970		ug/Kg	*	74	62 - 120
3,3'-Dichlorobenzidine	ND		5360	4040		ug/Kg	*	75	22 - 120
3-Methylphenol	ND		2680	1970		ug/Kg	*	74	62 - 120
3-Nitroaniline	ND		2680	1810		ug/Kg	*	68	40 - 120
4,6-Dinitro-2-methylphenol	ND		5360	4060		ug/Kg	*	76	60 - 120
4-Bromophenyl phenyl ether	ND		2680	1990		ug/Kg	*	74	66 - 120
4-Chloro-3-methylphenol	ND		2680	1900		ug/Kg	*	71	62 - 120
4-Chloroaniline	ND		2680	1530		ug/Kg	*	57	33 - 120
4-Chlorophenyl phenyl ether	ND		2680	1950		ug/Kg	*	73	63 - 120
4-Methylphenol	ND		2680	1970		ug/Kg	*	74	62 - 120
4-Nitroaniline	ND		2680	1980		ug/Kg	*	74	58 - 120
4-Nitrophenol	ND		5360	3620		ug/Kg	*	67	67 - 120
Acenaphthene	ND		2680	2030		ug/Kg	*	76	62 - 120
Acenaphthylene	ND		2680	1930		ug/Kg	*	72	64 - 120
Acetophenone	ND		2680	1670		ug/Kg	*	62	48 - 120
Aniline	ND		2680	1350		ug/Kg	*	50	21 - 120
Anthracene	ND		2680	2080		ug/Kg	*	78	66 - 120
Azobenzene	ND		2680	1840		ug/Kg	*	69	59 - 120
Benzaldehyde	ND	*	2680	1560		ug/Kg	*	58	30 - 150
Benzidine	ND		5360	1250	J	ug/Kg	*	23	5 - 120
Benzo[a]anthracene	ND		2680	2100		ug/Kg	*	78	64 - 120
Benzo[a]pyrene	ND		2680	2040		ug/Kg	*	76	65 - 120

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-143333-2 MS

Matrix: Solid

Analysis Batch: 520995

Client Sample ID: CDOT I270 12-2020-SB31-15-17

Prep Type: Total/NA

Prep Batch: 520466

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
Benzo[b]fluoranthene	ND		2680	2080		ug/Kg	*	78	58 - 120
Benzo[g,h,i]perylene	ND		2680	2050		ug/Kg	*	77	58 - 120
Benzo[k]fluoranthene	ND		2680	2140		ug/Kg	*	80	62 - 120
Benzoic acid	ND	F1	2680	1090	J F1	ug/Kg	*	41	51 - 120
Benzyl alcohol	ND		2680	1880		ug/Kg	*	70	61 - 120
Bis(2-chloroethoxy)methane	ND		2680	1790		ug/Kg	*	67	58 - 120
Bis(2-chloroethyl)ether	ND		2680	1850		ug/Kg	*	69	57 - 120
Bis(2-ethylhexyl) phthalate	ND		2680	2170		ug/Kg	*	81	65 - 120
Butyl benzyl phthalate	ND		2680	2160		ug/Kg	*	81	65 - 120
Caprolactam	ND		2680	2200		ug/Kg	*	82	20 - 138
Carbazole	ND		2680	2080		ug/Kg	*	78	65 - 120
Chrysene	ND		2680	2130		ug/Kg	*	80	65 - 120
Dibenz(a,h)anthracene	ND		2680	2080		ug/Kg	*	78	56 - 120
Dibenzofuran	ND		2680	1970		ug/Kg	*	73	65 - 120
Diethyl phthalate	ND		2680	1990		ug/Kg	*	74	68 - 120
Dimethyl phthalate	ND		2680	1970		ug/Kg	*	73	66 - 120
Di-n-butyl phthalate	ND		2680	2080		ug/Kg	*	77	66 - 120
Di-n-octyl phthalate	ND		2680	2170		ug/Kg	*	81	55 - 120
Diphenylamine	ND		2280	1700		ug/Kg	*	75	30 - 150
Fluoranthene	ND		2680	2100		ug/Kg	*	78	64 - 120
Fluorene	ND		2680	1980		ug/Kg	*	74	66 - 120
Hexachlorobenzene	ND		2680	1870		ug/Kg	*	70	65 - 120
Hexachlorobutadiene	ND		2680	1740		ug/Kg	*	65	58 - 120
Hexachlorocyclopentadiene	ND		5360	2440		ug/Kg	*	46	43 - 120
Hexachloroethane	ND		2680	1670		ug/Kg	*	62	56 - 120
Hexadecane	16	J	2680	2180		ug/Kg	*	81	45 - 135
Indeno[1,2,3-cd]pyrene	ND		2680	2140		ug/Kg	*	80	46 - 120
Isophorone	ND		2680	1710		ug/Kg	*	64	56 - 120
Naphthalene	ND		2680	1920		ug/Kg	*	72	59 - 120
Nitrobenzene	ND		2680	1720		ug/Kg	*	64	55 - 120
N-Nitrosodimethylamine	ND		2680	1590		ug/Kg	*	59	50 - 120
N-Nitrosodi-n-propylamine	ND		2680	1730		ug/Kg	*	65	52 - 120
N-Nitrosodiphenylamine	ND		2680	2040		ug/Kg	*	76	65 - 120
Pentachlorophenol	ND		5360	3230		ug/Kg	*	60	50 - 120
Phenanthrene	ND		2680	2070		ug/Kg	*	77	67 - 120
Phenol	ND		2680	1770		ug/Kg	*	66	63 - 120
Pyrene	ND		2680	2180		ug/Kg	*	82	66 - 120
Pyridine	ND		5360	2270		ug/Kg	*	42	37 - 120

Surrogate	MS %Recovery	MS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	71		35 - 120
2-Fluorobiphenyl	72		46 - 120
2-Fluorophenol (Surr)	71		43 - 120
Nitrobenzene-d5 (Surr)	64		46 - 120
Phenol-d5 (Surr)	71		46 - 120
Terphenyl-d14 (Surr)	85		46 - 120

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-143333-2 MSD

Matrix: Solid

Analysis Batch: 520995

Client Sample ID: CDOT I270 12-2020-SB31-15-17

Prep Type: Total/NA

Prep Batch: 520466

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
1,1'-Biphenyl	ND		2730	2000		ug/Kg	*	73	60 - 120	1	30
1,2,4,5-Tetrachlorobenzene	ND		2730	1800		ug/Kg	*	66	60 - 120	0	30
1,2,4-Trichlorobenzene	ND		2730	1810		ug/Kg	*	66	59 - 120	2	30
1,2-Dichlorobenzene	ND		2730	1670		ug/Kg	*	61	57 - 120	3	30
1,2-Diphenylhydrazine(as Azobenzene)	ND		2760	1880		ug/Kg	*	68	60 - 120	1	30
1,3-Dichlorobenzene	ND		2730	1620		ug/Kg	*	59	56 - 120	6	30
1,3-Dinitrobenzene	ND		2730	2320		ug/Kg	*	85	66 - 120	5	30
1,4-Dichlorobenzene	ND		2730	1680		ug/Kg	*	62	57 - 120	3	30
1,4-Dioxane	ND		2730	785		ug/Kg	*	29	28 - 120	14	30
1-Methylnaphthalene	ND		2730	1910		ug/Kg	*	70	57 - 120	3	30
2,2'-oxybis[1-chloropropane]	ND		2730	2060		ug/Kg	*	75	46 - 120	3	30
2,3,4,6-Tetrachlorophenol	ND		2730	1940		ug/Kg	*	71	63 - 120	0	30
2,4,5-Trichlorophenol	ND		2730	1920		ug/Kg	*	70	65 - 120	0	30
2,4,6-Trichlorophenol	ND		2730	1860		ug/Kg	*	68	64 - 120	3	30
2,4-Dichlorophenol	ND		2730	1950		ug/Kg	*	72	64 - 120	0	30
2,4-Dimethylphenol	ND		2730	1810		ug/Kg	*	66	60 - 120	3	30
2,4-Dinitrophenol	ND	*	5460	3410		ug/Kg	*	62	52 - 120	2	30
2,4-Dinitrotoluene	ND		2730	2180		ug/Kg	*	80	68 - 120	7	30
2,6-Dichlorophenol	ND		2730	1950		ug/Kg	*	72	30 - 150	2	30
2,6-Dinitrotoluene	ND		2730	2050		ug/Kg	*	75	68 - 120	1	30
2-Chloronaphthalene	ND		2730	1940		ug/Kg	*	71	61 - 120	1	30
2-Chlorophenol	ND		2730	1920		ug/Kg	*	70	62 - 120	2	30
2-Methylnaphthalene	ND		2730	1930		ug/Kg	*	71	60 - 120	0	30
2-Methylphenol	ND		2730	1940		ug/Kg	*	71	61 - 120	2	30
2-Nitroaniline	ND		2730	1940		ug/Kg	*	71	63 - 120	1	30
2-Nitrophenol	ND		2730	1900		ug/Kg	*	70	61 - 120	2	30
3 & 4 Methylphenol	ND		2730	1910		ug/Kg	*	70	62 - 120	3	30
3,3'-Dichlorobenzidine	ND		5460	4200		ug/Kg	*	77	22 - 120	4	30
3-Methylphenol	ND		2730	1910		ug/Kg	*	70	62 - 120	3	30
3-Nitroaniline	ND		2730	1880		ug/Kg	*	69	40 - 120	4	30
4,6-Dinitro-2-methylphenol	ND		5460	4140		ug/Kg	*	76	60 - 120	2	30
4-Bromophenyl phenyl ether	ND		2730	2020		ug/Kg	*	74	66 - 120	2	30
4-Chloro-3-methylphenol	ND		2730	1910		ug/Kg	*	70	62 - 120	0	30
4-Chloroaniline	ND		2730	1570		ug/Kg	*	58	33 - 120	2	30
4-Chlorophenyl phenyl ether	ND		2730	1950		ug/Kg	*	71	63 - 120	0	30
4-Methylphenol	ND		2730	1910		ug/Kg	*	70	62 - 120	3	30
4-Nitroaniline	ND		2730	2060		ug/Kg	*	75	58 - 120	4	30
4-Nitrophenol	ND		5460	3790		ug/Kg	*	69	67 - 120	5	30
Acenaphthene	ND		2730	2000		ug/Kg	*	73	62 - 120	1	30
Acenaphthylene	ND		2730	1920		ug/Kg	*	70	64 - 120	1	30
Acetophenone	ND		2730	1620		ug/Kg	*	59	48 - 120	3	30
Aniline	ND		2730	1360		ug/Kg	*	50	21 - 120	0	30
Anthracene	ND		2730	2130		ug/Kg	*	78	66 - 120	2	30
Azobenzene	ND		2730	1860		ug/Kg	*	68	59 - 120	1	30
Benzaldehyde	ND	*	2730	1150		ug/Kg	*	42	30 - 150	30	50
Benzidine	ND		5460	1520	J	ug/Kg	*	28	5 - 120	20	50
Benzo[a]anthracene	ND		2730	2200		ug/Kg	*	81	64 - 120	5	30
Benzo[a]pyrene	ND		2730	2190		ug/Kg	*	80	65 - 120	7	30

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-143333-2 MSD

Client Sample ID: CDOT I270 12-2020-SB31-15-17

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 520995

Prep Batch: 520466

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
	Result	Qualifier	Added	Result	Qualifier						
Benzo[b]fluoranthene	ND		2730	2280		ug/Kg	*	84	58 - 120	9	30
Benzo[g,h,i]perylene	ND		2730	2210		ug/Kg	*	81	58 - 120	8	30
Benzo[k]fluoranthene	ND		2730	2200		ug/Kg	*	81	62 - 120	3	30
Benzoic acid	ND	F1	2730	830	J F1	ug/Kg	*	30	51 - 120	27	30
Benzyl alcohol	ND		2730	1830		ug/Kg	*	67	61 - 120	2	30
Bis(2-chloroethoxy)methane	ND		2730	1810		ug/Kg	*	66	58 - 120	1	30
Bis(2-chloroethyl)ether	ND		2730	1760		ug/Kg	*	64	57 - 120	5	30
Bis(2-ethylhexyl) phthalate	ND		2730	2290		ug/Kg	*	84	65 - 120	5	30
Butyl benzyl phthalate	ND		2730	2270		ug/Kg	*	83	65 - 120	5	30
Caprolactam	ND		2730	2230		ug/Kg	*	82	20 - 138	1	30
Carbazole	ND		2730	2160		ug/Kg	*	79	65 - 120	4	30
Chrysene	ND		2730	2230		ug/Kg	*	82	65 - 120	5	30
Dibenz(a,h)anthracene	ND		2730	2200		ug/Kg	*	81	56 - 120	6	30
Dibenzofuran	ND		2730	1980		ug/Kg	*	72	65 - 120	0	30
Diethyl phthalate	ND		2730	2020		ug/Kg	*	74	68 - 120	2	30
Dimethyl phthalate	ND		2730	2030		ug/Kg	*	74	66 - 120	3	30
Di-n-butyl phthalate	ND		2730	2130		ug/Kg	*	78	66 - 120	3	30
Di-n-octyl phthalate	ND		2730	2280		ug/Kg	*	84	55 - 120	5	30
Diphenylamine	ND		2320	1740		ug/Kg	*	75	30 - 150	2	50
Fluoranthene	ND		2730	2160		ug/Kg	*	79	64 - 120	3	30
Fluorene	ND		2730	2010		ug/Kg	*	73	66 - 120	1	30
Hexachlorobenzene	ND		2730	1890		ug/Kg	*	69	65 - 120	1	30
Hexachlorobutadiene	ND		2730	1680		ug/Kg	*	61	58 - 120	4	30
Hexachlorocyclopentadiene	ND		5460	2530		ug/Kg	*	46	43 - 120	4	30
Hexachloroethane	ND		2730	1630		ug/Kg	*	60	56 - 120	3	30
Hexadecane	16	J	2730	2170		ug/Kg	*	79	45 - 135	1	30
Indeno[1,2,3-cd]pyrene	ND		2730	2270		ug/Kg	*	83	46 - 120	6	30
Isophorone	ND		2730	1690		ug/Kg	*	62	56 - 120	1	30
Naphthalene	ND		2730	1880		ug/Kg	*	69	59 - 120	2	30
Nitrobenzene	ND		2730	1700		ug/Kg	*	62	55 - 120	1	30
N-Nitrosodimethylamine	ND		2730	1490		ug/Kg	*	54	50 - 120	6	30
N-Nitrosodi-n-propylamine	ND		2730	1710		ug/Kg	*	63	52 - 120	1	30
N-Nitrosodiphenylamine	ND		2730	2070		ug/Kg	*	76	65 - 120	1	30
Pentachlorophenol	ND		5460	3070		ug/Kg	*	56	50 - 120	5	30
Phenanthrene	ND		2730	2150		ug/Kg	*	79	67 - 120	4	30
Phenol	ND		2730	1730		ug/Kg	*	63	63 - 120	2	30
Pyrene	ND		2730	2290		ug/Kg	*	84	66 - 120	5	30
Pyridine	ND		5460	2020		ug/Kg	*	37	37 - 120	11	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	72		35 - 120
2-Fluorobiphenyl	69		46 - 120
2-Fluorophenol (Surr)	68		43 - 120
Nitrobenzene-d5 (Surr)	62		46 - 120
Phenol-d5 (Surr)	69		46 - 120
Terphenyl-d14 (Surr)	89		46 - 120

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Lab Sample ID: MB 280-519873/5
Matrix: Water
Analysis Batch: 519873

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		25	10	ug/L			12/09/20 21:22	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	87		82 - 110					12/09/20 21:22	1

Lab Sample ID: LCS 280-519873/3
Matrix: Water
Analysis Batch: 519873

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	76.9	70.7		ug/L		92	79 - 149
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
a,a,a-Trifluorotoluene	84		82 - 110				

Lab Sample ID: LCSD 280-519873/4
Matrix: Water
Analysis Batch: 519873

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	76.9	67.3		ug/L		88	79 - 149	5	27
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
a,a,a-Trifluorotoluene	82		82 - 110						

Lab Sample ID: MB 280-520474/3-A
Matrix: Solid
Analysis Batch: 520541

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 520474

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		2.0	0.76	mg/Kg		12/15/20 09:02	12/15/20 17:23	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	89		77 - 123				12/15/20 09:02	12/15/20 17:23	1

Lab Sample ID: LCS 280-520474/1-A
Matrix: Solid
Analysis Batch: 520541

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 520474

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	8.54	7.19		mg/Kg		84	75 - 135

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics) (Continued)

Lab Sample ID: LCS 280-520474/1-A
Matrix: Solid
Analysis Batch: 520541

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 520474

Surrogate	LCS %Recovery	LCS Qualifier	Limits
a,a,a-Trifluorotoluene	93		77 - 123

Lab Sample ID: LCSD 280-520474/2-A
Matrix: Solid
Analysis Batch: 520541

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 520474

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	8.54	7.40		mg/Kg		87	75 - 135	3	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
a,a,a-Trifluorotoluene	93		77 - 123

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Lab Sample ID: MB 280-519246/1-A
Matrix: Solid
Analysis Batch: 520152

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 519246

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		8.0	3.6	mg/Kg		12/04/20 15:12	12/12/20 05:23	1
Motor Oil (C20-C38)	8.27	J	24	7.8	mg/Kg		12/04/20 15:12	12/12/20 05:23	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	71		49 - 115	12/04/20 15:12	12/12/20 05:23	1

Lab Sample ID: LCS 280-519246/2-A
Matrix: Solid
Analysis Batch: 520152

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 519246

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	132	118		mg/Kg		89	53 - 115

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl (Surr)	94		49 - 115

Lab Sample ID: LCS 280-519246/4-A
Matrix: Solid
Analysis Batch: 520152

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 519246

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Motor Oil (C20-C38)	334	256		mg/Kg		77	57 - 115

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl (Surr)	88		49 - 115

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Lab Sample ID: LCSD 280-519246/3-A
Matrix: Solid
Analysis Batch: 520152

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 519246

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	132	112		mg/Kg		84	53 - 115	6	23
Surrogate	%Recovery	LCSD Qualifier	Limits						
<i>o-Terphenyl (Surr)</i>	90		49 - 115						

Lab Sample ID: LCSD 280-519246/5-A
Matrix: Solid
Analysis Batch: 520152

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 519246

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Motor Oil (C20-C38)	334	269		mg/Kg		80	57 - 115	5	30
Surrogate	%Recovery	LCSD Qualifier	Limits						
<i>o-Terphenyl (Surr)</i>	92		49 - 115						

Lab Sample ID: MB 280-519339/1-A
Matrix: Water
Analysis Batch: 520288

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 519339

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.25	0.033	mg/L		12/05/20 15:03	12/12/20 19:45	1
Motor Oil (C20-C38)	ND		0.50	0.056	mg/L		12/05/20 15:03	12/12/20 19:45	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o-Terphenyl (Surr)</i>	72		50 - 115				12/05/20 15:03	12/12/20 19:45	1

Lab Sample ID: LCS 280-519339/2-A
Matrix: Water
Analysis Batch: 520288

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 519339

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]	1.98	1.64		mg/L		83	54 - 115		
Surrogate	%Recovery	LCS Qualifier	Limits						
<i>o-Terphenyl (Surr)</i>	106		50 - 115						

Lab Sample ID: LCS 280-519339/4-A
Matrix: Water
Analysis Batch: 520288

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 519339

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Motor Oil (C20-C38)	5.02	5.06		mg/L		101	54 - 115		

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Lab Sample ID: LCS 280-519339/4-A
Matrix: Water
Analysis Batch: 520288

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 519339

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl (Surr)	91		50 - 115

Lab Sample ID: LCSD 280-519339/3-A
Matrix: Water
Analysis Batch: 520288

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 519339

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	1.98	1.46		mg/L		74	54 - 115	11	31

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl (Surr)	98		50 - 115

Lab Sample ID: LCSD 280-519339/5-A
Matrix: Water
Analysis Batch: 520288

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 519339

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Motor Oil (C20-C38)	5.02	5.00		mg/L		100	54 - 115	1	31

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl (Surr)	90		50 - 115

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-519270/1-A
Matrix: Water
Analysis Batch: 520413

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 519270

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.33	ug/L		12/07/20 08:19	12/14/20 15:19	1
Barium	0.922	J	1.0	0.29	ug/L		12/07/20 08:19	12/14/20 15:19	1
Cadmium	ND		1.0	0.27	ug/L		12/07/20 08:19	12/14/20 15:19	1
Chromium	ND		2.0	0.50	ug/L		12/07/20 08:19	12/14/20 15:19	1
Lead	ND		1.0	0.18	ug/L		12/07/20 08:19	12/14/20 15:19	1
Selenium	ND		5.0	0.37	ug/L		12/07/20 08:19	12/14/20 15:19	1
Silver	ND		5.0	0.033	ug/L		12/07/20 08:19	12/14/20 15:19	1

Lab Sample ID: LCS 280-519270/2-A
Matrix: Water
Analysis Batch: 520413

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 519270

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	40.0	39.6		ug/L		99	85 - 117
Barium	40.0	41.8		ug/L		105	85 - 118
Cadmium	40.0	39.0		ug/L		97	85 - 115
Chromium	40.0	39.9		ug/L		100	84 - 121

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 280-519270/2-A
Matrix: Water
Analysis Batch: 520413

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 519270

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	40.0	41.1		ug/L		103	85 - 118
Selenium	40.0	40.9		ug/L		102	77 - 122
Silver	40.0	39.7		ug/L		99	85 - 115

Lab Sample ID: 280-143333-3 MS
Matrix: Water
Analysis Batch: 520413

Client Sample ID: CDOT I270 12-2020-SB31-GW
Prep Type: Total/NA
Prep Batch: 519270

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	170		40.0	203	4	ug/L		73	85 - 117
Barium	5600	B	40.0	3850	4	ug/L		-4291	85 - 118
Cadmium	10		40.0	53.4		ug/L		107	85 - 115
Chromium	1800		40.0	1880	4	ug/L		226	84 - 121
Lead	410		40.0	455	4	ug/L		121	85 - 118
Selenium	22	J F1	40.0	35.7	F1	ug/L		34	77 - 122
Silver	3.7	J	40.0	44.8		ug/L		103	85 - 115

Lab Sample ID: 280-143333-3 MSD
Matrix: Water
Analysis Batch: 520413

Client Sample ID: CDOT I270 12-2020-SB31-GW
Prep Type: Total/NA
Prep Batch: 519270

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Arsenic	170		40.0	211	4	ug/L		92	85 - 117	4	20
Barium	5600	B	40.0	4160	4	ug/L		-3522	85 - 118	8	20
Cadmium	10		40.0	51.8		ug/L		104	85 - 115	3	20
Chromium	1800		40.0	1880	4	ug/L		224	84 - 121	0	20
Lead	410		40.0	461	4	ug/L		134	85 - 118	1	20
Selenium	22	J F1	40.0	38.9	F1	ug/L		43	77 - 122	9	20
Silver	3.7	J	40.0	43.0		ug/L		98	85 - 115	4	20

Lab Sample ID: MB 280-519385/1-A
Matrix: Solid
Analysis Batch: 520055

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 519385

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.60	0.051	mg/Kg		12/07/20 15:50	12/10/20 19:30	1
Barium	ND		0.40	0.071	mg/Kg		12/07/20 15:50	12/10/20 19:30	1
Cadmium	ND		0.10	0.0094	mg/Kg		12/07/20 15:50	12/10/20 19:30	1
Chromium	ND		0.20	0.076	mg/Kg		12/07/20 15:50	12/10/20 19:30	1
Lead	ND		0.15	0.018	mg/Kg		12/07/20 15:50	12/10/20 19:30	1
Selenium	ND		0.50	0.13	mg/Kg		12/07/20 15:50	12/10/20 19:30	1

Lab Sample ID: LCS 280-519385/2-A
Matrix: Solid
Analysis Batch: 520055

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 519385

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	20.0	17.9		mg/Kg		90	83 - 111
Barium	20.0	20.5		mg/Kg		102	86 - 120
Cadmium	20.0	19.1		mg/Kg		96	85 - 109

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 280-519385/2-A
Matrix: Solid
Analysis Batch: 520055

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 519385

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium	20.0	18.8		mg/Kg		94	87 - 121
Lead	20.0	19.1		mg/Kg		96	81 - 125
Selenium	20.0	17.5		mg/Kg		88	78 - 108

Lab Sample ID: 280-143333-2 MS
Matrix: Solid
Analysis Batch: 520055

Client Sample ID: CDOT I270 12-2020-SB31-15-17
Prep Type: Total/NA
Prep Batch: 519385

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.3		20.2	18.5		mg/Kg	⊛	85	83 - 111
Barium	34	F1	20.2	49.2	F1	mg/Kg	⊛	77	86 - 120
Cadmium	0.36		20.2	18.9		mg/Kg	⊛	92	85 - 109
Chromium	3.7		20.2	22.2		mg/Kg	⊛	92	87 - 121
Lead	5.8	F1	20.2	21.0	F1	mg/Kg	⊛	75	81 - 125
Selenium	0.20	J	20.2	17.1		mg/Kg	⊛	84	78 - 108

Lab Sample ID: 280-143333-2 MSD
Matrix: Solid
Analysis Batch: 520055

Client Sample ID: CDOT I270 12-2020-SB31-15-17
Prep Type: Total/NA
Prep Batch: 519385

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Arsenic	1.3		20.3	18.7		mg/Kg	⊛	85	83 - 111	1	20
Barium	34	F1	20.3	47.2	F1	mg/Kg	⊛	67	86 - 120	4	20
Cadmium	0.36		20.3	19.5		mg/Kg	⊛	94	85 - 109	3	20
Chromium	3.7		20.3	22.6		mg/Kg	⊛	93	87 - 121	2	20
Lead	5.8	F1	20.3	23.0		mg/Kg	⊛	84	81 - 125	9	20
Selenium	0.20	J	20.3	17.8		mg/Kg	⊛	86	78 - 108	4	20

Lab Sample ID: MB 280-519386/1-A
Matrix: Solid
Analysis Batch: 519973

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 519386

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		100	7.8	ug/Kg		12/07/20 16:15	12/10/20 08:39	1

Lab Sample ID: LCS 280-519386/2-A
Matrix: Solid
Analysis Batch: 519973

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 519386

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	20000	22300		ug/Kg		112	83 - 113

Lab Sample ID: 280-143333-4 MS
Matrix: Solid
Analysis Batch: 519973

Client Sample ID: CDOT I270 12-2020-SB30-5-10
Prep Type: Total/NA
Prep Batch: 519386

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	170		24500	26500		ug/Kg	⊛	107	83 - 113

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 280-143333-4 MSD

Matrix: Solid

Analysis Batch: 519973

Client Sample ID: CDOT I270 12-2020-SB30-5-10

Prep Type: Total/NA

Prep Batch: 519386

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silver	170		24900	26400		ug/Kg	☼	105	83 - 113	1	20

Lab Sample ID: MB 280-519506/1-E

Matrix: Water

Analysis Batch: 520315

Client Sample ID: Method Blank

Prep Type: Dissolved

Prep Batch: 519762

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic, Dissolved	ND		5.0	0.33	ug/L		12/10/20 08:14	12/11/20 23:20	1
Barium, Dissolved	1.36		1.0	0.29	ug/L		12/10/20 08:14	12/11/20 23:20	1
Cadmium, Dissolved	ND	^	1.0	0.27	ug/L		12/10/20 08:14	12/11/20 23:20	1
Chromium, Dissolved	0.570	J	2.0	0.50	ug/L		12/10/20 08:14	12/11/20 23:20	1
Lead, Dissolved	ND		1.0	0.18	ug/L		12/10/20 08:14	12/11/20 23:20	1
Selenium, Dissolved	ND		5.0	0.37	ug/L		12/10/20 08:14	12/11/20 23:20	1
Silver, Dissolved	ND		5.0	0.033	ug/L		12/10/20 08:14	12/11/20 23:20	1

Lab Sample ID: LCS 280-519506/2-E

Matrix: Water

Analysis Batch: 520315

Client Sample ID: Lab Control Sample

Prep Type: Dissolved

Prep Batch: 519762

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic, Dissolved	40.0	37.9		ug/L		95	85 - 117
Barium, Dissolved	40.0	39.4		ug/L		98	85 - 118
Cadmium, Dissolved	40.0	39.3	^	ug/L		98	85 - 115
Chromium, Dissolved	40.0	41.7		ug/L		104	84 - 121
Lead, Dissolved	40.0	40.6		ug/L		102	85 - 118
Selenium, Dissolved	40.0	40.0		ug/L		100	77 - 122
Silver, Dissolved	40.0	39.1		ug/L		98	85 - 115

Lab Sample ID: 280-143333-3 MS

Matrix: Water

Analysis Batch: 520315

Client Sample ID: CDOT I270 12-2020-SB31-GW

Prep Type: Dissolved

Prep Batch: 519762

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic, Dissolved	ND		40.0	38.8		ug/L		97	85 - 117
Barium, Dissolved	86	B	40.0	126		ug/L		98	85 - 118
Cadmium, Dissolved	ND	^	40.0	36.6	^	ug/L		91	85 - 115
Chromium, Dissolved	ND	F2 F1	40.0	39.6		ug/L		99	84 - 121
Lead, Dissolved	ND		40.0	39.0		ug/L		98	85 - 118
Selenium, Dissolved	0.51	J	40.0	40.2		ug/L		99	77 - 122
Silver, Dissolved	ND		40.0	36.2		ug/L		90	85 - 115

Lab Sample ID: 280-143333-3 MSD

Matrix: Water

Analysis Batch: 520315

Client Sample ID: CDOT I270 12-2020-SB31-GW

Prep Type: Dissolved

Prep Batch: 519762

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic, Dissolved	ND		40.0	39.2		ug/L		98	85 - 117	1	20
Barium, Dissolved	86	B	40.0	125		ug/L		97	85 - 118	0	20
Cadmium, Dissolved	ND	^	40.0	36.3	^	ug/L		91	85 - 115	1	20

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 280-143333-3 MSD

Matrix: Water

Analysis Batch: 520315

Client Sample ID: CDOT I270 12-2020-SB31-GW

Prep Type: Dissolved

Prep Batch: 519762

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec.		RPD	Limit
				Result	Qualifier				Limits	RPD		
Chromium, Dissolved	ND	F2 F1	40.0	49.8	F1 F2	ug/L		124	84 - 121	23	20	
Lead, Dissolved	ND		40.0	37.5		ug/L		94	85 - 118	4	20	
Selenium, Dissolved	0.51	J	40.0	40.3		ug/L		99	77 - 122	0	20	
Silver, Dissolved	ND		40.0	36.0		ug/L		90	85 - 115	1	20	

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 280-519227/1-A

Matrix: Water

Analysis Batch: 519315

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 519227

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	ND		0.20	0.027	ug/L		12/04/20 15:00	12/04/20 17:56	1

Lab Sample ID: LCS 280-519227/2-A

Matrix: Water

Analysis Batch: 519315

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 519227

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec.	
		Result	Qualifier				Limits	RPD
Mercury	5.00	4.90		ug/L		98	84 - 120	

Lab Sample ID: MB 280-519506/1-B

Matrix: Water

Analysis Batch: 519850

Client Sample ID: Method Blank

Prep Type: Dissolved

Prep Batch: 519550

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury, Dissolved	ND		0.20	0.027	ug/L		12/09/20 12:45	12/09/20 15:46	1

Lab Sample ID: LCS 280-519506/2-B

Matrix: Water

Analysis Batch: 519850

Client Sample ID: Lab Control Sample

Prep Type: Dissolved

Prep Batch: 519550

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec.	
		Result	Qualifier				Limits	RPD
Mercury, Dissolved	5.00	4.75		ug/L		95	84 - 120	

Lab Sample ID: 280-143333-7 MS

Matrix: Water

Analysis Batch: 519850

Client Sample ID: CDOT I270 12-2020-SB29-GW

Prep Type: Dissolved

Prep Batch: 519550

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	%Rec.	
				Result	Qualifier				Limits	RPD
Mercury, Dissolved	ND		5.00	4.42		ug/L		88	75 - 125	

Lab Sample ID: 280-143333-7 MSD

Matrix: Water

Analysis Batch: 519850

Client Sample ID: CDOT I270 12-2020-SB29-GW

Prep Type: Dissolved

Prep Batch: 519550

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec.		RPD	Limit
				Result	Qualifier				Limits	RPD		
Mercury, Dissolved	ND		5.00	4.62		ug/L		92	75 - 125	4	20	

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 280-519912/1-A
 Matrix: Solid
 Analysis Batch: 520028

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 519912

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		17	5.5	ug/Kg		12/10/20 15:30	12/10/20 17:55	1

Lab Sample ID: LCS 280-519912/2-A
 Matrix: Solid
 Analysis Batch: 520028

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 519912

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	333	342		ug/Kg		102	87 - 111

Method: Moisture - Percent Moisture

Lab Sample ID: 280-143333-2 DU
 Matrix: Solid
 Analysis Batch: 519243

Client Sample ID: CDOT I270 12-2020-SB31-15-17
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	3.7		3.6		%		1	20
Percent Solids	96.3		96.4		%		0	20

Consultant Work Product - Jacobs Engineering
 -Not CDOT Approved-

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QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

GC/MS VOA

Prep Batch: 519140

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-1	CDOT I270 12-2020-SB31-9-11	Total/NA	Solid	5035	
280-143333-2	CDOT I270 12-2020-SB31-15-17	Total/NA	Solid	5035	
280-143333-4	CDOT I270 12-2020-SB30-5-10	Total/NA	Solid	5035	
280-143333-5	CDOT I270 12-2020-SB30-10-15	Total/NA	Solid	5035	
280-143333-6	CDOT I270 12-2020-SB29-10-12	Total/NA	Solid	5035	
MB 280-519140/3-A	Method Blank	Total/NA	Solid	5035	
LCS 280-519140/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-519140/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 519284

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-3	CDOT I270 12-2020-SB31-GW	Total/NA	Water	8260B	
280-143333-7	CDOT I270 12-2020-SB29-GW	Total/NA	Water	8260B	
280-143333-8	TRIP BLANK 01	Total/NA	Water	8260B	
MB 280-519284/10	Method Blank	Total/NA	Water	8260B	
LCS 280-519284/5	Lab Control Sample	Total/NA	Water	8260B	
LCSD 280-519284/6	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 519328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-1	CDOT I270 12-2020-SB31-9-11	Total/NA	Solid	8260B	519140
280-143333-2	CDOT I270 12-2020-SB31-15-17	Total/NA	Solid	8260B	519140
280-143333-4	CDOT I270 12-2020-SB30-5-10	Total/NA	Solid	8260B	519140
280-143333-5	CDOT I270 12-2020-SB30-10-15	Total/NA	Solid	8260B	519140
280-143333-6	CDOT I270 12-2020-SB29-10-12	Total/NA	Solid	8260B	519140
MB 280-519140/3-A	Method Blank	Total/NA	Solid	8260B	519140
LCS 280-519140/1-A	Lab Control Sample	Total/NA	Solid	8260B	519140
LCSD 280-519140/2-A	Lab Control Sample Dup	Total/NA	Solid	8260B	519140

GC/MS Semi VOA

Prep Batch: 520466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-2	CDOT I270 12-2020-SB31-15-17	Total/NA	Solid	3550C	
280-143333-4	CDOT I270 12-2020-SB30-5-10	Total/NA	Solid	3550C	
280-143333-5	CDOT I270 12-2020-SB30-10-15	Total/NA	Solid	3550C	
280-143333-6	CDOT I270 12-2020-SB29-10-12	Total/NA	Solid	3550C	
MB 280-520466/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 280-520466/2-A	Lab Control Sample	Total/NA	Solid	3550C	
280-143333-2 MS	CDOT I270 12-2020-SB31-15-17	Total/NA	Solid	3550C	
280-143333-2 MSD	CDOT I270 12-2020-SB31-15-17	Total/NA	Solid	3550C	

Analysis Batch: 520995

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-2	CDOT I270 12-2020-SB31-15-17	Total/NA	Solid	8270D	520466
280-143333-4	CDOT I270 12-2020-SB30-5-10	Total/NA	Solid	8270D	520466
280-143333-5	CDOT I270 12-2020-SB30-10-15	Total/NA	Solid	8270D	520466
280-143333-6	CDOT I270 12-2020-SB29-10-12	Total/NA	Solid	8270D	520466
MB 280-520466/1-A	Method Blank	Total/NA	Solid	8270D	520466
LCS 280-520466/2-A	Lab Control Sample	Total/NA	Solid	8270D	520466
280-143333-2 MS	CDOT I270 12-2020-SB31-15-17	Total/NA	Solid	8270D	520466

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QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

GC/MS Semi VOA (Continued)

Analysis Batch: 520995 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-2 MSD	CDOT I270 12-2020-SB31-15-17	Total/NA	Solid	8270D	520466

GC VOA

Analysis Batch: 519873

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-3	CDOT I270 12-2020-SB31-GW	Total/NA	Water	8015C	
280-143333-7	CDOT I270 12-2020-SB29-GW	Total/NA	Water	8015C	
280-143333-8	TRIP BLANK 01	Total/NA	Water	8015C	
MB 280-519873/5	Method Blank	Total/NA	Water	8015C	
LCS 280-519873/3	Lab Control Sample	Total/NA	Water	8015C	
LCSD 280-519873/4	Lab Control Sample Dup	Total/NA	Water	8015C	

Prep Batch: 520474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-1	CDOT I270 12-2020-SB31-9-11	Total/NA	Solid	5035	
280-143333-2	CDOT I270 12-2020-SB31-15-17	Total/NA	Solid	5035	
280-143333-4	CDOT I270 12-2020-SB30-5-10	Total/NA	Solid	5035	
280-143333-5	CDOT I270 12-2020-SB30-10-15	Total/NA	Solid	5035	
280-143333-6	CDOT I270 12-2020-SB29-10-12	Total/NA	Solid	5035	
MB 280-520474/3-A	Method Blank	Total/NA	Solid	5035	
LCS 280-520474/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-520474/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 520541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-1	CDOT I270 12-2020-SB31-9-11	Total/NA	Solid	8015C	520474
280-143333-2	CDOT I270 12-2020-SB31-15-17	Total/NA	Solid	8015C	520474
280-143333-4	CDOT I270 12-2020-SB30-5-10	Total/NA	Solid	8015C	520474
280-143333-5	CDOT I270 12-2020-SB30-10-15	Total/NA	Solid	8015C	520474
280-143333-6	CDOT I270 12-2020-SB29-10-12	Total/NA	Solid	8015C	520474
MB 280-520474/3-A	Method Blank	Total/NA	Solid	8015C	520474
LCS 280-520474/1-A	Lab Control Sample	Total/NA	Solid	8015C	520474
LCSD 280-520474/2-A	Lab Control Sample Dup	Total/NA	Solid	8015C	520474

GC Semi VOA

Prep Batch: 519246

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-1	CDOT I270 12-2020-SB31-9-11	Total/NA	Solid	3546	
280-143333-2	CDOT I270 12-2020-SB31-15-17	Total/NA	Solid	3546	
280-143333-4	CDOT I270 12-2020-SB30-5-10	Total/NA	Solid	3546	
280-143333-5	CDOT I270 12-2020-SB30-10-15	Total/NA	Solid	3546	
280-143333-6	CDOT I270 12-2020-SB29-10-12	Total/NA	Solid	3546	
MB 280-519246/1-A	Method Blank	Total/NA	Solid	3546	
LCS 280-519246/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCS 280-519246/4-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 280-519246/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
LCSD 280-519246/5-A	Lab Control Sample Dup	Total/NA	Solid	3546	

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

GC Semi VOA

Prep Batch: 519339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-3	CDOT I270 12-2020-SB31-GW	Total/NA	Water	3510C	
280-143333-7	CDOT I270 12-2020-SB29-GW	Total/NA	Water	3510C	
MB 280-519339/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-519339/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCS 280-519339/4-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 280-519339/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
LCSD 280-519339/5-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 520152

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-1	CDOT I270 12-2020-SB31-9-11	Total/NA	Solid	8015C	519246
280-143333-4	CDOT I270 12-2020-SB30-5-10	Total/NA	Solid	8015C	519246
MB 280-519246/1-A	Method Blank	Total/NA	Solid	8015C	519246
LCS 280-519246/2-A	Lab Control Sample	Total/NA	Solid	8015C	519246
LCS 280-519246/4-A	Lab Control Sample	Total/NA	Solid	8015C	519246
LCSD 280-519246/3-A	Lab Control Sample Dup	Total/NA	Solid	8015C	519246
LCSD 280-519246/5-A	Lab Control Sample Dup	Total/NA	Solid	8015C	519246

Analysis Batch: 520288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-3	CDOT I270 12-2020-SB31-GW	Total/NA	Water	8015C	519339
280-143333-7	CDOT I270 12-2020-SB29-GW	Total/NA	Water	8015C	519339
MB 280-519339/1-A	Method Blank	Total/NA	Water	8015C	519339
LCS 280-519339/2-A	Lab Control Sample	Total/NA	Water	8015C	519339
LCS 280-519339/4-A	Lab Control Sample	Total/NA	Water	8015C	519339
LCSD 280-519339/3-A	Lab Control Sample Dup	Total/NA	Water	8015C	519339
LCSD 280-519339/5-A	Lab Control Sample Dup	Total/NA	Water	8015C	519339

Analysis Batch: 520371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-2	CDOT I270 12-2020-SB31-15-17	Total/NA	Solid	8015C	519246
280-143333-5	CDOT I270 12-2020-SB30-10-15	Total/NA	Solid	8015C	519246
280-143333-6	CDOT I270 12-2020-SB29-10-12	Total/NA	Solid	8015C	519246

Metals

Prep Batch: 519227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-3	CDOT I270 12-2020-SB31-GW	Total/NA	Water	7470A	
280-143333-7	CDOT I270 12-2020-SB29-GW	Total/NA	Water	7470A	
MB 280-519227/1-A	Method Blank	Total/NA	Water	7470A	
LCS 280-519227/2-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 519270

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-3	CDOT I270 12-2020-SB31-GW	Total/NA	Water	3020A	
280-143333-7	CDOT I270 12-2020-SB29-GW	Total/NA	Water	3020A	
MB 280-519270/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-519270/2-A	Lab Control Sample	Total/NA	Water	3020A	
280-143333-3 MS	CDOT I270 12-2020-SB31-GW	Total/NA	Water	3020A	
280-143333-3 MSD	CDOT I270 12-2020-SB31-GW	Total/NA	Water	3020A	

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Metals

Analysis Batch: 519315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-3	CDOT I270 12-2020-SB31-GW	Total/NA	Water	7470A	519227
280-143333-7	CDOT I270 12-2020-SB29-GW	Total/NA	Water	7470A	519227
MB 280-519227/1-A	Method Blank	Total/NA	Water	7470A	519227
LCS 280-519227/2-A	Lab Control Sample	Total/NA	Water	7470A	519227

Prep Batch: 519385

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-2	CDOT I270 12-2020-SB31-15-17	Total/NA	Solid	3050B	
280-143333-4	CDOT I270 12-2020-SB30-5-10	Total/NA	Solid	3050B	
280-143333-5	CDOT I270 12-2020-SB30-10-15	Total/NA	Solid	3050B	
280-143333-6	CDOT I270 12-2020-SB29-10-12	Total/NA	Solid	3050B	
MB 280-519385/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-519385/2-A	Lab Control Sample	Total/NA	Solid	3050B	
280-143333-2 MS	CDOT I270 12-2020-SB31-15-17	Total/NA	Solid	3050B	
280-143333-2 MSD	CDOT I270 12-2020-SB31-15-17	Total/NA	Solid	3050B	

Prep Batch: 519386

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-2	CDOT I270 12-2020-SB31-15-17	Total/NA	Solid	3050B-Sb	
280-143333-4	CDOT I270 12-2020-SB30-5-10	Total/NA	Solid	3050B-Sb	
280-143333-5	CDOT I270 12-2020-SB30-10-15	Total/NA	Solid	3050B-Sb	
280-143333-6	CDOT I270 12-2020-SB29-10-12	Total/NA	Solid	3050B-Sb	
MB 280-519386/1-A	Method Blank	Total/NA	Solid	3050B-Sb	
LCS 280-519386/2-A	Lab Control Sample	Total/NA	Solid	3050B-Sb	
280-143333-4 MS	CDOT I270 12-2020-SB30-5-10	Total/NA	Solid	3050B-Sb	
280-143333-4 MSD	CDOT I270 12-2020-SB30-5-10	Total/NA	Solid	3050B-Sb	

Filtration Batch: 519506

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-3	CDOT I270 12-2020-SB31-GW	Dissolved	Water	FILTRATION	
280-143333-7	CDOT I270 12-2020-SB29-GW	Dissolved	Water	FILTRATION	
MB 280-519506/1-B	Method Blank	Dissolved	Water	FILTRATION	
MB 280-519506/1-E	Method Blank	Dissolved	Water	FILTRATION	
LCS 280-519506/2-B	Lab Control Sample	Dissolved	Water	FILTRATION	
LCS 280-519506/2-E	Lab Control Sample	Dissolved	Water	FILTRATION	
280-143333-3 MS	CDOT I270 12-2020-SB31-GW	Dissolved	Water	FILTRATION	
280-143333-3 MSD	CDOT I270 12-2020-SB31-GW	Dissolved	Water	FILTRATION	
280-143333-7 MS	CDOT I270 12-2020-SB29-GW	Dissolved	Water	FILTRATION	
280-143333-7 MSD	CDOT I270 12-2020-SB29-GW	Dissolved	Water	FILTRATION	

Prep Batch: 519550

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-3	CDOT I270 12-2020-SB31-GW	Dissolved	Water	7470A	519506
280-143333-7	CDOT I270 12-2020-SB29-GW	Dissolved	Water	7470A	519506
MB 280-519506/1-B	Method Blank	Dissolved	Water	7470A	519506
LCS 280-519506/2-B	Lab Control Sample	Dissolved	Water	7470A	519506
280-143333-7 MS	CDOT I270 12-2020-SB29-GW	Dissolved	Water	7470A	519506
280-143333-7 MSD	CDOT I270 12-2020-SB29-GW	Dissolved	Water	7470A	519506

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Metals

Prep Batch: 519762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-3	CDOT I270 12-2020-SB31-GW	Dissolved	Water	3005A	519506
280-143333-7	CDOT I270 12-2020-SB29-GW	Dissolved	Water	3005A	519506
MB 280-519506/1-E	Method Blank	Dissolved	Water	3005A	519506
LCS 280-519506/2-E	Lab Control Sample	Dissolved	Water	3005A	519506
280-143333-3 MS	CDOT I270 12-2020-SB31-GW	Dissolved	Water	3005A	519506
280-143333-3 MSD	CDOT I270 12-2020-SB31-GW	Dissolved	Water	3005A	519506

Analysis Batch: 519850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-3	CDOT I270 12-2020-SB31-GW	Dissolved	Water	7470A	519550
280-143333-7	CDOT I270 12-2020-SB29-GW	Dissolved	Water	7470A	519550
MB 280-519506/1-B	Method Blank	Dissolved	Water	7470A	519550
LCS 280-519506/2-B	Lab Control Sample	Dissolved	Water	7470A	519550
280-143333-7 MS	CDOT I270 12-2020-SB29-GW	Dissolved	Water	7470A	519550
280-143333-7 MSD	CDOT I270 12-2020-SB29-GW	Dissolved	Water	7470A	519550

Prep Batch: 519912

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-2	CDOT I270 12-2020-SB31-15-17	Total/NA	Solid	7471B	
280-143333-4	CDOT I270 12-2020-SB30-5-10	Total/NA	Solid	7471B	
280-143333-5	CDOT I270 12-2020-SB30-10-15	Total/NA	Solid	7471B	
280-143333-6	CDOT I270 12-2020-SB29-10-12	Total/NA	Solid	7471B	
MB 280-519912/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 280-519912/2-A	Lab Control Sample	Total/NA	Solid	7471B	

Analysis Batch: 519973

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-2	CDOT I270 12-2020-SB31-15-17	Total/NA	Solid	6020A	519386
280-143333-4	CDOT I270 12-2020-SB30-5-10	Total/NA	Solid	6020A	519386
280-143333-5	CDOT I270 12-2020-SB30-10-15	Total/NA	Solid	6020A	519386
280-143333-6	CDOT I270 12-2020-SB29-10-12	Total/NA	Solid	6020A	519386
MB 280-519386/1-A	Method Blank	Total/NA	Solid	6020A	519386
LCS 280-519386/2-A	Lab Control Sample	Total/NA	Solid	6020A	519386
280-143333-4 MS	CDOT I270 12-2020-SB30-5-10	Total/NA	Solid	6020A	519386
280-143333-4 MSD	CDOT I270 12-2020-SB30-5-10	Total/NA	Solid	6020A	519386

Analysis Batch: 520028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-2	CDOT I270 12-2020-SB31-15-17	Total/NA	Solid	7471B	519912
280-143333-4	CDOT I270 12-2020-SB30-5-10	Total/NA	Solid	7471B	519912
280-143333-5	CDOT I270 12-2020-SB30-10-15	Total/NA	Solid	7471B	519912
280-143333-6	CDOT I270 12-2020-SB29-10-12	Total/NA	Solid	7471B	519912
MB 280-519912/1-A	Method Blank	Total/NA	Solid	7471B	519912
LCS 280-519912/2-A	Lab Control Sample	Total/NA	Solid	7471B	519912

Analysis Batch: 520055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-2	CDOT I270 12-2020-SB31-15-17	Total/NA	Solid	6020A	519385
280-143333-4	CDOT I270 12-2020-SB30-5-10	Total/NA	Solid	6020A	519385
280-143333-5	CDOT I270 12-2020-SB30-10-15	Total/NA	Solid	6020A	519385
280-143333-6	CDOT I270 12-2020-SB29-10-12	Total/NA	Solid	6020A	519385

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Metals (Continued)

Analysis Batch: 520055 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-519385/1-A	Method Blank	Total/NA	Solid	6020A	519385
LCS 280-519385/2-A	Lab Control Sample	Total/NA	Solid	6020A	519385
280-143333-2 MS	CDOT I270 12-2020-SB31-15-17	Total/NA	Solid	6020A	519385
280-143333-2 MSD	CDOT I270 12-2020-SB31-15-17	Total/NA	Solid	6020A	519385

Analysis Batch: 520315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-3	CDOT I270 12-2020-SB31-GW	Dissolved	Water	6020A	519762
280-143333-7	CDOT I270 12-2020-SB29-GW	Dissolved	Water	6020A	519762
MB 280-519506/1-E	Method Blank	Dissolved	Water	6020A	519762
LCS 280-519506/2-E	Lab Control Sample	Dissolved	Water	6020A	519762
280-143333-3 MS	CDOT I270 12-2020-SB31-GW	Dissolved	Water	6020A	519762
280-143333-3 MSD	CDOT I270 12-2020-SB31-GW	Dissolved	Water	6020A	519762

Analysis Batch: 520413

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-3	CDOT I270 12-2020-SB31-GW	Total/NA	Water	6020A	519270
280-143333-7	CDOT I270 12-2020-SB29-GW	Total/NA	Water	6020A	519270
MB 280-519270/1-A	Method Blank	Total/NA	Water	6020A	519270
LCS 280-519270/2-A	Lab Control Sample	Total/NA	Water	6020A	519270
280-143333-3 MS	CDOT I270 12-2020-SB31-GW	Total/NA	Water	6020A	519270
280-143333-3 MSD	CDOT I270 12-2020-SB31-GW	Total/NA	Water	6020A	519270

General Chemistry

Analysis Batch: 519243

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143333-1	CDOT I270 12-2020-SB31-9-11	Total/NA	Solid	Moisture	
280-143333-2	CDOT I270 12-2020-SB31-15-17	Total/NA	Solid	Moisture	
280-143333-4	CDOT I270 12-2020-SB30-5-10	Total/NA	Solid	Moisture	
280-143333-5	CDOT I270 12-2020-SB30-10-15	Total/NA	Solid	Moisture	
280-143333-6	CDOT I270 12-2020-SB29-10-12	Total/NA	Solid	Moisture	
280-143333-2 DU	CDOT I270 12-2020-SB31-15-17	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Client Sample ID: CDOT I270 12-2020-SB31-9-11

Lab Sample ID: 280-143333-1

Date Collected: 12/01/20 09:30

Matrix: Solid

Date Received: 12/02/20 13:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			519243	12/04/20 12:34	JMH	TAL DEN

Client Sample ID: CDOT I270 12-2020-SB31-9-11

Lab Sample ID: 280-143333-1

Date Collected: 12/01/20 09:30

Matrix: Solid

Date Received: 12/02/20 13:12

Percent Solids: 67.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.144 g	5 mL	519140	12/01/20 09:30	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	519328	12/03/20 21:37	GPM	TAL DEN
Total/NA	Prep	5035			6.66 g	5 mL	520474	12/15/20 09:02	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	520541	12/15/20 17:47	CAS	TAL DEN
Total/NA	Prep	3546			15.7 g	20 mL	519246	12/04/20 15:12	DCL	TAL DEN
Total/NA	Analysis	8015C		1			520152	12/12/20 07:06	MAM	TAL DEN

Client Sample ID: CDOT I270 12-2020-SB31-15-17

Lab Sample ID: 280-143333-2

Date Collected: 12/01/20 09:55

Matrix: Solid

Date Received: 12/02/20 13:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			519243	12/04/20 12:34	JMH	TAL DEN

Client Sample ID: CDOT I270 12-2020-SB31-15-17

Lab Sample ID: 280-143333-2

Date Collected: 12/01/20 09:55

Matrix: Solid

Date Received: 12/02/20 13:12

Percent Solids: 96.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.975 g	5 mL	519140	12/01/20 09:55	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	519328	12/03/20 21:59	GPM	TAL DEN
Total/NA	Prep	3550C			31.0 g	1 mL	520466	12/15/20 12:41	DB	TAL DEN
Total/NA	Analysis	8270D		1			520995	12/18/20 17:16	RDP	TAL DEN
Total/NA	Prep	5035			5.44 g	5 mL	520474	12/15/20 09:02	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	520541	12/15/20 18:11	CAS	TAL DEN
Total/NA	Prep	3546			15.3 g	1 mL	519246	12/04/20 15:12	DCL	TAL DEN
Total/NA	Analysis	8015C		1			520371	12/15/20 03:07	MAM	TAL DEN
Total/NA	Prep	3050B-Sb			1.073 g	100 mL	519386	12/07/20 16:15	EC	TAL DEN
Total/NA	Analysis	6020A		1			519973	12/10/20 08:46	LMT	TAL DEN
Total/NA	Prep	3050B			1.085 g	100 mL	519385	12/07/20 15:50	EC	TAL DEN
Total/NA	Analysis	6020A		1			520055	12/10/20 19:37	LMT	TAL DEN
Total/NA	Prep	7471B			.54 g	50 mL	519912	12/10/20 15:30	NK	TAL DEN
Total/NA	Analysis	7471B		1			520028	12/10/20 18:30	NK	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Client Sample ID: CDOT I270 12-2020-SB31-GW

Lab Sample ID: 280-143333-3

Date Collected: 12/01/20 11:45

Matrix: Water

Date Received: 12/02/20 13:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	519284	12/05/20 05:57	RJS	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	519873	12/10/20 03:30	AAR	TAL DEN
Total/NA	Prep	3510C			995 mL	1 mL	519339	12/05/20 15:03	NMC	TAL DEN
Total/NA	Analysis	8015C		1			520288	12/13/20 01:05	MAM	TAL DEN
Dissolved	Filtration	FILTRATION			250 mL	250 mL	519506	12/07/20 16:06	MAB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	519762	12/10/20 08:14	MAB	TAL DEN
Dissolved	Analysis	6020A		1			520315	12/11/20 23:27	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	519270	12/07/20 08:19	MAB	TAL DEN
Total/NA	Analysis	6020A		5			520413	12/14/20 15:26	LMT	TAL DEN
Dissolved	Filtration	FILTRATION			250 mL	250 mL	519506	12/07/20 16:06	MAB	TAL DEN
Dissolved	Prep	7470A			30 mL	50 mL	519550	12/09/20 12:45	NK	TAL DEN
Dissolved	Analysis	7470A		1			519850	12/09/20 15:51	NK	TAL DEN
Total/NA	Prep	7470A			6 mL	50 mL	519227	12/04/20 15:00	NK	TAL DEN
Total/NA	Analysis	7470A		1			519315	12/04/20 18:09	NK	TAL DEN

Client Sample ID: CDOT I270 12-2020-SB30-5-10

Lab Sample ID: 280-143333-4

Date Collected: 12/02/20 08:40

Matrix: Solid

Date Received: 12/02/20 13:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			519243	12/04/20 12:34	JMH	TAL DEN

Client Sample ID: CDOT I270 12-2020-SB30-5-10

Lab Sample ID: 280-143333-4

Date Collected: 12/02/20 08:40

Matrix: Solid

Date Received: 12/02/20 13:12

Percent Solids: 73.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.282 g	5 mL	519140	12/02/20 08:40	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	519328	12/03/20 22:22	GPM	TAL DEN
Total/NA	Prep	3550C			31.4 g	1 mL	520466	12/15/20 12:41	DB	TAL DEN
Total/NA	Analysis	8270D		1			520995	12/18/20 19:20	RDP	TAL DEN
Total/NA	Prep	5035			4.47 g	5 mL	520474	12/15/20 09:02	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	520541	12/15/20 20:14	CAS	TAL DEN
Total/NA	Prep	3546			15.9 g	2 mL	519246	12/04/20 15:12	DCL	TAL DEN
Total/NA	Analysis	8015C		1			520152	12/12/20 08:07	MAM	TAL DEN
Total/NA	Prep	3050B-Sb			1.067 g	100 mL	519386	12/07/20 16:15	EC	TAL DEN
Total/NA	Analysis	6020A		1			519973	12/10/20 08:50	LMT	TAL DEN
Total/NA	Prep	3050B			1.329 g	100 mL	519385	12/07/20 15:50	EC	TAL DEN
Total/NA	Analysis	6020A		1			520055	12/10/20 19:54	LMT	TAL DEN
Total/NA	Prep	7471B			.59 g	50 mL	519912	12/10/20 15:30	NK	TAL DEN
Total/NA	Analysis	7471B		1			520028	12/10/20 18:33	NK	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Client Sample ID: CDOT I270 12-2020-SB30-10-15

Lab Sample ID: 280-143333-5

Date Collected: 12/02/20 09:05

Matrix: Solid

Date Received: 12/02/20 13:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			519243	12/04/20 12:34	JMH	TAL DEN

Client Sample ID: CDOT I270 12-2020-SB30-10-15

Lab Sample ID: 280-143333-5

Date Collected: 12/02/20 09:05

Matrix: Solid

Date Received: 12/02/20 13:12

Percent Solids: 88.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.645 g	5 mL	519140	12/02/20 09:05	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	519328	12/03/20 22:44	GPM	TAL DEN
Total/NA	Prep	3550C			32.2 g	1 mL	520466	12/15/20 12:41	DB	TAL DEN
Total/NA	Analysis	8270D		1			520995	12/18/20 19:48	RDP	TAL DEN
Total/NA	Prep	5035			5.74 g	5 mL	520474	12/15/20 09:02	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	520541	12/15/20 20:38	CAS	TAL DEN
Total/NA	Prep	3546			16.0 g	1 mL	519246	12/04/20 15:12	DCL	TAL DEN
Total/NA	Analysis	8015C		1			520371	12/15/20 02:44	MAM	TAL DEN
Total/NA	Prep	3050B-Sb			1.221 g	100 mL	519386	12/07/20 16:15	EC	TAL DEN
Total/NA	Analysis	6020A		1			519973	12/10/20 10:19	LMT	TAL DEN
Total/NA	Prep	3050B			1.252 g	100 mL	519385	12/07/20 15:50	EC	TAL DEN
Total/NA	Analysis	6020A		1			520055	12/10/20 19:58	LMT	TAL DEN
Total/NA	Prep	7471B			.51 g	50 mL	519912	12/10/20 15:30	NK	TAL DEN
Total/NA	Analysis	7471B		1			520028	12/10/20 18:35	NK	TAL DEN

Client Sample ID: CDOT I270 12-2020-SB29-10-12

Lab Sample ID: 280-143333-6

Date Collected: 12/02/20 11:00

Matrix: Solid

Date Received: 12/02/20 13:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			519243	12/04/20 12:34	JMH	TAL DEN

Client Sample ID: CDOT I270 12-2020-SB29-10-12

Lab Sample ID: 280-143333-6

Date Collected: 12/02/20 11:00

Matrix: Solid

Date Received: 12/02/20 13:12

Percent Solids: 80.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.774 g	5 mL	519140	12/02/20 11:00	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	519328	12/03/20 23:06	GPM	TAL DEN
Total/NA	Prep	3550C			32.5 g	1 mL	520466	12/15/20 12:41	DB	TAL DEN
Total/NA	Analysis	8270D		1			520995	12/18/20 20:16	RDP	TAL DEN
Total/NA	Prep	5035			7.48 g	5 mL	520474	12/15/20 09:02	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	520541	12/15/20 21:02	CAS	TAL DEN
Total/NA	Prep	3546			15.4 g	1 mL	519246	12/04/20 15:12	DCL	TAL DEN
Total/NA	Analysis	8015C		1			520371	12/15/20 02:21	MAM	TAL DEN
Total/NA	Prep	3050B-Sb			1.066 g	100 mL	519386	12/07/20 16:15	EC	TAL DEN
Total/NA	Analysis	6020A		1			519973	12/10/20 10:22	LMT	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Client Sample ID: CDOT I270 12-2020-SB29-10-12

Lab Sample ID: 280-143333-6

Date Collected: 12/02/20 11:00

Matrix: Solid

Date Received: 12/02/20 13:12

Percent Solids: 80.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.363 g	100 mL	519385	12/07/20 15:50	EC	TAL DEN
Total/NA	Analysis	6020A		1			520055	12/10/20 20:01	LMT	TAL DEN
Total/NA	Prep	7471B			.53 g	50 mL	519912	12/10/20 15:30	NK	TAL DEN
Total/NA	Analysis	7471B		1			520028	12/10/20 18:38	NK	TAL DEN

Client Sample ID: CDOT I270 12-2020-SB29-GW

Lab Sample ID: 280-143333-7

Date Collected: 12/02/20 11:50

Matrix: Water

Date Received: 12/02/20 13:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	519284	12/05/20 06:20	RJS	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	519873	12/10/20 03:53	AAR	TAL DEN
Total/NA	Prep	3510C			969.8 mL	1 mL	519339	12/05/20 15:03	NMC	TAL DEN
Total/NA	Analysis	8015C		1			520288	12/13/20 01:28	MAM	TAL DEN
Dissolved	Filtration	FILTRATION			250 mL	250 mL	519506	12/07/20 16:06	MAB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	519762	12/10/20 08:14	MAB	TAL DEN
Dissolved	Analysis	6020A		1			520315	12/11/20 23:45	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	519270	12/07/20 08:19	MAB	TAL DEN
Total/NA	Analysis	6020A		5			520413	12/14/20 15:44	LMT	TAL DEN
Dissolved	Filtration	FILTRATION			250 mL	250 mL	519506	12/07/20 16:06	MAB	TAL DEN
Dissolved	Prep	7470A			30 mL	50 mL	519550	12/09/20 12:45	NK	TAL DEN
Dissolved	Analysis	7470A		1			519850	12/09/20 15:54	NK	TAL DEN
Total/NA	Prep	7470A			6 mL	50 mL	519227	12/04/20 15:00	NK	TAL DEN
Total/NA	Analysis	7470A		1			519315	12/04/20 18:11	NK	TAL DEN

Client Sample ID: TRIP BLANK 01

Lab Sample ID: 280-143333-8

Date Collected: 12/01/20 08:00

Matrix: Water

Date Received: 12/02/20 13:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	519284	12/04/20 23:50	RJS	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	519873	12/10/20 01:14	AAR	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-519140/3-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	519140	12/03/20 16:13	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	519328	12/03/20 17:33	GPM	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Client Sample ID: Method Blank

Lab Sample ID: MB 280-519227/1-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			30 mL	50 mL	519227	12/04/20 15:00	NK	TAL DEN
Total/NA	Analysis	7470A		1			519315	12/04/20 17:56	NK	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-519246/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15 g	1 mL	519246	12/04/20 15:12	DCL	TAL DEN
Total/NA	Analysis	8015C		1			520152	12/12/20 05:23	MAM	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-519270/1-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3020A			50 mL	50 mL	519270	12/07/20 08:19	MAB	TAL DEN
Total/NA	Analysis	6020A		1			520413	12/14/20 15:19	LMT	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-519284/10

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	519284	12/04/20 21:43	RJS	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-519339/1-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1000 mL	1 mL	519339	12/05/20 15:03	NMC	TAL DEN
Total/NA	Analysis	8015C		1			520288	12/12/20 19:45	MAM	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-519385/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1 g	100 mL	519385	12/07/20 15:50	EC	TAL DEN
Total/NA	Analysis	6020A		1			520055	12/10/20 19:30	LMT	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Client Sample ID: Method Blank

Lab Sample ID: MB 280-519386/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B-Sb			1 g	100 mL	519386	12/07/20 16:15	EC	TAL DEN
Total/NA	Analysis	6020A		1			519973	12/10/20 08:39	LMT	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-519506/1-B

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	519506	12/07/20 16:06	MAB	TAL DEN
Dissolved	Prep	7470A			30 mL	50 mL	519550	12/09/20 12:45	NK	TAL DEN
Dissolved	Analysis	7470A		1			519850	12/09/20 15:46	NK	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-519506/1-E

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	519506	12/07/20 16:06	MAB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	519762	12/10/20 08:14	MAB	TAL DEN
Dissolved	Analysis	6020A		1			520315	12/11/20 23:20	LMT	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-519873/5

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015C		1	5 mL	5 mL	519873	12/09/20 21:22	AAR	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-519912/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			.6 g	50 mL	519912	12/10/20 15:30	NK	TAL DEN
Total/NA	Analysis	7471B		1			520028	12/10/20 17:55	NK	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-520466/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			30 g	1 mL	520466	12/15/20 12:41	DB	TAL DEN
Total/NA	Analysis	8270D		1			520995	12/18/20 16:20	RDP	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Client Sample ID: Method Blank

Lab Sample ID: MB 280-520474/3-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	520474	12/15/20 09:02	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	520541	12/15/20 17:23	CAS	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-519140/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	519140	12/03/20 16:13	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	519328	12/03/20 16:27	GPM	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-519227/2-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			30 mL	50 mL	519227	12/04/20 15:00	NK	TAL DEN
Total/NA	Analysis	7470A		1			519315	12/04/20 17:58	NK	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-519246/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15 g	1 mL	519246	12/04/20 15:12	DCL	TAL DEN
Total/NA	Analysis	8015C		1			520152	12/12/20 15:55	MAM	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-519246/4-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15 g	1 mL	519246	12/04/20 15:12	DCL	TAL DEN
Total/NA	Analysis	8015C		1			520152	12/12/20 06:25	MAM	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-519270/2-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3020A			50 mL	50 mL	519270	12/07/20 08:19	MAB	TAL DEN
Total/NA	Analysis	6020A		1			520413	12/14/20 15:23	LMT	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-519284/5

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	519284	12/04/20 19:48	RJS	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-519339/2-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1000 mL	1 mL	519339	12/05/20 15:03	NMC	TAL DEN
Total/NA	Analysis	8015C		1			520288	12/12/20 20:08	MAM	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-519339/4-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1000 mL	1 mL	519339	12/05/20 15:03	NMC	TAL DEN
Total/NA	Analysis	8015C		1			520288	12/12/20 20:54	MAM	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-519385/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1 g	100 mL	519385	12/07/20 15:50	EC	TAL DEN
Total/NA	Analysis	6020A		1			520055	12/10/20 19:33	LMT	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-519386/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B-Sb			1 g	100 mL	519386	12/07/20 16:15	EC	TAL DEN
Total/NA	Analysis	6020A		1			519973	12/10/20 08:42	LMT	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-519506/2-B

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	519506	12/07/20 16:06	MAB	TAL DEN
Dissolved	Prep	7470A			30 mL	50 mL	519550	12/09/20 12:45	NK	TAL DEN
Dissolved	Analysis	7470A		1			519850	12/09/20 15:49	NK	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-519506/2-E

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	519506	12/07/20 16:06	MAB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	519762	12/10/20 08:14	MAB	TAL DEN
Dissolved	Analysis	6020A		1			520315	12/11/20 23:24	LMT	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-519873/3

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015C		1	5 mL	5 mL	519873	12/09/20 20:37	AAR	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-519912/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			.6 g	50 mL	519912	12/10/20 15:30	NK	TAL DEN
Total/NA	Analysis	7471B		1			520028	12/10/20 17:57	NK	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-520466/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			30 g	1 mL	520466	12/15/20 12:41	DB	TAL DEN
Total/NA	Analysis	8270D		1			520995	12/18/20 16:48	RDP	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-520474/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	520474	12/15/20 09:02	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	520541	12/15/20 16:34	CAS	TAL DEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 280-519140/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	519140	12/03/20 16:13	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	519328	12/03/20 16:49	GPM	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 280-519246/3-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15 g	1 mL	519246	12/04/20 15:12	DCL	TAL DEN
Total/NA	Analysis	8015C		1			520152	12/12/20 06:04	MAM	TAL DEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 280-519246/5-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15 g	1 mL	519246	12/04/20 15:12	DCL	TAL DEN
Total/NA	Analysis	8015C		1			520152	12/12/20 06:45	MAM	TAL DEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 280-519284/6

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	519284	12/04/20 20:11	RJS	TAL DEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 280-519339/3-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1000 mL	1 mL	519339	12/05/20 15:03	NMC	TAL DEN
Total/NA	Analysis	8015C		1			520288	12/12/20 20:31	MAM	TAL DEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 280-519339/5-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1000 mL	1 mL	519339	12/05/20 15:03	NMC	TAL DEN
Total/NA	Analysis	8015C		1			520288	12/12/20 22:03	MAM	TAL DEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 280-519873/4

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015C		1	5 mL	5 mL	519873	12/09/20 20:59	AAR	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 280-520474/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	520474	12/15/20 09:02	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	520541	12/15/20 16:58	CAS	TAL DEN

Client Sample ID: CDOT I270 12-2020-SB31-15-17

Lab Sample ID: 280-143333-2 MS

Date Collected: 12/01/20 09:55

Matrix: Solid

Date Received: 12/02/20 13:12

Percent Solids: 96.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			31.0 g	1 mL	520466	12/15/20 12:41	DB	TAL DEN
Total/NA	Analysis	8270D		1			520995	12/18/20 17:45	RDP	TAL DEN
Total/NA	Prep	3050B			1.029 g	100 mL	519385	12/07/20 15:50	EC	TAL DEN
Total/NA	Analysis	6020A		1			520055	12/10/20 19:44	LMT	TAL DEN

Client Sample ID: CDOT I270 12-2020-SB31-15-17

Lab Sample ID: 280-143333-2 MSD

Date Collected: 12/01/20 09:55

Matrix: Solid

Date Received: 12/02/20 13:12

Percent Solids: 96.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			30.4 g	1 mL	520466	12/15/20 12:41	DB	TAL DEN
Total/NA	Analysis	8270D		1			520995	12/18/20 18:13	RDP	TAL DEN
Total/NA	Prep	3050B			1.021 g	100 mL	519385	12/07/20 15:50	EC	TAL DEN
Total/NA	Analysis	6020A		1			520055	12/10/20 19:47	LMT	TAL DEN

Client Sample ID: CDOT I270 12-2020-SB31-GW

Lab Sample ID: 280-143333-3 MS

Date Collected: 12/01/20 11:45

Matrix: Water

Date Received: 12/02/20 13:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			250 mL	250 mL	519506	12/07/20 16:06	MAB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	519762	12/10/20 08:14	MAB	TAL DEN
Dissolved	Analysis	6020A		1			520315	12/11/20 23:35	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	519270	12/07/20 08:19	MAB	TAL DEN
Total/NA	Analysis	6020A		5			520413	12/14/20 15:34	LMT	TAL DEN

Client Sample ID: CDOT I270 12-2020-SB31-GW

Lab Sample ID: 280-143333-3 MSD

Date Collected: 12/01/20 11:45

Matrix: Water

Date Received: 12/02/20 13:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			250 mL	250 mL	519506	12/07/20 16:06	MAB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	519762	12/10/20 08:14	MAB	TAL DEN
Dissolved	Analysis	6020A		1			520315	12/11/20 23:38	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	519270	12/07/20 08:19	MAB	TAL DEN
Total/NA	Analysis	6020A		5			520413	12/14/20 15:37	LMT	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Client Sample ID: CDOT I270 12-2020-SB30-5-10

Lab Sample ID: 280-143333-4 MS

Date Collected: 12/02/20 08:40

Matrix: Solid

Date Received: 12/02/20 13:12

Percent Solids: 73.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B-Sb			1.117 g	100 mL	519386	12/07/20 16:15	EC	TAL DEN
Total/NA	Analysis	6020A		1			519973	12/10/20 08:57	LMT	TAL DEN

Client Sample ID: CDOT I270 12-2020-SB30-5-10

Lab Sample ID: 280-143333-4 MSD

Date Collected: 12/02/20 08:40

Matrix: Solid

Date Received: 12/02/20 13:12

Percent Solids: 73.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B-Sb			1.099 g	100 mL	519386	12/07/20 16:15	EC	TAL DEN
Total/NA	Analysis	6020A		1			519973	12/10/20 09:01	LMT	TAL DEN

Client Sample ID: CDOT I270 12-2020-SB29-GW

Lab Sample ID: 280-143333-7 MS

Date Collected: 12/02/20 11:50

Matrix: Water

Date Received: 12/02/20 13:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			250 mL	250 mL	519506	12/07/20 16:06	MAB	TAL DEN
Dissolved	Prep	7470A			30 mL	50 mL	519550	12/09/20 12:45	NK	TAL DEN
Dissolved	Analysis	7470A		1			519850	12/09/20 15:56	NK	TAL DEN

Client Sample ID: CDOT I270 12-2020-SB29-GW

Lab Sample ID: 280-143333-7 MSD

Date Collected: 12/02/20 11:50

Matrix: Water

Date Received: 12/02/20 13:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			250 mL	250 mL	519506	12/07/20 16:06	MAB	TAL DEN
Dissolved	Prep	7470A			30 mL	50 mL	519550	12/09/20 12:45	NK	TAL DEN
Dissolved	Analysis	7470A		1			519850	12/09/20 15:59	NK	TAL DEN

Client Sample ID: CDOT I270 12-2020-SB31-15-17

Lab Sample ID: 280-143333-2 DU

Date Collected: 12/01/20 09:55

Matrix: Solid

Date Received: 12/02/20 13:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			519243	12/04/20 12:34	JMH	TAL DEN

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143333-1

Laboratory: Eurofins TestAmerica, Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21
A2LA	ISO/IEC 17025	2907.01	10-31-21
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	02-08-21
Arizona	State	AZ0713	12-19-20
Arkansas DEQ	State	19-047-0	06-01-21
California	State	2513	01-08-21
Connecticut	State	PH-0686	09-30-20 *
Florida	NELAP	E87667-57	07-01-21
Georgia	State	4025-011	01-09-21
Illinois	NELAP	2000172019-1	04-30-21
Iowa	State	IA#370	12-01-20 *
Kansas	NELAP	E-10166	04-30-21
Louisiana	NELAP	30785	06-30-14 *
Louisiana	NELAP	30785	06-30-21
Maine	State	2019011 (231)	03-03-21
Minnesota	NELAP	1788752	12-31-20
Nevada	State	CO000262020-1	07-31-21
New Hampshire	NELAP	205319	04-29-21
New Jersey	NELAP	190002	06-30-21
New York	NELAP	59923	04-01-21
North Carolina (WW/SW)	State	358	12-31-20
North Dakota	State	R-034	01-08-21
Oklahoma	State	2018-006	09-01-21
Oregon	NELAP	4025-011	01-08-21
Pennsylvania	NELAP	013	07-31-21
South Carolina	State	72002001	01-08-21
Texas	NELAP	TX104704183-08-TX	09-30-09 *
Texas	NELAP	T104704183-20-18	09-30-21
US Fish & Wildlife	US Federal Programs	058448	08-01-21
USDA	US Federal Programs	P330-18-00099	03-26-21
Utah	NELAP	QUAN5	06-30-13 *
Utah	NELAP	CO000262019-11	07-31-21
Virginia	NELAP	10490	06-14-21
Washington	State	C583-19	08-03-21
West Virginia DEP	State	354	02-28-21
Wisconsin	State	999615430	08-31-21
Wyoming (UST)	A2LA	2907.01	10-31-21

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Client Information
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 Project Name: CDOT I-270 Env-Dec 2020
 SOW#: 28020733
 Site:

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (G=grab, G=comp)	Matrix (Water, Solid, Organic, Inorganic, Air)	Preservation Code	Field Filtered Sample (Yes or No)		826B - VOCs (Terra Cores - 48 hour short holding time)		Moisture		8015C, GRO - TPH - GRO		8015C, DRO - TPH - DRO/ORO		Total 6020A + 747B (solids)		8270D - SVOCs		8081B - Pesticides		8082A - PCBs		8015C, GRO - TPH - GRO (waters)		826B - VOCs (waters)		Total 6020A + 7470A (waters)		Disolved 6020A + 7471B (lab filtration/preservation)		Total Number of Containers	Special Instructio	
						Perform MS/MSD (Yes or No)	826B - VOCs (Terra Cores - 48 hour short holding time)	J+FN	F	N	N	N	A	A	D	N	A	A	D	N	A	A	D	N										
CDOT I270 12-2020-5B31-9-11	12/1/20	0930	G	S		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CDOT I270 12-2020-5B31-15-17	12/1/20	0955	G	S		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CDOT I270 12-2020-5B31-6W	12/1/20	1145	G	W		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CDOT I270 12-2020-5B30-5-10	12/2/20	0840	G	S		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CDOT I270 12-2020-5B30-10-15	12/2/20	0905	G	S		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CDOT I270 12-2020-5B29-10-12	12/2/20	1100	G	S		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CDOT I270 12-2020-5B29-6W	12/2/20	1150	G	W		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
TRIP BLANK D1	12/1/20	0800	G	W		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		6 HCL

Preservation Codes:
 A - HCL
 B - NaOH
 C - Zn Acetate
 D - Nitric Acid
 E - NaHSO4
 F - MeOH
 G - Amchlor
 H - Ascorbic Acid
 I - Ice
 J - DI Water
 K - EDTA
 L - EDA
 M - Hexane
 N - None
 O - AsNaO2
 P - Na2O4S
 Q - Na2SO3
 R - Na2S2O3
 S - H2SO4
 T - TSP Dodecahydrate
 U - Acetone
 V - MCAA
 W - pH 4.5
 Z - other (specify)

Other:

Analysis Requested:
 Total 6020A + 7471B (lab filtration/preservation)
 Disolved 6020A + 7470A (waters)
 Total 6020A + 7470A (waters)
 826B - VOCs (waters)
 8015C, GRO - TPH - GRO (waters)
 8082A - PCBs
 8081B - Pesticides
 8270D - SVOCs
 Total 6020A + 747B (solids)
 8015C, DRO - TPH - DRO/ORO
 8015C, GRO - TPH - GRO
 Moisture
 826B - VOCs (Terra Cores - 48 hour short holding time)
 Perform MS/MSD (Yes or No)
 Field Filtered Sample (Yes or No)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements:

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: _____ Date/Time: 12/2/20 1312 Company: PAWS
 Relinquished by: _____ Date/Time: _____ Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seal Intact: X Yes No
 Custody Seal No: 1229842, 1229843, 1289844, 1289845
 Cooler Temperature(s) °C and Other Remarks: 7.1C, 3.8C I#11 CF-0.3C

280-14333 Chain of Custody



Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 280-143333-1

Login Number: 143333

List Source: Eurofins TestAmerica, Denver

List Number: 1

Creator: O'Hara, Jake F

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	Refer to Job Narrative for details.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	False	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Consultant Work Product - Not CDOT Approved - Jacobs Engineering

ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-143461-1
Client Project/Site: CDOT I-270 Env-Dec 2020

For:

Jacobs Engineering Group, Inc.
707 17th Street
Suite 2400
Denver, Colorado 80202

Attn: Mr. Jon Russ



Authorized for release by:
12/23/2020 8:19:34 AM

Michelle Johnston, Project Manager II
(303)736-0110
Michelle.Johnston@Eurofinset.com

LINKS

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results through
Total Access

Have a Question?



Visit us at:

www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
♠	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TNTC	Too Numerous To Count

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

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Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Job ID: 280-143461-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: Jacobs Engineering Group, Inc.
Project: CDOT I-270 Env-Dec 2020
Report Number: 280-143461-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 12/4/2020 2:05 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 12.0° C.

One of three methanol vials received for the following sample contained no free flowing liquid: CDOT I270 ENV 12_2020-SB-36-25-30 (280-143461-1). Sufficient volume received to perform the requested GRO analysis.

The following sample contained glass as indicated on the Chain-of-Custody (COC): CDOT I270 ENV 12_2020-SB-35-10-15 (280-143461-4).

The following samples were received at the laboratory outside the required temperature criteria: CDOT I270 ENV 12_2020-SB-36-25-30 (280-143461-1) and CDOT I270 ENV 12_2020-SB-TB002 (280-143461-2).

The following samples were received at the laboratory outside the required temperature criteria: CDOT I270 ENV 12_2020-SB-35-5-10 (280-143461-3), CDOT I270 ENV 12_2020-SB-35-10-15 (280-143461-4), CDOT I270 ENV 12_2020-SB-35-GW (280-143461-5) and CDOT I270 ENV 12_2020-SB-TB-03 (280-143461-6). The samples are considered acceptable since they were collected and submitted to the laboratory on the same day and there is evidence that the chilling process has begun.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples CDOT I270 ENV 12_2020-SB-36-25-30 (280-143461-1), CDOT I270 ENV 12_2020-SB-35-5-10 (280-143461-3), CDOT I270 ENV 12_2020-SB-35-10-15 (280-143461-4) and CDOT I270 ENV 12_2020-SB-TB002 (280-143461-7) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 12/03/2020 and 12/04/2020 and analyzed on 12/11/2020 and 12/14/2020.

Samples CDOT I270 ENV 12_2020-SB-35-10-15 (280-143461-4)[50X] and CDOT I270 ENV 12_2020-SB-TB002 (280-143461-7)[50X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

1,4-Dioxane failed the recovery criteria high for LCS 280-520106/1-A. Methyl tert-butyl ether failed the recovery criteria high for LCSD 280-520106/2-A. These analytes were biased high in the LCS/LCSD and were not detected in the associated samples; therefore, the data have been reported and flagged accordingly.

The following compound was outside control limits in the continuing calibration verification (CCV) associated with batch 280-520250: Dichlorodifluoromethane @ -59.7%D. This compound is not classified as Calibration Check Compound (CCC) in the reference method, and the laboratory defaults to in-house and/or project-specific criteria for evaluation. Commercial work allows up to 6 failures; therefore, the data was reported.

The continuing calibration verification (CCV) associated with batch 280-520250 recovered above the upper control limit for the following compounds: 1,4-Dioxane @ 53.7%D and Methyl tert-butyl ether @ 60.3%D. The samples associated with this CCV were non-detects for

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Job ID: 280-143461-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

the affected analytes; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples CDOT I270 ENV 12_2020-SB-35-GW (280-143461-5) and CDOT I270 ENV 12_2020-SB-TB-03 (280-143461-6) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 12/14/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GC/MS)

Samples CDOT I270 ENV 12_2020-SB-36-25-30 (280-143461-1), CDOT I270 ENV 12_2020-SB-35-5-10 (280-143461-3) and CDOT I270 ENV 12_2020-SB-35-10-15 (280-143461-4) were analyzed for semivolatile organic compounds (GC/MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 12/06/2020 and analyzed on 12/11/2020 and 12/14/2020.

The following sample contained non-soil materials: CDOT I270 ENV 12_2020-SB-35-10-15 (280-143461-4).

The following sample was diluted due to the nature of the sample matrix: CDOT I270 ENV 12_2020-SB-35-10-15 (280-143461-4). Elevated reporting limits (RLs) are provided.

The continuing calibration verification (CCV) associated with batch 280-520122 recovered outside acceptance criteria, low biased, for 4-Nitrophenol. A reporting limit (RL) standard was analyzed, and the target analytes were detected. Since the associated samples were non-detect for this analyte, the data has been reported.

The continuing calibration verification (CCV) associated with batch 280-520122 recovered above the upper control limit for 1,4-Dioxane. The samples associated with this CCV were non-detect for the affected analyte; therefore, the data have been reported. The associated samples are impacted: CDOT I270 ENV 12_2020-SB-36-25-30 (280-143461-1), CDOT I270 ENV 12_2020-SB-35-5-10 (280-143461-3), CDOT I270 ENV 12_2020-SB-35-10-15 (280-143461-4), (CCV 280-520121/3), (CCV 280-520122/3) and (320-67497-C-9-A).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GASOLINE RANGE ORGANICS (GRO)

Samples CDOT I270 ENV 12_2020-SB-36-25-30 (280-143461-1), CDOT I270 ENV 12_2020-SB-35-5-10 (280-143461-3), CDOT I270 ENV 12_2020-SB-35-10-15 (280-143461-4) and CDOT I270 ENV 12_2020-SB-TB002 (280-143461-7) were analyzed for Gasoline Range Organics (GRO) in accordance with EPA SW-846 Method 8015C - GRO. The samples were prepared on 12/10/2020 and analyzed on 12/11/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GASOLINE RANGE ORGANICS (GRO)

Samples CDOT I270 ENV 12_2020-SB-35-GW (280-143461-5) and CDOT I270 ENV 12_2020-SB-TB-03 (280-143461-6) were analyzed for Gasoline Range Organics (GRO) in accordance with EPA SW-846 Method 8015C - GRO. The samples were analyzed on 12/10/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DIESEL RANGE ORGANICS

Samples CDOT I270 ENV 12_2020-SB-36-25-30 (280-143461-1), CDOT I270 ENV 12_2020-SB-35-5-10 (280-143461-3) and CDOT I270 ENV 12_2020-SB-35-10-15 (280-143461-4) were analyzed for diesel range organics in accordance with EPA SW-846 Method 8015C - DRO. The samples were prepared on 12/09/2020 and analyzed on 12/16/2020.

The following sample was diluted to bring the concentration of target analytes within the calibration range: CDOT I270 ENV 12_2020-SB-35-10-15 (280-143461-4). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Job ID: 280-143461-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

METALS (ICPMS)

Samples CDOT I270 ENV 12_2020-SB-36-25-30 (280-143461-1), CDOT I270 ENV 12_2020-SB-35-5-10 (280-143461-3) and CDOT I270 ENV 12_2020-SB-35-10-15 (280-143461-4) were analyzed for metals (ICPMS) in accordance with SW 846 6020A. The samples were prepared on 12/11/2020 and analyzed on 12/15/2020 and 12/16/2020.

Sample CDOT I270 ENV 12_2020-SB-35-10-15 (280-143461-4)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Barium failed the recovery criteria high for the MS of sample CDOT I270 ENV 12_2020-SB-36-25-30MS (280-143461-1) in batch 280-520635. The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action was deemed unnecessary.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP/MS)

Samples CDOT I270 ENV 12_2020-SB-36-25-30 (280-143461-1), CDOT I270 ENV 12_2020-SB-35-5-10 (280-143461-3) and CDOT I270 ENV 12_2020-SB-35-10-15 (280-143461-4) were analyzed for Total Metals (ICP/MS) in accordance with 6020A. The samples were prepared on 12/11/2020 and analyzed on 12/14/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED METALS (ICPMS)

Sample CDOT I270 ENV 12_2020-SB-35-GW (280-143461-5) was analyzed for dissolved metals (ICPMS) in accordance with EPA SW-846 Methods 6020A. The samples were prepared on 12/10/2020 and analyzed on 12/11/2020.

Barium, Dissolved was detected in method blank MB 280-519506/1-E at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Associated samples were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Chromium, Dissolved was detected in method blank MB 280-519506/1-E at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

The low level continuing calibration verification (CCVL) associated with batch 280-520315 recovered above the upper control limit (130%) for Cadmium (138%). The sample associated with this CCVL was non-detect for the affected analyte; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICPMS)

Sample CDOT I270 ENV 12_2020-SB-35-GW (280-143461-5) was analyzed for total metals (ICPMS) in accordance with EPA SW-846 6020A. The sample was prepared on 12/09/2020 and analyzed on 12/15/2020 and 12/16/2020.

Sample CDOT I270 ENV 12_2020-SB-35-GW (280-143461-5)[50X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Selenium was detected in method blank MB 280-519628/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED MERCURY

Sample CDOT I270 ENV 12_2020-SB-35-GW (280-143461-5) was analyzed for dissolved mercury in accordance with EPA SW-846

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Job ID: 280-143461-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Methods 7470A. The samples were prepared and analyzed on 12/09/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Sample CDOT I270 ENV 12_2020-SB-35-GW (280-143461-5) was analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 12/08/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY (CVAA)

Samples CDOT I270 ENV 12_2020-SB-36-25-30 (280-143461-1), CDOT I270 ENV 12_2020-SB-35-5-10 (280-143461-3) and CDOT I270 ENV 12_2020-SB-35-10-15 (280-143461-4) were analyzed for total mercury (CVAA) in accordance with EPA SW-846 Method 7471B. The samples were prepared and analyzed on 12/10/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

Samples CDOT I270 ENV 12_2020-SB-36-25-30 (280-143461-1), CDOT I270 ENV 12_2020-SB-35-5-10 (280-143461-3) and CDOT I270 ENV 12_2020-SB-35-10-15 (280-143461-4) were analyzed for percent solids in accordance with ASTM D2216-90. The samples were analyzed on 12/09/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

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Detection Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Client Sample ID: CDOT I270 ENV 12_2020-SB-36-25-30

Lab Sample ID: 280-143461-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	6.4	J	27	5.2	ug/Kg	1	☒	8260B	Total/NA
Hexadecane	43	J	330	13	ug/Kg	1	☒	8270D	Total/NA
Diesel Range Organics [C10-C28]	36		8.6	3.9	mg/Kg	1	☒	8015C	Total/NA
Motor Oil (C20-C38)	31		26	8.4	mg/Kg	1	☒	8015C	Total/NA
Arsenic	2.3		0.61	0.052	mg/Kg	1	☒	6020A	Total/NA
Silver	31	J	92	7.2	ug/Kg	1	☒	6020A	Total/NA
Barium	110		0.41	0.072	mg/Kg	1	☒	6020A	Total/NA
Cadmium	0.13		0.10	0.0096	mg/Kg	1	☒	6020A	Total/NA
Chromium	8.0		0.20	0.077	mg/Kg	1	☒	6020A	Total/NA
Lead	7.6		0.15	0.019	mg/Kg	1	☒	6020A	Total/NA
Selenium	0.16	J	0.51	0.14	mg/Kg	1	☒	6020A	Total/NA

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-5-10

Lab Sample ID: 280-143461-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Anthracene	22	J	330	17	ug/Kg	1	☒	8270D	Total/NA
Benzo[a]anthracene	52	J	330	20	ug/Kg	1	☒	8270D	Total/NA
Benzo[a]pyrene	46	J	330	20	ug/Kg	1	☒	8270D	Total/NA
Benzo[b]fluoranthene	58	J	330	27	ug/Kg	1	☒	8270D	Total/NA
Benzo[g,h,i]perylene	40	J	330	16	ug/Kg	1	☒	8270D	Total/NA
Chrysene	55	J	330	27	ug/Kg	1	☒	8270D	Total/NA
Fluoranthene	120	J	330	36	ug/Kg	1	☒	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	32	J	330	22	ug/Kg	1	☒	8270D	Total/NA
Phenanthrene	110	J	330	17	ug/Kg	1	☒	8270D	Total/NA
Pyrene	110	J	330	12	ug/Kg	1	☒	8270D	Total/NA
Diesel Range Organics [C10-C28]	33		8.4	3.8	mg/Kg	1	☒	8015C	Total/NA
Motor Oil (C20-C38)	68		25	8.2	mg/Kg	1	☒	8015C	Total/NA
Arsenic	2.2		0.56	0.047	mg/Kg	1	☒	6020A	Total/NA
Silver	46	J	96	7.5	ug/Kg	1	☒	6020A	Total/NA
Barium	77		0.37	0.065	mg/Kg	1	☒	6020A	Total/NA
Cadmium	0.32		0.093	0.0087	mg/Kg	1	☒	6020A	Total/NA
Chromium	8.2		0.19	0.071	mg/Kg	1	☒	6020A	Total/NA
Lead	23		0.14	0.017	mg/Kg	1	☒	6020A	Total/NA
Selenium	0.13	J	0.46	0.12	mg/Kg	1	☒	6020A	Total/NA

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-10-15

Lab Sample ID: 280-143461-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dichlorobenzene	90		11	0.52	ug/Kg	1	☒	8260B	Total/NA
2-Butanone (MEK)	21	J	43	8.3	ug/Kg	1	☒	8260B	Total/NA
Acetone	110	J	150	76	ug/Kg	1	☒	8260B	Total/NA
Benzene	59		11	0.32	ug/Kg	1	☒	8260B	Total/NA
Carbon disulfide	19		11	3.5	ug/Kg	1	☒	8260B	Total/NA
Chlorobenzene	13		11	4.4	ug/Kg	1	☒	8260B	Total/NA
Cyclohexane	46		11	3.8	ug/Kg	1	☒	8260B	Total/NA
Ethylbenzene	50		11	0.65	ug/Kg	1	☒	8260B	Total/NA
Isopropylbenzene	42		11	5.1	ug/Kg	1	☒	8260B	Total/NA
Methylcyclohexane	400		11	0.90	ug/Kg	1	☒	8260B	Total/NA
o-Xylene	39		5.3	0.57	ug/Kg	1	☒	8260B	Total/NA
Toluene	5.6	J	11	0.48	ug/Kg	1	☒	8260B	Total/NA
m-Xylene & p-Xylene - DL	2300		120	51	ug/Kg	50	☒	8260B	Total/NA
1,1'-Biphenyl	350	J	600	44	ug/Kg	1	☒	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-10-15

Lab Sample ID: 280-143461-4

(Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dichlorobenzene	420	J	600	25	ug/Kg	1	✳	8270D	Total/NA
1-Methylnaphthalene	840		600	20	ug/Kg	1	✳	8270D	Total/NA
2-Methylnaphthalene	1100		600	35	ug/Kg	1	✳	8270D	Total/NA
4-Chloro-3-methylphenol	440	J	600	45	ug/Kg	1	✳	8270D	Total/NA
Acenaphthene	1400		600	19	ug/Kg	1	✳	8270D	Total/NA
Anthracene	2300		600	31	ug/Kg	1	✳	8270D	Total/NA
Benzo[a]anthracene	3000		600	36	ug/Kg	1	✳	8270D	Total/NA
Benzo[a]pyrene	2100		600	36	ug/Kg	1	✳	8270D	Total/NA
Benzo[b]fluoranthene	2700		600	48	ug/Kg	1	✳	8270D	Total/NA
Benzo[g,h,i]perylene	870		600	29	ug/Kg	1	✳	8270D	Total/NA
Benzo[k]fluoranthene	1100		600	73	ug/Kg	1	✳	8270D	Total/NA
Carbazole	1200		600	65	ug/Kg	1	✳	8270D	Total/NA
Chrysene	3200		600	49	ug/Kg	1	✳	8270D	Total/NA
Dibenz(a,h)anthracene	280	J	600	35	ug/Kg	1	✳	8270D	Total/NA
Dibenzofuran	860		600	36	ug/Kg	1	✳	8270D	Total/NA
Di-n-butyl phthalate	100	J	600	53	ug/Kg	1	✳	8270D	Total/NA
Diphenylamine	1200		600	80	ug/Kg	1	✳	8270D	Total/NA
Fluoranthene	7400		600	65	ug/Kg	1	✳	8270D	Total/NA
Fluorene	1900		600	33	ug/Kg	1	✳	8270D	Total/NA
Hexadecane	440	J	600	24	ug/Kg	1	✳	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	810		600	40	ug/Kg	1	✳	8270D	Total/NA
Naphthalene	1500		600	56	ug/Kg	1	✳	8270D	Total/NA
N-Nitrosodiphenylamine	1500		600	38	ug/Kg	1	✳	8270D	Total/NA
Phenanthrene	9100		600	31	ug/Kg	1	✳	8270D	Total/NA
Pyrene	8400		600	22	ug/Kg	1	✳	8270D	Total/NA
Bis(2-ethylhexyl) phthalate - DL	4500	J	6000	840	ug/Kg	10	✳	8270D	Total/NA
Gasoline Range Organics (GRO)-C6-C10	130		6.4	2.4	mg/Kg	1	✳	8015C	Total/NA
Diesel Range Organics [C10-C28]	3800	D	28	13	mg/Kg	2	✳	8015C	Total/NA
Motor Oil (C20-C38)	5100	D	84	27	mg/Kg	2	✳	8015C	Total/NA
Arsenic	13		0.95	0.080	mg/Kg	1	✳	6020A	Total/NA
Silver	2700		150	12	ug/Kg	1	✳	6020A	Total/NA
Barium	710		6.4	1.1	mg/Kg	10	✳	6020A	Total/NA
Cadmium	3.8		0.16	0.015	mg/Kg	1	✳	6020A	Total/NA
Chromium	52		0.32	0.12	mg/Kg	1	✳	6020A	Total/NA
Lead	1400		2.4	0.29	mg/Kg	10	✳	6020A	Total/NA
Selenium	0.29	J	0.79	0.21	mg/Kg	1	✳	6020A	Total/NA
Mercury	1100		33	11	ug/Kg	1	✳	7471B	Total/NA

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-GW

Lab Sample ID: 280-143461-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichlorobenzene	0.38	J	1.0	0.15	ug/L	1		8260B	Total/NA
1,4-Dichlorobenzene	2.7		1.0	0.16	ug/L	1		8260B	Total/NA
2-Butanone (MEK)	3.8	J	6.0	2.0	ug/L	1		8260B	Total/NA
Acetone	2.6	J	10	1.9	ug/L	1		8260B	Total/NA
Benzene	0.23	J	1.0	0.16	ug/L	1		8260B	Total/NA
Carbon disulfide	0.64	J	2.0	0.17	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	0.30	J	1.0	0.15	ug/L	1		8260B	Total/NA
Ethylbenzene	0.26	J	1.0	0.16	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-GW
(Continued)

Lab Sample ID: 280-143461-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
m-Xylene & p-Xylene	1.5	J	2.0	0.15	ug/L	1		8260B	Total/NA
Gasoline Range Organics (GRO)-C6-C10	30		25	10	ug/L	1		8015C	Total/NA
Arsenic	110		5.0	0.33	ug/L	1		6020A	Total/NA
Barium	11000		50	15	ug/L	50		6020A	Total/NA
Cadmium	6.0		1.0	0.27	ug/L	1		6020A	Total/NA
Chromium	270		2.0	0.50	ug/L	1		6020A	Total/NA
Lead	300		1.0	0.18	ug/L	1		6020A	Total/NA
Selenium	5.1	B	5.0	0.37	ug/L	1		6020A	Total/NA
Silver	2.2	J	5.0	0.033	ug/L	1		6020A	Total/NA
Arsenic, Dissolved	1.9	J	5.0	0.33	ug/L	1		6020A	Dissolved
Barium, Dissolved	410	B	1.0	0.29	ug/L	1		6020A	Dissolved
Chromium, Dissolved	0.74	J B	2.0	0.50	ug/L	1		6020A	Dissolved
Selenium, Dissolved	0.45	J	5.0	0.37	ug/L	1		6020A	Dissolved
Mercury	0.64	J	1.0	0.14	ug/L	1		7470A	Total/NA

Client Sample ID: CDOT I270 ENV 12_2020-SB-TB-03

Lab Sample ID: 280-143461-6

No Detections.

Client Sample ID: CDOT I270 ENV 12_2020-SB-TB002

Lab Sample ID: 280-143461-7

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Method Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL DEN
8015C	Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)	SW846	TAL DEN
8015C	Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)	SW846	TAL DEN
6020A	Metals (ICP/MS)	SW846	TAL DEN
7470A	Mercury (CVAA)	SW846	TAL DEN
7471B	Mercury (CVAA)	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL DEN
3020A	Preparation, Total Metals	SW846	TAL DEN
3050B	Preparation, Metals	SW846	TAL DEN
3050B-Sb	Preparation, Metals (Antimony)	SW846	TAL DEN
3546	Microwave Extraction	SW846	TAL DEN
3550C	Ultrasonic Extraction	SW846	TAL DEN
5030B	Purge and Trap	SW846	TAL DEN
5030C	Purge and Trap	SW846	TAL DEN
5035	Closed System Purge and Trap	SW846	TAL DEN
7470A	Preparation, Mercury	SW846	TAL DEN
7471B	Preparation, Mercury	SW846	TAL DEN
FILTRATION	Sample Filtration	None	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-143461-1	CDOT I270 ENV 12_2020-SB-36-25-30	Solid	12/03/20 10:40	12/04/20 14:05	
280-143461-3	CDOT I270 ENV 12_2020-SB-35-5-10	Solid	12/04/20 11:40	12/04/20 14:05	
280-143461-4	CDOT I270 ENV 12_2020-SB-35-10-15	Solid	12/04/20 12:00	12/04/20 14:05	
280-143461-5	CDOT I270 ENV 12_2020-SB-35-GW	Water	12/04/20 12:50	12/04/20 14:05	
280-143461-6	CDOT I270 ENV 12_2020-SB-TB-03	Water	12/04/20 08:00	12/04/20 14:05	
280-143461-7	CDOT I270 ENV 12_2020-SB-TB002	Solid	12/03/20 08:00	12/04/20 14:05	

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 ENV 12_2020-SB-36-25-30

Date Collected: 12/03/20 10:40

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-1

Matrix: Solid

Percent Solids: 92.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		6.7	2.6	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
1,1,2,2-Tetrachloroethane	ND		6.7	0.38	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
1,1,2-Trichloroethane	ND		6.7	1.2	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
1,1,2-Trichlorotrifluoroethane	ND		27	2.2	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
1,1-Dichloroethane	ND		6.7	0.28	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
1,1-Dichloroethene	ND		6.7	0.79	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
1,2,3-Trichlorobenzene	ND		6.7	1.1	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
1,2,4-Trichlorobenzene	ND		6.7	0.97	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
1,2-Dibromo-3-Chloropropane	ND		13	4.9	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
1,2-Dibromoethane	ND		6.7	0.69	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
1,2-Dichlorobenzene	ND		6.7	2.5	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
1,2-Dichloroethane	ND		6.7	0.93	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
1,2-Dichloropropane	ND		6.7	0.73	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
1,3-Dichlorobenzene	ND		6.7	0.64	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
1,4-Dichlorobenzene	ND		6.7	0.33	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
1,4-Dioxane	ND	*	670	75	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
2-Butanone (MEK)	6.4	J	27	5.2	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
2-Hexanone	ND		27	6.5	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
4-Methyl-2-pentanone (MIBK)	ND		27	5.8	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
Acetone	ND		96	47	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
Benzene	ND		6.7	0.20	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
Bromoform	ND		6.8	3.4	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
Bromomethane	ND		13	1.8	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
Carbon disulfide	ND		6.7	2.2	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
Carbon tetrachloride	ND		6.7	2.7	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
Chlorobenzene	ND		6.7	2.7	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
Chlorobromomethane	ND		6.7	3.3	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
Chlorodibromomethane	ND		6.7	3.0	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
Chloroethane	ND		13	2.7	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
Chloroform	ND		13	0.39	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
Chloromethane	ND		13	1.0	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
cis-1,2-Dichloroethene	ND		3.3	0.27	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
cis-1,3-Dichloropropene	ND		6.7	0.13	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
Cyclohexane	ND		6.7	2.3	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
Dichlorobromomethane	ND		6.7	2.8	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
Dichlorodifluoromethane	ND		13	3.6	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
Ethylbenzene	ND		6.7	0.41	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
Isopropylbenzene	ND		6.7	3.2	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
Methyl acetate	ND		13	3.7	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
Methyl tert-butyl ether	ND	*	27	2.8	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
Methylcyclohexane	ND		6.7	0.56	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
Methylene Chloride	ND		6.7	2.1	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
m-Xylene & p-Xylene	ND		3.3	1.4	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
o-Xylene	ND		3.3	0.35	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
Styrene	ND		6.7	0.37	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
Tetrachloroethene	ND		6.7	2.5	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
Toluene	ND		6.7	0.30	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
trans-1,2-Dichloroethene	ND		3.3	0.52	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
trans-1,3-Dichloropropene	ND		6.7	0.11	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 ENV 12_2020-SB-36-25-30

Date Collected: 12/03/20 10:40

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-1

Matrix: Solid

Percent Solids: 92.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		6.7	2.5	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
Trichlorofluoromethane	ND		13	4.3	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
Vinyl chloride	ND		6.7	1.8	ug/Kg	☼	12/03/20 10:40	12/11/20 18:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		58 - 140				12/03/20 10:40	12/11/20 18:41	1
4-Bromofluorobenzene (Surr)	103		76 - 127				12/03/20 10:40	12/11/20 18:41	1
Dibromofluoromethane (Surr)	92		75 - 121				12/03/20 10:40	12/11/20 18:41	1
Toluene-d8 (Surr)	102		80 - 126				12/03/20 10:40	12/11/20 18:41	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-5-10

Date Collected: 12/04/20 11:40

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-3

Matrix: Solid

Percent Solids: 93.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.9	1.9	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
1,1,2,2-Tetrachloroethane	ND		4.9	0.28	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
1,1,2-Trichloroethane	ND		4.9	0.86	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
1,1,2-Trichlorotrifluoroethane	ND		20	1.6	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
1,1-Dichloroethane	ND		4.9	0.21	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
1,1-Dichloroethene	ND		4.9	0.58	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
1,2,3-Trichlorobenzene	ND		4.9	0.79	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
1,2,4-Trichlorobenzene	ND		4.9	0.71	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
1,2-Dibromo-3-Chloropropane	ND		9.8	3.6	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
1,2-Dibromoethane	ND		4.9	0.51	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
1,2-Dichlorobenzene	ND		4.9	1.8	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
1,2-Dichloroethane	ND		4.9	0.69	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
1,2-Dichloropropane	ND		4.9	0.54	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
1,3-Dichlorobenzene	ND		4.9	0.47	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
1,4-Dichlorobenzene	ND		4.9	0.24	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
1,4-Dioxane	ND *		490	55	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
2-Butanone (MEK)	ND		20	3.8	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
2-Hexanone	ND		20	4.8	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.3	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
Acetone	ND		71	35	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
Benzene	ND		4.9	0.15	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
Bromoform	ND		5.0	2.5	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
Bromomethane	ND		9.8	1.3	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
Carbon disulfide	ND		4.9	1.6	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
Carbon tetrachloride	ND		4.9	2.0	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
Chlorobenzene	ND		4.9	2.0	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
Chlorobromomethane	ND		4.9	2.4	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
Chlorodibromomethane	ND		4.9	2.2	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
Chloroethane	ND		9.8	1.9	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
Chloroform	ND		9.8	0.28	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
Chloromethane	ND		9.8	0.75	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
cis-1,2-Dichloroethene	ND		2.4	0.20	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
cis-1,3-Dichloropropene	ND		4.9	0.098	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
Cyclohexane	ND		4.9	1.7	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
Dichlorobromomethane	ND		4.9	2.1	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
Dichlorodifluoromethane	ND		9.8	2.7	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-5-10

Date Collected: 12/04/20 11:40

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-3

Matrix: Solid

Percent Solids: 93.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		4.9	0.30	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
Isopropylbenzene	ND		4.9	2.4	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
Methyl acetate	ND		9.8	2.7	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
Methyl tert-butyl ether	ND	*	20	2.1	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
Methylcyclohexane	ND		4.9	0.41	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
Methylene Chloride	ND		4.9	1.6	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
m-Xylene & p-Xylene	ND		2.4	1.0	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
o-Xylene	ND		2.4	0.26	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
Styrene	ND		4.9	0.27	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
Tetrachloroethene	ND		4.9	1.9	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
Toluene	ND		4.9	0.22	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
trans-1,2-Dichloroethene	ND		2.4	0.38	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
trans-1,3-Dichloropropene	ND		4.9	0.081	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
Trichloroethene	ND		4.9	1.9	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
Trichlorofluoromethane	ND		9.8	3.1	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1
Vinyl chloride	ND		4.9	1.3	ug/Kg	☼	12/04/20 11:40	12/11/20 19:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		58 - 140	12/04/20 11:40	12/11/20 19:04	1
4-Bromofluorobenzene (Surr)	102		76 - 127	12/04/20 11:40	12/11/20 19:04	1
Dibromofluoromethane (Surr)	96		75 - 121	12/04/20 11:40	12/11/20 19:04	1
Toluene-d8 (Surr)	102		80 - 126	12/04/20 11:40	12/11/20 19:04	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-10-15

Date Collected: 12/04/20 12:00

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-4

Matrix: Solid

Percent Solids: 54.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		11	4.2	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
1,1,1,2-Tetrachloroethane	ND		11	0.61	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
1,1,2-Trichloroethane	ND		11	1.9	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
1,1,2-Trichlorotrifluoroethane	ND		43	3.5	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
1,1-Dichloroethane	ND		11	0.45	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
1,1-Dichloroethene	ND		11	1.3	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
1,2,3-Trichlorobenzene	ND		11	1.7	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
1,2,4-Trichlorobenzene	ND		11	1.6	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
1,2-Dibromo-3-Chloropropane	ND		21	7.8	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
1,2-Dibromoethane	ND		11	1.1	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
1,2-Dichlorobenzene	ND		11	4.0	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
1,2-Dichloroethane	ND		11	1.5	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
1,2-Dichloropropane	ND		11	1.2	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
1,3-Dichlorobenzene	ND		11	1.0	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
1,4-Dichlorobenzene	90		11	0.52	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
1,4-Dioxane	ND	*	1100	120	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
2-Butanone (MEK)	21	J	43	8.3	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
2-Hexanone	ND		43	10	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
4-Methyl-2-pentanone (MIBK)	ND		43	9.3	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
Acetone	110	J	150	76	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
Benzene	59		11	0.32	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
Bromoform	ND		11	5.4	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
Bromomethane	ND		21	2.9	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-10-15

Lab Sample ID: 280-143461-4

Date Collected: 12/04/20 12:00

Matrix: Solid

Date Received: 12/04/20 14:05

Percent Solids: 54.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	19		11	3.5	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
Carbon tetrachloride	ND		11	4.3	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
Chlorobenzene	13		11	4.4	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
Chlorobromomethane	ND		11	5.3	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
Chlorodibromomethane	ND		11	4.8	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
Chloroethane	ND		21	4.3	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
Chloroform	ND		21	0.62	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
Chloromethane	ND		21	1.6	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
cis-1,2-Dichloroethene	ND		5.3	0.43	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
cis-1,3-Dichloropropene	ND		11	0.21	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
Cyclohexane	46		11	3.8	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
Dichlorobromomethane	ND		11	4.5	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
Dichlorodifluoromethane	ND		21	5.9	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
Ethylbenzene	50		11	0.65	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
Isopropylbenzene	42		11	5.1	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
Methyl acetate	ND		21	5.9	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
Methyl tert-butyl ether	ND *		43	4.5	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
Methylcyclohexane	400		11	0.90	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
Methylene Chloride	ND		11	3.4	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
o-Xylene	39		5.3	0.57	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
Styrene	ND		11	0.60	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
Tetrachloroethene	ND		11	4.1	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
Toluene	5.6 J		11	0.48	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
trans-1,2-Dichloroethene	ND		5.3	0.83	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
trans-1,3-Dichloropropene	ND		11	0.18	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
Trichloroethene	ND		11	4.1	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
Trichlorofluoromethane	ND		21	6.8	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1
Vinyl chloride	ND		11	2.9	ug/Kg	☼	12/04/20 12:00	12/11/20 19:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		58 - 140	12/04/20 12:00	12/11/20 19:26	1
4-Bromofluorobenzene (Surr)	124		76 - 127	12/04/20 12:00	12/11/20 19:26	1
Dibromofluoromethane (Surr)	95		75 - 121	12/04/20 12:00	12/11/20 19:26	1
Toluene-d8 (Surr)	114		80 - 126	12/04/20 12:00	12/11/20 19:26	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-GW

Lab Sample ID: 280-143461-5

Date Collected: 12/04/20 12:50

Matrix: Water

Date Received: 12/04/20 14:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			12/14/20 14:12	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.21	ug/L			12/14/20 14:12	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			12/14/20 14:12	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			12/14/20 14:12	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			12/14/20 14:12	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			12/14/20 14:12	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			12/14/20 14:12	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			12/14/20 14:12	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			12/14/20 14:12	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			12/14/20 14:12	1
1,2-Dichlorobenzene	0.38 J		1.0	0.15	ug/L			12/14/20 14:12	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-GW

Lab Sample ID: 280-143461-5

Date Collected: 12/04/20 12:50

Matrix: Water

Date Received: 12/04/20 14:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/14/20 14:12	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			12/14/20 14:12	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/14/20 14:12	1
1,4-Dichlorobenzene	2.7		1.0	0.16	ug/L			12/14/20 14:12	1
1,4-Dioxane	ND		200	19	ug/L			12/14/20 14:12	1
2-Butanone (MEK)	3.8	J	6.0	2.0	ug/L			12/14/20 14:12	1
2-Hexanone	ND		5.0	1.7	ug/L			12/14/20 14:12	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			12/14/20 14:12	1
Acetone	2.6	J	10	1.9	ug/L			12/14/20 14:12	1
Benzene	0.23	J	1.0	0.16	ug/L			12/14/20 14:12	1
Bromoform	ND		1.0	0.46	ug/L			12/14/20 14:12	1
Bromomethane	ND		2.0	0.21	ug/L			12/14/20 14:12	1
Carbon disulfide	0.64	J	2.0	0.17	ug/L			12/14/20 14:12	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			12/14/20 14:12	1
Chlorobenzene	ND		1.0	0.17	ug/L			12/14/20 14:12	1
Chlorobromomethane	ND		1.0	0.10	ug/L			12/14/20 14:12	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			12/14/20 14:12	1
Chloroethane	ND		2.0	0.41	ug/L			12/14/20 14:12	1
Chloroform	ND		1.0	0.16	ug/L			12/14/20 14:12	1
Chloromethane	ND		2.0	0.30	ug/L			12/14/20 14:12	1
cis-1,2-Dichloroethene	0.30	J	1.0	0.15	ug/L			12/14/20 14:12	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			12/14/20 14:12	1
Cyclohexane	ND		2.0	0.28	ug/L			12/14/20 14:12	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			12/14/20 14:12	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			12/14/20 14:12	1
Ethylbenzene	0.26	J	1.0	0.16	ug/L			12/14/20 14:12	1
Isopropylbenzene	ND		1.0	0.19	ug/L			12/14/20 14:12	1
Methyl acetate	ND		5.0	1.6	ug/L			12/14/20 14:12	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			12/14/20 14:12	1
Methylcyclohexane	ND		1.0	0.10	ug/L			12/14/20 14:12	1
Methylene Chloride	ND		2.0	0.94	ug/L			12/14/20 14:12	1
m-Xylene & p-Xylene	1.5	J	2.0	0.15	ug/L			12/14/20 14:12	1
o-Xylene	ND		1.0	0.19	ug/L			12/14/20 14:12	1
Styrene	ND		1.0	0.36	ug/L			12/14/20 14:12	1
Tetrachloroethene	ND		1.0	0.20	ug/L			12/14/20 14:12	1
Toluene	ND		1.0	0.17	ug/L			12/14/20 14:12	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			12/14/20 14:12	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			12/14/20 14:12	1
Trichloroethene	ND		1.0	0.16	ug/L			12/14/20 14:12	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			12/14/20 14:12	1
Vinyl chloride	ND		1.0	0.10	ug/L			12/14/20 14:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90		70 - 127		12/14/20 14:12	1
4-Bromofluorobenzene (Surr)	102		78 - 120		12/14/20 14:12	1
Dibromofluoromethane (Surr)	99		77 - 120		12/14/20 14:12	1
Toluene-d8 (Surr)	101		80 - 125		12/14/20 14:12	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 ENV 12_2020-SB-TB-03

Lab Sample ID: 280-143461-6

Date Collected: 12/04/20 08:00

Matrix: Water

Date Received: 12/04/20 14:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			12/14/20 14:35	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			12/14/20 14:35	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			12/14/20 14:35	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			12/14/20 14:35	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			12/14/20 14:35	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			12/14/20 14:35	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			12/14/20 14:35	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			12/14/20 14:35	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			12/14/20 14:35	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			12/14/20 14:35	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			12/14/20 14:35	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/14/20 14:35	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			12/14/20 14:35	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/14/20 14:35	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			12/14/20 14:35	1
1,4-Dioxane	ND		200	19	ug/L			12/14/20 14:35	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			12/14/20 14:35	1
2-Hexanone	ND		5.0	1.7	ug/L			12/14/20 14:35	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			12/14/20 14:35	1
Acetone	ND		10	1.9	ug/L			12/14/20 14:35	1
Benzene	ND		1.0	0.16	ug/L			12/14/20 14:35	1
Bromoform	ND		1.0	0.46	ug/L			12/14/20 14:35	1
Bromomethane	ND		2.0	0.21	ug/L			12/14/20 14:35	1
Carbon disulfide	ND		2.0	0.17	ug/L			12/14/20 14:35	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			12/14/20 14:35	1
Chlorobenzene	ND		1.0	0.17	ug/L			12/14/20 14:35	1
Chlorobromomethane	ND		1.0	0.10	ug/L			12/14/20 14:35	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			12/14/20 14:35	1
Chloroethane	ND		2.0	0.41	ug/L			12/14/20 14:35	1
Chloroform	ND		1.0	0.16	ug/L			12/14/20 14:35	1
Chloromethane	ND		2.0	0.30	ug/L			12/14/20 14:35	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			12/14/20 14:35	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			12/14/20 14:35	1
Cyclohexane	ND		2.0	0.28	ug/L			12/14/20 14:35	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			12/14/20 14:35	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			12/14/20 14:35	1
Ethylbenzene	ND		1.0	0.16	ug/L			12/14/20 14:35	1
Isopropylbenzene	ND		1.0	0.19	ug/L			12/14/20 14:35	1
Methyl acetate	ND		5.0	1.6	ug/L			12/14/20 14:35	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			12/14/20 14:35	1
Methylcyclohexane	ND		1.0	0.10	ug/L			12/14/20 14:35	1
Methylene Chloride	ND		2.0	0.94	ug/L			12/14/20 14:35	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			12/14/20 14:35	1
o-Xylene	ND		1.0	0.19	ug/L			12/14/20 14:35	1
Styrene	ND		1.0	0.36	ug/L			12/14/20 14:35	1
Tetrachloroethene	ND		1.0	0.20	ug/L			12/14/20 14:35	1
Toluene	ND		1.0	0.17	ug/L			12/14/20 14:35	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			12/14/20 14:35	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			12/14/20 14:35	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 ENV 12_2020-SB-TB-03

Date Collected: 12/04/20 08:00

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		1.0	0.16	ug/L			12/14/20 14:35	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			12/14/20 14:35	1
Vinyl chloride	ND		1.0	0.10	ug/L			12/14/20 14:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	82		70 - 127					12/14/20 14:35	1
4-Bromofluorobenzene (Surr)	104		78 - 120					12/14/20 14:35	1
Dibromofluoromethane (Surr)	97		77 - 120					12/14/20 14:35	1
Toluene-d8 (Surr)	102		80 - 125					12/14/20 14:35	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-TB002

Date Collected: 12/03/20 08:00

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-7

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	2.0	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.29	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
1,1,2-Trichloroethane	ND		5.0	0.88	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
1,1,2-Trichlorotrifluoroethane	ND		20	1.7	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
1,1-Dichloroethane	ND		5.0	0.21	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
1,1-Dichloroethene	ND		5.0	0.59	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
1,2,3-Trichlorobenzene	ND		5.0	0.81	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
1,2,4-Trichlorobenzene	ND		5.0	0.73	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
1,2-Dibromo-3-Chloropropane	ND		10	3.7	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
1,2-Dibromoethane	ND		5.0	0.52	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
1,2-Dichlorobenzene	ND		5.0	1.9	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
1,2-Dichloroethane	ND		5.0	0.70	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
1,2-Dichloropropane	ND		5.0	0.55	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
1,3-Dichlorobenzene	ND		5.0	0.48	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
1,4-Dichlorobenzene	ND		5.0	0.25	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
1,4-Dioxane	ND *		500	56	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
2-Butanone (MEK)	ND		20	3.9	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
2-Hexanone	ND		20	4.9	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.4	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
Acetone	ND		72	36	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
Benzene	ND		5.0	0.15	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
Bromoform	ND		5.1	2.6	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
Bromomethane	ND		10	1.4	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
Carbon disulfide	ND		5.0	1.7	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
Carbon tetrachloride	ND		5.0	2.0	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
Chlorobenzene	ND		5.0	2.1	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
Chlorobromomethane	ND		5.0	2.5	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
Chlorodibromomethane	ND		5.0	2.3	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
Chloroethane	ND		10	2.0	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
Chloroform	ND		10	0.29	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
Chloromethane	ND		10	0.77	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
cis-1,2-Dichloroethene	ND		2.5	0.20	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
cis-1,3-Dichloropropene	ND		5.0	0.10	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
Cyclohexane	ND		5.0	1.8	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
Dichlorobromomethane	ND		5.0	2.1	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
Dichlorodifluoromethane	ND		10	2.7	ug/Kg		12/03/20 08:00	12/11/20 16:06	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 ENV 12_2020-SB-TB002

Lab Sample ID: 280-143461-7

Date Collected: 12/03/20 08:00

Matrix: Solid

Date Received: 12/04/20 14:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		5.0	0.31	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
Isopropylbenzene	ND		5.0	2.4	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
Methyl acetate	ND		10	2.8	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
Methyl tert-butyl ether	ND	*	20	2.1	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
Methylcyclohexane	ND		5.0	0.42	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
Methylene Chloride	ND		5.0	1.6	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
m-Xylene & p-Xylene	ND		2.5	1.0	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
o-Xylene	ND		2.5	0.27	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
Styrene	ND		5.0	0.28	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
Tetrachloroethene	ND		5.0	1.9	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
Toluene	ND		5.0	0.23	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
trans-1,2-Dichloroethene	ND		2.5	0.39	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
trans-1,3-Dichloropropene	ND		5.0	0.083	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
Trichloroethene	ND		5.0	1.9	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
Trichlorofluoromethane	ND		10	3.2	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
Vinyl chloride	ND		5.0	1.3	ug/Kg		12/03/20 08:00	12/11/20 16:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		58 - 140				12/03/20 08:00	12/11/20 16:06	1
4-Bromofluorobenzene (Surr)	102		76 - 127				12/03/20 08:00	12/11/20 16:06	1
Dibromofluoromethane (Surr)	94		75 - 121				12/03/20 08:00	12/11/20 16:06	1
Toluene-d8 (Surr)	103		80 - 126				12/03/20 08:00	12/11/20 16:06	1

Consultant Work Product - Jacobs Engineering Group, Inc. - Not CDOT Approved

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-10-15

Date Collected: 12/04/20 12:00

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-4

Matrix: Solid

Percent Solids: 54.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	2300		120	51	ug/Kg	☼	12/04/20 12:00	12/14/20 17:34	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		58 - 140				12/04/20 12:00	12/14/20 17:34	50
4-Bromofluorobenzene (Surr)	100		76 - 127				12/04/20 12:00	12/14/20 17:34	50
Dibromofluoromethane (Surr)	96		75 - 121				12/04/20 12:00	12/14/20 17:34	50
Toluene-d8 (Surr)	98		80 - 126				12/04/20 12:00	12/14/20 17:34	50

Client Sample ID: CDOT I270 ENV 12_2020-SB-TB002

Date Collected: 12/03/20 08:00

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-7

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		130	52	ug/Kg		12/03/20 08:00	12/14/20 17:56	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		58 - 140				12/03/20 08:00	12/14/20 17:56	50
4-Bromofluorobenzene (Surr)	100		76 - 127				12/03/20 08:00	12/14/20 17:56	50
Dibromofluoromethane (Surr)	98		75 - 121				12/03/20 08:00	12/14/20 17:56	50
Toluene-d8 (Surr)	99		80 - 126				12/03/20 08:00	12/14/20 17:56	50

Consultant Work Product - Jacobs Engineering Group, Inc.
 -Not CDOT Approved-

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 ENV 12_2020-SB-36-25-30

Date Collected: 12/03/20 10:40

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-1

Matrix: Solid

Percent Solids: 92.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		330	24	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
1,2,4,5-Tetrachlorobenzene	ND		330	49	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
1,2,4-Trichlorobenzene	ND		330	28	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
1,2-Dichlorobenzene	ND		330	22	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		330	22	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
1,3-Dichlorobenzene	ND		330	12	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
1,3-Dinitrobenzene	ND		330	70	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
1,4-Dichlorobenzene	ND		330	13	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
1,4-Dioxane	ND		650	65	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
1-Methylnaphthalene	ND		330	11	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
2,2'-oxybis[1-chloropropane]	ND		330	23	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
2,3,4,6-Tetrachlorophenol	ND		1600	140	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
2,4,5-Trichlorophenol	ND		330	9.9	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
2,4,6-Trichlorophenol	ND		330	9.9	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
2,4-Dichlorophenol	ND		330	9.9	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
2,4-Dimethylphenol	ND		330	65	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
2,4-Dinitrophenol	ND		1600	330	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
2,4-Dinitrotoluene	ND		330	65	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
2,6-Dichlorophenol	ND		330	22	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
2,6-Dinitrotoluene	ND		330	28	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
2-Chloronaphthalene	ND		330	9.9	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
2-Chlorophenol	ND		330	21	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
2-Methylnaphthalene	ND		330	19	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
2-Methylphenol	ND		330	13	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
2-Nitroaniline	ND		1600	50	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
2-Nitrophenol	ND		330	9.9	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
3 & 4 Methylphenol	ND		330	33	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
3,3'-Dichlorobenzidine	ND		650	89	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
3-Methylphenol	ND		330	33	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
3-Nitroaniline	ND		1600	72	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
4,6-Dinitro-2-methylphenol	ND		1600	330	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
4-Bromophenyl phenyl ether	ND		330	19	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
4-Chloro-3-methylphenol	ND		330	25	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
4-Chloroaniline	ND		330	81	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
4-Chlorophenyl phenyl ether	ND		330	21	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
4-Methylphenol	ND		330	33	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
4-Nitroaniline	ND		1600	72	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
4-Nitrophenol	ND		1600	96	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Acenaphthene	ND		330	10	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Acenaphthylene	ND		330	81	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Acetophenone	ND		330	20	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Aniline	ND		330	130	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Anthracene	ND		330	17	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Azobenzene	ND		330	22	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Benzaldehyde	ND		330	66	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Benzidine	ND		3300	980	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Benzo[a]anthracene	ND		330	20	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Benzo[a]pyrene	ND		330	20	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Benzo[b]fluoranthene	ND		330	26	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 ENV 12_2020-SB-36-25-30

Date Collected: 12/03/20 10:40

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-1

Matrix: Solid

Percent Solids: 92.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		330	16	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Benzo[k]fluoranthene	ND		330	40	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Benzoic acid	ND		1600	330	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Benzyl alcohol	ND		330	9.9	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Bis(2-chloroethoxy)methane	ND		330	23	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Bis(2-chloroethyl)ether	ND		330	16	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Bis(2-ethylhexyl) phthalate	ND		330	46	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Butyl benzyl phthalate	ND		330	43	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Caprolactam	ND		330	110	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Carbazole	ND		330	36	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Chrysene	ND		330	27	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Dibenz(a,h)anthracene	ND		330	19	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Dibenzofuran	ND		330	20	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Diethyl phthalate	ND		650	26	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Dimethyl phthalate	ND		330	23	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Di-n-butyl phthalate	ND		330	29	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Di-n-octyl phthalate	ND		330	40	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Diphenylamine	ND		330	44	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Famphur	ND		650	34	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Fluoranthene	ND		330	36	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Fluorene	ND		330	18	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Hexachlorobenzene	ND		330	29	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Hexachlorobutadiene	ND		330	9.9	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Hexachlorocyclopentadiene	ND		1600	110	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Hexachloroethane	ND		330	21	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Hexadecane	43	J	330	13	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Indeno[1,2,3-cd]pyrene	ND		330	22	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Isophorone	ND		330	17	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Naphthalene	ND		330	31	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Nitrobenzene	ND		330	22	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
N-Nitrosodimethylamine	ND		330	37	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
N-Nitrosodi-n-propylamine	ND		330	67	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
N-Nitrosodiphenylamine	ND		330	21	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Pentachlorophenol	ND		1600	330	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Phenanthrene	ND		330	17	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Phenol	ND		330	18	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Pyrene	ND		330	12	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1
Pyridine	ND		650	40	ug/Kg	☼	12/06/20 13:55	12/11/20 15:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	81		35 - 120	12/06/20 13:55	12/11/20 15:19	1
2-Fluorobiphenyl	55		46 - 120	12/06/20 13:55	12/11/20 15:19	1
2-Fluorophenol (Surr)	57		43 - 120	12/06/20 13:55	12/11/20 15:19	1
Nitrobenzene-d5 (Surr)	51		46 - 120	12/06/20 13:55	12/11/20 15:19	1
Phenol-d5 (Surr)	55		46 - 120	12/06/20 13:55	12/11/20 15:19	1
Terphenyl-d14 (Surr)	89		46 - 120	12/06/20 13:55	12/11/20 15:19	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-5-10

Lab Sample ID: 280-143461-3

Date Collected: 12/04/20 11:40

Matrix: Solid

Date Received: 12/04/20 14:05

Percent Solids: 93.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		330	24	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
1,2,4,5-Tetrachlorobenzene	ND		330	50	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
1,2,4-Trichlorobenzene	ND		330	28	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
1,2-Dichlorobenzene	ND		330	22	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		330	22	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
1,3-Dichlorobenzene	ND		330	12	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
1,3-Dinitrobenzene	ND		330	72	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
1,4-Dichlorobenzene	ND		330	14	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
1,4-Dioxane	ND		670	67	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
1-Methylnaphthalene	ND		330	11	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
2,2'-oxybis[1-chloropropane]	ND		330	23	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
2,3,4,6-Tetrachlorophenol	ND		1600	140	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
2,4,5-Trichlorophenol	ND		330	10	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
2,4,6-Trichlorophenol	ND		330	10	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
2,4-Dichlorophenol	ND		330	10	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
2,4-Dimethylphenol	ND		330	67	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
2,4-Dinitrophenol	ND		1600	340	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
2,4-Dinitrotoluene	ND		330	67	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
2,6-Dichlorophenol	ND		330	23	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
2,6-Dinitrotoluene	ND		330	28	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
2-Chloronaphthalene	ND		330	10	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
2-Chlorophenol	ND		330	21	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
2-Methylnaphthalene	ND		330	19	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
2-Methylphenol	ND		330	13	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
2-Nitroaniline	ND		1600	51	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
2-Nitrophenol	ND		330	10	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
3 & 4 Methylphenol	ND		330	33	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
3,3'-Dichlorobenzidine	ND		670	91	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
3-Methylphenol	ND		330	33	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
3-Nitroaniline	ND		1600	74	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
4,6-Dinitro-2-methylphenol	ND		1600	330	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
4-Bromophenyl phenyl ether	ND		330	19	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
4-Chloro-3-methylphenol	ND		330	25	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
4-Chloroaniline	ND		330	83	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
4-Chlorophenyl phenyl ether	ND		330	21	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
4-Methylphenol	ND		330	33	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
4-Nitroaniline	ND		1600	73	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
4-Nitrophenol	ND		1600	98	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Acenaphthene	ND		330	10	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Acenaphthylene	ND		330	83	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Acetophenone	ND		330	20	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Aniline	ND		330	130	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Anthracene	22	J	330	17	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Azobenzene	ND		330	22	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Benzaldehyde	ND		330	68	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Benzidine	ND		3300	1000	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Benzo[a]anthracene	52	J	330	20	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Benzo[a]pyrene	46	J	330	20	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Benzo[b]fluoranthene	58	J	330	27	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-5-10

Lab Sample ID: 280-143461-3

Date Collected: 12/04/20 11:40

Matrix: Solid

Date Received: 12/04/20 14:05

Percent Solids: 93.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	40	J	330	16	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Benzo[k]fluoranthene	ND		330	40	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Benzoic acid	ND		1600	330	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Benzyl alcohol	ND		330	10	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Bis(2-chloroethoxy)methane	ND		330	23	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Bis(2-chloroethyl)ether	ND		330	17	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Bis(2-ethylhexyl) phthalate	ND		330	47	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Butyl benzyl phthalate	ND		330	43	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Caprolactam	ND		330	110	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Carbazole	ND		330	36	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Chrysene	55	J	330	27	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Dibenz(a,h)anthracene	ND		330	19	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Dibenzofuran	ND		330	20	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Diethyl phthalate	ND		670	26	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Dimethyl phthalate	ND		330	23	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Di-n-butyl phthalate	ND		330	29	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Di-n-octyl phthalate	ND		330	41	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Diphenylamine	ND		330	45	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Famphur	ND		670	34	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Fluoranthene	120	J	330	36	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Fluorene	ND		330	18	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Hexachlorobenzene	ND		330	29	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Hexachlorobutadiene	ND		330	10	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Hexachlorocyclopentadiene	ND		1600	110	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Hexachloroethane	ND		330	22	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Hexadecane	ND		330	13	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Indeno[1,2,3-cd]pyrene	32	J	330	22	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Isophorone	ND		330	17	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Naphthalene	ND		330	31	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Nitrobenzene	ND		330	22	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
N-Nitrosodimethylamine	ND		330	37	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
N-Nitrosodi-n-propylamine	ND		330	69	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
N-Nitrosodiphenylamine	ND		330	21	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Pentachlorophenol	ND		1600	330	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Phenanthrene	110	J	330	17	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Phenol	ND		330	18	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Pyrene	110	J	330	12	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1
Pyridine	ND		670	40	ug/Kg	☼	12/06/20 13:55	12/11/20 15:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	73		35 - 120	12/06/20 13:55	12/11/20 15:49	1
2-Fluorobiphenyl	64		46 - 120	12/06/20 13:55	12/11/20 15:49	1
2-Fluorophenol (Surr)	61		43 - 120	12/06/20 13:55	12/11/20 15:49	1
Nitrobenzene-d5 (Surr)	56		46 - 120	12/06/20 13:55	12/11/20 15:49	1
Phenol-d5 (Surr)	61		46 - 120	12/06/20 13:55	12/11/20 15:49	1
Terphenyl-d14 (Surr)	87		46 - 120	12/06/20 13:55	12/11/20 15:49	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-10-15

Lab Sample ID: 280-143461-4

Date Collected: 12/04/20 12:00

Matrix: Solid

Date Received: 12/04/20 14:05

Percent Solids: 54.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	350	J	600	44	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
1,2,4,5-Tetrachlorobenzene	ND		600	89	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
1,2,4-Trichlorobenzene	ND		600	51	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
1,2-Dichlorobenzene	ND		600	40	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		600	40	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
1,3-Dichlorobenzene	ND		600	22	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
1,3-Dinitrobenzene	ND		600	130	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
1,4-Dichlorobenzene	420	J	600	25	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
1,4-Dioxane	ND		1200	120	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
1-Methylnaphthalene	840		600	20	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
2,2'-oxybis[1-chloropropane]	ND		600	42	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
2,3,4,6-Tetrachlorophenol	ND		2900	250	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
2,4,5-Trichlorophenol	ND		600	18	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
2,4,6-Trichlorophenol	ND		600	18	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
2,4-Dichlorophenol	ND		600	18	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
2,4-Dimethylphenol	ND		600	120	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
2,4-Dinitrophenol	ND		2900	610	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
2,4-Dinitrotoluene	ND		600	120	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
2,6-Dichlorophenol	ND		600	41	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
2,6-Dinitrotoluene	ND		600	51	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
2-Chloronaphthalene	ND		600	18	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
2-Chlorophenol	ND		600	38	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
2-Methylnaphthalene	1100		600	35	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
2-Methylphenol	ND		600	24	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
2-Nitroaniline	ND		2900	91	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
2-Nitrophenol	ND		600	18	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
3 & 4 Methylphenol	ND		600	60	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
3,3'-Dichlorobenzidine	ND		1200	160	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
3-Methylphenol	ND		600	60	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
3-Nitroaniline	ND		2900	130	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
4,6-Dinitro-2-methylphenol	ND		2900	600	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
4-Bromophenyl phenyl ether	ND		600	35	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
4-Chloro-3-methylphenol	440	J	600	45	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
4-Chloroaniline	ND		600	150	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
4-Chlorophenyl phenyl ether	ND		600	38	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
4-Methylphenol	ND		600	60	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
4-Nitroaniline	ND		2900	130	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
4-Nitrophenol	ND		2900	180	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Acenaphthene	1400		600	19	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Acenaphthylene	ND		600	150	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Acetophenone	ND		600	36	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Aniline	ND		600	240	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Anthracene	2300		600	31	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Azobenzene	ND		600	40	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Benzaldehyde	ND		600	120	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Benzidine	ND		6000	1800	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Benzo[a]anthracene	3000		600	36	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Benzo[a]pyrene	2100		600	36	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Benzo[b]fluoranthene	2700		600	48	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-10-15

Lab Sample ID: 280-143461-4

Date Collected: 12/04/20 12:00

Matrix: Solid

Date Received: 12/04/20 14:05

Percent Solids: 54.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	870		600	29	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Benzo[k]fluoranthene	1100		600	73	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Benzoic acid	ND		2900	600	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Benzyl alcohol	ND		600	18	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Bis(2-chloroethoxy)methane	ND		600	42	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Bis(2-chloroethyl)ether	ND		600	30	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Butyl benzyl phthalate	ND		600	78	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Caprolactam	ND		600	190	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Carbazole	1200		600	65	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Chrysene	3200		600	49	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Dibenz(a,h)anthracene	280	J	600	35	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Dibenzofuran	860		600	36	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Diethyl phthalate	ND		1200	47	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Dimethyl phthalate	ND		600	42	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Di-n-butyl phthalate	100	J	600	53	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Di-n-octyl phthalate	ND		600	74	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Diphenylamine	1200		600	80	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Famphur	ND		1200	62	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Fluoranthene	7400		600	65	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Fluorene	1900		600	33	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Hexachlorobenzene	ND		600	53	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Hexachlorobutadiene	ND		600	18	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Hexachlorocyclopentadiene	ND		2900	200	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Hexachloroethane	ND		600	39	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Hexadecane	440	J	600	24	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Indeno[1,2,3-cd]pyrene	810		600	40	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Isophorone	ND		600	31	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Naphthalene	1500		600	56	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Nitrobenzene	ND		600	40	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
N-Nitrosodimethylamine	ND		600	67	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
N-Nitrosodi-n-propylamine	ND		600	120	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
N-Nitrosodiphenylamine	1500		600	38	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Pentachlorophenol	ND		2900	600	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Phenanthrene	9100		600	31	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Phenol	ND		600	33	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Pyrene	8400		600	22	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1
Pyridine	ND		1200	73	ug/Kg	☼	12/06/20 13:55	12/11/20 16:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	74		35 - 120	12/06/20 13:55	12/11/20 16:17	1
2-Fluorobiphenyl	68		46 - 120	12/06/20 13:55	12/11/20 16:17	1
2-Fluorophenol (Surr)	70		43 - 120	12/06/20 13:55	12/11/20 16:17	1
Nitrobenzene-d5 (Surr)	67		46 - 120	12/06/20 13:55	12/11/20 16:17	1
Phenol-d5 (Surr)	68		46 - 120	12/06/20 13:55	12/11/20 16:17	1
Terphenyl-d14 (Surr)	84		46 - 120	12/06/20 13:55	12/11/20 16:17	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-10-15

Lab Sample ID: 280-143461-4

Date Collected: 12/04/20 12:00

Matrix: Solid

Date Received: 12/04/20 14:05

Percent Solids: 54.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	4500	J	6000	840	ug/Kg	☼	12/06/20 13:55	12/14/20 03:39	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	79	D	35 - 120				12/06/20 13:55	12/14/20 03:39	10
2-Fluorobiphenyl	74	D	46 - 120				12/06/20 13:55	12/14/20 03:39	10
2-Fluorophenol (Surr)	58	D	43 - 120				12/06/20 13:55	12/14/20 03:39	10
Nitrobenzene-d5 (Surr)	63	D	46 - 120				12/06/20 13:55	12/14/20 03:39	10
Phenol-d5 (Surr)	65	D	46 - 120				12/06/20 13:55	12/14/20 03:39	10
Terphenyl-d14 (Surr)	83	D	46 - 120				12/06/20 13:55	12/14/20 03:39	10

Consultant Work Product - Jacobs Engineering Group, Inc.
 -Not CDOT Approved-

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Client Sample ID: CDOT I270 ENV 12_2020-SB-36-25-30

Date Collected: 12/03/20 10:40

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-1

Matrix: Solid

Percent Solids: 92.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		2.4	0.91	mg/Kg	☆	12/10/20 23:48	12/11/20 09:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	89		77 - 123				12/10/20 23:48	12/11/20 09:13	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-5-10

Date Collected: 12/04/20 11:40

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-3

Matrix: Solid

Percent Solids: 93.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		2.2	0.84	mg/Kg	☆	12/10/20 23:48	12/11/20 10:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	88		77 - 123				12/10/20 23:48	12/11/20 10:02	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-10-15

Date Collected: 12/04/20 12:00

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-4

Matrix: Solid

Percent Solids: 54.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	130		6.4	2.4	mg/Kg	☆	12/10/20 23:48	12/11/20 10:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	122		77 - 123				12/10/20 23:48	12/11/20 10:26	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-GW

Date Collected: 12/04/20 12:50

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	30		25	10	ug/L			12/10/20 05:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	83		82 - 110					12/10/20 05:47	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-TB-03

Date Collected: 12/04/20 08:00

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		25	10	ug/L			12/10/20 11:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	87		82 - 110					12/10/20 11:12	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-TB002

Date Collected: 12/03/20 08:00

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-7

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		2.0	0.76	mg/Kg		12/10/20 23:48	12/11/20 09:38	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics) (Continued)

<u>Surrogate</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
a,a,a-Trifluorotoluene	90		77 - 123	12/10/20 23:48	12/11/20 09:38	1

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Client Sample ID: CDOT I270 ENV 12_2020-SB-36-25-30

Date Collected: 12/03/20 10:40

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-1

Matrix: Solid

Percent Solids: 92.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	36		8.6	3.9	mg/Kg	☼	12/09/20 10:16	12/16/20 13:31	1
Motor Oil (C20-C38)	31		26	8.4	mg/Kg	☼	12/09/20 10:16	12/16/20 13:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	62		49 - 115				12/09/20 10:16	12/16/20 13:31	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-5-10

Date Collected: 12/04/20 11:40

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-3

Matrix: Solid

Percent Solids: 93.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	33		8.4	3.8	mg/Kg	☼	12/09/20 10:16	12/16/20 15:26	1
Motor Oil (C20-C38)	68		25	8.2	mg/Kg	☼	12/09/20 10:16	12/16/20 15:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	71		49 - 115				12/09/20 10:16	12/16/20 15:26	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-10-15

Date Collected: 12/04/20 12:00

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-4

Matrix: Solid

Percent Solids: 54.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	3800	D	28	13	mg/Kg	☼	12/09/20 10:16	12/16/20 21:57	2
Motor Oil (C20-C38)	5100	D	84	27	mg/Kg	☼	12/09/20 10:16	12/16/20 21:57	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	85	D	49 - 115				12/09/20 10:16	12/16/20 21:57	2

Consultant Work Product - Jacobs Engineering Group, Inc.
-Not CDOT Approved-

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: CDOT I270 ENV 12_2020-SB-36-25-30

Date Collected: 12/03/20 10:40

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-1

Matrix: Solid

Percent Solids: 92.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.3		0.61	0.052	mg/Kg	☼	12/11/20 07:42	12/15/20 18:33	1
Silver	31	J	92	7.2	ug/Kg	☼	12/11/20 16:30	12/14/20 21:21	1
Barium	110		0.41	0.072	mg/Kg	☼	12/11/20 07:42	12/15/20 18:33	1
Cadmium	0.13		0.10	0.0096	mg/Kg	☼	12/11/20 07:42	12/15/20 18:33	1
Chromium	8.0		0.20	0.077	mg/Kg	☼	12/11/20 07:42	12/15/20 18:33	1
Lead	7.6		0.15	0.019	mg/Kg	☼	12/11/20 07:42	12/15/20 18:33	1
Selenium	0.16	J	0.51	0.14	mg/Kg	☼	12/11/20 07:42	12/15/20 18:33	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-5-10

Date Collected: 12/04/20 11:40

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-3

Matrix: Solid

Percent Solids: 93.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.2		0.56	0.047	mg/Kg	☼	12/11/20 07:42	12/15/20 18:50	1
Silver	46	J	96	7.5	ug/Kg	☼	12/11/20 16:30	12/14/20 21:39	1
Barium	77		0.37	0.065	mg/Kg	☼	12/11/20 07:42	12/15/20 18:50	1
Cadmium	0.32		0.093	0.0087	mg/Kg	☼	12/11/20 07:42	12/15/20 18:50	1
Chromium	8.2		0.19	0.071	mg/Kg	☼	12/11/20 07:42	12/15/20 18:50	1
Lead	23		0.14	0.017	mg/Kg	☼	12/11/20 07:42	12/15/20 18:50	1
Selenium	0.13	J	0.46	0.12	mg/Kg	☼	12/11/20 07:42	12/15/20 18:50	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-10-15

Date Collected: 12/04/20 12:00

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-4

Matrix: Solid

Percent Solids: 54.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	13		0.95	0.080	mg/Kg	☼	12/11/20 07:42	12/15/20 18:54	1
Silver	2700		150	12	ug/Kg	☼	12/11/20 16:30	12/14/20 21:43	1
Barium	710		6.4	1.1	mg/Kg	☼	12/11/20 07:42	12/16/20 16:46	10
Cadmium	3.8		0.16	0.015	mg/Kg	☼	12/11/20 07:42	12/15/20 18:54	1
Chromium	52		0.32	0.12	mg/Kg	☼	12/11/20 07:42	12/15/20 18:54	1
Lead	1400		2.4	0.29	mg/Kg	☼	12/11/20 07:42	12/16/20 16:46	10
Selenium	0.29	J	0.79	0.21	mg/Kg	☼	12/11/20 07:42	12/15/20 18:54	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-GW

Date Collected: 12/04/20 12:50

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	110		5.0	0.33	ug/L		12/09/20 15:45	12/15/20 17:01	1
Barium	11000		50	15	ug/L		12/09/20 15:45	12/16/20 16:43	50
Cadmium	6.0		1.0	0.27	ug/L		12/09/20 15:45	12/15/20 17:01	1
Chromium	270		2.0	0.50	ug/L		12/09/20 15:45	12/15/20 17:01	1
Lead	300		1.0	0.18	ug/L		12/09/20 15:45	12/15/20 17:01	1
Selenium	5.1	B	5.0	0.37	ug/L		12/09/20 15:45	12/15/20 17:01	1
Silver	2.2	J	5.0	0.033	ug/L		12/09/20 15:45	12/15/20 17:01	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 6020A - Metals (ICP/MS) - Dissolved

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-GW

Date Collected: 12/04/20 12:50

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic, Dissolved	1.9	J	5.0	0.33	ug/L		12/10/20 08:14	12/11/20 23:49	1
Barium, Dissolved	410	B	1.0	0.29	ug/L		12/10/20 08:14	12/11/20 23:49	1
Cadmium, Dissolved	ND	^	1.0	0.27	ug/L		12/10/20 08:14	12/11/20 23:49	1
Chromium, Dissolved	0.74	J B	2.0	0.50	ug/L		12/10/20 08:14	12/11/20 23:49	1
Lead, Dissolved	ND		1.0	0.18	ug/L		12/10/20 08:14	12/11/20 23:49	1
Selenium, Dissolved	0.45	J	5.0	0.37	ug/L		12/10/20 08:14	12/11/20 23:49	1
Silver, Dissolved	ND		5.0	0.033	ug/L		12/10/20 08:14	12/11/20 23:49	1

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 7470A - Mercury (CVAA)

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-GW

Date Collected: 12/04/20 12:50

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.64	J	1.0	0.14	ug/L		12/08/20 13:30	12/08/20 17:59	1

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 7470A - Mercury (CVAA) - Dissolved

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-GW

Date Collected: 12/04/20 12:50

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury, Dissolved	ND		0.20	0.027	ug/L		12/09/20 12:45	12/09/20 16:06	1

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 7471B - Mercury (CVAA)

Client Sample ID: CDOT I270 ENV 12_2020-SB-36-25-30

Date Collected: 12/03/20 10:40

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-1

Matrix: Solid

Percent Solids: 92.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		20	6.7	ug/Kg	☼	12/10/20 15:30	12/10/20 18:43	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-5-10

Date Collected: 12/04/20 11:40

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-3

Matrix: Solid

Percent Solids: 93.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		19	6.0	ug/Kg	☼	12/10/20 15:30	12/10/20 18:45	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-10-15

Date Collected: 12/04/20 12:00

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-4

Matrix: Solid

Percent Solids: 54.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	1100		33	11	ug/Kg	☼	12/10/20 15:30	12/10/20 18:48	1

Consultant Work Product - Jacobs Engineering Group, Inc.
 -Not CDOT Approved-

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

General Chemistry

Client Sample ID: CDOT I270 ENV 12_2020-SB-36-25-30

Date Collected: 12/03/20 10:40

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-1

Matrix: Solid

Percent Solids: 92.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	7.8		0.1	0.1	%			12/09/20 13:46	1
Percent Solids	92.2		0.1	0.1	%			12/09/20 13:46	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-5-10

Date Collected: 12/04/20 11:40

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-3

Matrix: Solid

Percent Solids: 93.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	7.0		0.1	0.1	%			12/09/20 13:46	1
Percent Solids	93.0		0.1	0.1	%			12/09/20 13:46	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-10-15

Date Collected: 12/04/20 12:00

Date Received: 12/04/20 14:05

Lab Sample ID: 280-143461-4

Matrix: Solid

Percent Solids: 54.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	45.2		0.1	0.1	%			12/09/20 13:46	1
Percent Solids	54.8		0.1	0.1	%			12/09/20 13:46	1

Consultant Work Product - Jacobs Engineering Group, Inc.
 -Not CDOT Approved-

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Surrogate Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (58-140)	BFB (76-127)	DBFM (75-121)	TOL (80-126)
280-143461-1	CDOT I270 ENV 12_2020-SB-3	101	103	92	102
280-143461-3	CDOT I270 ENV 12_2020-SB-35-5-10	104	102	96	102
280-143461-4	CDOT I270 ENV 12_2020-SB-35-10-15	108	124	95	114
280-143461-4 - DL	CDOT I270 ENV 12_2020-SB-35-10-15	99	100	96	98
280-143461-7	CDOT I270 ENV 12_2020-SB-TB002	102	102	94	103
280-143461-7 - DL	CDOT I270 ENV 12_2020-SB-TB002	103	100	98	99
LCS 280-520106/1-A	Lab Control Sample	107	105	90	102
LCS 280-520106/1-A	Lab Control Sample	103	100	102	99
LCSD 280-520106/2-A	Lab Control Sample Dup	99	104	92	102
LCSD 280-520106/2-A	Lab Control Sample Dup	100	102	101	99
MB 280-520106/3-A	Method Blank	101	102	90	104
MB 280-520106/4-A	Method Blank	100	102	94	101
MB 280-520106/4-A	Method Blank	101	102	100	98

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (70-127)	BFB (78-120)	DBFM (77-120)	TOL (80-125)
280-143461-5	CDOT I270 ENV 12_2020-SB-3	90	102	99	101
280-143461-6	CDOT I270 ENV 12_2020-SB-TB-03	82	104	97	102
LCS 280-520319/4	Lab Control Sample	84	102	99	100
LCSD 280-520319/5	Lab Control Sample Dup	84	102	99	101
MB 280-520319/9	Method Blank	92	104	100	100

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (35-120)	FBP (46-120)	2FP (43-120)	NBZ (46-120)	PHL (46-120)	TPHL (46-120)
280-143461-1	CDOT I270 ENV 12_2020-SB-3	81	55	57	51	55	89
280-143461-3	CDOT I270 ENV 12_2020-SB-35-5-10	73	64	61	56	61	87

Eurofins TestAmerica, Denver

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (35-120)	FBP (46-120)	2FP (43-120)	NBZ (46-120)	PHL (46-120)	TPHL (46-120)
280-143461-4	CDOT I270 ENV 12_2020-SB-3	74	68	70	67	68	84
280-143461-4 - DL	CDOT I270 ENV 12_2020-SB-35-10-15	79 D	74 D	58 D	63 D	65 D	83 D
LCS 280-519377/2-A	Lab Control Sample	83	69	73	65	69	95
MB 280-519377/1-A	Method Blank	73	64	68	63	64	91

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	TFT1
		(77-123)
280-143461-1	CDOT I270 ENV 12_2020-SB-3	89
280-143461-3	CDOT I270 ENV 12_2020-SB-35-5-10	88
280-143461-4	CDOT I270 ENV 12_2020-SB-35-10-15	122
280-143461-7	CDOT I270 ENV 12_2020-SB-TB002	90
LCS 280-520046/1-A	Lab Control Sample	90
LCSD 280-520046/2-A	Lab Control Sample Dup	87
MB 280-520046/3-A	Method Blank	89

Surrogate Legend

TFT = a,a,a-Trifluorotoluene

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	TFT1
		(82-110)
280-143461-5	CDOT I270 ENV 12_2020-SB-3	83
280-143461-6	CDOT I270 ENV 12_2020-SB-TB-03	87
LCS 280-519873/3	Lab Control Sample	84
LCSD 280-519873/4	Lab Control Sample Dup	82
MB 280-519873/5	Method Blank	87

Surrogate Legend

TFT = a,a,a-Trifluorotoluene

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTPH1 (49-115)
280-143461-1	CDOT I270 ENV 12_2020-SB-36-25-30	62
280-143461-1 MS	CDOT I270 ENV 12_2020-SB-36-25-30	72
280-143461-1 MSD	CDOT I270 ENV 12_2020-SB-36-25-30	57
280-143461-3	CDOT I270 ENV 12_2020-SB-35-5-10	71
280-143461-4	CDOT I270 ENV 12_2020-SB-35-10-15	85 D
LCS 280-519742/2-A	Lab Control Sample	77
LCS 280-519742/3-A	Lab Control Sample	79
MB 280-519742/1-A	Method Blank	57

Surrogate Legend

OTPH = o-Terphenyl (Surr)

Consultant Work Product - Jacobs Engineering
 -Not CDOT Approved-

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-520106/3-A
Matrix: Solid
Analysis Batch: 520250

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 520106

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1-Trichloroethane	ND		5.0	2.0	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.29	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
1,1,2-Trichloroethane	ND		5.0	0.88	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
1,1,2-Trichlorotrifluoroethane	ND		20	1.7	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
1,1-Dichloroethane	ND		5.0	0.21	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
1,1-Dichloroethene	ND		5.0	0.59	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
1,2,3-Trichlorobenzene	ND		5.0	0.81	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
1,2,4-Trichlorobenzene	ND		5.0	0.73	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
1,2-Dibromo-3-Chloropropane	ND		10	3.7	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
1,2-Dibromoethane	ND		5.0	0.52	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
1,2-Dichlorobenzene	ND		5.0	1.9	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
1,2-Dichloroethane	ND		5.0	0.70	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
1,2-Dichloropropane	ND		5.0	0.55	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
1,3-Dichlorobenzene	ND		5.0	0.48	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
1,4-Dichlorobenzene	ND		5.0	0.25	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
1,4-Dioxane	ND		500	56	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
2-Butanone (MEK)	ND		20	3.9	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
2-Hexanone	ND		20	4.9	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.4	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
Acetone	ND		72	36	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
Benzene	ND		5.0	0.15	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
Bromoform	ND		5.1	2.6	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
Bromomethane	ND		10	1.4	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
Carbon disulfide	ND		5.0	1.7	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
Carbon tetrachloride	ND		5.0	2.0	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
Chlorobenzene	ND		5.0	2.1	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
Chlorobromomethane	ND		5.0	2.5	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
Chlorodibromomethane	ND		5.0	2.3	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
Chloroethane	ND		10	2.0	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
Chloroform	ND		10	0.29	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
Chloromethane	ND		10	0.77	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
cis-1,2-Dichloroethene	ND		2.5	0.20	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
cis-1,3-Dichloropropene	ND		5.0	0.10	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
Cyclohexane	ND		5.0	1.8	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
Dichlorobromomethane	ND		5.0	2.1	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
Dichlorodifluoromethane	ND		10	2.7	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
Ethylbenzene	ND		5.0	0.31	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
Isopropylbenzene	ND		5.0	2.4	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
Methyl acetate	ND		10	2.8	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
Methyl tert-butyl ether	ND		20	2.1	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
Methylcyclohexane	ND		5.0	0.42	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
Methylene Chloride	ND		5.0	1.6	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
m-Xylene & p-Xylene	ND		2.5	1.0	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
o-Xylene	ND		2.5	0.27	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
Styrene	ND		5.0	0.28	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
Tetrachloroethene	ND		5.0	1.9	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
Toluene	ND		5.0	0.23	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
trans-1,2-Dichloroethene	ND		2.5	0.39	ug/Kg		12/11/20 09:00	12/11/20 10:33	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-520106/3-A
Matrix: Solid
Analysis Batch: 520250

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 520106

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		5.0	0.083	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
Trichloroethene	ND		5.0	1.9	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
Trichlorofluoromethane	ND		10	3.2	ug/Kg		12/11/20 09:00	12/11/20 10:33	1
Vinyl chloride	ND		5.0	1.3	ug/Kg		12/11/20 09:00	12/11/20 10:33	1

Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		58 - 140				12/11/20 09:00	12/11/20 10:33	1
4-Bromofluorobenzene (Surr)	102		76 - 127				12/11/20 09:00	12/11/20 10:33	1
Dibromofluoromethane (Surr)	90		75 - 121				12/11/20 09:00	12/11/20 10:33	1
Toluene-d8 (Surr)	104		80 - 126				12/11/20 09:00	12/11/20 10:33	1

Lab Sample ID: MB 280-520106/4-A
Matrix: Solid
Analysis Batch: 520250

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 520106

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		250	99	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
1,1,1,2-Tetrachloroethane	ND		250	14	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
1,1,2-Trichloroethane	ND		250	44	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
1,1,2-Trichlorotrifluoroethane	ND		1000	83	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
1,1-Dichloroethane	ND		250	11	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
1,1-Dichloroethene	ND		250	30	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
1,2,3-Trichlorobenzene	ND		250	41	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
1,2,4-Trichlorobenzene	ND		250	37	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
1,2-Dibromo-3-Chloropropane	ND		500	180	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
1,2-Dibromoethane	ND		250	26	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
1,2-Dichlorobenzene	ND		250	94	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
1,2-Dichloroethane	ND		250	35	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
1,2-Dichloropropane	ND		250	28	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
1,3-Dichlorobenzene	ND		250	24	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
1,4-Dichlorobenzene	ND		250	12	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
1,4-Dioxane	ND		25000	2800	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
2-Butanone (MEK)	ND		1000	190	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
2-Hexanone	ND		1000	240	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
4-Methyl-2-pentanone (MIBK)	ND		1000	220	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
Acetone	ND		3600	1800	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
Benzene	ND		250	7.6	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
Bromoform	ND		260	130	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
Bromomethane	ND		500	68	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
Carbon disulfide	ND		250	83	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
Carbon tetrachloride	ND		250	100	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
Chlorobenzene	ND		250	100	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
Chlorobromomethane	ND		250	120	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
Chlorodibromomethane	ND		250	110	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
Chloroethane	ND		500	100	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
Chloroform	ND		500	15	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
Chloromethane	ND		500	39	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
cis-1,2-Dichloroethene	ND		130	10	ug/Kg		12/11/20 09:00	12/11/20 10:55	50

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-520106/4-A
Matrix: Solid
Analysis Batch: 520250

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 520106

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		250	5.0	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
Cyclohexane	ND		250	88	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
Dichlorobromomethane	ND		250	110	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
Dichlorodifluoromethane	ND		500	140	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
Ethylbenzene	ND		250	15	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
Isopropylbenzene	ND		250	120	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
Methyl acetate	ND		500	140	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
Methyl tert-butyl ether	ND		1000	110	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
Methylcyclohexane	ND		250	21	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
Methylene Chloride	ND		250	80	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
m-Xylene & p-Xylene	ND		130	52	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
o-Xylene	ND		130	13	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
Styrene	ND		250	14	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
Tetrachloroethene	ND		250	96	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
Toluene	ND		250	11	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
trans-1,2-Dichloroethene	ND		130	20	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
trans-1,3-Dichloropropene	ND		250	4.2	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
Trichloroethene	ND		250	96	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
Trichlorofluoromethane	ND		500	160	ug/Kg		12/11/20 09:00	12/11/20 10:55	50
Vinyl chloride	ND		250	67	ug/Kg		12/11/20 09:00	12/11/20 10:55	50

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		58 - 140	12/11/20 09:00	12/11/20 10:55	50
4-Bromofluorobenzene (Surr)	102		76 - 127	12/11/20 09:00	12/11/20 10:55	50
Dibromofluoromethane (Surr)	94		75 - 121	12/11/20 09:00	12/11/20 10:55	50
Toluene-d8 (Surr)	101		80 - 126	12/11/20 09:00	12/11/20 10:55	50

Lab Sample ID: MB 280-520106/4-A
Matrix: Solid
Analysis Batch: 520536

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 520106

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		130	52	ug/Kg		12/11/20 09:00	12/14/20 12:11	50

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		58 - 140	12/11/20 09:00	12/14/20 12:11	50
4-Bromofluorobenzene (Surr)	102		76 - 127	12/11/20 09:00	12/14/20 12:11	50
Dibromofluoromethane (Surr)	100		75 - 121	12/11/20 09:00	12/14/20 12:11	50
Toluene-d8 (Surr)	98		80 - 126	12/11/20 09:00	12/14/20 12:11	50

Lab Sample ID: LCS 280-520106/1-A
Matrix: Solid
Analysis Batch: 520250

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 520106

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	50.0	43.0		ug/Kg		86	70 - 135
1,1,1,2-Tetrachloroethane	50.0	52.1		ug/Kg		104	65 - 135
1,1,2-Trichloroethane	50.0	44.9		ug/Kg		90	78 - 135

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-520106/1-A
Matrix: Solid
Analysis Batch: 520250

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 520106

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichlorotrifluoroethane	50.0	40.3		ug/Kg		81	50 - 150
1,1-Dichloroethane	50.0	42.7		ug/Kg		85	70 - 135
1,1-Dichloroethene	50.0	43.5		ug/Kg		87	79 - 135
1,2,3-Trichlorobenzene	50.0	51.7		ug/Kg		103	62 - 135
1,2,4-Trichlorobenzene	50.0	51.3		ug/Kg		103	65 - 135
1,2-Dibromo-3-Chloropropane	50.0	49.2		ug/Kg		98	66 - 150
1,2-Dibromoethane	50.0	47.6		ug/Kg		95	76 - 135
1,2-Dichlorobenzene	50.0	42.8		ug/Kg		86	73 - 135
1,2-Dichloroethane	50.0	44.5		ug/Kg		89	69 - 135
1,2-Dichloropropane	50.0	44.0		ug/Kg		88	72 - 121
1,3-Dichlorobenzene	50.0	44.8		ug/Kg		90	69 - 135
1,4-Dichlorobenzene	50.0	42.9		ug/Kg		86	73 - 135
1,4-Dioxane	1000	1420 *		ug/Kg		142	52 - 135
2-Butanone (MEK)	200	165		ug/Kg		82	45 - 177
2-Hexanone	200	191		ug/Kg		95	67 - 150
4-Methyl-2-pentanone (MIBK)	200	187		ug/Kg		94	69 - 150
Acetone	200	194		ug/Kg		97	65 - 150
Benzene	50.0	45.9		ug/Kg		92	75 - 135
Bromoform	50.0	49.4		ug/Kg		99	77 - 135
Bromomethane	50.0	48.3		ug/Kg		97	52 - 135
Carbon disulfide	50.0	46.4		ug/Kg		93	45 - 150
Carbon tetrachloride	50.0	42.4		ug/Kg		85	69 - 138
Chlorobenzene	50.0	45.4		ug/Kg		91	78 - 135
Chlorobromomethane	50.0	39.2		ug/Kg		78	74 - 135
Chlorodibromomethane	50.0	43.1		ug/Kg		86	77 - 135
Chloroethane	50.0	53.5		ug/Kg		107	51 - 145
Chloroform	50.0	45.5		ug/Kg		91	73 - 123
Chloromethane	50.0	31.0		ug/Kg		62	41 - 138
cis-1,2-Dichloroethene	50.0	42.2		ug/Kg		84	76 - 135
cis-1,3-Dichloropropene	50.0	54.1		ug/Kg		108	71 - 135
Cyclohexane	50.0	41.1		ug/Kg		82	50 - 150
Dichlorobromomethane	50.0	49.2		ug/Kg		98	73 - 135
Dichlorodifluoromethane	50.0	19.9		ug/Kg		40	32 - 152
Ethylbenzene	50.0	47.4		ug/Kg		95	73 - 125
Isopropylbenzene	50.0	48.2		ug/Kg		96	74 - 137
Methyl acetate	100	84.3		ug/Kg		84	50 - 150
Methyl tert-butyl ether	50.0	67.0		ug/Kg		134	71 - 141
Methylcyclohexane	50.0	41.2		ug/Kg		82	50 - 150
Methylene Chloride	50.0	45.7		ug/Kg		91	76 - 136
m-Xylene & p-Xylene	50.0	46.9		ug/Kg		94	77 - 135
o-Xylene	50.0	47.5		ug/Kg		95	75 - 135
Styrene	50.0	51.1		ug/Kg		102	76 - 135
Tetrachloroethene	50.0	45.2		ug/Kg		90	76 - 135
Toluene	50.0	45.5		ug/Kg		91	77 - 122
trans-1,2-Dichloroethene	50.0	43.8		ug/Kg		88	77 - 135
trans-1,3-Dichloropropene	50.0	50.1		ug/Kg		100	71 - 135
Trichloroethene	50.0	47.2		ug/Kg		94	77 - 135
Trichlorofluoromethane	50.0	58.1		ug/Kg		116	48 - 150
Vinyl chloride	50.0	48.1		ug/Kg		96	43 - 145

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	107		58 - 140
4-Bromofluorobenzene (Surr)	105		76 - 127
Dibromofluoromethane (Surr)	90		75 - 121
Toluene-d8 (Surr)	102		80 - 126

Lab Sample ID: LCS 280-520106/1-A
Matrix: Solid
Analysis Batch: 520536

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 520106
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
m-Xylene & p-Xylene	50.0	45.8		ug/Kg		92	77 - 135

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	103		58 - 140
4-Bromofluorobenzene (Surr)	100		76 - 127
Dibromofluoromethane (Surr)	102		75 - 121
Toluene-d8 (Surr)	99		80 - 126

Lab Sample ID: LCSD 280-520106/2-A
Matrix: Solid
Analysis Batch: 520250

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 520106
%Rec. RPD

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1,1-Trichloroethane	50.0	45.9		ug/Kg		92	70 - 135	7	20
1,1,1,2-Tetrachloroethane	50.0	53.9		ug/Kg		108	65 - 135	3	21
1,1,2-Trichloroethane	50.0	47.7		ug/Kg		95	78 - 135	6	20
1,1,2-Trichlorotrifluoroethane	50.0	42.6		ug/Kg		85	50 - 150	6	20
1,1-Dichloroethane	50.0	45.8		ug/Kg		92	70 - 135	7	20
1,1-Dichloroethene	50.0	46.3		ug/Kg		93	79 - 135	6	20
1,2,3-Trichlorobenzene	50.0	53.4		ug/Kg		107	62 - 135	3	31
1,2,4-Trichlorobenzene	50.0	54.1		ug/Kg		108	65 - 135	5	26
1,2-Dibromo-3-Chloropropane	50.0	51.9		ug/Kg		104	66 - 150	5	28
1,2-Dibromoethane	50.0	50.2		ug/Kg		100	76 - 135	5	20
1,2-Dichlorobenzene	50.0	45.0		ug/Kg		90	73 - 135	5	20
1,2-Dichloroethane	50.0	46.8		ug/Kg		94	69 - 135	5	20
1,2-Dichloropropane	50.0	47.6		ug/Kg		95	72 - 121	8	20
1,3-Dichlorobenzene	50.0	46.0		ug/Kg		92	69 - 135	2	20
1,4-Dichlorobenzene	50.0	45.4		ug/Kg		91	73 - 135	6	22
1,4-Dioxane	1000	1210		ug/Kg		121	52 - 135	16	30
2-Butanone (MEK)	200	176		ug/Kg		88	45 - 177	7	32
2-Hexanone	200	202		ug/Kg		101	67 - 150	6	29
4-Methyl-2-pentanone (MIBK)	200	204		ug/Kg		102	69 - 150	9	25
Acetone	200	207		ug/Kg		104	65 - 150	7	28
Benzene	50.0	49.0		ug/Kg		98	75 - 135	7	20
Bromoform	50.0	52.1		ug/Kg		104	77 - 135	5	20
Bromomethane	50.0	50.2		ug/Kg		100	52 - 135	4	22
Carbon disulfide	50.0	48.2		ug/Kg		96	45 - 150	4	24
Carbon tetrachloride	50.0	45.0		ug/Kg		90	69 - 138	6	20
Chlorobenzene	50.0	48.1		ug/Kg		96	78 - 135	6	20
Chlorobromomethane	50.0	42.3		ug/Kg		85	74 - 135	8	21
Chlorodibromomethane	50.0	46.5		ug/Kg		93	77 - 135	8	20

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-520106/2-A
Matrix: Solid
Analysis Batch: 520250

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 520106

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloroethane	50.0	56.1		ug/Kg		112	51 - 145	5	22
Chloroform	50.0	48.9		ug/Kg		98	73 - 123	7	20
Chloromethane	50.0	31.6		ug/Kg		63	41 - 138	2	25
cis-1,2-Dichloroethene	50.0	44.0		ug/Kg		88	76 - 135	4	20
cis-1,3-Dichloropropene	50.0	57.0		ug/Kg		114	71 - 135	5	20
Cyclohexane	50.0	44.0		ug/Kg		88	50 - 150	7	30
Dichlorobromomethane	50.0	53.1		ug/Kg		106	73 - 135	8	20
Dichlorodifluoromethane	50.0	20.7		ug/Kg		41	32 - 152	4	28
Ethylbenzene	50.0	50.3		ug/Kg		101	73 - 125	6	20
Isopropylbenzene	50.0	50.4		ug/Kg		101	74 - 137	4	20
Methyl acetate	100	88.9		ug/Kg		89	50 - 150	5	30
Methyl tert-butyl ether	50.0	71.2	*	ug/Kg		142	71 - 141	6	20
Methylcyclohexane	50.0	44.1		ug/Kg		88	50 - 150	7	30
Methylene Chloride	50.0	49.5		ug/Kg		99	76 - 136	8	21
m-Xylene & p-Xylene	50.0	50.4		ug/Kg		101	77 - 135	7	20
o-Xylene	50.0	50.4		ug/Kg		101	75 - 135	6	20
Styrene	50.0	54.4		ug/Kg		109	76 - 135	6	20
Tetrachloroethene	50.0	47.6		ug/Kg		95	76 - 135	5	20
Toluene	50.0	48.1		ug/Kg		96	77 - 122	5	20
trans-1,2-Dichloroethene	50.0	45.8		ug/Kg		92	77 - 135	4	20
trans-1,3-Dichloropropene	50.0	54.5		ug/Kg		109	71 - 135	8	20
Trichloroethene	50.0	49.7		ug/Kg		99	77 - 135	5	20
Trichlorofluoromethane	50.0	57.8		ug/Kg		116	48 - 150	1	33
Vinyl chloride	50.0	49.7		ug/Kg		99	43 - 145	3	24

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	99		58 - 140
4-Bromofluorobenzene (Surr)	104		76 - 127
Dibromofluoromethane (Surr)	92		75 - 121
Toluene-d8 (Surr)	102		80 - 126

Lab Sample ID: LCSD 280-520106/2-A
Matrix: Solid
Analysis Batch: 520536

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 520106

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
m-Xylene & p-Xylene	50.0	49.5		ug/Kg		99	77 - 135	8	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	100		58 - 140
4-Bromofluorobenzene (Surr)	102		76 - 127
Dibromofluoromethane (Surr)	101		75 - 121
Toluene-d8 (Surr)	99		80 - 126

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-520319/9
Matrix: Water
Analysis Batch: 520319

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			12/14/20 11:55	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			12/14/20 11:55	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			12/14/20 11:55	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			12/14/20 11:55	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			12/14/20 11:55	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			12/14/20 11:55	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			12/14/20 11:55	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			12/14/20 11:55	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			12/14/20 11:55	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			12/14/20 11:55	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			12/14/20 11:55	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/14/20 11:55	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			12/14/20 11:55	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/14/20 11:55	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			12/14/20 11:55	1
1,4-Dioxane	ND		200	19	ug/L			12/14/20 11:55	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			12/14/20 11:55	1
2-Hexanone	ND		5.0	1.7	ug/L			12/14/20 11:55	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			12/14/20 11:55	1
Acetone	ND		10	1.9	ug/L			12/14/20 11:55	1
Benzene	ND		1.0	0.16	ug/L			12/14/20 11:55	1
Bromoform	ND		1.0	0.46	ug/L			12/14/20 11:55	1
Bromomethane	ND		2.0	0.21	ug/L			12/14/20 11:55	1
Carbon disulfide	ND		2.0	0.17	ug/L			12/14/20 11:55	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			12/14/20 11:55	1
Chlorobenzene	ND		1.0	0.17	ug/L			12/14/20 11:55	1
Chlorobromomethane	ND		1.0	0.10	ug/L			12/14/20 11:55	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			12/14/20 11:55	1
Chloroethane	ND		2.0	0.41	ug/L			12/14/20 11:55	1
Chloroform	ND		1.0	0.16	ug/L			12/14/20 11:55	1
Chloromethane	ND		2.0	0.30	ug/L			12/14/20 11:55	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			12/14/20 11:55	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			12/14/20 11:55	1
Cyclohexane	ND		2.0	0.28	ug/L			12/14/20 11:55	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			12/14/20 11:55	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			12/14/20 11:55	1
Ethylbenzene	ND		1.0	0.16	ug/L			12/14/20 11:55	1
Isopropylbenzene	ND		1.0	0.19	ug/L			12/14/20 11:55	1
Methyl acetate	ND		5.0	1.6	ug/L			12/14/20 11:55	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			12/14/20 11:55	1
Methylcyclohexane	ND		1.0	0.10	ug/L			12/14/20 11:55	1
Methylene Chloride	ND		2.0	0.94	ug/L			12/14/20 11:55	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			12/14/20 11:55	1
o-Xylene	ND		1.0	0.19	ug/L			12/14/20 11:55	1
Styrene	ND		1.0	0.36	ug/L			12/14/20 11:55	1
Tetrachloroethene	ND		1.0	0.20	ug/L			12/14/20 11:55	1
Toluene	ND		1.0	0.17	ug/L			12/14/20 11:55	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			12/14/20 11:55	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-520319/9
Matrix: Water
Analysis Batch: 520319

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			12/14/20 11:55	1
Trichloroethene	ND		1.0	0.16	ug/L			12/14/20 11:55	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			12/14/20 11:55	1
Vinyl chloride	ND		1.0	0.10	ug/L			12/14/20 11:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		70 - 127		12/14/20 11:55	1
4-Bromofluorobenzene (Surr)	104		78 - 120		12/14/20 11:55	1
Dibromofluoromethane (Surr)	100		77 - 120		12/14/20 11:55	1
Toluene-d8 (Surr)	100		80 - 125		12/14/20 11:55	1

Lab Sample ID: LCS 280-520319/4
Matrix: Water
Analysis Batch: 520319

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	22.6		ug/L		90	65 - 135
1,1,2,2-Tetrachloroethane	25.0	26.1		ug/L		104	58 - 135
1,1,2-Trichloroethane	25.0	24.4		ug/L		97	64 - 135
1,1,2-Trichlorotrifluoroethane	25.0	23.3		ug/L		93	65 - 140
1,1-Dichloroethane	25.0	22.2		ug/L		89	65 - 135
1,1-Dichloroethene	25.0	24.7		ug/L		99	65 - 136
1,2,3-Trichlorobenzene	25.0	24.4		ug/L		97	60 - 135
1,2,4-Trichlorobenzene	25.0	24.7		ug/L		99	58 - 135
1,2-Dibromo-3-Chloropropane	25.0	25.7		ug/L		103	57 - 135
1,2-Dibromoethane	25.0	24.6		ug/L		98	65 - 135
1,2-Dichlorobenzene	25.0	24.3		ug/L		97	65 - 135
1,2-Dichloroethane	25.0	18.5		ug/L		74	65 - 135
1,2-Dichloropropane	25.0	20.7		ug/L		83	64 - 135
1,3-Dichlorobenzene	25.0	24.7		ug/L		99	65 - 135
1,4-Dichlorobenzene	25.0	24.6		ug/L		98	65 - 135
1,4-Dioxane	500	534		ug/L		107	31 - 147
2-Butanone (MEK)	100	88.5		ug/L		88	44 - 177
2-Hexanone	100	92.8		ug/L		93	57 - 139
4-Methyl-2-pentanone (MIBK)	100	89.0		ug/L		89	60 - 150
Acetone	100	86.2		ug/L		86	39 - 156
Benzene	25.0	23.2		ug/L		93	65 - 135
Bromoform	25.0	26.3		ug/L		105	62 - 135
Bromomethane	25.0	26.4		ug/L		105	45 - 135
Carbon disulfide	25.0	20.5		ug/L		82	55 - 143
Carbon tetrachloride	25.0	23.5		ug/L		94	65 - 135
Chlorobenzene	25.0	23.7		ug/L		95	65 - 135
Chlorobromomethane	25.0	24.2		ug/L		97	65 - 135
Chlorodibromomethane	25.0	28.0		ug/L		112	65 - 135
Chloroethane	25.0	25.2		ug/L		101	46 - 136
Chloroform	25.0	22.3		ug/L		89	65 - 135
Chloromethane	25.0	21.9		ug/L		87	34 - 145
cis-1,2-Dichloroethene	25.0	24.4		ug/L		98	65 - 135

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-520319/4
Matrix: Water
Analysis Batch: 520319

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,3-Dichloropropene	25.0	24.1		ug/L		96	65 - 135
Cyclohexane	25.0	21.7		ug/L		87	62 - 135
Dichlorobromomethane	25.0	24.2		ug/L		97	65 - 135
Dichlorodifluoromethane	25.0	21.8		ug/L		87	43 - 142
Ethylbenzene	25.0	23.5		ug/L		94	65 - 135
Isopropylbenzene	25.0	25.3		ug/L		101	65 - 135
Methyl acetate	50.0	46.0		ug/L		92	52 - 135
Methyl tert-butyl ether	25.0	21.8		ug/L		87	54 - 135
Methylcyclohexane	25.0	21.5		ug/L		86	63 - 135
Methylene Chloride	25.0	21.9		ug/L		87	54 - 141
m-Xylene & p-Xylene	25.0	23.6		ug/L		95	65 - 135
o-Xylene	25.0	23.7		ug/L		95	65 - 135
Styrene	25.0	24.2		ug/L		97	65 - 135
Tetrachloroethene	25.0	24.7		ug/L		99	65 - 135
Toluene	25.0	22.8		ug/L		91	65 - 135
trans-1,2-Dichloroethene	25.0	23.5		ug/L		94	65 - 135
trans-1,3-Dichloropropene	25.0	21.1		ug/L		85	65 - 135
Trichloroethene	25.0	23.4		ug/L		94	65 - 135
Trichlorofluoromethane	25.0	27.4		ug/L		110	53 - 137
Vinyl chloride	25.0	23.1		ug/L		92	40 - 137

Surrogate	LCS %Recovery	LCS Qualifier	LCS Limits
1,2-Dichloroethane-d4 (Surr)	84		70 - 127
4-Bromofluorobenzene (Surr)	102		78 - 120
Dibromofluoromethane (Surr)	99		77 - 120
Toluene-d8 (Surr)	100		80 - 125

Lab Sample ID: LCSD 280-520319/5
Matrix: Water
Analysis Batch: 520319

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	25.0	23.0		ug/L		92	65 - 135	2	20
1,1,2,2-Tetrachloroethane	25.0	25.5		ug/L		102	58 - 135	2	20
1,1,2-Trichloroethane	25.0	24.6		ug/L		99	64 - 135	1	27
1,1,2-Trichlorotrifluoroethane	25.0	23.9		ug/L		96	65 - 140	3	20
1,1-Dichloroethane	25.0	22.1		ug/L		88	65 - 135	0	21
1,1-Dichloroethene	25.0	25.1		ug/L		100	65 - 136	2	20
1,2,3-Trichlorobenzene	25.0	24.5		ug/L		98	60 - 135	0	36
1,2,4-Trichlorobenzene	25.0	25.0		ug/L		100	58 - 135	1	25
1,2-Dibromo-3-Chloropropane	25.0	24.5		ug/L		98	57 - 135	5	22
1,2-Dibromoethane	25.0	24.5		ug/L		98	65 - 135	0	27
1,2-Dichlorobenzene	25.0	24.2		ug/L		97	65 - 135	1	20
1,2-Dichloroethane	25.0	18.6		ug/L		74	65 - 135	1	20
1,2-Dichloropropane	25.0	21.1		ug/L		84	64 - 135	2	20
1,3-Dichlorobenzene	25.0	24.3		ug/L		97	65 - 135	1	20
1,4-Dichlorobenzene	25.0	24.2		ug/L		97	65 - 135	2	23
1,4-Dioxane	500	520		ug/L		104	31 - 147	3	30

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-520319/5
Matrix: Water
Analysis Batch: 520319

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Butanone (MEK)	100	87.5		ug/L		88	44 - 177	1	32
2-Hexanone	100	92.2		ug/L		92	57 - 139	1	25
4-Methyl-2-pentanone (MIBK)	100	88.8		ug/L		89	60 - 150	0	22
Acetone	100	81.7		ug/L		82	39 - 156	5	23
Benzene	25.0	23.2		ug/L		93	65 - 135	0	20
Bromoform	25.0	25.2		ug/L		101	62 - 135	4	27
Bromomethane	25.0	22.5		ug/L		90	45 - 135	16	33
Carbon disulfide	25.0	20.6		ug/L		82	55 - 143	1	20
Carbon tetrachloride	25.0	23.8		ug/L		95	65 - 135	1	21
Chlorobenzene	25.0	23.7		ug/L		95	65 - 135	0	20
Chlorobromomethane	25.0	24.0		ug/L		96	65 - 135	1	29
Chlorodibromomethane	25.0	27.4		ug/L		110	65 - 135	2	20
Chloroethane	25.0	24.6		ug/L		98	46 - 136	3	25
Chloroform	25.0	22.3		ug/L		89	65 - 135	0	20
Chloromethane	25.0	21.5		ug/L		86	34 - 145	2	24
cis-1,2-Dichloroethene	25.0	24.0		ug/L		96	65 - 135	2	20
cis-1,3-Dichloropropene	25.0	24.1		ug/L		96	65 - 135	0	26
Cyclohexane	25.0	22.0		ug/L		88	62 - 135	1	20
Dichlorobromomethane	25.0	24.3		ug/L		97	65 - 135	0	20
Dichlorodifluoromethane	25.0	18.7		ug/L		75	43 - 142	15	30
Ethylbenzene	25.0	23.7		ug/L		95	65 - 135	1	20
Isopropylbenzene	25.0	25.0		ug/L		100	65 - 135	1	20
Methyl acetate	50.0	44.1		ug/L		88	52 - 135	4	27
Methyl tert-butyl ether	25.0	21.7		ug/L		87	54 - 135	0	21
Methylcyclohexane	25.0	21.5		ug/L		86	63 - 135	0	20
Methylene Chloride	25.0	21.7		ug/L		87	54 - 141	1	26
m-Xylene & p-Xylene	25.0	23.7		ug/L		95	65 - 135	0	20
o-Xylene	25.0	23.7		ug/L		95	65 - 135	0	20
Styrene	25.0	24.1		ug/L		96	65 - 135	0	26
Tetrachloroethene	25.0	24.8		ug/L		99	65 - 135	0	20
Toluene	25.0	23.0		ug/L		92	65 - 135	1	20
trans-1,2-Dichloroethene	25.0	23.8		ug/L		95	65 - 135	1	24
trans-1,3-Dichloropropene	25.0	21.3		ug/L		85	65 - 135	1	26
Trichloroethene	25.0	23.7		ug/L		95	65 - 135	1	20
Trichlorofluoromethane	25.0	24.7		ug/L		99	53 - 137	10	27
Vinyl chloride	25.0	21.5		ug/L		86	40 - 137	7	24

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	84		70 - 127
4-Bromofluorobenzene (Surr)	102		78 - 120
Dibromofluoromethane (Surr)	99		77 - 120
Toluene-d8 (Surr)	101		80 - 125

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-519377/1-A
Matrix: Solid
Analysis Batch: 520122

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 519377

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1'-Biphenyl	ND		330	24	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
1,2,4,5-Tetrachlorobenzene	ND		330	49	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
1,2,4-Trichlorobenzene	ND		330	28	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
1,2-Dichlorobenzene	ND		330	22	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		330	22	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
1,3-Dichlorobenzene	ND		330	12	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
1,3-Dinitrobenzene	ND		330	71	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
1,4-Dichlorobenzene	ND		330	14	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
1,4-Dioxane	ND		660	66	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
1-Methylnaphthalene	ND		330	11	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
2,2'-oxybis[1-chloropropane]	ND		330	23	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
2,3,4,6-Tetrachlorophenol	ND		1600	140	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
2,4,5-Trichlorophenol	ND		330	10	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
2,4,6-Trichlorophenol	ND		330	10	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
2,4-Dichlorophenol	ND		330	10	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
2,4-Dimethylphenol	ND		330	66	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
2,4-Dinitrophenol	ND		1600	330	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
2,4-Dinitrotoluene	ND		330	66	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
2,6-Dichlorophenol	ND		330	22	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
2,6-Dinitrotoluene	ND		330	28	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
2-Chloronaphthalene	ND		330	10	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
2-Chlorophenol	ND		330	21	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
2-Methylnaphthalene	ND		330	19	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
2-Methylphenol	ND		330	13	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
2-Nitroaniline	ND		1600	50	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
2-Nitrophenol	ND		330	10	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
3 & 4 Methylphenol	ND		330	33	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
3,3'-Dichlorobenzidine	ND		660	90	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
3-Methylphenol	ND		330	33	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
3-Nitroaniline	ND		1600	73	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
4,6-Dinitro-2-methylphenol	ND		1600	330	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
4-Bromophenyl phenyl ether	ND		330	19	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
4-Chloro-3-methylphenol	ND		330	25	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
4-Chloroaniline	ND		330	82	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
4-Chlorophenyl phenyl ether	ND		330	21	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
4-Methylphenol	ND		330	33	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
4-Nitroaniline	ND		1600	73	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
4-Nitrophenol	ND		1600	97	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Acenaphthene	ND		330	10	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Acenaphthylene	ND		330	82	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Acetophenone	ND		330	20	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Aniline	ND		330	130	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Anthracene	ND		330	17	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Azobenzene	ND		330	22	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Benzaldehyde	ND		330	67	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Benzidine	ND		3300	990	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Benzo[a]anthracene	ND		330	20	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Benzo[a]pyrene	ND		330	20	ug/Kg		12/06/20 13:55	12/11/20 14:24	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-519377/1-A
Matrix: Solid
Analysis Batch: 520122

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 519377

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND		330	26	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Benzo[g,h,i]perylene	ND		330	16	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Benzo[k]fluoranthene	ND		330	40	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Benzoic acid	ND		1600	330	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Benzyl alcohol	ND		330	10	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Bis(2-chloroethoxy)methane	ND		330	23	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Bis(2-chloroethyl)ether	ND		330	17	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Bis(2-ethylhexyl) phthalate	ND		330	46	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Butyl benzyl phthalate	ND		330	43	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Caprolactam	ND		330	110	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Carbazole	ND		330	36	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Chrysene	ND		330	27	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Dibenz(a,h)anthracene	ND		330	19	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Dibenzofuran	ND		330	20	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Diethyl phthalate	ND		660	26	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Dimethyl phthalate	ND		330	23	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Di-n-butyl phthalate	ND		330	29	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Di-n-octyl phthalate	ND		330	41	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Diphenylamine	ND		330	44	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Famphur	ND		660	34	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Fluoranthene	ND		330	36	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Fluorene	ND		330	18	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Hexachlorobenzene	ND		330	29	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Hexachlorobutadiene	ND		330	10	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Hexachlorocyclopentadiene	ND		1600	110	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Hexachloroethane	ND		330	21	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Hexadecane	ND		330	13	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Indeno[1,2,3-cd]pyrene	ND		330	22	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Isophorone	ND		330	17	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Naphthalene	ND		330	31	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Nitrobenzene	ND		330	22	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
N-Nitrosodimethylamine	ND		330	37	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
N-Nitrosodi-n-propylamine	ND		330	68	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
N-Nitrosodiphenylamine	ND		330	21	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Pentachlorophenol	ND		1600	330	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Phenanthrene	ND		330	17	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Phenol	ND		330	18	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Pyrene	ND		330	12	ug/Kg		12/06/20 13:55	12/11/20 14:24	1
Pyridine	ND		660	40	ug/Kg		12/06/20 13:55	12/11/20 14:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	73		35 - 120	12/06/20 13:55	12/11/20 14:24	1
2-Fluorobiphenyl	64		46 - 120	12/06/20 13:55	12/11/20 14:24	1
2-Fluorophenol (Surr)	68		43 - 120	12/06/20 13:55	12/11/20 14:24	1
Nitrobenzene-d5 (Surr)	63		46 - 120	12/06/20 13:55	12/11/20 14:24	1
Phenol-d5 (Surr)	64		46 - 120	12/06/20 13:55	12/11/20 14:24	1
Terphenyl-d14 (Surr)	91		46 - 120	12/06/20 13:55	12/11/20 14:24	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-519377/2-A
Matrix: Solid
Analysis Batch: 520122

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 519377
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1'-Biphenyl	2670	2080		ug/Kg		78	60 - 120
1,2,4,5-Tetrachlorobenzene	2670	1900		ug/Kg		71	60 - 120
1,2,4-Trichlorobenzene	2670	1880		ug/Kg		70	59 - 120
1,2-Dichlorobenzene	2670	1840		ug/Kg		69	57 - 120
1,2-Diphenylhydrazine(as Azobenzene)	2700	2150		ug/Kg		80	60 - 120
1,3-Dichlorobenzene	2670	1800		ug/Kg		68	56 - 120
1,3-Dinitrobenzene	2670	2300		ug/Kg		86	66 - 120
1,4-Dichlorobenzene	2670	1810		ug/Kg		68	57 - 120
1,4-Dioxane	2670	1270		ug/Kg		48	28 - 120
1-Methylnaphthalene	2670	1960		ug/Kg		74	57 - 120
2,2'-oxybis[1-chloropropane]	2670	1760		ug/Kg		66	46 - 120
2,3,4,6-Tetrachlorophenol	2670	2280		ug/Kg		86	63 - 120
2,4,5-Trichlorophenol	2670	2310		ug/Kg		86	65 - 120
2,4,6-Trichlorophenol	2670	2190		ug/Kg		82	64 - 120
2,4-Dichlorophenol	2670	2080		ug/Kg		78	64 - 120
2,4-Dimethylphenol	2670	2030		ug/Kg		76	60 - 120
2,4-Dinitrophenol	5330	3540		ug/Kg		66	52 - 120
2,4-Dinitrotoluene	2670	2170		ug/Kg		81	68 - 120
2,6-Dichlorophenol	2670	2070		ug/Kg		78	30 - 150
2,6-Dinitrotoluene	2670	2320		ug/Kg		87	68 - 120
2-Chloronaphthalene	2670	2000		ug/Kg		75	61 - 120
2-Chlorophenol	2670	1960		ug/Kg		73	62 - 120
2-Methylnaphthalene	2670	1930		ug/Kg		72	60 - 120
2-Methylphenol	2670	1880		ug/Kg		70	61 - 120
2-Nitroaniline	2670	2190		ug/Kg		82	63 - 120
2-Nitrophenol	2670	1970		ug/Kg		74	61 - 120
3 & 4 Methylphenol	2670	2060		ug/Kg		77	62 - 120
3,3'-Dichlorobenzidine	5330	4070		ug/Kg		76	22 - 120
3-Methylphenol	2670	2060		ug/Kg		77	62 - 120
3-Nitroaniline	2670	1950		ug/Kg		73	40 - 120
4,6-Dinitro-2-methylphenol	5330	4160		ug/Kg		78	60 - 120
4-Bromophenyl phenyl ether	2670	2310		ug/Kg		86	66 - 120
4-Chloro-3-methylphenol	2670	2250		ug/Kg		84	62 - 120
4-Chloroaniline	2670	1760		ug/Kg		66	33 - 120
4-Chlorophenyl phenyl ether	2670	2180		ug/Kg		82	63 - 120
4-Methylphenol	2670	2060		ug/Kg		77	62 - 120
4-Nitroaniline	2670	2290		ug/Kg		86	58 - 120
4-Nitrophenol	5330	3840		ug/Kg		72	67 - 120
Acenaphthene	2670	2090		ug/Kg		78	62 - 120
Acenaphthylene	2670	2110		ug/Kg		79	64 - 120
Acetophenone	2670	1710		ug/Kg		64	48 - 120
Aniline	2670	1600		ug/Kg		60	21 - 120
Anthracene	2670	2310		ug/Kg		86	66 - 120
Azobenzene	2670	2130		ug/Kg		80	59 - 120
Benzaldehyde	2670	1510		ug/Kg		57	30 - 150
Benzidine	5330	2810	J	ug/Kg		53	5 - 120
Benzo[a]anthracene	2670	2330		ug/Kg		87	64 - 120
Benzo[a]pyrene	2670	2320		ug/Kg		87	65 - 120

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-519377/2-A
Matrix: Solid
Analysis Batch: 520122

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 519377

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[b]fluoranthene	2670	2300		ug/Kg		86	58 - 120
Benzo[g,h,i]perylene	2670	2370		ug/Kg		89	58 - 120
Benzo[k]fluoranthene	2670	2390		ug/Kg		90	62 - 120
Benzoic acid	2670	1700		ug/Kg		64	51 - 120
Benzyl alcohol	2670	1980		ug/Kg		74	61 - 120
Bis(2-chloroethoxy)methane	2670	1960		ug/Kg		74	58 - 120
Bis(2-chloroethyl)ether	2670	1890		ug/Kg		71	57 - 120
Bis(2-ethylhexyl) phthalate	2670	2440		ug/Kg		92	65 - 120
Butyl benzyl phthalate	2670	2420		ug/Kg		91	65 - 120
Caprolactam	2670	2040		ug/Kg		77	20 - 138
Carbazole	2670	2300		ug/Kg		86	65 - 120
Chrysene	2670	2400		ug/Kg		90	65 - 120
Dibenz(a,h)anthracene	2670	2340		ug/Kg		88	56 - 120
Dibenzofuran	2670	2050		ug/Kg		77	65 - 120
Diethyl phthalate	2670	2270		ug/Kg		85	68 - 120
Dimethyl phthalate	2670	2260		ug/Kg		85	66 - 120
Di-n-butyl phthalate	2670	2320		ug/Kg		87	66 - 120
Di-n-octyl phthalate	2670	2450		ug/Kg		92	55 - 120
Diphenylamine	2270	1970		ug/Kg		87	30 - 150
Fluoranthene	2670	2340		ug/Kg		88	64 - 120
Fluorene	2670	2170		ug/Kg		81	66 - 120
Hexachlorobenzene	2670	2320		ug/Kg		87	65 - 120
Hexachlorobutadiene	2670	1850		ug/Kg		69	58 - 120
Hexachlorocyclopentadiene	5330	2910		ug/Kg		55	43 - 120
Hexachloroethane	2670	1700		ug/Kg		64	56 - 120
Hexadecane	2670	1990		ug/Kg		74	45 - 135
Indeno[1,2,3-cd]pyrene	2670	2390		ug/Kg		90	46 - 120
Isophorone	2670	1840		ug/Kg		69	56 - 120
Naphthalene	2670	1930		ug/Kg		72	59 - 120
Nitrobenzene	2670	1830		ug/Kg		69	55 - 120
N-Nitrosodimethylamine	2670	2040		ug/Kg		76	50 - 120
N-Nitrosodi-n-propylamine	2670	1860		ug/Kg		70	52 - 120
N-Nitrosodiphenylamine	2670	2280		ug/Kg		86	65 - 120
Pentachlorophenol	5330	3790		ug/Kg		71	50 - 120
Phenanthrene	2670	2230		ug/Kg		84	67 - 120
Phenol	2670	1840		ug/Kg		69	63 - 120
Pyrene	2670	2390		ug/Kg		90	66 - 120
Pyridine	5330	2730		ug/Kg		51	37 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	83		35 - 120
2-Fluorobiphenyl	69		46 - 120
2-Fluorophenol (Surr)	73		43 - 120
Nitrobenzene-d5 (Surr)	65		46 - 120
Phenol-d5 (Surr)	69		46 - 120
Terphenyl-d14 (Surr)	95		46 - 120

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Lab Sample ID: MB 280-519873/5
Matrix: Water
Analysis Batch: 519873

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		25	10	ug/L			12/09/20 21:22	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	87		82 - 110					12/09/20 21:22	1

Lab Sample ID: LCS 280-519873/3
Matrix: Water
Analysis Batch: 519873

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	76.9	70.7		ug/L		92	79 - 149
Surrogate	%Recovery	LCS Qualifier	Limits				
a,a,a-Trifluorotoluene	84		82 - 110				

Lab Sample ID: LCSD 280-519873/4
Matrix: Water
Analysis Batch: 519873

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	76.9	67.3		ug/L		88	79 - 149	5	27
Surrogate	%Recovery	LCSD Qualifier	Limits						
a,a,a-Trifluorotoluene	82		82 - 110						

Lab Sample ID: MB 280-520046/3-A
Matrix: Solid
Analysis Batch: 520044

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 520046

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		2.0	0.76	mg/Kg		12/10/20 23:48	12/11/20 02:23	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	89		77 - 123				12/10/20 23:48	12/11/20 02:23	1

Lab Sample ID: LCS 280-520046/1-A
Matrix: Solid
Analysis Batch: 520044

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 520046

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	8.54	7.46		mg/Kg		87	75 - 135

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics) (Continued)

Lab Sample ID: LCS 280-520046/1-A
Matrix: Solid
Analysis Batch: 520044

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 520046

Surrogate	LCS %Recovery	LCS Qualifier	Limits
a,a,a-Trifluorotoluene	90		77 - 123

Lab Sample ID: LCSD 280-520046/2-A
Matrix: Solid
Analysis Batch: 520044

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 520046

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	8.54	7.31		mg/Kg		86	75 - 135	2	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
a,a,a-Trifluorotoluene	87		77 - 123

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Lab Sample ID: MB 280-519742/1-A
Matrix: Solid
Analysis Batch: 520579

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 519742

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		8.0	3.6	mg/Kg		12/09/20 10:16	12/16/20 01:00	1
Motor Oil (C20-C38)	ND		24	7.8	mg/Kg		12/09/20 10:16	12/16/20 01:00	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	57		49 - 115	12/09/20 10:16	12/16/20 01:00	1

Lab Sample ID: LCS 280-519742/2-A
Matrix: Solid
Analysis Batch: 520579

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 519742

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	132	101		mg/Kg		76	53 - 115

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl (Surr)	77		49 - 115

Lab Sample ID: LCS 280-519742/3-A
Matrix: Solid
Analysis Batch: 520579

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 519742

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Motor Oil (C20-C38)	334	299		mg/Kg		89	57 - 115

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl (Surr)	79		49 - 115

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Lab Sample ID: 280-143461-1 MS
Matrix: Solid
Analysis Batch: 520579

Client Sample ID: CDOT I270 ENV 12_2020-SB-36-25-30
Prep Type: Total/NA
Prep Batch: 519742

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Motor Oil (C20-C38)	31		338	316		mg/Kg	☼	85		57 - 115
Surrogate	%Recovery	MS	MS	Qualif	Qualifier					Limits
<i>o</i> -Terphenyl (Surr)	72									49 - 115

Lab Sample ID: 280-143461-1 MSD
Matrix: Solid
Analysis Batch: 520579

Client Sample ID: CDOT I270 ENV 12_2020-SB-36-25-30
Prep Type: Total/NA
Prep Batch: 519742

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Motor Oil (C20-C38)	31		349	263		mg/Kg	☼	67		57 - 115	18	30
Surrogate	%Recovery	MSD	MSD	Qualif	Qualifier					Limits		
<i>o</i> -Terphenyl (Surr)	57									49 - 115		

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-519628/1-A
Matrix: Water
Analysis Batch: 520315

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 519628

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	ND		5.0	0.33	ug/L		12/09/20 15:45	12/12/20 01:49	1
Barium	ND		1.0	0.29	ug/L		12/09/20 15:45	12/12/20 01:49	1
Cadmium	ND		1.0	0.27	ug/L		12/09/20 15:45	12/12/20 01:49	1
Lead	ND		1.0	0.18	ug/L		12/09/20 15:45	12/12/20 01:49	1
Silver	ND		5.0	0.033	ug/L		12/09/20 15:45	12/12/20 01:49	1

Lab Sample ID: MB 280-519628/1-A
Matrix: Water
Analysis Batch: 520635

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 519628

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	ND		5.0	0.33	ug/L		12/09/20 15:45	12/15/20 16:36	1
Barium	ND		1.0	0.29	ug/L		12/09/20 15:45	12/15/20 16:36	1
Cadmium	ND		1.0	0.27	ug/L		12/09/20 15:45	12/15/20 16:36	1
Chromium	ND		2.0	0.50	ug/L		12/09/20 15:45	12/15/20 16:36	1
Lead	ND		1.0	0.18	ug/L		12/09/20 15:45	12/15/20 16:36	1
Selenium	0.375	J	5.0	0.37	ug/L		12/09/20 15:45	12/15/20 16:36	1
Silver	ND		5.0	0.033	ug/L		12/09/20 15:45	12/15/20 16:36	1

Lab Sample ID: LCS 280-519628/2-A
Matrix: Water
Analysis Batch: 520315

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 519628

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
Arsenic	40.0	35.8		ug/L		89		85 - 117

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 280-519628/2-A
Matrix: Water
Analysis Batch: 520315

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 519628

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	40.0	41.8		ug/L		105	85 - 118
Cadmium	40.0	39.7		ug/L		99	85 - 115
Lead	40.0	41.7		ug/L		104	85 - 118
Silver	40.0	37.6		ug/L		94	85 - 115

Lab Sample ID: LCS 280-519628/2-A
Matrix: Water
Analysis Batch: 520635

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 519628

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	40.0	38.2		ug/L		96	85 - 117
Barium	40.0	41.4		ug/L		104	85 - 118
Cadmium	40.0	41.4		ug/L		103	85 - 115
Chromium	40.0	41.3		ug/L		103	84 - 121
Lead	40.0	41.5		ug/L		104	85 - 118
Selenium	40.0	37.1		ug/L		93	77 - 122
Silver	40.0	39.5		ug/L		99	85 - 115

Lab Sample ID: MB 280-519940/1-A
Matrix: Solid
Analysis Batch: 520450

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 519940

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		100	7.8	ug/Kg		12/11/20 16:30	12/14/20 21:14	1

Lab Sample ID: LCS 280-519940/2-A
Matrix: Solid
Analysis Batch: 520450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 519940

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	20000	20400		ug/Kg		102	83 - 113

Lab Sample ID: 280-143461-1 MS
Matrix: Solid
Analysis Batch: 520450

Client Sample ID: CDOT I270 ENV 12_2020-SB-36-25-30
Prep Type: Total/NA
Prep Batch: 519940

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	31	J	17900	17800		ug/Kg	✱	99	83 - 113

Lab Sample ID: 280-143461-1 MSD
Matrix: Solid
Analysis Batch: 520450

Client Sample ID: CDOT I270 ENV 12_2020-SB-36-25-30
Prep Type: Total/NA
Prep Batch: 519940

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limit	RPD
Silver	31	J	19300	18900		ug/Kg	✱	97	83 - 113	6

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 280-519945/1-A
Matrix: Solid
Analysis Batch: 520635

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 519945

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.60	0.051	mg/Kg		12/11/20 07:42	12/15/20 18:25	1
Barium	ND		0.40	0.071	mg/Kg		12/11/20 07:42	12/15/20 18:25	1
Cadmium	ND		0.10	0.0094	mg/Kg		12/11/20 07:42	12/15/20 18:25	1
Chromium	ND		0.20	0.076	mg/Kg		12/11/20 07:42	12/15/20 18:25	1
Lead	ND		0.15	0.018	mg/Kg		12/11/20 07:42	12/15/20 18:25	1
Selenium	ND		0.50	0.13	mg/Kg		12/11/20 07:42	12/15/20 18:25	1

Lab Sample ID: LCS 280-519945/2-A
Matrix: Solid
Analysis Batch: 520635

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 519945

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	20.0	17.3		mg/Kg		87	83 - 111
Barium	20.0	19.3		mg/Kg		96	86 - 120
Cadmium	20.0	19.2		mg/Kg		96	85 - 109
Chromium	20.0	19.4		mg/Kg		97	87 - 121
Lead	20.0	18.9		mg/Kg		94	81 - 125
Selenium	20.0	17.3		mg/Kg		87	78 - 108

Lab Sample ID: 280-143461-1 MS
Matrix: Solid
Analysis Batch: 520635

Client Sample ID: CDOT I270 ENV 12_2020-SB-36-25-30
Prep Type: Total/NA
Prep Batch: 519945

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	2.3		15.8	16.2		mg/Kg	✘	88	83 - 111
Barium	110		15.8	138	4	mg/Kg	✘	187	86 - 120
Cadmium	0.13		15.8	15.1		mg/Kg	✘	94	85 - 109
Chromium	8.0		15.8	25.3		mg/Kg	✘	110	87 - 121
Lead	7.6		15.8	22.8		mg/Kg	✘	96	81 - 125
Selenium	0.16	J	15.8	13.7		mg/Kg	✘	85	78 - 108

Lab Sample ID: 280-143461-1 MSD
Matrix: Solid
Analysis Batch: 520635

Client Sample ID: CDOT I270 ENV 12_2020-SB-36-25-30
Prep Type: Total/NA
Prep Batch: 519945

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	2.3		18.1	19.0		mg/Kg	✘	92	83 - 111	16	20
Barium	110		18.1	129	4	mg/Kg	✘	112	86 - 120	7	20
Cadmium	0.13		18.1	17.9		mg/Kg	✘	98	85 - 109	17	20
Chromium	8.0		18.1	29.2		mg/Kg	✘	117	87 - 121	14	20
Lead	7.6		18.1	24.9		mg/Kg	✘	96	81 - 125	9	20
Selenium	0.16	J	18.1	15.6		mg/Kg	✘	85	78 - 108	13	20

Lab Sample ID: MB 280-519506/1-E
Matrix: Water
Analysis Batch: 520315

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 519762

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic, Dissolved	ND		5.0	0.33	ug/L		12/10/20 08:14	12/11/20 23:20	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 280-519506/1-E
Matrix: Water
Analysis Batch: 520315

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 519762

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium, Dissolved	1.36		1.0	0.29	ug/L		12/10/20 08:14	12/11/20 23:20	1
Cadmium, Dissolved	ND	^	1.0	0.27	ug/L		12/10/20 08:14	12/11/20 23:20	1
Chromium, Dissolved	0.570	J	2.0	0.50	ug/L		12/10/20 08:14	12/11/20 23:20	1
Lead, Dissolved	ND		1.0	0.18	ug/L		12/10/20 08:14	12/11/20 23:20	1
Selenium, Dissolved	ND		5.0	0.37	ug/L		12/10/20 08:14	12/11/20 23:20	1
Silver, Dissolved	ND		5.0	0.033	ug/L		12/10/20 08:14	12/11/20 23:20	1

Lab Sample ID: LCS 280-519506/2-E
Matrix: Water
Analysis Batch: 520315

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 519762

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic, Dissolved	40.0	37.9		ug/L		95	85 - 117
Barium, Dissolved	40.0	39.4		ug/L		98	85 - 118
Cadmium, Dissolved	40.0	39.3	^	ug/L		98	85 - 115
Chromium, Dissolved	40.0	41.7		ug/L		104	84 - 121
Lead, Dissolved	40.0	40.6		ug/L		102	85 - 118
Selenium, Dissolved	40.0	40.0		ug/L		100	77 - 122
Silver, Dissolved	40.0	39.1		ug/L		98	85 - 115

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 280-519556/1-A
Matrix: Water
Analysis Batch: 519712

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 519556

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.027	ug/L		12/08/20 13:30	12/08/20 17:03	1

Lab Sample ID: LCS 280-519556/2-A
Matrix: Water
Analysis Batch: 519712

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 519556

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	4.98		ug/L		100	84 - 120

Lab Sample ID: MB 280-519506/1-B
Matrix: Water
Analysis Batch: 519850

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 519550

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury, Dissolved	ND		0.20	0.027	ug/L		12/09/20 12:45	12/09/20 15:46	1

Lab Sample ID: LCS 280-519506/2-B
Matrix: Water
Analysis Batch: 519850

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 519550

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury, Dissolved	5.00	4.75		ug/L		95	84 - 120

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 280-519912/1-A
Matrix: Solid
Analysis Batch: 520028

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 519912

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		17	5.5	ug/Kg		12/10/20 15:30	12/10/20 17:55	1

Lab Sample ID: LCS 280-519912/2-A
Matrix: Solid
Analysis Batch: 520028

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 519912

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	333	342		ug/Kg		102	87 - 111

Method: Moisture - Percent Moisture

Lab Sample ID: 280-143461-1 DU
Matrix: Solid
Analysis Batch: 519820

Client Sample ID: CDOT I270 ENV 12_2020-SB-36-25-30
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	7.8		8.0		%		3	20
Percent Solids	92.2		92.0		%		0.2	20

Consultant Work Product - Jacobs Engineering - Not CDOT Approved

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QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

GC/MS VOA

Prep Batch: 520106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143461-1	CDOT I270 ENV 12_2020-SB-36-25-30	Total/NA	Solid	5035	
280-143461-3	CDOT I270 ENV 12_2020-SB-35-5-10	Total/NA	Solid	5035	
280-143461-4 - DL	CDOT I270 ENV 12_2020-SB-35-10-15	Total/NA	Solid	5035	
280-143461-4	CDOT I270 ENV 12_2020-SB-35-10-15	Total/NA	Solid	5035	
280-143461-7	CDOT I270 ENV 12_2020-SB-TB002	Total/NA	Solid	5035	
280-143461-7 - DL	CDOT I270 ENV 12_2020-SB-TB002	Total/NA	Solid	5035	
MB 280-520106/3-A	Method Blank	Total/NA	Solid	5035	
MB 280-520106/4-A	Method Blank	Total/NA	Solid	5035	
LCS 280-520106/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-520106/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 520250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143461-1	CDOT I270 ENV 12_2020-SB-36-25-30	Total/NA	Solid	8260B	520106
280-143461-3	CDOT I270 ENV 12_2020-SB-35-5-10	Total/NA	Solid	8260B	520106
280-143461-4	CDOT I270 ENV 12_2020-SB-35-10-15	Total/NA	Solid	8260B	520106
280-143461-7	CDOT I270 ENV 12_2020-SB-TB002	Total/NA	Solid	8260B	520106
MB 280-520106/3-A	Method Blank	Total/NA	Solid	8260B	520106
MB 280-520106/4-A	Method Blank	Total/NA	Solid	8260B	520106
LCS 280-520106/1-A	Lab Control Sample	Total/NA	Solid	8260B	520106
LCSD 280-520106/2-A	Lab Control Sample Dup	Total/NA	Solid	8260B	520106

Analysis Batch: 520319

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143461-5	CDOT I270 ENV 12_2020-SB-35-GW	Total/NA	Water	8260B	
280-143461-6	CDOT I270 ENV 12_2020-SB-TB-03	Total/NA	Water	8260B	
MB 280-520319/9	Method Blank	Total/NA	Water	8260B	
LCS 280-520319/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 280-520319/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 520536

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143461-4 - DL	CDOT I270 ENV 12_2020-SB-35-10-15	Total/NA	Solid	8260B	520106
280-143461-7 - DL	CDOT I270 ENV 12_2020-SB-TB002	Total/NA	Solid	8260B	520106
MB 280-520106/4-A	Method Blank	Total/NA	Solid	8260B	520106
LCS 280-520106/1-A	Lab Control Sample	Total/NA	Solid	8260B	520106
LCSD 280-520106/2-A	Lab Control Sample Dup	Total/NA	Solid	8260B	520106

GC/MS Semi VOA

Prep Batch: 519377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143461-1	CDOT I270 ENV 12_2020-SB-36-25-30	Total/NA	Solid	3550C	
280-143461-3	CDOT I270 ENV 12_2020-SB-35-5-10	Total/NA	Solid	3550C	
280-143461-4 - DL	CDOT I270 ENV 12_2020-SB-35-10-15	Total/NA	Solid	3550C	
280-143461-4	CDOT I270 ENV 12_2020-SB-35-10-15	Total/NA	Solid	3550C	
MB 280-519377/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 280-519377/2-A	Lab Control Sample	Total/NA	Solid	3550C	

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

GC/MS Semi VOA

Analysis Batch: 520122

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143461-1	CDOT I270 ENV 12_2020-SB-36-25-30	Total/NA	Solid	8270D	519377
280-143461-3	CDOT I270 ENV 12_2020-SB-35-5-10	Total/NA	Solid	8270D	519377
280-143461-4	CDOT I270 ENV 12_2020-SB-35-10-15	Total/NA	Solid	8270D	519377
MB 280-519377/1-A	Method Blank	Total/NA	Solid	8270D	519377
LCS 280-519377/2-A	Lab Control Sample	Total/NA	Solid	8270D	519377

Analysis Batch: 520297

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143461-4 - DL	CDOT I270 ENV 12_2020-SB-35-10-15	Total/NA	Solid	8270D	519377

GC VOA

Analysis Batch: 519873

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143461-5	CDOT I270 ENV 12_2020-SB-35-GW	Total/NA	Water	8015C	
280-143461-6	CDOT I270 ENV 12_2020-SB-TB-03	Total/NA	Water	8015C	
MB 280-519873/5	Method Blank	Total/NA	Water	8015C	
LCS 280-519873/3	Lab Control Sample	Total/NA	Water	8015C	
LCSD 280-519873/4	Lab Control Sample Dup	Total/NA	Water	8015C	

Analysis Batch: 520044

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143461-1	CDOT I270 ENV 12_2020-SB-36-25-30	Total/NA	Solid	8015C	520046
280-143461-3	CDOT I270 ENV 12_2020-SB-35-5-10	Total/NA	Solid	8015C	520046
280-143461-4	CDOT I270 ENV 12_2020-SB-35-10-15	Total/NA	Solid	8015C	520046
280-143461-7	CDOT I270 ENV 12_2020-SB-TB002	Total/NA	Solid	8015C	520046
MB 280-520046/3-A	Method Blank	Total/NA	Solid	8015C	520046
LCS 280-520046/1-A	Lab Control Sample	Total/NA	Solid	8015C	520046
LCSD 280-520046/2-A	Lab Control Sample Dup	Total/NA	Solid	8015C	520046

Prep Batch: 520046

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143461-1	CDOT I270 ENV 12_2020-SB-36-25-30	Total/NA	Solid	5035	
280-143461-3	CDOT I270 ENV 12_2020-SB-35-5-10	Total/NA	Solid	5035	
280-143461-4	CDOT I270 ENV 12_2020-SB-35-10-15	Total/NA	Solid	5035	
280-143461-7	CDOT I270 ENV 12_2020-SB-TB002	Total/NA	Solid	5035	
MB 280-520046/3-A	Method Blank	Total/NA	Solid	5035	
LCS 280-520046/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-520046/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

GC Semi VOA

Prep Batch: 519742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143461-1	CDOT I270 ENV 12_2020-SB-36-25-30	Total/NA	Solid	3546	
280-143461-3	CDOT I270 ENV 12_2020-SB-35-5-10	Total/NA	Solid	3546	
280-143461-4	CDOT I270 ENV 12_2020-SB-35-10-15	Total/NA	Solid	3546	
MB 280-519742/1-A	Method Blank	Total/NA	Solid	3546	
LCS 280-519742/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCS 280-519742/3-A	Lab Control Sample	Total/NA	Solid	3546	
280-143461-1 MS	CDOT I270 ENV 12_2020-SB-36-25-30	Total/NA	Solid	3546	
280-143461-1 MSD	CDOT I270 ENV 12_2020-SB-36-25-30	Total/NA	Solid	3546	

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

GC Semi VOA

Analysis Batch: 520579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143461-1	CDOT I270 ENV 12_2020-SB-36-25-30	Total/NA	Solid	8015C	519742
280-143461-3	CDOT I270 ENV 12_2020-SB-35-5-10	Total/NA	Solid	8015C	519742
MB 280-519742/1-A	Method Blank	Total/NA	Solid	8015C	519742
LCS 280-519742/2-A	Lab Control Sample	Total/NA	Solid	8015C	519742
LCS 280-519742/3-A	Lab Control Sample	Total/NA	Solid	8015C	519742
280-143461-1 MS	CDOT I270 ENV 12_2020-SB-36-25-30	Total/NA	Solid	8015C	519742
280-143461-1 MSD	CDOT I270 ENV 12_2020-SB-36-25-30	Total/NA	Solid	8015C	519742

Analysis Batch: 520752

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143461-4	CDOT I270 ENV 12_2020-SB-35-10-15	Total/NA	Solid	8015C	519742

Metals

Filtration Batch: 519506

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-519506/1-B	Method Blank	Dissolved	Water	FILTRATION	
MB 280-519506/1-E	Method Blank	Dissolved	Water	FILTRATION	
LCS 280-519506/2-B	Lab Control Sample	Dissolved	Water	FILTRATION	
LCS 280-519506/2-E	Lab Control Sample	Dissolved	Water	FILTRATION	

Prep Batch: 519550

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143461-5	CDOT I270 ENV 12_2020-SB-35-GW	Dissolved	Water	7470A	
MB 280-519506/1-B	Method Blank	Dissolved	Water	7470A	519506
LCS 280-519506/2-B	Lab Control Sample	Dissolved	Water	7470A	519506

Prep Batch: 519556

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143461-5	CDOT I270 ENV 12_2020-SB-35-GW	Total/NA	Water	7470A	
MB 280-519556/1-A	Method Blank	Total/NA	Water	7470A	
LCS 280-519556/2-A	Lab Control Sample	Total/NA	Water	7470A	

Filtration Batch: 519592

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143461-5	CDOT I270 ENV 12_2020-SB-35-GW	Dissolved	Water	FILTRATION	

Prep Batch: 519628

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143461-5	CDOT I270 ENV 12_2020-SB-35-GW	Total/NA	Water	3020A	
MB 280-519628/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-519628/2-A	Lab Control Sample	Total/NA	Water	3020A	

Analysis Batch: 519712

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143461-5	CDOT I270 ENV 12_2020-SB-35-GW	Total/NA	Water	7470A	519556
MB 280-519556/1-A	Method Blank	Total/NA	Water	7470A	519556
LCS 280-519556/2-A	Lab Control Sample	Total/NA	Water	7470A	519556

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Metals

Prep Batch: 519762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143461-5	CDOT I270 ENV 12_2020-SB-35-GW	Dissolved	Water	3005A	519592
MB 280-519506/1-E	Method Blank	Dissolved	Water	3005A	519506
LCS 280-519506/2-E	Lab Control Sample	Dissolved	Water	3005A	519506

Analysis Batch: 519850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143461-5	CDOT I270 ENV 12_2020-SB-35-GW	Dissolved	Water	7470A	519550
MB 280-519506/1-B	Method Blank	Dissolved	Water	7470A	519550
LCS 280-519506/2-B	Lab Control Sample	Dissolved	Water	7470A	519550

Prep Batch: 519912

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143461-1	CDOT I270 ENV 12_2020-SB-36-25-30	Total/NA	Solid	7471B	
280-143461-3	CDOT I270 ENV 12_2020-SB-35-5-10	Total/NA	Solid	7471B	
280-143461-4	CDOT I270 ENV 12_2020-SB-35-10-15	Total/NA	Solid	7471B	
MB 280-519912/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 280-519912/2-A	Lab Control Sample	Total/NA	Solid	7471B	

Prep Batch: 519940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143461-1	CDOT I270 ENV 12_2020-SB-36-25-30	Total/NA	Solid	3050B-Sb	
280-143461-3	CDOT I270 ENV 12_2020-SB-35-5-10	Total/NA	Solid	3050B-Sb	
280-143461-4	CDOT I270 ENV 12_2020-SB-35-10-15	Total/NA	Solid	3050B-Sb	
MB 280-519940/1-A	Method Blank	Total/NA	Solid	3050B-Sb	
LCS 280-519940/2-A	Lab Control Sample	Total/NA	Solid	3050B-Sb	
280-143461-1 MS	CDOT I270 ENV 12_2020-SB-36-25-30	Total/NA	Solid	3050B-Sb	
280-143461-1 MSD	CDOT I270 ENV 12_2020-SB-36-25-30	Total/NA	Solid	3050B-Sb	

Prep Batch: 519945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143461-1	CDOT I270 ENV 12_2020-SB-36-25-30	Total/NA	Solid	3050B	
280-143461-3	CDOT I270 ENV 12_2020-SB-35-5-10	Total/NA	Solid	3050B	
280-143461-4	CDOT I270 ENV 12_2020-SB-35-10-15	Total/NA	Solid	3050B	
MB 280-519945/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-519945/2-A	Lab Control Sample	Total/NA	Solid	3050B	
280-143461-1 MS	CDOT I270 ENV 12_2020-SB-36-25-30	Total/NA	Solid	3050B	
280-143461-1 MSD	CDOT I270 ENV 12_2020-SB-36-25-30	Total/NA	Solid	3050B	

Analysis Batch: 520028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143461-1	CDOT I270 ENV 12_2020-SB-36-25-30	Total/NA	Solid	7471B	519912
280-143461-3	CDOT I270 ENV 12_2020-SB-35-5-10	Total/NA	Solid	7471B	519912
280-143461-4	CDOT I270 ENV 12_2020-SB-35-10-15	Total/NA	Solid	7471B	519912
MB 280-519912/1-A	Method Blank	Total/NA	Solid	7471B	519912
LCS 280-519912/2-A	Lab Control Sample	Total/NA	Solid	7471B	519912

Analysis Batch: 520315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143461-5	CDOT I270 ENV 12_2020-SB-35-GW	Dissolved	Water	6020A	519762
MB 280-519506/1-E	Method Blank	Dissolved	Water	6020A	519762
MB 280-519628/1-A	Method Blank	Total/NA	Water	6020A	519628

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QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Metals (Continued)

Analysis Batch: 520315 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-519506/2-E	Lab Control Sample	Dissolved	Water	6020A	519762
LCS 280-519628/2-A	Lab Control Sample	Total/NA	Water	6020A	519628

Analysis Batch: 520450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143461-1	CDOT I270 ENV 12_2020-SB-36-25-30	Total/NA	Solid	6020A	519940
280-143461-3	CDOT I270 ENV 12_2020-SB-35-5-10	Total/NA	Solid	6020A	519940
280-143461-4	CDOT I270 ENV 12_2020-SB-35-10-15	Total/NA	Solid	6020A	519940
MB 280-519940/1-A	Method Blank	Total/NA	Solid	6020A	519940
LCS 280-519940/2-A	Lab Control Sample	Total/NA	Solid	6020A	519940
280-143461-1 MS	CDOT I270 ENV 12_2020-SB-36-25-30	Total/NA	Solid	6020A	519940
280-143461-1 MSD	CDOT I270 ENV 12_2020-SB-36-25-30	Total/NA	Solid	6020A	519940

Analysis Batch: 520635

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143461-1	CDOT I270 ENV 12_2020-SB-36-25-30	Total/NA	Solid	6020A	519945
280-143461-3	CDOT I270 ENV 12_2020-SB-35-5-10	Total/NA	Solid	6020A	519945
280-143461-4	CDOT I270 ENV 12_2020-SB-35-10-15	Total/NA	Solid	6020A	519945
280-143461-5	CDOT I270 ENV 12_2020-SB-35-GW	Total/NA	Water	6020A	519628
MB 280-519628/1-A	Method Blank	Total/NA	Water	6020A	519628
MB 280-519945/1-A	Method Blank	Total/NA	Solid	6020A	519945
LCS 280-519628/2-A	Lab Control Sample	Total/NA	Water	6020A	519628
LCS 280-519945/2-A	Lab Control Sample	Total/NA	Solid	6020A	519945
280-143461-1 MS	CDOT I270 ENV 12_2020-SB-36-25-30	Total/NA	Solid	6020A	519945
280-143461-1 MSD	CDOT I270 ENV 12_2020-SB-36-25-30	Total/NA	Solid	6020A	519945

Analysis Batch: 520821

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143461-4	CDOT I270 ENV 12_2020-SB-35-10-15	Total/NA	Solid	6020A	519945
280-143461-5	CDOT I270 ENV 12_2020-SB-35-GW	Total/NA	Water	6020A	519628

General Chemistry

Analysis Batch: 519820

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143461-1	CDOT I270 ENV 12_2020-SB-36-25-30	Total/NA	Solid	Moisture	
280-143461-3	CDOT I270 ENV 12_2020-SB-35-5-10	Total/NA	Solid	Moisture	
280-143461-4	CDOT I270 ENV 12_2020-SB-35-10-15	Total/NA	Solid	Moisture	
280-143461-1 DU	CDOT I270 ENV 12_2020-SB-36-25-30	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Client Sample ID: CDOT I270 ENV 12_2020-SB-36-25-30

Lab Sample ID: 280-143461-1

Date Collected: 12/03/20 10:40

Matrix: Solid

Date Received: 12/04/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			519820	12/09/20 13:46	IEU	TAL DEN

Client Sample ID: CDOT I270 ENV 12_2020-SB-36-25-30

Lab Sample ID: 280-143461-1

Date Collected: 12/03/20 10:40

Matrix: Solid

Date Received: 12/04/20 14:05

Percent Solids: 92.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.072 g	5 mL	520106	12/03/20 10:40	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	520250	12/11/20 18:41	GPM	TAL DEN
Total/NA	Prep	3550C			32.8 g	1 mL	519377	12/06/20 13:55	AC	TAL DEN
Total/NA	Analysis	8270D		1			520122	12/11/20 15:19	AJE	TAL DEN
Total/NA	Prep	5035			4.89 g	5 mL	520046	12/10/20 23:48	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	520044	12/11/20 09:13	CAS	TAL DEN
Total/NA	Prep	3546			15.1 g	1 mL	519742	12/09/20 10:16	DB	TAL DEN
Total/NA	Analysis	8015C		1			520579	12/16/20 13:31	MAM	TAL DEN
Total/NA	Prep	3050B-Sb			1.179 g	100 mL	519940	12/11/20 16:30	EC	TAL DEN
Total/NA	Analysis	6020A		1			520450	12/14/20 21:21	LMT	TAL DEN
Total/NA	Prep	3050B			1.064 g	100 mL	519945	12/11/20 07:42	MAB	TAL DEN
Total/NA	Analysis	6020A		1			520635	12/15/20 18:33	LMT	TAL DEN
Total/NA	Prep	7471B			.54 g	50 mL	519912	12/10/20 15:30	NK	TAL DEN
Total/NA	Analysis	7471B		1			520028	12/10/20 18:43	NK	TAL DEN

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-5-10

Lab Sample ID: 280-143461-3

Date Collected: 12/04/20 11:40

Matrix: Solid

Date Received: 12/04/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			519820	12/09/20 13:46	IEU	TAL DEN

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-5-10

Lab Sample ID: 280-143461-3

Date Collected: 12/04/20 11:40

Matrix: Solid

Date Received: 12/04/20 14:05

Percent Solids: 93.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.491 g	5 mL	520106	12/04/20 11:40	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	520250	12/11/20 19:04	GPM	TAL DEN
Total/NA	Prep	3550C			31.9 g	1 mL	519377	12/06/20 13:55	AC	TAL DEN
Total/NA	Analysis	8270D		1	200 uL	1.0 mL	520122	12/11/20 15:49	AJE	TAL DEN
Total/NA	Prep	5035			5.183 g	5 mL	520046	12/10/20 23:48	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	520044	12/11/20 10:02	CAS	TAL DEN
Total/NA	Prep	3546			15.4 g	1 mL	519742	12/09/20 10:16	DB	TAL DEN
Total/NA	Analysis	8015C		1			520579	12/16/20 15:26	MAM	TAL DEN
Total/NA	Prep	3050B-Sb			1.119 g	100 mL	519940	12/11/20 16:30	EC	TAL DEN
Total/NA	Analysis	6020A		1			520450	12/14/20 21:39	LMT	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-5-10

Lab Sample ID: 280-143461-3

Date Collected: 12/04/20 11:40

Matrix: Solid

Date Received: 12/04/20 14:05

Percent Solids: 93.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.158 g	100 mL	519945	12/11/20 07:42	MAB	TAL DEN
Total/NA	Analysis	6020A		1			520635	12/15/20 18:50	LMT	TAL DEN
Total/NA	Prep	7471B			.59 g	50 mL	519912	12/10/20 15:30	NK	TAL DEN
Total/NA	Analysis	7471B		1			520028	12/10/20 18:45	NK	TAL DEN

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-10-15

Lab Sample ID: 280-143461-4

Date Collected: 12/04/20 12:00

Matrix: Solid

Date Received: 12/04/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			519820	12/09/20 13:46	IEU	TAL DEN

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-10-15

Lab Sample ID: 280-143461-4

Date Collected: 12/04/20 12:00

Matrix: Solid

Date Received: 12/04/20 14:05

Percent Solids: 54.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.27 g	5 mL	520106	12/04/20 12:00	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	520250	12/11/20 19:26	GPM	TAL DEN
Total/NA	Prep	5035	DL		4.57 g	2.45 mL	520106	12/04/20 12:00	GPM	TAL DEN
Total/NA	Analysis	8260B	DL	50	5 g	5 mL	520536	12/14/20 17:34	GPM	TAL DEN
Total/NA	Prep	3550C	DL		30.1 g	1 mL	519377	12/06/20 13:55	AC	TAL DEN
Total/NA	Analysis	8270D	DL	10			520297	12/14/20 03:39	RDP	TAL DEN
Total/NA	Prep	3550C			30.1 g	1 mL	519377	12/06/20 13:55	AC	TAL DEN
Total/NA	Analysis	8270D		1	200 uL	1.0 mL	520122	12/11/20 16:17	AJE	TAL DEN
Total/NA	Prep	5035			3.843 g	5 mL	520046	12/10/20 23:48	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	520044	12/11/20 10:26	CAS	TAL DEN
Total/NA	Prep	3546			15.6 g	1 mL	519742	12/09/20 10:16	DB	TAL DEN
Total/NA	Analysis	8015C		2			520752	12/16/20 21:57	MAM	TAL DEN
Total/NA	Prep	3050B-Sb			1.220 g	100 mL	519940	12/11/20 16:30	EC	TAL DEN
Total/NA	Analysis	6020A		1			520450	12/14/20 21:43	LMT	TAL DEN
Total/NA	Prep	3050B			1.148 g	100 mL	519945	12/11/20 07:42	MAB	TAL DEN
Total/NA	Analysis	6020A		1			520635	12/15/20 18:54	LMT	TAL DEN
Total/NA	Prep	3050B			1.148 g	100 mL	519945	12/11/20 07:42	MAB	TAL DEN
Total/NA	Analysis	6020A		10			520821	12/16/20 16:46	LMT	TAL DEN
Total/NA	Prep	7471B			.56 g	50 mL	519912	12/10/20 15:30	NK	TAL DEN
Total/NA	Analysis	7471B		1			520028	12/10/20 18:48	NK	TAL DEN

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-GW

Lab Sample ID: 280-143461-5

Date Collected: 12/04/20 12:50

Matrix: Water

Date Received: 12/04/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	520319	12/14/20 14:12	JLS	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	519873	12/10/20 05:47	AAR	TAL DEN

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Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Client Sample ID: CDOT I270 ENV 12_2020-SB-35-GW

Lab Sample ID: 280-143461-5

Date Collected: 12/04/20 12:50

Matrix: Water

Date Received: 12/04/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			250 mL	250 mL	519592	12/08/20 10:09	DEG	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	519762	12/10/20 08:14	MAB	TAL DEN
Dissolved	Analysis	6020A		1			520315	12/11/20 23:49	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	519628	12/09/20 15:45	EC	TAL DEN
Total/NA	Analysis	6020A		1			520635	12/15/20 17:01	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	519628	12/09/20 15:45	EC	TAL DEN
Total/NA	Analysis	6020A		50			520821	12/16/20 16:43	LMT	TAL DEN
Dissolved	Prep	7470A			30 mL	50 mL	519550	12/09/20 12:45	NK	TAL DEN
Dissolved	Analysis	7470A		1			519850	12/09/20 16:06	NK	TAL DEN
Total/NA	Prep	7470A			6 mL	50 mL	519556	12/08/20 13:30	NK	TAL DEN
Total/NA	Analysis	7470A		1			519712	12/08/20 17:59	NK	TAL DEN

Client Sample ID: CDOT I270 ENV 12_2020-SB-TB-03

Lab Sample ID: 280-143461-6

Date Collected: 12/04/20 08:00

Matrix: Water

Date Received: 12/04/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	520319	12/14/20 14:35	JLS	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	519873	12/10/20 11:12	AAR	TAL DEN

Client Sample ID: CDOT I270 ENV 12_2020-SB-TB002

Lab Sample ID: 280-143461-7

Date Collected: 12/03/20 08:00

Matrix: Solid

Date Received: 12/04/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	520106	12/03/20 08:00	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	520250	12/11/20 16:06	GPM	TAL DEN
Total/NA	Prep	5035	DL		5 g	5 mL	520106	12/03/20 08:00	GPM	TAL DEN
Total/NA	Analysis	8260B	DL	50	5 g	5 mL	520536	12/14/20 17:56	GPM	TAL DEN
Total/NA	Prep	5035			5 g	5 mL	520046	12/10/20 23:48	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	520044	12/11/20 09:38	CAS	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-519377/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			30.0 g	1 mL	519377	12/06/20 13:55	AC	TAL DEN
Total/NA	Analysis	8270D		1			520122	12/11/20 14:24	AJE	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Client Sample ID: Method Blank

Lab Sample ID: MB 280-519506/1-B

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	519506	12/07/20 16:06	MAB	TAL DEN
Dissolved	Prep	7470A			30 mL	50 mL	519550	12/09/20 12:45	NK	TAL DEN
Dissolved	Analysis	7470A		1			519850	12/09/20 15:46	NK	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-519506/1-E

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	519506	12/07/20 16:06	MAB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	519762	12/10/20 08:14	MAB	TAL DEN
Dissolved	Analysis	6020A		1			520315	12/11/20 23:20	LMT	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-519556/1-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			30 mL	50 mL	519556	12/08/20 13:30	NK	TAL DEN
Total/NA	Analysis	7470A		1			519712	12/08/20 17:03	NK	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-519628/1-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3020A			50 mL	50 mL	519628	12/09/20 15:45	EC	TAL DEN
Total/NA	Analysis	6020A		1			520315	12/12/20 01:49	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	519628	12/09/20 15:45	EC	TAL DEN
Total/NA	Analysis	6020A		1			520635	12/15/20 16:36	LMT	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-519742/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15 g	1 mL	519742	12/09/20 10:16	DB	TAL DEN
Total/NA	Analysis	8015C		1			520579	12/16/20 01:00	MAM	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-519873/5

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015C		1	5 mL	5 mL	519873	12/09/20 21:22	AAR	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Client Sample ID: Method Blank

Lab Sample ID: MB 280-519912/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			.6 g	50 mL	519912	12/10/20 15:30	NK	TAL DEN
Total/NA	Analysis	7471B		1			520028	12/10/20 17:55	NK	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-519940/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B-Sb			1 g	100 mL	519940	12/11/20 16:30	EC	TAL DEN
Total/NA	Analysis	6020A		1			520450	12/14/20 21:14	LMT	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-519945/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1 g	100 mL	519945	12/11/20 07:42	MAB	TAL DEN
Total/NA	Analysis	6020A		1			520635	12/15/20 18:25	LMT	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-520046/3-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	520046	12/10/20 23:48	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	520044	12/11/20 02:23	CAS	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-520106/3-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	520106	12/11/20 09:00	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	520250	12/11/20 10:33	GPM	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-520106/4-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	520106	12/11/20 09:00	GPM	TAL DEN
Total/NA	Analysis	8260B		50	5 g	5 mL	520250	12/11/20 10:55	GPM	TAL DEN
Total/NA	Prep	5035			5 g	5 mL	520106	12/11/20 09:00	GPM	TAL DEN
Total/NA	Analysis	8260B		50	5 g	5 mL	520536	12/14/20 12:11	GPM	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Client Sample ID: Method Blank

Lab Sample ID: MB 280-520319/9

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	520319	12/14/20 11:55	JLS	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-519377/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			30.0 g	1 mL	519377	12/06/20 13:55	AC	TAL DEN
Total/NA	Analysis	8270D		1			520122	12/11/20 14:52	AJE	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-519506/2-B

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	519506	12/07/20 16:06	MAB	TAL DEN
Dissolved	Prep	7470A			30 mL	50 mL	519550	12/09/20 12:45	NK	TAL DEN
Dissolved	Analysis	7470A		1			519850	12/09/20 15:49	NK	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-519506/2-E

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	519506	12/07/20 16:06	MAB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	519762	12/10/20 08:14	MAB	TAL DEN
Dissolved	Analysis	6020A		1			520315	12/11/20 23:24	LMT	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-519556/2-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			30 mL	50 mL	519556	12/08/20 13:30	NK	TAL DEN
Total/NA	Analysis	7470A		1			519712	12/08/20 17:05	NK	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-519628/2-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3020A			50 mL	50 mL	519628	12/09/20 15:45	EC	TAL DEN
Total/NA	Analysis	6020A		1			520315	12/12/20 01:52	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	519628	12/09/20 15:45	EC	TAL DEN
Total/NA	Analysis	6020A		1			520635	12/15/20 16:40	LMT	TAL DEN

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Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-519742/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15 g	1 mL	519742	12/09/20 10:16	DB	TAL DEN
Total/NA	Analysis	8015C		1			520579	12/16/20 01:23	MAM	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-519742/3-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15 g	1 mL	519742	12/09/20 10:16	DB	TAL DEN
Total/NA	Analysis	8015C		1			520579	12/16/20 01:46	MAM	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-519873/3

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015C		1	5 mL	5 mL	519873	12/09/20 20:37	AAR	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-519912/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			.6 g	50 mL	519912	12/10/20 15:30	NK	TAL DEN
Total/NA	Analysis	7471B		1			520028	12/10/20 17:57	NK	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-519940/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B-Sb			1 g	100 mL	519940	12/11/20 16:30	EC	TAL DEN
Total/NA	Analysis	6020A		1			520450	12/14/20 21:17	LMT	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-519945/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1 g	100 mL	519945	12/11/20 07:42	MAB	TAL DEN
Total/NA	Analysis	6020A		1			520635	12/15/20 18:29	LMT	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-520046/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	520046	12/10/20 23:48	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	520044	12/11/20 01:34	CAS	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-520106/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	520106	12/11/20 09:00	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	520250	12/11/20 09:27	GPM	TAL DEN
Total/NA	Prep	5035			5 g	5 mL	520106	12/11/20 09:00	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	520536	12/14/20 11:04	GPM	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-520319/4

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	520319	12/14/20 10:45	JLS	TAL DEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 280-519873/4

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015C		1	5 mL	5 mL	519873	12/09/20 20:59	AAR	TAL DEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 280-520046/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	520046	12/10/20 23:48	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	520044	12/11/20 01:59	CAS	TAL DEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 280-520106/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	520106	12/11/20 09:00	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	520250	12/11/20 09:49	GPM	TAL DEN
Total/NA	Prep	5035			5 g	5 mL	520106	12/11/20 09:00	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	520536	12/14/20 11:27	GPM	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 280-520319/5

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	520319	12/14/20 11:08	JLS	TAL DEN

Client Sample ID: CDOT I270 ENV 12_2020-SB-36-25-30

Lab Sample ID: 280-143461-1 MS

Date Collected: 12/03/20 10:40

Matrix: Solid

Date Received: 12/04/20 14:05

Percent Solids: 92.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			16.1 g	1 mL	519742	12/09/20 10:16	DB	TAL DEN
Total/NA	Analysis	8015C		1			520579	12/16/20 14:17	MAM	TAL DEN
Total/NA	Prep	3050B-Sb			1.213 g	100 mL	519940	12/11/20 16:30	EC	TAL DEN
Total/NA	Analysis	6020A		1			520450	12/14/20 21:28	LMT	TAL DEN
Total/NA	Prep	3050B			1.371 g	100 mL	519945	12/11/20 07:42	MAB	TAL DEN
Total/NA	Analysis	6020A		1			520635	12/15/20 18:40	LMT	TAL DEN

Client Sample ID: CDOT I270 ENV 12_2020-SB-36-25-30

Lab Sample ID: 280-143461-1 MSD

Date Collected: 12/03/20 10:40

Matrix: Solid

Date Received: 12/04/20 14:05

Percent Solids: 92.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15.6 g	1 mL	519742	12/09/20 10:16	DB	TAL DEN
Total/NA	Analysis	8015C		1			520579	12/16/20 14:40	MAM	TAL DEN
Total/NA	Prep	3050B-Sb			1.122 g	100 mL	519940	12/11/20 16:30	EC	TAL DEN
Total/NA	Analysis	6020A		1			520450	12/14/20 21:32	LMT	TAL DEN
Total/NA	Prep	3050B			1.196 g	100 mL	519945	12/11/20 07:42	MAB	TAL DEN
Total/NA	Analysis	6020A		1			520635	12/15/20 18:43	LMT	TAL DEN

Client Sample ID: CDOT I270 ENV 12_2020-SB-36-25-30

Lab Sample ID: 280-143461-1 DU

Date Collected: 12/03/20 10:40

Matrix: Solid

Date Received: 12/04/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			519820	12/09/20 13:46	IEU	TAL DEN

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-143461-1

Laboratory: Eurofins TestAmerica, Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21
A2LA	ISO/IEC 17025	2907.01	10-31-21
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	02-08-21
Arizona	State	AZ0713	12-19-20
Arkansas DEQ	State	19-047-0	06-01-21
California	State	2513	01-08-21
Connecticut	State	PH-0686	09-30-20 *
Florida	NELAP	E87667-57	07-01-21
Georgia	State	4025-011	01-09-21
Illinois	NELAP	2000172019-1	04-30-21
Iowa	State	IA#370	12-01-20 *
Kansas	NELAP	E-10166	04-30-21
Louisiana	NELAP	30785	06-30-14 *
Louisiana	NELAP	30785	06-30-21
Maine	State	2019011 (231)	03-03-21
Minnesota	NELAP	1788752	12-31-20
Nevada	State	CO000262020-1	07-31-21
New Hampshire	NELAP	205319	04-29-21
New Jersey	NELAP	190002	06-30-21
New York	NELAP	59923	04-01-21
North Carolina (WW/SW)	State	358	12-31-20
North Dakota	State	R-034	01-08-21
Oklahoma	State	2018-006	09-01-21
Oregon	NELAP	4025-011	01-08-21
Pennsylvania	NELAP	013	07-31-21
South Carolina	State	72002001	01-08-21
Texas	NELAP	TX104704183-08-TX	09-30-09 *
Texas	NELAP	T104704183-20-18	09-30-21
US Fish & Wildlife	US Federal Programs	058448	08-01-21
USDA	US Federal Programs	P330-18-00099	03-26-21
Utah	NELAP	QUAN5	06-30-13 *
Utah	NELAP	CO000262019-11	07-31-21
Virginia	NELAP	10490	06-14-21
Washington	State	C583-19	08-03-21
West Virginia DEP	State	354	02-28-21
Wisconsin	State	999615430	08-31-21
Wyoming (UST)	A2LA	2907.01	10-31-21

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Denver #280



Environment Testing America

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 738-0100 Fax (303) 431-7471

Chain of Custody Record

Client Information Mr. Jon Russ Company: Jacobs Engineering Group, Inc. Address: 707 17th Street Suite 2400 City: Denver State: CO Zip: CO, 80202 Phone: Email: jon.russ@jacobs.com Project Name: CDOT I-270 Env-Dec 2020 Site:		Lab PM: Johnston, Michelle A E-Mail: Michelle.Johnston@Eurofins.com State of Origin: Carrier Tracking No(s): Job #:		COC No: 280-104159-29871.1 Page: Page 1 of 1	
Due Date Requested: TAT Requested (days): 15 business day Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No PO #: Purchase Order not required WD #: Project #: 28020733 SSOW#:		Analysis Requested Total 6020A + 7471B (solids) N N N N X 8015C_DRO - TPH - GRO (RO/RO) F N N N X 8015C_GRO - TPH - GRO X X X X X Moisture J-F N F N N X 8260B - VOCs (Terra Cores - 48 hour short holding time) X X X X X Field Filtered Sample (Yes or No) X X X X X Perform MS/MSD (Yes or No) X X X X X 8081B - Pesticides N N N N X 8082A - PCBs N N N N X 8015C_GRO - TPH - GRO (waters) A A D N 8260B - VOCs (waters) A A D N Dissolved 6020A + 7471B (lab filtration/preservation) A A D N		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify) Other: Special Instructions/Note: QA/QC debris (glass) in sample QA/QC	
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=original, B=bioreactor, A=air)	Preservation Code:
CDOT I270 Env 12_2020-SB-36-25-30	12/31/20	1040	G	Solid	
CDOT I270 Env 12_2020-SB-TB-42	12/31/20	0800	G	Solid	
CDOT I270 Env 12_2020-SB-35-5-10	12/4/20	1140	G	Solid	
CDOT I270 Env 12_2020-SB-35-10-15	12/4/20	1200	G	Solid	
CDOT I270 Env 12_2020-SB-35-6W	12/4/20	1250	G	Solid	
CDOT I270 Env 12_2020-SB-TB-43	12/4/20	0800	G	Solid	
CDOT I270 Env 12_2020-SB-				Solid	
CDOT I270 Env 12_2020-SB-				Solid	
CDOT I270 Env 12_2020-SB-				Solid	
CDOT I270 Env 12_2020-SB-				Solid	
CDOT I270 Env 12_2020-SB-				Solid	

280-143461 Chain of Custody

Sample Disposal (see how we assess if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For Months
 Special Instructions/QC Requirements:

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
 Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by:
 Relinquished by: [Signature]
 Date/Time: 12/4/20 1405
 Company: Mass

Method of Shipment:
 Received by: Scott Ball
 Date/Time: 12/4/20 1405
 Company: Eurofins
 Received by: [Signature]
 Date/Time:
 Company:
 Received by:
 Date/Time:
 Company:

Cooler Temperature(s) °C and Other Remarks:
 7.55 7.81 7.91 -0.36 CF



Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 280-143461-1

Login Number: 143461

List Source: Eurofins TestAmerica, Denver

List Number: 1

Creator: O'Hara, Jake F

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	Refer to Job Narrative for details.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Consultant Work Product - Not CDOT Approved - Jacobs Engineering

ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-143671-1
Client Project/Site: CDOT I-270 Env- Dec 2020

For:

Jacobs Engineering Group, Inc.
707 17th Street
Suite 2400
Denver, Colorado 80202

Attn: Mr. Jon Russ



Authorized for release by:
12/31/2020 11:10:31 AM

Michelle Johnston, Project Manager II
(303)736-0110
Michelle.Johnston@Eurofinset.com

LINKS

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results through
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www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.

Metals

Qualifier	Qualifier Description
^+	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number

Eurofins TestAmerica, Denver

Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Glossary (Continued)

Abbreviation **These commonly used abbreviations may or may not be present in this report.**

MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

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Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Job ID: 280-143671-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: Jacobs Engineering Group, Inc.
Project: CDOT I-270 Env-Dec 2020
Report Number: 280-143671-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 12/10/2020 2:51 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 2.3° C, 3.7° C and 4.9° C.

A solid trip blank and water trip blank were submitted for analysis with these samples; however, they were not listed on the Chain of Custody (COC). Three tared methanol and 2 tared DI water vials were received labeled "TB-04" with a collection date/time of 12/9/20 0800. Six hydrochloric acid VOA vials were received that were labeled "TB-05" with a collection date/time of 12/9/20 at 0800. Samples were logged per the volume received.

The container label for the following samples did not match the information listed on the Chain-of-Custody (COC): CDOT I270 Env 12_2020-SB-32-GW (280-143671-1), CDOT I270 Env 12_2020-SB-32-GW-DUP (280-143671-2) and CDOT I270 Env 12_2020-SB-33-GW (280-143671-4). For each of these sample IDs, 4 X 1L amber glass unpreserved bottles were received. However, no corresponding analyses were indicated on the COC the required 1L unpreserved amber glass bottles. The samples were logged for 8270D SVOCs and 8015C DRO-TPH per the volume received and the bottle order. The client was notified on 12/11/2020 and verified 8270D SVOCs and 8015C DRO-TPH were required for these samples.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples CDOT I270 Env 12_2020-SB-32-GW (280-143671-1), CDOT I270 Env 12_2020-SB-32-GW-DUP (280-143671-2), CDOT I270 Env 12_2020-SB-33-GW (280-143671-4) and TB-05 (280-143671-8) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 12/14/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples CDOT I270 Env 12_2020-SB-32-9-11 (280-143671-3), CDOT I270 Env 12_2020-SB-33-6-10 (280-143671-5), CDOT I270 Env 12_2020-SB-38-13-15 (280-143671-6) and TB-04 (280-143671-7) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 12/09/2020 and 12/10/2020 and analyzed on 12/22/2020.

1,4-Dioxane failed the recovery criteria high for the MSD of sample CDOT I270 Env 12_2020-SB-33-6-10MSD (280-143671-5) in batch 280-521399. The acceptable LCS/LCSD analysis data indicated that the analytical system was operating within control; therefore, corrective action was deemed unnecessary.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GC/MS)

Samples CDOT I270 Env 12_2020-SB-32-GW (280-143671-1), CDOT I270 Env 12_2020-SB-32-GW-DUP (280-143671-2) and CDOT I270 Env 12_2020-SB-33-GW (280-143671-4) were analyzed for semivolatile organic compounds (GC-MS) in accordance with SW-846 8270D. The samples were prepared on 12/14/2020 and analyzed on 12/21/2020.

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Job ID: 280-143671-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Terphenyl-d14 (Surr) failed the surrogate recovery criteria low for CDOT I270 Env 12_2020-SB-32-GW (280-143671-1). Terphenyl-d14 (Surr) failed the surrogate recovery criteria low for CDOT I270 Env 12_2020-SB-32-GW-DUP (280-143671-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

2,4,6-Tribromophenol (Surr) failed the surrogate recovery criteria low for CDOT I270 Env 12_2020-SB-33-GW (280-143671-4). Evidence of matrix interferences is not obvious and any corrective action would be performed past holding time. The client was notified and instructed the laboratory to report data without corrective action.

3,3'-Dichlorobenzidine and Benzidine failed the recovery criteria high for LCS 280-520327/2-A. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GC/MS)

Samples CDOT I270 Env 12_2020-SB-32-9-11 (280-143671-3), CDOT I270 Env 12_2020-SB-33-6-10 (280-143671-5) and CDOT I270 Env 12_2020-SB-38-13-15 (280-143671-6) were analyzed for semivolatile organic compounds (GC/MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 12/17/2020 and analyzed on 12/30/2020.

2-Chlorophenol, Benzyl alcohol and Phenol failed the recovery criteria low for LCS 280-520806/2-A. Benzyl alcohol has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. Corrective action for the low recoveries for 2-Chlorophenol and Phenol would be performed greater than 2X the holding time; therefore, the data were reported and flagged accordingly.

Several analytes failed the recovery criteria low for the MS of sample CDOT I270 Env 12_2020-SB-33-6-10MS (280-143671-5) in batch 280-522166. 2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol and Hexachlorocyclopentadiene failed the recovery criteria low for the MSD of sample CDOT I270 Env 12_2020-SB-33-6-10MSD (280-143671-5) in batch 280-522166. The associated LCS was out low for 2-Chlorophenol, Benzyl alcohol and Phenol. Benzyl alcohol has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. Corrective action for the low recoveries for 2-Chlorophenol and Phenol would be performed greater than 2X the holding time; therefore, the data were reported and flagged accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GASOLINE RANGE ORGANICS (GRO)

Samples CDOT I270 Env 12_2020-SB-32-9-11 (280-143671-3), CDOT I270 Env 12_2020-SB-33-6-10 (280-143671-5), CDOT I270 Env 12_2020-SB-38-13-15 (280-143671-6) and TB-04 (280-143671-7) were analyzed for Gasoline Range Organics (GRO) in accordance with EPA SW-846 Method 8015C - GRO. The samples were prepared on 12/16/2020 and analyzed on 12/17/2020.

Gasoline Range Organics (GRO)-C6-C10 failed the recovery criteria high for the MSD of sample CDOT I270 Env 12_2020-SB-33-6-10MSD (280-143671-5) in batch 280-520773. Gasoline Range Organics (GRO)-C6-C10 exceeded the RPD limit. The acceptable LCS/LCSD analysis data indicated that the analytical system was operating within control; therefore, corrective action was deemed unnecessary.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GASOLINE RANGE ORGANICS (GRO)

Samples CDOT I270 Env 12_2020-SB-32-GW (280-143671-1), CDOT I270 Env 12_2020-SB-32-GW-DUP (280-143671-2), CDOT I270 Env 12_2020-SB-33-GW (280-143671-4) and TB-05 (280-143671-8) were analyzed for Gasoline Range Organics (GRO) in accordance with EPA SW-846 Method 8015C - GRO. The samples were analyzed on 12/19/2020.

The following sample was decanted into secondary vial due to abundant soil/solids in original: CDOT I270 Env 12_2020-SB-32-GW (280-143671-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DIESEL RANGE ORGANICS

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Job ID: 280-143671-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Samples CDOT I270 Env 12_2020-SB-32-GW (280-143671-1), CDOT I270 Env 12_2020-SB-32-GW-DUP (280-143671-2) and CDOT I270 Env 12_2020-SB-33-GW (280-143671-4) were analyzed for Diesel Range Organics in accordance with EPA SW-846 Method 8015C - DRO. The samples were prepared on 12/17/2020 and analyzed on 12/24/2020.

The following samples were prepared outside of preparation holding time due to laboratory oversight: CDOT I270 Env 12_2020-SB-32-GW (280-143671-1) and CDOT I270 Env 12_2020-SB-32-GW-DUP (280-143671-2).

The following samples contain sediment: CDOT I270 Env 12_2020-SB-32-GW (280-143671-1), CDOT I270 Env 12_2020-SB-32-GW-DUP (280-143671-2) and CDOT I270 Env 12_2020-SB-33-GW (280-143671-4).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DIESEL RANGE ORGANICS

Samples CDOT I270 Env 12_2020-SB-32-9-11 (280-143671-3), CDOT I270 Env 12_2020-SB-33-6-10 (280-143671-5) and CDOT I270 Env 12_2020-SB-38-13-15 (280-143671-6) were analyzed for diesel range organics in accordance with EPA SW-846 Method 8015C - DRO. The samples were prepared on 12/12/2020 and analyzed on 12/14/2020 and 12/15/2020.

The following samples contain sediment: CDOT I270 Env 12_2020-SB-32-GW (280-143671-1), CDOT I270 Env 12_2020-SB-32-GW-DUP (280-143671-2) and CDOT I270 Env 12_2020-SB-33-GW (280-143671-4).

The following sample was diluted due to the sample matrix being black and viscous: CDOT I270 Env 12_2020-SB-32-9-11 (280-143671-3). Elevated reporting limits (RL) are provided.

o-Terphenyl (Surr) failed the surrogate recovery criteria high for CDOT I270 Env 12_2020-SB-33-6-10MS (280-143671-5MS). Diesel Range Organics [C10-C28] failed the recovery criteria high for the MS of sample CDOT I270 Env 12_2020-SB-33-6-10MS (280-143671-5) in batch 280-520371. Diesel Range Organics [C10-C28] exceeded the RPD limit for the MSD of sample CDOT I270 Env 12_2020-SB-33-6-10MSD (280-143671-5) in batch 280-520371. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action was deemed unnecessary.

The closing continuing calibration verification (CCV) associated with batch 280-520371 recovered above the upper control limit (+20%D) for n-Octacosane (+21.3%D). ORO (C20-C38), DRO (C10-C28) and o-Terphenyl recovered within %D limits. The opening CCV met acceptance criteria. The samples associated with this CCV have surrogate recoveries well within acceptance criteria; therefore, the data have been reported. The associated samples are impacted: CDOT I270 Env 12_2020-SB-38-13-15 (280-143671-6) and (CCV 280-520371/24).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

METALS (ICPMS)

Samples CDOT I270 Env 12_2020-SB-32-9-11 (280-143671-3), CDOT I270 Env 12_2020-SB-33-6-10 (280-143671-5) and CDOT I270 Env 12_2020-SB-38-13-15 (280-143671-6) were analyzed for metals (ICPMS) in accordance with SW 846 6020A. The samples were prepared and analyzed on 12/17/2020.

Chromium was detected in method blank MB 280-520527/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Barium failed the recovery criteria high for the MS of sample CDOT I270 Env 12_2020-SB-33-6-10MS (280-143671-5) in batch 280-520948. Barium, Cadmium and Chromium exceeded the RPD limit for the MSD of sample CDOT I270 Env 12_2020-SB-33-6-10MSD (280-143671-5) in batch 280-520948. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action was deemed unnecessary.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP/MS)

Samples CDOT I270 Env 12_2020-SB-32-9-11 (280-143671-3), CDOT I270 Env 12_2020-SB-33-6-10 (280-143671-5) and CDOT I270

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Job ID: 280-143671-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Env 12_2020-SB-38-13-15 (280-143671-6) were analyzed for Total Metals (ICP/MS) in accordance with 6020A. The samples were prepared on 12/16/2020 and analyzed on 12/17/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED METALS (ICPMS)

Samples CDOT I270 Env 12_2020-SB-32-GW (280-143671-1), CDOT I270 Env 12_2020-SB-32-GW-DUP (280-143671-2) and CDOT I270 Env 12_2020-SB-33-GW (280-143671-4) were analyzed for dissolved metals (ICPMS) in accordance with EPA SW-846 Methods 6020A. The samples were prepared on 12/17/2020 and analyzed on 12/17/2020 and 12/18/2020.

Barium, Dissolved failed the recovery criteria low for the MS of sample CDOT I270 Env 12_2020-SB-33-GWMS (280-143671-4) in batch 280-521220. Barium, Dissolved failed the recovery criteria low for the MSD of sample CDOT I270 Env 12_2020-SB-33-GWMSD (280-143671-4) in batch 280-521220. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action was deemed unnecessary.

The continuing calibration verification (CCV) associated with batch 280-521220 recovered above the upper control limit (110%) for Selenium, Dissolved (116%D & 119%D). The samples associated with this CCV were <RL for the affected analytes; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICPMS)

Samples CDOT I270 Env 12_2020-SB-32-GW (280-143671-1), CDOT I270 Env 12_2020-SB-32-GW-DUP (280-143671-2) and CDOT I270 Env 12_2020-SB-33-GW (280-143671-4) were analyzed for total metals (ICPMS) in accordance with EPA SW-846 6020A. The samples were prepared on 12/16/2020 and analyzed on 12/17/2020 and 12/18/2020.

Chromium was detected in method blank MB 280-520517/1-A at a level that was above the reporting limit. Associated samples were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

The instrument blank for analytical batch 280-520969 contained Barium greater than one-half the reporting limit (RL). Associated samples were not re-analyzed because results were greater than 10X the value found in the blank.

Several analytes failed the recovery criteria low for the MS of sample CDOT I270 Env 12_2020-SB-33-GWMS (280-143671-4) in batch 280-520969. Several analytes failed the recovery criteria low for the MSD of sample CDOT I270 Env 12_2020-SB-33-GWMSD (280-143671-4) in batch 280-520969. The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action was deemed unnecessary.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED MERCURY

Samples CDOT I270 Env 12_2020-SB-32-GW (280-143671-1), CDOT I270 Env 12_2020-SB-32-GW-DUP (280-143671-2) and CDOT I270 Env 12_2020-SB-33-GW (280-143671-4) were analyzed for dissolved mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 12/17/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Samples CDOT I270 Env 12_2020-SB-32-GW (280-143671-1), CDOT I270 Env 12_2020-SB-32-GW-DUP (280-143671-2) and CDOT I270 Env 12_2020-SB-33-GW (280-143671-4) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 12/15/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY (CVAA)

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Job ID: 280-143671-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Samples CDOT I270 Env 12_2020-SB-32-9-11 (280-143671-3), CDOT I270 Env 12_2020-SB-33-6-10 (280-143671-5) and CDOT I270 Env 12_2020-SB-38-13-15 (280-143671-6) were analyzed for total mercury (CVAA) in accordance with EPA SW-846 Method 7471B. The samples were prepared and analyzed on 12/12/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

Samples CDOT I270 Env 12_2020-SB-32-9-11 (280-143671-3), CDOT I270 Env 12_2020-SB-33-6-10 (280-143671-5) and CDOT I270 Env 12_2020-SB-38-13-15 (280-143671-6) were analyzed for percent solids in accordance with ASTM D2216-90. The samples were analyzed on 12/16/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

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Detection Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Client Sample ID: CDOT I270 Env 12_2020-SB-32-GW

Lab Sample ID: 280-143671-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	1.2	H	0.24	0.032	mg/L	1		8015C	Total/NA
Motor Oil (C20-C38)	1.0	H	0.48	0.054	mg/L	1		8015C	Total/NA
Arsenic	58		5.0	0.33	ug/L	1		6020A	Total/NA
Barium	4800		1.0	0.29	ug/L	1		6020A	Total/NA
Cadmium	1.8		1.0	0.27	ug/L	1		6020A	Total/NA
Chromium	310	B	2.0	0.50	ug/L	1		6020A	Total/NA
Lead	230		1.0	0.18	ug/L	1		6020A	Total/NA
Selenium	37		5.0	0.37	ug/L	1		6020A	Total/NA
Silver	1.4	J	5.0	0.033	ug/L	1		6020A	Total/NA
Arsenic, Dissolved	0.33	J	5.0	0.33	ug/L	1		6020A	Dissolved
Barium, Dissolved	94		1.0	0.29	ug/L	1		6020A	Dissolved
Chromium, Dissolved	1.7	J	2.0	0.50	ug/L	1		6020A	Dissolved
Lead, Dissolved	0.21	J	1.0	0.18	ug/L	1		6020A	Dissolved
Selenium, Dissolved	8.7		5.0	0.37	ug/L	1		6020A	Dissolved
Mercury	0.55	J	1.0	0.14	ug/L	1		7470A	Total/NA

Client Sample ID: CDOT I270 Env 12_2020-SB-32-GW-DUP

Lab Sample ID: 280-143671-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bis(2-ethylhexyl) phthalate	0.56	J	9.8	0.55	ug/L	1		8270D	Total/NA
Phenol	2.1	J	9.8	2.0	ug/L	1		8270D	Total/NA
Diesel Range Organics [C10-C28]	0.71	H	0.24	0.032	mg/L	1		8015C	Total/NA
Motor Oil (C20-C38)	0.65	H	0.49	0.055	mg/L	1		8015C	Total/NA
Arsenic	61		5.0	0.33	ug/L	1		6020A	Total/NA
Barium	5000		1.0	0.29	ug/L	1		6020A	Total/NA
Cadmium	1.8		1.0	0.27	ug/L	1		6020A	Total/NA
Chromium	330	B	2.0	0.50	ug/L	1		6020A	Total/NA
Lead	240		1.0	0.18	ug/L	1		6020A	Total/NA
Selenium	39		5.0	0.37	ug/L	1		6020A	Total/NA
Silver	1.5	J	5.0	0.033	ug/L	1		6020A	Total/NA
Arsenic, Dissolved	0.34	J	5.0	0.33	ug/L	1		6020A	Dissolved
Barium, Dissolved	94		1.0	0.29	ug/L	1		6020A	Dissolved
Selenium, Dissolved	8.8		5.0	0.37	ug/L	1		6020A	Dissolved
Mercury	0.64	J	1.0	0.14	ug/L	1		7470A	Total/NA
Mercury, Dissolved	0.052	J	0.20	0.027	ug/L	1		7470A	Dissolved

Client Sample ID: CDOT I270 Env 12_2020-SB-32-9-11

Lab Sample ID: 280-143671-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3-Trichlorobenzene	1.4	J	4.9	0.79	ug/Kg	1	*	8260B	Total/NA
1,2,4-Trichlorobenzene	1.0	J	4.9	0.71	ug/Kg	1	*	8260B	Total/NA
1,4-Dichlorobenzene	0.30	J	4.9	0.24	ug/Kg	1	*	8260B	Total/NA
2-Butanone (MEK)	6.3	J	19	3.8	ug/Kg	1	*	8260B	Total/NA
Toluene	0.24	J	4.9	0.22	ug/Kg	1	*	8260B	Total/NA
Benzo[a]anthracene	45	J	350	21	ug/Kg	1	*	8270D	Total/NA
Benzo[a]pyrene	63	J	350	21	ug/Kg	1	*	8270D	Total/NA
Benzo[b]fluoranthene	81	J	350	27	ug/Kg	1	*	8270D	Total/NA
Benzo[g,h,i]perylene	59	J	350	17	ug/Kg	1	*	8270D	Total/NA
Chrysene	54	J	350	28	ug/Kg	1	*	8270D	Total/NA
Fluoranthene	59	J	350	38	ug/Kg	1	*	8270D	Total/NA
Hexadecane	38	J	350	14	ug/Kg	1	*	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	51	J	350	23	ug/Kg	1	*	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Client Sample ID: CDOT I270 Env 12_2020-SB-32-9-11
(Continued)

Lab Sample ID: 280-143671-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	45	J	350	18	ug/Kg	1	✳	8270D	Total/NA
Pyrene	56	J	350	13	ug/Kg	1	✳	8270D	Total/NA
Diesel Range Organics [C10-C28]	66		16	7.1	mg/Kg	2	✳	8015C	Total/NA
Motor Oil (C20-C38)	160		47	15	mg/Kg	2	✳	8015C	Total/NA
Arsenic	2.0		0.56	0.047	mg/Kg	1	✳	6020A	Total/NA
Silver	70	J	100	7.9	ug/Kg	1	✳	6020A	Total/NA
Barium	72		0.37	0.066	mg/Kg	1	✳	6020A	Total/NA
Cadmium	0.13		0.093	0.0087	mg/Kg	1	✳	6020A	Total/NA
Chromium	11	B	0.19	0.071	mg/Kg	1	✳	6020A	Total/NA
Lead	20		0.14	0.017	mg/Kg	1	✳	6020A	Total/NA
Mercury	46		20	6.6	ug/Kg	1	✳	7471B	Total/NA

Client Sample ID: CDOT I270 Env 12_2020-SB-33-GW

Lab Sample ID: 280-143671-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.30	J	1.0	0.15	ug/L	1		8260B	Total/NA
Tetrachloroethene	1.2		1.0	0.20	ug/L	1		8260B	Total/NA
Trichloroethene	0.39	J	1.0	0.16	ug/L	1		8260B	Total/NA
1,4-Dioxane	1.3	J	20	0.44	ug/L	1		8270D	Total/NA
Diesel Range Organics [C10-C28]	0.12	J	0.24	0.032	mg/L	1		8015C	Total/NA
Motor Oil (C20-C38)	0.20	J	0.49	0.055	mg/L	1		8015C	Total/NA
Arsenic	63	F1	5.0	0.33	ug/L	1		6020A	Total/NA
Barium	4500		1.0	0.29	ug/L	1		6020A	Total/NA
Cadmium	3.3		1.0	0.27	ug/L	1		6020A	Total/NA
Chromium	310	B	2.0	0.50	ug/L	1		6020A	Total/NA
Lead	240		1.0	0.18	ug/L	1		6020A	Total/NA
Selenium	5.3	F1	5.0	0.37	ug/L	1		6020A	Total/NA
Silver	1.3	J	5.0	0.033	ug/L	1		6020A	Total/NA
Arsenic, Dissolved	0.98	J	5.0	0.33	ug/L	1		6020A	Dissolved
Barium, Dissolved	140	F1	1.0	0.29	ug/L	1		6020A	Dissolved
Chromium, Dissolved	0.53	J	2.0	0.50	ug/L	1		6020A	Dissolved
Selenium, Dissolved	2.1	J, +	5.0	0.37	ug/L	1		6020A	Dissolved
Mercury	0.41	J	1.0	0.14	ug/L	1		7470A	Total/NA
Mercury, Dissolved	0.033	J	0.20	0.027	ug/L	1		7470A	Dissolved

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10

Lab Sample ID: 280-143671-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Motor Oil (C20-C38)	15	J	23	7.5	mg/Kg	1	✳	8015C	Total/NA
Arsenic	0.75		0.46	0.039	mg/Kg	1	✳	6020A	Total/NA
Barium	21	F2 F1	0.31	0.054	mg/Kg	1	✳	6020A	Total/NA
Cadmium	0.032	J F2	0.077	0.0072	mg/Kg	1	✳	6020A	Total/NA
Chromium	2.0	F2 B	0.15	0.059	mg/Kg	1	✳	6020A	Total/NA
Lead	2.4		0.12	0.014	mg/Kg	1	✳	6020A	Total/NA

Client Sample ID: CDOT I270 Env 12_2020-SB-38-13-15

Lab Sample ID: 280-143671-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.1		0.51	0.043	mg/Kg	1	✳	6020A	Total/NA
Silver	11	J	84	6.5	ug/Kg	1	✳	6020A	Total/NA
Barium	78		0.34	0.059	mg/Kg	1	✳	6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Client Sample ID: CDOT I270 Env 12_2020-SB-38-13-15
(Continued)

Lab Sample ID: 280-143671-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Cadmium	0.19		0.084	0.0079	mg/Kg	1		*	6020A	Total/NA
Chromium	7.6	B	0.17	0.064	mg/Kg	1		*	6020A	Total/NA
Lead	21		0.13	0.015	mg/Kg	1		*	6020A	Total/NA
Selenium	0.15	J	0.42	0.11	mg/Kg	1		*	6020A	Total/NA
Mercury	8.7	J	19	6.0	ug/Kg	1		*	7471B	Total/NA

Client Sample ID: TB-04

Lab Sample ID: 280-143671-7

No Detections.

Client Sample ID: TB-05

Lab Sample ID: 280-143671-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Acetone	2.2	J	10	1.9	ug/L	1			8260B	Total/NA

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Method Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL DEN
8015C	Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)	SW846	TAL DEN
8015C	Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)	SW846	TAL DEN
6020A	Metals (ICP/MS)	SW846	TAL DEN
7470A	Mercury (CVAA)	SW846	TAL DEN
7471B	Mercury (CVAA)	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL DEN
3020A	Preparation, Total Metals	SW846	TAL DEN
3050B	Preparation, Metals	SW846	TAL DEN
3050B-Sb	Preparation, Metals (Antimony)	SW846	TAL DEN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL DEN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL DEN
3546	Microwave Extraction	SW846	TAL DEN
3550C	Ultrasonic Extraction	SW846	TAL DEN
5030B	Purge and Trap	SW846	TAL DEN
5030C	Purge and Trap	SW846	TAL DEN
5035	Closed System Purge and Trap	SW846	TAL DEN
7470A	Preparation, Mercury	SW846	TAL DEN
7471B	Preparation, Mercury	SW846	TAL DEN
FILTRATION	Sample Filtration	None	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-143671-1	CDOT I270 Env 12_2020-SB-32-GW	Water	12/09/20 09:30	12/10/20 14:51	
280-143671-2	CDOT I270 Env 12_2020-SB-32-GW-DUP	Water	12/09/20 09:30	12/10/20 14:51	
280-143671-3	CDOT I270 Env 12_2020-SB-32-9-11	Solid	12/09/20 09:00	12/10/20 14:51	
280-143671-4	CDOT I270 Env 12_2020-SB-33-GW	Water	12/10/20 12:00	12/10/20 14:51	
280-143671-5	CDOT I270 Env 12_2020-SB-33-6-10	Solid	12/10/20 11:15	12/10/20 14:51	
280-143671-6	CDOT I270 Env 12_2020-SB-38-13-15	Solid	12/10/20 13:15	12/10/20 14:51	
280-143671-7	TB-04	Solid	12/09/20 08:00	12/10/20 14:51	
280-143671-8	TB-05	Water	12/09/20 08:00	12/10/20 14:51	

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env 12_2020-SB-32-GW

Lab Sample ID: 280-143671-1

Date Collected: 12/09/20 09:30

Matrix: Water

Date Received: 12/10/20 14:51

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			12/14/20 16:29	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			12/14/20 16:29	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			12/14/20 16:29	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			12/14/20 16:29	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			12/14/20 16:29	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			12/14/20 16:29	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			12/14/20 16:29	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			12/14/20 16:29	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			12/14/20 16:29	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			12/14/20 16:29	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			12/14/20 16:29	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/14/20 16:29	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			12/14/20 16:29	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/14/20 16:29	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			12/14/20 16:29	1
1,4-Dioxane	ND		200	19	ug/L			12/14/20 16:29	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			12/14/20 16:29	1
2-Hexanone	ND		5.0	1.7	ug/L			12/14/20 16:29	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			12/14/20 16:29	1
Acetone	ND		10	1.9	ug/L			12/14/20 16:29	1
Benzene	ND		1.0	0.16	ug/L			12/14/20 16:29	1
Bromoform	ND		1.0	0.46	ug/L			12/14/20 16:29	1
Bromomethane	ND		2.0	0.21	ug/L			12/14/20 16:29	1
Carbon disulfide	ND		2.0	0.17	ug/L			12/14/20 16:29	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			12/14/20 16:29	1
Chlorobenzene	ND		1.0	0.17	ug/L			12/14/20 16:29	1
Chlorobromomethane	ND		1.0	0.10	ug/L			12/14/20 16:29	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			12/14/20 16:29	1
Chloroethane	ND		2.0	0.41	ug/L			12/14/20 16:29	1
Chloroform	ND		1.0	0.16	ug/L			12/14/20 16:29	1
Chloromethane	ND		2.0	0.30	ug/L			12/14/20 16:29	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			12/14/20 16:29	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			12/14/20 16:29	1
Cyclohexane	ND		2.0	0.28	ug/L			12/14/20 16:29	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			12/14/20 16:29	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			12/14/20 16:29	1
Ethylbenzene	ND		1.0	0.16	ug/L			12/14/20 16:29	1
Isopropylbenzene	ND		1.0	0.19	ug/L			12/14/20 16:29	1
Methyl acetate	ND		5.0	1.6	ug/L			12/14/20 16:29	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			12/14/20 16:29	1
Methylcyclohexane	ND		1.0	0.10	ug/L			12/14/20 16:29	1
Methylene Chloride	ND		2.0	0.94	ug/L			12/14/20 16:29	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			12/14/20 16:29	1
o-Xylene	ND		1.0	0.19	ug/L			12/14/20 16:29	1
Styrene	ND		1.0	0.36	ug/L			12/14/20 16:29	1
Tetrachloroethene	ND		1.0	0.20	ug/L			12/14/20 16:29	1
Toluene	ND		1.0	0.17	ug/L			12/14/20 16:29	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			12/14/20 16:29	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			12/14/20 16:29	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env 12_2020-SB-32-GW

Date Collected: 12/09/20 09:30

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		1.0	0.16	ug/L			12/14/20 16:29	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			12/14/20 16:29	1
Vinyl chloride	ND		1.0	0.10	ug/L			12/14/20 16:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		70 - 127					12/14/20 16:29	1
4-Bromofluorobenzene (Surr)	100		78 - 120					12/14/20 16:29	1
Dibromofluoromethane (Surr)	101		77 - 120					12/14/20 16:29	1
Toluene-d8 (Surr)	99		80 - 125					12/14/20 16:29	1

Client Sample ID: CDOT I270 Env 12_2020-SB-32-GW-DUP

Date Collected: 12/09/20 09:30

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			12/14/20 16:51	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			12/14/20 16:51	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			12/14/20 16:51	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			12/14/20 16:51	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			12/14/20 16:51	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			12/14/20 16:51	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			12/14/20 16:51	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			12/14/20 16:51	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			12/14/20 16:51	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			12/14/20 16:51	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			12/14/20 16:51	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/14/20 16:51	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			12/14/20 16:51	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/14/20 16:51	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			12/14/20 16:51	1
1,4-Dioxane	ND		200	19	ug/L			12/14/20 16:51	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			12/14/20 16:51	1
2-Hexanone	ND		5.0	1.7	ug/L			12/14/20 16:51	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			12/14/20 16:51	1
Acetone	ND		10	1.9	ug/L			12/14/20 16:51	1
Benzene	ND		1.0	0.16	ug/L			12/14/20 16:51	1
Bromoform	ND		1.0	0.46	ug/L			12/14/20 16:51	1
Bromomethane	ND		2.0	0.21	ug/L			12/14/20 16:51	1
Carbon disulfide	ND		2.0	0.17	ug/L			12/14/20 16:51	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			12/14/20 16:51	1
Chlorobenzene	ND		1.0	0.17	ug/L			12/14/20 16:51	1
Chlorobromomethane	ND		1.0	0.10	ug/L			12/14/20 16:51	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			12/14/20 16:51	1
Chloroethane	ND		2.0	0.41	ug/L			12/14/20 16:51	1
Chloroform	ND		1.0	0.16	ug/L			12/14/20 16:51	1
Chloromethane	ND		2.0	0.30	ug/L			12/14/20 16:51	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			12/14/20 16:51	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			12/14/20 16:51	1
Cyclohexane	ND		2.0	0.28	ug/L			12/14/20 16:51	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			12/14/20 16:51	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			12/14/20 16:51	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env 12_2020-SB-32-GW-DUP

Date Collected: 12/09/20 09:30

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		1.0	0.16	ug/L			12/14/20 16:51	1
Isopropylbenzene	ND		1.0	0.19	ug/L			12/14/20 16:51	1
Methyl acetate	ND		5.0	1.6	ug/L			12/14/20 16:51	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			12/14/20 16:51	1
Methylcyclohexane	ND		1.0	0.10	ug/L			12/14/20 16:51	1
Methylene Chloride	ND		2.0	0.94	ug/L			12/14/20 16:51	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			12/14/20 16:51	1
o-Xylene	ND		1.0	0.19	ug/L			12/14/20 16:51	1
Styrene	ND		1.0	0.36	ug/L			12/14/20 16:51	1
Tetrachloroethene	ND		1.0	0.20	ug/L			12/14/20 16:51	1
Toluene	ND		1.0	0.17	ug/L			12/14/20 16:51	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			12/14/20 16:51	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			12/14/20 16:51	1
Trichloroethene	ND		1.0	0.16	ug/L			12/14/20 16:51	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			12/14/20 16:51	1
Vinyl chloride	ND		1.0	0.10	ug/L			12/14/20 16:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	84		70 - 127		12/14/20 16:51	1
4-Bromofluorobenzene (Surr)	100		78 - 120		12/14/20 16:51	1
Dibromofluoromethane (Surr)	99		77 - 120		12/14/20 16:51	1
Toluene-d8 (Surr)	100		80 - 125		12/14/20 16:51	1

Client Sample ID: CDOT I270 Env 12_2020-SB-32-9-11

Date Collected: 12/09/20 09:00

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-3

Matrix: Solid

Percent Solids: 92.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		4.9	1.9	ug/Kg	✱	12/09/20 09:00	12/22/20 15:06	1
1,1,1,2-Tetrachloroethane	ND		4.9	0.28	ug/Kg	✱	12/09/20 09:00	12/22/20 15:06	1
1,1,2-Trichloroethane	ND		4.9	0.86	ug/Kg	✱	12/09/20 09:00	12/22/20 15:06	1
1,1,2-Trichlorotrifluoroethane	ND		19	1.6	ug/Kg	✱	12/09/20 09:00	12/22/20 15:06	1
1,1-Dichloroethane	ND		4.9	0.20	ug/Kg	✱	12/09/20 09:00	12/22/20 15:06	1
1,1-Dichloroethene	ND		4.9	0.57	ug/Kg	✱	12/09/20 09:00	12/22/20 15:06	1
1,2,3-Trichlorobenzene	1.4	J	4.9	0.79	ug/Kg	✱	12/09/20 09:00	12/22/20 15:06	1
1,2,4-Trichlorobenzene	1.0	J	4.9	0.71	ug/Kg	✱	12/09/20 09:00	12/22/20 15:06	1
1,2-Dibromo-3-Chloropropane	ND		9.7	3.6	ug/Kg	✱	12/09/20 09:00	12/22/20 15:06	1
1,2-Dibromoethane	ND		4.9	0.51	ug/Kg	✱	12/09/20 09:00	12/22/20 15:06	1
1,2-Dichlorobenzene	ND		4.9	1.8	ug/Kg	✱	12/09/20 09:00	12/22/20 15:06	1
1,2-Dichloroethane	ND		4.9	0.68	ug/Kg	✱	12/09/20 09:00	12/22/20 15:06	1
1,2-Dichloropropane	ND		4.9	0.54	ug/Kg	✱	12/09/20 09:00	12/22/20 15:06	1
1,3-Dichlorobenzene	ND		4.9	0.47	ug/Kg	✱	12/09/20 09:00	12/22/20 15:06	1
1,4-Dichlorobenzene	0.30	J	4.9	0.24	ug/Kg	✱	12/09/20 09:00	12/22/20 15:06	1
1,4-Dioxane	ND		490	55	ug/Kg	✱	12/09/20 09:00	12/22/20 15:06	1
2-Butanone (MEK)	6.3	J	19	3.8	ug/Kg	✱	12/09/20 09:00	12/22/20 15:06	1
2-Hexanone	ND		19	4.8	ug/Kg	✱	12/09/20 09:00	12/22/20 15:06	1
4-Methyl-2-pentanone (MIBK)	ND		19	4.2	ug/Kg	✱	12/09/20 09:00	12/22/20 15:06	1
Acetone	ND		70	35	ug/Kg	✱	12/09/20 09:00	12/22/20 15:06	1
Benzene	ND		4.9	0.15	ug/Kg	✱	12/09/20 09:00	12/22/20 15:06	1
Bromoform	ND		5.0	2.5	ug/Kg	✱	12/09/20 09:00	12/22/20 15:06	1
Bromomethane	ND		9.7	1.3	ug/Kg	✱	12/09/20 09:00	12/22/20 15:06	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env 12_2020-SB-32-9-11

Date Collected: 12/09/20 09:00

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-3

Matrix: Solid

Percent Solids: 92.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		4.9	1.6	ug/Kg	☼	12/09/20 09:00	12/22/20 15:06	1
Carbon tetrachloride	ND		4.9	2.0	ug/Kg	☼	12/09/20 09:00	12/22/20 15:06	1
Chlorobenzene	ND		4.9	2.0	ug/Kg	☼	12/09/20 09:00	12/22/20 15:06	1
Chlorobromomethane	ND		4.9	2.4	ug/Kg	☼	12/09/20 09:00	12/22/20 15:06	1
Chlorodibromomethane	ND		4.9	2.2	ug/Kg	☼	12/09/20 09:00	12/22/20 15:06	1
Chloroethane	ND		9.7	1.9	ug/Kg	☼	12/09/20 09:00	12/22/20 15:06	1
Chloroform	ND		9.7	0.28	ug/Kg	☼	12/09/20 09:00	12/22/20 15:06	1
Chloromethane	ND		9.7	0.75	ug/Kg	☼	12/09/20 09:00	12/22/20 15:06	1
cis-1,2-Dichloroethene	ND		2.4	0.20	ug/Kg	☼	12/09/20 09:00	12/22/20 15:06	1
cis-1,3-Dichloropropene	ND		4.9	0.097	ug/Kg	☼	12/09/20 09:00	12/22/20 15:06	1
Cyclohexane	ND		4.9	1.7	ug/Kg	☼	12/09/20 09:00	12/22/20 15:06	1
Dichlorobromomethane	ND		4.9	2.1	ug/Kg	☼	12/09/20 09:00	12/22/20 15:06	1
Dichlorodifluoromethane	ND		9.7	2.7	ug/Kg	☼	12/09/20 09:00	12/22/20 15:06	1
Ethylbenzene	ND		4.9	0.30	ug/Kg	☼	12/09/20 09:00	12/22/20 15:06	1
Isopropylbenzene	ND		4.9	2.3	ug/Kg	☼	12/09/20 09:00	12/22/20 15:06	1
Methyl acetate	ND		9.7	2.7	ug/Kg	☼	12/09/20 09:00	12/22/20 15:06	1
Methyl tert-butyl ether	ND		19	2.1	ug/Kg	☼	12/09/20 09:00	12/22/20 15:06	1
Methylcyclohexane	ND		4.9	0.41	ug/Kg	☼	12/09/20 09:00	12/22/20 15:06	1
Methylene Chloride	ND		4.9	1.6	ug/Kg	☼	12/09/20 09:00	12/22/20 15:06	1
m-Xylene & p-Xylene	ND		2.4	1.0	ug/Kg	☼	12/09/20 09:00	12/22/20 15:06	1
o-Xylene	ND		2.4	0.26	ug/Kg	☼	12/09/20 09:00	12/22/20 15:06	1
Styrene	ND		4.9	0.27	ug/Kg	☼	12/09/20 09:00	12/22/20 15:06	1
Tetrachloroethene	ND		4.9	1.9	ug/Kg	☼	12/09/20 09:00	12/22/20 15:06	1
Toluene	0.24	J	4.9	0.22	ug/Kg	☼	12/09/20 09:00	12/22/20 15:06	1
trans-1,2-Dichloroethene	ND		2.4	0.38	ug/Kg	☼	12/09/20 09:00	12/22/20 15:06	1
trans-1,3-Dichloropropene	ND		4.9	0.081	ug/Kg	☼	12/09/20 09:00	12/22/20 15:06	1
Trichloroethene	ND		4.9	1.9	ug/Kg	☼	12/09/20 09:00	12/22/20 15:06	1
Trichlorofluoromethane	ND		9.7	3.1	ug/Kg	☼	12/09/20 09:00	12/22/20 15:06	1
Vinyl chloride	ND		4.9	1.3	ug/Kg	☼	12/09/20 09:00	12/22/20 15:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		58 - 140				12/09/20 09:00	12/22/20 15:06	1
4-Bromofluorobenzene (Surr)	101		76 - 127				12/09/20 09:00	12/22/20 15:06	1
Dibromofluoromethane (Surr)	101		75 - 121				12/09/20 09:00	12/22/20 15:06	1
Toluene-d8 (Surr)	97		80 - 126				12/09/20 09:00	12/22/20 15:06	1

Client Sample ID: CDOT I270 Env 12_2020-SB-33-GW

Date Collected: 12/10/20 12:00

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			12/14/20 17:14	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			12/14/20 17:14	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			12/14/20 17:14	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			12/14/20 17:14	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			12/14/20 17:14	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			12/14/20 17:14	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			12/14/20 17:14	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			12/14/20 17:14	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			12/14/20 17:14	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			12/14/20 17:14	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env 12_2020-SB-33-GW

Lab Sample ID: 280-143671-4

Date Collected: 12/10/20 12:00

Matrix: Water

Date Received: 12/10/20 14:51

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			12/14/20 17:14	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/14/20 17:14	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			12/14/20 17:14	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/14/20 17:14	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			12/14/20 17:14	1
1,4-Dioxane	ND		200	19	ug/L			12/14/20 17:14	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			12/14/20 17:14	1
2-Hexanone	ND		5.0	1.7	ug/L			12/14/20 17:14	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			12/14/20 17:14	1
Acetone	ND		10	1.9	ug/L			12/14/20 17:14	1
Benzene	ND		1.0	0.16	ug/L			12/14/20 17:14	1
Bromoform	ND		1.0	0.46	ug/L			12/14/20 17:14	1
Bromomethane	ND		2.0	0.21	ug/L			12/14/20 17:14	1
Carbon disulfide	ND		2.0	0.17	ug/L			12/14/20 17:14	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			12/14/20 17:14	1
Chlorobenzene	ND		1.0	0.17	ug/L			12/14/20 17:14	1
Chlorobromomethane	ND		1.0	0.10	ug/L			12/14/20 17:14	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			12/14/20 17:14	1
Chloroethane	ND		2.0	0.41	ug/L			12/14/20 17:14	1
Chloroform	ND		1.0	0.16	ug/L			12/14/20 17:14	1
Chloromethane	ND		2.0	0.30	ug/L			12/14/20 17:14	1
cis-1,2-Dichloroethene	0.30	J	1.0	0.15	ug/L			12/14/20 17:14	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			12/14/20 17:14	1
Cyclohexane	ND		2.0	0.28	ug/L			12/14/20 17:14	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			12/14/20 17:14	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			12/14/20 17:14	1
Ethylbenzene	ND		1.0	0.16	ug/L			12/14/20 17:14	1
Isopropylbenzene	ND		1.0	0.19	ug/L			12/14/20 17:14	1
Methyl acetate	ND		5.0	1.6	ug/L			12/14/20 17:14	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			12/14/20 17:14	1
Methylcyclohexane	ND		1.0	0.10	ug/L			12/14/20 17:14	1
Methylene Chloride	ND		2.0	0.94	ug/L			12/14/20 17:14	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			12/14/20 17:14	1
o-Xylene	ND		1.0	0.19	ug/L			12/14/20 17:14	1
Styrene	ND		1.0	0.36	ug/L			12/14/20 17:14	1
Tetrachloroethene	1.2		1.0	0.20	ug/L			12/14/20 17:14	1
Toluene	ND		1.0	0.17	ug/L			12/14/20 17:14	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			12/14/20 17:14	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			12/14/20 17:14	1
Trichloroethene	0.39	J	1.0	0.16	ug/L			12/14/20 17:14	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			12/14/20 17:14	1
Vinyl chloride	ND		1.0	0.10	ug/L			12/14/20 17:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	83		70 - 127					12/14/20 17:14	1
4-Bromofluorobenzene (Surr)	100		78 - 120					12/14/20 17:14	1
Dibromofluoromethane (Surr)	100		77 - 120					12/14/20 17:14	1
Toluene-d8 (Surr)	100		80 - 125					12/14/20 17:14	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10

Lab Sample ID: 280-143671-5

Date Collected: 12/10/20 11:15

Matrix: Solid

Date Received: 12/10/20 14:51

Percent Solids: 96.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.5	2.2	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
1,1,2,2-Tetrachloroethane	ND		5.5	0.31	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
1,1,2-Trichloroethane	ND		5.5	0.96	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
1,1,2-Trichlorotrifluoroethane	ND		22	1.8	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
1,1-Dichloroethane	ND		5.5	0.23	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
1,1-Dichloroethene	ND		5.5	0.65	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
1,2,3-Trichlorobenzene	ND		5.5	0.89	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
1,2,4-Trichlorobenzene	ND		5.5	0.80	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
1,2-Dibromo-3-Chloropropane	ND		11	4.0	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
1,2-Dibromoethane	ND		5.5	0.57	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
1,2-Dichlorobenzene	ND		5.5	2.0	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
1,2-Dichloroethane	ND		5.5	0.77	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
1,2-Dichloropropane	ND		5.5	0.60	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
1,3-Dichlorobenzene	ND		5.5	0.53	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
1,4-Dichlorobenzene	ND		5.5	0.27	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
1,4-Dioxane	ND	F1	550	61	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
2-Butanone (MEK)	ND		22	4.3	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
2-Hexanone	ND		22	5.4	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
4-Methyl-2-pentanone (MIBK)	ND		22	4.8	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
Acetone	ND		79	39	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
Benzene	ND		5.5	0.17	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
Bromoform	ND		5.6	2.8	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
Bromomethane	ND		11	1.5	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
Carbon disulfide	ND		5.5	1.8	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
Carbon tetrachloride	ND		5.5	2.2	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
Chlorobenzene	ND		5.5	2.3	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
Chlorobromomethane	ND		5.5	2.7	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
Chlorodibromomethane	ND		5.5	2.5	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
Chloroethane	ND		11	2.2	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
Chloroform	ND		11	0.32	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
Chloromethane	ND		11	0.84	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
cis-1,2-Dichloroethene	ND		2.7	0.22	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
cis-1,3-Dichloropropene	ND		5.5	0.11	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
Cyclohexane	ND		5.5	1.9	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
Dichlorobromomethane	ND		5.5	2.3	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
Dichlorodifluoromethane	ND		11	3.0	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
Ethylbenzene	ND		5.5	0.33	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
Isopropylbenzene	ND		5.5	2.6	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
Methyl acetate	ND		11	3.0	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
Methyl tert-butyl ether	ND		22	2.3	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
Methylcyclohexane	ND		5.5	0.46	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
Methylene Chloride	ND		5.5	1.8	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
m-Xylene & p-Xylene	ND		2.7	1.1	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
o-Xylene	ND		2.7	0.29	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
Styrene	ND		5.5	0.31	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
Tetrachloroethene	ND		5.5	2.1	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
Toluene	ND		5.5	0.25	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
trans-1,2-Dichloroethene	ND		2.7	0.43	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
trans-1,3-Dichloropropene	ND		5.5	0.091	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10

Date Collected: 12/10/20 11:15

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-5

Matrix: Solid

Percent Solids: 96.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		5.5	2.1	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
Trichlorofluoromethane	ND		11	3.5	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
Vinyl chloride	ND		5.5	1.5	ug/Kg	☼	12/10/20 11:15	12/22/20 14:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		58 - 140				12/10/20 11:15	12/22/20 14:00	1
4-Bromofluorobenzene (Surr)	99		76 - 127				12/10/20 11:15	12/22/20 14:00	1
Dibromofluoromethane (Surr)	101		75 - 121				12/10/20 11:15	12/22/20 14:00	1
Toluene-d8 (Surr)	96		80 - 126				12/10/20 11:15	12/22/20 14:00	1

Client Sample ID: CDOT I270 Env 12_2020-SB-38-13-15

Date Collected: 12/10/20 13:15

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-6

Matrix: Solid

Percent Solids: 96.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	2.0	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.29	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
1,1,2-Trichloroethane	ND		5.0	0.88	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
1,1,2-Trichlorotrifluoroethane	ND		20	1.7	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
1,1-Dichloroethane	ND		5.0	0.21	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
1,1-Dichloroethene	ND		5.0	0.59	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
1,2,3-Trichlorobenzene	ND		5.0	0.81	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
1,2,4-Trichlorobenzene	ND		5.0	0.73	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
1,2-Dibromo-3-Chloropropane	ND		10	3.7	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
1,2-Dibromoethane	ND		5.0	0.52	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
1,2-Dichlorobenzene	ND		5.0	1.9	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
1,2-Dichloroethane	ND		5.0	0.70	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
1,2-Dichloropropane	ND		5.0	0.55	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
1,3-Dichlorobenzene	ND		5.0	0.48	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
1,4-Dichlorobenzene	ND		5.0	0.25	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
1,4-Dioxane	ND		500	56	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
2-Butanone (MEK)	ND		20	3.9	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
2-Hexanone	ND		20	4.9	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.4	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
Acetone	ND		72	36	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
Benzene	ND		5.0	0.15	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
Bromoform	ND		5.1	2.6	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
Bromomethane	ND		10	1.4	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
Carbon disulfide	ND		5.0	1.7	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
Carbon tetrachloride	ND		5.0	2.0	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
Chlorobenzene	ND		5.0	2.1	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
Chlorobromomethane	ND		5.0	2.5	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
Chlorodibromomethane	ND		5.0	2.3	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
Chloroethane	ND		10	2.0	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
Chloroform	ND		10	0.29	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
Chloromethane	ND		10	0.77	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
cis-1,2-Dichloroethene	ND		2.5	0.20	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
cis-1,3-Dichloropropene	ND		5.0	0.10	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
Cyclohexane	ND		5.0	1.8	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
Dichlorobromomethane	ND		5.0	2.1	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
Dichlorodifluoromethane	ND		10	2.8	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env 12_2020-SB-38-13-15

Date Collected: 12/10/20 13:15

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-6

Matrix: Solid

Percent Solids: 96.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		5.0	0.31	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
Isopropylbenzene	ND		5.0	2.4	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
Methyl acetate	ND		10	2.8	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
Methyl tert-butyl ether	ND		20	2.1	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
Methylcyclohexane	ND		5.0	0.42	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
Methylene Chloride	ND		5.0	1.6	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
m-Xylene & p-Xylene	ND		2.5	1.0	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
o-Xylene	ND		2.5	0.27	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
Styrene	ND		5.0	0.28	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
Tetrachloroethene	ND		5.0	1.9	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
Toluene	ND		5.0	0.23	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
trans-1,2-Dichloroethene	ND		2.5	0.39	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
trans-1,3-Dichloropropene	ND		5.0	0.083	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
Trichloroethene	ND		5.0	1.9	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
Trichlorofluoromethane	ND		10	3.2	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1
Vinyl chloride	ND		5.0	1.3	ug/Kg	☼	12/10/20 13:15	12/22/20 15:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		58 - 140	12/10/20 13:15	12/22/20 15:28	1
4-Bromofluorobenzene (Surr)	99		76 - 127	12/10/20 13:15	12/22/20 15:28	1
Dibromofluoromethane (Surr)	101		75 - 121	12/10/20 13:15	12/22/20 15:28	1
Toluene-d8 (Surr)	97		80 - 126	12/10/20 13:15	12/22/20 15:28	1

Client Sample ID: TB-04

Date Collected: 12/09/20 08:00

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-7

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	2.0	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.29	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
1,1,2-Trichloroethane	ND		5.0	0.88	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
1,1,2-Trichlorotrifluoroethane	ND		20	1.7	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
1,1-Dichloroethane	ND		5.0	0.21	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
1,1-Dichloroethene	ND		5.0	0.59	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
1,2,3-Trichlorobenzene	ND		5.0	0.81	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
1,2,4-Trichlorobenzene	ND		5.0	0.73	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
1,2-Dibromo-3-Chloropropane	ND		10	3.7	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
1,2-Dibromoethane	ND		5.0	0.52	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
1,2-Dichlorobenzene	ND		5.0	1.9	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
1,2-Dichloroethane	ND		5.0	0.70	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
1,2-Dichloropropane	ND		5.0	0.55	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
1,3-Dichlorobenzene	ND		5.0	0.48	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
1,4-Dichlorobenzene	ND		5.0	0.25	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
1,4-Dioxane	ND		500	56	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
2-Butanone (MEK)	ND		20	3.9	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
2-Hexanone	ND		20	4.9	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.4	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
Acetone	ND		72	36	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
Benzene	ND		5.0	0.15	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
Bromoform	ND		5.1	2.6	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
Bromomethane	ND		10	1.4	ug/Kg		12/09/20 08:00	12/22/20 13:37	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: TB-04
Date Collected: 12/09/20 08:00
Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-7
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		5.0	1.7	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
Carbon tetrachloride	ND		5.0	2.0	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
Chlorobenzene	ND		5.0	2.1	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
Chlorobromomethane	ND		5.0	2.5	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
Chlorodibromomethane	ND		5.0	2.3	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
Chloroethane	ND		10	2.0	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
Chloroform	ND		10	0.29	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
Chloromethane	ND		10	0.77	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
cis-1,2-Dichloroethene	ND		2.5	0.20	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
cis-1,3-Dichloropropene	ND		5.0	0.10	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
Cyclohexane	ND		5.0	1.8	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
Dichlorobromomethane	ND		5.0	2.1	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
Dichlorodifluoromethane	ND		10	2.7	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
Ethylbenzene	ND		5.0	0.31	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
Isopropylbenzene	ND		5.0	2.4	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
Methyl acetate	ND		10	2.8	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
Methyl tert-butyl ether	ND		20	2.1	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
Methylcyclohexane	ND		5.0	0.42	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
Methylene Chloride	ND		5.0	1.6	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
m-Xylene & p-Xylene	ND		2.5	1.0	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
o-Xylene	ND		2.5	0.27	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
Styrene	ND		5.0	0.28	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
Tetrachloroethene	ND		5.0	1.9	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
Toluene	ND		5.0	0.23	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
trans-1,2-Dichloroethene	ND		2.5	0.39	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
trans-1,3-Dichloropropene	ND		5.0	0.083	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
Trichloroethene	ND		5.0	1.9	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
Trichlorofluoromethane	ND		10	3.2	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
Vinyl chloride	ND		5.0	1.3	ug/Kg		12/09/20 08:00	12/22/20 13:37	1
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>1,2-Dichloroethane-d4 (Surr)</i>	<i>103</i>		<i>58 - 140</i>				<i>12/09/20 08:00</i>	<i>12/22/20 13:37</i>	<i>1</i>
<i>4-Bromofluorobenzene (Surr)</i>	<i>98</i>		<i>76 - 127</i>				<i>12/09/20 08:00</i>	<i>12/22/20 13:37</i>	<i>1</i>
<i>Dibromofluoromethane (Surr)</i>	<i>102</i>		<i>75 - 121</i>				<i>12/09/20 08:00</i>	<i>12/22/20 13:37</i>	<i>1</i>
<i>Toluene-d8 (Surr)</i>	<i>97</i>		<i>80 - 126</i>				<i>12/09/20 08:00</i>	<i>12/22/20 13:37</i>	<i>1</i>

Client Sample ID: TB-05
Date Collected: 12/09/20 08:00
Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			12/14/20 17:37	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			12/14/20 17:37	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			12/14/20 17:37	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			12/14/20 17:37	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			12/14/20 17:37	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			12/14/20 17:37	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			12/14/20 17:37	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			12/14/20 17:37	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			12/14/20 17:37	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			12/14/20 17:37	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: TB-05
Date Collected: 12/09/20 08:00
Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			12/14/20 17:37	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/14/20 17:37	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			12/14/20 17:37	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/14/20 17:37	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			12/14/20 17:37	1
1,4-Dioxane	ND		200	19	ug/L			12/14/20 17:37	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			12/14/20 17:37	1
2-Hexanone	ND		5.0	1.7	ug/L			12/14/20 17:37	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			12/14/20 17:37	1
Acetone	2.2	J	10	1.9	ug/L			12/14/20 17:37	1
Benzene	ND		1.0	0.16	ug/L			12/14/20 17:37	1
Bromoform	ND		1.0	0.46	ug/L			12/14/20 17:37	1
Bromomethane	ND		2.0	0.21	ug/L			12/14/20 17:37	1
Carbon disulfide	ND		2.0	0.17	ug/L			12/14/20 17:37	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			12/14/20 17:37	1
Chlorobenzene	ND		1.0	0.17	ug/L			12/14/20 17:37	1
Chlorobromomethane	ND		1.0	0.10	ug/L			12/14/20 17:37	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			12/14/20 17:37	1
Chloroethane	ND		2.0	0.41	ug/L			12/14/20 17:37	1
Chloroform	ND		1.0	0.16	ug/L			12/14/20 17:37	1
Chloromethane	ND		2.0	0.30	ug/L			12/14/20 17:37	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			12/14/20 17:37	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			12/14/20 17:37	1
Cyclohexane	ND		2.0	0.28	ug/L			12/14/20 17:37	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			12/14/20 17:37	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			12/14/20 17:37	1
Ethylbenzene	ND		1.0	0.16	ug/L			12/14/20 17:37	1
Isopropylbenzene	ND		1.0	0.19	ug/L			12/14/20 17:37	1
Methyl acetate	ND		5.0	1.6	ug/L			12/14/20 17:37	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			12/14/20 17:37	1
Methylcyclohexane	ND		1.0	0.10	ug/L			12/14/20 17:37	1
Methylene Chloride	ND		2.0	0.94	ug/L			12/14/20 17:37	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			12/14/20 17:37	1
o-Xylene	ND		1.0	0.19	ug/L			12/14/20 17:37	1
Styrene	ND		1.0	0.36	ug/L			12/14/20 17:37	1
Tetrachloroethene	ND		1.0	0.20	ug/L			12/14/20 17:37	1
Toluene	ND		1.0	0.17	ug/L			12/14/20 17:37	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			12/14/20 17:37	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			12/14/20 17:37	1
Trichloroethene	ND		1.0	0.16	ug/L			12/14/20 17:37	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			12/14/20 17:37	1
Vinyl chloride	ND		1.0	0.10	ug/L			12/14/20 17:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	83		70 - 127					12/14/20 17:37	1
4-Bromofluorobenzene (Surr)	100		78 - 120					12/14/20 17:37	1
Dibromofluoromethane (Surr)	101		77 - 120					12/14/20 17:37	1
Toluene-d8 (Surr)	100		80 - 125					12/14/20 17:37	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env 12_2020-SB-32-GW

Lab Sample ID: 280-143671-1

Date Collected: 12/09/20 09:30

Matrix: Water

Date Received: 12/10/20 14:51

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		9.7	1.7	ug/L		12/14/20 12:57	12/21/20 13:31	1
1,2,4,5-Tetrachlorobenzene	ND		9.7	1.7	ug/L		12/14/20 12:57	12/21/20 13:31	1
1,2,4-Trichlorobenzene	ND		3.9	0.57	ug/L		12/14/20 12:57	12/21/20 13:31	1
1,2-Dichlorobenzene	ND		3.9	0.22	ug/L		12/14/20 12:57	12/21/20 13:31	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		9.7	0.22	ug/L		12/14/20 12:57	12/21/20 13:31	1
1,3-Dichlorobenzene	ND		9.7	0.29	ug/L		12/14/20 12:57	12/21/20 13:31	1
1,3-Dinitrobenzene	ND		9.7	1.9	ug/L		12/14/20 12:57	12/21/20 13:31	1
1,4-Dichlorobenzene	ND		3.9	1.2	ug/L		12/14/20 12:57	12/21/20 13:31	1
1,4-Dioxane	ND		19	0.44	ug/L		12/14/20 12:57	12/21/20 13:31	1
1-Methylnaphthalene	ND		3.9	0.22	ug/L		12/14/20 12:57	12/21/20 13:31	1
2,2'-oxybis[1-chloropropane]	ND		9.7	0.27	ug/L		12/14/20 12:57	12/21/20 13:31	1
2,3,4,6-Tetrachlorophenol	ND		49	1.9	ug/L		12/14/20 12:57	12/21/20 13:31	1
2,4,5-Trichlorophenol	ND		9.7	2.0	ug/L		12/14/20 12:57	12/21/20 13:31	1
2,4,6-Trichlorophenol	ND		9.7	0.28	ug/L		12/14/20 12:57	12/21/20 13:31	1
2,4-Dichlorophenol	ND		9.7	0.62	ug/L		12/14/20 12:57	12/21/20 13:31	1
2,4-Dimethylphenol	ND		9.7	0.56	ug/L		12/14/20 12:57	12/21/20 13:31	1
2,4-Dinitrophenol	ND		29	9.7	ug/L		12/14/20 12:57	12/21/20 13:31	1
2,4-Dinitrotoluene	ND		9.7	1.6	ug/L		12/14/20 12:57	12/21/20 13:31	1
2,6-Dichlorophenol	ND		9.7	1.3	ug/L		12/14/20 12:57	12/21/20 13:31	1
2,6-Dinitrotoluene	ND		9.7	1.8	ug/L		12/14/20 12:57	12/21/20 13:31	1
2-Chloronaphthalene	ND		3.9	0.25	ug/L		12/14/20 12:57	12/21/20 13:31	1
2-Chlorophenol	ND		9.7	1.9	ug/L		12/14/20 12:57	12/21/20 13:31	1
2-Methylnaphthalene	ND		3.9	1.5	ug/L		12/14/20 12:57	12/21/20 13:31	1
2-Methylphenol	ND		9.7	0.95	ug/L		12/14/20 12:57	12/21/20 13:31	1
2-Nitroaniline	ND		9.7	1.7	ug/L		12/14/20 12:57	12/21/20 13:31	1
2-Nitrophenol	ND		9.7	0.38	ug/L		12/14/20 12:57	12/21/20 13:31	1
3 & 4 Methylphenol	ND		9.7	0.24	ug/L		12/14/20 12:57	12/21/20 13:31	1
3,3'-Dichlorobenzidine	ND	+	49	1.9	ug/L		12/14/20 12:57	12/21/20 13:31	1
3-Methylphenol	ND		9.7	0.24	ug/L		12/14/20 12:57	12/21/20 13:31	1
3-Nitroaniline	ND		9.7	1.9	ug/L		12/14/20 12:57	12/21/20 13:31	1
4,6-Dinitro-2-methylphenol	ND		49	3.9	ug/L		12/14/20 12:57	12/21/20 13:31	1
4-Bromophenyl phenyl ether	ND		9.7	0.42	ug/L		12/14/20 12:57	12/21/20 13:31	1
4-Chloro-3-methylphenol	ND		9.7	2.3	ug/L		12/14/20 12:57	12/21/20 13:31	1
4-Chloroaniline	ND		9.7	2.1	ug/L		12/14/20 12:57	12/21/20 13:31	1
4-Chlorophenyl phenyl ether	ND		9.7	1.6	ug/L		12/14/20 12:57	12/21/20 13:31	1
4-Methylphenol	ND		9.7	0.24	ug/L		12/14/20 12:57	12/21/20 13:31	1
4-Nitroaniline	ND		9.7	1.9	ug/L		12/14/20 12:57	12/21/20 13:31	1
4-Nitrophenol	ND		9.7	1.2	ug/L		12/14/20 12:57	12/21/20 13:31	1
Acenaphthene	ND		3.9	0.27	ug/L		12/14/20 12:57	12/21/20 13:31	1
Acenaphthylene	ND		3.9	0.48	ug/L		12/14/20 12:57	12/21/20 13:31	1
Acetophenone	ND		9.7	0.23	ug/L		12/14/20 12:57	12/21/20 13:31	1
Aniline	ND		9.7	1.9	ug/L		12/14/20 12:57	12/21/20 13:31	1
Anthracene	ND		3.9	0.41	ug/L		12/14/20 12:57	12/21/20 13:31	1
Azobenzene	ND		3.9	0.22	ug/L		12/14/20 12:57	12/21/20 13:31	1
Benzaldehyde	ND		4.9	1.9	ug/L		12/14/20 12:57	12/21/20 13:31	1
Benzidine	ND	+	97	49	ug/L		12/14/20 12:57	12/21/20 13:31	1
Benzo[a]anthracene	ND		3.9	0.34	ug/L		12/14/20 12:57	12/21/20 13:31	1
Benzo[a]pyrene	ND		3.9	0.30	ug/L		12/14/20 12:57	12/21/20 13:31	1
Benzo[b]fluoranthene	ND		3.9	0.52	ug/L		12/14/20 12:57	12/21/20 13:31	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env 12_2020-SB-32-GW

Lab Sample ID: 280-143671-1

Date Collected: 12/09/20 09:30

Matrix: Water

Date Received: 12/10/20 14:51

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		3.9	0.49	ug/L		12/14/20 12:57	12/21/20 13:31	1
Benzo[k]fluoranthene	ND		3.9	0.45	ug/L		12/14/20 12:57	12/21/20 13:31	1
Benzoic acid	ND		24	9.7	ug/L		12/14/20 12:57	12/21/20 13:31	1
Benzyl alcohol	ND		9.7	0.22	ug/L		12/14/20 12:57	12/21/20 13:31	1
Bis(2-chloroethoxy)methane	ND		9.7	0.94	ug/L		12/14/20 12:57	12/21/20 13:31	1
Bis(2-chloroethyl)ether	ND		9.7	0.81	ug/L		12/14/20 12:57	12/21/20 13:31	1
Bis(2-ethylhexyl) phthalate	ND		9.7	0.55	ug/L		12/14/20 12:57	12/21/20 13:31	1
Butyl benzyl phthalate	ND		3.9	0.97	ug/L		12/14/20 12:57	12/21/20 13:31	1
Caprolactam	ND		4.9	2.4	ug/L		12/14/20 12:57	12/21/20 13:31	1
Carbazole	ND		3.9	0.42	ug/L		12/14/20 12:57	12/21/20 13:31	1
Chrysene	ND		3.9	0.53	ug/L		12/14/20 12:57	12/21/20 13:31	1
Dibenz(a,h)anthracene	ND		3.9	0.50	ug/L		12/14/20 12:57	12/21/20 13:31	1
Dibenzofuran	ND		3.9	0.28	ug/L		12/14/20 12:57	12/21/20 13:31	1
Diethyl phthalate	ND		3.9	0.37	ug/L		12/14/20 12:57	12/21/20 13:31	1
Dimethyl phthalate	ND		3.9	0.20	ug/L		12/14/20 12:57	12/21/20 13:31	1
Di-n-butyl phthalate	ND		3.9	1.1	ug/L		12/14/20 12:57	12/21/20 13:31	1
Di-n-octyl phthalate	ND		3.9	0.34	ug/L		12/14/20 12:57	12/21/20 13:31	1
Diphenylamine	ND		9.7	1.0	ug/L		12/14/20 12:57	12/21/20 13:31	1
Famphur	ND		9.7	1.5	ug/L		12/14/20 12:57	12/21/20 13:31	1
Fluoranthene	ND		3.9	0.19	ug/L		12/14/20 12:57	12/21/20 13:31	1
Fluorene	ND		3.9	0.30	ug/L		12/14/20 12:57	12/21/20 13:31	1
Hexachlorobenzene	ND		9.7	0.64	ug/L		12/14/20 12:57	12/21/20 13:31	1
Hexachlorobutadiene	ND		9.7	3.2	ug/L		12/14/20 12:57	12/21/20 13:31	1
Hexachlorocyclopentadiene	ND		49	3.0	ug/L		12/14/20 12:57	12/21/20 13:31	1
Hexachloroethane	ND		9.7	0.96	ug/L		12/14/20 12:57	12/21/20 13:31	1
Hexadecane	ND		9.7	0.53	ug/L		12/14/20 12:57	12/21/20 13:31	1
Indeno[1,2,3-cd]pyrene	ND		3.9	0.63	ug/L		12/14/20 12:57	12/21/20 13:31	1
Isophorone	ND		9.7	0.20	ug/L		12/14/20 12:57	12/21/20 13:31	1
Naphthalene	ND		3.9	0.28	ug/L		12/14/20 12:57	12/21/20 13:31	1
Nitrobenzene	ND		9.7	0.79	ug/L		12/14/20 12:57	12/21/20 13:31	1
N-Nitrosodimethylamine	ND		9.7	0.28	ug/L		12/14/20 12:57	12/21/20 13:31	1
N-Nitrosodi-n-propylamine	ND		9.7	0.34	ug/L		12/14/20 12:57	12/21/20 13:31	1
N-Nitrosodiphenylamine	ND		9.7	0.43	ug/L		12/14/20 12:57	12/21/20 13:31	1
Pentachlorophenol	ND		49	19	ug/L		12/14/20 12:57	12/21/20 13:31	1
Phenanthrene	ND		3.9	0.25	ug/L		12/14/20 12:57	12/21/20 13:31	1
Phenol	ND		9.7	1.9	ug/L		12/14/20 12:57	12/21/20 13:31	1
Pyrene	ND		9.7	0.36	ug/L		12/14/20 12:57	12/21/20 13:31	1
Pyridine	ND		19	1.7	ug/L		12/14/20 12:57	12/21/20 13:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	76		42 - 131	12/14/20 12:57	12/21/20 13:31	1
2-Fluorobiphenyl	56		48 - 120	12/14/20 12:57	12/21/20 13:31	1
2-Fluorophenol (Surr)	62		41 - 120	12/14/20 12:57	12/21/20 13:31	1
Nitrobenzene-d5 (Surr)	56		42 - 120	12/14/20 12:57	12/21/20 13:31	1
Phenol-d5 (Surr)	70		45 - 124	12/14/20 12:57	12/21/20 13:31	1
Terphenyl-d14 (Surr)	17	S1-	20 - 130	12/14/20 12:57	12/21/20 13:31	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env 12_2020-SB-32-GW-DUP

Lab Sample ID: 280-143671-2

Date Collected: 12/09/20 09:30

Matrix: Water

Date Received: 12/10/20 14:51

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		9.8	1.7	ug/L		12/14/20 12:57	12/21/20 13:59	1
1,2,4,5-Tetrachlorobenzene	ND		9.8	1.7	ug/L		12/14/20 12:57	12/21/20 13:59	1
1,2,4-Trichlorobenzene	ND		3.9	0.58	ug/L		12/14/20 12:57	12/21/20 13:59	1
1,2-Dichlorobenzene	ND		3.9	0.23	ug/L		12/14/20 12:57	12/21/20 13:59	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		9.8	0.23	ug/L		12/14/20 12:57	12/21/20 13:59	1
1,3-Dichlorobenzene	ND		9.8	0.29	ug/L		12/14/20 12:57	12/21/20 13:59	1
1,3-Dinitrobenzene	ND		9.8	2.0	ug/L		12/14/20 12:57	12/21/20 13:59	1
1,4-Dichlorobenzene	ND		3.9	1.3	ug/L		12/14/20 12:57	12/21/20 13:59	1
1,4-Dioxane	ND		20	0.44	ug/L		12/14/20 12:57	12/21/20 13:59	1
1-Methylnaphthalene	ND		3.9	0.23	ug/L		12/14/20 12:57	12/21/20 13:59	1
2,2'-oxybis[1-chloropropane]	ND		9.8	0.27	ug/L		12/14/20 12:57	12/21/20 13:59	1
2,3,4,6-Tetrachlorophenol	ND		49	2.0	ug/L		12/14/20 12:57	12/21/20 13:59	1
2,4,5-Trichlorophenol	ND		9.8	2.0	ug/L		12/14/20 12:57	12/21/20 13:59	1
2,4,6-Trichlorophenol	ND		9.8	0.28	ug/L		12/14/20 12:57	12/21/20 13:59	1
2,4-Dichlorophenol	ND		9.8	0.63	ug/L		12/14/20 12:57	12/21/20 13:59	1
2,4-Dimethylphenol	ND		9.8	0.57	ug/L		12/14/20 12:57	12/21/20 13:59	1
2,4-Dinitrophenol	ND		29	9.8	ug/L		12/14/20 12:57	12/21/20 13:59	1
2,4-Dinitrotoluene	ND		9.8	1.6	ug/L		12/14/20 12:57	12/21/20 13:59	1
2,6-Dichlorophenol	ND		9.8	1.3	ug/L		12/14/20 12:57	12/21/20 13:59	1
2,6-Dinitrotoluene	ND		9.8	1.8	ug/L		12/14/20 12:57	12/21/20 13:59	1
2-Chloronaphthalene	ND		3.9	0.25	ug/L		12/14/20 12:57	12/21/20 13:59	1
2-Chlorophenol	ND		9.8	2.0	ug/L		12/14/20 12:57	12/21/20 13:59	1
2-Methylnaphthalene	ND		3.9	1.5	ug/L		12/14/20 12:57	12/21/20 13:59	1
2-Methylphenol	ND		9.8	0.96	ug/L		12/14/20 12:57	12/21/20 13:59	1
2-Nitroaniline	ND		9.8	1.7	ug/L		12/14/20 12:57	12/21/20 13:59	1
2-Nitrophenol	ND		9.8	0.38	ug/L		12/14/20 12:57	12/21/20 13:59	1
3 & 4 Methylphenol	ND		9.8	0.24	ug/L		12/14/20 12:57	12/21/20 13:59	1
3,3'-Dichlorobenzidine	ND	*	49	2.0	ug/L		12/14/20 12:57	12/21/20 13:59	1
3-Methylphenol	ND		9.8	0.24	ug/L		12/14/20 12:57	12/21/20 13:59	1
3-Nitroaniline	ND		9.8	2.0	ug/L		12/14/20 12:57	12/21/20 13:59	1
4,6-Dinitro-2-methylphenol	ND		49	3.9	ug/L		12/14/20 12:57	12/21/20 13:59	1
4-Bromophenyl phenyl ether	ND		9.8	0.42	ug/L		12/14/20 12:57	12/21/20 13:59	1
4-Chloro-3-methylphenol	ND		9.8	2.4	ug/L		12/14/20 12:57	12/21/20 13:59	1
4-Chloroaniline	ND		9.8	2.1	ug/L		12/14/20 12:57	12/21/20 13:59	1
4-Chlorophenyl phenyl ether	ND		9.8	1.6	ug/L		12/14/20 12:57	12/21/20 13:59	1
4-Methylphenol	ND		9.8	0.24	ug/L		12/14/20 12:57	12/21/20 13:59	1
4-Nitroaniline	ND		9.8	2.0	ug/L		12/14/20 12:57	12/21/20 13:59	1
4-Nitrophenol	ND		9.8	1.2	ug/L		12/14/20 12:57	12/21/20 13:59	1
Acenaphthene	ND		3.9	0.27	ug/L		12/14/20 12:57	12/21/20 13:59	1
Acenaphthylene	ND		3.9	0.48	ug/L		12/14/20 12:57	12/21/20 13:59	1
Acetophenone	ND		9.8	0.23	ug/L		12/14/20 12:57	12/21/20 13:59	1
Aniline	ND		9.8	2.0	ug/L		12/14/20 12:57	12/21/20 13:59	1
Anthracene	ND		3.9	0.41	ug/L		12/14/20 12:57	12/21/20 13:59	1
Azobenzene	ND		3.9	0.23	ug/L		12/14/20 12:57	12/21/20 13:59	1
Benzaldehyde	ND		4.9	2.0	ug/L		12/14/20 12:57	12/21/20 13:59	1
Benzidine	ND	*	98	49	ug/L		12/14/20 12:57	12/21/20 13:59	1
Benzo[a]anthracene	ND		3.9	0.34	ug/L		12/14/20 12:57	12/21/20 13:59	1
Benzo[a]pyrene	ND		3.9	0.30	ug/L		12/14/20 12:57	12/21/20 13:59	1
Benzo[b]fluoranthene	ND		3.9	0.52	ug/L		12/14/20 12:57	12/21/20 13:59	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env 12_2020-SB-32-GW-DUP

Lab Sample ID: 280-143671-2

Date Collected: 12/09/20 09:30

Matrix: Water

Date Received: 12/10/20 14:51

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		3.9	0.49	ug/L		12/14/20 12:57	12/21/20 13:59	1
Benzo[k]fluoranthene	ND		3.9	0.45	ug/L		12/14/20 12:57	12/21/20 13:59	1
Benzoic acid	ND		24	9.8	ug/L		12/14/20 12:57	12/21/20 13:59	1
Benzyl alcohol	ND		9.8	0.23	ug/L		12/14/20 12:57	12/21/20 13:59	1
Bis(2-chloroethoxy)methane	ND		9.8	0.95	ug/L		12/14/20 12:57	12/21/20 13:59	1
Bis(2-chloroethyl)ether	ND		9.8	0.81	ug/L		12/14/20 12:57	12/21/20 13:59	1
Bis(2-ethylhexyl) phthalate	0.56	J	9.8	0.55	ug/L		12/14/20 12:57	12/21/20 13:59	1
Butyl benzyl phthalate	ND		3.9	0.98	ug/L		12/14/20 12:57	12/21/20 13:59	1
Caprolactam	ND		4.9	2.4	ug/L		12/14/20 12:57	12/21/20 13:59	1
Carbazole	ND		3.9	0.42	ug/L		12/14/20 12:57	12/21/20 13:59	1
Chrysene	ND		3.9	0.53	ug/L		12/14/20 12:57	12/21/20 13:59	1
Dibenz(a,h)anthracene	ND		3.9	0.50	ug/L		12/14/20 12:57	12/21/20 13:59	1
Dibenzofuran	ND		3.9	0.28	ug/L		12/14/20 12:57	12/21/20 13:59	1
Diethyl phthalate	ND		3.9	0.37	ug/L		12/14/20 12:57	12/21/20 13:59	1
Dimethyl phthalate	ND		3.9	0.21	ug/L		12/14/20 12:57	12/21/20 13:59	1
Di-n-butyl phthalate	ND		3.9	1.1	ug/L		12/14/20 12:57	12/21/20 13:59	1
Di-n-octyl phthalate	ND		3.9	0.34	ug/L		12/14/20 12:57	12/21/20 13:59	1
Diphenylamine	ND		9.8	1.0	ug/L		12/14/20 12:57	12/21/20 13:59	1
Famphur	ND		9.8	1.5	ug/L		12/14/20 12:57	12/21/20 13:59	1
Fluoranthene	ND		3.9	0.20	ug/L		12/14/20 12:57	12/21/20 13:59	1
Fluorene	ND		3.9	0.30	ug/L		12/14/20 12:57	12/21/20 13:59	1
Hexachlorobenzene	ND		9.8	0.65	ug/L		12/14/20 12:57	12/21/20 13:59	1
Hexachlorobutadiene	ND		9.8	3.2	ug/L		12/14/20 12:57	12/21/20 13:59	1
Hexachlorocyclopentadiene	ND		49	3.0	ug/L		12/14/20 12:57	12/21/20 13:59	1
Hexachloroethane	ND		9.8	0.96	ug/L		12/14/20 12:57	12/21/20 13:59	1
Hexadecane	ND		9.8	0.53	ug/L		12/14/20 12:57	12/21/20 13:59	1
Indeno[1,2,3-cd]pyrene	ND		3.9	0.64	ug/L		12/14/20 12:57	12/21/20 13:59	1
Isophorone	ND		9.8	0.21	ug/L		12/14/20 12:57	12/21/20 13:59	1
Naphthalene	ND		3.9	0.28	ug/L		12/14/20 12:57	12/21/20 13:59	1
Nitrobenzene	ND		9.8	0.79	ug/L		12/14/20 12:57	12/21/20 13:59	1
N-Nitrosodimethylamine	ND		9.8	0.28	ug/L		12/14/20 12:57	12/21/20 13:59	1
N-Nitrosodi-n-propylamine	ND		9.8	0.34	ug/L		12/14/20 12:57	12/21/20 13:59	1
N-Nitrosodiphenylamine	ND		9.8	0.43	ug/L		12/14/20 12:57	12/21/20 13:59	1
Pentachlorophenol	ND		49	20	ug/L		12/14/20 12:57	12/21/20 13:59	1
Phenanthrene	ND		3.9	0.25	ug/L		12/14/20 12:57	12/21/20 13:59	1
Phenol	2.1	J	9.8	2.0	ug/L		12/14/20 12:57	12/21/20 13:59	1
Pyrene	ND		9.8	0.36	ug/L		12/14/20 12:57	12/21/20 13:59	1
Pyridine	ND		20	1.7	ug/L		12/14/20 12:57	12/21/20 13:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	74		42 - 131	12/14/20 12:57	12/21/20 13:59	1
2-Fluorobiphenyl	67		48 - 120	12/14/20 12:57	12/21/20 13:59	1
2-Fluorophenol (Surr)	73		41 - 120	12/14/20 12:57	12/21/20 13:59	1
Nitrobenzene-d5 (Surr)	71		42 - 120	12/14/20 12:57	12/21/20 13:59	1
Phenol-d5 (Surr)	75		45 - 124	12/14/20 12:57	12/21/20 13:59	1
Terphenyl-d14 (Surr)	14	S1-	20 - 130	12/14/20 12:57	12/21/20 13:59	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env 12_2020-SB-32-9-11

Lab Sample ID: 280-143671-3

Date Collected: 12/09/20 09:00

Matrix: Solid

Date Received: 12/10/20 14:51

Percent Solids: 92.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		350	25	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
1,2,4,5-Tetrachlorobenzene	ND		350	51	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
1,2,4-Trichlorobenzene	ND		350	29	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
1,2-Dichlorobenzene	ND		350	23	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		350	23	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
1,3-Dichlorobenzene	ND		350	13	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
1,3-Dinitrobenzene	ND		350	74	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
1,4-Dichlorobenzene	ND		350	14	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
1,4-Dioxane	ND		690	69	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
1-Methylnaphthalene	ND		350	12	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
2,2'-oxybis[1-chloropropane]	ND		350	24	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
2,3,4,6-Tetrachlorophenol	ND		1700	140	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
2,4,5-Trichlorophenol	ND		350	10	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
2,4,6-Trichlorophenol	ND		350	10	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
2,4-Dichlorophenol	ND		350	10	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
2,4-Dimethylphenol	ND		350	69	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
2,4-Dinitrophenol	ND		1700	350	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
2,4-Dinitrotoluene	ND		350	69	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
2,6-Dichlorophenol	ND		350	23	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
2,6-Dinitrotoluene	ND		350	29	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
2-Chloronaphthalene	ND		350	10	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
2-Chlorophenol	ND	*	350	22	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
2-Methylnaphthalene	ND		350	20	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
2-Methylphenol	ND		350	14	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
2-Nitroaniline	ND		1700	52	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
2-Nitrophenol	ND		350	10	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
3 & 4 Methylphenol	ND		350	35	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
3,3'-Dichlorobenzidine	ND		690	94	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
3-Methylphenol	ND		350	35	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
3-Nitroaniline	ND		1700	77	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
4,6-Dinitro-2-methylphenol	ND		1700	350	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
4-Bromophenyl phenyl ether	ND		350	20	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
4-Chloro-3-methylphenol	ND		350	26	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
4-Chloroaniline	ND		350	86	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
4-Chlorophenyl phenyl ether	ND		350	22	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
4-Methylphenol	ND		350	35	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
4-Nitroaniline	ND		1700	76	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
4-Nitrophenol	ND		1700	100	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Acenaphthene	ND		350	11	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Acenaphthylene	ND		350	86	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Acetophenone	ND		350	21	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Aniline	ND		350	140	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Anthracene	ND		350	18	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Azobenzene	ND		350	23	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Benzaldehyde	ND		350	70	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Benzidine	ND		3500	1000	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Benzo[a]anthracene	45	J	350	21	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Benzo[a]pyrene	63	J	350	21	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Benzo[b]fluoranthene	81	J	350	27	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env 12_2020-SB-32-9-11

Lab Sample ID: 280-143671-3

Date Collected: 12/09/20 09:00

Matrix: Solid

Date Received: 12/10/20 14:51

Percent Solids: 92.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	59	J	350	17	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Benzo[k]fluoranthene	ND		350	42	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Benzoic acid	ND		1700	350	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Benzyl alcohol	ND	*-	350	10	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Bis(2-chloroethoxy)methane	ND		350	24	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Bis(2-chloroethyl)ether	ND		350	17	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Bis(2-ethylhexyl) phthalate	ND		350	48	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Butyl benzyl phthalate	ND		350	45	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Caprolactam	ND		350	110	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Carbazole	ND		350	38	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Chrysene	54	J	350	28	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Dibenz(a,h)anthracene	ND		350	20	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Dibenzofuran	ND		350	21	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Diethyl phthalate	ND		690	27	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Dimethyl phthalate	ND		350	24	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Di-n-butyl phthalate	ND		350	30	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Di-n-octyl phthalate	ND		350	42	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Diphenylamine	ND		350	46	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Famphur	ND		690	36	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Fluoranthene	59	J	350	38	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Fluorene	ND		350	19	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Hexachlorobenzene	ND		350	30	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Hexachlorobutadiene	ND		350	10	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Hexachlorocyclopentadiene	ND		1700	120	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Hexachloroethane	ND		350	22	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Hexadecane	38	J	350	14	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Indeno[1,2,3-cd]pyrene	51	J	350	23	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Isophorone	ND		350	18	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Naphthalene	ND		350	33	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Nitrobenzene	ND		350	23	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
N-Nitrosodimethylamine	ND		350	39	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
N-Nitrosodi-n-propylamine	ND		350	71	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
N-Nitrosodiphenylamine	ND		350	22	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Pentachlorophenol	ND		1700	350	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Phenanthrene	45	J	350	18	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Phenol	ND	*-	350	19	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Pyrene	56	J	350	13	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1
Pyridine	ND		690	42	ug/Kg	☼	12/17/20 13:57	12/30/20 17:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	72		35 - 120	12/17/20 13:57	12/30/20 17:13	1
2-Fluorobiphenyl	62		46 - 120	12/17/20 13:57	12/30/20 17:13	1
2-Fluorophenol (Surr)	55		43 - 120	12/17/20 13:57	12/30/20 17:13	1
Nitrobenzene-d5 (Surr)	55		46 - 120	12/17/20 13:57	12/30/20 17:13	1
Phenol-d5 (Surr)	59		46 - 120	12/17/20 13:57	12/30/20 17:13	1
Terphenyl-d14 (Surr)	83		46 - 120	12/17/20 13:57	12/30/20 17:13	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env 12_2020-SB-33-GW

Lab Sample ID: 280-143671-4

Date Collected: 12/10/20 12:00

Matrix: Water

Date Received: 12/10/20 14:51

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		9.9	1.7	ug/L		12/14/20 12:57	12/21/20 15:37	1
1,2,4,5-Tetrachlorobenzene	ND		9.9	1.7	ug/L		12/14/20 12:57	12/21/20 15:37	1
1,2,4-Trichlorobenzene	ND		4.0	0.58	ug/L		12/14/20 12:57	12/21/20 15:37	1
1,2-Dichlorobenzene	ND		4.0	0.23	ug/L		12/14/20 12:57	12/21/20 15:37	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		9.9	0.23	ug/L		12/14/20 12:57	12/21/20 15:37	1
1,3-Dichlorobenzene	ND		9.9	0.30	ug/L		12/14/20 12:57	12/21/20 15:37	1
1,3-Dinitrobenzene	ND		9.9	2.0	ug/L		12/14/20 12:57	12/21/20 15:37	1
1,4-Dichlorobenzene	ND		4.0	1.3	ug/L		12/14/20 12:57	12/21/20 15:37	1
1,4-Dioxane	1.3	J	20	0.44	ug/L		12/14/20 12:57	12/21/20 15:37	1
1-Methylnaphthalene	ND		4.0	0.23	ug/L		12/14/20 12:57	12/21/20 15:37	1
2,2'-oxybis[1-chloropropane]	ND		9.9	0.28	ug/L		12/14/20 12:57	12/21/20 15:37	1
2,3,4,6-Tetrachlorophenol	ND		49	2.0	ug/L		12/14/20 12:57	12/21/20 15:37	1
2,4,5-Trichlorophenol	ND		9.9	2.0	ug/L		12/14/20 12:57	12/21/20 15:37	1
2,4,6-Trichlorophenol	ND		9.9	0.29	ug/L		12/14/20 12:57	12/21/20 15:37	1
2,4-Dichlorophenol	ND		9.9	0.63	ug/L		12/14/20 12:57	12/21/20 15:37	1
2,4-Dimethylphenol	ND		9.9	0.57	ug/L		12/14/20 12:57	12/21/20 15:37	1
2,4-Dinitrophenol	ND		30	9.9	ug/L		12/14/20 12:57	12/21/20 15:37	1
2,4-Dinitrotoluene	ND		9.9	1.6	ug/L		12/14/20 12:57	12/21/20 15:37	1
2,6-Dichlorophenol	ND		9.9	1.3	ug/L		12/14/20 12:57	12/21/20 15:37	1
2,6-Dinitrotoluene	ND		9.9	1.9	ug/L		12/14/20 12:57	12/21/20 15:37	1
2-Chloronaphthalene	ND		4.0	0.26	ug/L		12/14/20 12:57	12/21/20 15:37	1
2-Chlorophenol	ND		9.9	2.0	ug/L		12/14/20 12:57	12/21/20 15:37	1
2-Methylnaphthalene	ND		4.0	1.5	ug/L		12/14/20 12:57	12/21/20 15:37	1
2-Methylphenol	ND		9.9	0.97	ug/L		12/14/20 12:57	12/21/20 15:37	1
2-Nitroaniline	ND		9.9	1.7	ug/L		12/14/20 12:57	12/21/20 15:37	1
2-Nitrophenol	ND		9.9	0.39	ug/L		12/14/20 12:57	12/21/20 15:37	1
3 & 4 Methylphenol	ND		9.9	0.25	ug/L		12/14/20 12:57	12/21/20 15:37	1
3,3'-Dichlorobenzidine	ND	*+	49	2.0	ug/L		12/14/20 12:57	12/21/20 15:37	1
3-Methylphenol	ND		9.9	0.25	ug/L		12/14/20 12:57	12/21/20 15:37	1
3-Nitroaniline	ND		9.9	2.0	ug/L		12/14/20 12:57	12/21/20 15:37	1
4,6-Dinitro-2-methylphenol	ND		49	4.0	ug/L		12/14/20 12:57	12/21/20 15:37	1
4-Bromophenyl phenyl ether	ND		9.9	0.43	ug/L		12/14/20 12:57	12/21/20 15:37	1
4-Chloro-3-methylphenol	ND		9.9	2.4	ug/L		12/14/20 12:57	12/21/20 15:37	1
4-Chloroaniline	ND		9.9	2.1	ug/L		12/14/20 12:57	12/21/20 15:37	1
4-Chlorophenyl phenyl ether	ND		9.9	1.6	ug/L		12/14/20 12:57	12/21/20 15:37	1
4-Methylphenol	ND		9.9	0.25	ug/L		12/14/20 12:57	12/21/20 15:37	1
4-Nitroaniline	ND		9.9	2.0	ug/L		12/14/20 12:57	12/21/20 15:37	1
4-Nitrophenol	ND		9.9	1.2	ug/L		12/14/20 12:57	12/21/20 15:37	1
Acenaphthene	ND		4.0	0.28	ug/L		12/14/20 12:57	12/21/20 15:37	1
Acenaphthylene	ND		4.0	0.49	ug/L		12/14/20 12:57	12/21/20 15:37	1
Acetophenone	ND		9.9	0.24	ug/L		12/14/20 12:57	12/21/20 15:37	1
Aniline	ND		9.9	2.0	ug/L		12/14/20 12:57	12/21/20 15:37	1
Anthracene	ND		4.0	0.42	ug/L		12/14/20 12:57	12/21/20 15:37	1
Azobenzene	ND		4.0	0.23	ug/L		12/14/20 12:57	12/21/20 15:37	1
Benzaldehyde	ND		4.9	2.0	ug/L		12/14/20 12:57	12/21/20 15:37	1
Benzidine	ND	*+	99	49	ug/L		12/14/20 12:57	12/21/20 15:37	1
Benzo[a]anthracene	ND		4.0	0.35	ug/L		12/14/20 12:57	12/21/20 15:37	1
Benzo[a]pyrene	ND		4.0	0.31	ug/L		12/14/20 12:57	12/21/20 15:37	1
Benzo[b]fluoranthene	ND		4.0	0.53	ug/L		12/14/20 12:57	12/21/20 15:37	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env 12_2020-SB-33-GW

Lab Sample ID: 280-143671-4

Date Collected: 12/10/20 12:00

Matrix: Water

Date Received: 12/10/20 14:51

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		4.0	0.49	ug/L		12/14/20 12:57	12/21/20 15:37	1
Benzo[k]fluoranthene	ND		4.0	0.46	ug/L		12/14/20 12:57	12/21/20 15:37	1
Benzoic acid	ND		25	9.9	ug/L		12/14/20 12:57	12/21/20 15:37	1
Benzyl alcohol	ND		9.9	0.23	ug/L		12/14/20 12:57	12/21/20 15:37	1
Bis(2-chloroethoxy)methane	ND		9.9	0.96	ug/L		12/14/20 12:57	12/21/20 15:37	1
Bis(2-chloroethyl)ether	ND		9.9	0.82	ug/L		12/14/20 12:57	12/21/20 15:37	1
Bis(2-ethylhexyl) phthalate	ND		9.9	0.55	ug/L		12/14/20 12:57	12/21/20 15:37	1
Butyl benzyl phthalate	ND		4.0	0.99	ug/L		12/14/20 12:57	12/21/20 15:37	1
Caprolactam	ND		4.9	2.5	ug/L		12/14/20 12:57	12/21/20 15:37	1
Carbazole	ND		4.0	0.43	ug/L		12/14/20 12:57	12/21/20 15:37	1
Chrysene	ND		4.0	0.53	ug/L		12/14/20 12:57	12/21/20 15:37	1
Dibenz(a,h)anthracene	ND		4.0	0.50	ug/L		12/14/20 12:57	12/21/20 15:37	1
Dibenzofuran	ND		4.0	0.29	ug/L		12/14/20 12:57	12/21/20 15:37	1
Diethyl phthalate	ND		4.0	0.38	ug/L		12/14/20 12:57	12/21/20 15:37	1
Dimethyl phthalate	ND		4.0	0.21	ug/L		12/14/20 12:57	12/21/20 15:37	1
Di-n-butyl phthalate	ND		4.0	1.1	ug/L		12/14/20 12:57	12/21/20 15:37	1
Di-n-octyl phthalate	ND		4.0	0.35	ug/L		12/14/20 12:57	12/21/20 15:37	1
Diphenylamine	ND		9.9	1.0	ug/L		12/14/20 12:57	12/21/20 15:37	1
Famphur	ND		99	1.5	ug/L		12/14/20 12:57	12/21/20 15:37	1
Fluoranthene	ND		4.0	0.20	ug/L		12/14/20 12:57	12/21/20 15:37	1
Fluorene	ND		4.0	0.31	ug/L		12/14/20 12:57	12/21/20 15:37	1
Hexachlorobenzene	ND		9.9	0.65	ug/L		12/14/20 12:57	12/21/20 15:37	1
Hexachlorobutadiene	ND		9.9	3.3	ug/L		12/14/20 12:57	12/21/20 15:37	1
Hexachlorocyclopentadiene	ND		49	3.1	ug/L		12/14/20 12:57	12/21/20 15:37	1
Hexachloroethane	ND		9.9	0.97	ug/L		12/14/20 12:57	12/21/20 15:37	1
Hexadecane	ND		9.9	0.53	ug/L		12/14/20 12:57	12/21/20 15:37	1
Indeno[1,2,3-cd]pyrene	ND		4.0	0.64	ug/L		12/14/20 12:57	12/21/20 15:37	1
Isophorone	ND		9.9	0.21	ug/L		12/14/20 12:57	12/21/20 15:37	1
Naphthalene	ND		4.0	0.29	ug/L		12/14/20 12:57	12/21/20 15:37	1
Nitrobenzene	ND		9.9	0.80	ug/L		12/14/20 12:57	12/21/20 15:37	1
N-Nitrosodimethylamine	ND		9.9	0.29	ug/L		12/14/20 12:57	12/21/20 15:37	1
N-Nitrosodi-n-propylamine	ND		9.9	0.35	ug/L		12/14/20 12:57	12/21/20 15:37	1
N-Nitrosodiphenylamine	ND		9.9	0.44	ug/L		12/14/20 12:57	12/21/20 15:37	1
Pentachlorophenol	ND		49	20	ug/L		12/14/20 12:57	12/21/20 15:37	1
Phenanthrene	ND		4.0	0.26	ug/L		12/14/20 12:57	12/21/20 15:37	1
Phenol	ND		9.9	2.0	ug/L		12/14/20 12:57	12/21/20 15:37	1
Pyrene	ND		9.9	0.37	ug/L		12/14/20 12:57	12/21/20 15:37	1
Pyridine	ND		20	1.7	ug/L		12/14/20 12:57	12/21/20 15:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	26	S1-	42 - 131	12/14/20 12:57	12/21/20 15:37	1
2-Fluorobiphenyl	78		48 - 120	12/14/20 12:57	12/21/20 15:37	1
2-Fluorophenol (Surr)	57		41 - 120	12/14/20 12:57	12/21/20 15:37	1
Nitrobenzene-d5 (Surr)	75		42 - 120	12/14/20 12:57	12/21/20 15:37	1
Phenol-d5 (Surr)	65		45 - 124	12/14/20 12:57	12/21/20 15:37	1
Terphenyl-d14 (Surr)	41		20 - 130	12/14/20 12:57	12/21/20 15:37	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10

Date Collected: 12/10/20 11:15

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-5

Matrix: Solid

Percent Solids: 96.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		320	23	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
1,2,4,5-Tetrachlorobenzene	ND		320	47	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
1,2,4-Trichlorobenzene	ND		320	27	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
1,2-Dichlorobenzene	ND		320	21	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		320	21	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
1,3-Dichlorobenzene	ND	F1	320	12	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
1,3-Dinitrobenzene	ND		320	68	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
1,4-Dichlorobenzene	ND		320	13	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
1,4-Dioxane	ND		630	63	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
1-Methylnaphthalene	ND		320	11	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
2,2'-oxybis[1-chloropropane]	ND		320	22	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
2,3,4,6-Tetrachlorophenol	ND		1500	130	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
2,4,5-Trichlorophenol	ND		320	9.6	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
2,4,6-Trichlorophenol	ND		320	9.6	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
2,4-Dichlorophenol	ND		320	9.6	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
2,4-Dimethylphenol	ND		320	63	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
2,4-Dinitrophenol	ND	F1	1500	320	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
2,4-Dinitrotoluene	ND		320	63	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
2,6-Dichlorophenol	ND		320	21	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
2,6-Dinitrotoluene	ND		320	27	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
2-Chloronaphthalene	ND		320	9.6	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
2-Chlorophenol	ND	*	320	20	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
2-Methylnaphthalene	ND		320	18	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
2-Methylphenol	ND		320	12	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
2-Nitroaniline	ND		1500	48	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
2-Nitrophenol	ND		320	9.6	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
3 & 4 Methylphenol	ND		320	32	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
3,3'-Dichlorobenzidine	ND		630	86	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
3-Methylphenol	ND		320	32	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
3-Nitroaniline	ND		1500	70	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
4,6-Dinitro-2-methylphenol	ND	F1	1500	320	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
4-Bromophenyl phenyl ether	ND		320	18	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
4-Chloro-3-methylphenol	ND		320	24	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
4-Chloroaniline	ND		320	79	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
4-Chlorophenyl phenyl ether	ND		320	20	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
4-Methylphenol	ND		320	32	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
4-Nitroaniline	ND		1500	69	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
4-Nitrophenol	ND		1500	93	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Acenaphthene	ND		320	9.9	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Acenaphthylene	ND		320	79	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Acetophenone	ND		320	19	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Aniline	ND		320	120	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Anthracene	ND		320	16	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Azobenzene	ND		320	21	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Benzaldehyde	ND		320	64	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Benzidine	ND		3200	950	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Benzo[a]anthracene	ND		320	19	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Benzo[a]pyrene	ND		320	19	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Benzo[b]fluoranthene	ND		320	25	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10

Date Collected: 12/10/20 11:15

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-5

Matrix: Solid

Percent Solids: 96.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		320	15	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Benzo[k]fluoranthene	ND		320	38	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Benzoic acid	ND		1500	320	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Benzyl alcohol	ND	*-	320	9.6	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Bis(2-chloroethoxy)methane	ND		320	22	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Bis(2-chloroethyl)ether	ND		320	16	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Bis(2-ethylhexyl) phthalate	ND		320	44	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Butyl benzyl phthalate	ND		320	41	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Caprolactam	ND		320	100	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Carbazole	ND		320	35	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Chrysene	ND		320	26	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Dibenz(a,h)anthracene	ND		320	18	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Dibenzofuran	ND		320	19	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Diethyl phthalate	ND		630	25	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Dimethyl phthalate	ND		320	22	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Di-n-butyl phthalate	ND		320	28	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Di-n-octyl phthalate	ND		320	39	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Diphenylamine	ND		320	42	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Famphur	ND		630	33	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Fluoranthene	ND		320	35	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Fluorene	ND		320	17	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Hexachlorobenzene	ND		320	28	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Hexachlorobutadiene	ND		320	9.6	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Hexachlorocyclopentadiene	ND	F1	1500	110	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Hexachloroethane	ND	F1	320	20	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Hexadecane	ND		320	13	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Indeno[1,2,3-cd]pyrene	ND		320	21	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Isophorone	ND		320	16	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Naphthalene	ND		320	30	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Nitrobenzene	ND		320	21	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
N-Nitrosodimethylamine	ND		320	35	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
N-Nitrosodi-n-propylamine	ND		320	65	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
N-Nitrosodiphenylamine	ND		320	20	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Pentachlorophenol	ND		1500	320	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Phenanthrene	ND		320	16	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Phenol	ND	*-	320	17	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Pyrene	ND		320	12	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1
Pyridine	ND		630	38	ug/Kg	☼	12/17/20 13:57	12/30/20 17:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	73		35 - 120	12/17/20 13:57	12/30/20 17:40	1
2-Fluorobiphenyl	66		46 - 120	12/17/20 13:57	12/30/20 17:40	1
2-Fluorophenol (Surr)	63		43 - 120	12/17/20 13:57	12/30/20 17:40	1
Nitrobenzene-d5 (Surr)	66		46 - 120	12/17/20 13:57	12/30/20 17:40	1
Phenol-d5 (Surr)	65		46 - 120	12/17/20 13:57	12/30/20 17:40	1
Terphenyl-d14 (Surr)	87		46 - 120	12/17/20 13:57	12/30/20 17:40	1

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 Env 12_2020-SB-38-13-15

Date Collected: 12/10/20 13:15

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-6

Matrix: Solid

Percent Solids: 96.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		330	24	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
1,2,4,5-Tetrachlorobenzene	ND		330	50	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
1,2,4-Trichlorobenzene	ND		330	28	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
1,2-Dichlorobenzene	ND		330	22	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		330	22	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
1,3-Dichlorobenzene	ND		330	12	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
1,3-Dinitrobenzene	ND		330	72	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
1,4-Dichlorobenzene	ND		330	14	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
1,4-Dioxane	ND		670	67	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
1-Methylnaphthalene	ND		330	11	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
2,2'-oxybis[1-chloropropane]	ND		330	23	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
2,3,4,6-Tetrachlorophenol	ND		1600	140	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
2,4,5-Trichlorophenol	ND		330	10	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
2,4,6-Trichlorophenol	ND		330	10	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
2,4-Dichlorophenol	ND		330	10	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
2,4-Dimethylphenol	ND		330	67	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
2,4-Dinitrophenol	ND		1600	340	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
2,4-Dinitrotoluene	ND		330	67	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
2,6-Dichlorophenol	ND		330	23	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
2,6-Dinitrotoluene	ND		330	28	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
2-Chloronaphthalene	ND		330	10	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
2-Chlorophenol	ND	*	330	21	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
2-Methylnaphthalene	ND		330	19	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
2-Methylphenol	ND		330	13	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
2-Nitroaniline	ND		1600	51	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
2-Nitrophenol	ND		330	10	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
3 & 4 Methylphenol	ND		330	33	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
3,3'-Dichlorobenzidine	ND		670	91	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
3-Methylphenol	ND		330	33	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
3-Nitroaniline	ND		1600	74	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
4,6-Dinitro-2-methylphenol	ND		1600	330	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
4-Bromophenyl phenyl ether	ND		330	19	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
4-Chloro-3-methylphenol	ND		330	25	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
4-Chloroaniline	ND		330	83	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
4-Chlorophenyl phenyl ether	ND		330	21	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
4-Methylphenol	ND		330	33	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
4-Nitroaniline	ND		1600	73	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
4-Nitrophenol	ND		1600	98	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Acenaphthene	ND		330	10	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Acenaphthylene	ND		330	83	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Acetophenone	ND		330	20	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Aniline	ND		330	130	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Anthracene	ND		330	17	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Azobenzene	ND		330	22	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Benzaldehyde	ND		330	68	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Benzidine	ND		3300	1000	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Benzo[a]anthracene	ND		330	20	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Benzo[a]pyrene	ND		330	20	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Benzo[b]fluoranthene	ND		330	26	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 Env 12_2020-SB-38-13-15

Lab Sample ID: 280-143671-6

Date Collected: 12/10/20 13:15

Matrix: Solid

Date Received: 12/10/20 14:51

Percent Solids: 96.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		330	16	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Benzo[k]fluoranthene	ND		330	40	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Benzoic acid	ND		1600	330	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Benzyl alcohol	ND	*-	330	10	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Bis(2-chloroethoxy)methane	ND		330	23	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Bis(2-chloroethyl)ether	ND		330	17	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Bis(2-ethylhexyl) phthalate	ND		330	47	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Butyl benzyl phthalate	ND		330	43	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Caprolactam	ND		330	110	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Carbazole	ND		330	36	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Chrysene	ND		330	27	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Dibenz(a,h)anthracene	ND		330	19	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Dibenzofuran	ND		330	20	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Diethyl phthalate	ND		670	26	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Dimethyl phthalate	ND		330	23	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Di-n-butyl phthalate	ND		330	29	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Di-n-octyl phthalate	ND		330	41	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Diphenylamine	ND		330	44	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Famphur	ND		670	34	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Fluoranthene	ND		330	36	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Fluorene	ND		330	18	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Hexachlorobenzene	ND		330	29	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Hexachlorobutadiene	ND		330	10	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Hexachlorocyclopentadiene	ND		1600	110	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Hexachloroethane	ND		330	22	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Hexadecane	ND		330	13	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Indeno[1,2,3-cd]pyrene	ND		330	22	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Isophorone	ND		330	17	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Naphthalene	ND		330	31	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Nitrobenzene	ND		330	22	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
N-Nitrosodimethylamine	ND		330	37	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
N-Nitrosodi-n-propylamine	ND		330	69	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
N-Nitrosodiphenylamine	ND		330	21	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Pentachlorophenol	ND		1600	330	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Phenanthrene	ND		330	17	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Phenol	ND	*-	330	18	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Pyrene	ND		330	12	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1
Pyridine	ND		670	40	ug/Kg	☼	12/17/20 13:57	12/30/20 19:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	71		35 - 120	12/17/20 13:57	12/30/20 19:01	1
2-Fluorobiphenyl	69		46 - 120	12/17/20 13:57	12/30/20 19:01	1
2-Fluorophenol (Surr)	63		43 - 120	12/17/20 13:57	12/30/20 19:01	1
Nitrobenzene-d5 (Surr)	66		46 - 120	12/17/20 13:57	12/30/20 19:01	1
Phenol-d5 (Surr)	66		46 - 120	12/17/20 13:57	12/30/20 19:01	1
Terphenyl-d14 (Surr)	86		46 - 120	12/17/20 13:57	12/30/20 19:01	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Client Sample ID: CDOT I270 Env 12_2020-SB-32-GW

Date Collected: 12/09/20 09:30

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		25	10	ug/L			12/19/20 05:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	92		82 - 110					12/19/20 05:08	1

Client Sample ID: CDOT I270 Env 12_2020-SB-32-GW-DUP

Date Collected: 12/09/20 09:30

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		25	10	ug/L			12/19/20 05:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	92		82 - 110					12/19/20 05:32	1

Client Sample ID: CDOT I270 Env 12_2020-SB-32-9-11

Date Collected: 12/09/20 09:00

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-3

Matrix: Solid

Percent Solids: 92.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		2.9	1.1	mg/Kg	✱	12/16/20 21:50	12/17/20 05:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	85		77 - 123				12/16/20 21:50	12/17/20 05:31	1

Client Sample ID: CDOT I270 Env 12_2020-SB-33-GW

Date Collected: 12/10/20 12:00

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		25	10	ug/L			12/19/20 05:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	92		82 - 110					12/19/20 05:55	1

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10

Date Collected: 12/10/20 11:15

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-5

Matrix: Solid

Percent Solids: 96.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND	F1 F2	2.3	0.88	mg/Kg	✱	12/16/20 21:50	12/17/20 05:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	85		77 - 123				12/16/20 21:50	12/17/20 05:55	1

Client Sample ID: CDOT I270 Env 12_2020-SB-38-13-15

Date Collected: 12/10/20 13:15

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-6

Matrix: Solid

Percent Solids: 96.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		2.4	0.91	mg/Kg	✱	12/16/20 21:50	12/17/20 07:09	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics) (Continued)

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
a,a,a-Trifluorotoluene	84		77 - 123			12/16/20 21:50	12/17/20 07:09	1	
Client Sample ID: TB-04			Lab Sample ID: 280-143671-7						
Date Collected: 12/09/20 08:00			Matrix: Solid						
Date Received: 12/10/20 14:51									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		2.0	0.76	mg/Kg		12/16/20 21:50	12/17/20 03:53	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
a,a,a-Trifluorotoluene	85		77 - 123			12/16/20 21:50	12/17/20 03:53	1	
Client Sample ID: TB-05			Lab Sample ID: 280-143671-8						
Date Collected: 12/09/20 08:00			Matrix: Water						
Date Received: 12/10/20 14:51									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		25	10	ug/L			12/19/20 04:45	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
a,a,a-Trifluorotoluene	92		82 - 110				12/19/20 04:45	1	

Consultant Work Product - Jacobs Engineering
 -Not CDOT Approved-

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Client Sample ID: CDOT I270 Env 12_2020-SB-32-GW

Date Collected: 12/09/20 09:30

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	1.2	H	0.24	0.032	mg/L		12/17/20 15:12	12/24/20 17:09	1
Motor Oil (C20-C38)	1.0	H	0.48	0.054	mg/L		12/17/20 15:12	12/24/20 17:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	66		50 - 115				12/17/20 15:12	12/24/20 17:09	1

Client Sample ID: CDOT I270 Env 12_2020-SB-32-GW-DUP

Date Collected: 12/09/20 09:30

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	0.71	H	0.24	0.032	mg/L		12/17/20 15:12	12/24/20 17:32	1
Motor Oil (C20-C38)	0.65	H	0.49	0.055	mg/L		12/17/20 15:12	12/24/20 17:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	66		50 - 115				12/17/20 15:12	12/24/20 17:32	1

Client Sample ID: CDOT I270 Env 12_2020-SB-32-9-11

Date Collected: 12/09/20 09:00

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-3

Matrix: Solid

Percent Solids: 92.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	66		16	7.1	mg/Kg	☆	12/12/20 16:06	12/15/20 20:46	2
Motor Oil (C20-C38)	160		47	15	mg/Kg	☆	12/12/20 16:06	12/15/20 20:46	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	60		49 - 115				12/12/20 16:06	12/15/20 20:46	2

Client Sample ID: CDOT I270 Env 12_2020-SB-33-GW

Date Collected: 12/10/20 12:00

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	0.12	J	0.24	0.032	mg/L		12/17/20 15:12	12/24/20 17:55	1
Motor Oil (C20-C38)	0.20	J	0.49	0.055	mg/L		12/17/20 15:12	12/24/20 17:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	82		50 - 115				12/17/20 15:12	12/24/20 17:55	1

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10

Date Collected: 12/10/20 11:15

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-5

Matrix: Solid

Percent Solids: 96.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND	F2 F1	7.7	3.5	mg/Kg	☆	12/12/20 16:06	12/14/20 20:51	1
Motor Oil (C20-C38)	15	J	23	7.5	mg/Kg	☆	12/12/20 16:06	12/14/20 20:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	65		49 - 115				12/12/20 16:06	12/14/20 20:51	1

Client Sample ID: CDOT I270 Env 12_2020-SB-38-13-15

Date Collected: 12/10/20 13:15

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-6

Matrix: Solid

Percent Solids: 96.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		7.9	3.6	mg/Kg	☆	12/12/20 16:06	12/14/20 23:41	1
Motor Oil (C20-C38)	ND		24	7.7	mg/Kg	☆	12/12/20 16:06	12/14/20 23:41	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

<u>Surrogate</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
<i>o-Terphenyl (Surr)</i>	64		49 - 115	12/12/20 16:06	12/14/20 23:41	1

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: CDOT I270 Env 12_2020-SB-32-GW

Date Collected: 12/09/20 09:30

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	58		5.0	0.33	ug/L		12/16/20 15:40	12/17/20 18:03	1
Barium	4800		1.0	0.29	ug/L		12/16/20 15:40	12/18/20 07:34	1
Cadmium	1.8		1.0	0.27	ug/L		12/16/20 15:40	12/17/20 18:03	1
Chromium	310	B	2.0	0.50	ug/L		12/16/20 15:40	12/18/20 07:34	1
Lead	230		1.0	0.18	ug/L		12/16/20 15:40	12/17/20 18:03	1
Selenium	37		5.0	0.37	ug/L		12/16/20 15:40	12/17/20 18:03	1
Silver	1.4	J	5.0	0.033	ug/L		12/16/20 15:40	12/17/20 18:03	1

Client Sample ID: CDOT I270 Env 12_2020-SB-32-GW-DUP

Date Collected: 12/09/20 09:30

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	61		5.0	0.33	ug/L		12/16/20 15:40	12/17/20 18:07	1
Barium	5000		1.0	0.29	ug/L		12/16/20 15:40	12/18/20 07:38	1
Cadmium	1.8		1.0	0.27	ug/L		12/16/20 15:40	12/17/20 18:07	1
Chromium	330	B	2.0	0.50	ug/L		12/16/20 15:40	12/18/20 07:38	1
Lead	240		1.0	0.18	ug/L		12/16/20 15:40	12/17/20 18:07	1
Selenium	39		5.0	0.37	ug/L		12/16/20 15:40	12/17/20 18:07	1
Silver	1.5	J	5.0	0.033	ug/L		12/16/20 15:40	12/17/20 18:07	1

Client Sample ID: CDOT I270 Env 12_2020-SB-32-9-11

Date Collected: 12/09/20 09:00

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-3

Matrix: Solid

Percent Solids: 92.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.0		0.56	0.047	mg/Kg	⊛	12/17/20 08:02	12/17/20 18:49	1
Silver	70	J	100	7.9	ug/Kg	⊛	12/16/20 16:10	12/17/20 08:55	1
Barium	72		0.37	0.066	mg/Kg	⊛	12/17/20 08:02	12/17/20 18:49	1
Cadmium	0.13		0.093	0.0087	mg/Kg	⊛	12/17/20 08:02	12/17/20 18:49	1
Chromium	11	B	0.19	0.071	mg/Kg	⊛	12/17/20 08:02	12/17/20 18:49	1
Lead	20		0.14	0.017	mg/Kg	⊛	12/17/20 08:02	12/17/20 18:49	1
Selenium	ND		0.47	0.12	mg/Kg	⊛	12/17/20 08:02	12/17/20 18:49	1

Client Sample ID: CDOT I270 Env 12_2020-SB-33-GW

Date Collected: 12/10/20 12:00

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	63	F1	5.0	0.33	ug/L		12/16/20 15:40	12/17/20 18:11	1
Barium	4500		1.0	0.29	ug/L		12/16/20 15:40	12/18/20 07:42	1
Cadmium	3.3		1.0	0.27	ug/L		12/16/20 15:40	12/17/20 18:11	1
Chromium	310	B	2.0	0.50	ug/L		12/16/20 15:40	12/18/20 07:42	1
Lead	240		1.0	0.18	ug/L		12/16/20 15:40	12/17/20 18:11	1
Selenium	5.3	F1	5.0	0.37	ug/L		12/16/20 15:40	12/17/20 18:11	1
Silver	1.3	J	5.0	0.033	ug/L		12/16/20 15:40	12/17/20 18:11	1

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10

Date Collected: 12/10/20 11:15

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-5

Matrix: Solid

Percent Solids: 96.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.75		0.46	0.039	mg/Kg	⊛	12/17/20 08:02	12/17/20 18:53	1
Silver	ND		100	7.9	ug/Kg	⊛	12/16/20 16:10	12/17/20 08:59	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 6020A - Metals (ICP/MS) (Continued)

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10
Date Collected: 12/10/20 11:15
Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-5
Matrix: Solid
Percent Solids: 96.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	21	F2 F1	0.31	0.054	mg/Kg	☼	12/17/20 08:02	12/17/20 18:53	1
Cadmium	0.032	J F2	0.077	0.0072	mg/Kg	☼	12/17/20 08:02	12/17/20 18:53	1
Chromium	2.0	F2 B	0.15	0.059	mg/Kg	☼	12/17/20 08:02	12/17/20 18:53	1
Lead	2.4		0.12	0.014	mg/Kg	☼	12/17/20 08:02	12/17/20 18:53	1
Selenium	ND		0.39	0.10	mg/Kg	☼	12/17/20 08:02	12/17/20 18:53	1

Client Sample ID: CDOT I270 Env 12_2020-SB-38-13-15
Date Collected: 12/10/20 13:15
Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-6
Matrix: Solid
Percent Solids: 96.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.1		0.51	0.043	mg/Kg	☼	12/17/20 08:02	12/17/20 19:11	1
Silver	11	J	84	6.5	ug/Kg		12/16/20 16:10	12/17/20 09:28	1
Barium	78		0.34	0.059	mg/Kg	☼	12/17/20 08:02	12/17/20 19:11	1
Cadmium	0.19		0.084	0.0079	mg/Kg	☼	12/17/20 08:02	12/17/20 19:11	1
Chromium	7.6	B	0.17	0.064	mg/Kg	☼	12/17/20 08:02	12/17/20 19:11	1
Lead	21		0.13	0.015	mg/Kg	☼	12/17/20 08:02	12/17/20 19:11	1
Selenium	0.15	J	0.42	0.11	mg/Kg	☼	12/17/20 08:02	12/17/20 19:11	1

Consultant Work Product - Jacobs Engineering Group, Inc.
 -Not CDOT Approved

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 6020A - Metals (ICP/MS) - Dissolved

Client Sample ID: CDOT I270 Env 12_2020-SB-32-GW

Date Collected: 12/09/20 09:30

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic, Dissolved	0.33	J	5.0	0.33	ug/L		12/17/20 08:07	12/17/20 19:32	1
Barium, Dissolved	94		1.0	0.29	ug/L		12/17/20 08:07	12/17/20 19:32	1
Cadmium, Dissolved	ND		1.0	0.27	ug/L		12/17/20 08:07	12/17/20 19:32	1
Chromium, Dissolved	1.7	J	2.0	0.50	ug/L		12/17/20 08:07	12/17/20 19:32	1
Lead, Dissolved	0.21	J	1.0	0.18	ug/L		12/17/20 08:07	12/17/20 19:32	1
Selenium, Dissolved	8.7		5.0	0.37	ug/L		12/17/20 08:07	12/17/20 19:32	1
Silver, Dissolved	ND		5.0	0.033	ug/L		12/17/20 08:07	12/17/20 19:32	1

Client Sample ID: CDOT I270 Env 12_2020-SB-32-GW-DUP

Date Collected: 12/09/20 09:30

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic, Dissolved	0.34	J	5.0	0.33	ug/L		12/17/20 08:07	12/17/20 19:35	1
Barium, Dissolved	94		1.0	0.29	ug/L		12/17/20 08:07	12/17/20 19:35	1
Cadmium, Dissolved	ND		1.0	0.27	ug/L		12/17/20 08:07	12/17/20 19:35	1
Chromium, Dissolved	ND		2.0	0.50	ug/L		12/17/20 08:07	12/17/20 19:35	1
Lead, Dissolved	ND		1.0	0.18	ug/L		12/17/20 08:07	12/17/20 19:35	1
Selenium, Dissolved	8.8		5.0	0.37	ug/L		12/17/20 08:07	12/17/20 19:35	1
Silver, Dissolved	ND		5.0	0.033	ug/L		12/17/20 08:07	12/17/20 19:35	1

Client Sample ID: CDOT I270 Env 12_2020-SB-33-GW

Date Collected: 12/10/20 12:00

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic, Dissolved	0.98	J	5.0	0.33	ug/L		12/17/20 08:07	12/17/20 19:39	1
Barium, Dissolved	140	F1	1.0	0.29	ug/L		12/17/20 08:07	12/17/20 19:39	1
Cadmium, Dissolved	ND		1.0	0.27	ug/L		12/17/20 08:07	12/17/20 19:39	1
Chromium, Dissolved	0.53	J	2.0	0.50	ug/L		12/17/20 08:07	12/17/20 19:39	1
Lead, Dissolved	ND		1.0	0.18	ug/L		12/17/20 08:07	12/17/20 19:39	1
Selenium, Dissolved	2.1	J^+	5.0	0.37	ug/L		12/17/20 08:07	12/18/20 09:55	1
Silver, Dissolved	ND		5.0	0.033	ug/L		12/17/20 08:07	12/17/20 19:39	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 7470A - Mercury (CVAA)

Client Sample ID: CDOT I270 Env 12_2020-SB-32-GW

Date Collected: 12/09/20 09:30

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.55	J	1.0	0.14	ug/L		12/15/20 13:10	12/15/20 17:48	1

Client Sample ID: CDOT I270 Env 12_2020-SB-32-GW-DUP

Date Collected: 12/09/20 09:30

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.64	J	1.0	0.14	ug/L		12/15/20 13:10	12/15/20 17:50	1

Client Sample ID: CDOT I270 Env 12_2020-SB-33-GW

Date Collected: 12/10/20 12:00

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.41	J	1.0	0.14	ug/L		12/15/20 13:10	12/15/20 17:52	1

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 7470A - Mercury (CVAA) - Dissolved

Client Sample ID: CDOT I270 Env 12_2020-SB-32-GW
Date Collected: 12/09/20 09:30
Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury, Dissolved	ND		0.20	0.027	ug/L		12/17/20 14:00	12/17/20 21:58	1

Client Sample ID: CDOT I270 Env 12_2020-SB-32-GW-DUP
Date Collected: 12/09/20 09:30
Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury, Dissolved	0.052	J	0.20	0.027	ug/L		12/17/20 14:00	12/17/20 22:06	1

Client Sample ID: CDOT I270 Env 12_2020-SB-33-GW
Date Collected: 12/10/20 12:00
Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury, Dissolved	0.033	J	0.20	0.027	ug/L		12/17/20 14:00	12/17/20 22:08	1

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 7471B - Mercury (CVAA)

Client Sample ID: CDOT I270 Env 12_2020-SB-32-9-11

Date Collected: 12/09/20 09:00

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-3

Matrix: Solid

Percent Solids: 92.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	46		20	6.6	ug/Kg	☼	12/12/20 13:00	12/12/20 14:35	1

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10

Date Collected: 12/10/20 11:15

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-5

Matrix: Solid

Percent Solids: 96.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		20	6.6	ug/Kg	☼	12/12/20 13:00	12/12/20 14:37	1

Client Sample ID: CDOT I270 Env 12_2020-SB-38-13-15

Date Collected: 12/10/20 13:15

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-6

Matrix: Solid

Percent Solids: 96.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	8.7	J	19	6.0	ug/Kg	☼	12/12/20 13:00	12/12/20 14:44	1

Consultant Work Product - Jacobs Engineering Group, Inc.
 -Not CDOT Approved-

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

General Chemistry

Client Sample ID: CDOT I270 Env 12_2020-SB-32-9-11

Date Collected: 12/09/20 09:00

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-3

Matrix: Solid

Percent Solids: 92.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	7.1		0.1	0.1	%			12/16/20 11:19	1
Percent Solids	92.9		0.1	0.1	%			12/16/20 11:19	1

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10

Date Collected: 12/10/20 11:15

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-5

Matrix: Solid

Percent Solids: 96.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.4		0.1	0.1	%			12/16/20 11:19	1
Percent Solids	96.6		0.1	0.1	%			12/16/20 11:19	1

Client Sample ID: CDOT I270 Env 12_2020-SB-38-13-15

Date Collected: 12/10/20 13:15

Date Received: 12/10/20 14:51

Lab Sample ID: 280-143671-6

Matrix: Solid

Percent Solids: 96.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.7		0.1	0.1	%			12/16/20 11:19	1
Percent Solids	96.3		0.1	0.1	%			12/16/20 11:19	1

Consultant Work Product - Jacobs Engineering Group, Inc.
-Not CDOT Approved-

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (58-140)	BFB (76-127)	DBFM (75-121)	TOL (80-126)
280-143671-3	CDOT I270 Env 12_2020-SB-32	104	101	101	97
280-143671-5	CDOT I270 Env 12_2020-SB-33-6-10	103	99	101	96
280-143671-5 MS	CDOT I270 Env 12_2020-SB-33-6-10	103	99	103	96
280-143671-5 MSD	CDOT I270 Env 12_2020-SB-33-6-10	104	100	103	97
280-143671-6	CDOT I270 Env 12_2020-SB-38-13-15	104	99	101	97
280-143671-7	TB-04	103	98	102	97
LCS 280-521431/1-A	Lab Control Sample	102	102	103	96
LCSD 280-521431/2-A	Lab Control Sample Dup	103	100	103	96
MB 280-521431/3-A	Method Blank	104	99	104	95

Surrogate Legend
DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (70-127)	BFB (78-120)	DBFM (77-120)	TOL (80-125)
280-143671-1	CDOT I270 Env 12_2020-SB-32	86	100	101	99
280-143671-2	CDOT I270 Env 12_2020-SB-32-GW-DUP	84	100	99	100
280-143671-4	CDOT I270 Env 12_2020-SB-33-GW	83	100	100	100
280-143671-8	TB-05	83	100	101	100
LCS 280-520319/4	Lab Control Sample	84	102	99	100
LCSD 280-520319/5	Lab Control Sample Dup	84	102	99	101
MB 280-520319/9	Method Blank	92	104	100	100

Surrogate Legend
DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (35-120)	FBP (46-120)	2FP (43-120)	NBZ (46-120)	PHL (46-120)	TPHL (46-120)
280-143671-3	CDOT I270 Env 12_2020-SB-32	72	62	55	55	59	83
280-143671-5	CDOT I270 Env 12_2020-SB-33-6-10	73	66	63	66	65	87
280-143671-5 MS	CDOT I270 Env 12_2020-SB-33-6-10	79	73	66	68	70	93

Eurofins TestAmerica, Denver

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (35-120)	FBP (46-120)	2FP (43-120)	NBZ (46-120)	PHL (46-120)	TPHL (46-120)
280-143671-5 MSD	CDOT I270 Env 12_2020-SB-33	78	71	63	66	66	92
280-143671-6	CDOT I270 Env 12_2020-SB-38-13-15	71	69	63	66	66	86
LCS 280-520806/2-A	Lab Control Sample	75	64	56	58	58	89
MB 280-520806/1-A	Method Blank	67	61	63	65	65	93

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (42-131)	FBP (48-120)	2FP (41-120)	NBZ (42-120)	PHL (45-124)	TPHL (20-130)
280-143671-1	CDOT I270 Env 12_2020-SB-32	76	56	62	56	70	17 S1-
280-143671-2	CDOT I270 Env 12_2020-SB-32-GW-DUP	74	67	73	71	75	14 S1-
280-143671-4	CDOT I270 Env 12_2020-SB-33-GW	26 S1-	78	57	75	65	41
LCS 280-520327/2-A	Lab Control Sample	84	83	80	78	82	98
LCSD 280-520327/3-A	Lab Control Sample Dup	81	77	80	75	83	96
MB 280-520327/1-A	Method Blank	76	66	82	73	80	92

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		TFT1 (77-123)
280-143671-3	CDOT I270 Env 12_2020-SB-32	85
280-143671-5	CDOT I270 Env 12_2020-SB-33-6-10	85
280-143671-5 MS	CDOT I270 Env 12_2020-SB-33-6-10	87
280-143671-5 MSD	CDOT I270 Env 12_2020-SB-33-6-10	88
280-143671-6	CDOT I270 Env 12_2020-SB-38-13-15	84
280-143671-7	TB-04	85
LCS 280-520771/1-A	Lab Control Sample	88

Eurofins TestAmerica, Denver

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

(Continued)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TFT1 (77-123)
LCSD 280-520771/2-A	Lab Control Sample Dup	88
MB 280-520771/3-A	Method Blank	85

Surrogate Legend

TFT = a,a,a-Trifluorotoluene

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TFT1 (82-110)
280-143671-1	CDOT I270 Env 12_2020-SB-32	92
280-143671-2	CDOT I270 Env 12_2020-SB-32-GW-DUP	92
280-143671-4	CDOT I270 Env 12_2020-SB-33-GW	92
280-143671-8	TB-05	92
LCS 280-521036/36	Lab Control Sample	98
LCSD 280-521036/37	Lab Control Sample Dup	94
MB 280-521036/38	Method Blank	94

Surrogate Legend

TFT = a,a,a-Trifluorotoluene

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTPH1 (49-115)
280-143671-3	CDOT I270 Env 12_2020-SB-32	60
280-143671-5	CDOT I270 Env 12_2020-SB-33-6-10	65
280-143671-5 MS	CDOT I270 Env 12_2020-SB-33-6-10	134 S1+
280-143671-5 MS	CDOT I270 Env 12_2020-SB-33-6-10	76
280-143671-5 MSD	CDOT I270 Env 12_2020-SB-33-6-10	77
280-143671-5 MSD	CDOT I270 Env 12_2020-SB-33-6-10	75
280-143671-6	CDOT I270 Env 12_2020-SB-38-13-15	64
LCS 280-520265/2-A	Lab Control Sample	77
LCS 280-520265/3-A	Lab Control Sample	79
MB 280-520265/1-A	Method Blank	60

Surrogate Legend

OTPH = o-Terphenyl (Surr)

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTPH1 (50-115)
280-143671-1	CDOT I270 Env 12_2020-SB-32	66
280-143671-2	CDOT I270 Env 12_2020-SB-32-GW-DUP	66
280-143671-4	CDOT I270 Env 12_2020-SB-33-GW	82
LCS 280-520850/2-A	Lab Control Sample	83
LCS 280-520850/4-A	Lab Control Sample	76
LCSD 280-520850/3-A	Lab Control Sample Dup	89
LCSD 280-520850/5-A	Lab Control Sample Dup	82
MB 280-520850/1-A	Method Blank	75

Surrogate Legend

OTPH = o-Terphenyl (Surr)

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-520319/9
Matrix: Water
Analysis Batch: 520319

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			12/14/20 11:55	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			12/14/20 11:55	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			12/14/20 11:55	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			12/14/20 11:55	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			12/14/20 11:55	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			12/14/20 11:55	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			12/14/20 11:55	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			12/14/20 11:55	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			12/14/20 11:55	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			12/14/20 11:55	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			12/14/20 11:55	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			12/14/20 11:55	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			12/14/20 11:55	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/14/20 11:55	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			12/14/20 11:55	1
1,4-Dioxane	ND		200	19	ug/L			12/14/20 11:55	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			12/14/20 11:55	1
2-Hexanone	ND		5.0	1.7	ug/L			12/14/20 11:55	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			12/14/20 11:55	1
Acetone	ND		10	1.9	ug/L			12/14/20 11:55	1
Benzene	ND		1.0	0.16	ug/L			12/14/20 11:55	1
Bromoform	ND		1.0	0.46	ug/L			12/14/20 11:55	1
Bromomethane	ND		2.0	0.21	ug/L			12/14/20 11:55	1
Carbon disulfide	ND		2.0	0.17	ug/L			12/14/20 11:55	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			12/14/20 11:55	1
Chlorobenzene	ND		1.0	0.17	ug/L			12/14/20 11:55	1
Chlorobromomethane	ND		1.0	0.10	ug/L			12/14/20 11:55	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			12/14/20 11:55	1
Chloroethane	ND		2.0	0.41	ug/L			12/14/20 11:55	1
Chloroform	ND		1.0	0.16	ug/L			12/14/20 11:55	1
Chloromethane	ND		2.0	0.30	ug/L			12/14/20 11:55	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			12/14/20 11:55	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			12/14/20 11:55	1
Cyclohexane	ND		2.0	0.28	ug/L			12/14/20 11:55	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			12/14/20 11:55	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			12/14/20 11:55	1
Ethylbenzene	ND		1.0	0.16	ug/L			12/14/20 11:55	1
Isopropylbenzene	ND		1.0	0.19	ug/L			12/14/20 11:55	1
Methyl acetate	ND		5.0	1.6	ug/L			12/14/20 11:55	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			12/14/20 11:55	1
Methylcyclohexane	ND		1.0	0.10	ug/L			12/14/20 11:55	1
Methylene Chloride	ND		2.0	0.94	ug/L			12/14/20 11:55	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			12/14/20 11:55	1
o-Xylene	ND		1.0	0.19	ug/L			12/14/20 11:55	1
Styrene	ND		1.0	0.36	ug/L			12/14/20 11:55	1
Tetrachloroethene	ND		1.0	0.20	ug/L			12/14/20 11:55	1
Toluene	ND		1.0	0.17	ug/L			12/14/20 11:55	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			12/14/20 11:55	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-520319/9
Matrix: Water
Analysis Batch: 520319

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			12/14/20 11:55	1
Trichloroethene	ND		1.0	0.16	ug/L			12/14/20 11:55	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			12/14/20 11:55	1
Vinyl chloride	ND		1.0	0.10	ug/L			12/14/20 11:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		70 - 127		12/14/20 11:55	1
4-Bromofluorobenzene (Surr)	104		78 - 120		12/14/20 11:55	1
Dibromofluoromethane (Surr)	100		77 - 120		12/14/20 11:55	1
Toluene-d8 (Surr)	100		80 - 125		12/14/20 11:55	1

Lab Sample ID: LCS 280-520319/4
Matrix: Water
Analysis Batch: 520319

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	22.6		ug/L		90	65 - 135
1,1,2,2-Tetrachloroethane	25.0	26.1		ug/L		104	58 - 135
1,1,2-Trichloroethane	25.0	24.4		ug/L		97	64 - 135
1,1,2-Trichlorotrifluoroethane	25.0	23.3		ug/L		93	65 - 140
1,1-Dichloroethane	25.0	22.2		ug/L		89	65 - 135
1,1-Dichloroethene	25.0	24.7		ug/L		99	65 - 136
1,2,3-Trichlorobenzene	25.0	24.4		ug/L		97	60 - 135
1,2,4-Trichlorobenzene	25.0	24.7		ug/L		99	58 - 135
1,2-Dibromo-3-Chloropropane	25.0	25.7		ug/L		103	57 - 135
1,2-Dibromoethane	25.0	24.6		ug/L		98	65 - 135
1,2-Dichlorobenzene	25.0	24.3		ug/L		97	65 - 135
1,2-Dichloroethane	25.0	18.5		ug/L		74	65 - 135
1,2-Dichloropropane	25.0	20.7		ug/L		83	64 - 135
1,3-Dichlorobenzene	25.0	24.7		ug/L		99	65 - 135
1,4-Dichlorobenzene	25.0	24.6		ug/L		98	65 - 135
1,4-Dioxane	500	534		ug/L		107	31 - 147
2-Butanone (MEK)	100	88.5		ug/L		88	44 - 177
2-Hexanone	100	92.8		ug/L		93	57 - 139
4-Methyl-2-pentanone (MIBK)	100	89.0		ug/L		89	60 - 150
Acetone	100	86.2		ug/L		86	39 - 156
Benzene	25.0	23.2		ug/L		93	65 - 135
Bromoform	25.0	26.3		ug/L		105	62 - 135
Bromomethane	25.0	26.4		ug/L		105	45 - 135
Carbon disulfide	25.0	20.5		ug/L		82	55 - 143
Carbon tetrachloride	25.0	23.5		ug/L		94	65 - 135
Chlorobenzene	25.0	23.7		ug/L		95	65 - 135
Chlorobromomethane	25.0	24.2		ug/L		97	65 - 135
Chlorodibromomethane	25.0	28.0		ug/L		112	65 - 135
Chloroethane	25.0	25.2		ug/L		101	46 - 136
Chloroform	25.0	22.3		ug/L		89	65 - 135
Chloromethane	25.0	21.9		ug/L		87	34 - 145
cis-1,2-Dichloroethene	25.0	24.4		ug/L		98	65 - 135

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-520319/4
Matrix: Water
Analysis Batch: 520319

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,3-Dichloropropene	25.0	24.1		ug/L		96	65 - 135
Cyclohexane	25.0	21.7		ug/L		87	62 - 135
Dichlorobromomethane	25.0	24.2		ug/L		97	65 - 135
Dichlorodifluoromethane	25.0	21.8		ug/L		87	43 - 142
Ethylbenzene	25.0	23.5		ug/L		94	65 - 135
Isopropylbenzene	25.0	25.3		ug/L		101	65 - 135
Methyl acetate	50.0	46.0		ug/L		92	52 - 135
Methyl tert-butyl ether	25.0	21.8		ug/L		87	54 - 135
Methylcyclohexane	25.0	21.5		ug/L		86	63 - 135
Methylene Chloride	25.0	21.9		ug/L		87	54 - 141
m-Xylene & p-Xylene	25.0	23.6		ug/L		95	65 - 135
o-Xylene	25.0	23.7		ug/L		95	65 - 135
Styrene	25.0	24.2		ug/L		97	65 - 135
Tetrachloroethene	25.0	24.7		ug/L		99	65 - 135
Toluene	25.0	22.8		ug/L		91	65 - 135
trans-1,2-Dichloroethene	25.0	23.5		ug/L		94	65 - 135
trans-1,3-Dichloropropene	25.0	21.1		ug/L		85	65 - 135
Trichloroethene	25.0	23.4		ug/L		94	65 - 135
Trichlorofluoromethane	25.0	27.4		ug/L		110	53 - 137
Vinyl chloride	25.0	23.1		ug/L		92	40 - 137

Surrogate	LCS %Recovery	LCS Qualifier	LCS Limits
1,2-Dichloroethane-d4 (Surr)	84		70 - 127
4-Bromofluorobenzene (Surr)	102		78 - 120
Dibromofluoromethane (Surr)	99		77 - 120
Toluene-d8 (Surr)	100		80 - 125

Lab Sample ID: LCSD 280-520319/5
Matrix: Water
Analysis Batch: 520319

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	25.0	23.0		ug/L		92	65 - 135	2	20
1,1,2,2-Tetrachloroethane	25.0	25.5		ug/L		102	58 - 135	2	20
1,1,2-Trichloroethane	25.0	24.6		ug/L		99	64 - 135	1	27
1,1,2-Trichlorotrifluoroethane	25.0	23.9		ug/L		96	65 - 140	3	20
1,1-Dichloroethane	25.0	22.1		ug/L		88	65 - 135	0	21
1,1-Dichloroethene	25.0	25.1		ug/L		100	65 - 136	2	20
1,2,3-Trichlorobenzene	25.0	24.5		ug/L		98	60 - 135	0	36
1,2,4-Trichlorobenzene	25.0	25.0		ug/L		100	58 - 135	1	25
1,2-Dibromo-3-Chloropropane	25.0	24.5		ug/L		98	57 - 135	5	22
1,2-Dibromoethane	25.0	24.5		ug/L		98	65 - 135	0	27
1,2-Dichlorobenzene	25.0	24.2		ug/L		97	65 - 135	1	20
1,2-Dichloroethane	25.0	18.6		ug/L		74	65 - 135	1	20
1,2-Dichloropropane	25.0	21.1		ug/L		84	64 - 135	2	20
1,3-Dichlorobenzene	25.0	24.3		ug/L		97	65 - 135	1	20
1,4-Dichlorobenzene	25.0	24.2		ug/L		97	65 - 135	2	23
1,4-Dioxane	500	520		ug/L		104	31 - 147	3	30

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-520319/5
Matrix: Water
Analysis Batch: 520319

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Butanone (MEK)	100	87.5		ug/L		88	44 - 177	1	32
2-Hexanone	100	92.2		ug/L		92	57 - 139	1	25
4-Methyl-2-pentanone (MIBK)	100	88.8		ug/L		89	60 - 150	0	22
Acetone	100	81.7		ug/L		82	39 - 156	5	23
Benzene	25.0	23.2		ug/L		93	65 - 135	0	20
Bromoform	25.0	25.2		ug/L		101	62 - 135	4	27
Bromomethane	25.0	22.5		ug/L		90	45 - 135	16	33
Carbon disulfide	25.0	20.6		ug/L		82	55 - 143	1	20
Carbon tetrachloride	25.0	23.8		ug/L		95	65 - 135	1	21
Chlorobenzene	25.0	23.7		ug/L		95	65 - 135	0	20
Chlorobromomethane	25.0	24.0		ug/L		96	65 - 135	1	29
Chlorodibromomethane	25.0	27.4		ug/L		110	65 - 135	2	20
Chloroethane	25.0	24.6		ug/L		98	46 - 136	3	25
Chloroform	25.0	22.3		ug/L		89	65 - 135	0	20
Chloromethane	25.0	21.5		ug/L		86	34 - 145	2	24
cis-1,2-Dichloroethene	25.0	24.0		ug/L		96	65 - 135	2	20
cis-1,3-Dichloropropene	25.0	24.1		ug/L		96	65 - 135	0	26
Cyclohexane	25.0	22.0		ug/L		88	62 - 135	1	20
Dichlorobromomethane	25.0	24.3		ug/L		97	65 - 135	0	20
Dichlorodifluoromethane	25.0	18.7		ug/L		75	43 - 142	15	30
Ethylbenzene	25.0	23.7		ug/L		95	65 - 135	1	20
Isopropylbenzene	25.0	25.0		ug/L		100	65 - 135	1	20
Methyl acetate	50.0	44.1		ug/L		88	52 - 135	4	27
Methyl tert-butyl ether	25.0	21.7		ug/L		87	54 - 135	0	21
Methylcyclohexane	25.0	21.5		ug/L		86	63 - 135	0	20
Methylene Chloride	25.0	21.7		ug/L		87	54 - 141	1	26
m-Xylene & p-Xylene	25.0	23.7		ug/L		95	65 - 135	0	20
o-Xylene	25.0	23.7		ug/L		95	65 - 135	0	20
Styrene	25.0	24.1		ug/L		96	65 - 135	0	26
Tetrachloroethene	25.0	24.8		ug/L		99	65 - 135	0	20
Toluene	25.0	23.0		ug/L		92	65 - 135	1	20
trans-1,2-Dichloroethene	25.0	23.8		ug/L		95	65 - 135	1	24
trans-1,3-Dichloropropene	25.0	21.3		ug/L		85	65 - 135	1	26
Trichloroethene	25.0	23.7		ug/L		95	65 - 135	1	20
Trichlorofluoromethane	25.0	24.7		ug/L		99	53 - 137	10	27
Vinyl chloride	25.0	21.5		ug/L		86	40 - 137	7	24

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	84		70 - 127
4-Bromofluorobenzene (Surr)	102		78 - 120
Dibromofluoromethane (Surr)	99		77 - 120
Toluene-d8 (Surr)	101		80 - 125

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-521431/3-A
Matrix: Solid
Analysis Batch: 521399

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 521431

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1-Trichloroethane	ND		5.0	2.0	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.29	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
1,1,2-Trichloroethane	ND		5.0	0.88	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
1,1,2-Trichlorotrifluoroethane	ND		20	1.7	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
1,1-Dichloroethane	ND		5.0	0.21	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
1,1-Dichloroethene	ND		5.0	0.59	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
1,2,3-Trichlorobenzene	ND		5.0	0.81	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
1,2,4-Trichlorobenzene	ND		5.0	0.73	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
1,2-Dibromo-3-Chloropropane	ND		10	3.7	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
1,2-Dibromoethane	ND		5.0	0.52	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
1,2-Dichlorobenzene	ND		5.0	1.9	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
1,2-Dichloroethane	ND		5.0	0.70	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
1,2-Dichloropropane	ND		5.0	0.55	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
1,3-Dichlorobenzene	ND		5.0	0.48	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
1,4-Dichlorobenzene	ND		5.0	0.25	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
1,4-Dioxane	ND		500	56	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
2-Butanone (MEK)	ND		20	3.9	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
2-Hexanone	ND		20	4.9	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.4	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
Acetone	ND		72	36	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
Benzene	ND		5.0	0.15	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
Bromoform	ND		5.1	2.6	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
Bromomethane	ND		10	1.4	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
Carbon disulfide	ND		5.0	1.7	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
Carbon tetrachloride	ND		5.0	2.0	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
Chlorobenzene	ND		5.0	2.1	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
Chlorobromomethane	ND		5.0	2.5	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
Chlorodibromomethane	ND		5.0	2.3	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
Chloroethane	ND		10	2.0	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
Chloroform	ND		10	0.29	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
Chloromethane	ND		10	0.77	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
cis-1,2-Dichloroethene	ND		2.5	0.20	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
cis-1,3-Dichloropropene	ND		5.0	0.10	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
Cyclohexane	ND		5.0	1.8	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
Dichlorobromomethane	ND		5.0	2.1	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
Dichlorodifluoromethane	ND		10	2.7	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
Ethylbenzene	ND		5.0	0.31	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
Isopropylbenzene	ND		5.0	2.4	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
Methyl acetate	ND		10	2.8	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
Methyl tert-butyl ether	ND		20	2.1	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
Methylcyclohexane	ND		5.0	0.42	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
Methylene Chloride	ND		5.0	1.6	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
m-Xylene & p-Xylene	ND		2.5	1.0	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
o-Xylene	ND		2.5	0.27	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
Styrene	ND		5.0	0.28	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
Tetrachloroethene	ND		5.0	1.9	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
Toluene	ND		5.0	0.23	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
trans-1,2-Dichloroethene	ND		2.5	0.39	ug/Kg		12/22/20 11:00	12/22/20 12:53	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-521431/3-A
Matrix: Solid
Analysis Batch: 521399

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 521431

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		5.0	0.083	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
Trichloroethene	ND		5.0	1.9	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
Trichlorofluoromethane	ND		10	3.2	ug/Kg		12/22/20 11:00	12/22/20 12:53	1
Vinyl chloride	ND		5.0	1.3	ug/Kg		12/22/20 11:00	12/22/20 12:53	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		58 - 140	12/22/20 11:00	12/22/20 12:53	1
4-Bromofluorobenzene (Surr)	99		76 - 127	12/22/20 11:00	12/22/20 12:53	1
Dibromofluoromethane (Surr)	104		75 - 121	12/22/20 11:00	12/22/20 12:53	1
Toluene-d8 (Surr)	95		80 - 126	12/22/20 11:00	12/22/20 12:53	1

Lab Sample ID: LCS 280-521431/1-A
Matrix: Solid
Analysis Batch: 521399

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 521431

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	50.0	48.3		ug/Kg		97	70 - 135
1,1,2,2-Tetrachloroethane	50.0	43.5		ug/Kg		87	65 - 135
1,1,2-Trichloroethane	50.0	46.6		ug/Kg		93	78 - 135
1,1,2-Trichlorotrifluoroethane	50.0	46.3		ug/Kg		93	50 - 150
1,1-Dichloroethane	50.0	46.7		ug/Kg		93	70 - 135
1,1-Dichloroethene	50.0	46.7		ug/Kg		93	79 - 135
1,2,3-Trichlorobenzene	50.0	47.1		ug/Kg		94	62 - 135
1,2,4-Trichlorobenzene	50.0	47.0		ug/Kg		94	65 - 135
1,2-Dibromo-3-Chloropropane	50.0	40.6		ug/Kg		81	66 - 150
1,2-Dibromoethane	50.0	44.6		ug/Kg		89	76 - 135
1,2-Dichlorobenzene	50.0	43.9		ug/Kg		88	73 - 135
1,2-Dichloroethane	50.0	44.2		ug/Kg		88	69 - 135
1,2-Dichloropropane	50.0	43.4		ug/Kg		87	72 - 121
1,3-Dichlorobenzene	50.0	45.0		ug/Kg		90	69 - 135
1,4-Dichlorobenzene	50.0	44.2		ug/Kg		88	73 - 135
1,4-Dioxane	1000	1050		ug/Kg		105	52 - 135
2-Butanone (MEK)	200	189		ug/Kg		94	45 - 177
2-Hexanone	200	189		ug/Kg		95	67 - 150
4-Methyl-2-pentanone (MIBK)	200	207		ug/Kg		104	69 - 150
Acetone	200	238		ug/Kg		119	65 - 150
Benzene	50.0	45.7		ug/Kg		91	75 - 135
Bromoform	50.0	44.0		ug/Kg		88	77 - 135
Bromomethane	50.0	44.0		ug/Kg		88	52 - 135
Carbon disulfide	50.0	44.7		ug/Kg		89	45 - 150
Carbon tetrachloride	50.0	46.1		ug/Kg		92	69 - 138
Chlorobenzene	50.0	44.0		ug/Kg		88	78 - 135
Chlorobromomethane	50.0	46.5		ug/Kg		93	74 - 135
Chlorodibromomethane	50.0	43.5		ug/Kg		87	77 - 135
Chloroethane	50.0	47.2		ug/Kg		94	51 - 145
Chloroform	50.0	44.1		ug/Kg		88	73 - 123
Chloromethane	50.0	40.4		ug/Kg		81	41 - 138
cis-1,2-Dichloroethene	50.0	47.8		ug/Kg		96	76 - 135

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-521431/1-A
Matrix: Solid
Analysis Batch: 521399

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 521431

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,3-Dichloropropene	50.0	46.2		ug/Kg		92	71 - 135
Cyclohexane	50.0	45.2		ug/Kg		90	50 - 150
Dichlorobromomethane	50.0	46.1		ug/Kg		92	73 - 135
Dichlorodifluoromethane	50.0	39.0		ug/Kg		78	32 - 152
Ethylbenzene	50.0	44.7		ug/Kg		89	73 - 125
Isopropylbenzene	50.0	44.4		ug/Kg		89	74 - 137
Methyl acetate	100	93.6		ug/Kg		94	50 - 150
Methyl tert-butyl ether	50.0	47.9		ug/Kg		96	71 - 141
Methylcyclohexane	50.0	44.6		ug/Kg		89	50 - 150
Methylene Chloride	50.0	45.1		ug/Kg		90	76 - 136
m-Xylene & p-Xylene	50.0	43.4		ug/Kg		87	77 - 135
o-Xylene	50.0	43.8		ug/Kg		88	75 - 135
Styrene	50.0	45.9		ug/Kg		92	76 - 135
Tetrachloroethene	50.0	44.3		ug/Kg		89	76 - 135
Toluene	50.0	45.4		ug/Kg		91	77 - 122
trans-1,2-Dichloroethene	50.0	47.1		ug/Kg		94	77 - 135
trans-1,3-Dichloropropene	50.0	47.1		ug/Kg		94	71 - 135
Trichloroethene	50.0	42.8		ug/Kg		86	77 - 135
Trichlorofluoromethane	50.0	49.8		ug/Kg		100	48 - 150
Vinyl chloride	50.0	45.8		ug/Kg		92	43 - 145

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	102		58 - 140
4-Bromofluorobenzene (Surr)	102		76 - 127
Dibromofluoromethane (Surr)	103		75 - 121
Toluene-d8 (Surr)	96		80 - 126

Lab Sample ID: LCSD 280-521431/2-A
Matrix: Solid
Analysis Batch: 521399

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 521431

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	50.0	51.2		ug/Kg		102	70 - 135	6	20
1,1,2,2-Tetrachloroethane	50.0	46.2		ug/Kg		92	65 - 135	6	21
1,1,2-Trichloroethane	50.0	52.1		ug/Kg		104	78 - 135	11	20
1,1,2-Trichlorotrifluoroethane	50.0	50.0		ug/Kg		100	50 - 150	8	20
1,1-Dichloroethane	50.0	49.6		ug/Kg		99	70 - 135	6	20
1,1-Dichloroethene	50.0	51.1		ug/Kg		102	79 - 135	9	20
1,2,3-Trichlorobenzene	50.0	49.1		ug/Kg		98	62 - 135	4	31
1,2,4-Trichlorobenzene	50.0	48.9		ug/Kg		98	65 - 135	4	26
1,2-Dibromo-3-Chloropropane	50.0	44.4		ug/Kg		89	66 - 150	9	28
1,2-Dibromoethane	50.0	47.5		ug/Kg		95	76 - 135	6	20
1,2-Dichlorobenzene	50.0	46.2		ug/Kg		92	73 - 135	5	20
1,2-Dichloroethane	50.0	48.2		ug/Kg		96	69 - 135	9	20
1,2-Dichloropropane	50.0	46.8		ug/Kg		94	72 - 121	8	20
1,3-Dichlorobenzene	50.0	46.2		ug/Kg		92	69 - 135	3	20
1,4-Dichlorobenzene	50.0	45.4		ug/Kg		91	73 - 135	3	22
1,4-Dioxane	1000	1100		ug/Kg		110	52 - 135	5	30

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-521431/2-A
Matrix: Solid
Analysis Batch: 521399

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 521431

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Butanone (MEK)	200	205		ug/Kg		103	45 - 177	9	32
2-Hexanone	200	201		ug/Kg		100	67 - 150	6	29
4-Methyl-2-pentanone (MIBK)	200	227		ug/Kg		113	69 - 150	9	25
Acetone	200	252		ug/Kg		126	65 - 150	6	28
Benzene	50.0	49.1		ug/Kg		98	75 - 135	7	20
Bromoform	50.0	47.7		ug/Kg		95	77 - 135	8	20
Bromomethane	50.0	49.5		ug/Kg		99	52 - 135	12	22
Carbon disulfide	50.0	48.1		ug/Kg		96	45 - 150	7	24
Carbon tetrachloride	50.0	49.3		ug/Kg		99	69 - 138	7	20
Chlorobenzene	50.0	47.2		ug/Kg		94	78 - 135	7	20
Chlorobromomethane	50.0	50.8		ug/Kg		102	74 - 135	9	21
Chlorodibromomethane	50.0	47.4		ug/Kg		95	77 - 135	9	20
Chloroethane	50.0	52.0		ug/Kg		104	51 - 145	10	22
Chloroform	50.0	48.3		ug/Kg		97	73 - 123	9	20
Chloromethane	50.0	44.3		ug/Kg		89	41 - 138	9	25
cis-1,2-Dichloroethene	50.0	51.6		ug/Kg		103	76 - 135	8	20
cis-1,3-Dichloropropene	50.0	49.1		ug/Kg		98	71 - 135	6	20
Cyclohexane	50.0	48.5		ug/Kg		97	50 - 150	7	30
Dichlorobromomethane	50.0	50.8		ug/Kg		102	73 - 135	10	20
Dichlorodifluoromethane	50.0	42.3		ug/Kg		85	32 - 152	8	28
Ethylbenzene	50.0	47.6		ug/Kg		95	73 - 125	6	20
Isopropylbenzene	50.0	46.6		ug/Kg		93	74 - 137	5	20
Methyl acetate	100	102		ug/Kg		102	50 - 150	8	30
Methyl tert-butyl ether	50.0	52.2		ug/Kg		104	71 - 141	9	20
Methylcyclohexane	50.0	47.2		ug/Kg		94	50 - 150	6	30
Methylene Chloride	50.0	49.3		ug/Kg		99	76 - 136	9	21
m-Xylene & p-Xylene	50.0	45.6		ug/Kg		91	77 - 135	5	20
o-Xylene	50.0	46.0		ug/Kg		92	75 - 135	5	20
Styrene	50.0	48.4		ug/Kg		97	76 - 135	5	20
Tetrachloroethene	50.0	46.9		ug/Kg		94	76 - 135	6	20
Toluene	50.0	48.4		ug/Kg		97	77 - 122	6	20
trans-1,2-Dichloroethene	50.0	50.3		ug/Kg		101	77 - 135	7	20
trans-1,3-Dichloropropene	50.0	50.2		ug/Kg		100	71 - 135	6	20
Trichloroethene	50.0	45.6		ug/Kg		91	77 - 135	6	20
Trichlorofluoromethane	50.0	51.5		ug/Kg		103	48 - 150	3	33
Vinyl chloride	50.0	50.1		ug/Kg		100	43 - 145	9	24

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	103		58 - 140
4-Bromofluorobenzene (Surr)	100		76 - 127
Dibromofluoromethane (Surr)	103		75 - 121
Toluene-d8 (Surr)	96		80 - 126

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-143671-5 MS

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 521399

Prep Batch: 521431

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
1,1,1-Trichloroethane	ND		54.9	53.5		ug/Kg	*	97	70 - 135
1,1,2,2-Tetrachloroethane	ND		54.9	48.3		ug/Kg	*	88	65 - 135
1,1,2-Trichloroethane	ND		54.9	55.2		ug/Kg	*	101	78 - 135
1,1,2-Trichlorotrifluoroethane	ND		54.9	53.5		ug/Kg	*	97	50 - 150
1,1-Dichloroethane	ND		54.9	54.1		ug/Kg	*	98	70 - 135
1,1-Dichloroethene	ND		54.9	53.8		ug/Kg	*	98	79 - 135
1,2,3-Trichlorobenzene	ND		54.9	48.7		ug/Kg	*	89	62 - 135
1,2,4-Trichlorobenzene	ND		54.9	47.6		ug/Kg	*	87	65 - 135
1,2-Dibromo-3-Chloropropane	ND		54.9	45.6		ug/Kg	*	83	66 - 150
1,2-Dibromoethane	ND		54.9	50.7		ug/Kg	*	92	76 - 135
1,2-Dichlorobenzene	ND		54.9	47.2		ug/Kg	*	86	73 - 135
1,2-Dichloroethane	ND		54.9	51.8		ug/Kg	*	94	69 - 135
1,2-Dichloropropane	ND		54.9	49.0		ug/Kg	*	89	72 - 121
1,3-Dichlorobenzene	ND		54.9	48.6		ug/Kg	*	88	69 - 135
1,4-Dichlorobenzene	ND		54.9	46.7		ug/Kg	*	85	73 - 135
1,4-Dioxane	ND	F1	1100	1430		ug/Kg	*	130	52 - 135
2-Butanone (MEK)	ND		220	218		ug/Kg	*	99	45 - 177
2-Hexanone	ND		220	220		ug/Kg	*	100	67 - 150
4-Methyl-2-pentanone (MIBK)	ND		220	241		ug/Kg	*	110	69 - 150
Acetone	ND		220	279		ug/Kg	*	127	65 - 150
Benzene	ND		54.9	52.4		ug/Kg	*	96	75 - 135
Bromoform	ND		54.9	49.8		ug/Kg	*	91	77 - 135
Bromomethane	ND		54.9	56.4		ug/Kg	*	103	52 - 135
Carbon disulfide	ND		54.9	52.1		ug/Kg	*	95	45 - 150
Carbon tetrachloride	ND		54.9	52.4		ug/Kg	*	95	69 - 138
Chlorobenzene	ND		54.9	48.9		ug/Kg	*	89	78 - 135
Chlorobromomethane	ND		54.9	54.8		ug/Kg	*	100	74 - 135
Chlorodibromomethane	ND		54.9	49.8		ug/Kg	*	91	77 - 135
Chloroethane	ND		54.9	59.2		ug/Kg	*	108	51 - 145
Chloroform	ND		54.9	51.2		ug/Kg	*	93	73 - 123
Chloromethane	ND		54.9	49.0		ug/Kg	*	89	41 - 138
cis-1,2-Dichloroethene	ND		54.9	55.1		ug/Kg	*	100	76 - 135
cis-1,3-Dichloropropene	ND		54.9	52.0		ug/Kg	*	95	71 - 135
Cyclohexane	ND		54.9	51.4		ug/Kg	*	94	50 - 150
Dichlorobromomethane	ND		54.9	53.3		ug/Kg	*	97	73 - 135
Dichlorodifluoromethane	ND		54.9	47.3		ug/Kg	*	86	32 - 152
Ethylbenzene	ND		54.9	50.4		ug/Kg	*	92	73 - 125
Isopropylbenzene	ND		54.9	48.7		ug/Kg	*	89	74 - 137
Methyl acetate	ND		110	121		ug/Kg	*	111	50 - 150
Methyl tert-butyl ether	ND		54.9	57.3		ug/Kg	*	104	71 - 141
Methylcyclohexane	ND		54.9	50.9		ug/Kg	*	93	50 - 150
Methylene Chloride	ND		54.9	53.0		ug/Kg	*	96	76 - 136
m-Xylene & p-Xylene	ND		54.9	48.4		ug/Kg	*	88	77 - 135
o-Xylene	ND		54.9	48.6		ug/Kg	*	88	75 - 135
Styrene	ND		54.9	51.0		ug/Kg	*	93	76 - 135
Tetrachloroethene	ND		54.9	51.2		ug/Kg	*	93	76 - 135
Toluene	ND		54.9	51.5		ug/Kg	*	94	77 - 122
trans-1,2-Dichloroethene	ND		54.9	54.6		ug/Kg	*	100	77 - 135

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-143671-5 MS

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 521399

Prep Batch: 521431

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	ND		54.9	52.9		ug/Kg	*	96	71 - 135
Trichloroethene	ND		54.9	48.4		ug/Kg	*	88	77 - 135
Trichlorofluoromethane	ND		54.9	51.2		ug/Kg	*	93	48 - 150
Vinyl chloride	ND		54.9	57.0		ug/Kg	*	104	43 - 145

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	103		58 - 140
4-Bromofluorobenzene (Surr)	99		76 - 127
Dibromofluoromethane (Surr)	103		75 - 121
Toluene-d8 (Surr)	96		80 - 126

Lab Sample ID: 280-143671-5 MSD

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 521399

Prep Batch: 521431

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	ND		49.1	52.5		ug/Kg	*	107	70 - 135	2	20
1,1,2,2-Tetrachloroethane	ND		49.1	48.9		ug/Kg	*	100	65 - 135	1	21
1,1,2-Trichloroethane	ND		49.1	53.2		ug/Kg	*	108	78 - 135	4	20
1,1,2-Trichlorotrifluoroethane	ND		49.1	49.8		ug/Kg	*	101	50 - 150	7	20
1,1-Dichloroethane	ND		49.1	51.2		ug/Kg	*	104	70 - 135	5	20
1,1-Dichloroethene	ND		49.1	50.6		ug/Kg	*	103	79 - 135	6	20
1,2,3-Trichlorobenzene	ND		49.1	47.3		ug/Kg	*	96	62 - 135	3	31
1,2,4-Trichlorobenzene	ND		49.1	46.4		ug/Kg	*	94	65 - 135	3	26
1,2-Dibromo-3-Chloropropane	ND		49.1	48.5		ug/Kg	*	99	66 - 150	6	28
1,2-Dibromoethane	ND		49.1	50.0		ug/Kg	*	102	76 - 135	1	20
1,2-Dichlorobenzene	ND		49.1	45.5		ug/Kg	*	93	73 - 135	4	20
1,2-Dichloroethane	ND		49.1	49.5		ug/Kg	*	101	69 - 135	5	20
1,2-Dichloropropane	ND		49.1	46.8		ug/Kg	*	95	72 - 121	5	20
1,3-Dichlorobenzene	ND		49.1	45.7		ug/Kg	*	93	69 - 135	6	20
1,4-Dichlorobenzene	ND		49.1	44.7		ug/Kg	*	91	73 - 135	4	22
1,4-Dioxane	ND	F1	983	1450	F1	ug/Kg	*	148	52 - 135	2	30
2-Butanone (MEK)	ND		197	227		ug/Kg	*	115	45 - 177	4	32
2-Hexanone	ND		197	224		ug/Kg	*	114	67 - 150	2	29
4-Methyl-2-pentanone (MIBK)	ND		197	244		ug/Kg	*	124	69 - 150	1	25
Acetone	ND		197	284		ug/Kg	*	144	65 - 150	2	28
Benzene	ND		49.1	49.1		ug/Kg	*	100	75 - 135	7	20
Bromoform	ND		49.1	48.4		ug/Kg	*	98	77 - 135	3	20
Bromomethane	ND		49.1	52.9		ug/Kg	*	108	52 - 135	6	22
Carbon disulfide	ND		49.1	49.0		ug/Kg	*	100	45 - 150	6	24
Carbon tetrachloride	ND		49.1	49.3		ug/Kg	*	100	69 - 138	6	20
Chlorobenzene	ND		49.1	46.7		ug/Kg	*	95	78 - 135	4	20
Chlorobromomethane	ND		49.1	52.5		ug/Kg	*	107	74 - 135	4	21
Chlorodibromomethane	ND		49.1	48.2		ug/Kg	*	98	77 - 135	3	20
Chloroethane	ND		49.1	55.1		ug/Kg	*	112	51 - 145	7	22
Chloroform	ND		49.1	48.9		ug/Kg	*	100	73 - 123	5	20
Chloromethane	ND		49.1	45.6		ug/Kg	*	93	41 - 138	7	25
cis-1,2-Dichloroethene	ND		49.1	51.9		ug/Kg	*	106	76 - 135	6	20

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-143671-5 MSD

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 521399

Prep Batch: 521431

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
cis-1,3-Dichloropropene	ND		49.1	49.9		ug/Kg	*	102	71 - 135	4	20
Cyclohexane	ND		49.1	48.8		ug/Kg	*	99	50 - 150	5	30
Dichlorobromomethane	ND		49.1	50.9		ug/Kg	*	104	73 - 135	5	20
Dichlorodifluoromethane	ND		49.1	44.6		ug/Kg	*	91	32 - 152	6	28
Ethylbenzene	ND		49.1	47.4		ug/Kg	*	96	73 - 125	6	20
Isopropylbenzene	ND		49.1	46.4		ug/Kg	*	94	74 - 137	5	20
Methyl acetate	ND		98.3	123		ug/Kg	*	125	50 - 150	1	30
Methyl tert-butyl ether	ND		49.1	55.3		ug/Kg	*	113	71 - 141	4	20
Methylcyclohexane	ND		49.1	46.8		ug/Kg	*	95	50 - 150	9	30
Methylene Chloride	ND		49.1	50.0		ug/Kg	*	102	76 - 136	6	21
m-Xylene & p-Xylene	ND		49.1	45.3		ug/Kg	*	92	77 - 135	7	20
o-Xylene	ND		49.1	46.3		ug/Kg	*	94	75 - 135	5	20
Styrene	ND		49.1	47.7		ug/Kg	*	97	76 - 135	7	20
Tetrachloroethene	ND		49.1	46.4		ug/Kg	*	95	76 - 135	10	20
Toluene	ND		49.1	48.4		ug/Kg	*	99	77 - 122	6	20
trans-1,2-Dichloroethene	ND		49.1	52.0		ug/Kg	*	106	77 - 135	5	20
trans-1,3-Dichloropropene	ND		49.1	50.8		ug/Kg	*	103	71 - 135	4	20
Trichloroethene	ND		49.1	46.0		ug/Kg	*	94	77 - 135	5	20
Trichlorofluoromethane	ND		49.1	49.6		ug/Kg	*	101	48 - 150	3	33
Vinyl chloride	ND		49.1	52.7		ug/Kg	*	107	43 - 145	8	24

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	104		58 - 140
4-Bromofluorobenzene (Surr)	100		76 - 127
Dibromofluoromethane (Surr)	103		75 - 121
Toluene-d8 (Surr)	97		80 - 126

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-520327/1-A

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 521226

Prep Batch: 520327

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1'-Biphenyl	ND		10	1.8	ug/L		12/14/20 12:57	12/21/20 11:20	1
1,2,4,5-Tetrachlorobenzene	ND		10	1.7	ug/L		12/14/20 12:57	12/21/20 11:20	1
1,2,4-Trichlorobenzene	ND		4.0	0.59	ug/L		12/14/20 12:57	12/21/20 11:20	1
1,2-Dichlorobenzene	ND		4.0	0.23	ug/L		12/14/20 12:57	12/21/20 11:20	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		10	0.23	ug/L		12/14/20 12:57	12/21/20 11:20	1
1,3-Dichlorobenzene	ND		10	0.30	ug/L		12/14/20 12:57	12/21/20 11:20	1
1,3-Dinitrobenzene	ND		10	2.0	ug/L		12/14/20 12:57	12/21/20 11:20	1
1,4-Dichlorobenzene	ND		4.0	1.3	ug/L		12/14/20 12:57	12/21/20 11:20	1
1,4-Dioxane	ND		20	0.45	ug/L		12/14/20 12:57	12/21/20 11:20	1
1-Methylnaphthalene	ND		4.0	0.23	ug/L		12/14/20 12:57	12/21/20 11:20	1
2,2'-oxybis[1-chloropropane]	ND		10	0.28	ug/L		12/14/20 12:57	12/21/20 11:20	1
2,3,4,6-Tetrachlorophenol	ND		50	2.0	ug/L		12/14/20 12:57	12/21/20 11:20	1
2,4,5-Trichlorophenol	ND		10	2.1	ug/L		12/14/20 12:57	12/21/20 11:20	1
2,4,6-Trichlorophenol	ND		10	0.29	ug/L		12/14/20 12:57	12/21/20 11:20	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-520327/1-A
Matrix: Water
Analysis Batch: 521226

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 520327

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
2,4-Dichlorophenol	ND		10	0.64	ug/L		12/14/20 12:57	12/21/20 11:20	1
2,4-Dimethylphenol	ND		10	0.58	ug/L		12/14/20 12:57	12/21/20 11:20	1
2,4-Dinitrophenol	ND		30	10	ug/L		12/14/20 12:57	12/21/20 11:20	1
2,4-Dinitrotoluene	ND		10	1.7	ug/L		12/14/20 12:57	12/21/20 11:20	1
2,6-Dichlorophenol	ND		10	1.4	ug/L		12/14/20 12:57	12/21/20 11:20	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		12/14/20 12:57	12/21/20 11:20	1
2-Chloronaphthalene	ND		4.0	0.26	ug/L		12/14/20 12:57	12/21/20 11:20	1
2-Chlorophenol	ND		10	2.0	ug/L		12/14/20 12:57	12/21/20 11:20	1
2-Methylnaphthalene	ND		4.0	1.5	ug/L		12/14/20 12:57	12/21/20 11:20	1
2-Methylphenol	ND		10	0.98	ug/L		12/14/20 12:57	12/21/20 11:20	1
2-Nitroaniline	ND		10	1.7	ug/L		12/14/20 12:57	12/21/20 11:20	1
2-Nitrophenol	ND		10	0.39	ug/L		12/14/20 12:57	12/21/20 11:20	1
3 & 4 Methylphenol	ND		10	0.25	ug/L		12/14/20 12:57	12/21/20 11:20	1
3,3'-Dichlorobenzidine	ND		50	2.0	ug/L		12/14/20 12:57	12/21/20 11:20	1
3-Methylphenol	ND		10	0.25	ug/L		12/14/20 12:57	12/21/20 11:20	1
3-Nitroaniline	ND		10	2.0	ug/L		12/14/20 12:57	12/21/20 11:20	1
4,6-Dinitro-2-methylphenol	ND		50	4.0	ug/L		12/14/20 12:57	12/21/20 11:20	1
4-Bromophenyl phenyl ether	ND		10	0.43	ug/L		12/14/20 12:57	12/21/20 11:20	1
4-Chloro-3-methylphenol	ND		10	2.4	ug/L		12/14/20 12:57	12/21/20 11:20	1
4-Chloroaniline	ND		10	2.1	ug/L		12/14/20 12:57	12/21/20 11:20	1
4-Chlorophenyl phenyl ether	ND		10	1.7	ug/L		12/14/20 12:57	12/21/20 11:20	1
4-Methylphenol	ND		10	0.25	ug/L		12/14/20 12:57	12/21/20 11:20	1
4-Nitroaniline	ND		10	2.0	ug/L		12/14/20 12:57	12/21/20 11:20	1
4-Nitrophenol	ND		10	1.2	ug/L		12/14/20 12:57	12/21/20 11:20	1
Acenaphthene	ND		4.0	0.28	ug/L		12/14/20 12:57	12/21/20 11:20	1
Acenaphthylene	ND		4.0	0.49	ug/L		12/14/20 12:57	12/21/20 11:20	1
Acetophenone	ND		10	0.24	ug/L		12/14/20 12:57	12/21/20 11:20	1
Aniline	ND		10	2.0	ug/L		12/14/20 12:57	12/21/20 11:20	1
Anthracene	ND		4.0	0.42	ug/L		12/14/20 12:57	12/21/20 11:20	1
Azobenzene	ND		4.0	0.23	ug/L		12/14/20 12:57	12/21/20 11:20	1
Benzaldehyde	ND		5.0	2.0	ug/L		12/14/20 12:57	12/21/20 11:20	1
Benzidine	ND		100	50	ug/L		12/14/20 12:57	12/21/20 11:20	1
Benzo[a]anthracene	ND		4.0	0.35	ug/L		12/14/20 12:57	12/21/20 11:20	1
Benzo[a]pyrene	ND		4.0	0.31	ug/L		12/14/20 12:57	12/21/20 11:20	1
Benzo[b]fluoranthene	ND		4.0	0.53	ug/L		12/14/20 12:57	12/21/20 11:20	1
Benzo[g,h,i]perylene	ND		4.0	0.50	ug/L		12/14/20 12:57	12/21/20 11:20	1
Benzo[k]fluoranthene	ND		4.0	0.46	ug/L		12/14/20 12:57	12/21/20 11:20	1
Benzoic acid	ND		25	10	ug/L		12/14/20 12:57	12/21/20 11:20	1
Benzyl alcohol	ND		10	0.23	ug/L		12/14/20 12:57	12/21/20 11:20	1
Bis(2-chloroethoxy)methane	ND		10	0.97	ug/L		12/14/20 12:57	12/21/20 11:20	1
Bis(2-chloroethyl)ether	ND		10	0.83	ug/L		12/14/20 12:57	12/21/20 11:20	1
Bis(2-ethylhexyl) phthalate	ND		10	0.56	ug/L		12/14/20 12:57	12/21/20 11:20	1
Butyl benzyl phthalate	ND		4.0	1.0	ug/L		12/14/20 12:57	12/21/20 11:20	1
Caprolactam	ND		5.0	2.5	ug/L		12/14/20 12:57	12/21/20 11:20	1
Carbazole	ND		4.0	0.43	ug/L		12/14/20 12:57	12/21/20 11:20	1
Chrysene	ND		4.0	0.54	ug/L		12/14/20 12:57	12/21/20 11:20	1
Dibenz(a,h)anthracene	ND		4.0	0.51	ug/L		12/14/20 12:57	12/21/20 11:20	1
Dibenzofuran	ND		4.0	0.29	ug/L		12/14/20 12:57	12/21/20 11:20	1
Diethyl phthalate	ND		4.0	0.38	ug/L		12/14/20 12:57	12/21/20 11:20	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-520327/1-A
Matrix: Water
Analysis Batch: 521226

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 520327

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl phthalate	ND		4.0	0.21	ug/L		12/14/20 12:57	12/21/20 11:20	1
Di-n-butyl phthalate	ND		4.0	1.2	ug/L		12/14/20 12:57	12/21/20 11:20	1
Di-n-octyl phthalate	ND		4.0	0.35	ug/L		12/14/20 12:57	12/21/20 11:20	1
Diphenylamine	ND		10	1.1	ug/L		12/14/20 12:57	12/21/20 11:20	1
Famphur	ND		100	1.5	ug/L		12/14/20 12:57	12/21/20 11:20	1
Fluoranthene	ND		4.0	0.20	ug/L		12/14/20 12:57	12/21/20 11:20	1
Fluorene	ND		4.0	0.31	ug/L		12/14/20 12:57	12/21/20 11:20	1
Hexachlorobenzene	ND		10	0.66	ug/L		12/14/20 12:57	12/21/20 11:20	1
Hexachlorobutadiene	ND		10	3.3	ug/L		12/14/20 12:57	12/21/20 11:20	1
Hexachlorocyclopentadiene	ND		50	3.1	ug/L		12/14/20 12:57	12/21/20 11:20	1
Hexachloroethane	ND		10	0.98	ug/L		12/14/20 12:57	12/21/20 11:20	1
Hexadecane	ND		10	0.54	ug/L		12/14/20 12:57	12/21/20 11:20	1
Indeno[1,2,3-cd]pyrene	ND		4.0	0.65	ug/L		12/14/20 12:57	12/21/20 11:20	1
Isophorone	ND		10	0.21	ug/L		12/14/20 12:57	12/21/20 11:20	1
Naphthalene	ND		4.0	0.29	ug/L		12/14/20 12:57	12/21/20 11:20	1
Nitrobenzene	ND		10	0.81	ug/L		12/14/20 12:57	12/21/20 11:20	1
N-Nitrosodimethylamine	ND		10	0.29	ug/L		12/14/20 12:57	12/21/20 11:20	1
N-Nitrosodi-n-propylamine	ND		10	0.35	ug/L		12/14/20 12:57	12/21/20 11:20	1
N-Nitrosodiphenylamine	ND		10	0.44	ug/L		12/14/20 12:57	12/21/20 11:20	1
Pentachlorophenol	ND		50	20	ug/L		12/14/20 12:57	12/21/20 11:20	1
Phenanthrene	ND		4.0	0.26	ug/L		12/14/20 12:57	12/21/20 11:20	1
Phenol	ND		10	2.0	ug/L		12/14/20 12:57	12/21/20 11:20	1
Pyrene	ND		10	0.37	ug/L		12/14/20 12:57	12/21/20 11:20	1
Pyridine	ND		20	1.7	ug/L		12/14/20 12:57	12/21/20 11:20	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	76		42 - 131	12/14/20 12:57	12/21/20 11:20	1
2-Fluorobiphenyl	66		48 - 120	12/14/20 12:57	12/21/20 11:20	1
2-Fluorophenol (Surr)	82		41 - 120	12/14/20 12:57	12/21/20 11:20	1
Nitrobenzene-d5 (Surr)	73		42 - 120	12/14/20 12:57	12/21/20 11:20	1
Phenol-d5 (Surr)	80		45 - 124	12/14/20 12:57	12/21/20 11:20	1
Terphenyl-d14 (Surr)	92		20 - 130	12/14/20 12:57	12/21/20 11:20	1

Lab Sample ID: LCS 280-520327/2-A
Matrix: Water
Analysis Batch: 521226

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 520327

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1'-Biphenyl	80.0	66.2		ug/L		83	63 - 99
1,2,4,5-Tetrachlorobenzene	80.0	57.9		ug/L		72	57 - 100
1,2,4-Trichlorobenzene	80.0	58.8		ug/L		74	41 - 99
1,2-Dichlorobenzene	80.0	55.7		ug/L		70	37 - 97
1,2-Diphenylhydrazine(as Azobenzene)	80.9	66.8		ug/L		83	66 - 104
1,3-Dichlorobenzene	80.0	54.6		ug/L		68	34 - 96
1,3-Dinitrobenzene	80.0	80.8		ug/L		101	72 - 114
1,4-Dichlorobenzene	80.0	56.1		ug/L		70	35 - 96
1,4-Dioxane	80.0	49.9		ug/L		62	46 - 94
1-Methylnaphthalene	80.0	63.3		ug/L		79	56 - 102

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-520327/2-A
Matrix: Water
Analysis Batch: 521226

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 520327

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,2'-oxybis[1-chloropropane]	80.0	74.7		ug/L		93	52 - 108
2,3,4,6-Tetrachlorophenol	80.0	69.7		ug/L		87	71 - 111
2,4,5-Trichlorophenol	80.0	69.3		ug/L		87	70 - 109
2,4,6-Trichlorophenol	80.0	68.6		ug/L		86	71 - 113
2,4-Dichlorophenol	80.0	69.9		ug/L		87	65 - 109
2,4-Dimethylphenol	80.0	62.3		ug/L		78	46 - 100
2,4-Dinitrophenol	160	135		ug/L		84	60 - 110
2,4-Dinitrotoluene	80.0	76.9		ug/L		96	72 - 110
2,6-Dichlorophenol	80.0	70.4		ug/L		88	64 - 109
2,6-Dinitrotoluene	80.0	75.4		ug/L		94	70 - 109
2-Chloronaphthalene	80.0	63.1		ug/L		79	61 - 98
2-Chlorophenol	80.0	68.5		ug/L		86	59 - 107
2-Methylnaphthalene	80.0	62.0		ug/L		77	55 - 100
2-Methylphenol	80.0	71.7		ug/L		90	61 - 105
2-Nitroaniline	80.0	72.9		ug/L		91	65 - 110
2-Nitrophenol	80.0	71.2		ug/L		89	63 - 108
3 & 4 Methylphenol	80.0	72.0		ug/L		90	58 - 107
3,3'-Dichlorobenzidine	160	171	*+	ug/L		107	39 - 105
3-Methylphenol	80.0	72.0		ug/L		90	58 - 107
3-Nitroaniline	80.0	75.1		ug/L		94	37 - 94
4,6-Dinitro-2-methylphenol	160	153		ug/L		96	67 - 109
4-Bromophenyl phenyl ether	80.0	69.6		ug/L		87	67 - 105
4-Chloro-3-methylphenol	80.0	68.2		ug/L		85	68 - 110
4-Chloroaniline	80.0	66.9		ug/L		84	34 - 97
4-Chlorophenyl phenyl ether	80.0	67.9		ug/L		85	69 - 100
4-Methylphenol	80.0	72.0		ug/L		90	58 - 107
4-Nitroaniline	80.0	77.3		ug/L		97	64 - 103
4-Nitrophenol	160	127		ug/L		80	60 - 120
Acenaphthene	80.0	67.8		ug/L		85	63 - 99
Acenaphthylene	80.0	65.1		ug/L		81	66 - 98
Acetophenone	80.0	67.3		ug/L		84	59 - 106
Aniline	80.0	58.7		ug/L		73	40 - 96
Anthracene	80.0	73.9		ug/L		92	65 - 105
Azobenzene	80.0	66.1		ug/L		83	66 - 104
Benzaldehyde	80.0	60.2		ug/L		75	10 - 89
Benzidine	160	115	*+	ug/L		72	10 - 52
Benzo[a]anthracene	80.0	75.7		ug/L		95	68 - 104
Benzo[a]pyrene	80.0	73.6		ug/L		92	66 - 102
Benzo[b]fluoranthene	80.0	78.2		ug/L		98	67 - 107
Benzo[g,h,i]perylene	80.0	77.0		ug/L		96	65 - 106
Benzo[k]fluoranthene	80.0	75.4		ug/L		94	71 - 109
Benzoic acid	80.0	55.4		ug/L		69	29 - 120
Benzyl alcohol	80.0	70.9		ug/L		89	61 - 107
Bis(2-chloroethoxy)methane	80.0	67.3		ug/L		84	62 - 106
Bis(2-chloroethyl)ether	80.0	67.1		ug/L		84	59 - 110
Bis(2-ethylhexyl) phthalate	80.0	78.9		ug/L		99	65 - 106
Butyl benzyl phthalate	80.0	78.5		ug/L		98	66 - 107
Caprolactam	80.0	76.5		ug/L		96	60 - 107
Carbazole	80.0	76.9		ug/L		96	66 - 109

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-520327/2-A
Matrix: Water
Analysis Batch: 521226

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 520327

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chrysene	80.0	76.4		ug/L		96	70 - 105
Dibenz(a,h)anthracene	80.0	76.2		ug/L		95	64 - 106
Dibenzofuran	80.0	68.1		ug/L		85	68 - 99
Diethyl phthalate	80.0	72.1		ug/L		90	71 - 105
Dimethyl phthalate	80.0	73.0		ug/L		91	70 - 107
Di-n-butyl phthalate	80.0	74.1		ug/L		93	75 - 120
Di-n-octyl phthalate	80.0	81.6		ug/L		102	71 - 120
Diphenylamine	68.0	61.0		ug/L		90	67 - 103
Fluoranthene	80.0	75.5		ug/L		94	66 - 107
Fluorene	80.0	69.4		ug/L		87	67 - 100
Hexachlorobenzene	80.0	67.0		ug/L		84	66 - 106
Hexachlorobutadiene	80.0	55.2		ug/L		69	33 - 98
Hexachlorocyclopentadiene	160	58.4		ug/L		37	10 - 67
Hexachloroethane	80.0	54.1		ug/L		68	24 - 98
Hexadecane	80.0	74.5		ug/L		93	50 - 150
Indeno[1,2,3-cd]pyrene	80.0	78.6		ug/L		98	56 - 104
Isophorone	80.0	64.2		ug/L		80	59 - 102
Naphthalene	80.0	62.3		ug/L		78	39 - 120
Nitrobenzene	80.0	62.2		ug/L		78	58 - 108
N-Nitrosodimethylamine	80.0	60.7		ug/L		76	53 - 106
N-Nitrosodi-n-propylamine	80.0	65.3		ug/L		82	57 - 106
N-Nitrosodiphenylamine	80.0	72.8		ug/L		91	65 - 104
Pentachlorophenol	160	120		ug/L		75	55 - 109
Phenanthrene	80.0	73.9		ug/L		92	67 - 106
Phenol	80.0	63.9		ug/L		80	60 - 108
Pyrene	80.0	78.3		ug/L		98	69 - 105
Pyridine	160	88.1		ug/L		55	46 - 88

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	84		42 - 131
2-Fluorobiphenyl	83		48 - 120
2-Fluorophenol (Surr)	80		41 - 120
Nitrobenzene-d5 (Surr)	78		42 - 120
Phenol-d5 (Surr)	82		45 - 124
Terphenyl-d14 (Surr)	98		20 - 130

Lab Sample ID: LCSD 280-520327/3-A
Matrix: Water
Analysis Batch: 521226

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 520327

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1'-Biphenyl	80.0	67.3		ug/L		84	63 - 99	2	30
1,2,4,5-Tetrachlorobenzene	80.0	58.0		ug/L		72	57 - 100	0	30
1,2,4-Trichlorobenzene	80.0	60.0		ug/L		75	41 - 99	2	30
1,2-Dichlorobenzene	80.0	57.8		ug/L		72	37 - 97	4	30
1,2-Diphenylhydrazine(as Azobenzene)	80.9	65.3		ug/L		81	66 - 104	2	30
1,3-Dichlorobenzene	80.0	57.1		ug/L		71	34 - 96	4	30
1,3-Dinitrobenzene	80.0	79.5		ug/L		99	72 - 114	2	30

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-520327/3-A
Matrix: Water
Analysis Batch: 521226

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 520327

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD
									Limit
1,4-Dichlorobenzene	80.0	57.5		ug/L		72	35 - 96	3	30
1,4-Dioxane	80.0	52.8		ug/L		66	46 - 94	6	30
1-Methylnaphthalene	80.0	63.6		ug/L		80	56 - 102	0	30
2,2'-oxybis[1-chloropropane]	80.0	76.7		ug/L		96	52 - 108	3	30
2,3,4,6-Tetrachlorophenol	80.0	67.5		ug/L		84	71 - 111	3	30
2,4,5-Trichlorophenol	80.0	66.8		ug/L		83	70 - 109	4	30
2,4,6-Trichlorophenol	80.0	67.8		ug/L		85	71 - 113	1	30
2,4-Dichlorophenol	80.0	69.1		ug/L		86	65 - 109	1	30
2,4-Dimethylphenol	80.0	59.3		ug/L		74	46 - 100	5	30
2,4-Dinitrophenol	160	139		ug/L		87	60 - 110	3	30
2,4-Dinitrotoluene	80.0	73.8		ug/L		92	72 - 110	4	30
2,6-Dichlorophenol	80.0	69.4		ug/L		87	64 - 109	2	50
2,6-Dinitrotoluene	80.0	72.2		ug/L		90	70 - 109	4	30
2-Chloronaphthalene	80.0	64.0		ug/L		80	61 - 98	1	30
2-Chlorophenol	80.0	69.4		ug/L		87	59 - 107	1	30
2-Methylnaphthalene	80.0	63.1		ug/L		79	55 - 100	2	30
2-Methylphenol	80.0	69.8		ug/L		87	61 - 105	3	30
2-Nitroaniline	80.0	70.9		ug/L		89	65 - 110	3	30
2-Nitrophenol	80.0	70.9		ug/L		89	63 - 108	0	30
3 & 4 Methylphenol	80.0	70.5		ug/L		88	58 - 107	2	30
3,3'-Dichlorobenzidine	160	154		ug/L		96	39 - 105	10	30
3-Methylphenol	80.0	70.5		ug/L		88	58 - 107	2	30
3-Nitroaniline	80.0	65.6		ug/L		82	37 - 94	14	30
4,6-Dinitro-2-methylphenol	160	148		ug/L		93	67 - 109	3	30
4-Bromophenyl phenyl ether	80.0	66.1		ug/L		83	67 - 105	5	30
4-Chloro-3-methylphenol	80.0	66.9		ug/L		84	68 - 110	2	30
4-Chloroaniline	80.0	61.7		ug/L		77	34 - 97	8	30
4-Chlorophenyl phenyl ether	80.0	66.8		ug/L		84	69 - 100	2	30
4-Methylphenol	80.0	70.5		ug/L		88	58 - 107	2	30
4-Nitroaniline	80.0	73.7		ug/L		92	64 - 103	5	30
4-Nitrophenol	160	131		ug/L		82	60 - 120	3	30
Acenaphthene	80.0	67.8		ug/L		85	63 - 99	0	30
Acenaphthylene	80.0	65.3		ug/L		82	66 - 98	0	30
Acetophenone	80.0	66.2		ug/L		83	59 - 106	2	30
Aniline	80.0	56.1		ug/L		70	40 - 96	5	30
Anthracene	80.0	70.7		ug/L		88	65 - 105	4	30
Azobenzene	80.0	64.6		ug/L		81	66 - 104	2	30
Benzaldehyde	80.0	42.9		ug/L		54	10 - 89	34	50
Benzidine	160	82.9	J	ug/L		52	10 - 52	33	50
Benzo[a]anthracene	80.0	73.4		ug/L		92	68 - 104	3	30
Benzo[a]pyrene	80.0	70.6		ug/L		88	66 - 102	4	30
Benzo[b]fluoranthene	80.0	73.9		ug/L		92	67 - 107	6	30
Benzo[g,h,i]perylene	80.0	72.9		ug/L		91	65 - 106	5	30
Benzo[k]fluoranthene	80.0	74.7		ug/L		93	71 - 109	1	30
Benzoic acid	80.0	62.3		ug/L		78	29 - 120	12	30
Benzyl alcohol	80.0	67.9		ug/L		85	61 - 107	4	30
Bis(2-chloroethoxy)methane	80.0	66.5		ug/L		83	62 - 106	1	30
Bis(2-chloroethyl)ether	80.0	66.4		ug/L		83	59 - 110	1	30
Bis(2-ethylhexyl) phthalate	80.0	76.4		ug/L		96	65 - 106	3	30

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-520327/3-A
Matrix: Water
Analysis Batch: 521226

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 520327

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Butyl benzyl phthalate	80.0	75.8		ug/L		95	66 - 107	4	30
Caprolactam	80.0	78.6		ug/L		98	60 - 107	3	30
Carbazole	80.0	72.4		ug/L		90	66 - 109	6	30
Chrysene	80.0	73.0		ug/L		91	70 - 105	5	30
Dibenz(a,h)anthracene	80.0	73.5		ug/L		92	64 - 106	4	30
Dibenzofuran	80.0	67.7		ug/L		85	68 - 99	1	30
Diethyl phthalate	80.0	70.0		ug/L		88	71 - 105	3	30
Dimethyl phthalate	80.0	70.3		ug/L		88	70 - 107	4	30
Di-n-butyl phthalate	80.0	71.7		ug/L		90	75 - 120	3	30
Di-n-octyl phthalate	80.0	78.8		ug/L		99	71 - 120	3	30
Diphenylamine	68.0	58.8		ug/L		86	67 - 103	4	50
Fluoranthene	80.0	72.2		ug/L		90	66 - 107	5	30
Fluorene	80.0	68.4		ug/L		85	67 - 100	1	30
Hexachlorobenzene	80.0	63.7		ug/L		80	66 - 106	5	30
Hexachlorobutadiene	80.0	56.2		ug/L		70	33 - 98	2	30
Hexachlorocyclopentadiene	160	63.7		ug/L		40	10 - 67	9	50
Hexachloroethane	80.0	56.5		ug/L		71	24 - 98	4	30
Hexadecane	80.0	74.4		ug/L		93	50 - 150	0	30
Indeno[1,2,3-cd]pyrene	80.0	75.1		ug/L		94	56 - 104	5	30
Isophorone	80.0	62.4		ug/L		78	59 - 102	3	30
Naphthalene	80.0	63.5		ug/L		79	39 - 120	2	30
Nitrobenzene	80.0	63.1		ug/L		79	58 - 108	1	30
N-Nitrosodimethylamine	80.0	59.6		ug/L		75	53 - 106	2	34
N-Nitrosodi-n-propylamine	80.0	64.3		ug/L		80	57 - 106	2	30
N-Nitrosodiphenylamine	80.0	68.9		ug/L		86	65 - 104	5	30
Pentachlorophenol	160	115		ug/L		72	55 - 109	5	30
Phenanthrene	80.0	70.5		ug/L		88	67 - 106	5	30
Phenol	80.0	64.8		ug/L		81	60 - 108	1	30
Pyrene	80.0	75.2		ug/L		94	69 - 105	4	30
Pyridine	160	97.2		ug/L		61	46 - 88	10	41

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	81		42 - 131
2-Fluorobiphenyl	77		48 - 120
2-Fluorophenol (Surr)	80		41 - 120
Nitrobenzene-d5 (Surr)	75		42 - 120
Phenol-d5 (Surr)	83		45 - 124
Terphenyl-d14 (Surr)	96		20 - 130

Lab Sample ID: MB 280-520806/1-A
Matrix: Solid
Analysis Batch: 522166

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 520806

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared		Analyzed		Dil Fac
1,1'-Biphenyl	ND		330	24	ug/Kg		12/17/20 13:57	12/30/20 13:11		1	
1,2,4,5-Tetrachlorobenzene	ND		330	49	ug/Kg		12/17/20 13:57	12/30/20 13:11		1	
1,2,4-Trichlorobenzene	ND		330	28	ug/Kg		12/17/20 13:57	12/30/20 13:11		1	
1,2-Dichlorobenzene	ND		330	22	ug/Kg		12/17/20 13:57	12/30/20 13:11		1	

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-520806/1-A
Matrix: Solid
Analysis Batch: 522166

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 520806

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
	Result	Qualifier							
1,2-Diphenylhydrazine(as Azobenzene)	ND		330	22	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
1,3-Dichlorobenzene	ND		330	12	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
1,3-Dinitrobenzene	ND		330	71	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
1,4-Dichlorobenzene	ND		330	14	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
1,4-Dioxane	ND		660	66	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
1-Methylnaphthalene	ND		330	11	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
2,2'-oxybis[1-chloropropane]	ND		330	23	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
2,3,4,6-Tetrachlorophenol	ND		1600	140	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
2,4,5-Trichlorophenol	ND		330	10	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
2,4,6-Trichlorophenol	ND		330	10	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
2,4-Dichlorophenol	ND		330	10	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
2,4-Dimethylphenol	ND		330	66	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
2,4-Dinitrophenol	ND		1600	330	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
2,4-Dinitrotoluene	ND		330	66	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
2,6-Dichlorophenol	ND		330	22	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
2,6-Dinitrotoluene	ND		330	28	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
2-Chloronaphthalene	ND		330	10	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
2-Chlorophenol	ND		330	21	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
2-Methylnaphthalene	ND		330	19	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
2-Methylphenol	ND		330	13	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
2-Nitroaniline	ND		1600	50	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
2-Nitrophenol	ND		330	10	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
3 & 4 Methylphenol	ND		330	33	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
3,3'-Dichlorobenzidine	ND		660	90	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
3-Methylphenol	ND		330	33	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
3-Nitroaniline	ND		1600	73	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
4,6-Dinitro-2-methylphenol	ND		1600	330	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
4-Bromophenyl phenyl ether	ND		330	19	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
4-Chloro-3-methylphenol	ND		330	25	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
4-Chloroaniline	ND		330	82	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
4-Chlorophenyl phenyl ether	ND		330	21	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
4-Methylphenol	ND		330	33	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
4-Nitroaniline	ND		1600	73	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
4-Nitrophenol	ND		1600	97	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Acenaphthene	ND		330	10	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Acenaphthylene	ND		330	82	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Acetophenone	ND		330	20	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Aniline	ND		330	130	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Anthracene	ND		330	17	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Azobenzene	ND		330	22	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Benzaldehyde	ND		330	67	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Benzidine	ND		3300	990	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Benzo[a]anthracene	ND		330	20	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Benzo[a]pyrene	ND		330	20	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Benzo[b]fluoranthene	ND		330	26	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Benzo[g,h,i]perylene	ND		330	16	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Benzo[k]fluoranthene	ND		330	40	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Benzoic acid	ND		1600	330	ug/Kg		12/17/20 13:57	12/30/20 13:11	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-520806/1-A
Matrix: Solid
Analysis Batch: 522166

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 520806

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzyl alcohol	ND		330	10	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Bis(2-chloroethoxy)methane	ND		330	23	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Bis(2-chloroethyl)ether	ND		330	17	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Bis(2-ethylhexyl) phthalate	ND		330	46	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Butyl benzyl phthalate	ND		330	43	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Caprolactam	ND		330	110	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Carbazole	ND		330	36	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Chrysene	ND		330	27	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Dibenz(a,h)anthracene	ND		330	19	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Dibenzofuran	ND		330	20	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Diethyl phthalate	ND		660	26	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Dimethyl phthalate	ND		330	23	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Di-n-butyl phthalate	ND		330	29	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Di-n-octyl phthalate	ND		330	41	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Diphenylamine	ND		330	44	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Famphur	ND		660	34	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Fluoranthene	ND		330	36	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Fluorene	ND		330	18	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Hexachlorobenzene	ND		330	29	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Hexachlorobutadiene	ND		330	10	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Hexachlorocyclopentadiene	ND		1600	110	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Hexachloroethane	ND		330	21	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Hexadecane	ND		330	13	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Indeno[1,2,3-cd]pyrene	ND		330	22	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Isophorone	ND		330	17	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Naphthalene	ND		330	31	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Nitrobenzene	ND		330	22	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
N-Nitrosodimethylamine	ND		330	37	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
N-Nitrosodi-n-propylamine	ND		330	68	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
N-Nitrosodiphenylamine	ND		330	21	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Pentachlorophenol	ND		1600	330	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Phenanthrene	ND		330	17	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Phenol	ND		330	18	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Pyrene	ND		330	12	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Pyridine	ND		660	40	ug/Kg		12/17/20 13:57	12/30/20 13:11	1
Surrogate	MB	MB	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	67		35 - 120				12/17/20 13:57	12/30/20 13:11	1
2-Fluorobiphenyl	61		46 - 120				12/17/20 13:57	12/30/20 13:11	1
2-Fluorophenol (Surr)	63		43 - 120				12/17/20 13:57	12/30/20 13:11	1
Nitrobenzene-d5 (Surr)	65		46 - 120				12/17/20 13:57	12/30/20 13:11	1
Phenol-d5 (Surr)	65		46 - 120				12/17/20 13:57	12/30/20 13:11	1
Terphenyl-d14 (Surr)	93		46 - 120				12/17/20 13:57	12/30/20 13:11	1

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-520806/2-A
Matrix: Solid
Analysis Batch: 522166

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 520806
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1'-Biphenyl	2670	1920		ug/Kg		72	60 - 120
1,2,4,5-Tetrachlorobenzene	2670	1860		ug/Kg		70	60 - 120
1,2,4-Trichlorobenzene	2670	1680		ug/Kg		63	59 - 120
1,2-Dichlorobenzene	2670	1590		ug/Kg		59	57 - 120
1,2-Diphenylhydrazine(as Azobenzene)	2700	2030		ug/Kg		75	60 - 120
1,3-Dichlorobenzene	2670	1540		ug/Kg		58	56 - 120
1,3-Dinitrobenzene	2670	2110		ug/Kg		79	66 - 120
1,4-Dichlorobenzene	2670	1580		ug/Kg		59	57 - 120
1,4-Dioxane	2670	811		ug/Kg		30	28 - 120
1-Methylnaphthalene	2670	1810		ug/Kg		68	57 - 120
2,2'-oxybis[1-chloropropane]	2670	1520		ug/Kg		57	46 - 120
2,3,4,6-Tetrachlorophenol	2670	2080		ug/Kg		78	63 - 120
2,4,5-Trichlorophenol	2670	1890		ug/Kg		71	65 - 120
2,4,6-Trichlorophenol	2670	1800		ug/Kg		68	64 - 120
2,4-Dichlorophenol	2670	1770		ug/Kg		66	64 - 120
2,4-Dimethylphenol	2670	1790		ug/Kg		67	60 - 120
2,4-Dinitrophenol	5330	3310		ug/Kg		62	52 - 120
2,4-Dinitrotoluene	2670	2170		ug/Kg		81	68 - 120
2,6-Dichlorophenol	2670	1810		ug/Kg		68	30 - 150
2,6-Dinitrotoluene	2670	2040		ug/Kg		76	68 - 120
2-Chloronaphthalene	2670	1880		ug/Kg		71	61 - 120
2-Chlorophenol	2670	1580	*	ug/Kg		59	62 - 120
2-Methylnaphthalene	2670	1760		ug/Kg		66	60 - 120
2-Methylphenol	2670	1790		ug/Kg		67	61 - 120
2-Nitroaniline	2670	1980		ug/Kg		74	63 - 120
2-Nitrophenol	2670	1620		ug/Kg		61	61 - 120
3 & 4 Methylphenol	2670	1710		ug/Kg		64	62 - 120
3,3'-Dichlorobenzidine	5330	3890		ug/Kg		73	22 - 120
3-Methylphenol	2670	1710		ug/Kg		64	62 - 120
3-Nitroaniline	2670	1480	J	ug/Kg		55	40 - 120
4,6-Dinitro-2-methylphenol	5330	4100		ug/Kg		77	60 - 120
4-Bromophenyl phenyl ether	2670	2130		ug/Kg		80	66 - 120
4-Chloro-3-methylphenol	2670	1930		ug/Kg		72	62 - 120
4-Chloroaniline	2670	1240		ug/Kg		47	33 - 120
4-Chlorophenyl phenyl ether	2670	2070		ug/Kg		78	63 - 120
4-Methylphenol	2670	1710		ug/Kg		64	62 - 120
4-Nitroaniline	2670	1860		ug/Kg		70	58 - 120
4-Nitrophenol	5330	4180		ug/Kg		78	67 - 120
Acenaphthene	2670	1960		ug/Kg		73	62 - 120
Acenaphthylene	2670	1890		ug/Kg		71	64 - 120
Acetophenone	2670	1530		ug/Kg		58	48 - 120
Aniline	2670	1070		ug/Kg		40	21 - 120
Anthracene	2670	2130		ug/Kg		80	66 - 120
Azobenzene	2670	2010		ug/Kg		75	59 - 120
Benzaldehyde	2670	974		ug/Kg		37	30 - 150
Benzidine	5330	1330	J	ug/Kg		25	5 - 120
Benzo[a]anthracene	2670	2120		ug/Kg		79	64 - 120
Benzo[a]pyrene	2670	2080		ug/Kg		78	65 - 120

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-520806/2-A
Matrix: Solid
Analysis Batch: 522166

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 520806

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Benzo[b]fluoranthene	2670	2100		ug/Kg		79	58 - 120
Benzo[g,h,i]perylene	2670	2130		ug/Kg		80	58 - 120
Benzo[k]fluoranthene	2670	2230		ug/Kg		83	62 - 120
Benzoic acid	2670	1610		ug/Kg		60	51 - 120
Benzyl alcohol	2670	1550	*	ug/Kg		58	61 - 120
Bis(2-chloroethoxy)methane	2670	1650		ug/Kg		62	58 - 120
Bis(2-chloroethyl)ether	2670	1660		ug/Kg		62	57 - 120
Bis(2-ethylhexyl) phthalate	2670	2080		ug/Kg		78	65 - 120
Butyl benzyl phthalate	2670	2080		ug/Kg		78	65 - 120
Caprolactam	2670	1900		ug/Kg		71	20 - 138
Carbazole	2670	2100		ug/Kg		79	65 - 120
Chrysene	2670	2210		ug/Kg		83	65 - 120
Dibenz(a,h)anthracene	2670	2040		ug/Kg		76	56 - 120
Dibenzofuran	2670	2040		ug/Kg		76	65 - 120
Diethyl phthalate	2670	2140		ug/Kg		80	68 - 120
Dimethyl phthalate	2670	2080		ug/Kg		78	66 - 120
Di-n-butyl phthalate	2670	1970		ug/Kg		74	66 - 120
Di-n-octyl phthalate	2670	1960		ug/Kg		73	55 - 120
Diphenylamine	2270	1740		ug/Kg		77	30 - 150
Fluoranthene	2670	1970		ug/Kg		74	64 - 120
Fluorene	2670	2070		ug/Kg		77	66 - 120
Hexachlorobenzene	2670	2120		ug/Kg		79	65 - 120
Hexachlorobutadiene	2670	1720		ug/Kg		64	58 - 120
Hexachlorocyclopentadiene	5330	3010		ug/Kg		57	43 - 120
Hexachloroethane	2670	1540		ug/Kg		58	56 - 120
Hexadecane	2670	1840		ug/Kg		69	45 - 135
Indeno[1,2,3-cd]pyrene	2670	1940		ug/Kg		73	46 - 120
Isophorone	2670	1660		ug/Kg		62	56 - 120
Naphthalene	2670	1690		ug/Kg		63	59 - 120
Nitrobenzene	2670	1650		ug/Kg		62	55 - 120
N-Nitrosodimethylamine	2670	1420		ug/Kg		53	50 - 120
N-Nitrosodi-n-propylamine	2670	1720		ug/Kg		64	52 - 120
N-Nitrosodiphenylamine	2670	2060		ug/Kg		77	65 - 120
Pentachlorophenol	5330	4110		ug/Kg		77	50 - 120
Phenanthrene	2670	2100		ug/Kg		79	67 - 120
Phenol	2670	1570	*	ug/Kg		59	63 - 120
Pyrene	2670	2180		ug/Kg		82	66 - 120
Pyridine	5330	2050		ug/Kg		38	37 - 120

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	75		35 - 120
2-Fluorobiphenyl	64		46 - 120
2-Fluorophenol (Surr)	56		43 - 120
Nitrobenzene-d5 (Surr)	58		46 - 120
Phenol-d5 (Surr)	58		46 - 120
Terphenyl-d14 (Surr)	89		46 - 120

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-143671-5 MS

Matrix: Solid

Analysis Batch: 522166

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10

Prep Type: Total/NA

Prep Batch: 520806

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
1,1'-Biphenyl	ND		2690	2120		ug/Kg	*	79	60 - 120
1,2,4,5-Tetrachlorobenzene	ND		2690	2070		ug/Kg	*	77	60 - 120
1,2,4-Trichlorobenzene	ND		2690	1800		ug/Kg	*	67	59 - 120
1,2-Dichlorobenzene	ND		2690	1620		ug/Kg	*	60	57 - 120
1,2-Diphenylhydrazine(as Azobenzene)	ND		2720	2120		ug/Kg	*	78	60 - 120
1,3-Dichlorobenzene	ND	F1	2690	1490	F1	ug/Kg	*	55	56 - 120
1,3-Dinitrobenzene	ND		2690	2220		ug/Kg	*	83	66 - 120
1,4-Dichlorobenzene	ND		2690	1560		ug/Kg	*	58	57 - 120
1,4-Dioxane	ND		2690	880		ug/Kg	*	33	28 - 120
1-Methylnaphthalene	ND		2690	2050		ug/Kg	*	76	57 - 120
2,2'-oxybis[1-chloropropane]	ND		2690	1770		ug/Kg	*	66	46 - 120
2,3,4,6-Tetrachlorophenol	ND		2690	2270		ug/Kg	*	84	63 - 120
2,4,5-Trichlorophenol	ND		2690	2200		ug/Kg	*	82	65 - 120
2,4,6-Trichlorophenol	ND		2690	2190		ug/Kg	*	81	64 - 120
2,4-Dichlorophenol	ND		2690	2000		ug/Kg	*	74	64 - 120
2,4-Dimethylphenol	ND		2690	1940		ug/Kg	*	72	60 - 120
2,4-Dinitrophenol	ND	F1	5380	1430	J F1	ug/Kg	*	27	52 - 120
2,4-Dinitrotoluene	ND		2690	2260		ug/Kg	*	84	68 - 120
2,6-Dichlorophenol	ND		2690	1980		ug/Kg	*	74	30 - 150
2,6-Dinitrotoluene	ND		2690	2160		ug/Kg	*	80	68 - 120
2-Chloronaphthalene	ND		2690	2090		ug/Kg	*	78	61 - 120
2-Chlorophenol	ND	*	2690	1900		ug/Kg	*	71	62 - 120
2-Methylnaphthalene	ND		2690	1960		ug/Kg	*	73	60 - 120
2-Methylphenol	ND		2690	2040		ug/Kg	*	76	61 - 120
2-Nitroaniline	ND		2690	2050		ug/Kg	*	76	63 - 120
2-Nitrophenol	ND		2690	1940		ug/Kg	*	72	61 - 120
3 & 4 Methylphenol	ND		2690	2020		ug/Kg	*	75	62 - 120
3,3'-Dichlorobenzidine	ND		5380	4660		ug/Kg	*	87	22 - 120
3-Methylphenol	ND		2690	2020		ug/Kg	*	75	62 - 120
3-Nitroaniline	ND		2690	1360	J	ug/Kg	*	51	40 - 120
4,6-Dinitro-2-methylphenol	ND	F1	5380	2460	F1	ug/Kg	*	46	60 - 120
4-Bromophenyl phenyl ether	ND		2690	2260		ug/Kg	*	84	66 - 120
4-Chloro-3-methylphenol	ND		2690	2090		ug/Kg	*	78	62 - 120
4-Chloroaniline	ND		2690	1360		ug/Kg	*	51	33 - 120
4-Chlorophenyl phenyl ether	ND		2690	2130		ug/Kg	*	79	63 - 120
4-Methylphenol	ND		2690	2020		ug/Kg	*	75	62 - 120
4-Nitroaniline	ND		2690	1820		ug/Kg	*	68	58 - 120
4-Nitrophenol	ND		5380	4300		ug/Kg	*	80	67 - 120
Acenaphthene	ND		2690	2080		ug/Kg	*	77	62 - 120
Acenaphthylene	ND		2690	2070		ug/Kg	*	77	64 - 120
Acetophenone	ND		2690	1830		ug/Kg	*	68	48 - 120
Aniline	ND		2690	1160		ug/Kg	*	43	21 - 120
Anthracene	ND		2690	2310		ug/Kg	*	86	66 - 120
Azobenzene	ND		2690	2090		ug/Kg	*	78	59 - 120
Benzaldehyde	ND		2690	1450		ug/Kg	*	54	30 - 150
Benzidine	ND		5380	1130	J	ug/Kg	*	21	5 - 120
Benzo[a]anthracene	ND		2690	2300		ug/Kg	*	85	64 - 120
Benzo[a]pyrene	ND		2690	2320		ug/Kg	*	86	65 - 120

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-143671-5 MS

Matrix: Solid

Analysis Batch: 522166

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10

Prep Type: Total/NA

Prep Batch: 520806

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
Benzo[b]fluoranthene	ND		2690	2360		ug/Kg	☼	88	58 - 120
Benzo[g,h,i]perylene	ND		2690	2180		ug/Kg	☼	81	58 - 120
Benzo[k]fluoranthene	ND		2690	2440		ug/Kg	☼	91	62 - 120
Benzoic acid	ND		2690	2000		ug/Kg	☼	75	51 - 120
Benzyl alcohol	ND	*-	2690	1910		ug/Kg	☼	71	61 - 120
Bis(2-chloroethoxy)methane	ND		2690	1990		ug/Kg	☼	74	58 - 120
Bis(2-chloroethyl)ether	ND		2690	1980		ug/Kg	☼	73	57 - 120
Bis(2-ethylhexyl) phthalate	ND		2690	2430		ug/Kg	☼	90	65 - 120
Butyl benzyl phthalate	ND		2690	2340		ug/Kg	☼	87	65 - 120
Caprolactam	ND		2690	2030		ug/Kg	☼	76	20 - 138
Carbazole	ND		2690	2320		ug/Kg	☼	86	65 - 120
Chrysene	ND		2690	2350		ug/Kg	☼	87	65 - 120
Dibenz(a,h)anthracene	ND		2690	2340		ug/Kg	☼	87	56 - 120
Dibenzofuran	ND		2690	2120		ug/Kg	☼	79	65 - 120
Diethyl phthalate	ND		2690	2270		ug/Kg	☼	84	68 - 120
Dimethyl phthalate	ND		2690	2240		ug/Kg	☼	83	66 - 120
Di-n-butyl phthalate	ND		2690	2400		ug/Kg	☼	89	66 - 120
Di-n-octyl phthalate	ND		2690	2510		ug/Kg	☼	93	55 - 120
Diphenylamine	ND		2290	1800		ug/Kg	☼	79	30 - 150
Fluoranthene	ND		2690	2290		ug/Kg	☼	85	64 - 120
Fluorene	ND		2690	2120		ug/Kg	☼	79	66 - 120
Hexachlorobenzene	ND		2690	2270		ug/Kg	☼	84	65 - 120
Hexachlorobutadiene	ND		2690	1750		ug/Kg	☼	65	58 - 120
Hexachlorocyclopentadiene	ND	F1	5380	356	J F1	ug/Kg	☼	7	43 - 120
Hexachloroethane	ND	F1	2690	1410	F1	ug/Kg	☼	52	56 - 120
Hexadecane	ND		2690	2000		ug/Kg	☼	74	45 - 135
Indeno[1,2,3-cd]pyrene	ND		2690	2140		ug/Kg	☼	80	46 - 120
Isophorone	ND		2690	1920		ug/Kg	☼	72	56 - 120
Naphthalene	ND		2690	1940		ug/Kg	☼	72	59 - 120
Nitrobenzene	ND		2690	1910		ug/Kg	☼	71	55 - 120
N-Nitrosodimethylamine	ND		2690	1580		ug/Kg	☼	59	50 - 120
N-Nitrosodi-n-propylamine	ND		2690	2020		ug/Kg	☼	75	52 - 120
N-Nitrosodiphenylamine	ND		2690	2190		ug/Kg	☼	81	65 - 120
Pentachlorophenol	ND		5380	4400		ug/Kg	☼	82	50 - 120
Phenanthrene	ND		2690	2270		ug/Kg	☼	84	67 - 120
Phenol	ND	*-	2690	1870		ug/Kg	☼	70	63 - 120
Pyrene	ND		2690	2330		ug/Kg	☼	87	66 - 120
Pyridine	ND		5380	2190		ug/Kg	☼	41	37 - 120

Surrogate	MS %Recovery	MS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	79		35 - 120
2-Fluorobiphenyl	73		46 - 120
2-Fluorophenol (Surr)	66		43 - 120
Nitrobenzene-d5 (Surr)	68		46 - 120
Phenol-d5 (Surr)	70		46 - 120
Terphenyl-d14 (Surr)	93		46 - 120

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-143671-5 MSD

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 522166

Prep Batch: 520806

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
1,1'-Biphenyl	ND		2690	2080		ug/Kg	*	77	60 - 120	2	30
1,2,4,5-Tetrachlorobenzene	ND		2690	2040		ug/Kg	*	76	60 - 120	1	30
1,2,4-Trichlorobenzene	ND		2690	1890		ug/Kg	*	70	59 - 120	5	30
1,2-Dichlorobenzene	ND		2690	1720		ug/Kg	*	64	57 - 120	6	30
1,2-Diphenylhydrazine(as Azobenzene)	ND		2720	2090		ug/Kg	*	77	60 - 120	1	30
1,3-Dichlorobenzene	ND	F1	2690	1640		ug/Kg	*	61	56 - 120	10	30
1,3-Dinitrobenzene	ND		2690	2200		ug/Kg	*	82	66 - 120	1	30
1,4-Dichlorobenzene	ND		2690	1690		ug/Kg	*	63	57 - 120	8	30
1,4-Dioxane	ND		2690	962		ug/Kg	*	36	28 - 120	9	30
1-Methylnaphthalene	ND		2690	1980		ug/Kg	*	74	57 - 120	3	30
2,2'-oxybis[1-chloropropane]	ND		2690	1830		ug/Kg	*	68	46 - 120	3	30
2,3,4,6-Tetrachlorophenol	ND		2690	2200		ug/Kg	*	82	63 - 120	3	30
2,4,5-Trichlorophenol	ND		2690	2100		ug/Kg	*	78	65 - 120	5	30
2,4,6-Trichlorophenol	ND		2690	2110		ug/Kg	*	78	64 - 120	4	30
2,4-Dichlorophenol	ND		2690	1950		ug/Kg	*	72	64 - 120	2	30
2,4-Dimethylphenol	ND		2690	1850		ug/Kg	*	69	60 - 120	5	30
2,4-Dinitrophenol	ND	F1	5380	1430	J F1	ug/Kg	*	27	52 - 120	0	30
2,4-Dinitrotoluene	ND		2690	2240		ug/Kg	*	83	68 - 120	1	30
2,6-Dichlorophenol	ND		2690	1970		ug/Kg	*	73	30 - 150	1	30
2,6-Dinitrotoluene	ND		2690	2150		ug/Kg	*	80	68 - 120	1	30
2-Chloronaphthalene	ND		2690	2030		ug/Kg	*	75	61 - 120	3	30
2-Chlorophenol	ND	*	2690	1840		ug/Kg	*	68	62 - 120	3	30
2-Methylnaphthalene	ND		2690	1970		ug/Kg	*	73	60 - 120	1	30
2-Methylphenol	ND		2690	2030		ug/Kg	*	76	61 - 120	1	30
2-Nitroaniline	ND		2690	2020		ug/Kg	*	75	63 - 120	1	30
2-Nitrophenol	ND		2690	1890		ug/Kg	*	70	61 - 120	3	30
3 & 4 Methylphenol	ND		2690	1960		ug/Kg	*	73	62 - 120	3	30
3,3'-Dichlorobenzidine	ND		5380	4760		ug/Kg	*	89	22 - 120	2	30
3-Methylphenol	ND		2690	1960		ug/Kg	*	73	62 - 120	3	30
3-Nitroaniline	ND		2690	1390	J	ug/Kg	*	52	40 - 120	2	30
4,6-Dinitro-2-methylphenol	ND	F1	5380	2540	F1	ug/Kg	*	47	60 - 120	3	30
4-Bromophenyl phenyl ether	ND		2690	2260		ug/Kg	*	84	66 - 120	0	30
4-Chloro-3-methylphenol	ND		2690	2060		ug/Kg	*	77	62 - 120	1	30
4-Chloroaniline	ND		2690	1410		ug/Kg	*	52	33 - 120	3	30
4-Chlorophenyl phenyl ether	ND		2690	2140		ug/Kg	*	80	63 - 120	1	30
4-Methylphenol	ND		2690	1960		ug/Kg	*	73	62 - 120	3	30
4-Nitroaniline	ND		2690	1830		ug/Kg	*	68	58 - 120	1	30
4-Nitrophenol	ND		5380	4340		ug/Kg	*	81	67 - 120	1	30
Acenaphthene	ND		2690	2030		ug/Kg	*	75	62 - 120	3	30
Acenaphthylene	ND		2690	1990		ug/Kg	*	74	64 - 120	4	30
Acetophenone	ND		2690	1810		ug/Kg	*	67	48 - 120	1	30
Aniline	ND		2690	1190		ug/Kg	*	44	21 - 120	2	30
Anthracene	ND		2690	2260		ug/Kg	*	84	66 - 120	2	30
Azobenzene	ND		2690	2060		ug/Kg	*	77	59 - 120	1	30
Benzaldehyde	ND		2690	1470		ug/Kg	*	54	30 - 150	1	50
Benzidine	ND		5380	1440	J	ug/Kg	*	27	5 - 120	25	50
Benzo[a]anthracene	ND		2690	2240		ug/Kg	*	83	64 - 120	2	30
Benzo[a]pyrene	ND		2690	2220		ug/Kg	*	82	65 - 120	4	30

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-143671-5 MSD

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 522166

Prep Batch: 520806

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
	Result	Qualifier	Added	Result	Qualifier						
Benzo[b]fluoranthene	ND		2690	2190		ug/Kg	☼	82	58 - 120	7	30
Benzo[g,h,i]perylene	ND		2690	2020		ug/Kg	☼	75	58 - 120	8	30
Benzo[k]fluoranthene	ND		2690	2300		ug/Kg	☼	86	62 - 120	6	30
Benzoic acid	ND		2690	1860		ug/Kg	☼	69	51 - 120	8	30
Benzyl alcohol	ND	*-	2690	1810		ug/Kg	☼	67	61 - 120	6	30
Bis(2-chloroethoxy)methane	ND		2690	1920		ug/Kg	☼	71	58 - 120	4	30
Bis(2-chloroethyl)ether	ND		2690	1910		ug/Kg	☼	71	57 - 120	3	30
Bis(2-ethylhexyl) phthalate	ND		2690	2330		ug/Kg	☼	87	65 - 120	4	30
Butyl benzyl phthalate	ND		2690	2330		ug/Kg	☼	87	65 - 120	0	30
Caprolactam	ND		2690	2020		ug/Kg	☼	75	20 - 138	1	30
Carbazole	ND		2690	2290		ug/Kg	☼	85	65 - 120	1	30
Chrysene	ND		2690	2240		ug/Kg	☼	83	65 - 120	5	30
Dibenz(a,h)anthracene	ND		2690	2150		ug/Kg	☼	80	56 - 120	9	30
Dibenzofuran	ND		2690	2120		ug/Kg	☼	79	65 - 120	0	30
Diethyl phthalate	ND		2690	2230		ug/Kg	☼	83	68 - 120	2	30
Dimethyl phthalate	ND		2690	2180		ug/Kg	☼	81	66 - 120	3	30
Di-n-butyl phthalate	ND		2690	2360		ug/Kg	☼	88	66 - 120	2	30
Di-n-octyl phthalate	ND		2690	2420		ug/Kg	☼	90	55 - 120	4	30
Diphenylamine	ND		2290	1810		ug/Kg	☼	79	30 - 150	0	50
Fluoranthene	ND		2690	2260		ug/Kg	☼	84	64 - 120	2	30
Fluorene	ND		2690	2150		ug/Kg	☼	80	66 - 120	1	30
Hexachlorobenzene	ND		2690	2280		ug/Kg	☼	85	65 - 120	0	30
Hexachlorobutadiene	ND		2690	1880		ug/Kg	☼	70	58 - 120	7	30
Hexachlorocyclopentadiene	ND	F1	5380	323	J F1	ug/Kg	☼	6	43 - 120	10	30
Hexachloroethane	ND	F1	2690	1540		ug/Kg	☼	57	56 - 120	9	30
Hexadecane	ND		2690	2020		ug/Kg	☼	75	45 - 135	1	30
Indeno[1,2,3-cd]pyrene	ND		2690	2040		ug/Kg	☼	76	46 - 120	5	30
Isophorone	ND		2690	1860		ug/Kg	☼	69	56 - 120	3	30
Naphthalene	ND		2690	1940		ug/Kg	☼	72	59 - 120	0	30
Nitrobenzene	ND		2690	1890		ug/Kg	☼	70	55 - 120	1	30
N-Nitrosodimethylamine	ND		2690	1560		ug/Kg	☼	58	50 - 120	2	30
N-Nitrosodi-n-propylamine	ND		2690	2020		ug/Kg	☼	75	52 - 120	0	30
N-Nitrosodiphenylamine	ND		2690	2210		ug/Kg	☼	82	65 - 120	1	30
Pentachlorophenol	ND		5380	4480		ug/Kg	☼	83	50 - 120	2	30
Phenanthrene	ND		2690	2250		ug/Kg	☼	84	67 - 120	1	30
Phenol	ND	*-	2690	1800		ug/Kg	☼	67	63 - 120	4	30
Pyrene	ND		2690	2260		ug/Kg	☼	84	66 - 120	3	30
Pyridine	ND		5380	2250		ug/Kg	☼	42	37 - 120	3	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	78		35 - 120
2-Fluorobiphenyl	71		46 - 120
2-Fluorophenol (Surr)	63		43 - 120
Nitrobenzene-d5 (Surr)	66		46 - 120
Phenol-d5 (Surr)	66		46 - 120
Terphenyl-d14 (Surr)	92		46 - 120

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Lab Sample ID: MB 280-520771/3-A
Matrix: Solid
Analysis Batch: 520773

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 520771

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		2.0	0.76	mg/Kg		12/16/20 21:50	12/17/20 03:29	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	85		77 - 123				12/16/20 21:50	12/17/20 03:29	1

Lab Sample ID: LCS 280-520771/1-A
Matrix: Solid
Analysis Batch: 520773

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 520771

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Gasoline Range Organics (GRO)-C6-C10	8.54	7.22		mg/Kg		84	75 - 135
Surrogate	%Recovery	LCS Qualifier	Limits				
a,a,a-Trifluorotoluene	88		77 - 123				

Lab Sample ID: LCSD 280-520771/2-A
Matrix: Solid
Analysis Batch: 520773

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 520771

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	8.54	7.40		mg/Kg		87	75 - 135	3	30
Surrogate	%Recovery	LCSD Qualifier	Limits						
a,a,a-Trifluorotoluene	88		77 - 123						

Lab Sample ID: 280-143671-5 MS
Matrix: Solid
Analysis Batch: 520773

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10
Prep Type: Total/NA
Prep Batch: 520771

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Gasoline Range Organics (GRO)-C6-C10	ND	F1 F2	9.73	10.5		mg/Kg	⊛	108	75 - 135
Surrogate	%Recovery	MS Qualifier	Limits						
a,a,a-Trifluorotoluene	87		77 - 123						

Lab Sample ID: 280-143671-5 MSD
Matrix: Solid
Analysis Batch: 520773

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10
Prep Type: Total/NA
Prep Batch: 520771

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	ND	F1 F2	11.0	14.9	F1 F2	mg/Kg	⊛	136	75 - 135	35	30

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics) (Continued)

Lab Sample ID: 280-143671-5 MSD
Matrix: Solid
Analysis Batch: 520773

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10
Prep Type: Total/NA
Prep Batch: 520771

Surrogate	MSD %Recovery	MSD Qualifier	Limits
a,a,a-Trifluorotoluene	88		77 - 123

Lab Sample ID: MB 280-521036/38
Matrix: Water
Analysis Batch: 521036

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		25	10	ug/L			12/18/20 23:47	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	94		82 - 110		12/18/20 23:47	1

Lab Sample ID: LCS 280-521036/36
Matrix: Water
Analysis Batch: 521036

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	76.9	76.5		ug/L		100	79 - 149

Surrogate	LCS %Recovery	LCS Qualifier	Limits
a,a,a-Trifluorotoluene	98		82 - 110

Lab Sample ID: LCSD 280-521036/37
Matrix: Water
Analysis Batch: 521036

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	76.9	77.6		ug/L		101	79 - 149	1	27

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
a,a,a-Trifluorotoluene	94		82 - 110

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Lab Sample ID: MB 280-520265/1-A
Matrix: Solid
Analysis Batch: 520371

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 520265

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		8.0	3.6	mg/Kg		12/12/20 16:06	12/14/20 18:10	1
Motor Oil (C20-C38)	ND		24	7.8	mg/Kg		12/12/20 16:06	12/14/20 18:10	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	60		49 - 115	12/12/20 16:06	12/14/20 18:10	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Lab Sample ID: LCS 280-520265/2-A
Matrix: Solid
Analysis Batch: 520371

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 520265

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Diesel Range Organics [C10-C28]	132	98.4		mg/Kg		74	53 - 115
Surrogate		LCS %Recovery	LCS Qualifier				Limits
<i>o</i> -Terphenyl (Surr)		77					49 - 115

Lab Sample ID: LCS 280-520265/3-A
Matrix: Solid
Analysis Batch: 520371

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 520265

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Motor Oil (C20-C38)	334	280		mg/Kg		84	57 - 115
Surrogate		LCS %Recovery	LCS Qualifier				Limits
<i>o</i> -Terphenyl (Surr)		79					49 - 115

Lab Sample ID: 280-143671-5 MS
Matrix: Solid
Analysis Batch: 520371

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10
Prep Type: Total/NA
Prep Batch: 520265

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Diesel Range Organics [C10-C28]	ND	F2 F1	135	162	F1	mg/Kg	✱	120	56 - 115
Surrogate		MS %Recovery		MS Qualifier					Limits
<i>o</i> -Terphenyl (Surr)		134		S1+					49 - 115

Lab Sample ID: 280-143671-5 MS
Matrix: Solid
Analysis Batch: 520371

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10
Prep Type: Total/NA
Prep Batch: 520265

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Motor Oil (C20-C38)	15	J	315	271		mg/Kg	✱	81	57 - 115
Surrogate		MS %Recovery		MS Qualifier					Limits
<i>o</i> -Terphenyl (Surr)		76							49 - 115

Lab Sample ID: 280-143671-5 MSD
Matrix: Solid
Analysis Batch: 520371

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10
Prep Type: Total/NA
Prep Batch: 520265

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Diesel Range Organics [C10-C28]	ND	F2 F1	130	91.4	F2	mg/Kg	✱	70	56 - 115	56	23
Surrogate		MSD %Recovery		MSD Qualifier					Limits		
<i>o</i> -Terphenyl (Surr)		77							49 - 115		

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Lab Sample ID: 280-143671-5 MSD
Matrix: Solid
Analysis Batch: 520371

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10
Prep Type: Total/NA
Prep Batch: 520265

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Motor Oil (C20-C38)	15	J	307	259		mg/Kg	✱	79	57 - 115	4	30
Surrogate	%Recovery	MSD Qualifier	Limits								
<i>o-Terphenyl (Surr)</i>	75		49 - 115								

Lab Sample ID: MB 280-520850/1-A
Matrix: Water
Analysis Batch: 521662

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 520850

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.25	0.033	mg/L		12/17/20 15:12	12/24/20 14:51	1
Motor Oil (C20-C38)	ND		0.50	0.056	mg/L		12/17/20 15:12	12/24/20 14:51	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o-Terphenyl (Surr)</i>	75		50 - 115				12/17/20 15:12	12/24/20 14:51	1

Lab Sample ID: LCS 280-520850/2-A
Matrix: Water
Analysis Batch: 521662

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 520850

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	1.98	1.58		mg/L		80	54 - 115
Surrogate	%Recovery	LCS Qualifier	Limits				
<i>o-Terphenyl (Surr)</i>	83		50 - 115				

Lab Sample ID: LCS 280-520850/4-A
Matrix: Water
Analysis Batch: 521662

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 520850

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Motor Oil (C20-C38)	5.02	4.32		mg/L		86	54 - 115
Surrogate	%Recovery	LCS Qualifier	Limits				
<i>o-Terphenyl (Surr)</i>	76		50 - 115				

Lab Sample ID: LCSD 280-520850/3-A
Matrix: Water
Analysis Batch: 521662

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 520850

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	1.98	1.73		mg/L		87	54 - 115	9	31

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Lab Sample ID: LCSD 280-520850/3-A
Matrix: Water
Analysis Batch: 521662

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 520850

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
o-Terphenyl (Surr)	89		50 - 115

Lab Sample ID: LCSD 280-520850/5-A
Matrix: Water
Analysis Batch: 521662

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 520850

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Motor Oil (C20-C38)	5.02	4.69		mg/L		93	54 - 115	8	31

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
o-Terphenyl (Surr)	82		50 - 115

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-520472/1-A
Matrix: Solid
Analysis Batch: 520836

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 520472

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		100	7.8	ug/Kg		12/16/20 16:10	12/17/20 08:48	1

Lab Sample ID: LCS 280-520472/2-A
Matrix: Solid
Analysis Batch: 520836

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 520472

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	20000	20300		ug/Kg		101	83 - 113

Lab Sample ID: 280-143671-5 MS
Matrix: Solid
Analysis Batch: 520836

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10
Prep Type: Total/NA
Prep Batch: 520472

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	ND		14300	14700		ug/Kg	✱	103	83 - 113

Lab Sample ID: 280-143671-5 MSD
Matrix: Solid
Analysis Batch: 520836

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10
Prep Type: Total/NA
Prep Batch: 520472

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silver	ND		17500	17700		ug/Kg	✱	101	83 - 113	18	20

Lab Sample ID: MB 280-520517/1-A
Matrix: Water
Analysis Batch: 520943

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 520517

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.33	ug/L		12/16/20 15:40	12/17/20 17:56	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 280-520517/1-A
Matrix: Water
Analysis Batch: 520943

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 520517

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cadmium	ND		1.0	0.27	ug/L		12/16/20 15:40	12/17/20 17:56	1
Lead	ND		1.0	0.18	ug/L		12/16/20 15:40	12/17/20 17:56	1
Selenium	ND		5.0	0.37	ug/L		12/16/20 15:40	12/17/20 17:56	1
Silver	ND		5.0	0.033	ug/L		12/16/20 15:40	12/17/20 17:56	1

Lab Sample ID: MB 280-520517/1-A
Matrix: Water
Analysis Batch: 520969

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 520517

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Barium	ND		1.0	0.29	ug/L		12/16/20 15:40	12/18/20 07:27	1
Chromium	12.4		2.0	0.50	ug/L		12/16/20 15:40	12/18/20 07:27	1

Lab Sample ID: LCS 280-520517/2-A
Matrix: Water
Analysis Batch: 520943

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 520517

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
Arsenic	40.0	37.5		ug/L		94		85 - 117
Cadmium	40.0	39.8		ug/L		100		85 - 115
Lead	40.0	39.2		ug/L		98		85 - 118
Selenium	40.0	39.8		ug/L		100		77 - 122
Silver	40.0	39.2		ug/L		98		85 - 115

Lab Sample ID: LCS 280-520517/2-A
Matrix: Water
Analysis Batch: 520969

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 520517

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
Barium	40.0	38.2		ug/L		96		85 - 118
Chromium	40.0	41.1		ug/L		103		84 - 121

Lab Sample ID: 280-143671-4 MS
Matrix: Water
Analysis Batch: 520943

Client Sample ID: CDOT I270 Env 12_2020-SB-33-GW
Prep Type: Total/NA
Prep Batch: 520517

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier		Result	Qualifier					
Arsenic	63	F1	40.0	91.5	F1	ug/L		72		85 - 117
Cadmium	3.3		40.0	40.7		ug/L		93		85 - 115
Lead	240		40.0	274	4	ug/L		73		85 - 118
Selenium	5.3	F1	40.0	28.7	F1	ug/L		58		77 - 122
Silver	1.3	J	40.0	38.5		ug/L		93		85 - 115

Lab Sample ID: 280-143671-4 MS
Matrix: Water
Analysis Batch: 520969

Client Sample ID: CDOT I270 Env 12_2020-SB-33-GW
Prep Type: Total/NA
Prep Batch: 520517

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier		Result	Qualifier					
Barium	4500		40.0	4090	4	ug/L		-946		85 - 118
Chromium	310	B	40.0	329	4	ug/L		58		84 - 121

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: 280-143671-4 MSD

Matrix: Water

Analysis Batch: 520943

Client Sample ID: CDOT I270 Env 12_2020-SB-33-GW

Prep Type: Total/NA

Prep Batch: 520517

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits		
Arsenic	63	F1	40.0	91.9	F1	ug/L		73	85 - 117	0	20
Cadmium	3.3		40.0	42.3		ug/L		97	85 - 115	4	20
Lead	240		40.0	273	4	ug/L		73	85 - 118	0	20
Selenium	5.3	F1	40.0	29.4	F1	ug/L		60	77 - 122	2	20
Silver	1.3	J	40.0	38.8		ug/L		94	85 - 115	1	20

Lab Sample ID: 280-143671-4 MSD

Matrix: Water

Analysis Batch: 520969

Client Sample ID: CDOT I270 Env 12_2020-SB-33-GW

Prep Type: Total/NA

Prep Batch: 520517

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits		
Barium	4500		40.0	4040	4	ug/L		-1065	85 - 118	1	20
Chromium	310	B	40.0	339	4	ug/L		81	84 - 121	3	20

Lab Sample ID: MB 280-520527/1-A

Matrix: Solid

Analysis Batch: 520948

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 520527

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	ND		0.60	0.051	mg/Kg		12/17/20 08:02	12/17/20 18:42	1
Barium	ND		0.40	0.071	mg/Kg		12/17/20 08:02	12/17/20 18:42	1
Cadmium	ND		0.10	0.0094	mg/Kg		12/17/20 08:02	12/17/20 18:42	1
Chromium	0.0897	J	0.20	0.076	mg/Kg		12/17/20 08:02	12/17/20 18:42	1
Lead	ND		0.15	0.018	mg/Kg		12/17/20 08:02	12/17/20 18:42	1
Selenium	ND		0.50	0.13	mg/Kg		12/17/20 08:02	12/17/20 18:42	1

Lab Sample ID: LCS 280-520527/2-A

Matrix: Solid

Analysis Batch: 520948

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 520527

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
							Result
Arsenic	20.0	16.8		mg/Kg		84	83 - 111
Barium	20.0	18.6		mg/Kg		93	86 - 120
Cadmium	20.0	17.7		mg/Kg		89	85 - 109
Chromium	20.0	19.0		mg/Kg		95	87 - 121
Lead	20.0	18.2		mg/Kg		91	81 - 125
Selenium	20.0	16.9		mg/Kg		84	78 - 108

Lab Sample ID: 280-143671-5 MS

Matrix: Solid

Analysis Batch: 520948

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10

Prep Type: Total/NA

Prep Batch: 520527

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier		Result	Qualifier				Limits
Arsenic	0.75		17.1	15.8		mg/Kg	⊛	88	83 - 111
Barium	21	F2 F1	17.1	69.9	F1	mg/Kg	⊛	287	86 - 120
Cadmium	0.032	J F2	17.1	16.0		mg/Kg	⊛	93	85 - 109
Chromium	2.0	F2 B	17.1	20.0		mg/Kg	⊛	105	87 - 121
Lead	2.4		17.1	19.1		mg/Kg	⊛	97	81 - 125
Selenium	ND		17.1	13.5		mg/Kg	⊛	79	78 - 108

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 280-143671-5 MSD

Matrix: Solid
Analysis Batch: 520948

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10

Prep Type: Total/NA
Prep Batch: 520527

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.		RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD		
Arsenic	0.75		14.2	13.4		mg/Kg	☼	88	83 - 111	17	20	
Barium	21	F2 F1	14.2	34.9	F2	mg/Kg	☼	100	86 - 120	67	20	
Cadmium	0.032	J F2	14.2	12.9	F2	mg/Kg	☼	90	85 - 109	21	20	
Chromium	2.0	F2 B	14.2	15.9	F2	mg/Kg	☼	97	87 - 121	23	20	
Lead	2.4		14.2	16.3		mg/Kg	☼	97	81 - 125	16	20	
Selenium	ND		14.2	12.3		mg/Kg	☼	87	78 - 108	9	20	

Lab Sample ID: MB 280-520360/1-E

Matrix: Water
Analysis Batch: 520948

Client Sample ID: Method Blank

Prep Type: Dissolved
Prep Batch: 520506

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
	Result	Qualifier								
Arsenic, Dissolved	ND		5.0	0.33	ug/L		12/17/20 08:07	12/17/20 19:25		1
Barium, Dissolved	ND		1.0	0.29	ug/L		12/17/20 08:07	12/17/20 19:25		1
Cadmium, Dissolved	ND		1.0	0.27	ug/L		12/17/20 08:07	12/17/20 19:25		1
Chromium, Dissolved	ND		2.0	0.50	ug/L		12/17/20 08:07	12/17/20 19:25		1
Lead, Dissolved	ND		1.0	0.18	ug/L		12/17/20 08:07	12/17/20 19:25		1
Selenium, Dissolved	ND		5.0	0.37	ug/L		12/17/20 08:07	12/17/20 19:25		1
Silver, Dissolved	ND		5.0	0.033	ug/L		12/17/20 08:07	12/17/20 19:25		1

Lab Sample ID: LCS 280-520360/2-E

Matrix: Water
Analysis Batch: 520948

Client Sample ID: Lab Control Sample

Prep Type: Dissolved
Prep Batch: 520506

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	
							Limits	
Arsenic, Dissolved	40.0	38.0		ug/L		95	85 - 117	
Barium, Dissolved	40.0	41.1		ug/L		103	85 - 118	
Cadmium, Dissolved	40.0	40.2		ug/L		100	85 - 115	
Chromium, Dissolved	40.0	40.8		ug/L		102	84 - 121	
Lead, Dissolved	40.0	41.0		ug/L		103	85 - 118	
Selenium, Dissolved	40.0	39.4		ug/L		99	77 - 122	
Silver, Dissolved	40.0	39.3		ug/L		98	85 - 115	

Lab Sample ID: 280-143671-4 MS

Matrix: Water
Analysis Batch: 520948

Client Sample ID: CDOT I270 Env 12_2020-SB-33-GW

Prep Type: Dissolved
Prep Batch: 520506

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	
	Result	Qualifier	Added	Result	Qualifier				Limits	
Arsenic, Dissolved	0.98	J	40.0	40.5		ug/L		99	85 - 117	
Barium, Dissolved	140	F1	40.0	167	F1	ug/L		71	85 - 118	
Cadmium, Dissolved	ND		40.0	38.8		ug/L		97	85 - 115	
Chromium, Dissolved	0.53	J	40.0	41.6		ug/L		103	84 - 121	
Lead, Dissolved	ND		40.0	38.6		ug/L		97	85 - 118	
Silver, Dissolved	ND		40.0	37.0		ug/L		93	85 - 115	

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 280-143671-4 MS

Matrix: Water

Analysis Batch: 521220

Client Sample ID: CDOT I270 Env 12_2020-SB-33-GW

Prep Type: Dissolved

Prep Batch: 520506

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Selenium, Dissolved	2.1	J ^+	40.0	48.2	^+	ug/L		115	77 - 122

Lab Sample ID: 280-143671-4 MSD

Matrix: Water

Analysis Batch: 520948

Client Sample ID: CDOT I270 Env 12_2020-SB-33-GW

Prep Type: Dissolved

Prep Batch: 520506

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Arsenic, Dissolved	0.98	J	40.0	39.9		ug/L		97	85 - 117	2	20
Barium, Dissolved	140	F1	40.0	167	F1	ug/L		70	85 - 118	0	20
Cadmium, Dissolved	ND		40.0	39.4		ug/L		98	85 - 115	2	20
Chromium, Dissolved	0.53	J	40.0	39.4		ug/L		97	84 - 121	5	20
Lead, Dissolved	ND		40.0	39.2		ug/L		98	85 - 118	1	20
Silver, Dissolved	ND		40.0	37.1		ug/L		93	85 - 115	0	20

Lab Sample ID: 280-143671-4 MSD

Matrix: Water

Analysis Batch: 521220

Client Sample ID: CDOT I270 Env 12_2020-SB-33-GW

Prep Type: Dissolved

Prep Batch: 520506

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Selenium, Dissolved	2.1	J ^+	40.0	46.7	^+	ug/L		111	77 - 122	3	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 280-520362/1-A

Matrix: Water

Analysis Batch: 520590

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 520362

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.027	ug/L		12/15/20 13:10	12/15/20 17:08	1

Lab Sample ID: LCS 280-520362/2-A

Matrix: Water

Analysis Batch: 520590

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 520362

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	4.93		ug/L		99	84 - 120

Lab Sample ID: MB 280-520360/1-F

Matrix: Water

Analysis Batch: 520991

Client Sample ID: Method Blank

Prep Type: Dissolved

Prep Batch: 520569

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury, Dissolved	ND		0.20	0.027	ug/L		12/17/20 14:00	12/17/20 21:53	1

Lab Sample ID: LCS 280-520360/2-F

Matrix: Water

Analysis Batch: 520991

Client Sample ID: Lab Control Sample

Prep Type: Dissolved

Prep Batch: 520569

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury, Dissolved	5.00	4.78		ug/L		96	84 - 120

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 280-143671-1 MS
Matrix: Water
Analysis Batch: 520991

Client Sample ID: CDOT I270 Env 12_2020-SB-32-GW
Prep Type: Dissolved
Prep Batch: 520569

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury, Dissolved	ND		5.00	4.80		ug/L		96	75 - 125

Lab Sample ID: 280-143671-1 MSD
Matrix: Water
Analysis Batch: 520991

Client Sample ID: CDOT I270 Env 12_2020-SB-32-GW
Prep Type: Dissolved
Prep Batch: 520569

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury, Dissolved	ND		5.00	4.82		ug/L		96	75 - 125	1	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 280-520209/1-A
Matrix: Solid
Analysis Batch: 520271

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 520209

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		17	5.5	ug/Kg		12/12/20 13:00	12/12/20 14:30	1

Lab Sample ID: LCS 280-520209/2-A
Matrix: Solid
Analysis Batch: 520271

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 520209

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	333	352		ug/Kg		106	87 - 111

Lab Sample ID: 280-143671-5 MS
Matrix: Solid
Analysis Batch: 520271

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10
Prep Type: Total/NA
Prep Batch: 520209

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	ND		391	418		ug/Kg	⊛	107	87 - 111

Lab Sample ID: 280-143671-5 MSD
Matrix: Solid
Analysis Batch: 520271

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10
Prep Type: Total/NA
Prep Batch: 520209

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		398	420		ug/Kg	⊛	105	87 - 111	0	20

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

GC/MS VOA

Analysis Batch: 520319

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-1	CDOT I270 Env 12_2020-SB-32-GW	Total/NA	Water	8260B	
280-143671-2	CDOT I270 Env 12_2020-SB-32-GW-DUP	Total/NA	Water	8260B	
280-143671-4	CDOT I270 Env 12_2020-SB-33-GW	Total/NA	Water	8260B	
280-143671-8	TB-05	Total/NA	Water	8260B	
MB 280-520319/9	Method Blank	Total/NA	Water	8260B	
LCS 280-520319/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 280-520319/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 521399

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-3	CDOT I270 Env 12_2020-SB-32-9-11	Total/NA	Solid	8260B	521431
280-143671-5	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	8260B	521431
280-143671-6	CDOT I270 Env 12_2020-SB-38-13-15	Total/NA	Solid	8260B	521431
280-143671-7	TB-04	Total/NA	Solid	8260B	521431
MB 280-521431/3-A	Method Blank	Total/NA	Solid	8260B	521431
LCS 280-521431/1-A	Lab Control Sample	Total/NA	Solid	8260B	521431
LCSD 280-521431/2-A	Lab Control Sample Dup	Total/NA	Solid	8260B	521431
280-143671-5 MS	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	8260B	521431
280-143671-5 MSD	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	8260B	521431

Prep Batch: 521431

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-3	CDOT I270 Env 12_2020-SB-32-9-11	Total/NA	Solid	5035	
280-143671-5	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	5035	
280-143671-6	CDOT I270 Env 12_2020-SB-38-13-15	Total/NA	Solid	5035	
280-143671-7	TB-04	Total/NA	Solid	5035	
MB 280-521431/3-A	Method Blank	Total/NA	Solid	5035	
LCS 280-521431/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-521431/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
280-143671-5 MS	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	5035	
280-143671-5 MSD	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	5035	

GC/MS Semi VOA

Prep Batch: 520327

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-1	CDOT I270 Env 12_2020-SB-32-GW	Total/NA	Water	3520C	
280-143671-2	CDOT I270 Env 12_2020-SB-32-GW-DUP	Total/NA	Water	3520C	
280-143671-4	CDOT I270 Env 12_2020-SB-33-GW	Total/NA	Water	3520C	
MB 280-520327/1-A	Method Blank	Total/NA	Water	3520C	
LCS 280-520327/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 280-520327/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Prep Batch: 520806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-3	CDOT I270 Env 12_2020-SB-32-9-11	Total/NA	Solid	3550C	
280-143671-5	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	3550C	
280-143671-6	CDOT I270 Env 12_2020-SB-38-13-15	Total/NA	Solid	3550C	
MB 280-520806/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 280-520806/2-A	Lab Control Sample	Total/NA	Solid	3550C	
280-143671-5 MS	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	3550C	

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QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

GC/MS Semi VOA (Continued)

Prep Batch: 520806 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-5 MSD	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	3550C	

Analysis Batch: 521226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-1	CDOT I270 Env 12_2020-SB-32-GW	Total/NA	Water	8270D	520327
280-143671-2	CDOT I270 Env 12_2020-SB-32-GW-DUP	Total/NA	Water	8270D	520327
280-143671-4	CDOT I270 Env 12_2020-SB-33-GW	Total/NA	Water	8270D	520327
MB 280-520327/1-A	Method Blank	Total/NA	Water	8270D	520327
LCS 280-520327/2-A	Lab Control Sample	Total/NA	Water	8270D	520327
LCSD 280-520327/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	520327

Analysis Batch: 522166

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-3	CDOT I270 Env 12_2020-SB-32-9-11	Total/NA	Solid	8270D	520806
280-143671-5	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	8270D	520806
280-143671-6	CDOT I270 Env 12_2020-SB-38-13-15	Total/NA	Solid	8270D	520806
MB 280-520806/1-A	Method Blank	Total/NA	Solid	8270D	520806
LCS 280-520806/2-A	Lab Control Sample	Total/NA	Solid	8270D	520806
280-143671-5 MS	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	8270D	520806
280-143671-5 MSD	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	8270D	520806

GC VOA

Prep Batch: 520771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-3	CDOT I270 Env 12_2020-SB-32-9-11	Total/NA	Solid	5035	
280-143671-5	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	5035	
280-143671-6	CDOT I270 Env 12_2020-SB-38-13-15	Total/NA	Solid	5035	
280-143671-7	TB-04	Total/NA	Solid	5035	
MB 280-520771/3-A	Method Blank	Total/NA	Solid	5035	
LCS 280-520771/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-520771/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
280-143671-5 MS	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	5035	
280-143671-5 MSD	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	5035	

Analysis Batch: 520773

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-3	CDOT I270 Env 12_2020-SB-32-9-11	Total/NA	Solid	8015C	520771
280-143671-5	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	8015C	520771
280-143671-6	CDOT I270 Env 12_2020-SB-38-13-15	Total/NA	Solid	8015C	520771
280-143671-7	TB-04	Total/NA	Solid	8015C	520771
MB 280-520771/3-A	Method Blank	Total/NA	Solid	8015C	520771
LCS 280-520771/1-A	Lab Control Sample	Total/NA	Solid	8015C	520771
LCSD 280-520771/2-A	Lab Control Sample Dup	Total/NA	Solid	8015C	520771
280-143671-5 MS	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	8015C	520771
280-143671-5 MSD	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	8015C	520771

Analysis Batch: 521036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-1	CDOT I270 Env 12_2020-SB-32-GW	Total/NA	Water	8015C	
280-143671-2	CDOT I270 Env 12_2020-SB-32-GW-DUP	Total/NA	Water	8015C	

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QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

GC VOA (Continued)

Analysis Batch: 521036 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-4	CDOT I270 Env 12_2020-SB-33-GW	Total/NA	Water	8015C	
280-143671-8	TB-05	Total/NA	Water	8015C	
MB 280-521036/38	Method Blank	Total/NA	Water	8015C	
LCS 280-521036/36	Lab Control Sample	Total/NA	Water	8015C	
LCSD 280-521036/37	Lab Control Sample Dup	Total/NA	Water	8015C	

GC Semi VOA

Prep Batch: 520265

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-3	CDOT I270 Env 12_2020-SB-32-9-11	Total/NA	Solid	3546	
280-143671-5	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	3546	
280-143671-6	CDOT I270 Env 12_2020-SB-38-13-15	Total/NA	Solid	3546	
MB 280-520265/1-A	Method Blank	Total/NA	Solid	3546	
LCS 280-520265/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCS 280-520265/3-A	Lab Control Sample	Total/NA	Solid	3546	
280-143671-5 MS	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	3546	
280-143671-5 MS	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	3546	
280-143671-5 MSD	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	3546	
280-143671-5 MSD	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	3546	

Analysis Batch: 520371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-5	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	8015C	520265
280-143671-6	CDOT I270 Env 12_2020-SB-38-13-15	Total/NA	Solid	8015C	520265
MB 280-520265/1-A	Method Blank	Total/NA	Solid	8015C	520265
LCS 280-520265/2-A	Lab Control Sample	Total/NA	Solid	8015C	520265
LCS 280-520265/3-A	Lab Control Sample	Total/NA	Solid	8015C	520265
280-143671-5 MS	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	8015C	520265
280-143671-5 MS	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	8015C	520265
280-143671-5 MSD	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	8015C	520265
280-143671-5 MSD	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	8015C	520265

Analysis Batch: 520579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-3	CDOT I270 Env 12_2020-SB-32-9-11	Total/NA	Solid	8015C	520265

Prep Batch: 520850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-1	CDOT I270 Env 12_2020-SB-32-GW	Total/NA	Water	3510C	
280-143671-2	CDOT I270 Env 12_2020-SB-32-GW-DUP	Total/NA	Water	3510C	
280-143671-4	CDOT I270 Env 12_2020-SB-33-GW	Total/NA	Water	3510C	
MB 280-520850/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-520850/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCS 280-520850/4-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 280-520850/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
LCSD 280-520850/5-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 521662

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-1	CDOT I270 Env 12_2020-SB-32-GW	Total/NA	Water	8015C	520850

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QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

GC Semi VOA (Continued)

Analysis Batch: 521662 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-2	CDOT I270 Env 12_2020-SB-32-GW-DUP	Total/NA	Water	8015C	520850
280-143671-4	CDOT I270 Env 12_2020-SB-33-GW	Total/NA	Water	8015C	520850
MB 280-520850/1-A	Method Blank	Total/NA	Water	8015C	520850
LCS 280-520850/2-A	Lab Control Sample	Total/NA	Water	8015C	520850
LCS 280-520850/4-A	Lab Control Sample	Total/NA	Water	8015C	520850
LCSD 280-520850/3-A	Lab Control Sample Dup	Total/NA	Water	8015C	520850
LCSD 280-520850/5-A	Lab Control Sample Dup	Total/NA	Water	8015C	520850

Metals

Prep Batch: 520209

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-3	CDOT I270 Env 12_2020-SB-32-9-11	Total/NA	Solid	7471B	
280-143671-5	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	7471B	
280-143671-6	CDOT I270 Env 12_2020-SB-38-13-15	Total/NA	Solid	7471B	
MB 280-520209/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 280-520209/2-A	Lab Control Sample	Total/NA	Solid	7471B	
280-143671-5 MS	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	7471B	
280-143671-5 MSD	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	7471B	

Analysis Batch: 520271

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-3	CDOT I270 Env 12_2020-SB-32-9-11	Total/NA	Solid	7471B	520209
280-143671-5	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	7471B	520209
280-143671-6	CDOT I270 Env 12_2020-SB-38-13-15	Total/NA	Solid	7471B	520209
MB 280-520209/1-A	Method Blank	Total/NA	Solid	7471B	520209
LCS 280-520209/2-A	Lab Control Sample	Total/NA	Solid	7471B	520209
280-143671-5 MS	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	7471B	520209
280-143671-5 MSD	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	7471B	520209

Filtration Batch: 520360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-1	CDOT I270 Env 12_2020-SB-32-GW	Dissolved	Water	FILTRATION	
280-143671-2	CDOT I270 Env 12_2020-SB-32-GW-DUP	Dissolved	Water	FILTRATION	
280-143671-4	CDOT I270 Env 12_2020-SB-33-GW	Dissolved	Water	FILTRATION	
MB 280-520360/1-E	Method Blank	Dissolved	Water	FILTRATION	
MB 280-520360/1-F	Method Blank	Dissolved	Water	FILTRATION	
LCS 280-520360/2-E	Lab Control Sample	Dissolved	Water	FILTRATION	
LCS 280-520360/2-F	Lab Control Sample	Dissolved	Water	FILTRATION	
280-143671-1 MS	CDOT I270 Env 12_2020-SB-32-GW	Dissolved	Water	FILTRATION	
280-143671-1 MSD	CDOT I270 Env 12_2020-SB-32-GW	Dissolved	Water	FILTRATION	
280-143671-4 MS	CDOT I270 Env 12_2020-SB-33-GW	Dissolved	Water	FILTRATION	
280-143671-4 MSD	CDOT I270 Env 12_2020-SB-33-GW	Dissolved	Water	FILTRATION	

Prep Batch: 520362

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-1	CDOT I270 Env 12_2020-SB-32-GW	Total/NA	Water	7470A	
280-143671-2	CDOT I270 Env 12_2020-SB-32-GW-DUP	Total/NA	Water	7470A	
280-143671-4	CDOT I270 Env 12_2020-SB-33-GW	Total/NA	Water	7470A	
MB 280-520362/1-A	Method Blank	Total/NA	Water	7470A	
LCS 280-520362/2-A	Lab Control Sample	Total/NA	Water	7470A	

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QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Metals

Prep Batch: 520472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-3	CDOT I270 Env 12_2020-SB-32-9-11	Total/NA	Solid	3050B-Sb	
280-143671-5	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	3050B-Sb	
280-143671-6	CDOT I270 Env 12_2020-SB-38-13-15	Total/NA	Solid	3050B-Sb	
MB 280-520472/1-A	Method Blank	Total/NA	Solid	3050B-Sb	
LCS 280-520472/2-A	Lab Control Sample	Total/NA	Solid	3050B-Sb	
280-143671-5 MS	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	3050B-Sb	
280-143671-5 MSD	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	3050B-Sb	

Prep Batch: 520506

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-1	CDOT I270 Env 12_2020-SB-32-GW	Dissolved	Water	3005A	520360
280-143671-2	CDOT I270 Env 12_2020-SB-32-GW-DUP	Dissolved	Water	3005A	520360
280-143671-4	CDOT I270 Env 12_2020-SB-33-GW	Dissolved	Water	3005A	520360
MB 280-520360/1-E	Method Blank	Dissolved	Water	3005A	520360
LCS 280-520360/2-E	Lab Control Sample	Dissolved	Water	3005A	520360
280-143671-4 MS	CDOT I270 Env 12_2020-SB-33-GW	Dissolved	Water	3005A	520360
280-143671-4 MSD	CDOT I270 Env 12_2020-SB-33-GW	Dissolved	Water	3005A	520360

Prep Batch: 520517

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-1	CDOT I270 Env 12_2020-SB-32-GW	Total/NA	Water	3020A	
280-143671-2	CDOT I270 Env 12_2020-SB-32-GW-DUP	Total/NA	Water	3020A	
280-143671-4	CDOT I270 Env 12_2020-SB-33-GW	Total/NA	Water	3020A	
MB 280-520517/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-520517/2-A	Lab Control Sample	Total/NA	Water	3020A	
280-143671-4 MS	CDOT I270 Env 12_2020-SB-33-GW	Total/NA	Water	3020A	
280-143671-4 MSD	CDOT I270 Env 12_2020-SB-33-GW	Total/NA	Water	3020A	

Prep Batch: 520527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-3	CDOT I270 Env 12_2020-SB-32-9-11	Total/NA	Solid	3050B	
280-143671-5	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	3050B	
280-143671-6	CDOT I270 Env 12_2020-SB-38-13-15	Total/NA	Solid	3050B	
MB 280-520527/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-520527/2-A	Lab Control Sample	Total/NA	Solid	3050B	
280-143671-5 MS	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	3050B	
280-143671-5 MSD	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	3050B	

Prep Batch: 520569

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-1	CDOT I270 Env 12_2020-SB-32-GW	Dissolved	Water	7470A	520360
280-143671-2	CDOT I270 Env 12_2020-SB-32-GW-DUP	Dissolved	Water	7470A	520360
280-143671-4	CDOT I270 Env 12_2020-SB-33-GW	Dissolved	Water	7470A	520360
MB 280-520360/1-F	Method Blank	Dissolved	Water	7470A	520360
LCS 280-520360/2-F	Lab Control Sample	Dissolved	Water	7470A	520360
280-143671-1 MS	CDOT I270 Env 12_2020-SB-32-GW	Dissolved	Water	7470A	520360
280-143671-1 MSD	CDOT I270 Env 12_2020-SB-32-GW	Dissolved	Water	7470A	520360

Analysis Batch: 520590

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-1	CDOT I270 Env 12_2020-SB-32-GW	Total/NA	Water	7470A	520362

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Metals (Continued)

Analysis Batch: 520590 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-2	CDOT I270 Env 12_2020-SB-32-GW-DUP	Total/NA	Water	7470A	520362
280-143671-4	CDOT I270 Env 12_2020-SB-33-GW	Total/NA	Water	7470A	520362
MB 280-520362/1-A	Method Blank	Total/NA	Water	7470A	520362
LCS 280-520362/2-A	Lab Control Sample	Total/NA	Water	7470A	520362

Analysis Batch: 520836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-3	CDOT I270 Env 12_2020-SB-32-9-11	Total/NA	Solid	6020A	520472
280-143671-5	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	6020A	520472
280-143671-6	CDOT I270 Env 12_2020-SB-38-13-15	Total/NA	Solid	6020A	520472
MB 280-520472/1-A	Method Blank	Total/NA	Solid	6020A	520472
LCS 280-520472/2-A	Lab Control Sample	Total/NA	Solid	6020A	520472
280-143671-5 MS	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	6020A	520472
280-143671-5 MSD	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	6020A	520472

Analysis Batch: 520943

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-1	CDOT I270 Env 12_2020-SB-32-GW	Total/NA	Water	6020A	520517
280-143671-2	CDOT I270 Env 12_2020-SB-32-GW-DUP	Total/NA	Water	6020A	520517
280-143671-4	CDOT I270 Env 12_2020-SB-33-GW	Total/NA	Water	6020A	520517
MB 280-520517/1-A	Method Blank	Total/NA	Water	6020A	520517
LCS 280-520517/2-A	Lab Control Sample	Total/NA	Water	6020A	520517
280-143671-4 MS	CDOT I270 Env 12_2020-SB-33-GW	Total/NA	Water	6020A	520517
280-143671-4 MSD	CDOT I270 Env 12_2020-SB-33-GW	Total/NA	Water	6020A	520517

Analysis Batch: 520948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-1	CDOT I270 Env 12_2020-SB-32-GW	Dissolved	Water	6020A	520506
280-143671-2	CDOT I270 Env 12_2020-SB-32-GW-DUP	Dissolved	Water	6020A	520506
280-143671-3	CDOT I270 Env 12_2020-SB-32-9-11	Total/NA	Solid	6020A	520527
280-143671-4	CDOT I270 Env 12_2020-SB-33-GW	Dissolved	Water	6020A	520506
280-143671-5	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	6020A	520527
280-143671-6	CDOT I270 Env 12_2020-SB-38-13-15	Total/NA	Solid	6020A	520527
MB 280-520360/1-E	Method Blank	Dissolved	Water	6020A	520506
MB 280-520527/1-A	Method Blank	Total/NA	Solid	6020A	520527
LCS 280-520360/2-E	Lab Control Sample	Dissolved	Water	6020A	520506
LCS 280-520527/2-A	Lab Control Sample	Total/NA	Solid	6020A	520527
280-143671-4 MS	CDOT I270 Env 12_2020-SB-33-GW	Dissolved	Water	6020A	520506
280-143671-4 MSD	CDOT I270 Env 12_2020-SB-33-GW	Dissolved	Water	6020A	520506
280-143671-5 MS	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	6020A	520527
280-143671-5 MSD	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	6020A	520527

Analysis Batch: 520969

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-1	CDOT I270 Env 12_2020-SB-32-GW	Total/NA	Water	6020A	520517
280-143671-2	CDOT I270 Env 12_2020-SB-32-GW-DUP	Total/NA	Water	6020A	520517
280-143671-4	CDOT I270 Env 12_2020-SB-33-GW	Total/NA	Water	6020A	520517
MB 280-520517/1-A	Method Blank	Total/NA	Water	6020A	520517
LCS 280-520517/2-A	Lab Control Sample	Total/NA	Water	6020A	520517
280-143671-4 MS	CDOT I270 Env 12_2020-SB-33-GW	Total/NA	Water	6020A	520517
280-143671-4 MSD	CDOT I270 Env 12_2020-SB-33-GW	Total/NA	Water	6020A	520517

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Metals

Analysis Batch: 520991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-1	CDOT I270 Env 12_2020-SB-32-GW	Dissolved	Water	7470A	520569
280-143671-2	CDOT I270 Env 12_2020-SB-32-GW-DUP	Dissolved	Water	7470A	520569
280-143671-4	CDOT I270 Env 12_2020-SB-33-GW	Dissolved	Water	7470A	520569
MB 280-520360/1-F	Method Blank	Dissolved	Water	7470A	520569
LCS 280-520360/2-F	Lab Control Sample	Dissolved	Water	7470A	520569
280-143671-1 MS	CDOT I270 Env 12_2020-SB-32-GW	Dissolved	Water	7470A	520569
280-143671-1 MSD	CDOT I270 Env 12_2020-SB-32-GW	Dissolved	Water	7470A	520569

Analysis Batch: 521220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-4	CDOT I270 Env 12_2020-SB-33-GW	Dissolved	Water	6020A	520506
280-143671-4 MS	CDOT I270 Env 12_2020-SB-33-GW	Dissolved	Water	6020A	520506
280-143671-4 MSD	CDOT I270 Env 12_2020-SB-33-GW	Dissolved	Water	6020A	520506

General Chemistry

Analysis Batch: 520682

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143671-3	CDOT I270 Env 12_2020-SB-32-9-11	Total/NA	Solid	Moisture	
280-143671-5	CDOT I270 Env 12_2020-SB-33-6-10	Total/NA	Solid	Moisture	
280-143671-6	CDOT I270 Env 12_2020-SB-38-13-15	Total/NA	Solid	Moisture	

Consultant Work Product - Not CDOT Approved

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Client Sample ID: CDOT I270 Env 12_2020-SB-32-GW

Lab Sample ID: 280-143671-1

Date Collected: 12/09/20 09:30

Matrix: Water

Date Received: 12/10/20 14:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	520319	12/14/20 16:29	JLS	TAL DEN
Total/NA	Prep	3520C			1026.6 mL	1 mL	520327	12/14/20 12:57	JNM	TAL DEN
Total/NA	Analysis	8270D		1			521226	12/21/20 13:31	RDP	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	521036	12/19/20 05:08	AAR	TAL DEN
Total/NA	Prep	3510C			1031.3 mL	1 mL	520850	12/17/20 15:12	NMC	TAL DEN
Total/NA	Analysis	8015C		1			521662	12/24/20 17:09	MAM	TAL DEN
Dissolved	Filtration	FILTRATION			250 mL	250 mL	520360	12/14/20 12:26	MAB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	520506	12/17/20 08:07	MAB	TAL DEN
Dissolved	Analysis	6020A		1			520948	12/17/20 19:32	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	520517	12/16/20 15:40	EC	TAL DEN
Total/NA	Analysis	6020A		1			520943	12/17/20 18:03	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	520517	12/16/20 15:40	EC	TAL DEN
Total/NA	Analysis	6020A		1			520969	12/18/20 07:34	LMT	TAL DEN
Dissolved	Filtration	FILTRATION			250 mL	250 mL	520360	12/14/20 12:26	MAB	TAL DEN
Dissolved	Prep	7470A			30 mL	50 mL	520569	12/17/20 14:00	NK	TAL DEN
Dissolved	Analysis	7470A		1			520991	12/17/20 21:58	NK	TAL DEN
Total/NA	Prep	7470A			6 mL	50 mL	520362	12/15/20 13:10	NK	TAL DEN
Total/NA	Analysis	7470A		1			520590	12/15/20 17:48	NK	TAL DEN

Client Sample ID: CDOT I270 Env 12_2020-SB-32-GW-DUP

Lab Sample ID: 280-143671-2

Date Collected: 12/09/20 09:30

Matrix: Water

Date Received: 12/10/20 14:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	520319	12/14/20 16:51	JLS	TAL DEN
Total/NA	Prep	3520C			1022 mL	1 mL	520327	12/14/20 12:57	JNM	TAL DEN
Total/NA	Analysis	8270D		1			521226	12/21/20 13:59	RDP	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	521036	12/19/20 05:32	AAR	TAL DEN
Total/NA	Prep	3510C			1025.9 mL	1 mL	520850	12/17/20 15:12	NMC	TAL DEN
Total/NA	Analysis	8015C		1			521662	12/24/20 17:32	MAM	TAL DEN
Dissolved	Filtration	FILTRATION			250 mL	250 mL	520360	12/14/20 12:26	MAB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	520506	12/17/20 08:07	MAB	TAL DEN
Dissolved	Analysis	6020A		1			520948	12/17/20 19:35	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	520517	12/16/20 15:40	EC	TAL DEN
Total/NA	Analysis	6020A		1			520943	12/17/20 18:07	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	520517	12/16/20 15:40	EC	TAL DEN
Total/NA	Analysis	6020A		1			520969	12/18/20 07:38	LMT	TAL DEN
Dissolved	Filtration	FILTRATION			250 mL	250 mL	520360	12/14/20 12:26	MAB	TAL DEN
Dissolved	Prep	7470A			30 mL	50 mL	520569	12/17/20 14:00	NK	TAL DEN
Dissolved	Analysis	7470A		1			520991	12/17/20 22:06	NK	TAL DEN
Total/NA	Prep	7470A			6 mL	50 mL	520362	12/15/20 13:10	NK	TAL DEN
Total/NA	Analysis	7470A		1			520590	12/15/20 17:50	NK	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Client Sample ID: CDOT I270 Env 12_2020-SB-32-9-11

Lab Sample ID: 280-143671-3

Date Collected: 12/09/20 09:00

Matrix: Solid

Date Received: 12/10/20 14:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			520682	12/16/20 11:19	IEU	TAL DEN

Client Sample ID: CDOT I270 Env 12_2020-SB-32-9-11

Lab Sample ID: 280-143671-3

Date Collected: 12/09/20 09:00

Matrix: Solid

Date Received: 12/10/20 14:51

Percent Solids: 92.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.526 g	5 mL	521431	12/09/20 09:00	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	521399	12/22/20 15:06	GPM	TAL DEN
Total/NA	Prep	3550C			30.8 g	1 mL	520806	12/17/20 13:57	DB	TAL DEN
Total/NA	Analysis	8270D		1			522166	12/30/20 17:13	RDP	TAL DEN
Total/NA	Prep	5035			3.911 g	5 mL	520771	12/16/20 21:50	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	520773	12/17/20 05:31	CAS	TAL DEN
Total/NA	Prep	3546			16.6 g	1 mL	520265	12/12/20 16:06	AC	TAL DEN
Total/NA	Analysis	8015C		2			520579	12/15/20 20:46	MAM	TAL DEN
Total/NA	Prep	3050B-Sb			1.064 g	100 mL	520472	12/16/20 16:10	EC	TAL DEN
Total/NA	Analysis	6020A		1			520836	12/17/20 08:55	LMT	TAL DEN
Total/NA	Prep	3050B			1.157 g	100 mL	520527	12/17/20 08:02	MAB	TAL DEN
Total/NA	Analysis	6020A		1			520948	12/17/20 18:49	LMT	TAL DEN
Total/NA	Prep	7471B			.54 g	50 mL	520209	12/12/20 13:00	NK	TAL DEN
Total/NA	Analysis	7471B		1			520271	12/12/20 14:35	NK	TAL DEN

Client Sample ID: CDOT I270 Env 12_2020-SB-33-GW

Lab Sample ID: 280-143671-4

Date Collected: 12/10/20 12:00

Matrix: Water

Date Received: 12/10/20 14:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	520319	12/14/20 17:14	JLS	TAL DEN
Total/NA	Prep	3520C			1010.2 mL	1 mL	520327	12/14/20 12:57	JNM	TAL DEN
Total/NA	Analysis	8270D		1			521226	12/21/20 15:37	RDP	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	521036	12/19/20 05:55	AAR	TAL DEN
Total/NA	Prep	3510C			1025.9 mL	1 mL	520850	12/17/20 15:12	NMC	TAL DEN
Total/NA	Analysis	8015C		1			521662	12/24/20 17:55	MAM	TAL DEN
Dissolved	Filtration	FILTRATION			250 mL	250 mL	520360	12/14/20 12:26	MAB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	520506	12/17/20 08:07	MAB	TAL DEN
Dissolved	Analysis	6020A		1			520948	12/17/20 19:39	LMT	TAL DEN
Dissolved	Filtration	FILTRATION			250 mL	250 mL	520360	12/14/20 12:26	MAB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	520506	12/17/20 08:07	MAB	TAL DEN
Dissolved	Analysis	6020A		1			521220	12/18/20 09:55	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	520517	12/16/20 15:40	EC	TAL DEN
Total/NA	Analysis	6020A		1			520943	12/17/20 18:11	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	520517	12/16/20 15:40	EC	TAL DEN
Total/NA	Analysis	6020A		1			520969	12/18/20 07:42	LMT	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Client Sample ID: CDOT I270 Env 12_2020-SB-33-GW

Lab Sample ID: 280-143671-4

Date Collected: 12/10/20 12:00

Matrix: Water

Date Received: 12/10/20 14:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			250 mL	250 mL	520360	12/14/20 12:26	MAB	TAL DEN
Dissolved	Prep	7470A			30 mL	50 mL	520569	12/17/20 14:00	NK	TAL DEN
Dissolved	Analysis	7470A		1			520991	12/17/20 22:08	NK	TAL DEN
Total/NA	Prep	7470A			6 mL	50 mL	520362	12/15/20 13:10	NK	TAL DEN
Total/NA	Analysis	7470A		1			520590	12/15/20 17:52	NK	TAL DEN

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10

Lab Sample ID: 280-143671-5

Date Collected: 12/10/20 11:15

Matrix: Solid

Date Received: 12/10/20 14:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			520682	12/16/20 11:19	IEU	TAL DEN

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10

Lab Sample ID: 280-143671-5

Date Collected: 12/10/20 11:15

Matrix: Solid

Date Received: 12/10/20 14:51

Percent Solids: 96.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.725 g	5 mL	521431	12/10/20 11:15	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	521399	12/22/20 14:00	GPM	TAL DEN
Total/NA	Prep	3550C			32.4 g	1 mL	520806	12/17/20 13:57	DB	TAL DEN
Total/NA	Analysis	8270D		1			522166	12/30/20 17:40	RDP	TAL DEN
Total/NA	Prep	5035			4.612 g	5 mL	520771	12/16/20 21:50	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	520773	12/17/20 05:55	CAS	TAL DEN
Total/NA	Prep	3546			16.2 g	1 mL	520265	12/12/20 16:06	AC	TAL DEN
Total/NA	Analysis	8015C		1			520371	12/14/20 20:51	MAM	TAL DEN
Total/NA	Prep	3050B-Sb			1.024 g	100 mL	520472	12/16/20 16:10	EC	TAL DEN
Total/NA	Analysis	6020A		1			520836	12/17/20 08:59	LMT	TAL DEN
Total/NA	Prep	3050B			1.342 g	100 mL	520527	12/17/20 08:02	MAB	TAL DEN
Total/NA	Analysis	6020A		1			520948	12/17/20 18:53	LMT	TAL DEN
Total/NA	Prep	7471B			.52 g	50 mL	520209	12/12/20 13:00	NK	TAL DEN
Total/NA	Analysis	7471B		1			520271	12/12/20 14:37	NK	TAL DEN

Client Sample ID: CDOT I270 Env 12_2020-SB-38-13-15

Lab Sample ID: 280-143671-6

Date Collected: 12/10/20 13:15

Matrix: Solid

Date Received: 12/10/20 14:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			520682	12/16/20 11:19	IEU	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Client Sample ID: CDOT I270 Env 12_2020-SB-38-13-15

Lab Sample ID: 280-143671-6

Date Collected: 12/10/20 13:15

Matrix: Solid

Date Received: 12/10/20 14:51

Percent Solids: 96.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.164 g	5 mL	521431	12/10/20 13:15	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	521399	12/22/20 15:28	GPM	TAL DEN
Total/NA	Prep	3550C			30.8 g	1 mL	520806	12/17/20 13:57	DB	TAL DEN
Total/NA	Analysis	8270D		1			522166	12/30/20 19:01	RDP	TAL DEN
Total/NA	Prep	5035			4.487 g	5 mL	520771	12/16/20 21:50	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	520773	12/17/20 07:09	CAS	TAL DEN
Total/NA	Prep	3546			15.8 g	1 mL	520265	12/12/20 16:06	AC	TAL DEN
Total/NA	Analysis	8015C		1			520371	12/14/20 23:41	MAM	TAL DEN
Total/NA	Prep	3050B-Sb			1.242 g	100 mL	520472	12/16/20 16:10	EC	TAL DEN
Total/NA	Analysis	6020A		1			520836	12/17/20 09:28	LMT	TAL DEN
Total/NA	Prep	3050B			1.231 g	100 mL	520527	12/17/20 08:02	MAB	TAL DEN
Total/NA	Analysis	6020A		1			520948	12/17/20 19:11	LMT	TAL DEN
Total/NA	Prep	7471B			.57 g	50 mL	520209	12/12/20 13:00	NK	TAL DEN
Total/NA	Analysis	7471B		1			520271	12/12/20 14:44	NK	TAL DEN

Client Sample ID: TB-04

Lab Sample ID: 280-143671-7

Date Collected: 12/09/20 08:00

Matrix: Solid

Date Received: 12/10/20 14:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	521431	12/09/20 08:00	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	521399	12/22/20 13:37	GPM	TAL DEN
Total/NA	Prep	5035			5 g	5 mL	520771	12/16/20 21:50	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	520773	12/17/20 03:53	CAS	TAL DEN

Client Sample ID: TB-05

Lab Sample ID: 280-143671-8

Date Collected: 12/09/20 08:00

Matrix: Water

Date Received: 12/10/20 14:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	520319	12/14/20 17:37	JLS	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	521036	12/19/20 04:45	AAR	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-520209/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			.6 g	50 mL	520209	12/12/20 13:00	NK	TAL DEN
Total/NA	Analysis	7471B		1			520271	12/12/20 14:30	NK	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Client Sample ID: Method Blank

Lab Sample ID: MB 280-520265/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15.0 g	1 mL	520265	12/12/20 16:06	AC	TAL DEN
Total/NA	Analysis	8015C		1			520371	12/14/20 18:10	MAM	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-520319/9

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	520319	12/14/20 11:55	JLS	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-520327/1-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1 mL	520327	12/14/20 12:57	JNM	TAL DEN
Total/NA	Analysis	8270D		1			521226	12/21/20 11:20	RDP	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-520360/1-E

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	520360	12/14/20 12:26	MAB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	520506	12/17/20 08:07	MAB	TAL DEN
Dissolved	Analysis	6020A		1			520948	12/17/20 19:25	LMT	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-520360/1-F

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	520360	12/14/20 12:26	MAB	TAL DEN
Dissolved	Prep	7470A			30 mL	50 mL	520569	12/17/20 14:00	NK	TAL DEN
Dissolved	Analysis	7470A		1			520991	12/17/20 21:53	NK	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-520362/1-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			30 mL	50 mL	520362	12/15/20 13:10	NK	TAL DEN
Total/NA	Analysis	7470A		1			520590	12/15/20 17:08	NK	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Client Sample ID: Method Blank

Date Collected: N/A

Date Received: N/A

Lab Sample ID: MB 280-520472/1-A

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B-Sb			1 g	100 mL	520472	12/16/20 16:10	EC	TAL DEN
Total/NA	Analysis	6020A		1			520836	12/17/20 08:48	LMT	TAL DEN

Client Sample ID: Method Blank

Date Collected: N/A

Date Received: N/A

Lab Sample ID: MB 280-520517/1-A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3020A			50 mL	50 mL	520517	12/16/20 15:40	EC	TAL DEN
Total/NA	Analysis	6020A		1			520943	12/17/20 17:56	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	520517	12/16/20 15:40	EC	TAL DEN
Total/NA	Analysis	6020A		1			520969	12/18/20 07:27	LMT	TAL DEN

Client Sample ID: Method Blank

Date Collected: N/A

Date Received: N/A

Lab Sample ID: MB 280-520527/1-A

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1 g	100 mL	520527	12/17/20 08:02	MAB	TAL DEN
Total/NA	Analysis	6020A		1			520948	12/17/20 18:42	LMT	TAL DEN

Client Sample ID: Method Blank

Date Collected: N/A

Date Received: N/A

Lab Sample ID: MB 280-520771/3-A

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	520771	12/16/20 21:50	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	520773	12/17/20 03:29	CAS	TAL DEN

Client Sample ID: Method Blank

Date Collected: N/A

Date Received: N/A

Lab Sample ID: MB 280-520806/1-A

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			30 g	1 mL	520806	12/17/20 13:57	DB	TAL DEN
Total/NA	Analysis	8270D		1			522166	12/30/20 13:11	RDP	TAL DEN

Client Sample ID: Method Blank

Date Collected: N/A

Date Received: N/A

Lab Sample ID: MB 280-520850/1-A

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1000 mL	1 mL	520850	12/17/20 15:12	NMC	TAL DEN
Total/NA	Analysis	8015C		1			521662	12/24/20 14:51	MAM	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Client Sample ID: Method Blank

Lab Sample ID: MB 280-521036/38

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015C		1	5 mL	5 mL	521036	12/18/20 23:47	AAR	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-521431/3-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	521431	12/22/20 11:00	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	521399	12/22/20 12:53	GPM	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-520209/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			.6 g	50 mL	520209	12/12/20 13:00	NK	TAL DEN
Total/NA	Analysis	7471B		1			520271	12/12/20 14:32	NK	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-520265/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15.0 g	1 mL	520265	12/12/20 16:06	AC	TAL DEN
Total/NA	Analysis	8015C		1			520371	12/14/20 18:56	MAM	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-520265/3-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15.0 g	1 mL	520265	12/12/20 16:06	AC	TAL DEN
Total/NA	Analysis	8015C		1			520371	12/14/20 19:19	MAM	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-520319/4

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	520319	12/14/20 10:45	JLS	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-520327/2-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1 mL	520327	12/14/20 12:57	JNM	TAL DEN
Total/NA	Analysis	8270D		1			521226	12/21/20 11:48	RDP	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-520360/2-E

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	520360	12/14/20 12:26	MAB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	520506	12/17/20 08:07	MAB	TAL DEN
Dissolved	Analysis	6020A		1			520948	12/17/20 19:28	LMT	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-520360/2-F

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	520360	12/14/20 12:26	MAB	TAL DEN
Dissolved	Prep	7470A			30 mL	50 mL	520569	12/17/20 14:00	NK	TAL DEN
Dissolved	Analysis	7470A		1			520991	12/17/20 21:55	NK	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-520362/2-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			30 mL	50 mL	520362	12/15/20 13:10	NK	TAL DEN
Total/NA	Analysis	7470A		1			520590	12/15/20 17:10	NK	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-520472/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B-Sb			1 g	100 mL	520472	12/16/20 16:10	EC	TAL DEN
Total/NA	Analysis	6020A		1			520836	12/17/20 08:51	LMT	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-520517/2-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3020A			50 mL	50 mL	520517	12/16/20 15:40	EC	TAL DEN
Total/NA	Analysis	6020A		1			520943	12/17/20 18:00	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	520517	12/16/20 15:40	EC	TAL DEN
Total/NA	Analysis	6020A		1			520969	12/18/20 07:31	LMT	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-520527/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1 g	100 mL	520527	12/17/20 08:02	MAB	TAL DEN
Total/NA	Analysis	6020A		1			520948	12/17/20 18:46	LMT	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-520771/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	520771	12/16/20 21:50	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	520773	12/17/20 02:40	CAS	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-520806/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			30 g	1 mL	520806	12/17/20 13:57	DB	TAL DEN
Total/NA	Analysis	8270D		1			522166	12/30/20 13:38	RDP	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-520850/2-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1000 mL	1 mL	520850	12/17/20 15:12	NMC	TAL DEN
Total/NA	Analysis	8015C		1			521662	12/24/20 15:14	MAM	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-520850/4-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1000 mL	1 mL	520850	12/17/20 15:12	NMC	TAL DEN
Total/NA	Analysis	8015C		1			521662	12/24/20 16:00	MAM	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-521036/36

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015C		1	5 mL	5 mL	521036	12/18/20 23:01	AAR	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-521431/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	521431	12/22/20 11:00	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	521399	12/22/20 11:46	GPM	TAL DEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 280-520319/5

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	520319	12/14/20 11:08	JLS	TAL DEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 280-520327/3-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1 mL	520327	12/14/20 12:57	JNM	TAL DEN
Total/NA	Analysis	8270D		1			521226	12/21/20 12:16	RDP	TAL DEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 280-520771/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	520771	12/16/20 21:50	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	520773	12/17/20 03:05	CAS	TAL DEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 280-520850/3-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1000 mL	1 mL	520850	12/17/20 15:12	NMC	TAL DEN
Total/NA	Analysis	8015C		1			521662	12/24/20 15:37	MAM	TAL DEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 280-520850/5-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1000 mL	1 mL	520850	12/17/20 15:12	NMC	TAL DEN
Total/NA	Analysis	8015C		1			521662	12/24/20 16:23	MAM	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 280-521036/37

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015C		1	5 mL	5 mL	521036	12/18/20 23:24	AAR	TAL DEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 280-521431/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	521431	12/22/20 11:00	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	521399	12/22/20 12:08	GPM	TAL DEN

Client Sample ID: CDOT I270 Env 12_2020-SB-32-GW

Lab Sample ID: 280-143671-1 MS

Date Collected: 12/09/20 09:30

Matrix: Water

Date Received: 12/10/20 14:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			250 mL	250 mL	520360	12/14/20 12:26	MAB	TAL DEN
Dissolved	Prep	7470A			30 mL	50 mL	520569	12/17/20 14:00	NK	TAL DEN
Dissolved	Analysis	7470A		1			520991	12/17/20 22:00	NK	TAL DEN

Client Sample ID: CDOT I270 Env 12_2020-SB-32-GW

Lab Sample ID: 280-143671-1 MSD

Date Collected: 12/09/20 09:30

Matrix: Water

Date Received: 12/10/20 14:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			250 mL	250 mL	520360	12/14/20 12:26	MAB	TAL DEN
Dissolved	Prep	7470A			30 mL	50 mL	520569	12/17/20 14:00	NK	TAL DEN
Dissolved	Analysis	7470A		1			520991	12/17/20 22:03	NK	TAL DEN

Client Sample ID: CDOT I270 Env 12_2020-SB-33-GW

Lab Sample ID: 280-143671-4 MS

Date Collected: 12/10/20 12:00

Matrix: Water

Date Received: 12/10/20 14:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			250 mL	250 mL	520360	12/14/20 12:26	MAB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	520506	12/17/20 08:07	MAB	TAL DEN
Dissolved	Analysis	6020A		1			520948	12/17/20 19:46	LMT	TAL DEN
Dissolved	Filtration	FILTRATION			250 mL	250 mL	520360	12/14/20 12:26	MAB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	520506	12/17/20 08:07	MAB	TAL DEN
Dissolved	Analysis	6020A		1			521220	12/18/20 10:02	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	520517	12/16/20 15:40	EC	TAL DEN
Total/NA	Analysis	6020A		1			520943	12/17/20 18:18	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	520517	12/16/20 15:40	EC	TAL DEN
Total/NA	Analysis	6020A		1			520969	12/18/20 07:49	LMT	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Client Sample ID: CDOT I270 Env 12_2020-SB-33-GW

Lab Sample ID: 280-143671-4 MSD

Date Collected: 12/10/20 12:00

Matrix: Water

Date Received: 12/10/20 14:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			250 mL	250 mL	520360	12/14/20 12:26	MAB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	520506	12/17/20 08:07	MAB	TAL DEN
Dissolved	Analysis	6020A		1			520948	12/17/20 19:49	LMT	TAL DEN
Dissolved	Filtration	FILTRATION			250 mL	250 mL	520360	12/14/20 12:26	MAB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	520506	12/17/20 08:07	MAB	TAL DEN
Dissolved	Analysis	6020A		1			521220	12/18/20 10:05	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	520517	12/16/20 15:40	EC	TAL DEN
Total/NA	Analysis	6020A		1			520943	12/17/20 18:22	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	520517	12/16/20 15:40	EC	TAL DEN
Total/NA	Analysis	6020A		1			520969	12/18/20 07:52	LMT	TAL DEN

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10

Lab Sample ID: 280-143671-5 MS

Date Collected: 12/10/20 11:15

Matrix: Solid

Date Received: 12/10/20 14:51

Percent Solids: 96.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.713 g	5 mL	521431	12/10/20 11:15	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	521399	12/22/20 14:22	GPM	TAL DEN
Total/NA	Prep	3550C			30.8 g	1 mL	520806	12/17/20 13:57	DB	TAL DEN
Total/NA	Analysis	8270D		1			522166	12/30/20 18:07	RDP	TAL DEN
Total/NA	Prep	5035			4.544 g	5 mL	520771	12/16/20 21:50	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	520773	12/17/20 06:20	CAS	TAL DEN
Total/NA	Prep	3546			15.2 g	1 mL	520265	12/12/20 16:06	AC	TAL DEN
Total/NA	Analysis	8015C		1			520371	12/14/20 21:23	MAM	TAL DEN
Total/NA	Prep	3546			16.5 g	1 mL	520265	12/12/20 16:06	AC	TAL DEN
Total/NA	Analysis	8015C		1			520371	12/14/20 22:09	MAM	TAL DEN
Total/NA	Prep	3050B-Sb			1.443 g	100 mL	520472	12/16/20 16:10	EC	TAL DEN
Total/NA	Analysis	6020A		1			520836	12/17/20 09:06	LMT	TAL DEN
Total/NA	Prep	3050B			1.208 g	100 mL	520527	12/17/20 08:02	MAB	TAL DEN
Total/NA	Analysis	6020A		1			520948	12/17/20 19:00	LMT	TAL DEN
Total/NA	Prep	7471B			.53 g	50 mL	520209	12/12/20 13:00	NK	TAL DEN
Total/NA	Analysis	7471B		1			520271	12/12/20 14:39	NK	TAL DEN

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10

Lab Sample ID: 280-143671-5 MSD

Date Collected: 12/10/20 11:15

Matrix: Solid

Date Received: 12/10/20 14:51

Percent Solids: 96.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.268 g	5 mL	521431	12/10/20 11:15	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	521399	12/22/20 14:44	GPM	TAL DEN
Total/NA	Prep	3550C			30.8 g	1 mL	520806	12/17/20 13:57	DB	TAL DEN
Total/NA	Analysis	8270D		1			522166	12/30/20 18:34	RDP	TAL DEN
Total/NA	Prep	5035			4.037 g	5 mL	520771	12/16/20 21:50	AAR	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	520773	12/17/20 06:44	CAS	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Client Sample ID: CDOT I270 Env 12_2020-SB-33-6-10

Lab Sample ID: 280-143671-5 MSD

Date Collected: 12/10/20 11:15

Matrix: Solid

Date Received: 12/10/20 14:51

Percent Solids: 96.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15.8 g	1 mL	520265	12/12/20 16:06	AC	TAL DEN
Total/NA	Analysis	8015C		1			520371	12/14/20 21:46	MAM	TAL DEN
Total/NA	Prep	3546			16.9 g	1 mL	520265	12/12/20 16:06	AC	TAL DEN
Total/NA	Analysis	8015C		1			520371	12/14/20 22:32	MAM	TAL DEN
Total/NA	Prep	3050B-Sb			1.184 g	100 mL	520472	12/16/20 16:10	EC	TAL DEN
Total/NA	Analysis	6020A		1			520836	12/17/20 09:10	LMT	TAL DEN
Total/NA	Prep	3050B			1.453 g	100 mL	520527	12/17/20 08:02	MAB	TAL DEN
Total/NA	Analysis	6020A		1			520948	12/17/20 19:03	LMT	TAL DEN
Total/NA	Prep	7471B			.52 g	50 mL	520209	12/12/20 13:00	NK	TAL DEN
Total/NA	Analysis	7471B		1			520271	12/12/20 14:42	NK	TAL DEN

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Consultant Work Product - Jacobs Engineering
 -Not CDOT Approved-

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Accreditation/Certification Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env- Dec 2020

Job ID: 280-143671-1

Laboratory: Eurofins TestAmerica, Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21
A2LA	ISO/IEC 17025	2907.01	10-31-21
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	02-08-21
Arizona	State	AZ0713	12-21-21
Arkansas DEQ	State	19-047-0	06-01-21
California	State	2513	01-08-21
Connecticut	State	PH-0686	09-30-20 *
Florida	NELAP	E87667-57	07-01-21
Georgia	State	4025-011	01-09-21
Illinois	NELAP	2000172019-1	04-30-21
Iowa	State	IA#370	12-01-20 *
Kansas	NELAP	E-10166	04-30-21
Louisiana	NELAP	30785	06-30-14 *
Louisiana	NELAP	30785	06-30-21
Maine	State	2019011 (231)	03-03-21
Minnesota	NELAP	1788752	12-31-20
Nevada	State	CO000262020-1	07-31-21
New Hampshire	NELAP	205319	04-29-21
New Jersey	NELAP	190002	06-30-21
New York	NELAP	59923	04-01-21
North Carolina (WW/SW)	State	358	12-31-20
North Dakota	State	R-034	01-08-21
Oklahoma	State	2018-006	09-01-21
Oregon	NELAP	4025-011	01-08-21
Pennsylvania	NELAP	013	07-31-21
South Carolina	State	72002001	01-08-21
Texas	NELAP	TX104704183-08-TX	09-30-09 *
Texas	NELAP	T104704183-20-18	09-30-21
US Fish & Wildlife	US Federal Programs	058448	08-01-21
USDA	US Federal Programs	P330-18-00099	03-26-21
Utah	NELAP	QUAN5	06-30-13 *
Utah	NELAP	CO000262019-11	07-31-21
Virginia	NELAP	10490	06-14-21
Washington	State	C583-19	08-03-21
West Virginia DEP	State	354	02-28-21
Wisconsin	State	999615430	08-31-21
Wyoming (UST)	A2LA	2907.01	10-31-21

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Denver #280

Chain of Custody Record

Eurofins TestAmerica, Denver
 4955 Yarrow Street
 Arvada, CO 80002
 Phone (303) 736-0100 Fax (303) 431-7171

eurofins Environment Testing America

Client Information		Sampler: <i>bus</i>	Lab PM: Johnston, Michelle A	Carrier Tracking No(s):	COC No: 280-104159-29871.3
Client Contact: Mr. Jon Russ		Phone: 303 408 4462	E-Mail: Michelle.Johnston@Eurofins.com	State of Origin:	Page: Page 1 of 1
Company: Jacobs Engineering Group, Inc.		PWSID:			Job #:
Address: 707 17th Street Suite 2400		Due Date Requested:			
City: Denver		TAT Requested (days): 15 business day			
State, Zip: CO, 80202		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No			
Phone: 303 408 4462		PO #: Purchase Order not required			
Email: jon.russ@jacobs.com		WO #:			
Project Name: CDOT I-270 Env-Dec 2020		Project #: 28020733			
Site:		SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=water, I=In-Tissue, A=Air)	Analysis Requested												Special Instructions/Note:		
					Field Filtered Sample (Yes or No)	8260B - VOCs (Terra Cores - 48 hour short holding time)	Moisture	8015C - GRO - TPH - GRO	8015C - DRO - TPH - DRO/ORO	Total 6020A + 7471B (solids)	8270D - SVOCs	8081B - Pesticides	8082A - PCBs	8015C - GRO - TPH - GRO (waters)	8260B - VOCs (waters)	Total 6020A + 7470A (water)		Dissolved 6020A + 7471B (lab filtration/preservation)	Total Number of Containers
CDOT I270 Env 12_2020-SB-32-6W	12/9/20	0930	G	Water	X	X	X	X	X	X	X	X	X	X	X	X	X		
CDOT I270 Env 12_2020-SB-32-6W - DUF	12/9/20	0930	G	Water	X	X	X	X	X	X	X	X	X	X	X	X	X		
CDOT I270 Env 12_2020-SB-32-9-11	12/9/20	0900	G	Water	X	X	X	X	X	X	X	X	X	X	X	X	X		
CDOT I270 Env 12_2020-SB-33-6W	12/10/20	1200	G	Water	X	X	X	X	X	X	X	X	X	X	X	X	X		limited volume
CDOT I270 Env 12_2020-SB-33-6-10	12/10/20	1115	G	Water	X	X	X	X	X	X	X	X	X	X	X	X	X		SOIC
CDOT I270 Env 12_2020-SB-33-6-10-MS	12/10/20	1115	G	Water	X	X	X	X	X	X	X	X	X	X	X	X	X		MS
CDOT I270 Env 12_2020-SB-33-6-10-MSD	12/10/20	1115	G	Water	X	X	X	X	X	X	X	X	X	X	X	X	X		MSD
CDOT I270 Env 12_2020-SB-38-13-15	12/10/20	1315	G	Water	X	X	X	X	X	X	X	X	X	X	X	X	X		
CDOT I270 Env 12_2020-SB-				Water															
CDOT I270 Env 12_2020-SB-				Water															
CDOT I270 Env 12_2020-SB-MS				Water															

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant
 Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples):
 Return To Client Disposal (B) Lab

Barcode: 280-143671 Chain of Custody



Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 280-143671-1

Login Number: 143671

List Source: Eurofins TestAmerica, Denver

List Number: 1

Creator: Paul, Ryan D

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Received Trip Blank(s) not listed on COC.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Consultant Work Product - Not CDOT Approved - Jacobs Engineering

ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-144325-1
Client Project/Site: CDOT I-270 Env-Dec 2020

For:
Jacobs Engineering Group, Inc.
707 17th Street
Suite 2400
Denver, Colorado 80202

Attn: Mr. Jon Russ



Authorized for release by:
1/27/2021 11:42:08 AM

Michelle Johnston, Project Manager II
(303)736-0110
Michelle.Johnston@Eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.

GC/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.

GC VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
H	Sample was prepped or analyzed beyond the specified holding time

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit

Eurofins TestAmerica, Denver

Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Glossary (Continued)

Abbreviation **These commonly used abbreviations may or may not be present in this report.**

NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Job ID: 280-144325-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: Jacobs Engineering Group, Inc.
Project: CDOT I-270 Env-Dec 2020
Report Number: 280-144325-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 1/6/2021 1:32 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 13.5° C.

The following samples were received at the laboratory outside the required temperature criteria: CDOT I270 ENV 12_2020-SB-18-6-8 (280-144325-1), CDOT I270 ENV 12_2020-SB-18-18-20 (280-144325-2), CDOT I270 ENV 12_2020-SB-18-GW (280-144325-3) and CDOT I270 ENV 12_2020-SB-TB-04 (280-144325-4). This is considered acceptable since samples collected and submitted to the laboratory on the same day and there is evidence that the chilling process has begun.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples CDOT I270 ENV 12_2020-SB-18-6-8 (280-144325-1) and CDOT I270 ENV 12_2020-SB-18-18-20 (280-144325-2) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 01/06/2021 and analyzed on 01/14/2021.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples CDOT I270 ENV 12_2020-SB-18-GW (280-144325-3) and CDOT I270 ENV 12_2020-SB-TB-04 (280-144325-4) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 01/08/2021.

4-Bromofluorobenzene (Surr) failed the surrogate recovery criteria high for CDOT I270 ENV 12_2020-SB-18-GW (280-144325-3). This sample did not contain any target analytes associated to this surrogate; therefore, re-extraction and/or re-analysis was not performed.

Acetone was detected in method blank MB 280-522940/9 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Bromomethane failed the recovery criteria high for LCS 280-522940/4 and LCSD 280-522940/5. This analyte was biased high in the LCS and LCSD and were not detected in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GC/MS)

Samples CDOT I270 ENV 12_2020-SB-18-6-8 (280-144325-1) and CDOT I270 ENV 12_2020-SB-18-18-20 (280-144325-2) were analyzed for semivolatile organic compounds (GC/MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 01/07/2021 and 01/19/2021 and analyzed on 01/18/2021 and 01/21/2021.

2-Fluorophenol (Surr) and Phenol-d5 (Surr) failed the surrogate recovery criteria low for MB 280-522806/1-A. The associated samples

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Job ID: 280-144325-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

recovered within the control limits for all surrogates. As the associated samples were ND for all target analytes, re-extraction was not required.

Phenol and Pyridine failed the recovery criteria low for LCS 280-522806/2-A. Pyridine has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not required. The associated samples were re-extracted past holding time and re-analyzed with confirming results. Both sets of data have been reported and qualified.

2,4-Dinitrophenol, Benzoic acid and Phenol failed the recovery criteria low for LCS 280-523852/2-A. 2,4-Dinitrophenol and Benzoic acid have been identified as poor performing analytes when analyzed using this method; therefore, re-extraction/re-analysis was not required. This is the re-extraction batch for original LCS failures. Any additional corrective action would be performed further outside holding time; therefore, the data have been reported and qualified.

Several analytes failed the recovery criteria low for the MS of sample CDOT I270 ENV 12_2020-SB-18-6-8 (280-144325-1) in batch 280-523769. Benzidine failed the recovery criteria low for the MSD of sample CDOT I270 ENV 12_2020-SB-18-6-8 (280-144325-1) in batch 280-523769. Also, Pyridine exceeded the RPD limit. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action was deemed unnecessary.

Several analytes failed the recovery criteria low for the MS of sample CDOT I270 ENV 12_2020-SB-18-6-8 (280-144325-1) in batch 280-524185. Several analytes exceeded the RPD limit for the MSD of sample CDOT I270 ENV 12_2020-SB-18-6-8 (280-144325-1) in batch 280-524185. The associated LCS had failures. This is the re-extraction batch for original LCS failures. Any additional corrective action would be performed further outside holding time; therefore, the data have been reported and qualified.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GC/MS)

Sample CDOT I270 ENV 12_2020-SB-18-GW (280-144325-3) was analyzed for semivolatile organic compounds (GC-MS) in accordance with SW-846 8270D. The sample was prepared on 01/12/2021 and 01/20/2021 and analyzed on 01/20/2021 and 01/26/2021.

The following sample was re-prepared outside of preparation holding time due to low surrogate recoveries in the initial batch: CDOT I270 ENV 12_2020-SB-18-GW (280-144325-3). Both sets of data have been reported.

2-Fluorobiphenyl, 2-Fluorophenol (Surr), Nitrobenzene-d5 (Surr), Phenol-d5 (Surr) and Terphenyl-d14 (Surr) failed the surrogate recovery criteria low for CDOT I270 ENV 12_2020-SB-18-GW (280-144325-3). Evidence of matrix interferences is not obvious. Upon re-extraction past holding time and re-analysis, surrogate recovery outliers were still present, demonstrating that this anomaly is most likely due to matrix interference. Both sets of data have been reported.

2,4,6-Tribromophenol (Surr), 2-Fluorobiphenyl, 2-Fluorophenol (Surr), Nitrobenzene-d5 (Surr), Phenol-d5 (Surr) and Terphenyl-d14 (Surr) failed the surrogate recovery criteria low for LCS 280-523230/2-A. Several analytes failed the recovery criteria low for LCS 280-523230/2-A. Several analytes failed the recovery criteria low for LCSD 280-523230/3-A. Several analytes exceeded the RPD limit. The associated samples was re-extracted past holding time and re-analyzed. Both sets of data have been reported and qualified.

2,4-Dinitrophenol and Benzoic acid failed the recovery criteria low for LCS 280-524131/2-A. 2,4-Dinitrophenol and Pyridine failed the recovery criteria low for LCSD 280-524131/3-A. These analytes have been identified as poor performing analytes when analyzed using this method; therefore, re-extraction/re-analysis was not performed. The data have been reported and qualified.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GASOLINE RANGE ORGANICS (GRO)

Samples CDOT I270 ENV 12_2020-SB-18-6-8 (280-144325-1) and CDOT I270 ENV 12_2020-SB-18-18-20 (280-144325-2) were analyzed for Gasoline Range Organics (GRO) in accordance with EPA SW-846 Method 8015C - GRO. The samples were prepared on 01/19/2021 and analyzed on 01/20/2021 and 01/21/2021.

Reanalysis of the following samples was performed outside of the analytical holding time due to instrument failure: CDOT I270 ENV 12_2020-SB-18-6-8 (280-144325-1) and CDOT I270 ENV 12_2020-SB-18-18-20 (280-144325-2). The re-analysis results confirm the original results. Both sets of data have been reported.

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Job ID: 280-144325-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Gasoline Range Organics (GRO)-C6-C10 failed the recovery criteria low for LCS 280-523965/1-A and LCSD 280-523965/2-A. The associated samples were re-analyzed out of hold with confirming results. Both sets of data have been reported.

The initial calibration verification (ICV) result for a,a,a-Trifluorotoluene in batch 280-524036 was above the upper control limit. The associated results were non-detects; therefore, the data have been reported.

The continuing calibration verification (CCV) associated with batch 280-524036 recovered outside acceptance criteria, low biased, for Gasoline Range Organics (GRO)-C6-C10. The associated samples were re-analyzed out of hold with confirming results. Both sets of data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GASOLINE RANGE ORGANICS (GRO)

Samples CDOT I270 ENV 12_2020-SB-18-GW (280-144325-3) and CDOT I270 ENV 12_2020-SB-TB-04 (280-144325-4) were analyzed for Gasoline Range Organics (GRO) in accordance with EPA SW-846 Method 8015C - GRO. The samples were analyzed on 01/07/2021.

The following sample contained excess amount of sediment and had to be decanted before analysis: CDOT I270 ENV 12_2020-SB-18-GW (280-144325-3). Possible low bias.

The following sample was collected in a properly preserved vial; however, the pH level was outside the required criteria when verified by the laboratory: CDOT I270 ENV 12_2020-SB-18-GW (280-144325-3). The sample was analyzed within the 7-day holding time specified for unpreserved samples.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DIESEL RANGE ORGANICS

Samples CDOT I270 ENV 12_2020-SB-18-6-8 (280-144325-1) and CDOT I270 ENV 12_2020-SB-18-18-20 (280-144325-2) were analyzed for diesel range organics in accordance with EPA SW-846 Method 8015C - DRO. The samples were prepared on 01/07/2021 and analyzed on 01/10/2021.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DIESEL RANGE ORGANICS

Sample CDOT I270 ENV 12_2020-SB-18-GW (280-144325-3) was analyzed for Diesel Range Organics in accordance with EPA SW-846 Method 8015C - DRO. The sample was prepared on 01/11/2021 and analyzed on 01/17/2021.

The following sample was muddy: CDOT I270 ENV 12_2020-SB-18-GW (280-144325-3).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

METALS (ICPMS)

Samples CDOT I270 ENV 12_2020-SB-18-6-8 (280-144325-1) and CDOT I270 ENV 12_2020-SB-18-18-20 (280-144325-2) were analyzed for metals (ICPMS) in accordance with SW 846 6020A. The samples were prepared on 01/18/2021 and analyzed on 01/19/2021.

Barium failed the recovery criteria high for the MS of sample CDOT I270 ENV 12_2020-SB-18-6-8 (280-144325-1) in batch 280-524092. For the MSD of sample CDOT I270 ENV 12_2020-SB-18-6-8 (280-144325-1) in batch 280-524092, Lead failed the recovery criteria low and Barium failed the recovery criteria high. Also, several analytes exceeded the RPD limit. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action was deemed unnecessary.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP/MS)

Samples CDOT I270 ENV 12_2020-SB-18-6-8 (280-144325-1) and CDOT I270 ENV 12_2020-SB-18-18-20 (280-144325-2) were analyzed for Total Metals (ICP/MS) in accordance with 6020A. The samples were prepared on 01/18/2021 and analyzed on 01/19/2021.

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Job ID: 280-144325-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED METALS (ICPMS)

Sample CDOT I270 ENV 12_2020-SB-18-GW (280-144325-3) was analyzed for dissolved metals (ICPMS) in accordance with EPA SW-846 Methods 6020A. The sample was prepared on 01/18/2021 and analyzed on 01/19/2021 and 01/20/2021.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICPMS)

Sample CDOT I270 ENV 12_2020-SB-18-GW (280-144325-3) was analyzed for total metals (ICPMS) in accordance with EPA SW-846 6020A. The sample was prepared on 01/14/2021 and analyzed on 01/18/2021.

Barium failed the recovery criteria low for the MS and MSD of sample CDOT I270 ENV 12_2020-SB-18-GW (280-144325-3) in batch 280-523934. The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action was deemed unnecessary.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED MERCURY

Sample CDOT I270 ENV 12_2020-SB-18-GW (280-144325-3) was analyzed for dissolved mercury in accordance with EPA SW-846 Methods 7470A. The sample was prepared and analyzed on 01/20/2021.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Sample CDOT I270 ENV 12_2020-SB-18-GW (280-144325-3) was analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The sample was prepared on 01/18/2021 and analyzed on 01/19/2021.

Mercury was detected in method blank MB 280-523884/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

The instrument blank for analytical batch 280-524243 contained Mercury greater than one-half the reporting limit (RL). The associated results were ND; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY (CVAA)

Samples CDOT I270 ENV 12_2020-SB-18-6-8 (280-144325-1) and CDOT I270 ENV 12_2020-SB-18-18-20 (280-144325-2) were analyzed for total mercury (CVAA) in accordance with EPA SW-846 Method 7471B. The samples were prepared and analyzed on 01/21/2021.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

Samples CDOT I270 ENV 12_2020-SB-18-6-8 (280-144325-1) and CDOT I270 ENV 12_2020-SB-18-18-20 (280-144325-2) were analyzed for percent solids in accordance with ASTM D2216-90. The samples were analyzed on 01/07/2021.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8

Lab Sample ID: 280-144325-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	0.31	J	5.2	0.31	ug/Kg	1	✳	8260B	Total/NA
Methylene Chloride	6.1		5.2	1.6	ug/Kg	1	✳	8260B	Total/NA
m-Xylene & p-Xylene	2.7		2.6	1.1	ug/Kg	1	✳	8260B	Total/NA
o-Xylene	1.4	J	2.6	0.27	ug/Kg	1	✳	8260B	Total/NA
Toluene	0.48	J	5.2	0.23	ug/Kg	1	✳	8260B	Total/NA
Arsenic	1.6	F2	0.51	0.043	mg/Kg	1	✳	6020A	Total/NA
Silver	180		95	7.4	ug/Kg	1	✳	6020A	Total/NA
Barium	52	F1	0.34	0.059	mg/Kg	1	✳	6020A	Total/NA
Cadmium	0.21	F2	0.084	0.0079	mg/Kg	1	✳	6020A	Total/NA
Chromium	4.1	F2	0.17	0.064	mg/Kg	1	✳	6020A	Total/NA
Lead	13	F1 F2	0.13	0.015	mg/Kg	1	✳	6020A	Total/NA
Mercury	6.2	J	19	6.2	ug/Kg	1	✳	7471B	Total/NA

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-18-20

Lab Sample ID: 280-144325-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.1		0.58	0.049	mg/Kg	1	✳	6020A	Total/NA
Silver	15	J	87	6.8	ug/Kg	1	✳	6020A	Total/NA
Barium	27		0.39	0.069	mg/Kg	1	✳	6020A	Total/NA
Cadmium	0.023	J	0.097	0.0091	mg/Kg	1	✳	6020A	Total/NA
Chromium	3.2		0.19	0.074	mg/Kg	1	✳	6020A	Total/NA
Lead	2.9		0.15	0.018	mg/Kg	1	✳	6020A	Total/NA
Mercury	9.3	J	22	7.3	ug/Kg	1	✳	7471B	Total/NA

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-GW

Lab Sample ID: 280-144325-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	4.3	J B	10	1.9	ug/L	1		8260B	Total/NA
Bis(2-ethylhexyl) phthalate - RE	1.1	J H	10	0.56	ug/L	1		8270D	Total/NA
Diesel Range Organics [C10-C28]	0.22	J	0.25	0.032	mg/L	1		8015C	Total/NA
Motor Oil (C20-C38)	0.50		0.49	0.055	mg/L	1		8015C	Total/NA
Arsenic	19		5.0	0.33	ug/L	1		6020A	Total/NA
Barium	560		1.0	0.29	ug/L	1		6020A	Total/NA
Cadmium	0.32	J	1.0	0.27	ug/L	1		6020A	Total/NA
Chromium	34		2.0	0.50	ug/L	1		6020A	Total/NA
Lead	26		1.0	0.18	ug/L	1		6020A	Total/NA
Selenium	1.7	J	5.0	0.37	ug/L	1		6020A	Total/NA
Silver	0.18	J	5.0	0.033	ug/L	1		6020A	Total/NA
Arsenic, Dissolved	3.0	J	5.0	0.33	ug/L	1		6020A	Dissolved
Barium, Dissolved	110		1.0	0.29	ug/L	1		6020A	Dissolved
Selenium, Dissolved	0.41	J	5.0	0.37	ug/L	1		6020A	Dissolved
Silver, Dissolved	0.037	J	5.0	0.033	ug/L	1		6020A	Dissolved
Mercury	0.084	J B	0.20	0.027	ug/L	1		7470A	Total/NA

Client Sample ID: CDOT I270 ENV 12_2020-SB-TB-04

Lab Sample ID: 280-144325-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	5.9	J B	10	1.9	ug/L	1		8260B	Total/NA
Carbon disulfide	0.54	J	2.0	0.17	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Method Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL DEN
8015C	Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)	SW846	TAL DEN
8015C	Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)	SW846	TAL DEN
6020A	Metals (ICP/MS)	SW846	TAL DEN
7470A	Mercury (CVAA)	SW846	TAL DEN
7471B	Mercury (CVAA)	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL DEN
3020A	Preparation, Total Metals	SW846	TAL DEN
3050B	Preparation, Metals	SW846	TAL DEN
3050B-Sb	Preparation, Metals (Antimony)	SW846	TAL DEN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL DEN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL DEN
3546	Microwave Extraction	SW846	TAL DEN
3550C	Ultrasonic Extraction	SW846	TAL DEN
5030B	Purge and Trap	SW846	TAL DEN
5030C	Purge and Trap	SW846	TAL DEN
5035	Closed System Purge and Trap	SW846	TAL DEN
7470A	Preparation, Mercury	SW846	TAL DEN
7471B	Preparation, Mercury	SW846	TAL DEN
FILTRATION	Sample Filtration	None	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-144325-1	CDOT I270 ENV 12_2020-SB-18-6-8	Solid	01/06/21 10:30	01/06/21 13:32	
280-144325-2	CDOT I270 ENV 12_2020-SB-18-18-20	Solid	01/06/21 11:00	01/06/21 13:32	
280-144325-3	CDOT I270 ENV 12_2020-SB-18-GW	Water	01/06/21 11:30	01/06/21 13:32	
280-144325-4	CDOT I270 ENV 12_2020-SB-TB-04	Water	01/06/21 10:00	01/06/21 13:32	

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

- 1
- 2
- 3
- 4
- 5
- 6
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- 14
- 15

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8

Lab Sample ID: 280-144325-1

Date Collected: 01/06/21 10:30

Matrix: Solid

Date Received: 01/06/21 13:32

Percent Solids: 93.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.2	2.0	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
1,1,2,2-Tetrachloroethane	ND		5.2	0.29	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
1,1,2-Trichloroethane	ND		5.2	0.91	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
1,1,2-Trichlorotrifluoroethane	ND		21	1.7	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
1,1-Dichloroethane	ND		5.2	0.22	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
1,1-Dichloroethene	ND		5.2	0.61	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
1,2,3-Trichlorobenzene	ND		5.2	0.84	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
1,2,4-Trichlorobenzene	ND		5.2	0.75	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
1,2-Dibromo-3-Chloropropane	ND		10	3.8	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
1,2-Dibromoethane	ND		5.2	0.54	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
1,2-Dichlorobenzene	ND		5.2	1.9	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
1,2-Dichloroethane	ND		5.2	0.72	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
1,2-Dichloropropane	ND		5.2	0.57	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
1,3-Dichlorobenzene	ND		5.2	0.49	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
1,4-Dichlorobenzene	ND		5.2	0.25	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
1,4-Dioxane	ND		520	58	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
2-Butanone (MEK)	ND		21	4.0	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
2-Hexanone	ND		21	5.0	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
4-Methyl-2-pentanone (MIBK)	ND		21	4.5	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
Acetone	ND		74	37	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
Benzene	ND		5.2	0.16	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
Bromoform	ND		5.3	2.6	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
Bromomethane	ND		10	1.4	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
Carbon disulfide	ND		5.2	1.7	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
Carbon tetrachloride	ND		5.2	2.1	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
Chlorobenzene	ND		5.2	2.1	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
Chlorobromomethane	ND		5.2	2.5	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
Chlorodibromomethane	ND		5.2	2.3	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
Chloroethane	ND		10	2.1	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
Chloroform	ND		10	0.30	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
Chloromethane	ND		10	0.79	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
cis-1,2-Dichloroethene	ND		2.6	0.21	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
cis-1,3-Dichloropropene	ND		5.2	0.10	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
Cyclohexane	ND		5.2	1.8	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
Dichlorobromomethane	ND		5.2	2.2	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
Dichlorodifluoromethane	ND		10	2.8	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
Ethylbenzene	0.31	J	5.2	0.31	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
Isopropylbenzene	ND		5.2	2.5	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
Methyl acetate	ND		10	2.8	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
Methyl tert-butyl ether	ND		21	2.2	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
Methylcyclohexane	ND		5.2	0.43	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
Methylene Chloride	6.1		5.2	1.6	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
m-Xylene & p-Xylene	2.7		2.6	1.1	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
o-Xylene	1.4	J	2.6	0.27	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
Styrene	ND		5.2	0.29	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
Tetrachloroethene	ND		5.2	2.0	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
Toluene	0.48	J	5.2	0.23	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
trans-1,2-Dichloroethene	ND		2.6	0.40	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
trans-1,3-Dichloropropene	ND		5.2	0.086	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8

Date Collected: 01/06/21 10:30

Date Received: 01/06/21 13:32

Lab Sample ID: 280-144325-1

Matrix: Solid

Percent Solids: 93.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		5.2	2.0	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
Trichlorofluoromethane	ND		10	3.3	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
Vinyl chloride	ND		5.2	1.4	ug/Kg	✳	01/06/21 10:30	01/14/21 23:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		58 - 140				01/06/21 10:30	01/14/21 23:21	1
4-Bromofluorobenzene (Surr)	98		76 - 127				01/06/21 10:30	01/14/21 23:21	1
Dibromofluoromethane (Surr)	99		75 - 121				01/06/21 10:30	01/14/21 23:21	1
Toluene-d8 (Surr)	98		80 - 126				01/06/21 10:30	01/14/21 23:21	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-18-20

Date Collected: 01/06/21 11:00

Date Received: 01/06/21 13:32

Lab Sample ID: 280-144325-2

Matrix: Solid

Percent Solids: 87.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.6	2.2	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
1,1,2,2-Tetrachloroethane	ND		5.6	0.32	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
1,1,2-Trichloroethane	ND		5.6	0.99	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
1,1,2-Trichlorotrifluoroethane	ND		23	1.9	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
1,1-Dichloroethane	ND		5.6	0.24	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
1,1-Dichloroethene	ND		5.6	0.67	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
1,2,3-Trichlorobenzene	ND		5.6	0.92	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
1,2,4-Trichlorobenzene	ND		5.6	0.82	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
1,2-Dibromo-3-Chloropropane	ND		11	4.1	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
1,2-Dibromoethane	ND		5.6	0.59	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
1,2-Dichlorobenzene	ND		5.6	2.1	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
1,2-Dichloroethane	ND		5.6	0.79	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
1,2-Dichloropropane	ND		5.6	0.62	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
1,3-Dichlorobenzene	ND		5.6	0.54	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
1,4-Dichlorobenzene	ND		5.6	0.28	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
1,4-Dioxane	ND		560	63	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
2-Butanone (MEK)	ND		23	4.4	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
2-Hexanone	ND		23	5.5	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
4-Methyl-2-pentanone (MIBK)	ND		23	4.9	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
Acetone	ND		81	40	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
Benzene	ND		5.6	0.17	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
Bromoform	ND		5.8	2.9	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
Bromomethane	ND		11	1.5	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
Carbon disulfide	ND		5.6	1.9	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
Carbon tetrachloride	ND		5.6	2.3	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
Chlorobenzene	ND		5.6	2.3	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
Chlorobromomethane	ND		5.6	2.8	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
Chlorodibromomethane	ND		5.6	2.6	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
Chloroethane	ND		11	2.2	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
Chloroform	ND		11	0.33	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
Chloromethane	ND		11	0.87	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
cis-1,2-Dichloroethene	ND		2.8	0.23	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
cis-1,3-Dichloropropene	ND		5.6	0.11	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
Cyclohexane	ND		5.6	2.0	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
Dichlorobromomethane	ND		5.6	2.4	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1
Dichlorodifluoromethane	ND		11	3.1	ug/Kg	✳	01/06/21 11:00	01/14/21 23:43	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-18-20

Date Collected: 01/06/21 11:00

Date Received: 01/06/21 13:32

Lab Sample ID: 280-144325-2

Matrix: Solid

Percent Solids: 87.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		5.6	0.34	ug/Kg	☼	01/06/21 11:00	01/14/21 23:43	1
Isopropylbenzene	ND		5.6	2.7	ug/Kg	☼	01/06/21 11:00	01/14/21 23:43	1
Methyl acetate	ND		11	3.1	ug/Kg	☼	01/06/21 11:00	01/14/21 23:43	1
Methyl tert-butyl ether	ND		23	2.4	ug/Kg	☼	01/06/21 11:00	01/14/21 23:43	1
Methylcyclohexane	ND		5.6	0.47	ug/Kg	☼	01/06/21 11:00	01/14/21 23:43	1
Methylene Chloride	ND		5.6	1.8	ug/Kg	☼	01/06/21 11:00	01/14/21 23:43	1
m-Xylene & p-Xylene	ND		2.8	1.2	ug/Kg	☼	01/06/21 11:00	01/14/21 23:43	1
o-Xylene	ND		2.8	0.30	ug/Kg	☼	01/06/21 11:00	01/14/21 23:43	1
Styrene	ND		5.6	0.32	ug/Kg	☼	01/06/21 11:00	01/14/21 23:43	1
Tetrachloroethene	ND		5.6	2.2	ug/Kg	☼	01/06/21 11:00	01/14/21 23:43	1
Toluene	ND		5.6	0.26	ug/Kg	☼	01/06/21 11:00	01/14/21 23:43	1
trans-1,2-Dichloroethene	ND		2.8	0.44	ug/Kg	☼	01/06/21 11:00	01/14/21 23:43	1
trans-1,3-Dichloropropene	ND		5.6	0.094	ug/Kg	☼	01/06/21 11:00	01/14/21 23:43	1
Trichloroethene	ND		5.6	2.2	ug/Kg	☼	01/06/21 11:00	01/14/21 23:43	1
Trichlorofluoromethane	ND		11	3.6	ug/Kg	☼	01/06/21 11:00	01/14/21 23:43	1
Vinyl chloride	ND		5.6	1.5	ug/Kg	☼	01/06/21 11:00	01/14/21 23:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		58 - 140	01/06/21 11:00	01/14/21 23:43	1
4-Bromofluorobenzene (Surr)	94		76 - 127	01/06/21 11:00	01/14/21 23:43	1
Dibromofluoromethane (Surr)	99		75 - 121	01/06/21 11:00	01/14/21 23:43	1
Toluene-d8 (Surr)	97		80 - 126	01/06/21 11:00	01/14/21 23:43	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-GW

Date Collected: 01/06/21 11:30

Date Received: 01/06/21 13:32

Lab Sample ID: 280-144325-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			01/08/21 13:29	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			01/08/21 13:29	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			01/08/21 13:29	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			01/08/21 13:29	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			01/08/21 13:29	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			01/08/21 13:29	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			01/08/21 13:29	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			01/08/21 13:29	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			01/08/21 13:29	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			01/08/21 13:29	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			01/08/21 13:29	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			01/08/21 13:29	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			01/08/21 13:29	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			01/08/21 13:29	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			01/08/21 13:29	1
1,4-Dioxane	ND		200	19	ug/L			01/08/21 13:29	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			01/08/21 13:29	1
2-Hexanone	ND		5.0	1.7	ug/L			01/08/21 13:29	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			01/08/21 13:29	1
Acetone	4.3	J B	10	1.9	ug/L			01/08/21 13:29	1
Benzene	ND		1.0	0.16	ug/L			01/08/21 13:29	1
Bromoform	ND		1.0	0.46	ug/L			01/08/21 13:29	1
Bromomethane	ND	*+	2.0	0.21	ug/L			01/08/21 13:29	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-GW

Lab Sample ID: 280-144325-3

Date Collected: 01/06/21 11:30

Matrix: Water

Date Received: 01/06/21 13:32

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		2.0	0.17	ug/L			01/08/21 13:29	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/08/21 13:29	1
Chlorobenzene	ND		1.0	0.17	ug/L			01/08/21 13:29	1
Chlorobromomethane	ND		1.0	0.10	ug/L			01/08/21 13:29	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			01/08/21 13:29	1
Chloroethane	ND		2.0	0.41	ug/L			01/08/21 13:29	1
Chloroform	ND		1.0	0.16	ug/L			01/08/21 13:29	1
Chloromethane	ND		2.0	0.30	ug/L			01/08/21 13:29	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			01/08/21 13:29	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			01/08/21 13:29	1
Cyclohexane	ND		2.0	0.28	ug/L			01/08/21 13:29	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			01/08/21 13:29	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			01/08/21 13:29	1
Ethylbenzene	ND		1.0	0.16	ug/L			01/08/21 13:29	1
Isopropylbenzene	ND		1.0	0.19	ug/L			01/08/21 13:29	1
Methyl acetate	ND		5.0	1.6	ug/L			01/08/21 13:29	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			01/08/21 13:29	1
Methylcyclohexane	ND		1.0	0.10	ug/L			01/08/21 13:29	1
Methylene Chloride	ND		2.0	0.94	ug/L			01/08/21 13:29	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			01/08/21 13:29	1
o-Xylene	ND		1.0	0.19	ug/L			01/08/21 13:29	1
Styrene	ND		1.0	0.36	ug/L			01/08/21 13:29	1
Tetrachloroethene	ND		1.0	0.20	ug/L			01/08/21 13:29	1
Toluene	ND		1.0	0.17	ug/L			01/08/21 13:29	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			01/08/21 13:29	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			01/08/21 13:29	1
Trichloroethene	ND		1.0	0.16	ug/L			01/08/21 13:29	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			01/08/21 13:29	1
Vinyl chloride	ND		1.0	0.10	ug/L			01/08/21 13:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90		70 - 127					01/08/21 13:29	1
4-Bromofluorobenzene (Surr)	138	S1+	78 - 120					01/08/21 13:29	1
Dibromofluoromethane (Surr)	100		77 - 120					01/08/21 13:29	1
Toluene-d8 (Surr)	109		80 - 125					01/08/21 13:29	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-TB-04

Lab Sample ID: 280-144325-4

Date Collected: 01/06/21 10:00

Matrix: Water

Date Received: 01/06/21 13:32

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			01/08/21 19:02	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			01/08/21 19:02	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			01/08/21 19:02	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			01/08/21 19:02	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			01/08/21 19:02	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			01/08/21 19:02	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			01/08/21 19:02	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			01/08/21 19:02	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			01/08/21 19:02	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			01/08/21 19:02	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 ENV 12_2020-SB-TB-04

Lab Sample ID: 280-144325-4

Date Collected: 01/06/21 10:00

Matrix: Water

Date Received: 01/06/21 13:32

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			01/08/21 19:02	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			01/08/21 19:02	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			01/08/21 19:02	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			01/08/21 19:02	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			01/08/21 19:02	1
1,4-Dioxane	ND		200	19	ug/L			01/08/21 19:02	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			01/08/21 19:02	1
2-Hexanone	ND		5.0	1.7	ug/L			01/08/21 19:02	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			01/08/21 19:02	1
Acetone	5.9	J B	10	1.9	ug/L			01/08/21 19:02	1
Benzene	ND		1.0	0.16	ug/L			01/08/21 19:02	1
Bromoform	ND		1.0	0.46	ug/L			01/08/21 19:02	1
Bromomethane	ND	*+	2.0	0.21	ug/L			01/08/21 19:02	1
Carbon disulfide	0.54	J	2.0	0.17	ug/L			01/08/21 19:02	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/08/21 19:02	1
Chlorobenzene	ND		1.0	0.17	ug/L			01/08/21 19:02	1
Chlorobromomethane	ND		1.0	0.10	ug/L			01/08/21 19:02	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			01/08/21 19:02	1
Chloroethane	ND		2.0	0.41	ug/L			01/08/21 19:02	1
Chloroform	ND		1.0	0.16	ug/L			01/08/21 19:02	1
Chloromethane	ND		2.0	0.30	ug/L			01/08/21 19:02	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			01/08/21 19:02	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			01/08/21 19:02	1
Cyclohexane	ND		2.0	0.28	ug/L			01/08/21 19:02	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			01/08/21 19:02	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			01/08/21 19:02	1
Ethylbenzene	ND		1.0	0.16	ug/L			01/08/21 19:02	1
Isopropylbenzene	ND		1.0	0.19	ug/L			01/08/21 19:02	1
Methyl acetate	ND		5.0	1.6	ug/L			01/08/21 19:02	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			01/08/21 19:02	1
Methylcyclohexane	ND		1.0	0.10	ug/L			01/08/21 19:02	1
Methylene Chloride	ND		2.0	0.94	ug/L			01/08/21 19:02	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			01/08/21 19:02	1
o-Xylene	ND		1.0	0.19	ug/L			01/08/21 19:02	1
Styrene	ND		1.0	0.36	ug/L			01/08/21 19:02	1
Tetrachloroethene	ND		1.0	0.20	ug/L			01/08/21 19:02	1
Toluene	ND		1.0	0.17	ug/L			01/08/21 19:02	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			01/08/21 19:02	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			01/08/21 19:02	1
Trichloroethene	ND		1.0	0.16	ug/L			01/08/21 19:02	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			01/08/21 19:02	1
Vinyl chloride	ND		1.0	0.10	ug/L			01/08/21 19:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		70 - 127					01/08/21 19:02	1
4-Bromofluorobenzene (Surr)	96		78 - 120					01/08/21 19:02	1
Dibromofluoromethane (Surr)	100		77 - 120					01/08/21 19:02	1
Toluene-d8 (Surr)	96		80 - 125					01/08/21 19:02	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8

Lab Sample ID: 280-144325-1

Date Collected: 01/06/21 10:30

Matrix: Solid

Date Received: 01/06/21 13:32

Percent Solids: 93.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		340	25	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
1,2,4,5-Tetrachlorobenzene	ND		340	51	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
1,2,4-Trichlorobenzene	ND	F1	340	29	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
1,2-Dichlorobenzene	ND	F1	340	23	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		340	23	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
1,3-Dichlorobenzene	ND	F1	340	12	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
1,3-Dinitrobenzene	ND		340	73	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
1,4-Dichlorobenzene	ND	F1	340	14	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
1,4-Dioxane	ND		680	68	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
1-Methylnaphthalene	ND		340	12	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
2,2'-oxybis[1-chloropropane]	ND		340	24	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
2,3,4,6-Tetrachlorophenol	ND		1600	140	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
2,4,5-Trichlorophenol	ND		340	10	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
2,4,6-Trichlorophenol	ND		340	10	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
2,4-Dichlorophenol	ND	F1	340	10	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
2,4-Dimethylphenol	ND	F1	340	68	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
2,4-Dinitrophenol	ND		1600	340	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
2,4-Dinitrotoluene	ND		340	68	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
2,6-Dichlorophenol	ND		340	23	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
2,6-Dinitrotoluene	ND		340	29	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
2-Chloronaphthalene	ND		340	10	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
2-Chlorophenol	ND	F1	340	22	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
2-Methylnaphthalene	ND	F1	340	20	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
2-Methylphenol	ND	F1	340	13	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
2-Nitroaniline	ND		1600	52	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
2-Nitrophenol	ND	F1	340	10	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
3 & 4 Methylphenol	ND	F1	340	34	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
3,3'-Dichlorobenzidine	ND		680	93	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
3-Methylphenol	ND	F1	340	34	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
3-Nitroaniline	ND		1600	75	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
4,6-Dinitro-2-methylphenol	ND		1600	340	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
4-Bromophenyl phenyl ether	ND		340	20	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
4-Chloro-3-methylphenol	ND		340	26	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
4-Chloroaniline	ND		340	84	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
4-Chlorophenyl phenyl ether	ND		340	22	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
4-Methylphenol	ND	F1	340	34	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
4-Nitroaniline	ND		1600	75	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
4-Nitrophenol	ND		1600	100	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Acenaphthene	ND		340	11	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Acenaphthylene	ND	F1	340	85	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Acetophenone	ND		340	21	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Aniline	ND		340	130	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Anthracene	ND		340	18	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Azobenzene	ND		340	23	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Benzaldehyde	ND		340	69	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Benzidine	ND	F1	3400	1000	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Benzo[a]anthracene	ND		340	21	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Benzo[a]pyrene	ND		340	21	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Benzo[b]fluoranthene	ND		340	27	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8

Date Collected: 01/06/21 10:30

Date Received: 01/06/21 13:32

Lab Sample ID: 280-144325-1

Matrix: Solid

Percent Solids: 93.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		340	16	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Benzo[k]fluoranthene	ND		340	41	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Benzoic acid	ND	F1	1600	340	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Benzyl alcohol	ND	F1	340	10	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Bis(2-chloroethoxy)methane	ND	F1	340	24	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Bis(2-chloroethyl)ether	ND	F1	340	17	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Bis(2-ethylhexyl) phthalate	ND		340	47	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Butyl benzyl phthalate	ND		340	44	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Caprolactam	ND		340	110	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Carbazole	ND		340	37	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Chrysene	ND		340	28	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Dibenz(a,h)anthracene	ND		340	20	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Dibenzofuran	ND		340	21	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Diethyl phthalate	ND		680	27	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Dimethyl phthalate	ND		340	24	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Di-n-butyl phthalate	ND		340	30	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Di-n-octyl phthalate	ND		340	42	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Diphenylamine	ND		340	45	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Famphur	ND		680	35	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Fluoranthene	ND		340	37	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Fluorene	ND		340	19	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Hexachlorobenzene	ND		340	30	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Hexachlorobutadiene	ND	F1	340	10	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Hexachlorocyclopentadiene	ND		1600	110	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Hexachloroethane	ND	F1	340	22	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Hexadecane	ND		340	14	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Indeno[1,2,3-cd]pyrene	ND		340	23	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Isophorone	ND		340	18	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Naphthalene	ND	F1	340	32	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Nitrobenzene	ND		340	23	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
N-Nitrosodimethylamine	ND		340	38	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
N-Nitrosodi-n-propylamine	ND		340	70	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
N-Nitrosodiphenylamine	ND		340	22	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Pentachlorophenol	ND		1600	340	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Phenanthrene	ND		340	18	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Phenol	ND	*- F1	340	19	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Pyrene	ND		340	12	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1
Pyridine	ND	*- F1 F2	680	41	ug/Kg	☼	01/07/21 10:47	01/18/21 00:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	72		35 - 120	01/07/21 10:47	01/18/21 00:22	1
2-Fluorobiphenyl	68		46 - 120	01/07/21 10:47	01/18/21 00:22	1
2-Fluorophenol (Surr)	59		43 - 120	01/07/21 10:47	01/18/21 00:22	1
Nitrobenzene-d5 (Surr)	63		46 - 120	01/07/21 10:47	01/18/21 00:22	1
Phenol-d5 (Surr)	63		46 - 120	01/07/21 10:47	01/18/21 00:22	1
Terphenyl-d14 (Surr)	96		46 - 120	01/07/21 10:47	01/18/21 00:22	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-18-20

Lab Sample ID: 280-144325-2

Date Collected: 01/06/21 11:00

Matrix: Solid

Date Received: 01/06/21 13:32

Percent Solids: 87.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		360	27	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
1,2,4,5-Tetrachlorobenzene	ND		360	54	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
1,2,4-Trichlorobenzene	ND		360	31	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
1,2-Dichlorobenzene	ND		360	24	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		360	24	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
1,3-Dichlorobenzene	ND		360	13	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
1,3-Dinitrobenzene	ND		360	79	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
1,4-Dichlorobenzene	ND		360	15	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
1,4-Dioxane	ND		730	73	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
1-Methylnaphthalene	ND		360	12	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
2,2'-oxybis[1-chloropropane]	ND		360	25	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
2,3,4,6-Tetrachlorophenol	ND		1800	150	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
2,4,5-Trichlorophenol	ND		360	11	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
2,4,6-Trichlorophenol	ND		360	11	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
2,4-Dichlorophenol	ND		360	11	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
2,4-Dimethylphenol	ND		360	73	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
2,4-Dinitrophenol	ND		1800	370	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
2,4-Dinitrotoluene	ND		360	73	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
2,6-Dichlorophenol	ND		360	25	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
2,6-Dinitrotoluene	ND		360	31	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
2-Chloronaphthalene	ND		360	11	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
2-Chlorophenol	ND		360	23	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
2-Methylnaphthalene	ND		360	21	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
2-Methylphenol	ND		360	14	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
2-Nitroaniline	ND		1800	55	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
2-Nitrophenol	ND		360	11	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
3 & 4 Methylphenol	ND		360	36	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
3,3'-Dichlorobenzidine	ND		730	100	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
3-Methylphenol	ND		360	36	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
3-Nitroaniline	ND		1800	81	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
4,6-Dinitro-2-methylphenol	ND		1800	360	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
4-Bromophenyl phenyl ether	ND		360	21	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
4-Chloro-3-methylphenol	ND		360	27	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
4-Chloroaniline	ND		360	91	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
4-Chlorophenyl phenyl ether	ND		360	23	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
4-Methylphenol	ND		360	36	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
4-Nitroaniline	ND		1800	80	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
4-Nitrophenol	ND		1800	110	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Acenaphthene	ND		360	11	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Acenaphthylene	ND		360	91	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Acetophenone	ND		360	22	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Aniline	ND		360	140	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Anthracene	ND		360	19	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Azobenzene	ND		360	24	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Benzaldehyde	ND		360	74	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Benzidine	ND		3600	1100	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Benzo[a]anthracene	ND		360	22	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Benzo[a]pyrene	ND		360	22	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Benzo[b]fluoranthene	ND		360	29	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-18-20

Lab Sample ID: 280-144325-2

Date Collected: 01/06/21 11:00

Matrix: Solid

Date Received: 01/06/21 13:32

Percent Solids: 87.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		360	18	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Benzo[k]fluoranthene	ND		360	44	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Benzoic acid	ND		1800	360	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Benzyl alcohol	ND		360	11	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Bis(2-chloroethoxy)methane	ND		360	25	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Bis(2-chloroethyl)ether	ND		360	18	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Bis(2-ethylhexyl) phthalate	ND		360	51	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Butyl benzyl phthalate	ND		360	48	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Caprolactam	ND		360	120	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Carbazole	ND		360	40	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Chrysene	ND		360	30	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Dibenz(a,h)anthracene	ND		360	21	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Dibenzofuran	ND		360	22	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Diethyl phthalate	ND		730	29	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Dimethyl phthalate	ND		360	25	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Di-n-butyl phthalate	ND		360	32	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Di-n-octyl phthalate	ND		360	45	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Diphenylamine	ND		360	49	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Famphur	ND		730	38	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Fluoranthene	ND		360	40	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Fluorene	ND		360	20	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Hexachlorobenzene	ND		360	32	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Hexachlorobutadiene	ND		360	11	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Hexachlorocyclopentadiene	ND		1800	120	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Hexachloroethane	ND		360	24	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Hexadecane	ND		360	15	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Indeno[1,2,3-cd]pyrene	ND		360	24	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Isophorone	ND		360	19	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Naphthalene	ND		360	34	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Nitrobenzene	ND		360	24	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
N-Nitrosodimethylamine	ND		360	41	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
N-Nitrosodi-n-propylamine	ND		360	75	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
N-Nitrosodiphenylamine	ND		360	23	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Pentachlorophenol	ND		1800	360	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Phenanthrene	ND		360	19	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Phenol	ND	*	360	20	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Pyrene	ND		360	13	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1
Pyridine	ND	*	730	44	ug/Kg	☼	01/07/21 10:47	01/18/21 01:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	75		35 - 120	01/07/21 10:47	01/18/21 01:42	1
2-Fluorobiphenyl	66		46 - 120	01/07/21 10:47	01/18/21 01:42	1
2-Fluorophenol (Surr)	60		43 - 120	01/07/21 10:47	01/18/21 01:42	1
Nitrobenzene-d5 (Surr)	63		46 - 120	01/07/21 10:47	01/18/21 01:42	1
Phenol-d5 (Surr)	64		46 - 120	01/07/21 10:47	01/18/21 01:42	1
Terphenyl-d14 (Surr)	94		46 - 120	01/07/21 10:47	01/18/21 01:42	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-GW

Lab Sample ID: 280-144325-3

Date Collected: 01/06/21 11:30

Matrix: Water

Date Received: 01/06/21 13:32

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND	*- *1	9.8	1.7	ug/L		01/12/21 11:33	01/20/21 00:30	1
1,2,4,5-Tetrachlorobenzene	ND	*- *1	9.8	1.7	ug/L		01/12/21 11:33	01/20/21 00:30	1
1,2,4-Trichlorobenzene	ND	*- *1	3.9	0.58	ug/L		01/12/21 11:33	01/20/21 00:30	1
1,2-Dichlorobenzene	ND	*- *1	3.9	0.23	ug/L		01/12/21 11:33	01/20/21 00:30	1
1,2-Diphenylhydrazine(as Azobenzene)	ND	*- *1	9.8	0.23	ug/L		01/12/21 11:33	01/20/21 00:30	1
1,3-Dichlorobenzene	ND	*- *1	9.8	0.29	ug/L		01/12/21 11:33	01/20/21 00:30	1
1,3-Dinitrobenzene	ND	*- *1	9.8	2.0	ug/L		01/12/21 11:33	01/20/21 00:30	1
1,4-Dichlorobenzene	ND	*- *1	3.9	1.3	ug/L		01/12/21 11:33	01/20/21 00:30	1
1,4-Dioxane	ND	*- *1	20	0.44	ug/L		01/12/21 11:33	01/20/21 00:30	1
1-Methylnaphthalene	ND	*- *1	3.9	0.23	ug/L		01/12/21 11:33	01/20/21 00:30	1
2,2'-oxybis[1-chloropropane]	ND	*- *1	9.8	0.28	ug/L		01/12/21 11:33	01/20/21 00:30	1
2,3,4,6-Tetrachlorophenol	ND	*- *1	49	2.0	ug/L		01/12/21 11:33	01/20/21 00:30	1
2,4,5-Trichlorophenol	ND	*- *1	9.8	2.0	ug/L		01/12/21 11:33	01/20/21 00:30	1
2,4,6-Trichlorophenol	ND	*- *1	9.8	0.28	ug/L		01/12/21 11:33	01/20/21 00:30	1
2,4-Dichlorophenol	ND	*- *1	9.8	0.63	ug/L		01/12/21 11:33	01/20/21 00:30	1
2,4-Dimethylphenol	ND	*- *1	9.8	0.57	ug/L		01/12/21 11:33	01/20/21 00:30	1
2,4-Dinitrophenol	ND	*- *1	29	9.8	ug/L		01/12/21 11:33	01/20/21 00:30	1
2,4-Dinitrotoluene	ND	*- *1	9.8	1.6	ug/L		01/12/21 11:33	01/20/21 00:30	1
2,6-Dichlorophenol	ND	*- *1	9.8	1.3	ug/L		01/12/21 11:33	01/20/21 00:30	1
2,6-Dinitrotoluene	ND	*- *1	9.8	1.9	ug/L		01/12/21 11:33	01/20/21 00:30	1
2-Chloronaphthalene	ND	*- *1	3.9	0.26	ug/L		01/12/21 11:33	01/20/21 00:30	1
2-Chlorophenol	ND	*- *1	9.8	2.0	ug/L		01/12/21 11:33	01/20/21 00:30	1
2-Methylnaphthalene	ND	*- *1	3.9	1.5	ug/L		01/12/21 11:33	01/20/21 00:30	1
2-Methylphenol	ND	*- *1	9.8	0.96	ug/L		01/12/21 11:33	01/20/21 00:30	1
2-Nitroaniline	ND	*- *1	9.8	1.7	ug/L		01/12/21 11:33	01/20/21 00:30	1
2-Nitrophenol	ND	*- *1	9.8	0.38	ug/L		01/12/21 11:33	01/20/21 00:30	1
3 & 4 Methylphenol	ND	*- *1	9.8	0.25	ug/L		01/12/21 11:33	01/20/21 00:30	1
3,3'-Dichlorobenzidine	ND	*- *1	49	2.0	ug/L		01/12/21 11:33	01/20/21 00:30	1
3-Methylphenol	ND	*- *1	9.8	0.25	ug/L		01/12/21 11:33	01/20/21 00:30	1
3-Nitroaniline	ND	*- *1	9.8	2.0	ug/L		01/12/21 11:33	01/20/21 00:30	1
4,6-Dinitro-2-methylphenol	ND	*- *1	49	3.9	ug/L		01/12/21 11:33	01/20/21 00:30	1
4-Bromophenyl phenyl ether	ND	*- *1	9.8	0.42	ug/L		01/12/21 11:33	01/20/21 00:30	1
4-Chloro-3-methylphenol	ND	*- *1	9.8	2.4	ug/L		01/12/21 11:33	01/20/21 00:30	1
4-Chloroaniline	ND	*- *1	9.8	2.1	ug/L		01/12/21 11:33	01/20/21 00:30	1
4-Chlorophenyl phenyl ether	ND	*- *1	9.8	1.6	ug/L		01/12/21 11:33	01/20/21 00:30	1
4-Methylphenol	ND	*- *1	9.8	0.25	ug/L		01/12/21 11:33	01/20/21 00:30	1
4-Nitroaniline	ND	*- *1	9.8	2.0	ug/L		01/12/21 11:33	01/20/21 00:30	1
4-Nitrophenol	ND	*- *1	9.8	1.2	ug/L		01/12/21 11:33	01/20/21 00:30	1
Acenaphthene	ND	*- *1	3.9	0.28	ug/L		01/12/21 11:33	01/20/21 00:30	1
Acenaphthylene	ND	*- *1	3.9	0.48	ug/L		01/12/21 11:33	01/20/21 00:30	1
Acetophenone	ND	*- *1	9.8	0.24	ug/L		01/12/21 11:33	01/20/21 00:30	1
Aniline	ND	*- *1	9.8	2.0	ug/L		01/12/21 11:33	01/20/21 00:30	1
Anthracene	ND	*- *1	3.9	0.41	ug/L		01/12/21 11:33	01/20/21 00:30	1
Azobenzene	ND	*- *1	3.9	0.23	ug/L		01/12/21 11:33	01/20/21 00:30	1
Benzaldehyde	ND	*- *1	4.9	2.0	ug/L		01/12/21 11:33	01/20/21 00:30	1
Benzidine	ND	*- *1	98	49	ug/L		01/12/21 11:33	01/20/21 00:30	1
Benzo[a]anthracene	ND	*- *1	3.9	0.34	ug/L		01/12/21 11:33	01/20/21 00:30	1
Benzo[a]pyrene	ND	*- *1	3.9	0.30	ug/L		01/12/21 11:33	01/20/21 00:30	1
Benzo[b]fluoranthene	ND	*- *1	3.9	0.52	ug/L		01/12/21 11:33	01/20/21 00:30	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-GW

Lab Sample ID: 280-144325-3

Date Collected: 01/06/21 11:30

Matrix: Water

Date Received: 01/06/21 13:32

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND	*- *1	3.9	0.49	ug/L		01/12/21 11:33	01/20/21 00:30	1
Benzo[k]fluoranthene	ND	*- *1	3.9	0.45	ug/L		01/12/21 11:33	01/20/21 00:30	1
Benzoic acid	ND	*- *1	25	9.8	ug/L		01/12/21 11:33	01/20/21 00:30	1
Benzyl alcohol	ND	*- *1	9.8	0.23	ug/L		01/12/21 11:33	01/20/21 00:30	1
Bis(2-chloroethoxy)methane	ND	*- *1	9.8	0.95	ug/L		01/12/21 11:33	01/20/21 00:30	1
Bis(2-chloroethyl)ether	ND	*- *1	9.8	0.82	ug/L		01/12/21 11:33	01/20/21 00:30	1
Bis(2-ethylhexyl) phthalate	ND	*- *1	9.8	0.55	ug/L		01/12/21 11:33	01/20/21 00:30	1
Butyl benzyl phthalate	ND	*- *1	3.9	0.98	ug/L		01/12/21 11:33	01/20/21 00:30	1
Caprolactam	ND	*- *1	4.9	2.5	ug/L		01/12/21 11:33	01/20/21 00:30	1
Carbazole	ND	*- *1	3.9	0.42	ug/L		01/12/21 11:33	01/20/21 00:30	1
Chrysene	ND	*- *1	3.9	0.53	ug/L		01/12/21 11:33	01/20/21 00:30	1
Dibenz(a,h)anthracene	ND	*- *1	3.9	0.50	ug/L		01/12/21 11:33	01/20/21 00:30	1
Dibenzofuran	ND	*- *1	3.9	0.28	ug/L		01/12/21 11:33	01/20/21 00:30	1
Diethyl phthalate	ND	*- *1	3.9	0.37	ug/L		01/12/21 11:33	01/20/21 00:30	1
Dimethyl phthalate	ND	*- *1	3.9	0.21	ug/L		01/12/21 11:33	01/20/21 00:30	1
Di-n-butyl phthalate	ND	*- *1	3.9	1.1	ug/L		01/12/21 11:33	01/20/21 00:30	1
Di-n-octyl phthalate	ND	*- *1	3.9	0.34	ug/L		01/12/21 11:33	01/20/21 00:30	1
Diphenylamine	ND	*- *1	9.8	1.0	ug/L		01/12/21 11:33	01/20/21 00:30	1
Famphur	ND		98	1.5	ug/L		01/12/21 11:33	01/20/21 00:30	1
Fluoranthene	ND	*- *1	3.9	0.20	ug/L		01/12/21 11:33	01/20/21 00:30	1
Fluorene	ND	*- *1	3.9	0.30	ug/L		01/12/21 11:33	01/20/21 00:30	1
Hexachlorobenzene	ND	*- *1	9.8	0.65	ug/L		01/12/21 11:33	01/20/21 00:30	1
Hexachlorobutadiene	ND	*- *1	9.8	3.2	ug/L		01/12/21 11:33	01/20/21 00:30	1
Hexachlorocyclopentadiene	ND	*- *1	49	3.0	ug/L		01/12/21 11:33	01/20/21 00:30	1
Hexachloroethane	ND	*- *1	9.8	0.97	ug/L		01/12/21 11:33	01/20/21 00:30	1
Hexadecane	ND	*- *1	9.8	0.53	ug/L		01/12/21 11:33	01/20/21 00:30	1
Indeno[1,2,3-cd]pyrene	ND	*- *1	3.9	0.64	ug/L		01/12/21 11:33	01/20/21 00:30	1
Isophorone	ND	*- *1	9.8	0.21	ug/L		01/12/21 11:33	01/20/21 00:30	1
Naphthalene	ND	*- *1	3.9	0.28	ug/L		01/12/21 11:33	01/20/21 00:30	1
Nitrobenzene	ND	*- *1	9.8	0.80	ug/L		01/12/21 11:33	01/20/21 00:30	1
N-Nitrosodimethylamine	ND	*- *1	9.8	0.28	ug/L		01/12/21 11:33	01/20/21 00:30	1
N-Nitrosodi-n-propylamine	ND	*- *1	9.8	0.34	ug/L		01/12/21 11:33	01/20/21 00:30	1
N-Nitrosodiphenylamine	ND	*- *1	9.8	0.43	ug/L		01/12/21 11:33	01/20/21 00:30	1
Pentachlorophenol	ND	*- *1	49	20	ug/L		01/12/21 11:33	01/20/21 00:30	1
Phenanthrene	ND	*- *1	3.9	0.26	ug/L		01/12/21 11:33	01/20/21 00:30	1
Phenol	ND	*- *1	9.8	2.0	ug/L		01/12/21 11:33	01/20/21 00:30	1
Pyrene	ND	*- *1	9.8	0.36	ug/L		01/12/21 11:33	01/20/21 00:30	1
Pyridine	ND	*- *1	20	1.7	ug/L		01/12/21 11:33	01/20/21 00:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	65		42 - 131	01/12/21 11:33	01/20/21 00:30	1
2-Fluorobiphenyl	45	S1-	48 - 120	01/12/21 11:33	01/20/21 00:30	1
2-Fluorophenol (Surr)	33	S1-	41 - 120	01/12/21 11:33	01/20/21 00:30	1
Nitrobenzene-d5 (Surr)	38	S1-	42 - 120	01/12/21 11:33	01/20/21 00:30	1
Phenol-d5 (Surr)	41	S1-	45 - 124	01/12/21 11:33	01/20/21 00:30	1
Terphenyl-d14 (Surr)	13	S1-	20 - 130	01/12/21 11:33	01/20/21 00:30	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8

Lab Sample ID: 280-144325-1

Date Collected: 01/06/21 10:30

Matrix: Solid

Date Received: 01/06/21 13:32

Percent Solids: 93.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND	F1 F2	340	25	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
1,2,4,5-Tetrachlorobenzene	ND	F1 F2	340	51	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
1,2,4-Trichlorobenzene	ND	F1 F2	340	29	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
1,2-Dichlorobenzene	ND	F1 F2	340	23	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
1,2-Diphenylhydrazine(as Azobenzene)	ND	F1 F2	340	23	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
1,3-Dichlorobenzene	ND	F1 F2	340	13	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
1,3-Dinitrobenzene	ND	F1 F2	340	74	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
1,4-Dichlorobenzene	ND	F1 F2	340	14	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
1,4-Dioxane	ND	F1 F2	690	69	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
1-Methylnaphthalene	ND	F1 F2	340	12	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
2,2'-oxybis[1-chloropropane]	ND	F2	340	24	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
2,3,4,6-Tetrachlorophenol	ND	F1 F2	1700	140	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
2,4,5-Trichlorophenol	ND	F1 F2	340	10	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
2,4,6-Trichlorophenol	ND	F1 F2	340	10	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
2,4-Dichlorophenol	ND	F1 F2	340	10	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
2,4-Dimethylphenol	ND	F1 F2	340	69	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
2,4-Dinitrophenol	ND	*- F1 F2	1700	350	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
2,4-Dinitrotoluene	ND	F1 F2	340	69	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
2,6-Dichlorophenol	ND	F2	340	23	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
2,6-Dinitrotoluene	ND	F1 F2	340	29	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
2-Chloronaphthalene	ND	F1 F2	340	10	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
2-Chlorophenol	ND	F1 F2	340	22	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
2-Methylnaphthalene	ND	F1 F2	340	20	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
2-Methylphenol	ND	F1 F2	340	14	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
2-Nitroaniline	ND	F1 F2	1700	52	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
2-Nitrophenol	ND	F1 F2	340	10	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
3 & 4 Methylphenol	ND	F1 F2	340	34	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
3,3'-Dichlorobenzidine	ND	F2	690	94	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
3-Methylphenol	ND	F1 F2	340	34	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
3-Nitroaniline	ND	F2	1700	76	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
4,6-Dinitro-2-methylphenol	ND	F1 F2	1700	340	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
4-Bromophenyl phenyl ether	ND	F1 F2	340	20	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
4-Chloro-3-methylphenol	ND	F1 F2	340	26	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
4-Chloroaniline	ND	F2	340	86	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
4-Chlorophenyl phenyl ether	ND	F1 F2	340	22	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
4-Methylphenol	ND	F1 F2	340	34	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
4-Nitroaniline	ND	F1 F2	1700	76	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
4-Nitrophenol	ND	F1 F2	1700	100	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Acenaphthene	ND	F1 F2	340	11	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Acenaphthylene	ND	F1 F2	340	86	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Acetophenone	ND	F1 F2	340	21	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Aniline	ND	F2	340	140	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Anthracene	ND	F1 F2	340	18	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Azobenzene	ND	F1 F2	340	23	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Benzaldehyde	ND		340	70	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Benzidine	ND	F1	3400	1000	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Benzo[a]anthracene	ND	F1 F2	340	21	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Benzo[a]pyrene	ND	F1 F2	340	21	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Benzo[b]fluoranthene	ND	F1 F2	340	27	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE (Continued)

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8

Lab Sample ID: 280-144325-1

Date Collected: 01/06/21 10:30

Matrix: Solid

Date Received: 01/06/21 13:32

Percent Solids: 93.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND	F2	340	17	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Benzo[k]fluoranthene	ND	F1 F2	340	42	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Benzoic acid	ND	*- F1 F2	1700	340	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Benzyl alcohol	ND	F1 F2	340	10	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Bis(2-chloroethoxy)methane	ND	F1 F2	340	24	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Bis(2-chloroethyl)ether	ND	F1 F2	340	17	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Bis(2-ethylhexyl) phthalate	ND	F1 F2	340	48	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Butyl benzyl phthalate	ND	F1 F2	340	45	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Caprolactam	ND	F2	340	110	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Carbazole	ND	F1 F2	340	38	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Chrysene	ND	F1 F2	340	28	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Dibenz(a,h)anthracene	ND	F2	340	20	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Dibenzofuran	ND	F1 F2	340	21	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Diethyl phthalate	ND	F1 F2	690	27	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Dimethyl phthalate	ND	F1 F2	340	24	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Di-n-butyl phthalate	ND	F1 F2	340	30	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Di-n-octyl phthalate	ND	F2	340	42	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Diphenylamine	ND		340	46	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Famphur	ND		690	36	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Fluoranthene	ND	F1 F2	340	38	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Fluorene	ND	F1 F2	340	19	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Hexachlorobenzene	ND	F1 F2	340	30	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Hexachlorobutadiene	ND	F1 F2	340	10	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Hexachlorocyclopentadiene	ND	F1 F2	1700	120	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Hexachloroethane	ND	F1 F2	340	22	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Hexadecane	ND	F2	340	14	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Indeno[1,2,3-cd]pyrene	ND	F2	340	23	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Isophorone	ND	F1 F2	340	18	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Naphthalene	ND	F1 F2	340	32	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Nitrobenzene	ND	F1 F2	340	23	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
N-Nitrosodimethylamine	ND	F1 F2	340	39	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
N-Nitrosodi-n-propylamine	ND	F1 F2	340	71	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
N-Nitrosodiphenylamine	ND	F1 F2	340	22	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Pentachlorophenol	ND	F1 F2	1700	340	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Phenanthrene	ND	F1 F2	340	18	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Phenol	ND	*- F1 F2	340	19	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Pyrene	ND	F1 F2	340	13	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1
Pyridine	ND	F1 F2	690	42	ug/Kg	☼	01/19/21 09:23	01/21/21 12:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	81		35 - 120	01/19/21 09:23	01/21/21 12:09	1
2-Fluorobiphenyl	76		46 - 120	01/19/21 09:23	01/21/21 12:09	1
2-Fluorophenol (Surr)	62		43 - 120	01/19/21 09:23	01/21/21 12:09	1
Nitrobenzene-d5 (Surr)	65		46 - 120	01/19/21 09:23	01/21/21 12:09	1
Phenol-d5 (Surr)	68		46 - 120	01/19/21 09:23	01/21/21 12:09	1
Terphenyl-d14 (Surr)	104		46 - 120	01/19/21 09:23	01/21/21 12:09	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-18-20

Lab Sample ID: 280-144325-2

Date Collected: 01/06/21 11:00

Matrix: Solid

Date Received: 01/06/21 13:32

Percent Solids: 87.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		360	26	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
1,2,4,5-Tetrachlorobenzene	ND		360	54	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
1,2,4-Trichlorobenzene	ND		360	31	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
1,2-Dichlorobenzene	ND		360	24	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		360	24	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
1,3-Dichlorobenzene	ND		360	13	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
1,3-Dinitrobenzene	ND		360	78	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
1,4-Dichlorobenzene	ND		360	15	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
1,4-Dioxane	ND		730	73	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
1-Methylnaphthalene	ND		360	12	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
2,2'-oxybis[1-chloropropane]	ND		360	25	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
2,3,4,6-Tetrachlorophenol	ND		1800	150	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
2,4,5-Trichlorophenol	ND		360	11	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
2,4,6-Trichlorophenol	ND		360	11	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
2,4-Dichlorophenol	ND		360	11	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
2,4-Dimethylphenol	ND		360	73	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
2,4-Dinitrophenol	ND	*	1800	370	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
2,4-Dinitrotoluene	ND		360	73	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
2,6-Dichlorophenol	ND		360	25	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
2,6-Dinitrotoluene	ND		360	31	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
2-Chloronaphthalene	ND		360	11	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
2-Chlorophenol	ND		360	23	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
2-Methylnaphthalene	ND		360	21	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
2-Methylphenol	ND		360	14	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
2-Nitroaniline	ND		1800	55	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
2-Nitrophenol	ND		360	11	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
3 & 4 Methylphenol	ND		360	36	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
3,3'-Dichlorobenzidine	ND		730	99	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
3-Methylphenol	ND		360	36	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
3-Nitroaniline	ND		1800	80	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
4,6-Dinitro-2-methylphenol	ND		1800	360	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
4-Bromophenyl phenyl ether	ND		360	21	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
4-Chloro-3-methylphenol	ND		360	27	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
4-Chloroaniline	ND		360	90	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
4-Chlorophenyl phenyl ether	ND		360	23	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
4-Methylphenol	ND		360	36	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
4-Nitroaniline	ND		1800	80	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
4-Nitrophenol	ND		1800	110	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
Acenaphthene	ND		360	11	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
Acenaphthylene	ND		360	90	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
Acetophenone	ND		360	22	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
Aniline	ND		360	140	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
Anthracene	ND		360	19	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
Azobenzene	ND		360	24	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
Benzaldehyde	ND		360	74	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
Benzidine	ND		3600	1100	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
Benzo[a]anthracene	ND		360	22	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
Benzo[a]pyrene	ND		360	22	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1
Benzo[b]fluoranthene	ND		360	29	ug/Kg	✱	01/19/21 09:23	01/21/21 13:30	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE (Continued)

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-18-20

Lab Sample ID: 280-144325-2

Date Collected: 01/06/21 11:00

Matrix: Solid

Date Received: 01/06/21 13:32

Percent Solids: 87.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		360	18	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Benzo[k]fluoranthene	ND		360	44	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Benzoic acid	ND	*	1800	360	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Benzyl alcohol	ND		360	11	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Bis(2-chloroethoxy)methane	ND		360	25	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Bis(2-chloroethyl)ether	ND		360	18	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Bis(2-ethylhexyl) phthalate	ND		360	51	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Butyl benzyl phthalate	ND		360	47	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Caprolactam	ND		360	120	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Carbazole	ND		360	40	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Chrysene	ND		360	30	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Dibenz(a,h)anthracene	ND		360	21	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Dibenzofuran	ND		360	22	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Diethyl phthalate	ND		730	29	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Dimethyl phthalate	ND		360	25	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Di-n-butyl phthalate	ND		360	32	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Di-n-octyl phthalate	ND		360	44	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Diphenylamine	ND		360	48	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Famphur	ND		730	37	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Fluoranthene	ND		360	40	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Fluorene	ND		360	20	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Hexachlorobenzene	ND		360	32	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Hexachlorobutadiene	ND		360	11	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Hexachlorocyclopentadiene	ND		1800	120	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Hexachloroethane	ND		360	23	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Hexadecane	ND		360	15	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Indeno[1,2,3-cd]pyrene	ND		360	24	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Isophorone	ND		360	19	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Naphthalene	ND		360	34	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Nitrobenzene	ND		360	24	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
N-Nitrosodimethylamine	ND		360	41	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
N-Nitrosodi-n-propylamine	ND		360	75	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
N-Nitrosodiphenylamine	ND		360	23	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Pentachlorophenol	ND		1800	360	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Phenanthrene	ND		360	19	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Phenol	ND	*	360	20	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Pyrene	ND		360	13	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1
Pyridine	ND		730	44	ug/Kg	☼	01/19/21 09:23	01/21/21 13:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	60		35 - 120	01/19/21 09:23	01/21/21 13:30	1
2-Fluorobiphenyl	56		46 - 120	01/19/21 09:23	01/21/21 13:30	1
2-Fluorophenol (Surr)	52		43 - 120	01/19/21 09:23	01/21/21 13:30	1
Nitrobenzene-d5 (Surr)	54		46 - 120	01/19/21 09:23	01/21/21 13:30	1
Phenol-d5 (Surr)	53		46 - 120	01/19/21 09:23	01/21/21 13:30	1
Terphenyl-d14 (Surr)	78		46 - 120	01/19/21 09:23	01/21/21 13:30	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-GW

Lab Sample ID: 280-144325-3

Date Collected: 01/06/21 11:30

Matrix: Water

Date Received: 01/06/21 13:32

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND	H	10	1.8	ug/L		01/20/21 14:21	01/26/21 02:20	1
1,2,4,5-Tetrachlorobenzene	ND	H	10	1.7	ug/L		01/20/21 14:21	01/26/21 02:20	1
1,2,4-Trichlorobenzene	ND	H	4.0	0.59	ug/L		01/20/21 14:21	01/26/21 02:20	1
1,2-Dichlorobenzene	ND	H	4.0	0.23	ug/L		01/20/21 14:21	01/26/21 02:20	1
1,2-Diphenylhydrazine(as Azobenzene)	ND	H	10	0.23	ug/L		01/20/21 14:21	01/26/21 02:20	1
1,3-Dichlorobenzene	ND	H	10	0.30	ug/L		01/20/21 14:21	01/26/21 02:20	1
1,3-Dinitrobenzene	ND	H	10	2.0	ug/L		01/20/21 14:21	01/26/21 02:20	1
1,4-Dichlorobenzene	ND	H	4.0	1.3	ug/L		01/20/21 14:21	01/26/21 02:20	1
1,4-Dioxane	ND	H	20	0.45	ug/L		01/20/21 14:21	01/26/21 02:20	1
1-Methylnaphthalene	ND	H	4.0	0.23	ug/L		01/20/21 14:21	01/26/21 02:20	1
2,2'-oxybis[1-chloropropane]	ND	H	10	0.28	ug/L		01/20/21 14:21	01/26/21 02:20	1
2,3,4,6-Tetrachlorophenol	ND	H	50	2.0	ug/L		01/20/21 14:21	01/26/21 02:20	1
2,4,5-Trichlorophenol	ND	H	10	2.1	ug/L		01/20/21 14:21	01/26/21 02:20	1
2,4,6-Trichlorophenol	ND	H	10	0.29	ug/L		01/20/21 14:21	01/26/21 02:20	1
2,4-Dichlorophenol	ND	H	10	0.64	ug/L		01/20/21 14:21	01/26/21 02:20	1
2,4-Dimethylphenol	ND	H	10	0.58	ug/L		01/20/21 14:21	01/26/21 02:20	1
2,4-Dinitrophenol	ND	H *	30	10	ug/L		01/20/21 14:21	01/26/21 02:20	1
2,4-Dinitrotoluene	ND	H	10	1.7	ug/L		01/20/21 14:21	01/26/21 02:20	1
2,6-Dichlorophenol	ND	H	10	1.4	ug/L		01/20/21 14:21	01/26/21 02:20	1
2,6-Dinitrotoluene	ND	H	10	1.9	ug/L		01/20/21 14:21	01/26/21 02:20	1
2-Chloronaphthalene	ND	H	4.0	0.26	ug/L		01/20/21 14:21	01/26/21 02:20	1
2-Chlorophenol	ND	H	10	2.0	ug/L		01/20/21 14:21	01/26/21 02:20	1
2-Methylnaphthalene	ND	H	4.0	1.5	ug/L		01/20/21 14:21	01/26/21 02:20	1
2-Methylphenol	ND	H	10	0.98	ug/L		01/20/21 14:21	01/26/21 02:20	1
2-Nitroaniline	ND	H	10	1.7	ug/L		01/20/21 14:21	01/26/21 02:20	1
2-Nitrophenol	ND	H	10	0.39	ug/L		01/20/21 14:21	01/26/21 02:20	1
3 & 4 Methylphenol	ND	H	10	0.25	ug/L		01/20/21 14:21	01/26/21 02:20	1
3,3'-Dichlorobenzidine	ND	H	50	2.0	ug/L		01/20/21 14:21	01/26/21 02:20	1
3-Methylphenol	ND	H	10	0.25	ug/L		01/20/21 14:21	01/26/21 02:20	1
3-Nitroaniline	ND	H	10	2.0	ug/L		01/20/21 14:21	01/26/21 02:20	1
4,6-Dinitro-2-methylphenol	ND	H	50	4.0	ug/L		01/20/21 14:21	01/26/21 02:20	1
4-Bromophenyl phenyl ether	ND	H	10	0.43	ug/L		01/20/21 14:21	01/26/21 02:20	1
4-Chloro-3-methylphenol	ND	H	10	2.4	ug/L		01/20/21 14:21	01/26/21 02:20	1
4-Chloroaniline	ND	H	10	2.1	ug/L		01/20/21 14:21	01/26/21 02:20	1
4-Chlorophenyl phenyl ether	ND	H	10	1.7	ug/L		01/20/21 14:21	01/26/21 02:20	1
4-Methylphenol	ND	H	10	0.25	ug/L		01/20/21 14:21	01/26/21 02:20	1
4-Nitroaniline	ND	H	10	2.0	ug/L		01/20/21 14:21	01/26/21 02:20	1
4-Nitrophenol	ND	H	10	1.2	ug/L		01/20/21 14:21	01/26/21 02:20	1
Acenaphthene	ND	H	4.0	0.28	ug/L		01/20/21 14:21	01/26/21 02:20	1
Acenaphthylene	ND	H	4.0	0.49	ug/L		01/20/21 14:21	01/26/21 02:20	1
Acetophenone	ND	H	10	0.24	ug/L		01/20/21 14:21	01/26/21 02:20	1
Aniline	ND	H	10	2.0	ug/L		01/20/21 14:21	01/26/21 02:20	1
Anthracene	ND	H	4.0	0.42	ug/L		01/20/21 14:21	01/26/21 02:20	1
Azobenzene	ND	H	4.0	0.23	ug/L		01/20/21 14:21	01/26/21 02:20	1
Benzaldehyde	ND	H	5.0	2.0	ug/L		01/20/21 14:21	01/26/21 02:20	1
Benzidine	ND	H	100	50	ug/L		01/20/21 14:21	01/26/21 02:20	1
Benzo[a]anthracene	ND	H	4.0	0.35	ug/L		01/20/21 14:21	01/26/21 02:20	1
Benzo[a]pyrene	ND	H	4.0	0.31	ug/L		01/20/21 14:21	01/26/21 02:20	1
Benzo[b]fluoranthene	ND	H	4.0	0.53	ug/L		01/20/21 14:21	01/26/21 02:20	1

Euofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE (Continued)

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-GW

Lab Sample ID: 280-144325-3

Date Collected: 01/06/21 11:30

Matrix: Water

Date Received: 01/06/21 13:32

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND	H	4.0	0.50	ug/L		01/20/21 14:21	01/26/21 02:20	1
Benzo[k]fluoranthene	ND	H	4.0	0.46	ug/L		01/20/21 14:21	01/26/21 02:20	1
Benzoic acid	ND	H *	25	10	ug/L		01/20/21 14:21	01/26/21 02:20	1
Benzyl alcohol	ND	H	10	0.23	ug/L		01/20/21 14:21	01/26/21 02:20	1
Bis(2-chloroethoxy)methane	ND	H	10	0.97	ug/L		01/20/21 14:21	01/26/21 02:20	1
Bis(2-chloroethyl)ether	ND	H	10	0.83	ug/L		01/20/21 14:21	01/26/21 02:20	1
Bis(2-ethylhexyl) phthalate	1.1	J H	10	0.56	ug/L		01/20/21 14:21	01/26/21 02:20	1
Butyl benzyl phthalate	ND	H	4.0	1.0	ug/L		01/20/21 14:21	01/26/21 02:20	1
Caprolactam	ND	H	5.0	2.5	ug/L		01/20/21 14:21	01/26/21 02:20	1
Carbazole	ND	H	4.0	0.43	ug/L		01/20/21 14:21	01/26/21 02:20	1
Chrysene	ND	H	4.0	0.54	ug/L		01/20/21 14:21	01/26/21 02:20	1
Dibenz(a,h)anthracene	ND	H	4.0	0.51	ug/L		01/20/21 14:21	01/26/21 02:20	1
Dibenzofuran	ND	H	4.0	0.29	ug/L		01/20/21 14:21	01/26/21 02:20	1
Diethyl phthalate	ND	H	4.0	0.38	ug/L		01/20/21 14:21	01/26/21 02:20	1
Dimethyl phthalate	ND	H	4.0	0.21	ug/L		01/20/21 14:21	01/26/21 02:20	1
Di-n-butyl phthalate	ND	H	4.0	1.2	ug/L		01/20/21 14:21	01/26/21 02:20	1
Di-n-octyl phthalate	ND	H	4.0	0.35	ug/L		01/20/21 14:21	01/26/21 02:20	1
Diphenylamine	ND	H	10	1.1	ug/L		01/20/21 14:21	01/26/21 02:20	1
Famphur	ND	H	100	1.5	ug/L		01/20/21 14:21	01/26/21 02:20	1
Fluoranthene	ND	H	4.0	0.20	ug/L		01/20/21 14:21	01/26/21 02:20	1
Fluorene	ND	H	4.0	0.31	ug/L		01/20/21 14:21	01/26/21 02:20	1
Hexachlorobenzene	ND	H	10	0.66	ug/L		01/20/21 14:21	01/26/21 02:20	1
Hexachlorobutadiene	ND	H	10	3.3	ug/L		01/20/21 14:21	01/26/21 02:20	1
Hexachlorocyclopentadiene	ND	H	50	3.1	ug/L		01/20/21 14:21	01/26/21 02:20	1
Hexachloroethane	ND	H	10	0.98	ug/L		01/20/21 14:21	01/26/21 02:20	1
Hexadecane	ND	H	10	0.54	ug/L		01/20/21 14:21	01/26/21 02:20	1
Indeno[1,2,3-cd]pyrene	ND	H	4.0	0.65	ug/L		01/20/21 14:21	01/26/21 02:20	1
Isophorone	ND	H	10	0.21	ug/L		01/20/21 14:21	01/26/21 02:20	1
Naphthalene	ND	H	4.0	0.29	ug/L		01/20/21 14:21	01/26/21 02:20	1
Nitrobenzene	ND	H	10	0.81	ug/L		01/20/21 14:21	01/26/21 02:20	1
N-Nitrosodimethylamine	ND	H	10	0.29	ug/L		01/20/21 14:21	01/26/21 02:20	1
N-Nitrosodi-n-propylamine	ND	H	10	0.35	ug/L		01/20/21 14:21	01/26/21 02:20	1
N-Nitrosodiphenylamine	ND	H	10	0.44	ug/L		01/20/21 14:21	01/26/21 02:20	1
Pentachlorophenol	ND	H	50	20	ug/L		01/20/21 14:21	01/26/21 02:20	1
Phenanthrene	ND	H	4.0	0.26	ug/L		01/20/21 14:21	01/26/21 02:20	1
Phenol	ND	H	10	2.0	ug/L		01/20/21 14:21	01/26/21 02:20	1
Pyrene	ND	H	10	0.37	ug/L		01/20/21 14:21	01/26/21 02:20	1
Pyridine	ND	H *	20	1.7	ug/L		01/20/21 14:21	01/26/21 02:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	36	S1-	42 - 131	01/20/21 14:21	01/26/21 02:20	1
2-Fluorobiphenyl	54		48 - 120	01/20/21 14:21	01/26/21 02:20	1
2-Fluorophenol (Surr)	29	S1-	41 - 120	01/20/21 14:21	01/26/21 02:20	1
Nitrobenzene-d5 (Surr)	49		42 - 120	01/20/21 14:21	01/26/21 02:20	1
Phenol-d5 (Surr)	36	S1-	45 - 124	01/20/21 14:21	01/26/21 02:20	1
Terphenyl-d14 (Surr)	19	S1-	20 - 130	01/20/21 14:21	01/26/21 02:20	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8

Date Collected: 01/06/21 10:30

Date Received: 01/06/21 13:32

Lab Sample ID: 280-144325-1

Matrix: Solid

Percent Solids: 93.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND	*-	2.4	0.91	mg/Kg	☼	01/19/21 10:58	01/20/21 02:52	1
Gasoline Range Organics (GRO)-C6-C10	ND	H	2.4	0.91	mg/Kg	☼	01/19/21 10:58	01/21/21 12:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	92		77 - 123				01/19/21 10:58	01/20/21 02:52	1
a,a,a-Trifluorotoluene	91		77 - 123				01/19/21 10:58	01/21/21 12:08	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-18-20

Date Collected: 01/06/21 11:00

Date Received: 01/06/21 13:32

Lab Sample ID: 280-144325-2

Matrix: Solid

Percent Solids: 87.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND	*-	2.5	0.93	mg/Kg	☼	01/19/21 10:58	01/20/21 03:16	1
Gasoline Range Organics (GRO)-C6-C10	ND	H	2.5	0.93	mg/Kg	☼	01/19/21 10:58	01/21/21 12:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	91		77 - 123				01/19/21 10:58	01/20/21 03:16	1
a,a,a-Trifluorotoluene	93		77 - 123				01/19/21 10:58	01/21/21 12:33	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-GW

Date Collected: 01/06/21 11:30

Date Received: 01/06/21 13:32

Lab Sample ID: 280-144325-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		25	10	ug/L			01/07/21 14:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	109		82 - 110					01/07/21 14:40	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-TB-04

Date Collected: 01/06/21 10:00

Date Received: 01/06/21 13:32

Lab Sample ID: 280-144325-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		25	10	ug/L			01/07/21 12:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	95		82 - 110					01/07/21 12:22	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8

Date Collected: 01/06/21 10:30

Date Received: 01/06/21 13:32

Lab Sample ID: 280-144325-1

Matrix: Solid

Percent Solids: 93.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		8.2	3.7	mg/Kg	☼	01/07/21 10:47	01/10/21 10:01	1
Motor Oil (C20-C38)	ND		25	8.0	mg/Kg	☼	01/07/21 10:47	01/10/21 10:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	71		49 - 115				01/07/21 10:47	01/10/21 10:01	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-18-20

Date Collected: 01/06/21 11:00

Date Received: 01/06/21 13:32

Lab Sample ID: 280-144325-2

Matrix: Solid

Percent Solids: 87.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		8.2	3.7	mg/Kg	☼	01/07/21 10:47	01/10/21 11:55	1
Motor Oil (C20-C38)	ND		25	8.0	mg/Kg	☼	01/07/21 10:47	01/10/21 11:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	66		49 - 115				01/07/21 10:47	01/10/21 11:55	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-GW

Date Collected: 01/06/21 11:30

Date Received: 01/06/21 13:32

Lab Sample ID: 280-144325-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	0.22	J	0.25	0.032	mg/L		01/11/21 13:14	01/17/21 03:08	1
Motor Oil (C20-C38)	0.50		0.49	0.055	mg/L		01/11/21 13:14	01/17/21 03:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	71		50 - 115				01/11/21 13:14	01/17/21 03:08	1

Consultant Work Product - Jacobs Engineering Group
-Not CDOT Approved

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8

Date Collected: 01/06/21 10:30

Date Received: 01/06/21 13:32

Lab Sample ID: 280-144325-1

Matrix: Solid

Percent Solids: 93.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.6	F2	0.51	0.043	mg/Kg	☼	01/18/21 14:30	01/19/21 22:48	1
Silver	180		95	7.4	ug/Kg	☼	01/18/21 15:30	01/19/21 17:37	1
Barium	52	F1	0.34	0.059	mg/Kg	☼	01/18/21 14:30	01/19/21 22:48	1
Cadmium	0.21	F2	0.084	0.0079	mg/Kg	☼	01/18/21 14:30	01/19/21 22:48	1
Chromium	4.1	F2	0.17	0.064	mg/Kg	☼	01/18/21 14:30	01/19/21 22:48	1
Lead	13	F1 F2	0.13	0.015	mg/Kg	☼	01/18/21 14:30	01/19/21 22:48	1
Selenium	ND	F2	0.42	0.11	mg/Kg	☼	01/18/21 14:30	01/19/21 22:48	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-18-20

Date Collected: 01/06/21 11:00

Date Received: 01/06/21 13:32

Lab Sample ID: 280-144325-2

Matrix: Solid

Percent Solids: 87.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.1		0.58	0.049	mg/Kg	☼	01/18/21 14:30	01/19/21 23:06	1
Silver	15	J	87	6.8	ug/Kg	☼	01/18/21 15:30	01/19/21 17:54	1
Barium	27		0.39	0.069	mg/Kg	☼	01/18/21 14:30	01/19/21 23:06	1
Cadmium	0.023	J	0.097	0.0091	mg/Kg	☼	01/18/21 14:30	01/19/21 23:06	1
Chromium	3.2		0.19	0.074	mg/Kg	☼	01/18/21 14:30	01/19/21 23:06	1
Lead	2.9		0.15	0.018	mg/Kg	☼	01/18/21 14:30	01/19/21 23:06	1
Selenium	ND		0.49	0.13	mg/Kg	☼	01/18/21 14:30	01/19/21 23:06	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-GW

Date Collected: 01/06/21 11:30

Date Received: 01/06/21 13:32

Lab Sample ID: 280-144325-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	19		5.0	0.33	ug/L		01/14/21 16:00	01/18/21 16:59	1
Barium	560		1.0	0.29	ug/L		01/14/21 16:00	01/18/21 16:59	1
Cadmium	0.32	J	1.0	0.27	ug/L		01/14/21 16:00	01/18/21 16:59	1
Chromium	34		2.0	0.50	ug/L		01/14/21 16:00	01/18/21 16:59	1
Lead	26		1.0	0.18	ug/L		01/14/21 16:00	01/18/21 16:59	1
Selenium	1.7	J	5.0	0.37	ug/L		01/14/21 16:00	01/18/21 16:59	1
Silver	0.18	J	5.0	0.033	ug/L		01/14/21 16:00	01/18/21 16:59	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 6020A - Metals (ICP/MS) - Dissolved

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-GW

Lab Sample ID: 280-144325-3

Date Collected: 01/06/21 11:30

Matrix: Water

Date Received: 01/06/21 13:32

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic, Dissolved	3.0	J	5.0	0.33	ug/L		01/18/21 14:30	01/19/21 20:21	1
Barium, Dissolved	110		1.0	0.29	ug/L		01/18/21 14:30	01/19/21 20:21	1
Cadmium, Dissolved	ND		1.0	0.27	ug/L		01/18/21 14:30	01/19/21 20:21	1
Chromium, Dissolved	ND		2.0	0.50	ug/L		01/18/21 14:30	01/19/21 20:21	1
Lead, Dissolved	ND		1.0	0.18	ug/L		01/18/21 14:30	01/19/21 20:21	1
Selenium, Dissolved	0.41	J	5.0	0.37	ug/L		01/18/21 14:30	01/20/21 09:11	1
Silver, Dissolved	0.037	J	5.0	0.033	ug/L		01/18/21 14:30	01/19/21 20:21	1

Consultant Work Product - Jacobs Engineering
 -Not CDOT Approved-

- 1
- 2
- 3
- 4
- 5
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- 14
- 15

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 7470A - Mercury (CVAA)

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-GW

Date Collected: 01/06/21 11:30

Date Received: 01/06/21 13:32

Lab Sample ID: 280-144325-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.084	J B	0.20	0.027	ug/L		01/18/21 15:51	01/19/21 19:06	1

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 7470A - Mercury (CVAA) - Dissolved

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-GW

Date Collected: 01/06/21 11:30

Date Received: 01/06/21 13:32

Lab Sample ID: 280-144325-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury, Dissolved	ND		0.20	0.027	ug/L		01/20/21 14:58	01/20/21 22:19	1

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 7471B - Mercury (CVAA)

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8

Date Collected: 01/06/21 10:30

Date Received: 01/06/21 13:32

Lab Sample ID: 280-144325-1

Matrix: Solid

Percent Solids: 93.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	6.2	J	19	6.2	ug/Kg	☼	01/21/21 14:45	01/21/21 17:21	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-18-20

Date Collected: 01/06/21 11:00

Date Received: 01/06/21 13:32

Lab Sample ID: 280-144325-2

Matrix: Solid

Percent Solids: 87.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	9.3	J	22	7.3	ug/Kg	☼	01/21/21 14:45	01/21/21 17:29	1

Consultant Work Product - Jacobs Engineering Group, Inc.
-Not CDOT Approved-

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

General Chemistry

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8

Date Collected: 01/06/21 10:30

Date Received: 01/06/21 13:32

Lab Sample ID: 280-144325-1

Matrix: Solid

Percent Solids: 93.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	7.0		0.1	0.1	%			01/07/21 13:32	1
Percent Solids	93.0		0.1	0.1	%			01/07/21 13:32	1

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-18-20

Date Collected: 01/06/21 11:00

Date Received: 01/06/21 13:32

Lab Sample ID: 280-144325-2

Matrix: Solid

Percent Solids: 87.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	12.2		0.1	0.1	%			01/07/21 13:32	1
Percent Solids	87.8		0.1	0.1	%			01/07/21 13:32	1

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (58-140)	BFB (76-127)	DBFM (75-121)	TOL (80-126)
280-144325-1	CDOT I270 ENV 12_2020-SB-11	102	98	99	98
280-144325-2	CDOT I270 ENV 12_2020-SB-18-18-20	98	94	99	97
LCS 280-522885/1-A	Lab Control Sample	105	96	101	98
LCS 280-522885/2-A	Lab Control Sample Dup	104	96	103	100
MB 280-522885/3-A	Method Blank	101	100	101	100

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (70-127)	BFB (78-120)	DBFM (77-120)	TOL (80-125)
280-144325-3	CDOT I270 ENV 12_2020-SB-11	90	138 S1+	100	109
280-144325-4	CDOT I270 ENV 12_2020-SB-TB-04	101	96	100	96
LCS 280-522940/4	Lab Control Sample	99	101	102	100
LCS 280-522940/5	Lab Control Sample Dup	97	101	100	101
MB 280-522940/9	Method Blank	101	100	101	102

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (35-120)	FBP (46-120)	2FP (43-120)	NBZ (46-120)	PHL (46-120)	TPHL (46-120)
280-144325-1	CDOT I270 ENV 12_2020-SB-11	72	68	59	63	63	96
280-144325-1 - RE	CDOT I270 ENV 12_2020-SB-18-6-8	81	76	62	65	68	104
280-144325-1 MS	CDOT I270 ENV 12_2020-SB-18-6-8	69	58	49	53	53	85
280-144325-1 MS - RE	CDOT I270 ENV 12_2020-SB-18-6-8	55	53	43	46	46	66
280-144325-1 MSD	CDOT I270 ENV 12_2020-SB-18-6-8	77	73	66	70	67	89
280-144325-1 MSD - RE	CDOT I270 ENV 12_2020-SB-18-6-8	88	85	75	80	77	107
280-144325-2	CDOT I270 ENV 12_2020-SB-18-18-20	75	66	60	63	64	94
280-144325-2 - RE	CDOT I270 ENV 12_2020-SB-18-18-20	60	56	52	54	53	78
LCS 280-522806/2-A	Lab Control Sample	75	70	61	66	65	88

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Surrogate Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (35-120)	FBP (46-120)	2FP (43-120)	NBZ (46-120)	PHL (46-120)	TPHL (46-120)
LCS 280-523852/2-A	Lab Control Sample	82	74	57	64	65	95
MB 280-522806/1-A	Method Blank	61	50	42 S1-	46	44 S1-	91
MB 280-523852/1-A	Method Blank	54	59	51	56	54	85

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)

FBP = 2-Fluorobiphenyl

2FP = 2-Fluorophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

PHL = Phenol-d5 (Surr)

TPHL = Terphenyl-d14 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (42-131)	FBP (48-120)	2FP (41-120)	NBZ (42-120)	PHL (45-124)	TPHL (20-130)
280-144325-3	CDOT I270 ENV 12_2020-SB-11	65	45 S1-	33 S1-	38 S1-	41 S1-	13 S1-
280-144325-3 - RE	CDOT I270 ENV 12_2020-SB-18-GW	36 S1-	54	29 S1-	49	36 S1-	19 S1-
LCS 280-523230/2-A	Lab Control Sample	12 S1-	12 S1-	8 S1-	11 S1-	10 S1-	15 S1-
LCS 280-524131/2-A	Lab Control Sample	78	75	66	72	68	87
LCSD 280-523230/3-A	Lab Control Sample Dup	68	59	47	55	53	74
LCSD 280-524131/3-A	Lab Control Sample Dup	72	67	57	64	61	81
MB 280-523230/1-A	Method Blank	61	55	50	57	53	92
MB 280-524131/1-A	Method Blank	72	52	46	49	48	92

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)

FBP = 2-Fluorobiphenyl

2FP = 2-Fluorophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

PHL = Phenol-d5 (Surr)

TPHL = Terphenyl-d14 (Surr)

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		TFT1 (77-123)
280-144325-1	CDOT I270 ENV 12_2020-SB-11	92
280-144325-1	CDOT I270 ENV 12_2020-SB-18-6-8	91
280-144325-2	CDOT I270 ENV 12_2020-SB-18-18-20	91
280-144325-2	CDOT I270 ENV 12_2020-SB-18-18-20	93
LCS 280-523965/1-A	Lab Control Sample	95
LCS 280-523965/1-A	Lab Control Sample	97
LCSD 280-523965/2-A	Lab Control Sample Dup	94
LCSD 280-523965/2-A	Lab Control Sample Dup	96

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Surrogate Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

(Continued)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TFT1 (77-123)
MB 280-523965/3-A	Method Blank	93
MB 280-523965/3-A	Method Blank	93

Surrogate Legend

TFT = a,a,a-Trifluorotoluene

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TFT1 (82-110)
280-144325-3	CDOT I270 ENV 12_2020-SB-11	109
280-144325-4	CDOT I270 ENV 12_2020-SB-TB-04	95
LCS 280-522815/15	Lab Control Sample	94
LCSD 280-522815/16	Lab Control Sample Dup	93
MB 280-522815/5	Method Blank	91

Surrogate Legend

TFT = a,a,a-Trifluorotoluene

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTPH1 (49-115)
280-144325-1	CDOT I270 ENV 12_2020-SB-11	71
280-144325-1 MS	CDOT I270 ENV 12_2020-SB-18-6-8	81
280-144325-1 MS	CDOT I270 ENV 12_2020-SB-18-6-8	61
280-144325-1 MSD	CDOT I270 ENV 12_2020-SB-18-6-8	83
280-144325-1 MSD	CDOT I270 ENV 12_2020-SB-18-6-8	68
280-144325-2	CDOT I270 ENV 12_2020-SB-18-18-20	66
LCS 280-522804/2-A	Lab Control Sample	80
LCS 280-522804/3-A	Lab Control Sample	74
MB 280-522804/1-A	Method Blank	70

Surrogate Legend

OTPH = o-Terphenyl (Surr)

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTPH1 (50-115)
280-144325-3	CDOT I270 ENV 12_2020-SB-11	71

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Surrogate Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

(Continued)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTPH1 (50-115)
LCS 280-523119/2-A	Lab Control Sample	83
LCS 280-523119/4-A	Lab Control Sample	86
LCSD 280-523119/3-A	Lab Control Sample Dup	84
LCSD 280-523119/5-A	Lab Control Sample Dup	81
MB 280-523119/1-A	Method Blank	69

Surrogate Legend

OTPH = o-Terphenyl (Surr)

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-522885/3-A
Matrix: Solid
Analysis Batch: 523544

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 522885

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1-Trichloroethane	ND		5.0	2.0	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.29	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
1,1,2-Trichloroethane	ND		5.0	0.88	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
1,1,2-Trichlorotrifluoroethane	ND		20	1.7	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
1,1-Dichloroethane	ND		5.0	0.21	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
1,1-Dichloroethene	ND		5.0	0.59	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
1,2,3-Trichlorobenzene	ND		5.0	0.81	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
1,2,4-Trichlorobenzene	ND		5.0	0.73	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
1,2-Dibromo-3-Chloropropane	ND		10	3.7	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
1,2-Dibromoethane	ND		5.0	0.52	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
1,2-Dichlorobenzene	ND		5.0	1.9	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
1,2-Dichloroethane	ND		5.0	0.70	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
1,2-Dichloropropane	ND		5.0	0.55	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
1,3-Dichlorobenzene	ND		5.0	0.48	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
1,4-Dichlorobenzene	ND		5.0	0.25	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
1,4-Dioxane	ND		500	56	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
2-Butanone (MEK)	ND		20	3.9	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
2-Hexanone	ND		20	4.9	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.4	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
Acetone	ND		72	36	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
Benzene	ND		5.0	0.15	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
Bromoform	ND		5.1	2.6	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
Bromomethane	ND		10	1.4	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
Carbon disulfide	ND		5.0	1.7	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
Carbon tetrachloride	ND		5.0	2.0	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
Chlorobenzene	ND		5.0	2.1	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
Chlorobromomethane	ND		5.0	2.5	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
Chlorodibromomethane	ND		5.0	2.3	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
Chloroethane	ND		10	2.0	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
Chloroform	ND		10	0.29	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
Chloromethane	ND		10	0.77	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
cis-1,2-Dichloroethene	ND		2.5	0.20	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
cis-1,3-Dichloropropene	ND		5.0	0.10	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
Cyclohexane	ND		5.0	1.8	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
Dichlorobromomethane	ND		5.0	2.1	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
Dichlorodifluoromethane	ND		10	2.7	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
Ethylbenzene	ND		5.0	0.31	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
Isopropylbenzene	ND		5.0	2.4	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
Methyl acetate	ND		10	2.8	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
Methyl tert-butyl ether	ND		20	2.1	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
Methylcyclohexane	ND		5.0	0.42	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
Methylene Chloride	ND		5.0	1.6	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
m-Xylene & p-Xylene	ND		2.5	1.0	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
o-Xylene	ND		2.5	0.27	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
Styrene	ND		5.0	0.28	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
Tetrachloroethene	ND		5.0	1.9	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
Toluene	ND		5.0	0.23	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
trans-1,2-Dichloroethene	ND		2.5	0.39	ug/Kg		01/07/21 05:43	01/14/21 18:27	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-522885/3-A
Matrix: Solid
Analysis Batch: 523544

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 522885

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		5.0	0.083	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
Trichloroethene	ND		5.0	1.9	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
Trichlorofluoromethane	ND		10	3.2	ug/Kg		01/07/21 05:43	01/14/21 18:27	1
Vinyl chloride	ND		5.0	1.3	ug/Kg		01/07/21 05:43	01/14/21 18:27	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		58 - 140	01/07/21 05:43	01/14/21 18:27	1
4-Bromofluorobenzene (Surr)	100		76 - 127	01/07/21 05:43	01/14/21 18:27	1
Dibromofluoromethane (Surr)	101		75 - 121	01/07/21 05:43	01/14/21 18:27	1
Toluene-d8 (Surr)	100		80 - 126	01/07/21 05:43	01/14/21 18:27	1

Lab Sample ID: LCS 280-522885/1-A
Matrix: Solid
Analysis Batch: 523544

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 522885

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	50.0	47.8		ug/Kg		96	70 - 135
1,1,2,2-Tetrachloroethane	50.0	46.8		ug/Kg		94	65 - 135
1,1,2-Trichloroethane	50.0	50.1		ug/Kg		100	78 - 135
1,1,2-Trichlorotrifluoroethane	50.0	48.1		ug/Kg		96	50 - 150
1,1-Dichloroethane	50.0	45.3		ug/Kg		91	70 - 135
1,1-Dichloroethene	50.0	52.1		ug/Kg		104	79 - 135
1,2,3-Trichlorobenzene	50.0	46.7		ug/Kg		93	62 - 135
1,2,4-Trichlorobenzene	50.0	48.1		ug/Kg		96	65 - 135
1,2-Dibromo-3-Chloropropane	50.0	49.2		ug/Kg		98	66 - 150
1,2-Dibromoethane	50.0	46.3		ug/Kg		93	76 - 135
1,2-Dichlorobenzene	50.0	46.6		ug/Kg		93	73 - 135
1,2-Dichloroethane	50.0	43.4		ug/Kg		87	69 - 135
1,2-Dichloropropane	50.0	43.2		ug/Kg		86	72 - 121
1,3-Dichlorobenzene	50.0	45.5		ug/Kg		91	69 - 135
1,4-Dichlorobenzene	50.0	46.0		ug/Kg		92	73 - 135
1,4-Dioxane	1000	998		ug/Kg		100	52 - 135
2-Butanone (MEK)	200	168		ug/Kg		84	45 - 177
2-Hexanone	200	176		ug/Kg		88	67 - 150
4-Methyl-2-pentanone (MIBK)	200	177		ug/Kg		89	69 - 150
Acetone	200	198		ug/Kg		99	65 - 150
Benzene	50.0	48.1		ug/Kg		96	75 - 135
Bromoform	50.0	47.9		ug/Kg		96	77 - 135
Bromomethane	50.0	46.4		ug/Kg		93	52 - 135
Carbon disulfide	50.0	47.8		ug/Kg		96	45 - 150
Carbon tetrachloride	50.0	47.6		ug/Kg		95	69 - 138
Chlorobenzene	50.0	47.2		ug/Kg		94	78 - 135
Chlorobromomethane	50.0	43.0		ug/Kg		86	74 - 135
Chlorodibromomethane	50.0	48.0		ug/Kg		96	77 - 135
Chloroethane	50.0	47.6		ug/Kg		95	51 - 145
Chloroform	50.0	46.6		ug/Kg		93	73 - 123
Chloromethane	50.0	37.6		ug/Kg		75	41 - 138
cis-1,2-Dichloroethene	50.0	47.7		ug/Kg		95	76 - 135

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-522885/1-A
Matrix: Solid
Analysis Batch: 523544

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 522885

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,3-Dichloropropene	50.0	48.2		ug/Kg		96	71 - 135
Cyclohexane	50.0	40.7		ug/Kg		81	50 - 150
Dichlorobromomethane	50.0	45.2		ug/Kg		90	73 - 135
Dichlorodifluoromethane	50.0	46.5		ug/Kg		93	32 - 152
Ethylbenzene	50.0	46.8		ug/Kg		94	73 - 125
Isopropylbenzene	50.0	47.8		ug/Kg		96	74 - 137
Methyl acetate	100	78.2		ug/Kg		78	50 - 150
Methyl tert-butyl ether	50.0	46.9		ug/Kg		94	71 - 141
Methylcyclohexane	50.0	40.4		ug/Kg		81	50 - 150
Methylene Chloride	50.0	50.6		ug/Kg		101	76 - 136
m-Xylene & p-Xylene	50.0	47.7		ug/Kg		95	77 - 135
o-Xylene	50.0	45.8		ug/Kg		92	75 - 135
Styrene	50.0	48.3		ug/Kg		97	76 - 135
Tetrachloroethene	50.0	45.8		ug/Kg		92	76 - 135
Toluene	50.0	45.6		ug/Kg		91	77 - 122
trans-1,2-Dichloroethene	50.0	49.0		ug/Kg		98	77 - 135
trans-1,3-Dichloropropene	50.0	43.4		ug/Kg		87	71 - 135
Trichloroethene	50.0	46.0		ug/Kg		92	77 - 135
Trichlorofluoromethane	50.0	42.2		ug/Kg		84	48 - 150
Vinyl chloride	50.0	47.0		ug/Kg		94	43 - 145

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	105		58 - 140
4-Bromofluorobenzene (Surr)	96		76 - 127
Dibromofluoromethane (Surr)	101		75 - 121
Toluene-d8 (Surr)	98		80 - 126

Lab Sample ID: LCSD 280-522885/2-A
Matrix: Solid
Analysis Batch: 523544

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 522885

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	50.0	42.1		ug/Kg		84	70 - 135	13	20
1,1,2,2-Tetrachloroethane	50.0	49.7		ug/Kg		99	65 - 135	6	21
1,1,2-Trichloroethane	50.0	50.9		ug/Kg		102	78 - 135	2	20
1,1,2-Trichlorotrifluoroethane	50.0	42.2		ug/Kg		84	50 - 150	13	20
1,1-Dichloroethane	50.0	40.3		ug/Kg		81	70 - 135	12	20
1,1-Dichloroethene	50.0	42.9		ug/Kg		86	79 - 135	19	20
1,2,3-Trichlorobenzene	50.0	46.9		ug/Kg		94	62 - 135	0	31
1,2,4-Trichlorobenzene	50.0	44.9		ug/Kg		90	65 - 135	7	26
1,2-Dibromo-3-Chloropropane	50.0	54.1		ug/Kg		108	66 - 150	10	28
1,2-Dibromoethane	50.0	50.6		ug/Kg		101	76 - 135	9	20
1,2-Dichlorobenzene	50.0	45.5		ug/Kg		91	73 - 135	2	20
1,2-Dichloroethane	50.0	42.0		ug/Kg		84	69 - 135	3	20
1,2-Dichloropropane	50.0	40.0		ug/Kg		80	72 - 121	8	20
1,3-Dichlorobenzene	50.0	41.5		ug/Kg		83	69 - 135	9	20
1,4-Dichlorobenzene	50.0	44.0		ug/Kg		88	73 - 135	4	22
1,4-Dioxane	1000	1120		ug/Kg		112	52 - 135	12	30

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-522885/2-A
Matrix: Solid
Analysis Batch: 523544

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 522885

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Butanone (MEK)	200	183		ug/Kg		92	45 - 177	8	32
2-Hexanone	200	199		ug/Kg		99	67 - 150	12	29
4-Methyl-2-pentanone (MIBK)	200	198		ug/Kg		99	69 - 150	11	25
Acetone	200	222		ug/Kg		111	65 - 150	11	28
Benzene	50.0	43.9		ug/Kg		88	75 - 135	9	20
Bromoform	50.0	53.4		ug/Kg		107	77 - 135	11	20
Bromomethane	50.0	52.8		ug/Kg		106	52 - 135	13	22
Carbon disulfide	50.0	41.4		ug/Kg		83	45 - 150	14	24
Carbon tetrachloride	50.0	41.1		ug/Kg		82	69 - 138	15	20
Chlorobenzene	50.0	44.0		ug/Kg		88	78 - 135	7	20
Chlorobromomethane	50.0	42.1		ug/Kg		84	74 - 135	2	21
Chlorodibromomethane	50.0	51.3		ug/Kg		103	77 - 135	7	20
Chloroethane	50.0	52.6		ug/Kg		105	51 - 145	10	22
Chloroform	50.0	43.1		ug/Kg		86	73 - 123	8	20
Chloromethane	50.0	42.2		ug/Kg		84	41 - 138	12	25
cis-1,2-Dichloroethene	50.0	43.4		ug/Kg		87	76 - 135	9	20
cis-1,3-Dichloropropene	50.0	47.8		ug/Kg		96	71 - 135	1	20
Cyclohexane	50.0	35.2		ug/Kg		70	50 - 150	15	30
Dichlorobromomethane	50.0	44.7		ug/Kg		89	73 - 135	1	20
Dichlorodifluoromethane	50.0	53.5		ug/Kg		107	32 - 152	14	28
Ethylbenzene	50.0	42.5		ug/Kg		85	73 - 125	10	20
Isopropylbenzene	50.0	41.8		ug/Kg		84	74 - 137	13	20
Methyl acetate	100	81.2		ug/Kg		81	50 - 150	4	30
Methyl tert-butyl ether	50.0	47.7		ug/Kg		95	71 - 141	2	20
Methylcyclohexane	50.0	32.0		ug/Kg		64	50 - 150	23	30
Methylene Chloride	50.0	46.5		ug/Kg		93	76 - 136	8	21
m-Xylene & p-Xylene	50.0	42.6		ug/Kg		85	77 - 135	11	20
o-Xylene	50.0	42.8		ug/Kg		86	75 - 135	7	20
Styrene	50.0	46.8		ug/Kg		94	76 - 135	3	20
Tetrachloroethene	50.0	41.7		ug/Kg		83	76 - 135	9	20
Toluene	50.0	41.7		ug/Kg		83	77 - 122	9	20
trans-1,2-Dichloroethene	50.0	43.8		ug/Kg		88	77 - 135	11	20
trans-1,3-Dichloropropene	50.0	43.2		ug/Kg		86	71 - 135	0	20
Trichloroethene	50.0	41.6		ug/Kg		83	77 - 135	10	20
Trichlorofluoromethane	50.0	48.4		ug/Kg		97	48 - 150	14	33
Vinyl chloride	50.0	53.0		ug/Kg		106	43 - 145	12	24

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	104		58 - 140
4-Bromofluorobenzene (Surr)	96		76 - 127
Dibromofluoromethane (Surr)	103		75 - 121
Toluene-d8 (Surr)	100		80 - 126

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-522940/9
Matrix: Water
Analysis Batch: 522940

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			01/08/21 11:46	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			01/08/21 11:46	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			01/08/21 11:46	1
1,1,2-Trichlorotrifluoroethane	ND		3.0	0.18	ug/L			01/08/21 11:46	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			01/08/21 11:46	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			01/08/21 11:46	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			01/08/21 11:46	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			01/08/21 11:46	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			01/08/21 11:46	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			01/08/21 11:46	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			01/08/21 11:46	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			01/08/21 11:46	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			01/08/21 11:46	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			01/08/21 11:46	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			01/08/21 11:46	1
1,4-Dioxane	ND		200	19	ug/L			01/08/21 11:46	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			01/08/21 11:46	1
2-Hexanone	ND		5.0	1.7	ug/L			01/08/21 11:46	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			01/08/21 11:46	1
Acetone	3.00	J	10	1.9	ug/L			01/08/21 11:46	1
Benzene	ND		1.0	0.16	ug/L			01/08/21 11:46	1
Bromoform	ND		1.0	0.46	ug/L			01/08/21 11:46	1
Bromomethane	ND		2.0	0.21	ug/L			01/08/21 11:46	1
Carbon disulfide	ND		2.0	0.17	ug/L			01/08/21 11:46	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			01/08/21 11:46	1
Chlorobenzene	ND		1.0	0.17	ug/L			01/08/21 11:46	1
Chlorobromomethane	ND		1.0	0.10	ug/L			01/08/21 11:46	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			01/08/21 11:46	1
Chloroethane	ND		2.0	0.41	ug/L			01/08/21 11:46	1
Chloroform	ND		1.0	0.16	ug/L			01/08/21 11:46	1
Chloromethane	ND		2.0	0.30	ug/L			01/08/21 11:46	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			01/08/21 11:46	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			01/08/21 11:46	1
Cyclohexane	ND		2.0	0.28	ug/L			01/08/21 11:46	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			01/08/21 11:46	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			01/08/21 11:46	1
Ethylbenzene	ND		1.0	0.16	ug/L			01/08/21 11:46	1
Isopropylbenzene	ND		1.0	0.19	ug/L			01/08/21 11:46	1
Methyl acetate	ND		5.0	1.6	ug/L			01/08/21 11:46	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			01/08/21 11:46	1
Methylcyclohexane	ND		1.0	0.10	ug/L			01/08/21 11:46	1
Methylene Chloride	ND		2.0	0.94	ug/L			01/08/21 11:46	1
m-Xylene & p-Xylene	ND		2.0	0.15	ug/L			01/08/21 11:46	1
o-Xylene	ND		1.0	0.19	ug/L			01/08/21 11:46	1
Styrene	ND		1.0	0.36	ug/L			01/08/21 11:46	1
Tetrachloroethene	ND		1.0	0.20	ug/L			01/08/21 11:46	1
Toluene	ND		1.0	0.17	ug/L			01/08/21 11:46	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			01/08/21 11:46	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-522940/9
Matrix: Water
Analysis Batch: 522940

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			01/08/21 11:46	1
Trichloroethene	ND		1.0	0.16	ug/L			01/08/21 11:46	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			01/08/21 11:46	1
Vinyl chloride	ND		1.0	0.10	ug/L			01/08/21 11:46	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		70 - 127		01/08/21 11:46	1
4-Bromofluorobenzene (Surr)	100		78 - 120		01/08/21 11:46	1
Dibromofluoromethane (Surr)	101		77 - 120		01/08/21 11:46	1
Toluene-d8 (Surr)	102		80 - 125		01/08/21 11:46	1

Lab Sample ID: LCS 280-522940/4
Matrix: Water
Analysis Batch: 522940

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	26.7		ug/L		107	65 - 135
1,1,1,2-Tetrachloroethane	25.0	24.6		ug/L		98	58 - 135
1,1,2-Trichloroethane	25.0	25.8		ug/L		103	64 - 135
1,1,2-Trichlorotrifluoroethane	25.0	29.8		ug/L		119	65 - 140
1,1-Dichloroethane	25.0	26.7		ug/L		107	65 - 135
1,1-Dichloroethene	25.0	27.9		ug/L		112	65 - 136
1,2,3-Trichlorobenzene	25.0	24.6		ug/L		98	60 - 135
1,2,4-Trichlorobenzene	25.0	24.9		ug/L		99	58 - 135
1,2-Dibromo-3-Chloropropane	25.0	23.8		ug/L		95	57 - 135
1,2-Dibromoethane	25.0	25.9		ug/L		104	65 - 135
1,2-Dichlorobenzene	25.0	25.2		ug/L		101	65 - 135
1,2-Dichloroethane	25.0	24.9		ug/L		100	65 - 135
1,2-Dichloropropane	25.0	26.6		ug/L		106	64 - 135
1,3-Dichlorobenzene	25.0	25.1		ug/L		100	65 - 135
1,4-Dichlorobenzene	25.0	25.8		ug/L		103	65 - 135
1,4-Dioxane	500	472		ug/L		94	31 - 147
2-Butanone (MEK)	100	94.4		ug/L		94	44 - 177
2-Hexanone	100	100		ug/L		100	57 - 139
4-Methyl-2-pentanone (MIBK)	100	98.8		ug/L		99	60 - 150
Acetone	100	99.6		ug/L		100	39 - 156
Benzene	25.0	26.0		ug/L		104	65 - 135
Bromoform	25.0	26.8		ug/L		107	62 - 135
Bromomethane	25.0	37.9	+	ug/L		152	45 - 135
Carbon disulfide	25.0	28.3		ug/L		113	55 - 143
Carbon tetrachloride	25.0	27.0		ug/L		108	65 - 135
Chlorobenzene	25.0	25.4		ug/L		102	65 - 135
Chlorobromomethane	25.0	25.6		ug/L		102	65 - 135
Chlorodibromomethane	25.0	27.3		ug/L		109	65 - 135
Chloroethane	25.0	22.5		ug/L		90	46 - 136
Chloroform	25.0	26.2		ug/L		105	65 - 135
Chloromethane	25.0	22.7		ug/L		91	34 - 145
cis-1,2-Dichloroethene	25.0	27.1		ug/L		108	65 - 135

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-522940/4
Matrix: Water
Analysis Batch: 522940

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,3-Dichloropropene	25.0	27.0		ug/L		108	65 - 135
Cyclohexane	25.0	26.6		ug/L		106	62 - 135
Dichlorobromomethane	25.0	27.3		ug/L		109	65 - 135
Dichlorodifluoromethane	25.0	25.1		ug/L		101	43 - 142
Ethylbenzene	25.0	25.6		ug/L		102	65 - 135
Isopropylbenzene	25.0	26.0		ug/L		104	65 - 135
Methyl acetate	50.0	49.2		ug/L		98	52 - 135
Methyl tert-butyl ether	25.0	27.1		ug/L		108	54 - 135
Methylcyclohexane	25.0	26.9		ug/L		108	63 - 135
Methylene Chloride	25.0	25.0		ug/L		100	54 - 141
m-Xylene & p-Xylene	25.0	25.8		ug/L		103	65 - 135
o-Xylene	25.0	25.6		ug/L		102	65 - 135
Styrene	25.0	26.1		ug/L		104	65 - 135
Tetrachloroethene	25.0	26.9		ug/L		108	65 - 135
Toluene	25.0	25.7		ug/L		103	65 - 135
trans-1,2-Dichloroethene	25.0	27.3		ug/L		109	65 - 135
trans-1,3-Dichloropropene	25.0	25.9		ug/L		104	65 - 135
Trichloroethene	25.0	26.3		ug/L		105	65 - 135
Trichlorofluoromethane	25.0	25.3		ug/L		101	53 - 137
Vinyl chloride	25.0	24.5		ug/L		98	40 - 137

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		70 - 127
4-Bromofluorobenzene (Surr)	101		78 - 120
Dibromofluoromethane (Surr)	102		77 - 120
Toluene-d8 (Surr)	100		80 - 125

Lab Sample ID: LCSD 280-522940/5
Matrix: Water
Analysis Batch: 522940

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	25.0	28.1		ug/L		112	65 - 135	5	20
1,1,2,2-Tetrachloroethane	25.0	24.9		ug/L		100	58 - 135	1	20
1,1,2-Trichloroethane	25.0	25.5		ug/L		102	64 - 135	2	27
1,1,2-Trichlorotrifluoroethane	25.0	31.1		ug/L		125	65 - 140	4	20
1,1-Dichloroethane	25.0	27.4		ug/L		110	65 - 135	3	21
1,1-Dichloroethene	25.0	29.7		ug/L		119	65 - 136	6	20
1,2,3-Trichlorobenzene	25.0	25.0		ug/L		100	60 - 135	2	36
1,2,4-Trichlorobenzene	25.0	24.6		ug/L		99	58 - 135	1	25
1,2-Dibromo-3-Chloropropane	25.0	24.4		ug/L		97	57 - 135	2	22
1,2-Dibromoethane	25.0	25.5		ug/L		102	65 - 135	1	27
1,2-Dichlorobenzene	25.0	25.0		ug/L		100	65 - 135	1	20
1,2-Dichloroethane	25.0	24.7		ug/L		99	65 - 135	1	20
1,2-Dichloropropane	25.0	26.7		ug/L		107	64 - 135	1	20
1,3-Dichlorobenzene	25.0	25.7		ug/L		103	65 - 135	2	20
1,4-Dichlorobenzene	25.0	25.6		ug/L		102	65 - 135	1	23
1,4-Dioxane	500	457		ug/L		91	31 - 147	3	30

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-522940/5
Matrix: Water
Analysis Batch: 522940

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Butanone (MEK)	100	98.3		ug/L		98	44 - 177	4	32
2-Hexanone	100	105		ug/L		105	57 - 139	5	25
4-Methyl-2-pentanone (MIBK)	100	100		ug/L		100	60 - 150	2	22
Acetone	100	95.4		ug/L		95	39 - 156	4	23
Benzene	25.0	26.7		ug/L		107	65 - 135	3	20
Bromoform	25.0	26.5		ug/L		106	62 - 135	1	27
Bromomethane	25.0	35.5	*+	ug/L		142	45 - 135	7	33
Carbon disulfide	25.0	29.5		ug/L		118	55 - 143	4	20
Carbon tetrachloride	25.0	28.3		ug/L		113	65 - 135	5	21
Chlorobenzene	25.0	26.0		ug/L		104	65 - 135	2	20
Chlorobromomethane	25.0	25.7		ug/L		103	65 - 135	0	29
Chlorodibromomethane	25.0	27.4		ug/L		110	65 - 135	0	20
Chloroethane	25.0	23.3		ug/L		93	46 - 136	4	25
Chloroform	25.0	26.4		ug/L		106	65 - 135	1	20
Chloromethane	25.0	23.8		ug/L		95	34 - 145	4	24
cis-1,2-Dichloroethene	25.0	27.5		ug/L		110	65 - 135	1	20
cis-1,3-Dichloropropene	25.0	27.1		ug/L		108	65 - 135	0	26
Cyclohexane	25.0	28.6		ug/L		115	62 - 135	7	20
Dichlorobromomethane	25.0	26.4		ug/L		105	65 - 135	4	20
Dichlorodifluoromethane	25.0	26.3		ug/L		105	43 - 142	5	30
Ethylbenzene	25.0	26.5		ug/L		106	65 - 135	3	20
Isopropylbenzene	25.0	26.9		ug/L		108	65 - 135	4	20
Methyl acetate	50.0	51.0		ug/L		102	52 - 135	4	27
Methyl tert-butyl ether	25.0	26.3		ug/L		105	54 - 135	3	21
Methylcyclohexane	25.0	28.4		ug/L		113	63 - 135	5	20
Methylene Chloride	25.0	24.9		ug/L		100	54 - 141	0	26
m-Xylene & p-Xylene	25.0	26.6		ug/L		107	65 - 135	3	20
o-Xylene	25.0	26.1		ug/L		104	65 - 135	2	20
Styrene	25.0	26.1		ug/L		105	65 - 135	0	26
Tetrachloroethene	25.0	27.9		ug/L		112	65 - 135	4	20
Toluene	25.0	26.2		ug/L		105	65 - 135	2	20
trans-1,2-Dichloroethene	25.0	28.7		ug/L		115	65 - 135	5	24
trans-1,3-Dichloropropene	25.0	25.1		ug/L		100	65 - 135	3	26
Trichloroethene	25.0	26.8		ug/L		107	65 - 135	2	20
Trichlorofluoromethane	25.0	27.3		ug/L		109	53 - 137	8	27
Vinyl chloride	25.0	26.3		ug/L		105	40 - 137	7	24

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	97		70 - 127
4-Bromofluorobenzene (Surr)	101		78 - 120
Dibromofluoromethane (Surr)	100		77 - 120
Toluene-d8 (Surr)	101		80 - 125

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-522806/1-A
Matrix: Solid
Analysis Batch: 523769

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 522806

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1'-Biphenyl	ND		330	24	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
1,2,4,5-Tetrachlorobenzene	ND		330	49	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
1,2,4-Trichlorobenzene	ND		330	28	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
1,2-Dichlorobenzene	ND		330	22	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		330	22	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
1,3-Dichlorobenzene	ND		330	12	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
1,3-Dinitrobenzene	ND		330	71	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
1,4-Dichlorobenzene	ND		330	14	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
1,4-Dioxane	ND		660	66	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
1-Methylnaphthalene	ND		330	11	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
2,2'-oxybis[1-chloropropane]	ND		330	23	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
2,3,4,6-Tetrachlorophenol	ND		1600	140	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
2,4,5-Trichlorophenol	ND		330	10	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
2,4,6-Trichlorophenol	ND		330	10	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
2,4-Dichlorophenol	ND		330	10	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
2,4-Dimethylphenol	ND		330	66	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
2,4-Dinitrophenol	ND		1600	330	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
2,4-Dinitrotoluene	ND		330	66	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
2,6-Dichlorophenol	ND		330	22	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
2,6-Dinitrotoluene	ND		330	28	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
2-Chloronaphthalene	ND		330	10	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
2-Chlorophenol	ND		330	21	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
2-Methylnaphthalene	ND		330	19	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
2-Methylphenol	ND		330	13	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
2-Nitroaniline	ND		1600	50	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
2-Nitrophenol	ND		330	10	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
3 & 4 Methylphenol	ND		330	33	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
3,3'-Dichlorobenzidine	ND		660	90	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
3-Methylphenol	ND		330	33	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
3-Nitroaniline	ND		1600	73	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
4,6-Dinitro-2-methylphenol	ND		1600	330	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
4-Bromophenyl phenyl ether	ND		330	19	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
4-Chloro-3-methylphenol	ND		330	25	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
4-Chloroaniline	ND		330	82	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
4-Chlorophenyl phenyl ether	ND		330	21	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
4-Methylphenol	ND		330	33	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
4-Nitroaniline	ND		1600	73	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
4-Nitrophenol	ND		1600	97	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Acenaphthene	ND		330	10	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Acenaphthylene	ND		330	82	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Acetophenone	ND		330	20	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Aniline	ND		330	130	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Anthracene	ND		330	17	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Azobenzene	ND		330	22	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Benzaldehyde	ND		330	67	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Benzidine	ND		3300	990	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Benzo[a]anthracene	ND		330	20	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Benzo[a]pyrene	ND		330	20	ug/Kg		01/07/21 10:47	01/17/21 23:28	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-522806/1-A
Matrix: Solid
Analysis Batch: 523769

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 522806

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND		330	26	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Benzo[g,h,i]perylene	ND		330	16	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Benzo[k]fluoranthene	ND		330	40	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Benzoic acid	ND		1600	330	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Benzyl alcohol	ND		330	10	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Bis(2-chloroethoxy)methane	ND		330	23	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Bis(2-chloroethyl)ether	ND		330	17	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Bis(2-ethylhexyl) phthalate	ND		330	46	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Butyl benzyl phthalate	ND		330	43	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Caprolactam	ND		330	110	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Carbazole	ND		330	36	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Chrysene	ND		330	27	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Dibenz(a,h)anthracene	ND		330	19	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Dibenzofuran	ND		330	20	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Diethyl phthalate	ND		660	26	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Dimethyl phthalate	ND		330	23	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Di-n-butyl phthalate	ND		330	29	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Di-n-octyl phthalate	ND		330	41	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Diphenylamine	ND		330	44	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Famphur	ND		660	34	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Fluoranthene	ND		330	36	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Fluorene	ND		330	18	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Hexachlorobenzene	ND		330	29	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Hexachlorobutadiene	ND		330	10	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Hexachlorocyclopentadiene	ND		1600	110	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Hexachloroethane	ND		330	21	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Hexadecane	ND		330	13	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Indeno[1,2,3-cd]pyrene	ND		330	22	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Isophorone	ND		330	17	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Naphthalene	ND		330	31	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Nitrobenzene	ND		330	22	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
N-Nitrosodimethylamine	ND		330	37	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
N-Nitrosodi-n-propylamine	ND		330	68	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
N-Nitrosodiphenylamine	ND		330	21	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Pentachlorophenol	ND		1600	330	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Phenanthrene	ND		330	17	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Phenol	ND		330	18	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Pyrene	ND		330	12	ug/Kg		01/07/21 10:47	01/17/21 23:28	1
Pyridine	ND		660	40	ug/Kg		01/07/21 10:47	01/17/21 23:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	61		35 - 120	01/07/21 10:47	01/17/21 23:28	1
2-Fluorobiphenyl	50		46 - 120	01/07/21 10:47	01/17/21 23:28	1
2-Fluorophenol (Surr)	42	S1-	43 - 120	01/07/21 10:47	01/17/21 23:28	1
Nitrobenzene-d5 (Surr)	46		46 - 120	01/07/21 10:47	01/17/21 23:28	1
Phenol-d5 (Surr)	44	S1-	46 - 120	01/07/21 10:47	01/17/21 23:28	1
Terphenyl-d14 (Surr)	91		46 - 120	01/07/21 10:47	01/17/21 23:28	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-522806/2-A
Matrix: Solid
Analysis Batch: 523769

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 522806
%Rec. Limits

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1'-Biphenyl	2670	2030		ug/Kg		76	60 - 120
1,2,4,5-Tetrachlorobenzene	2670	1950		ug/Kg		73	60 - 120
1,2,4-Trichlorobenzene	2670	1840		ug/Kg		69	59 - 120
1,2-Dichlorobenzene	2670	1760		ug/Kg		66	57 - 120
1,2-Diphenylhydrazine(as Azobenzene)	2700	2030		ug/Kg		75	60 - 120
1,3-Dichlorobenzene	2670	1700		ug/Kg		64	56 - 120
1,3-Dinitrobenzene	2670	2160		ug/Kg		81	66 - 120
1,4-Dichlorobenzene	2670	1770		ug/Kg		66	57 - 120
1,4-Dioxane	2670	1230		ug/Kg		46	28 - 120
1-Methylnaphthalene	2670	1960		ug/Kg		73	57 - 120
2,2'-oxybis[1-chloropropane]	2670	1730		ug/Kg		65	46 - 120
2,3,4,6-Tetrachlorophenol	2670	2080		ug/Kg		78	63 - 120
2,4,5-Trichlorophenol	2670	2020		ug/Kg		76	65 - 120
2,4,6-Trichlorophenol	2670	2050		ug/Kg		77	64 - 120
2,4-Dichlorophenol	2670	1910		ug/Kg		72	64 - 120
2,4-Dimethylphenol	2670	1900		ug/Kg		71	60 - 120
2,4-Dinitrophenol	5330	3230		ug/Kg		60	52 - 120
2,4-Dinitrotoluene	2670	2190		ug/Kg		82	68 - 120
2,6-Dichlorophenol	2670	1960		ug/Kg		73	30 - 150
2,6-Dinitrotoluene	2670	2070		ug/Kg		78	68 - 120
2-Chloronaphthalene	2670	2030		ug/Kg		76	61 - 120
2-Chlorophenol	2670	1760		ug/Kg		66	62 - 120
2-Methylnaphthalene	2670	1920		ug/Kg		72	60 - 120
2-Methylphenol	2670	1950		ug/Kg		73	61 - 120
2-Nitroaniline	2670	1940		ug/Kg		73	63 - 120
2-Nitrophenol	2670	1850		ug/Kg		69	61 - 120
3 & 4 Methylphenol	2670	1910		ug/Kg		72	62 - 120
3,3'-Dichlorobenzidine	5330	3810		ug/Kg		71	22 - 120
3-Methylphenol	2670	1910		ug/Kg		72	62 - 120
3-Nitroaniline	2670	1320	J	ug/Kg		50	40 - 120
4,6-Dinitro-2-methylphenol	5330	4120		ug/Kg		77	60 - 120
4-Bromophenyl phenyl ether	2670	2070		ug/Kg		78	66 - 120
4-Chloro-3-methylphenol	2670	1980		ug/Kg		74	62 - 120
4-Chloroaniline	2670	1080		ug/Kg		41	33 - 120
4-Chlorophenyl phenyl ether	2670	2110		ug/Kg		79	63 - 120
4-Methylphenol	2670	1910		ug/Kg		72	62 - 120
4-Nitroaniline	2670	1810		ug/Kg		68	58 - 120
4-Nitrophenol	5330	3950		ug/Kg		74	67 - 120
Acenaphthene	2670	1990		ug/Kg		75	62 - 120
Acenaphthylene	2670	1960		ug/Kg		74	64 - 120
Acetophenone	2670	1810		ug/Kg		68	48 - 120
Aniline	2670	815		ug/Kg		31	21 - 120
Anthracene	2670	2130		ug/Kg		80	66 - 120
Azobenzene	2670	2010		ug/Kg		75	59 - 120
Benzaldehyde	2000	842		ug/Kg		42	30 - 150
Benzidine	5330	ND		ug/Kg		5	5 - 120
Benzo[a]anthracene	2670	2100		ug/Kg		79	64 - 120
Benzo[a]pyrene	2670	2080		ug/Kg		78	65 - 120

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-522806/2-A
Matrix: Solid
Analysis Batch: 523769

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 522806

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Benzo[b]fluoranthene	2670	2090		ug/Kg		78	58 - 120
Benzo[g,h,i]perylene	2670	2100		ug/Kg		79	58 - 120
Benzo[k]fluoranthene	2670	2250		ug/Kg		84	62 - 120
Benzoic acid	2670	1660		ug/Kg		62	51 - 120
Benzyl alcohol	2670	1710		ug/Kg		64	61 - 120
Bis(2-chloroethoxy)methane	2670	1860		ug/Kg		70	58 - 120
Bis(2-chloroethyl)ether	2670	1870		ug/Kg		70	57 - 120
Bis(2-ethylhexyl) phthalate	2670	2130		ug/Kg		80	65 - 120
Butyl benzyl phthalate	2670	2140		ug/Kg		80	65 - 120
Caprolactam	2000	1990		ug/Kg		100	20 - 138
Carbazole	2670	2110		ug/Kg		79	65 - 120
Chrysene	2670	2200		ug/Kg		82	65 - 120
Dibenz(a,h)anthracene	2670	2110		ug/Kg		79	56 - 120
Dibenzofuran	2670	2050		ug/Kg		77	65 - 120
Diethyl phthalate	2670	2100		ug/Kg		79	68 - 120
Dimethyl phthalate	2670	2090		ug/Kg		78	66 - 120
Di-n-butyl phthalate	2670	2110		ug/Kg		79	66 - 120
Di-n-octyl phthalate	2670	2050		ug/Kg		77	55 - 120
Diphenylamine	2270	1750		ug/Kg		77	30 - 150
Fluoranthene	2670	2140		ug/Kg		80	64 - 120
Fluorene	2670	2050		ug/Kg		77	66 - 120
Hexachlorobenzene	2670	2130		ug/Kg		80	65 - 120
Hexachlorobutadiene	2670	1880		ug/Kg		71	58 - 120
Hexachlorocyclopentadiene	5330	3520		ug/Kg		66	43 - 120
Hexachloroethane	2670	1750		ug/Kg		65	56 - 120
Hexadecane	2670	1980		ug/Kg		74	45 - 135
Indeno[1,2,3-cd]pyrene	2670	1950		ug/Kg		73	46 - 120
Isophorone	2670	1830		ug/Kg		69	56 - 120
Naphthalene	2670	1910		ug/Kg		72	59 - 120
Nitrobenzene	2670	1860		ug/Kg		70	55 - 120
N-Nitrosodimethylamine	2670	1590		ug/Kg		60	50 - 120
N-Nitrosodi-n-propylamine	2670	1910		ug/Kg		72	52 - 120
N-Nitrosodiphenylamine	2670	2070		ug/Kg		78	65 - 120
Pentachlorophenol	5330	3580		ug/Kg		67	50 - 120
Phenanthrene	2670	2090		ug/Kg		78	67 - 120
Phenol	2670	1660	*-	ug/Kg		62	63 - 120
Pyrene	2670	2160		ug/Kg		81	66 - 120
Pyridine	5330	1930	*-	ug/Kg		36	37 - 120

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	75		35 - 120
2-Fluorobiphenyl	70		46 - 120
2-Fluorophenol (Surr)	61		43 - 120
Nitrobenzene-d5 (Surr)	66		46 - 120
Phenol-d5 (Surr)	65		46 - 120
Terphenyl-d14 (Surr)	88		46 - 120

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-144325-1 MS

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 523769

Prep Batch: 522806

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
1,1'-Biphenyl	ND		2810	1770		ug/Kg	*	63	60 - 120
1,2,4,5-Tetrachlorobenzene	ND		2810	1690		ug/Kg	*	60	60 - 120
1,2,4-Trichlorobenzene	ND	F1	2810	1540	F1	ug/Kg	*	55	59 - 120
1,2-Dichlorobenzene	ND	F1	2810	1450	F1	ug/Kg	*	52	57 - 120
1,2-Diphenylhydrazine(as Azobenzene)	ND		2840	1950		ug/Kg	*	69	60 - 120
1,3-Dichlorobenzene	ND	F1	2810	1400	F1	ug/Kg	*	50	56 - 120
1,3-Dinitrobenzene	ND		2810	2120		ug/Kg	*	75	66 - 120
1,4-Dichlorobenzene	ND	F1	2810	1460	F1	ug/Kg	*	52	57 - 120
1,4-Dioxane	ND		2810	1080		ug/Kg	*	38	28 - 120
1-Methylnaphthalene	ND		2810	1700		ug/Kg	*	60	57 - 120
2,2'-oxybis[1-chloropropane]	ND		2810	1450		ug/Kg	*	52	46 - 120
2,3,4,6-Tetrachlorophenol	ND		2810	1950		ug/Kg	*	69	63 - 120
2,4,5-Trichlorophenol	ND		2810	1900		ug/Kg	*	68	65 - 120
2,4,6-Trichlorophenol	ND		2810	1820		ug/Kg	*	65	64 - 120
2,4-Dichlorophenol	ND	F1	2810	1610	F1	ug/Kg	*	57	64 - 120
2,4-Dimethylphenol	ND	F1	2810	1540	F1	ug/Kg	*	55	60 - 120
2,4-Dinitrophenol	ND		5620	3100		ug/Kg	*	55	52 - 120
2,4-Dinitrotoluene	ND		2810	2170		ug/Kg	*	77	68 - 120
2,6-Dichlorophenol	ND		2810	1630		ug/Kg	*	58	30 - 150
2,6-Dinitrotoluene	ND		2810	1950		ug/Kg	*	69	68 - 120
2-Chloronaphthalene	ND		2810	1760		ug/Kg	*	63	61 - 120
2-Chlorophenol	ND	F1	2810	1460	F1	ug/Kg	*	52	62 - 120
2-Methylnaphthalene	ND	F1	2810	1670	F1	ug/Kg	*	59	60 - 120
2-Methylphenol	ND	F1	2810	1660	F1	ug/Kg	*	59	61 - 120
2-Nitroaniline	ND		2810	1870		ug/Kg	*	66	63 - 120
2-Nitrophenol	ND	F1	2810	1550	F1	ug/Kg	*	55	61 - 120
3 & 4 Methylphenol	ND	F1	2810	1660	F1	ug/Kg	*	59	62 - 120
3,3'-Dichlorobenzidine	ND		5620	3820		ug/Kg	*	68	22 - 120
3-Methylphenol	ND	F1	2810	1660	F1	ug/Kg	*	59	62 - 120
3-Nitroaniline	ND		2810	1680	J	ug/Kg	*	60	40 - 120
4,6-Dinitro-2-methylphenol	ND		5620	4070		ug/Kg	*	72	60 - 120
4-Bromophenyl phenyl ether	ND		2810	2040		ug/Kg	*	73	66 - 120
4-Chloro-3-methylphenol	ND		2810	1840		ug/Kg	*	66	62 - 120
4-Chloroaniline	ND		2810	1410		ug/Kg	*	50	33 - 120
4-Chlorophenyl phenyl ether	ND		2810	1950		ug/Kg	*	69	63 - 120
4-Methylphenol	ND	F1	2810	1660	F1	ug/Kg	*	59	62 - 120
4-Nitroaniline	ND		2810	1820		ug/Kg	*	65	58 - 120
4-Nitrophenol	ND		5620	3830		ug/Kg	*	68	67 - 120
Acenaphthene	ND		2810	1820		ug/Kg	*	65	62 - 120
Acenaphthylene	ND	F1	2810	1740	F1	ug/Kg	*	62	64 - 120
Acetophenone	ND		2810	1460		ug/Kg	*	52	48 - 120
Aniline	ND		2810	1000		ug/Kg	*	36	21 - 120
Anthracene	ND		2810	2090		ug/Kg	*	74	66 - 120
Azobenzene	ND		2810	1930		ug/Kg	*	69	59 - 120
Benzaldehyde	ND		2110	1580		ug/Kg	*	75	30 - 150
Benzidine	ND	F1	5620	ND	F1	ug/Kg	*	0	5 - 120
Benzo[a]anthracene	ND		2810	2010		ug/Kg	*	71	64 - 120
Benzo[a]pyrene	ND		2810	1980		ug/Kg	*	70	65 - 120

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-144325-1 MS

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 523769

Prep Batch: 522806

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
Benzo[b]fluoranthene	ND		2810	2030		ug/Kg	☼	72	58 - 120
Benzo[g,h,i]perylene	ND		2810	1930		ug/Kg	☼	69	58 - 120
Benzo[k]fluoranthene	ND		2810	2210		ug/Kg	☼	78	62 - 120
Benzoic acid	ND	F1	2810	1290	J F1	ug/Kg	☼	46	51 - 120
Benzyl alcohol	ND	F1	2810	1480	F1	ug/Kg	☼	53	61 - 120
Bis(2-chloroethoxy)methane	ND	F1	2810	1590	F1	ug/Kg	☼	57	58 - 120
Bis(2-chloroethyl)ether	ND	F1	2810	1570	F1	ug/Kg	☼	56	57 - 120
Bis(2-ethylhexyl) phthalate	ND		2810	2070		ug/Kg	☼	74	65 - 120
Butyl benzyl phthalate	ND		2810	2060		ug/Kg	☼	73	65 - 120
Caprolactam	ND		2110	1940		ug/Kg	☼	92	20 - 138
Carbazole	ND		2810	2080		ug/Kg	☼	74	65 - 120
Chrysene	ND		2810	2090		ug/Kg	☼	74	65 - 120
Dibenz(a,h)anthracene	ND		2810	2000		ug/Kg	☼	71	56 - 120
Dibenzofuran	ND		2810	1880		ug/Kg	☼	67	65 - 120
Diethyl phthalate	ND		2810	2080		ug/Kg	☼	74	68 - 120
Dimethyl phthalate	ND		2810	2020		ug/Kg	☼	72	66 - 120
Di-n-butyl phthalate	ND		2810	2110		ug/Kg	☼	75	66 - 120
Di-n-octyl phthalate	ND		2810	2030		ug/Kg	☼	72	55 - 120
Diphenylamine	ND		2390	1620		ug/Kg	☼	68	30 - 150
Fluoranthene	ND		2810	2050		ug/Kg	☼	73	64 - 120
Fluorene	ND		2810	1940		ug/Kg	☼	69	66 - 120
Hexachlorobenzene	ND		2810	2030		ug/Kg	☼	72	65 - 120
Hexachlorobutadiene	ND	F1	2810	1530	F1	ug/Kg	☼	54	58 - 120
Hexachlorocyclopentadiene	ND		5620	2840		ug/Kg	☼	51	43 - 120
Hexachloroethane	ND	F1	2810	1420	F1	ug/Kg	☼	51	56 - 120
Hexadecane	ND		2810	1800		ug/Kg	☼	64	45 - 135
Indeno[1,2,3-cd]pyrene	ND		2810	1760		ug/Kg	☼	63	46 - 120
Isophorone	ND		2810	1570		ug/Kg	☼	56	56 - 120
Naphthalene	ND	F1	2810	1590	F1	ug/Kg	☼	56	59 - 120
Nitrobenzene	ND		2810	1610		ug/Kg	☼	57	55 - 120
N-Nitrosodimethylamine	ND		2810	1390		ug/Kg	☼	50	50 - 120
N-Nitrosodi-n-propylamine	ND		2810	1640		ug/Kg	☼	58	52 - 120
N-Nitrosodiphenylamine	ND		2810	1940		ug/Kg	☼	69	65 - 120
Pentachlorophenol	ND		5620	3270		ug/Kg	☼	58	50 - 120
Phenanthrene	ND		2810	2050		ug/Kg	☼	73	67 - 120
Phenol	ND	*- F1	2810	1430	F1	ug/Kg	☼	51	63 - 120
Pyrene	ND		2810	2120		ug/Kg	☼	75	66 - 120
Pyridine	ND	*- F1 F2	5620	2050	F1	ug/Kg	☼	36	37 - 120

Surrogate	MS %Recovery	MS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	69		35 - 120
2-Fluorobiphenyl	58		46 - 120
2-Fluorophenol (Surr)	49		43 - 120
Nitrobenzene-d5 (Surr)	53		46 - 120
Phenol-d5 (Surr)	53		46 - 120
Terphenyl-d14 (Surr)	85		46 - 120

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-144325-1 MSD

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 523769

Prep Batch: 522806

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
	Result	Qualifier	Added	Result	Qualifier						
1,1'-Biphenyl	ND		2760	2130		ug/Kg	*	77	60 - 120	18	30
1,2,4,5-Tetrachlorobenzene	ND		2760	2050		ug/Kg	*	74	60 - 120	19	30
1,2,4-Trichlorobenzene	ND	F1	2760	2000		ug/Kg	*	73	59 - 120	26	30
1,2-Dichlorobenzene	ND	F1	2760	1850		ug/Kg	*	67	57 - 120	24	30
1,2-Diphenylhydrazine(as Azobenzene)	ND		2790	2130		ug/Kg	*	76	60 - 120	9	30
1,3-Dichlorobenzene	ND	F1	2760	1770		ug/Kg	*	64	56 - 120	23	30
1,3-Dinitrobenzene	ND		2760	2240		ug/Kg	*	81	66 - 120	5	30
1,4-Dichlorobenzene	ND	F1	2760	1840		ug/Kg	*	67	57 - 120	23	30
1,4-Dioxane	ND		2760	1400		ug/Kg	*	51	28 - 120	26	30
1-Methylnaphthalene	ND		2760	2090		ug/Kg	*	76	57 - 120	21	30
2,2'-oxybis[1-chloropropane]	ND		2760	1870		ug/Kg	*	68	46 - 120	25	30
2,3,4,6-Tetrachlorophenol	ND		2760	2090		ug/Kg	*	76	63 - 120	7	30
2,4,5-Trichlorophenol	ND		2760	2110		ug/Kg	*	76	65 - 120	10	30
2,4,6-Trichlorophenol	ND		2760	2110		ug/Kg	*	77	64 - 120	15	30
2,4-Dichlorophenol	ND	F1	2760	2000		ug/Kg	*	73	64 - 120	22	30
2,4-Dimethylphenol	ND	F1	2760	1960		ug/Kg	*	71	60 - 120	24	30
2,4-Dinitrophenol	ND		5520	3400		ug/Kg	*	62	52 - 120	9	30
2,4-Dinitrotoluene	ND		2760	2260		ug/Kg	*	82	68 - 120	4	30
2,6-Dichlorophenol	ND		2760	2050		ug/Kg	*	74	30 - 150	23	30
2,6-Dinitrotoluene	ND		2760	2160		ug/Kg	*	78	68 - 120	10	30
2-Chloronaphthalene	ND		2760	2120		ug/Kg	*	77	61 - 120	18	30
2-Chlorophenol	ND	F1	2760	1890		ug/Kg	*	68	62 - 120	26	30
2-Methylnaphthalene	ND	F1	2760	2050		ug/Kg	*	74	60 - 120	21	30
2-Methylphenol	ND	F1	2760	2070		ug/Kg	*	75	61 - 120	22	30
2-Nitroaniline	ND		2760	2080		ug/Kg	*	75	63 - 120	10	30
2-Nitrophenol	ND	F1	2760	2030		ug/Kg	*	74	61 - 120	26	30
3 & 4 Methylphenol	ND	F1	2760	2020		ug/Kg	*	73	62 - 120	20	30
3,3'-Dichlorobenzidine	ND		5520	3920		ug/Kg	*	71	22 - 120	3	30
3-Methylphenol	ND	F1	2760	2020		ug/Kg	*	73	62 - 120	20	30
3-Nitroaniline	ND		2760	1760		ug/Kg	*	64	40 - 120	5	30
4,6-Dinitro-2-methylphenol	ND		5520	4330		ug/Kg	*	79	60 - 120	6	30
4-Bromophenyl phenyl ether	ND		2760	2130		ug/Kg	*	77	66 - 120	4	30
4-Chloro-3-methylphenol	ND		2760	2070		ug/Kg	*	75	62 - 120	12	30
4-Chloroaniline	ND		2760	1550		ug/Kg	*	56	33 - 120	10	30
4-Chlorophenyl phenyl ether	ND		2760	2140		ug/Kg	*	78	63 - 120	9	30
4-Methylphenol	ND	F1	2760	2020		ug/Kg	*	73	62 - 120	20	30
4-Nitroaniline	ND		2760	1940		ug/Kg	*	70	58 - 120	6	30
4-Nitrophenol	ND		5520	3870		ug/Kg	*	70	67 - 120	1	30
Acenaphthene	ND		2760	2140		ug/Kg	*	78	62 - 120	16	30
Acenaphthylene	ND	F1	2760	2050		ug/Kg	*	74	64 - 120	16	30
Acetophenone	ND		2760	1810		ug/Kg	*	66	48 - 120	22	30
Aniline	ND		2760	1140		ug/Kg	*	41	21 - 120	13	30
Anthracene	ND		2760	2190		ug/Kg	*	80	66 - 120	5	30
Azobenzene	ND		2760	2110		ug/Kg	*	76	59 - 120	9	30
Benzaldehyde	ND		2070	1770		ug/Kg	*	85	30 - 150	11	50
Benzidine	ND	F1	5520	ND	F1	ug/Kg	*	0	5 - 120	NC	50
Benzo[a]anthracene	ND		2760	2170		ug/Kg	*	79	64 - 120	8	30
Benzo[a]pyrene	ND		2760	2160		ug/Kg	*	78	65 - 120	9	30

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-144325-1 MSD

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 523769

Prep Batch: 522806

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Benzo[b]fluoranthene	ND		2760	2170		ug/Kg	*	79	58 - 120	7	30
Benzo[g,h,i]perylene	ND		2760	2020		ug/Kg	*	73	58 - 120	5	30
Benzo[k]fluoranthene	ND		2760	2320		ug/Kg	*	84	62 - 120	5	30
Benzoic acid	ND	F1	2760	1600	J	ug/Kg	*	58	51 - 120	21	30
Benzyl alcohol	ND	F1	2760	1840		ug/Kg	*	67	61 - 120	22	30
Bis(2-chloroethoxy)methane	ND	F1	2760	2030		ug/Kg	*	73	58 - 120	24	30
Bis(2-chloroethyl)ether	ND	F1	2760	2050		ug/Kg	*	74	57 - 120	26	30
Bis(2-ethylhexyl) phthalate	ND		2760	2150		ug/Kg	*	78	65 - 120	4	30
Butyl benzyl phthalate	ND		2760	2150		ug/Kg	*	78	65 - 120	4	30
Caprolactam	ND		2070	2110		ug/Kg	*	102	20 - 138	8	30
Carbazole	ND		2760	2160		ug/Kg	*	78	65 - 120	4	30
Chrysene	ND		2760	2180		ug/Kg	*	79	65 - 120	4	30
Dibenz(a,h)anthracene	ND		2760	2040		ug/Kg	*	74	56 - 120	2	30
Dibenzofuran	ND		2760	2130		ug/Kg	*	77	65 - 120	12	30
Diethyl phthalate	ND		2760	2180		ug/Kg	*	79	68 - 120	5	30
Dimethyl phthalate	ND		2760	2200		ug/Kg	*	80	66 - 120	9	30
Di-n-butyl phthalate	ND		2760	2200		ug/Kg	*	80	66 - 120	4	30
Di-n-octyl phthalate	ND		2760	2090		ug/Kg	*	76	55 - 120	3	30
Diphenylamine	ND		2340	1750		ug/Kg	*	75	30 - 150	8	50
Fluoranthene	ND		2760	2190		ug/Kg	*	80	64 - 120	7	30
Fluorene	ND		2760	2130		ug/Kg	*	77	66 - 120	9	30
Hexachlorobenzene	ND		2760	2170		ug/Kg	*	79	65 - 120	7	30
Hexachlorobutadiene	ND	F1	2760	2040		ug/Kg	*	74	58 - 120	29	30
Hexachlorocyclopentadiene	ND		5520	3590		ug/Kg	*	65	43 - 120	23	30
Hexachloroethane	ND	F1	2760	1820		ug/Kg	*	66	56 - 120	25	30
Hexadecane	ND		2760	2090		ug/Kg	*	76	45 - 135	15	30
Indeno[1,2,3-cd]pyrene	ND		2760	1740		ug/Kg	*	63	46 - 120	1	30
Isophorone	ND		2760	1970		ug/Kg	*	71	56 - 120	23	30
Naphthalene	ND	F1	2760	2060		ug/Kg	*	75	59 - 120	26	30
Nitrobenzene	ND		2760	2040		ug/Kg	*	74	55 - 120	24	30
N-Nitrosodimethylamine	ND		2760	1750		ug/Kg	*	64	50 - 120	23	30
N-Nitrosodi-n-propylamine	ND		2760	2030		ug/Kg	*	74	52 - 120	21	30
N-Nitrosodiphenylamine	ND		2760	2080		ug/Kg	*	75	65 - 120	7	30
Pentachlorophenol	ND		5520	3510		ug/Kg	*	64	50 - 120	7	30
Phenanthrene	ND		2760	2130		ug/Kg	*	77	67 - 120	4	30
Phenol	ND	*- F1	2760	1820		ug/Kg	*	66	63 - 120	24	30
Pyrene	ND		2760	2260		ug/Kg	*	82	66 - 120	6	30
Pyridine	ND	*- F1 F2	5520	2790	F2	ug/Kg	*	51	37 - 120	31	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	77		35 - 120
2-Fluorobiphenyl	73		46 - 120
2-Fluorophenol (Surr)	66		43 - 120
Nitrobenzene-d5 (Surr)	70		46 - 120
Phenol-d5 (Surr)	67		46 - 120
Terphenyl-d14 (Surr)	89		46 - 120

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-523230/1-A
Matrix: Water
Analysis Batch: 524058

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523230

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1'-Biphenyl	ND		10	1.8	ug/L		01/12/21 11:33	01/19/21 23:10	1
1,2,4,5-Tetrachlorobenzene	ND		10	1.7	ug/L		01/12/21 11:33	01/19/21 23:10	1
1,2,4-Trichlorobenzene	ND		4.0	0.59	ug/L		01/12/21 11:33	01/19/21 23:10	1
1,2-Dichlorobenzene	ND		4.0	0.23	ug/L		01/12/21 11:33	01/19/21 23:10	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		10	0.23	ug/L		01/12/21 11:33	01/19/21 23:10	1
1,3-Dichlorobenzene	ND		10	0.30	ug/L		01/12/21 11:33	01/19/21 23:10	1
1,3-Dinitrobenzene	ND		10	2.0	ug/L		01/12/21 11:33	01/19/21 23:10	1
1,4-Dichlorobenzene	ND		4.0	1.3	ug/L		01/12/21 11:33	01/19/21 23:10	1
1,4-Dioxane	ND		20	0.45	ug/L		01/12/21 11:33	01/19/21 23:10	1
1-Methylnaphthalene	ND		4.0	0.23	ug/L		01/12/21 11:33	01/19/21 23:10	1
2,2'-oxybis[1-chloropropane]	ND		10	0.28	ug/L		01/12/21 11:33	01/19/21 23:10	1
2,3,4,6-Tetrachlorophenol	ND		50	2.0	ug/L		01/12/21 11:33	01/19/21 23:10	1
2,4,5-Trichlorophenol	ND		10	2.1	ug/L		01/12/21 11:33	01/19/21 23:10	1
2,4,6-Trichlorophenol	ND		10	0.29	ug/L		01/12/21 11:33	01/19/21 23:10	1
2,4-Dichlorophenol	ND		10	0.64	ug/L		01/12/21 11:33	01/19/21 23:10	1
2,4-Dimethylphenol	ND		10	0.58	ug/L		01/12/21 11:33	01/19/21 23:10	1
2,4-Dinitrophenol	ND		30	10	ug/L		01/12/21 11:33	01/19/21 23:10	1
2,4-Dinitrotoluene	ND		10	1.7	ug/L		01/12/21 11:33	01/19/21 23:10	1
2,6-Dichlorophenol	ND		10	1.4	ug/L		01/12/21 11:33	01/19/21 23:10	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		01/12/21 11:33	01/19/21 23:10	1
2-Chloronaphthalene	ND		4.0	0.26	ug/L		01/12/21 11:33	01/19/21 23:10	1
2-Chlorophenol	ND		10	2.0	ug/L		01/12/21 11:33	01/19/21 23:10	1
2-Methylnaphthalene	ND		4.0	1.5	ug/L		01/12/21 11:33	01/19/21 23:10	1
2-Methylphenol	ND		10	0.98	ug/L		01/12/21 11:33	01/19/21 23:10	1
2-Nitroaniline	ND		10	1.7	ug/L		01/12/21 11:33	01/19/21 23:10	1
2-Nitrophenol	ND		10	0.39	ug/L		01/12/21 11:33	01/19/21 23:10	1
3 & 4 Methylphenol	ND		10	0.25	ug/L		01/12/21 11:33	01/19/21 23:10	1
3,3'-Dichlorobenzidine	ND		50	2.0	ug/L		01/12/21 11:33	01/19/21 23:10	1
3-Methylphenol	ND		10	0.25	ug/L		01/12/21 11:33	01/19/21 23:10	1
3-Nitroaniline	ND		10	2.0	ug/L		01/12/21 11:33	01/19/21 23:10	1
4,6-Dinitro-2-methylphenol	ND		50	4.0	ug/L		01/12/21 11:33	01/19/21 23:10	1
4-Bromophenyl phenyl ether	ND		10	0.43	ug/L		01/12/21 11:33	01/19/21 23:10	1
4-Chloro-3-methylphenol	ND		10	2.4	ug/L		01/12/21 11:33	01/19/21 23:10	1
4-Chloroaniline	ND		10	2.1	ug/L		01/12/21 11:33	01/19/21 23:10	1
4-Chlorophenyl phenyl ether	ND		10	1.7	ug/L		01/12/21 11:33	01/19/21 23:10	1
4-Methylphenol	ND		10	0.25	ug/L		01/12/21 11:33	01/19/21 23:10	1
4-Nitroaniline	ND		10	2.0	ug/L		01/12/21 11:33	01/19/21 23:10	1
4-Nitrophenol	ND		10	1.2	ug/L		01/12/21 11:33	01/19/21 23:10	1
Acenaphthene	ND		4.0	0.28	ug/L		01/12/21 11:33	01/19/21 23:10	1
Acenaphthylene	ND		4.0	0.49	ug/L		01/12/21 11:33	01/19/21 23:10	1
Acetophenone	ND		10	0.24	ug/L		01/12/21 11:33	01/19/21 23:10	1
Aniline	ND		10	2.0	ug/L		01/12/21 11:33	01/19/21 23:10	1
Anthracene	ND		4.0	0.42	ug/L		01/12/21 11:33	01/19/21 23:10	1
Azobenzene	ND		4.0	0.23	ug/L		01/12/21 11:33	01/19/21 23:10	1
Benzaldehyde	ND		5.0	2.0	ug/L		01/12/21 11:33	01/19/21 23:10	1
Benzidine	ND		100	50	ug/L		01/12/21 11:33	01/19/21 23:10	1
Benzo[a]anthracene	ND		4.0	0.35	ug/L		01/12/21 11:33	01/19/21 23:10	1
Benzo[a]pyrene	ND		4.0	0.31	ug/L		01/12/21 11:33	01/19/21 23:10	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-523230/1-A
Matrix: Water
Analysis Batch: 524058

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523230

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND		4.0	0.53	ug/L		01/12/21 11:33	01/19/21 23:10	1
Benzo[g,h,i]perylene	ND		4.0	0.50	ug/L		01/12/21 11:33	01/19/21 23:10	1
Benzo[k]fluoranthene	ND		4.0	0.46	ug/L		01/12/21 11:33	01/19/21 23:10	1
Benzoic acid	ND		25	10	ug/L		01/12/21 11:33	01/19/21 23:10	1
Benzyl alcohol	ND		10	0.23	ug/L		01/12/21 11:33	01/19/21 23:10	1
Bis(2-chloroethoxy)methane	ND		10	0.97	ug/L		01/12/21 11:33	01/19/21 23:10	1
Bis(2-chloroethyl)ether	ND		10	0.83	ug/L		01/12/21 11:33	01/19/21 23:10	1
Bis(2-ethylhexyl) phthalate	ND		10	0.56	ug/L		01/12/21 11:33	01/19/21 23:10	1
Butyl benzyl phthalate	ND		4.0	1.0	ug/L		01/12/21 11:33	01/19/21 23:10	1
Caprolactam	ND		5.0	2.5	ug/L		01/12/21 11:33	01/19/21 23:10	1
Carbazole	ND		4.0	0.43	ug/L		01/12/21 11:33	01/19/21 23:10	1
Chrysene	ND		4.0	0.54	ug/L		01/12/21 11:33	01/19/21 23:10	1
Dibenz(a,h)anthracene	ND		4.0	0.51	ug/L		01/12/21 11:33	01/19/21 23:10	1
Dibenzofuran	ND		4.0	0.29	ug/L		01/12/21 11:33	01/19/21 23:10	1
Diethyl phthalate	ND		4.0	0.38	ug/L		01/12/21 11:33	01/19/21 23:10	1
Dimethyl phthalate	ND		4.0	0.21	ug/L		01/12/21 11:33	01/19/21 23:10	1
Di-n-butyl phthalate	ND		4.0	1.2	ug/L		01/12/21 11:33	01/19/21 23:10	1
Di-n-octyl phthalate	ND		4.0	0.35	ug/L		01/12/21 11:33	01/19/21 23:10	1
Diphenylamine	ND		10	1.1	ug/L		01/12/21 11:33	01/19/21 23:10	1
Famphur	ND		100	1.5	ug/L		01/12/21 11:33	01/19/21 23:10	1
Fluoranthene	ND		4.0	0.20	ug/L		01/12/21 11:33	01/19/21 23:10	1
Fluorene	ND		4.0	0.31	ug/L		01/12/21 11:33	01/19/21 23:10	1
Hexachlorobenzene	ND		10	0.66	ug/L		01/12/21 11:33	01/19/21 23:10	1
Hexachlorobutadiene	ND		10	3.3	ug/L		01/12/21 11:33	01/19/21 23:10	1
Hexachlorocyclopentadiene	ND		50	3.1	ug/L		01/12/21 11:33	01/19/21 23:10	1
Hexachloroethane	ND		10	0.98	ug/L		01/12/21 11:33	01/19/21 23:10	1
Hexadecane	ND		10	0.54	ug/L		01/12/21 11:33	01/19/21 23:10	1
Indeno[1,2,3-cd]pyrene	ND		4.0	0.65	ug/L		01/12/21 11:33	01/19/21 23:10	1
Isophorone	ND		10	0.21	ug/L		01/12/21 11:33	01/19/21 23:10	1
Naphthalene	ND		4.0	0.29	ug/L		01/12/21 11:33	01/19/21 23:10	1
Nitrobenzene	ND		10	0.81	ug/L		01/12/21 11:33	01/19/21 23:10	1
N-Nitrosodimethylamine	ND		10	0.29	ug/L		01/12/21 11:33	01/19/21 23:10	1
N-Nitrosodi-n-propylamine	ND		10	0.35	ug/L		01/12/21 11:33	01/19/21 23:10	1
N-Nitrosodiphenylamine	ND		10	0.44	ug/L		01/12/21 11:33	01/19/21 23:10	1
Pentachlorophenol	ND		50	20	ug/L		01/12/21 11:33	01/19/21 23:10	1
Phenanthrene	ND		4.0	0.26	ug/L		01/12/21 11:33	01/19/21 23:10	1
Phenol	ND		10	2.0	ug/L		01/12/21 11:33	01/19/21 23:10	1
Pyrene	ND		10	0.37	ug/L		01/12/21 11:33	01/19/21 23:10	1
Pyridine	ND		20	1.7	ug/L		01/12/21 11:33	01/19/21 23:10	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	61		42 - 131	01/12/21 11:33	01/19/21 23:10	1
2-Fluorobiphenyl	55		48 - 120	01/12/21 11:33	01/19/21 23:10	1
2-Fluorophenol (Surr)	50		41 - 120	01/12/21 11:33	01/19/21 23:10	1
Nitrobenzene-d5 (Surr)	57		42 - 120	01/12/21 11:33	01/19/21 23:10	1
Phenol-d5 (Surr)	53		45 - 124	01/12/21 11:33	01/19/21 23:10	1
Terphenyl-d14 (Surr)	92		20 - 130	01/12/21 11:33	01/19/21 23:10	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-523230/2-A
Matrix: Water
Analysis Batch: 524058

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523230
%Rec. Limits

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1'-Biphenyl	80.0	9.34	J *-	ug/L		12	63 - 99
1,2,4,5-Tetrachlorobenzene	80.0	9.70	J *-	ug/L		12	57 - 100
1,2,4-Trichlorobenzene	80.0	7.98	*-	ug/L		10	41 - 99
1,2-Dichlorobenzene	80.0	7.05	*-	ug/L		9	37 - 97
1,2-Diphenylhydrazine(as Azobenzene)	80.9	10.1	*-	ug/L		13	66 - 104
1,3-Dichlorobenzene	80.0	6.50	J *-	ug/L		8	34 - 96
1,3-Dinitrobenzene	80.0	8.92	J *-	ug/L		11	72 - 114
1,4-Dichlorobenzene	80.0	6.94	*-	ug/L		9	35 - 96
1,4-Dioxane	80.0	6.47	J *-	ug/L		8	46 - 94
1-Methylnaphthalene	80.0	9.27	*-	ug/L		12	56 - 102
2,2'-oxybis[1-chloropropane]	80.0	8.17	J *-	ug/L		10	52 - 108
2,3,4,6-Tetrachlorophenol	80.0	9.50	J *-	ug/L		12	71 - 111
2,4,5-Trichlorophenol	80.0	9.51	J *-	ug/L		12	70 - 109
2,4,6-Trichlorophenol	80.0	8.78	J *-	ug/L		11	71 - 113
2,4-Dichlorophenol	80.0	8.20	J *-	ug/L		10	65 - 109
2,4-Dimethylphenol	80.0	8.16	J *-	ug/L		10	46 - 100
2,4-Dinitrophenol	160	ND	*-	ug/L		4	60 - 110
2,4-Dinitrotoluene	80.0	10.3	*-	ug/L		13	72 - 110
2,6-Dichlorophenol	80.0	9.77	J *-	ug/L		12	64 - 109
2,6-Dinitrotoluene	80.0	10.1	*-	ug/L		13	70 - 109
2-Chloronaphthalene	80.0	9.21	*-	ug/L		12	61 - 98
2-Chlorophenol	80.0	8.14	J *-	ug/L		10	59 - 107
2-Methylnaphthalene	80.0	8.95	*-	ug/L		11	55 - 100
2-Methylphenol	80.0	9.41	J *-	ug/L		12	61 - 105
2-Nitroaniline	80.0	8.51	J *-	ug/L		11	65 - 110
2-Nitrophenol	80.0	8.09	J *-	ug/L		10	63 - 108
3 & 4 Methylphenol	80.0	8.87	J *-	ug/L		11	58 - 107
3,3'-Dichlorobenzidine	160	18.8	J *-	ug/L		12	39 - 105
3-Methylphenol	80.0	8.87	J *-	ug/L		11	58 - 107
3-Nitroaniline	80.0	7.95	J *-	ug/L		10	37 - 94
4,6-Dinitro-2-methylphenol	160	13.1	J *-	ug/L		8	67 - 109
4-Bromophenyl phenyl ether	80.0	10.5	*-	ug/L		13	67 - 105
4-Chloro-3-methylphenol	80.0	9.17	J *-	ug/L		11	68 - 110
4-Chloroaniline	80.0	8.36	J *-	ug/L		10	34 - 97
4-Chlorophenyl phenyl ether	80.0	10.9	*-	ug/L		14	69 - 100
4-Methylphenol	80.0	8.87	J *-	ug/L		11	58 - 107
4-Nitroaniline	80.0	7.62	J *-	ug/L		10	64 - 103
4-Nitrophenol	160	ND	*-	ug/L		0	60 - 120
Acenaphthene	80.0	9.90	*-	ug/L		12	63 - 99
Acenaphthylene	80.0	9.05	*-	ug/L		11	66 - 98
Acetophenone	80.0	9.52	J *-	ug/L		12	59 - 106
Aniline	80.0	7.29	J *-	ug/L		9	40 - 96
Anthracene	80.0	10.9	*-	ug/L		14	65 - 105
Azobenzene	80.0	10.0	*-	ug/L		13	66 - 104
Benzaldehyde	80.0	6.83	*-	ug/L		9	10 - 89
Benzidine	160	ND	*-	ug/L		6	10 - 52
Benzo[a]anthracene	80.0	9.96	*-	ug/L		12	68 - 104
Benzo[a]pyrene	80.0	8.66	*-	ug/L		11	66 - 102

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-523230/2-A
Matrix: Water
Analysis Batch: 524058

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523230

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Benzo[b]fluoranthene	80.0	9.22	*-	ug/L		12	67 - 107
Benzo[g,h,i]perylene	80.0	9.17	*-	ug/L		11	65 - 106
Benzo[k]fluoranthene	80.0	11.3	*-	ug/L		14	71 - 109
Benzoic acid	80.0	ND	*-	ug/L		0	29 - 120
Benzyl alcohol	80.0	7.14	J* -	ug/L		9	61 - 107
Bis(2-chloroethoxy)methane	80.0	9.18	J* -	ug/L		11	62 - 106
Bis(2-chloroethyl)ether	80.0	9.35	J* -	ug/L		12	59 - 110
Bis(2-ethylhexyl) phthalate	80.0	8.13	J* -	ug/L		10	65 - 106
Butyl benzyl phthalate	80.0	8.64	*-	ug/L		11	66 - 107
Caprolactam	80.0	8.05	*-	ug/L		10	60 - 107
Carbazole	80.0	10.2	*-	ug/L		13	66 - 109
Chrysene	80.0	10.7	*-	ug/L		13	70 - 105
Dibenz(a,h)anthracene	80.0	7.99	*-	ug/L		10	64 - 106
Dibenzofuran	80.0	10.2	*-	ug/L		13	68 - 99
Diethyl phthalate	80.0	11.4	*-	ug/L		14	71 - 105
Dimethyl phthalate	80.0	10.7	*-	ug/L		13	70 - 107
Di-n-butyl phthalate	80.0	10.2	*-	ug/L		13	75 - 120
Di-n-octyl phthalate	80.0	5.89	*-	ug/L		7	71 - 120
Diphenylamine	68.0	8.78	J* -	ug/L		13	67 - 103
Fluoranthene	80.0	10.7	*-	ug/L		13	66 - 107
Fluorene	80.0	10.8	*-	ug/L		14	67 - 100
Hexachlorobenzene	80.0	10.7	*-	ug/L		13	66 - 106
Hexachlorobutadiene	80.0	8.22	J* -	ug/L		10	33 - 98
Hexachlorocyclopentadiene	160	8.15	J* -	ug/L		5	10 - 67
Hexachloroethane	80.0	6.91	J* -	ug/L		9	24 - 98
Hexadecane	80.0	9.06	J* -	ug/L		11	50 - 150
Indeno[1,2,3-cd]pyrene	80.0	7.04	*-	ug/L		9	56 - 104
Isophorone	80.0	9.58	J* -	ug/L		12	59 - 102
Naphthalene	80.0	8.41	*-	ug/L		11	39 - 120
Nitrobenzene	80.0	9.47	J* -	ug/L		12	58 - 108
N-Nitrosodimethylamine	80.0	7.30	J* -	ug/L		9	53 - 106
N-Nitrosodi-n-propylamine	80.0	9.48	J* -	ug/L		12	57 - 106
N-Nitrosodiphenylamine	80.0	10.4	*-	ug/L		13	65 - 104
Pentachlorophenol	160	ND	*-	ug/L		7	55 - 109
Phenanthrene	80.0	11.0	*-	ug/L		14	67 - 106
Phenol	80.0	8.39	J* -	ug/L		10	60 - 108
Pyrene	80.0	10.9	*-	ug/L		14	69 - 105
Pyridine	160	12.6	J* -	ug/L		8	46 - 88

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	12	S1-	42 - 131
2-Fluorobiphenyl	12	S1-	48 - 120
2-Fluorophenol (Surr)	8	S1-	41 - 120
Nitrobenzene-d5 (Surr)	11	S1-	42 - 120
Phenol-d5 (Surr)	10	S1-	45 - 124
Terphenyl-d14 (Surr)	15	S1-	20 - 130

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-523230/3-A
Matrix: Water
Analysis Batch: 524058

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 523230

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
							Limits	RPD		
1,1'-Biphenyl	80.0	45.5	*- *1	ug/L		57	63 - 99	132	30	
1,2,4,5-Tetrachlorobenzene	80.0	42.4	*- *1	ug/L		53	57 - 100	126	30	
1,2,4-Trichlorobenzene	80.0	32.4	*- *1	ug/L		40	41 - 99	121	30	
1,2-Dichlorobenzene	80.0	28.3	*- *1	ug/L		35	37 - 97	120	30	
1,2-Diphenylhydrazine(as Azobenzene)	80.9	52.7	*- *1	ug/L		65	66 - 104	135	30	
1,3-Dichlorobenzene	80.0	26.2	*- *1	ug/L		33	34 - 96	120	30	
1,3-Dinitrobenzene	80.0	55.4	*- *1	ug/L		69	72 - 114	145	30	
1,4-Dichlorobenzene	80.0	27.9	*1	ug/L		35	35 - 96	120	30	
1,4-Dioxane	80.0	31.4	*- *1	ug/L		39	46 - 94	132	30	
1-Methylnaphthalene	80.0	40.6	*- *1	ug/L		51	56 - 102	126	30	
2,2'-oxybis[1-chloropropane]	80.0	39.3	*- *1	ug/L		49	52 - 108	131	30	
2,3,4,6-Tetrachlorophenol	80.0	53.5	*- *1	ug/L		67	71 - 111	140	30	
2,4,5-Trichlorophenol	80.0	51.2	*- *1	ug/L		64	70 - 109	137	30	
2,4,6-Trichlorophenol	80.0	49.1	*- *1	ug/L		61	71 - 113	139	30	
2,4-Dichlorophenol	80.0	45.0	*- *1	ug/L		56	65 - 109	138	30	
2,4-Dimethylphenol	80.0	42.0	*1	ug/L		52	46 - 100	135	30	
2,4-Dinitrophenol	160	65.8	*- *1	ug/L		41	60 - 110	161	30	
2,4-Dinitrotoluene	80.0	56.9	*- *1	ug/L		71	72 - 110	139	30	
2,6-Dichlorophenol	80.0	46.9	*- *1	ug/L		59	64 - 109	131	50	
2,6-Dinitrotoluene	80.0	52.9	*- *1	ug/L		66	70 - 109	136	30	
2-Chloronaphthalene	80.0	44.4	*- *1	ug/L		56	61 - 98	131	30	
2-Chlorophenol	80.0	41.6	*- *1	ug/L		52	59 - 107	135	30	
2-Methylnaphthalene	80.0	40.0	*- *1	ug/L		50	55 - 100	127	30	
2-Methylphenol	80.0	47.4	*- *1	ug/L		59	61 - 105	134	30	
2-Nitroaniline	80.0	50.6	*- *1	ug/L		63	65 - 110	142	30	
2-Nitrophenol	80.0	43.6	*- *1	ug/L		54	63 - 108	137	30	
3 & 4 Methylphenol	80.0	46.1	*1	ug/L		58	58 - 107	135	30	
3,3'-Dichlorobenzidine	160	111	*1	ug/L		69	39 - 105	142	30	
3-Methylphenol	80.0	46.1	*1	ug/L		58	58 - 107	135	30	
3-Nitroaniline	80.0	49.2	*1	ug/L		62	37 - 94	144	30	
4,6-Dinitro-2-methylphenol	160	103	*- *1	ug/L		64	67 - 109	155	30	
4-Bromophenyl phenyl ether	80.0	53.0	*- *1	ug/L		66	67 - 105	134	30	
4-Chloro-3-methylphenol	80.0	50.2	*- *1	ug/L		63	68 - 110	138	30	
4-Chloroaniline	80.0	44.3	*1	ug/L		55	34 - 97	136	30	
4-Chlorophenyl phenyl ether	80.0	52.3	*- *1	ug/L		65	69 - 100	131	30	
4-Methylphenol	80.0	46.1	*1	ug/L		58	58 - 107	135	30	
4-Nitroaniline	80.0	50.5	*- *1	ug/L		63	64 - 103	148	30	
4-Nitrophenol	160	98.8	*1	ug/L		62	60 - 120	200	30	
Acenaphthene	80.0	47.9	*- *1	ug/L		60	63 - 99	132	30	
Acenaphthylene	80.0	45.9	*- *1	ug/L		57	66 - 98	134	30	
Acetophenone	80.0	45.2	*- *1	ug/L		57	59 - 106	130	30	
Aniline	80.0	40.6	*1	ug/L		51	40 - 96	139	30	
Anthracene	80.0	54.5	*1	ug/L		68	65 - 105	134	30	
Azobenzene	80.0	52.1	*- *1	ug/L		65	66 - 104	135	30	
Benzaldehyde	80.0	37.5	*1	ug/L		47	10 - 89	138	50	
Benzidine	160	71.8	J *1	ug/L		45	10 - 52	154	50	
Benzo[a]anthracene	80.0	51.6	*- *1	ug/L		64	68 - 104	135	30	
Benzo[a]pyrene	80.0	51.1	*- *1	ug/L		64	66 - 102	142	30	

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-523230/3-A
Matrix: Water
Analysis Batch: 524058

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 523230

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[b]fluoranthene	80.0	50.4	*- *1	ug/L		63	67 - 107	138	30
Benzo[g,h,i]perylene	80.0	51.8	*1	ug/L		65	65 - 106	140	30
Benzo[k]fluoranthene	80.0	57.7	*1	ug/L		72	71 - 109	134	30
Benzoic acid	80.0	11.9	J *- *1	ug/L		15	29 - 120	200	30
Benzyl alcohol	80.0	42.4	*- *1	ug/L		53	61 - 107	142	30
Bis(2-chloroethoxy)methane	80.0	45.2	*- *1	ug/L		57	62 - 106	133	30
Bis(2-chloroethyl)ether	80.0	44.0	*- *1	ug/L		55	59 - 110	130	30
Bis(2-ethylhexyl) phthalate	80.0	50.6	*- *1	ug/L		63	65 - 106	145	30
Butyl benzyl phthalate	80.0	51.5	*- *1	ug/L		64	66 - 107	143	30
Caprolactam	80.0	48.6	*1	ug/L		61	60 - 107	143	30
Carbazole	80.0	53.8	*1	ug/L		67	66 - 109	136	30
Chrysene	80.0	54.5	*- *1	ug/L		68	70 - 105	134	30
Dibenz(a,h)anthracene	80.0	50.5	*- *1	ug/L		63	64 - 106	145	30
Dibenzofuran	80.0	50.5	*- *1	ug/L		63	68 - 99	133	30
Diethyl phthalate	80.0	55.8	*- *1	ug/L		70	71 - 105	132	30
Dimethyl phthalate	80.0	54.3	*- *1	ug/L		68	70 - 107	134	30
Di-n-butyl phthalate	80.0	54.4	*- *1	ug/L		68	75 - 120	137	30
Di-n-octyl phthalate	80.0	47.9	*- *1	ug/L		60	71 - 120	156	30
Diphenylamine	68.0	44.9	*- *1	ug/L		66	67 - 103	135	50
Fluoranthene	80.0	54.1	*1	ug/L		68	66 - 107	134	30
Fluorene	80.0	52.3	*- *1	ug/L		65	67 - 100	131	30
Hexachlorobenzene	80.0	53.4	*1	ug/L		67	66 - 106	133	30
Hexachlorobutadiene	80.0	31.0	*1	ug/L		39	33 - 98	116	30
Hexachlorocyclopentadiene	160	45.6	J *1	ug/L		28	10 - 67	139	50
Hexachloroethane	80.0	26.8	*1	ug/L		34	24 - 98	118	30
Hexadecane	80.0	46.6	*1	ug/L		58	50 - 150	135	30
Indeno[1,2,3-cd]pyrene	80.0	46.2	*1	ug/L		58	56 - 104	147	30
Isophorone	80.0	44.7	*- *1	ug/L		56	59 - 102	129	30
Naphthalene	80.0	36.3	*1	ug/L		45	39 - 120	125	30
Nitrobenzene	80.0	44.5	*- *1	ug/L		56	58 - 108	130	30
N-Nitrosodimethylamine	80.0	38.2	*- *1	ug/L		48	53 - 106	136	34
N-Nitrosodi-n-propylamine	80.0	46.5	*1	ug/L		58	57 - 106	132	30
N-Nitrosodiphenylamine	80.0	52.4	*1	ug/L		65	65 - 104	134	30
Pentachlorophenol	160	90.5	*1	ug/L		57	55 - 109	154	30
Phenanthrene	80.0	54.1	*1	ug/L		68	67 - 106	132	30
Phenol	80.0	42.6	*- *1	ug/L		53	60 - 108	134	30
Pyrene	80.0	53.5	*- *1	ug/L		67	69 - 105	132	30
Pyridine	160	66.5	*- *1	ug/L		42	46 - 88	137	41

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2,4,6-Tribromophenol (Surr)	68		42 - 131
2-Fluorobiphenyl	59		48 - 120
2-Fluorophenol (Surr)	47		41 - 120
Nitrobenzene-d5 (Surr)	55		42 - 120
Phenol-d5 (Surr)	53		45 - 124
Terphenyl-d14 (Surr)	74		20 - 130

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-523852/1-A
Matrix: Solid
Analysis Batch: 524185

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523852

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1'-Biphenyl	ND		330	24	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
1,2,4,5-Tetrachlorobenzene	ND		330	49	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
1,2,4-Trichlorobenzene	ND		330	28	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
1,2-Dichlorobenzene	ND		330	22	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		330	22	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
1,3-Dichlorobenzene	ND		330	12	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
1,3-Dinitrobenzene	ND		330	71	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
1,4-Dichlorobenzene	ND		330	14	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
1,4-Dioxane	ND		660	66	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
1-Methylnaphthalene	ND		330	11	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
2,2'-oxybis[1-chloropropane]	ND		330	23	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
2,3,4,6-Tetrachlorophenol	ND		1600	140	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
2,4,5-Trichlorophenol	ND		330	10	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
2,4,6-Trichlorophenol	ND		330	10	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
2,4-Dichlorophenol	ND		330	10	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
2,4-Dimethylphenol	ND		330	66	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
2,4-Dinitrophenol	ND		1600	330	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
2,4-Dinitrotoluene	ND		330	66	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
2,6-Dichlorophenol	ND		330	22	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
2,6-Dinitrotoluene	ND		330	28	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
2-Chloronaphthalene	ND		330	10	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
2-Chlorophenol	ND		330	21	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
2-Methylnaphthalene	ND		330	19	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
2-Methylphenol	ND		330	13	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
2-Nitroaniline	ND		1600	50	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
2-Nitrophenol	ND		330	10	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
3 & 4 Methylphenol	ND		330	33	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
3,3'-Dichlorobenzidine	ND		660	90	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
3-Methylphenol	ND		330	33	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
3-Nitroaniline	ND		1600	73	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
4,6-Dinitro-2-methylphenol	ND		1600	330	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
4-Bromophenyl phenyl ether	ND		330	19	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
4-Chloro-3-methylphenol	ND		330	25	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
4-Chloroaniline	ND		330	82	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
4-Chlorophenyl phenyl ether	ND		330	21	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
4-Methylphenol	ND		330	33	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
4-Nitroaniline	ND		1600	73	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
4-Nitrophenol	ND		1600	97	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Acenaphthene	ND		330	10	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Acenaphthylene	ND		330	82	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Acetophenone	ND		330	20	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Aniline	ND		330	130	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Anthracene	ND		330	17	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Azobenzene	ND		330	22	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Benzaldehyde	ND		330	67	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Benzidine	ND		3300	990	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Benzo[a]anthracene	ND		330	20	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Benzo[a]pyrene	ND		330	20	ug/Kg		01/19/21 09:23	01/21/21 11:16	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-523852/1-A
Matrix: Solid
Analysis Batch: 524185

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523852

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND		330	26	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Benzo[g,h,i]perylene	ND		330	16	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Benzo[k]fluoranthene	ND		330	40	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Benzoic acid	ND		1600	330	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Benzyl alcohol	ND		330	10	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Bis(2-chloroethoxy)methane	ND		330	23	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Bis(2-chloroethyl)ether	ND		330	17	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Bis(2-ethylhexyl) phthalate	ND		330	46	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Butyl benzyl phthalate	ND		330	43	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Caprolactam	ND		330	110	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Carbazole	ND		330	36	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Chrysene	ND		330	27	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Dibenz(a,h)anthracene	ND		330	19	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Dibenzofuran	ND		330	20	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Diethyl phthalate	ND		660	26	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Dimethyl phthalate	ND		330	23	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Di-n-butyl phthalate	ND		330	29	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Di-n-octyl phthalate	ND		330	41	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Diphenylamine	ND		330	44	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Famphur	ND		660	34	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Fluoranthene	ND		330	36	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Fluorene	ND		330	18	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Hexachlorobenzene	ND		330	29	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Hexachlorobutadiene	ND		330	10	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Hexachlorocyclopentadiene	ND		1600	110	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Hexachloroethane	ND		330	21	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Hexadecane	ND		330	13	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Indeno[1,2,3-cd]pyrene	ND		330	22	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Isophorone	ND		330	17	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Naphthalene	ND		330	31	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Nitrobenzene	ND		330	22	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
N-Nitrosodimethylamine	ND		330	37	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
N-Nitrosodi-n-propylamine	ND		330	68	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
N-Nitrosodiphenylamine	ND		330	21	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Pentachlorophenol	ND		1600	330	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Phenanthrene	ND		330	17	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Phenol	ND		330	18	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Pyrene	ND		330	12	ug/Kg		01/19/21 09:23	01/21/21 11:16	1
Pyridine	ND		660	40	ug/Kg		01/19/21 09:23	01/21/21 11:16	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	54		35 - 120	01/19/21 09:23	01/21/21 11:16	1
2-Fluorobiphenyl	59		46 - 120	01/19/21 09:23	01/21/21 11:16	1
2-Fluorophenol (Surr)	51		43 - 120	01/19/21 09:23	01/21/21 11:16	1
Nitrobenzene-d5 (Surr)	56		46 - 120	01/19/21 09:23	01/21/21 11:16	1
Phenol-d5 (Surr)	54		46 - 120	01/19/21 09:23	01/21/21 11:16	1
Terphenyl-d14 (Surr)	85		46 - 120	01/19/21 09:23	01/21/21 11:16	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-523852/2-A
Matrix: Solid
Analysis Batch: 524185

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523852
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1'-Biphenyl	2670	2140		ug/Kg		80	60 - 120
1,2,4,5-Tetrachlorobenzene	2670	2060		ug/Kg		77	60 - 120
1,2,4-Trichlorobenzene	2670	1770		ug/Kg		67	59 - 120
1,2-Dichlorobenzene	2670	1640		ug/Kg		62	57 - 120
1,2-Diphenylhydrazine(as Azobenzene)	2700	2140		ug/Kg		80	60 - 120
1,3-Dichlorobenzene	2670	1590		ug/Kg		60	56 - 120
1,3-Dinitrobenzene	2670	2230		ug/Kg		83	66 - 120
1,4-Dichlorobenzene	2670	1680		ug/Kg		63	57 - 120
1,4-Dioxane	2670	912		ug/Kg		34	28 - 120
1-Methylnaphthalene	2670	2000		ug/Kg		75	57 - 120
2,2'-oxybis[1-chloropropane]	2670	1610		ug/Kg		60	46 - 120
2,3,4,6-Tetrachlorophenol	2670	2100		ug/Kg		79	63 - 120
2,4,5-Trichlorophenol	2670	2110		ug/Kg		79	65 - 120
2,4,6-Trichlorophenol	2670	2110		ug/Kg		79	64 - 120
2,4-Dichlorophenol	2670	1950		ug/Kg		73	64 - 120
2,4-Dimethylphenol	2670	1980		ug/Kg		74	60 - 120
2,4-Dinitrophenol	5330	2370	*	ug/Kg		44	52 - 120
2,4-Dinitrotoluene	2670	2260		ug/Kg		85	68 - 120
2,6-Dichlorophenol	2670	1980		ug/Kg		74	30 - 150
2,6-Dinitrotoluene	2670	2160		ug/Kg		81	68 - 120
2-Chloronaphthalene	2670	2070		ug/Kg		78	61 - 120
2-Chlorophenol	2670	1660		ug/Kg		62	62 - 120
2-Methylnaphthalene	2670	1980		ug/Kg		74	60 - 120
2-Methylphenol	2670	1950		ug/Kg		73	61 - 120
2-Nitroaniline	2670	2020		ug/Kg		76	63 - 120
2-Nitrophenol	2670	1770		ug/Kg		67	61 - 120
3 & 4 Methylphenol	2670	1900		ug/Kg		71	62 - 120
3,3'-Dichlorobenzidine	5330	4220		ug/Kg		79	22 - 120
3-Methylphenol	2670	1900		ug/Kg		71	62 - 120
3-Nitroaniline	2670	1760		ug/Kg		66	40 - 120
4,6-Dinitro-2-methylphenol	5330	3930		ug/Kg		74	60 - 120
4-Bromophenyl phenyl ether	2670	2220		ug/Kg		83	66 - 120
4-Chloro-3-methylphenol	2670	2070		ug/Kg		77	62 - 120
4-Chloroaniline	2670	1620		ug/Kg		61	33 - 120
4-Chlorophenyl phenyl ether	2670	2200		ug/Kg		82	63 - 120
4-Methylphenol	2670	1900		ug/Kg		71	62 - 120
4-Nitroaniline	2670	1990		ug/Kg		75	58 - 120
4-Nitrophenol	5330	3890		ug/Kg		73	67 - 120
Acenaphthene	2670	2110		ug/Kg		79	62 - 120
Acenaphthylene	2670	2070		ug/Kg		78	64 - 120
Acetophenone	2670	1580		ug/Kg		59	48 - 120
Aniline	2670	1290		ug/Kg		49	21 - 120
Anthracene	2670	2250		ug/Kg		84	66 - 120
Azobenzene	2670	2120		ug/Kg		80	59 - 120
Benzaldehyde	2670	865		ug/Kg		32	30 - 150
Benzidine	5330	2120	J	ug/Kg		40	5 - 120
Benzo[a]anthracene	2670	2190		ug/Kg		82	64 - 120
Benzo[a]pyrene	2670	2210		ug/Kg		83	65 - 120

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-523852/2-A
Matrix: Solid
Analysis Batch: 524185

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523852

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[b]fluoranthene	2670	2190		ug/Kg		82	58 - 120
Benzo[g,h,i]perylene	2670	2240		ug/Kg		84	58 - 120
Benzo[k]fluoranthene	2670	2370		ug/Kg		89	62 - 120
Benzoic acid	2670	1190	J *	ug/Kg		45	51 - 120
Benzyl alcohol	2670	1700		ug/Kg		64	61 - 120
Bis(2-chloroethoxy)methane	2670	1820		ug/Kg		68	58 - 120
Bis(2-chloroethyl)ether	2670	1730		ug/Kg		65	57 - 120
Bis(2-ethylhexyl) phthalate	2670	2180		ug/Kg		82	65 - 120
Butyl benzyl phthalate	2670	2160		ug/Kg		81	65 - 120
Caprolactam	2670	1870		ug/Kg		70	20 - 138
Carbazole	2670	2210		ug/Kg		83	65 - 120
Chrysene	2670	2310		ug/Kg		86	65 - 120
Dibenz(a,h)anthracene	2670	2250		ug/Kg		85	56 - 120
Dibenzofuran	2670	2170		ug/Kg		81	65 - 120
Diethyl phthalate	2670	2240		ug/Kg		84	68 - 120
Dimethyl phthalate	2670	2220		ug/Kg		83	66 - 120
Di-n-butyl phthalate	2670	2230		ug/Kg		84	66 - 120
Di-n-octyl phthalate	2670	2100		ug/Kg		79	55 - 120
Diphenylamine	2270	1830		ug/Kg		81	30 - 150
Fluoranthene	2670	2240		ug/Kg		84	64 - 120
Fluorene	2670	2200		ug/Kg		82	66 - 120
Hexachlorobenzene	2670	2240		ug/Kg		84	65 - 120
Hexachlorobutadiene	2670	1740		ug/Kg		65	58 - 120
Hexachlorocyclopentadiene	5330	3250		ug/Kg		61	43 - 120
Hexachloroethane	2670	1600		ug/Kg		60	56 - 120
Hexadecane	2670	2080		ug/Kg		78	45 - 135
Indeno[1,2,3-cd]pyrene	2670	2040		ug/Kg		76	46 - 120
Isophorone	2670	1840		ug/Kg		69	56 - 120
Naphthalene	2670	1800		ug/Kg		67	59 - 120
Nitrobenzene	2670	1740		ug/Kg		65	55 - 120
N-Nitrosodimethylamine	2670	1500		ug/Kg		56	50 - 120
N-Nitrosodi-n-propylamine	2670	1910		ug/Kg		72	52 - 120
N-Nitrosodiphenylamine	2670	2180		ug/Kg		82	65 - 120
Pentachlorophenol	5330	3570		ug/Kg		67	50 - 120
Phenanthrene	2670	2210		ug/Kg		83	67 - 120
Phenol	2670	1630	*	ug/Kg		61	63 - 120
Pyrene	2670	2220		ug/Kg		83	66 - 120
Pyridine	5330	2200		ug/Kg		41	37 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	82		35 - 120
2-Fluorobiphenyl	74		46 - 120
2-Fluorophenol (Surr)	57		43 - 120
Nitrobenzene-d5 (Surr)	64		46 - 120
Phenol-d5 (Surr)	65		46 - 120
Terphenyl-d14 (Surr)	95		46 - 120

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-524131/1-A
Matrix: Water
Analysis Batch: 524537

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524131

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1'-Biphenyl	ND		10	1.8	ug/L		01/20/21 14:21	01/25/21 21:25	1
1,2,4,5-Tetrachlorobenzene	ND		10	1.7	ug/L		01/20/21 14:21	01/25/21 21:25	1
1,2,4-Trichlorobenzene	ND		4.0	0.59	ug/L		01/20/21 14:21	01/25/21 21:25	1
1,2-Dichlorobenzene	ND		4.0	0.23	ug/L		01/20/21 14:21	01/25/21 21:25	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		10	0.23	ug/L		01/20/21 14:21	01/25/21 21:25	1
1,3-Dichlorobenzene	ND		10	0.30	ug/L		01/20/21 14:21	01/25/21 21:25	1
1,3-Dinitrobenzene	ND		10	2.0	ug/L		01/20/21 14:21	01/25/21 21:25	1
1,4-Dichlorobenzene	ND		4.0	1.3	ug/L		01/20/21 14:21	01/25/21 21:25	1
1,4-Dioxane	ND		20	0.45	ug/L		01/20/21 14:21	01/25/21 21:25	1
1-Methylnaphthalene	ND		4.0	0.23	ug/L		01/20/21 14:21	01/25/21 21:25	1
2,2'-oxybis[1-chloropropane]	ND		10	0.28	ug/L		01/20/21 14:21	01/25/21 21:25	1
2,3,4,6-Tetrachlorophenol	ND		50	2.0	ug/L		01/20/21 14:21	01/25/21 21:25	1
2,4,5-Trichlorophenol	ND		10	2.1	ug/L		01/20/21 14:21	01/25/21 21:25	1
2,4,6-Trichlorophenol	ND		10	0.29	ug/L		01/20/21 14:21	01/25/21 21:25	1
2,4-Dichlorophenol	ND		10	0.64	ug/L		01/20/21 14:21	01/25/21 21:25	1
2,4-Dimethylphenol	ND		10	0.58	ug/L		01/20/21 14:21	01/25/21 21:25	1
2,4-Dinitrophenol	ND		30	10	ug/L		01/20/21 14:21	01/25/21 21:25	1
2,4-Dinitrotoluene	ND		10	1.7	ug/L		01/20/21 14:21	01/25/21 21:25	1
2,6-Dichlorophenol	ND		10	1.4	ug/L		01/20/21 14:21	01/25/21 21:25	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		01/20/21 14:21	01/25/21 21:25	1
2-Chloronaphthalene	ND		4.0	0.26	ug/L		01/20/21 14:21	01/25/21 21:25	1
2-Chlorophenol	ND		10	2.0	ug/L		01/20/21 14:21	01/25/21 21:25	1
2-Methylnaphthalene	ND		4.0	1.5	ug/L		01/20/21 14:21	01/25/21 21:25	1
2-Methylphenol	ND		10	0.98	ug/L		01/20/21 14:21	01/25/21 21:25	1
2-Nitroaniline	ND		10	1.7	ug/L		01/20/21 14:21	01/25/21 21:25	1
2-Nitrophenol	ND		10	0.39	ug/L		01/20/21 14:21	01/25/21 21:25	1
3 & 4 Methylphenol	ND		10	0.25	ug/L		01/20/21 14:21	01/25/21 21:25	1
3,3'-Dichlorobenzidine	ND		50	2.0	ug/L		01/20/21 14:21	01/25/21 21:25	1
3-Methylphenol	ND		10	0.25	ug/L		01/20/21 14:21	01/25/21 21:25	1
3-Nitroaniline	ND		10	2.0	ug/L		01/20/21 14:21	01/25/21 21:25	1
4,6-Dinitro-2-methylphenol	ND		50	4.0	ug/L		01/20/21 14:21	01/25/21 21:25	1
4-Bromophenyl phenyl ether	ND		10	0.43	ug/L		01/20/21 14:21	01/25/21 21:25	1
4-Chloro-3-methylphenol	ND		10	2.4	ug/L		01/20/21 14:21	01/25/21 21:25	1
4-Chloroaniline	ND		10	2.1	ug/L		01/20/21 14:21	01/25/21 21:25	1
4-Chlorophenyl phenyl ether	ND		10	1.7	ug/L		01/20/21 14:21	01/25/21 21:25	1
4-Methylphenol	ND		10	0.25	ug/L		01/20/21 14:21	01/25/21 21:25	1
4-Nitroaniline	ND		10	2.0	ug/L		01/20/21 14:21	01/25/21 21:25	1
4-Nitrophenol	ND		10	1.2	ug/L		01/20/21 14:21	01/25/21 21:25	1
Acenaphthene	ND		4.0	0.28	ug/L		01/20/21 14:21	01/25/21 21:25	1
Acenaphthylene	ND		4.0	0.49	ug/L		01/20/21 14:21	01/25/21 21:25	1
Acetophenone	ND		10	0.24	ug/L		01/20/21 14:21	01/25/21 21:25	1
Aniline	ND		10	2.0	ug/L		01/20/21 14:21	01/25/21 21:25	1
Anthracene	ND		4.0	0.42	ug/L		01/20/21 14:21	01/25/21 21:25	1
Azobenzene	ND		4.0	0.23	ug/L		01/20/21 14:21	01/25/21 21:25	1
Benzaldehyde	ND		5.0	2.0	ug/L		01/20/21 14:21	01/25/21 21:25	1
Benzidine	ND		100	50	ug/L		01/20/21 14:21	01/25/21 21:25	1
Benzo[a]anthracene	ND		4.0	0.35	ug/L		01/20/21 14:21	01/25/21 21:25	1
Benzo[a]pyrene	ND		4.0	0.31	ug/L		01/20/21 14:21	01/25/21 21:25	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-524131/1-A
Matrix: Water
Analysis Batch: 524537

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524131

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND		4.0	0.53	ug/L		01/20/21 14:21	01/25/21 21:25	1
Benzo[g,h,i]perylene	ND		4.0	0.50	ug/L		01/20/21 14:21	01/25/21 21:25	1
Benzo[k]fluoranthene	ND		4.0	0.46	ug/L		01/20/21 14:21	01/25/21 21:25	1
Benzoic acid	ND		25	10	ug/L		01/20/21 14:21	01/25/21 21:25	1
Benzyl alcohol	ND		10	0.23	ug/L		01/20/21 14:21	01/25/21 21:25	1
Bis(2-chloroethoxy)methane	ND		10	0.97	ug/L		01/20/21 14:21	01/25/21 21:25	1
Bis(2-chloroethyl)ether	ND		10	0.83	ug/L		01/20/21 14:21	01/25/21 21:25	1
Bis(2-ethylhexyl) phthalate	ND		10	0.56	ug/L		01/20/21 14:21	01/25/21 21:25	1
Butyl benzyl phthalate	ND		4.0	1.0	ug/L		01/20/21 14:21	01/25/21 21:25	1
Caprolactam	ND		5.0	2.5	ug/L		01/20/21 14:21	01/25/21 21:25	1
Carbazole	ND		4.0	0.43	ug/L		01/20/21 14:21	01/25/21 21:25	1
Chrysene	ND		4.0	0.54	ug/L		01/20/21 14:21	01/25/21 21:25	1
Dibenz(a,h)anthracene	ND		4.0	0.51	ug/L		01/20/21 14:21	01/25/21 21:25	1
Dibenzofuran	ND		4.0	0.29	ug/L		01/20/21 14:21	01/25/21 21:25	1
Diethyl phthalate	ND		4.0	0.38	ug/L		01/20/21 14:21	01/25/21 21:25	1
Dimethyl phthalate	ND		4.0	0.21	ug/L		01/20/21 14:21	01/25/21 21:25	1
Di-n-butyl phthalate	ND		4.0	1.2	ug/L		01/20/21 14:21	01/25/21 21:25	1
Di-n-octyl phthalate	ND		4.0	0.35	ug/L		01/20/21 14:21	01/25/21 21:25	1
Diphenylamine	ND		10	1.1	ug/L		01/20/21 14:21	01/25/21 21:25	1
Famphur	ND		100	1.5	ug/L		01/20/21 14:21	01/25/21 21:25	1
Fluoranthene	ND		4.0	0.20	ug/L		01/20/21 14:21	01/25/21 21:25	1
Fluorene	ND		4.0	0.31	ug/L		01/20/21 14:21	01/25/21 21:25	1
Hexachlorobenzene	ND		10	0.66	ug/L		01/20/21 14:21	01/25/21 21:25	1
Hexachlorobutadiene	ND		10	3.3	ug/L		01/20/21 14:21	01/25/21 21:25	1
Hexachlorocyclopentadiene	ND		50	3.1	ug/L		01/20/21 14:21	01/25/21 21:25	1
Hexachloroethane	ND		10	0.98	ug/L		01/20/21 14:21	01/25/21 21:25	1
Hexadecane	ND		10	0.54	ug/L		01/20/21 14:21	01/25/21 21:25	1
Indeno[1,2,3-cd]pyrene	ND		4.0	0.65	ug/L		01/20/21 14:21	01/25/21 21:25	1
Isophorone	ND		10	0.21	ug/L		01/20/21 14:21	01/25/21 21:25	1
Naphthalene	ND		4.0	0.29	ug/L		01/20/21 14:21	01/25/21 21:25	1
Nitrobenzene	ND		10	0.81	ug/L		01/20/21 14:21	01/25/21 21:25	1
N-Nitrosodimethylamine	ND		10	0.29	ug/L		01/20/21 14:21	01/25/21 21:25	1
N-Nitrosodi-n-propylamine	ND		10	0.35	ug/L		01/20/21 14:21	01/25/21 21:25	1
N-Nitrosodiphenylamine	ND		10	0.44	ug/L		01/20/21 14:21	01/25/21 21:25	1
Pentachlorophenol	ND		50	20	ug/L		01/20/21 14:21	01/25/21 21:25	1
Phenanthrene	ND		4.0	0.26	ug/L		01/20/21 14:21	01/25/21 21:25	1
Phenol	ND		10	2.0	ug/L		01/20/21 14:21	01/25/21 21:25	1
Pyrene	ND		10	0.37	ug/L		01/20/21 14:21	01/25/21 21:25	1
Pyridine	ND		20	1.7	ug/L		01/20/21 14:21	01/25/21 21:25	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	72		42 - 131	01/20/21 14:21	01/25/21 21:25	1
2-Fluorobiphenyl	52		48 - 120	01/20/21 14:21	01/25/21 21:25	1
2-Fluorophenol (Surr)	46		41 - 120	01/20/21 14:21	01/25/21 21:25	1
Nitrobenzene-d5 (Surr)	49		42 - 120	01/20/21 14:21	01/25/21 21:25	1
Phenol-d5 (Surr)	48		45 - 124	01/20/21 14:21	01/25/21 21:25	1
Terphenyl-d14 (Surr)	92		20 - 130	01/20/21 14:21	01/25/21 21:25	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-524131/2-A
Matrix: Water
Analysis Batch: 524537

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524131
%Rec. Limits

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1'-Biphenyl	80.0	62.5		ug/L		78	63 - 99
1,2,4,5-Tetrachlorobenzene	80.0	60.1		ug/L		75	57 - 100
1,2,4-Trichlorobenzene	80.0	55.2		ug/L		69	41 - 99
1,2-Dichlorobenzene	80.0	53.9		ug/L		67	37 - 97
1,2-Diphenylhydrazine(as Azobenzene)	80.9	62.1		ug/L		77	66 - 104
1,3-Dichlorobenzene	80.0	51.0		ug/L		64	34 - 96
1,3-Dinitrobenzene	80.0	66.9		ug/L		84	72 - 114
1,4-Dichlorobenzene	80.0	53.8		ug/L		67	35 - 96
1,4-Dioxane	80.0	46.7		ug/L		58	46 - 94
1-Methylnaphthalene	80.0	59.2		ug/L		74	56 - 102
2,2'-oxybis[1-chloropropane]	80.0	57.9		ug/L		72	52 - 108
2,3,4,6-Tetrachlorophenol	80.0	63.0		ug/L		79	71 - 111
2,4,5-Trichlorophenol	80.0	64.9		ug/L		81	70 - 109
2,4,6-Trichlorophenol	80.0	63.3		ug/L		79	71 - 113
2,4-Dichlorophenol	80.0	58.9		ug/L		74	65 - 109
2,4-Dimethylphenol	80.0	55.2		ug/L		69	46 - 100
2,4-Dinitrophenol	160	93.5	*	ug/L		58	60 - 110
2,4-Dinitrotoluene	80.0	68.2		ug/L		85	72 - 110
2,6-Dichlorophenol	80.0	63.7		ug/L		80	64 - 109
2,6-Dinitrotoluene	80.0	64.7		ug/L		81	70 - 109
2-Chloronaphthalene	80.0	60.9		ug/L		76	61 - 98
2-Chlorophenol	80.0	59.5		ug/L		74	59 - 107
2-Methylnaphthalene	80.0	58.9		ug/L		74	55 - 100
2-Methylphenol	80.0	65.2		ug/L		81	61 - 105
2-Nitroaniline	80.0	59.2		ug/L		74	65 - 110
2-Nitrophenol	80.0	60.5		ug/L		76	63 - 108
3 & 4 Methylphenol	80.0	64.1		ug/L		80	58 - 107
3,3'-Dichlorobenzidine	160	134		ug/L		84	39 - 105
3-Methylphenol	80.0	64.1		ug/L		80	58 - 107
3-Nitroaniline	80.0	53.7		ug/L		67	37 - 94
4,6-Dinitro-2-methylphenol	160	130		ug/L		81	67 - 109
4-Bromophenyl phenyl ether	80.0	63.9		ug/L		80	67 - 105
4-Chloro-3-methylphenol	80.0	61.2		ug/L		77	68 - 110
4-Chloroaniline	80.0	48.8		ug/L		61	34 - 97
4-Chlorophenyl phenyl ether	80.0	65.3		ug/L		82	69 - 100
4-Methylphenol	80.0	64.1		ug/L		80	58 - 107
4-Nitroaniline	80.0	59.5		ug/L		74	64 - 103
4-Nitrophenol	160	106		ug/L		66	60 - 120
Acenaphthene	80.0	62.0		ug/L		77	63 - 99
Acenaphthylene	80.0	59.2		ug/L		74	66 - 98
Acetophenone	80.0	62.8		ug/L		78	59 - 106
Aniline	80.0	41.8		ug/L		52	40 - 96
Anthracene	80.0	65.5		ug/L		82	65 - 105
Azobenzene	80.0	61.4		ug/L		77	66 - 104
Benzaldehyde	80.0	57.1		ug/L		71	10 - 89
Benzidine	160	61.3	J	ug/L		38	10 - 52
Benzo[a]anthracene	80.0	64.4		ug/L		80	68 - 104
Benzo[a]pyrene	80.0	61.4		ug/L		77	66 - 102

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-524131/2-A
Matrix: Water
Analysis Batch: 524537

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524131

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[b]fluoranthene	80.0	61.9		ug/L		77	67 - 107
Benzo[g,h,i]perylene	80.0	64.0		ug/L		80	65 - 106
Benzo[k]fluoranthene	80.0	68.8		ug/L		86	71 - 109
Benzoic acid	80.0	21.8	J *	ug/L		27	29 - 120
Benzyl alcohol	80.0	58.3		ug/L		73	61 - 107
Bis(2-chloroethoxy)methane	80.0	60.6		ug/L		76	62 - 106
Bis(2-chloroethyl)ether	80.0	63.5		ug/L		79	59 - 110
Bis(2-ethylhexyl) phthalate	80.0	65.0		ug/L		81	65 - 106
Butyl benzyl phthalate	80.0	64.9		ug/L		81	66 - 107
Caprolactam	80.0	49.8		ug/L		62	60 - 107
Carbazole	80.0	64.5		ug/L		81	66 - 109
Chrysene	80.0	66.8		ug/L		84	70 - 105
Dibenz(a,h)anthracene	80.0	65.1		ug/L		81	64 - 106
Dibenzofuran	80.0	64.1		ug/L		80	68 - 99
Diethyl phthalate	80.0	65.4		ug/L		82	71 - 105
Dimethyl phthalate	80.0	63.9		ug/L		80	70 - 107
Di-n-butyl phthalate	80.0	64.5		ug/L		81	75 - 120
Di-n-octyl phthalate	80.0	64.5		ug/L		81	71 - 120
Diphenylamine	68.0	53.5		ug/L		79	67 - 103
Fluoranthene	80.0	64.2		ug/L		80	66 - 107
Fluorene	80.0	64.5		ug/L		81	67 - 100
Hexachlorobenzene	80.0	64.8		ug/L		81	66 - 106
Hexachlorobutadiene	80.0	54.8		ug/L		68	33 - 98
Hexachlorocyclopentadiene	160	66.8		ug/L		42	10 - 67
Hexachloroethane	80.0	51.5		ug/L		64	24 - 98
Hexadecane	80.0	59.9		ug/L		75	50 - 150
Indeno[1,2,3-cd]pyrene	80.0	60.5		ug/L		76	56 - 104
Isophorone	80.0	58.1		ug/L		73	59 - 102
Naphthalene	80.0	57.8		ug/L		72	39 - 120
Nitrobenzene	80.0	61.1		ug/L		76	58 - 108
N-Nitrosodimethylamine	80.0	54.0		ug/L		68	53 - 106
N-Nitrosodi-n-propylamine	80.0	62.7		ug/L		78	57 - 106
N-Nitrosodiphenylamine	80.0	63.3		ug/L		79	65 - 104
Pentachlorophenol	160	110		ug/L		69	55 - 109
Phenanthrene	80.0	65.2		ug/L		82	67 - 106
Phenol	80.0	54.4		ug/L		68	60 - 108
Pyrene	80.0	65.8		ug/L		82	69 - 105
Pyridine	160	81.4		ug/L		51	46 - 88

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	78		42 - 131
2-Fluorobiphenyl	75		48 - 120
2-Fluorophenol (Surr)	66		41 - 120
Nitrobenzene-d5 (Surr)	72		42 - 120
Phenol-d5 (Surr)	68		45 - 124
Terphenyl-d14 (Surr)	87		20 - 130

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-524131/3-A
Matrix: Water
Analysis Batch: 524537

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 524131

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD	Limit
									%Rec.	RPD
1,1'-Biphenyl	80.0	57.8		ug/L		72	63 - 99	8		30
1,2,4,5-Tetrachlorobenzene	80.0	55.0		ug/L		69	57 - 100	9		30
1,2,4-Trichlorobenzene	80.0	49.7		ug/L		62	41 - 99	10		30
1,2-Dichlorobenzene	80.0	45.1		ug/L		56	37 - 97	18		30
1,2-Diphenylhydrazine(as Azobenzene)	80.9	56.9		ug/L		70	66 - 104	9		30
1,3-Dichlorobenzene	80.0	43.7		ug/L		55	34 - 96	15		30
1,3-Dinitrobenzene	80.0	60.6		ug/L		76	72 - 114	10		30
1,4-Dichlorobenzene	80.0	45.8		ug/L		57	35 - 96	16		30
1,4-Dioxane	80.0	44.3		ug/L		55	46 - 94	5		30
1-Methylnaphthalene	80.0	54.1		ug/L		68	56 - 102	9		30
2,2'-oxybis[1-chloropropane]	80.0	49.1		ug/L		61	52 - 108	17		30
2,3,4,6-Tetrachlorophenol	80.0	58.6		ug/L		73	71 - 111	7		30
2,4,5-Trichlorophenol	80.0	58.4		ug/L		73	70 - 109	10		30
2,4,6-Trichlorophenol	80.0	58.2		ug/L		73	71 - 113	8		30
2,4-Dichlorophenol	80.0	54.3		ug/L		68	65 - 109	8		30
2,4-Dimethylphenol	80.0	49.5		ug/L		62	46 - 100	11		30
2,4-Dinitrophenol	160	91.1	*	ug/L		57	60 - 110	3		30
2,4-Dinitrotoluene	80.0	62.5		ug/L		78	72 - 110	9		30
2,6-Dichlorophenol	80.0	56.2		ug/L		70	64 - 109	13		50
2,6-Dinitrotoluene	80.0	59.1		ug/L		74	70 - 109	9		30
2-Chloronaphthalene	80.0	56.0		ug/L		70	61 - 98	8		30
2-Chlorophenol	80.0	51.2		ug/L		64	59 - 107	15		30
2-Methylnaphthalene	80.0	53.0		ug/L		66	55 - 100	11		30
2-Methylphenol	80.0	57.3		ug/L		72	61 - 105	13		30
2-Nitroaniline	80.0	55.8		ug/L		70	65 - 110	6		30
2-Nitrophenol	80.0	53.8		ug/L		67	63 - 108	12		30
3 & 4 Methylphenol	80.0	55.7		ug/L		70	58 - 107	14		30
3,3'-Dichlorobenzidine	160	137		ug/L		85	39 - 105	2		30
3-Methylphenol	80.0	55.7		ug/L		70	58 - 107	14		30
3-Nitroaniline	80.0	54.1		ug/L		68	37 - 94	1		30
4,6-Dinitro-2-methylphenol	160	126		ug/L		79	67 - 109	3		30
4-Bromophenyl phenyl ether	80.0	61.2		ug/L		77	67 - 105	4		30
4-Chloro-3-methylphenol	80.0	57.5		ug/L		72	68 - 110	6		30
4-Chloroaniline	80.0	51.1		ug/L		64	34 - 97	5		30
4-Chlorophenyl phenyl ether	80.0	60.5		ug/L		76	69 - 100	8		30
4-Methylphenol	80.0	55.7		ug/L		70	58 - 107	14		30
4-Nitroaniline	80.0	54.6		ug/L		68	64 - 103	9		30
4-Nitrophenol	160	103		ug/L		64	60 - 120	3		30
Acenaphthene	80.0	58.0		ug/L		72	63 - 99	7		30
Acenaphthylene	80.0	55.5		ug/L		69	66 - 98	6		30
Acetophenone	80.0	54.2		ug/L		68	59 - 106	15		30
Aniline	80.0	39.4		ug/L		49	40 - 96	6		30
Anthracene	80.0	61.4		ug/L		77	65 - 105	7		30
Azobenzene	80.0	56.3		ug/L		70	66 - 104	9		30
Benzaldehyde	80.0	45.0		ug/L		56	10 - 89	24		50
Benzidine	160	71.4	J	ug/L		45	10 - 52	15		50
Benzo[a]anthracene	80.0	60.4		ug/L		75	68 - 104	6		30
Benzo[a]pyrene	80.0	57.9		ug/L		72	66 - 102	6		30

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-524131/3-A
Matrix: Water
Analysis Batch: 524537

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 524131

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[b]fluoranthene	80.0	58.4		ug/L		73	67 - 107	6	30
Benzo[g,h,i]perylene	80.0	60.5		ug/L		76	65 - 106	6	30
Benzo[k]fluoranthene	80.0	64.2		ug/L		80	71 - 109	7	30
Benzoic acid	80.0	24.3	J	ug/L		30	29 - 120	11	30
Benzyl alcohol	80.0	51.5		ug/L		64	61 - 107	12	30
Bis(2-chloroethoxy)methane	80.0	54.3		ug/L		68	62 - 106	11	30
Bis(2-chloroethyl)ether	80.0	54.2		ug/L		68	59 - 110	16	30
Bis(2-ethylhexyl) phthalate	80.0	60.4		ug/L		75	65 - 106	7	30
Butyl benzyl phthalate	80.0	59.9		ug/L		75	66 - 107	8	30
Caprolactam	80.0	47.7		ug/L		60	60 - 107	4	30
Carbazole	80.0	60.6		ug/L		76	66 - 109	6	30
Chrysene	80.0	63.1		ug/L		79	70 - 105	6	30
Dibenz(a,h)anthracene	80.0	60.9		ug/L		76	64 - 106	7	30
Dibenzofuran	80.0	58.9		ug/L		74	68 - 99	8	30
Diethyl phthalate	80.0	59.4		ug/L		74	71 - 105	10	30
Dimethyl phthalate	80.0	60.9		ug/L		76	70 - 107	5	30
Di-n-butyl phthalate	80.0	60.9		ug/L		76	75 - 120	6	30
Di-n-octyl phthalate	80.0	59.8		ug/L		75	71 - 120	7	30
Diphenylamine	68.0	49.2		ug/L		72	67 - 103	8	50
Fluoranthene	80.0	61.4		ug/L		77	66 - 107	4	30
Fluorene	80.0	59.6		ug/L		74	67 - 100	8	30
Hexachlorobenzene	80.0	59.0		ug/L		74	66 - 106	9	30
Hexachlorobutadiene	80.0	48.5		ug/L		61	33 - 98	12	30
Hexachlorocyclopentadiene	160	60.7		ug/L		38	10 - 67	10	50
Hexachloroethane	80.0	44.0		ug/L		55	24 - 98	16	30
Hexadecane	80.0	55.7		ug/L		70	50 - 150	7	30
Indeno[1,2,3-cd]pyrene	80.0	56.4		ug/L		70	56 - 104	7	30
Isophorone	80.0	53.1		ug/L		66	59 - 102	9	30
Naphthalene	80.0	51.6		ug/L		65	39 - 120	11	30
Nitrobenzene	80.0	53.9		ug/L		67	58 - 108	13	30
N-Nitrosodimethylamine	80.0	47.7		ug/L		60	53 - 106	12	34
N-Nitrosodi-n-propylamine	80.0	55.4		ug/L		69	57 - 106	12	30
N-Nitrosodiphenylamine	80.0	58.9		ug/L		74	65 - 104	7	30
Pentachlorophenol	160	104		ug/L		65	55 - 109	6	30
Phenanthrene	80.0	60.8		ug/L		76	67 - 106	7	30
Phenol	80.0	48.5		ug/L		61	60 - 108	11	30
Pyrene	80.0	61.6		ug/L		77	69 - 105	7	30
Pyridine	160	63.6	*-	ug/L		40	46 - 88	24	41

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2,4,6-Tribromophenol (Surr)	72		42 - 131
2-Fluorobiphenyl	67		48 - 120
2-Fluorophenol (Surr)	57		41 - 120
Nitrobenzene-d5 (Surr)	64		42 - 120
Phenol-d5 (Surr)	61		45 - 124
Terphenyl-d14 (Surr)	81		20 - 130

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE

Lab Sample ID: 280-144325-1 MS

Matrix: Solid

Analysis Batch: 524185

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8

Prep Type: Total/NA

Prep Batch: 523852

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier		Added	Result				
1,1'-Biphenyl - RE	ND	F1 F2	2850	1600	F1	ug/Kg	*	56	60 - 120
1,2,4,5-Tetrachlorobenzene - RE	ND	F1 F2	2850	1530	F1	ug/Kg	*	54	60 - 120
1,2,4-Trichlorobenzene - RE	ND	F1 F2	2850	1390	F1	ug/Kg	*	49	59 - 120
1,2-Dichlorobenzene - RE	ND	F1 F2	2850	1280	F1	ug/Kg	*	45	57 - 120
1,2-Diphenylhydrazine(as Azobenzene) - RE	ND	F1 F2	2880	1610	F1	ug/Kg	*	56	60 - 120
1,3-Dichlorobenzene - RE	ND	F1 F2	2850	1230	F1	ug/Kg	*	43	56 - 120
1,3-Dinitrobenzene - RE	ND	F1 F2	2850	1660	F1	ug/Kg	*	58	66 - 120
1,4-Dichlorobenzene - RE	ND	F1 F2	2850	1300	F1	ug/Kg	*	46	57 - 120
1,4-Dioxane - RE	ND	F1 F2	2850	640	J F1	ug/Kg	*	22	28 - 120
1-Methylnaphthalene - RE	ND	F1 F2	2850	1520	F1	ug/Kg	*	53	57 - 120
2,2'-oxybis[1-chloropropane] - RE	ND	F2	2850	1300		ug/Kg	*	46	46 - 120
2,3,4,6-Tetrachlorophenol - RE	ND	F1 F2	2850	1620	J F1	ug/Kg	*	57	63 - 120
2,4,5-Trichlorophenol - RE	ND	F1 F2	2850	1590	F1	ug/Kg	*	56	65 - 120
2,4,6-Trichlorophenol - RE	ND	F1 F2	2850	1560	F1	ug/Kg	*	55	64 - 120
2,4-Dichlorophenol - RE	ND	F1 F2	2850	1440	F1	ug/Kg	*	50	64 - 120
2,4-Dimethylphenol - RE	ND	F1 F2	2850	1410	F1	ug/Kg	*	49	60 - 120
2,4-Dinitrophenol - RE	ND	*- F1 F2	5700	2240	F1	ug/Kg	*	39	52 - 120
2,4-Dinitrotoluene - RE	ND	F1 F2	2850	1710	F1	ug/Kg	*	60	68 - 120
2,6-Dichlorophenol - RE	ND	F2	2850	1470		ug/Kg	*	52	30 - 150
2,6-Dinitrotoluene - RE	ND	F1 F2	2850	1640	F1	ug/Kg	*	58	68 - 120
2-Chloronaphthalene - RE	ND	F1 F2	2850	1560	F1	ug/Kg	*	55	61 - 120
2-Chlorophenol - RE	ND	F1 F2	2850	1320	F1	ug/Kg	*	46	62 - 120
2-Methylnaphthalene - RE	ND	F1 F2	2850	1490	F1	ug/Kg	*	52	60 - 120
2-Methylphenol - RE	ND	F1 F2	2850	1500	F1	ug/Kg	*	52	61 - 120
2-Nitroaniline - RE	ND	F1 F2	2850	1510	J F1	ug/Kg	*	53	63 - 120
2-Nitrophenol - RE	ND	F1 F2	2850	1310	F1	ug/Kg	*	46	61 - 120
3 & 4 Methylphenol - RE	ND	F1 F2	2850	1440	F1	ug/Kg	*	51	62 - 120
3,3'-Dichlorobenzidine - RE	ND	F2	5700	3350		ug/Kg	*	59	22 - 120
3-Methylphenol - RE	ND	F1 F2	2850	1440	F1	ug/Kg	*	51	62 - 120
3-Nitroaniline - RE	ND	F2	2850	1400	J	ug/Kg	*	49	40 - 120
4,6-Dinitro-2-methylphenol - RE	ND	F1 F2	5700	3000	F1	ug/Kg	*	53	60 - 120
4-Bromophenyl phenyl ether - RE	ND	F1 F2	2850	1620	F1	ug/Kg	*	57	66 - 120
4-Chloro-3-methylphenol - RE	ND	F1 F2	2850	1520	F1	ug/Kg	*	53	62 - 120
4-Chloroaniline - RE	ND	F2	2850	1230		ug/Kg	*	43	33 - 120
4-Chlorophenyl phenyl ether - RE	ND	F1 F2	2850	1650	F1	ug/Kg	*	58	63 - 120
4-Methylphenol - RE	ND	F1 F2	2850	1440	F1	ug/Kg	*	51	62 - 120
4-Nitroaniline - RE	ND	F1 F2	2850	1460	J F1	ug/Kg	*	51	58 - 120
4-Nitrophenol - RE	ND	F1 F2	5700	2850	F1	ug/Kg	*	50	67 - 120
Acenaphthene - RE	ND	F1 F2	2850	1580	F1	ug/Kg	*	56	62 - 120
Acenaphthylene - RE	ND	F1 F2	2850	1510	F1	ug/Kg	*	53	64 - 120
Acetophenone - RE	ND	F1 F2	2850	1230	F1	ug/Kg	*	43	48 - 120
Aniline - RE	ND	F2	2850	985		ug/Kg	*	35	21 - 120
Anthracene - RE	ND	F1 F2	2850	1690	F1	ug/Kg	*	59	66 - 120
Azobenzene - RE	ND	F1 F2	2850	1590	F1	ug/Kg	*	56	59 - 120
Benzaldehyde - RE	ND		2850	1200		ug/Kg	*	42	30 - 150
Benzidine - RE	ND	F1	5700	ND	F1	ug/Kg	*	0	5 - 120
Benzo[a]anthracene - RE	ND	F1 F2	2850	1650	F1	ug/Kg	*	58	64 - 120

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE (Continued)

Lab Sample ID: 280-144325-1 MS

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 524185

Prep Batch: 523852

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier				
Benzo[a]pyrene - RE	ND	F1 F2	2850	1600	F1	ug/Kg	*	56	65 - 120
Benzo[b]fluoranthene - RE	ND	F1 F2	2850	1600	F1	ug/Kg	*	56	58 - 120
Benzo[g,h,i]perylene - RE	ND	F2	2850	1670		ug/Kg	*	59	58 - 120
Benzo[k]fluoranthene - RE	ND	F1 F2	2850	1700	F1	ug/Kg	*	60	62 - 120
Benzoic acid - RE	ND	*- F1 F2	2850	999	J F1	ug/Kg	*	35	51 - 120
Benzyl alcohol - RE	ND	F1 F2	2850	1250	F1	ug/Kg	*	44	61 - 120
Bis(2-chloroethoxy)methane - RE	ND	F1 F2	2850	1390	F1	ug/Kg	*	49	58 - 120
Bis(2-chloroethyl)ether - RE	ND	F1 F2	2850	1390	F1	ug/Kg	*	49	57 - 120
Bis(2-ethylhexyl) phthalate - RE	ND	F1 F2	2850	1660	F1	ug/Kg	*	58	65 - 120
Butyl benzyl phthalate - RE	ND	F1 F2	2850	1630	F1	ug/Kg	*	57	65 - 120
Caprolactam - RE	ND	F2	2850	1410		ug/Kg	*	50	20 - 138
Carbazole - RE	ND	F1 F2	2850	1620	F1	ug/Kg	*	57	65 - 120
Chrysene - RE	ND	F1 F2	2850	1690	F1	ug/Kg	*	59	65 - 120
Dibenz(a,h)anthracene - RE	ND	F2	2850	1650		ug/Kg	*	58	56 - 120
Dibenzofuran - RE	ND	F1 F2	2850	1610	F1	ug/Kg	*	56	65 - 120
Diethyl phthalate - RE	ND	F1 F2	2850	1680	F1	ug/Kg	*	59	68 - 120
Dimethyl phthalate - RE	ND	F1 F2	2850	1670	F1	ug/Kg	*	58	66 - 120
Di-n-butyl phthalate - RE	ND	F1 F2	2850	1670	F1	ug/Kg	*	58	66 - 120
Di-n-octyl phthalate - RE	ND	F2	2850	1630		ug/Kg	*	57	55 - 120
Diphenylamine - RE	ND		2420	1390		ug/Kg	*	57	30 - 150
Fluoranthene - RE	ND	F1 F2	2850	1690	F1	ug/Kg	*	59	64 - 120
Fluorene - RE	ND	F1 F2	2850	1650	F1	ug/Kg	*	58	66 - 120
Hexachlorobenzene - RE	ND	F1 F2	2850	1650	F1	ug/Kg	*	58	65 - 120
Hexachlorobutadiene - RE	ND	F1 F2	2850	1440	F1	ug/Kg	*	50	58 - 120
Hexachlorocyclopentadiene - RE	ND	F1 F2	5700	2360	F1	ug/Kg	*	41	43 - 120
Hexachloroethane - RE	ND	F1 F2	2850	1260	F1	ug/Kg	*	44	56 - 120
Hexadecane - RE	ND	F2	2850	1540		ug/Kg	*	54	45 - 135
Indeno[1,2,3-cd]pyrene - RE	ND	F2	2850	1500		ug/Kg	*	53	46 - 120
Isophorone - RE	ND	F1 F2	2850	1350	F1	ug/Kg	*	47	56 - 120
Naphthalene - RE	ND	F1 F2	2850	1430	F1	ug/Kg	*	50	59 - 120
Nitrobenzene - RE	ND	F1 F2	2850	1360	F1	ug/Kg	*	48	55 - 120
N-Nitrosodimethylamine - RE	ND	F1 F2	2850	1150	F1	ug/Kg	*	40	50 - 120
N-Nitrosodi-n-propylamine - RE	ND	F1 F2	2850	1410	F1	ug/Kg	*	49	52 - 120
N-Nitrosodiphenylamine - RE	ND	F1 F2	2850	1630	F1	ug/Kg	*	57	65 - 120
Pentachlorophenol - RE	ND	F1 F2	5700	2750	F1	ug/Kg	*	48	50 - 120
Phenanthrene - RE	ND	F1 F2	2850	1660	F1	ug/Kg	*	58	67 - 120
Phenol - RE	ND	*- F1 F2	2850	1230	F1	ug/Kg	*	43	63 - 120
Pyrene - RE	ND	F1 F2	2850	1750	F1	ug/Kg	*	61	66 - 120
Pyridine - RE	ND	F1 F2	5700	1630	F1	ug/Kg	*	29	37 - 120

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr) - RE	55		35 - 120
2-Fluorobiphenyl - RE	53		46 - 120
2-Fluorophenol (Surr) - RE	43		43 - 120
Nitrobenzene-d5 (Surr) - RE	46		46 - 120
Phenol-d5 (Surr) - RE	46		46 - 120
Terphenyl-d14 (Surr) - RE	66		46 - 120

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE (Continued)

Lab Sample ID: 280-144325-1 MSD

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 524185

Prep Batch: 523852

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
1,1'-Biphenyl - RE	ND	F1 F2	2700	2420	F2	ug/Kg	*	90	60 - 120	41	30	
1,2,4,5-Tetrachlorobenzene - RE	ND	F1 F2	2700	2310	F2	ug/Kg	*	86	60 - 120	40	30	
1,2,4-Trichlorobenzene - RE	ND	F1 F2	2700	2240	F2	ug/Kg	*	83	59 - 120	47	30	
1,2-Dichlorobenzene - RE	ND	F1 F2	2700	2030	F2	ug/Kg	*	75	57 - 120	45	30	
1,2-Diphenylhydrazine(as Azobenzene) - RE	ND	F1 F2	2730	2350	F2	ug/Kg	*	86	60 - 120	38	30	
1,3-Dichlorobenzene - RE	ND	F1 F2	2700	1960	F2	ug/Kg	*	73	56 - 120	46	30	
1,3-Dinitrobenzene - RE	ND	F1 F2	2700	2530	F2	ug/Kg	*	94	66 - 120	41	30	
1,4-Dichlorobenzene - RE	ND	F1 F2	2700	2030	F2	ug/Kg	*	75	57 - 120	44	30	
1,4-Dioxane - RE	ND	F1 F2	2700	936	F2	ug/Kg	*	35	28 - 120	37	30	
1-Methylnaphthalene - RE	ND	F1 F2	2700	2320	F2	ug/Kg	*	86	57 - 120	42	30	
2,2'-oxybis[1-chloropropane] - RE	ND	F2	2700	2040	F2	ug/Kg	*	76	46 - 120	44	30	
2,3,4,6-Tetrachlorophenol - RE	ND	F1 F2	2700	2360	F2	ug/Kg	*	87	63 - 120	37	30	
2,4,5-Trichlorophenol - RE	ND	F1 F2	2700	2360	F2	ug/Kg	*	87	65 - 120	39	30	
2,4,6-Trichlorophenol - RE	ND	F1 F2	2700	2360	F2	ug/Kg	*	87	64 - 120	40	30	
2,4-Dichlorophenol - RE	ND	F1 F2	2700	2220	F2	ug/Kg	*	82	64 - 120	43	30	
2,4-Dimethylphenol - RE	ND	F1 F2	2700	2210	F2	ug/Kg	*	82	60 - 120	45	30	
2,4-Dinitrophenol - RE	ND	*- F1 F2	5400	3700	F2	ug/Kg	*	69	52 - 120	49	30	
2,4-Dinitrotoluene - RE	ND	F1 F2	2700	2520	F2	ug/Kg	*	93	68 - 120	38	30	
2,6-Dichlorophenol - RE	ND	F2	2700	2300	F2	ug/Kg	*	85	30 - 150	44	30	
2,6-Dinitrotoluene - RE	ND	F1 F2	2700	2390	F2	ug/Kg	*	89	68 - 120	37	30	
2-Chloronaphthalene - RE	ND	F1 F2	2700	2360	F2	ug/Kg	*	87	61 - 120	41	30	
2-Chlorophenol - RE	ND	F1 F2	2700	2080	F2	ug/Kg	*	77	62 - 120	45	30	
2-Methylnaphthalene - RE	ND	F1 F2	2700	2300	F2	ug/Kg	*	85	60 - 120	43	30	
2-Methylphenol - RE	ND	F1 F2	2700	2270	F2	ug/Kg	*	84	61 - 120	41	30	
2-Nitroaniline - RE	ND	F1 F2	2700	2220	F2	ug/Kg	*	82	63 - 120	38	30	
2-Nitrophenol - RE	ND	F1 F2	2700	2170	F2	ug/Kg	*	81	61 - 120	49	30	
3 & 4 Methylphenol - RE	ND	F1 F2	2700	2240	F2	ug/Kg	*	83	62 - 120	44	30	
3,3'-Dichlorobenzidine - RE	ND	F2	5400	5120	F2	ug/Kg	*	95	22 - 120	42	30	
3-Methylphenol - RE	ND	F1 F2	2700	2240	F2	ug/Kg	*	83	62 - 120	44	30	
3-Nitroaniline - RE	ND	F2	2700	2010	F2	ug/Kg	*	75	40 - 120	36	30	
4,6-Dinitro-2-methylphenol - RE	ND	F1 F2	5400	4960	F2	ug/Kg	*	92	60 - 120	49	30	
4-Bromophenyl phenyl ether - RE	ND	F1 F2	2700	2470	F2	ug/Kg	*	92	66 - 120	41	30	
4-Chloro-3-methylphenol - RE	ND	F1 F2	2700	2280	F2	ug/Kg	*	84	62 - 120	40	30	
4-Chloroaniline - RE	ND	F2	2700	1740	F2	ug/Kg	*	65	33 - 120	35	30	
4-Chlorophenyl phenyl ether - RE	ND	F1 F2	2700	2450	F2	ug/Kg	*	91	63 - 120	39	30	
4-Methylphenol - RE	ND	F1 F2	2700	2240	F2	ug/Kg	*	83	62 - 120	44	30	
4-Nitroaniline - RE	ND	F1 F2	2700	2210	F2	ug/Kg	*	82	58 - 120	41	30	
4-Nitrophenol - RE	ND	F1 F2	5400	4440	F2	ug/Kg	*	82	67 - 120	44	30	
Acenaphthene - RE	ND	F1 F2	2700	2350	F2	ug/Kg	*	87	62 - 120	39	30	
Acenaphthylene - RE	ND	F1 F2	2700	2270	F2	ug/Kg	*	84	64 - 120	40	30	
Acetophenone - RE	ND	F1 F2	2700	1930	F2	ug/Kg	*	71	48 - 120	44	30	
Aniline - RE	ND	F2	2700	1490	F2	ug/Kg	*	55	21 - 120	41	30	
Anthracene - RE	ND	F1 F2	2700	2540	F2	ug/Kg	*	94	66 - 120	40	30	
Azobenzene - RE	ND	F1 F2	2700	2320	F2	ug/Kg	*	86	59 - 120	38	30	
Benzaldehyde - RE	ND		2700	1540		ug/Kg	*	57	30 - 150	25	50	
Benzidine - RE	ND	F1	5400	1330	J	ug/Kg	*	25	5 - 120	NC	50	
Benzo[a]anthracene - RE	ND	F1 F2	2700	2540	F2	ug/Kg	*	94	64 - 120	43	30	

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE (Continued)

Lab Sample ID: 280-144325-1 MSD

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 524185

Prep Batch: 523852

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
	Result	Qualifier	Added	Result	Qualifier						
Benzo[a]pyrene - RE	ND	F1 F2	2700	2450	F2	ug/Kg	☼	91	65 - 120	42	30
Benzo[b]fluoranthene - RE	ND	F1 F2	2700	2400	F2	ug/Kg	☼	89	58 - 120	40	30
Benzo[g,h,i]perylene - RE	ND	F2	2700	2540	F2	ug/Kg	☼	94	58 - 120	42	30
Benzo[k]fluoranthene - RE	ND	F1 F2	2700	2600	F2	ug/Kg	☼	96	62 - 120	42	30
Benzoic acid - RE	ND	*- F1 F2	2700	1840	F2	ug/Kg	☼	68	51 - 120	59	30
Benzyl alcohol - RE	ND	F1 F2	2700	2000	F2	ug/Kg	☼	74	61 - 120	46	30
Bis(2-chloroethoxy)methane - RE	ND	F1 F2	2700	2220	F2	ug/Kg	☼	82	58 - 120	46	30
Bis(2-chloroethyl)ether - RE	ND	F1 F2	2700	2240	F2	ug/Kg	☼	83	57 - 120	47	30
Bis(2-ethylhexyl) phthalate - RE	ND	F1 F2	2700	2620	F2	ug/Kg	☼	97	65 - 120	45	30
Butyl benzyl phthalate - RE	ND	F1 F2	2700	2510	F2	ug/Kg	☼	93	65 - 120	42	30
Caprolactam - RE	ND	F2	2700	2100	F2	ug/Kg	☼	78	20 - 138	39	30
Carbazole - RE	ND	F1 F2	2700	2520	F2	ug/Kg	☼	93	65 - 120	44	30
Chrysene - RE	ND	F1 F2	2700	2550	F2	ug/Kg	☼	94	65 - 120	40	30
Dibenz(a,h)anthracene - RE	ND	F2	2700	2540	F2	ug/Kg	☼	94	56 - 120	42	30
Dibenzofuran - RE	ND	F1 F2	2700	2360	F2	ug/Kg	☼	87	65 - 120	38	30
Diethyl phthalate - RE	ND	F1 F2	2700	2470	F2	ug/Kg	☼	92	68 - 120	38	30
Dimethyl phthalate - RE	ND	F1 F2	2700	2460	F2	ug/Kg	☼	91	66 - 120	39	30
Di-n-butyl phthalate - RE	ND	F1 F2	2700	2550	F2	ug/Kg	☼	94	66 - 120	42	30
Di-n-octyl phthalate - RE	ND	F2	2700	2620	F2	ug/Kg	☼	97	55 - 120	47	30
Diphenylamine - RE	ND		2290	2010		ug/Kg	☼	88	30 - 150	37	50
Fluoranthene - RE	ND	F1 F2	2700	2470	F2	ug/Kg	☼	92	64 - 120	38	30
Fluorene - RE	ND	F1 F2	2700	2400	F2	ug/Kg	☼	89	66 - 120	37	30
Hexachlorobenzene - RE	ND	F1 F2	2700	2490	F2	ug/Kg	☼	92	65 - 120	40	30
Hexachlorobutadiene - RE	ND	F1 F2	2700	2260	F2	ug/Kg	☼	84	58 - 120	44	30
Hexachlorocyclopentadiene - RE	ND	F1 F2	5400	3680	F2	ug/Kg	☼	68	43 - 120	44	30
Hexachloroethane - RE	ND	F1 F2	2700	1990	F2	ug/Kg	☼	74	56 - 120	45	30
Hexadecane - RE	ND	F2	2700	2320	F2	ug/Kg	☼	86	45 - 135	41	30
Indeno[1,2,3-cd]pyrene - RE	ND	F2	2700	2410	F2	ug/Kg	☼	89	46 - 120	47	30
Isophorone - RE	ND	F1 F2	2700	2100	F2	ug/Kg	☼	78	56 - 120	43	30
Naphthalene - RE	ND	F1 F2	2700	2260	F2	ug/Kg	☼	84	59 - 120	45	30
Nitrobenzene - RE	ND	F1 F2	2700	2210	F2	ug/Kg	☼	82	55 - 120	48	30
N-Nitrosodimethylamine - RE	ND	F1 F2	2700	1840	F2	ug/Kg	☼	68	50 - 120	46	30
N-Nitrosodi-n-propylamine - RE	ND	F1 F2	2700	2240	F2	ug/Kg	☼	83	52 - 120	46	30
N-Nitrosodiphenylamine - RE	ND	F1 F2	2700	2440	F2	ug/Kg	☼	90	65 - 120	39	30
Pentachlorophenol - RE	ND	F1 F2	5400	4250	F2	ug/Kg	☼	79	50 - 120	43	30
Phenanthrene - RE	ND	F1 F2	2700	2480	F2	ug/Kg	☼	92	67 - 120	39	30
Phenol - RE	ND	*- F1 F2	2700	1980	F2	ug/Kg	☼	73	63 - 120	47	30
Pyrene - RE	ND	F1 F2	2700	2600	F2	ug/Kg	☼	97	66 - 120	39	30
Pyridine - RE	ND	F1 F2	5400	2480	F2	ug/Kg	☼	46	37 - 120	41	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2,4,6-Tribromophenol (Surr) - RE	88		35 - 120
2-Fluorobiphenyl - RE	85		46 - 120
2-Fluorophenol (Surr) - RE	75		43 - 120
Nitrobenzene-d5 (Surr) - RE	80		46 - 120
Phenol-d5 (Surr) - RE	77		46 - 120
Terphenyl-d14 (Surr) - RE	107		46 - 120

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Lab Sample ID: MB 280-522815/5
Matrix: Water
Analysis Batch: 522815

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		25	10	ug/L			01/07/21 10:50	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	91		82 - 110					01/07/21 10:50	1

Lab Sample ID: LCS 280-522815/15
Matrix: Water
Analysis Batch: 522815

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	76.9	74.5		ug/L		97	79 - 149
Surrogate	%Recovery	LCS Qualifier	Limits				
a,a,a-Trifluorotoluene	94		82 - 110				

Lab Sample ID: LCSD 280-522815/16
Matrix: Water
Analysis Batch: 522815

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	76.9	72.1		ug/L		94	79 - 149	3	27
Surrogate	%Recovery	LCSD Qualifier	Limits						
a,a,a-Trifluorotoluene	93		82 - 110						

Lab Sample ID: MB 280-523965/3-A
Matrix: Solid
Analysis Batch: 524036

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523965

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		2.0	0.76	mg/Kg		01/19/21 10:58	01/19/21 22:04	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	93		77 - 123				01/19/21 10:58	01/19/21 22:04	1

Lab Sample ID: MB 280-523965/3-A
Matrix: Solid
Analysis Batch: 524122

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523965

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		2.0	0.76	mg/Kg		01/19/21 10:58	01/20/21 20:29	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics) (Continued)

Lab Sample ID: MB 280-523965/3-A
Matrix: Solid
Analysis Batch: 524122

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523965

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
a,a,a-Trifluorotoluene	93		77 - 123	01/19/21 10:58	01/20/21 20:29	1

Lab Sample ID: LCS 280-523965/1-A
Matrix: Solid
Analysis Batch: 524036

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523965

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
a,a,a-Trifluorotoluene	95		77 - 123

Lab Sample ID: LCS 280-523965/1-A
Matrix: Solid
Analysis Batch: 524122

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523965

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
a,a,a-Trifluorotoluene	97		77 - 123

Lab Sample ID: LCSD 280-523965/2-A
Matrix: Solid
Analysis Batch: 524036

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 523965

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
a,a,a-Trifluorotoluene	94		77 - 123

Lab Sample ID: LCSD 280-523965/2-A
Matrix: Solid
Analysis Batch: 524122

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 523965

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
a,a,a-Trifluorotoluene	96		77 - 123

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Lab Sample ID: MB 280-522804/1-A
Matrix: Solid
Analysis Batch: 523040

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 522804

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Diesel Range Organics [C10-C28]	ND		8.0	3.6	mg/Kg		01/07/21 10:47	01/10/21 08:52	1
Motor Oil (C20-C38)	ND		24	7.8	mg/Kg		01/07/21 10:47	01/10/21 08:52	1
Surrogate	MB	MB	Limits			D	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier							
<i>o</i> -Terphenyl (Surr)	70		49 - 115				01/07/21 10:47	01/10/21 08:52	1

Lab Sample ID: LCS 280-522804/2-A
Matrix: Solid
Analysis Batch: 523040

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 522804

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	Limits
		Result	Qualifier				
Diesel Range Organics [C10-C28]	132	112		mg/Kg		85	53 - 115
Surrogate	LCS	LCS	Limits				
	%Recovery	Qualifier					
<i>o</i> -Terphenyl (Surr)	80		49 - 115				

Lab Sample ID: LCS 280-522804/3-A
Matrix: Solid
Analysis Batch: 523040

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 522804

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	Limits
		Result	Qualifier				
Motor Oil (C20-C38)	334	269		mg/Kg		80	57 - 115
Surrogate	LCS	LCS	Limits				
	%Recovery	Qualifier					
<i>o</i> -Terphenyl (Surr)	74		49 - 115				

Lab Sample ID: 280-144325-1 MS
Matrix: Solid
Analysis Batch: 523040

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8
Prep Type: Total/NA
Prep Batch: 522804

Analyte	Sample Result	Sample Qualifier	Spike Added	MS	MS	Unit	D	%Rec	Limits
				Result	Qualifier				
Diesel Range Organics [C10-C28]	ND		137	103		mg/Kg	☼	76	56 - 115
Surrogate	MS	MS	Limits						
	%Recovery	Qualifier							
<i>o</i> -Terphenyl (Surr)	81		49 - 115						

Lab Sample ID: 280-144325-1 MS
Matrix: Solid
Analysis Batch: 523040

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8
Prep Type: Total/NA
Prep Batch: 522804

Analyte	Sample Result	Sample Qualifier	Spike Added	MS	MS	Unit	D	%Rec	Limits
				Result	Qualifier				
Motor Oil (C20-C38)	ND		327	251		mg/Kg	☼	77	57 - 115
Surrogate	MS	MS	Limits						
	%Recovery	Qualifier							
<i>o</i> -Terphenyl (Surr)	61		49 - 115						

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Lab Sample ID: 280-144325-1 MSD
Matrix: Solid
Analysis Batch: 523040

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8
Prep Type: Total/NA
Prep Batch: 522804

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	ND		135	118		mg/Kg	*	87	56 - 115	13	23
Surrogate	%Recovery	MSD Qualifier	MSD Limits								
<i>o-Terphenyl (Surr)</i>	83		49 - 115								

Lab Sample ID: 280-144325-1 MSD
Matrix: Solid
Analysis Batch: 523040

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8
Prep Type: Total/NA
Prep Batch: 522804

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Motor Oil (C20-C38)	ND		337	297		mg/Kg	*	88	57 - 115	17	30
Surrogate	%Recovery	MSD Qualifier	MSD Limits								
<i>o-Terphenyl (Surr)</i>	68		49 - 115								

Lab Sample ID: MB 280-523119/1-A
Matrix: Water
Analysis Batch: 523570

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523119

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		0.25	0.033	mg/L		01/11/21 13:14	01/16/21 23:44	1	
Motor Oil (C20-C38)	ND		0.50	0.056	mg/L		01/11/21 13:14	01/16/21 23:44	1	
Surrogate	%Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac				
<i>o-Terphenyl (Surr)</i>	69		50 - 115	01/11/21 13:14	01/16/21 23:44	1				

Lab Sample ID: LCS 280-523119/2-A
Matrix: Water
Analysis Batch: 523570

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523119

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	1.98	1.62		mg/L		82	54 - 115
Surrogate	LCS %Recovery	LCS Qualifier	LCS Limits				
<i>o-Terphenyl (Surr)</i>	83		50 - 115				

Lab Sample ID: LCS 280-523119/4-A
Matrix: Water
Analysis Batch: 523570

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523119

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Motor Oil (C20-C38)	5.02	4.63		mg/L		92	54 - 115

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Lab Sample ID: LCS 280-523119/4-A
Matrix: Water
Analysis Batch: 523570

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523119

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl (Surr)	86		50 - 115

Lab Sample ID: LCSD 280-523119/3-A
Matrix: Water
Analysis Batch: 523570

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 523119

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	1.98	1.63		mg/L		82	54 - 115	0	31

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl (Surr)	84		50 - 115

Lab Sample ID: LCSD 280-523119/5-A
Matrix: Water
Analysis Batch: 523570

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 523119

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Motor Oil (C20-C38)	5.02	4.37		mg/L		87	54 - 115	6	31

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl (Surr)	81		50 - 115

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-523494/1-A
Matrix: Water
Analysis Batch: 523934

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523494

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.33	ug/L		01/14/21 16:00	01/18/21 16:51	1
Barium	ND		1.0	0.29	ug/L		01/14/21 16:00	01/18/21 16:51	1
Cadmium	ND		1.0	0.27	ug/L		01/14/21 16:00	01/18/21 16:51	1
Chromium	ND		2.0	0.50	ug/L		01/14/21 16:00	01/18/21 16:51	1
Lead	ND		1.0	0.18	ug/L		01/14/21 16:00	01/18/21 16:51	1
Selenium	ND		5.0	0.37	ug/L		01/14/21 16:00	01/18/21 16:51	1
Silver	ND		5.0	0.033	ug/L		01/14/21 16:00	01/18/21 16:51	1

Lab Sample ID: LCS 280-523494/2-A
Matrix: Water
Analysis Batch: 523934

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523494

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	40.0	38.1		ug/L		95	85 - 117
Barium	40.0	39.2		ug/L		98	85 - 118
Cadmium	40.0	37.8		ug/L		95	85 - 115
Chromium	40.0	39.5		ug/L		99	84 - 121

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 280-523494/2-A
Matrix: Water
Analysis Batch: 523934

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523494

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	40.0	39.2		ug/L		98	85 - 118
Selenium	40.0	39.2		ug/L		98	77 - 122
Silver	40.0	39.8		ug/L		99	85 - 115

Lab Sample ID: 280-144325-3 MS
Matrix: Water
Analysis Batch: 523934

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-GW
Prep Type: Total/NA
Prep Batch: 523494

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	19		40.0	53.5		ug/L		86	85 - 117
Barium	560		40.0	571	4	ug/L		39	85 - 118
Cadmium	0.32	J	40.0	38.5		ug/L		96	85 - 115
Chromium	34		40.0	70.6		ug/L		91	84 - 121
Lead	26		40.0	60.4		ug/L		87	85 - 118
Selenium	1.7	J	40.0	37.6		ug/L		90	77 - 122
Silver	0.18	J	40.0	37.7		ug/L		94	85 - 115

Lab Sample ID: 280-144325-3 MSD
Matrix: Water
Analysis Batch: 523934

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-GW
Prep Type: Total/NA
Prep Batch: 523494

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Arsenic	19		40.0	54.4		ug/L		89	85 - 117	2	20
Barium	560		40.0	558	4	ug/L		5	85 - 118	2	20
Cadmium	0.32	J	40.0	38.9		ug/L		96	85 - 115	1	20
Chromium	34		40.0	70.9		ug/L		92	84 - 121	0	20
Lead	26		40.0	60.7		ug/L		88	85 - 118	1	20
Selenium	1.7	J	40.0	38.9		ug/L		93	77 - 122	4	20
Silver	0.18	J	40.0	38.4		ug/L		96	85 - 115	2	20

Lab Sample ID: MB 280-523726/1-A
Matrix: Solid
Analysis Batch: 524093

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523726

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		100	7.8	ug/Kg		01/18/21 15:30	01/19/21 17:30	1

Lab Sample ID: LCS 280-523726/2-A
Matrix: Solid
Analysis Batch: 524093

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523726

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	20000	20500		ug/Kg		103	83 - 113

Lab Sample ID: 280-144325-1 MS
Matrix: Solid
Analysis Batch: 524093

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8
Prep Type: Total/NA
Prep Batch: 523726

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	180		14400	14600		ug/Kg	✱	100	83 - 113

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: 280-144325-1 MSD
Matrix: Solid
Analysis Batch: 524093

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8
Prep Type: Total/NA
Prep Batch: 523726

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silver	180		15700	15400		ug/Kg	☼	97	83 - 113	5	20

Lab Sample ID: MB 280-523727/1-A
Matrix: Solid
Analysis Batch: 524092

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523727

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.60	0.051	mg/Kg		01/18/21 14:30	01/19/21 22:40	1
Barium	ND		0.40	0.071	mg/Kg		01/18/21 14:30	01/19/21 22:40	1
Cadmium	ND		0.10	0.0094	mg/Kg		01/18/21 14:30	01/19/21 22:40	1
Chromium	ND		0.20	0.076	mg/Kg		01/18/21 14:30	01/19/21 22:40	1
Lead	ND		0.15	0.018	mg/Kg		01/18/21 14:30	01/19/21 22:40	1
Selenium	ND		0.50	0.13	mg/Kg		01/18/21 14:30	01/19/21 22:40	1

Lab Sample ID: LCS 280-523727/2-A
Matrix: Solid
Analysis Batch: 524092

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523727

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	20.0	20.0		mg/Kg		100	83 - 111
Barium	20.0	20.8		mg/Kg		104	86 - 120
Cadmium	20.0	19.8		mg/Kg		99	85 - 109
Chromium	20.0	21.0		mg/Kg		105	87 - 121
Lead	20.0	20.3		mg/Kg		101	81 - 125
Selenium	20.0	20.3		mg/Kg		101	78 - 108

Lab Sample ID: 280-144325-1 MS
Matrix: Solid
Analysis Batch: 524092

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8
Prep Type: Total/NA
Prep Batch: 523727

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.6	F2	19.0	20.6		mg/Kg	☼	100	83 - 111
Barium	52	F1	19.0	79.1	F1	mg/Kg	☼	145	86 - 120
Cadmium	0.21	F2	19.0	19.0		mg/Kg	☼	99	85 - 109
Chromium	4.1	F2	19.0	25.2		mg/Kg	☼	111	87 - 121
Lead	13	F1 F2	19.0	32.9		mg/Kg	☼	106	81 - 125
Selenium	ND	F2	19.0	18.6		mg/Kg	☼	98	78 - 108

Lab Sample ID: 280-144325-1 MSD
Matrix: Solid
Analysis Batch: 524092

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8
Prep Type: Total/NA
Prep Batch: 523727

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	1.6	F2	16.6	15.8	F2	mg/Kg	☼	85	83 - 111	27	20
Barium	52	F1	16.6	72.2	F1	mg/Kg	☼	124	86 - 120	9	20
Cadmium	0.21	F2	16.6	14.3	F2	mg/Kg	☼	85	85 - 109	28	20
Chromium	4.1	F2	16.6	19.3	F2	mg/Kg	☼	91	87 - 121	26	20
Lead	13	F1 F2	16.6	24.4	F1 F2	mg/Kg	☼	69	81 - 125	30	20
Selenium	ND	F2	16.6	14.2	F2	mg/Kg	☼	86	78 - 108	27	20

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 280-523411/1-C
Matrix: Water
Analysis Batch: 524092

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 523725

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic, Dissolved	ND		5.0	0.33	ug/L		01/18/21 14:30	01/19/21 20:13	1
Barium, Dissolved	ND		1.0	0.29	ug/L		01/18/21 14:30	01/19/21 20:13	1
Cadmium, Dissolved	ND		1.0	0.27	ug/L		01/18/21 14:30	01/19/21 20:13	1
Chromium, Dissolved	ND		2.0	0.50	ug/L		01/18/21 14:30	01/19/21 20:13	1
Lead, Dissolved	ND		1.0	0.18	ug/L		01/18/21 14:30	01/19/21 20:13	1
Silver, Dissolved	ND		5.0	0.033	ug/L		01/18/21 14:30	01/19/21 20:13	1

Lab Sample ID: MB 280-523411/1-C
Matrix: Water
Analysis Batch: 524115

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 523725

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium, Dissolved	ND		5.0	0.37	ug/L		01/18/21 14:30	01/20/21 09:03	1

Lab Sample ID: LCS 280-523411/2-C
Matrix: Water
Analysis Batch: 524092

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 523725

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic, Dissolved	40.0	39.1		ug/L		98	85 - 117
Barium, Dissolved	40.0	40.6		ug/L		102	85 - 118
Cadmium, Dissolved	40.0	39.1		ug/L		98	85 - 115
Chromium, Dissolved	40.0	41.3		ug/L		103	84 - 121
Lead, Dissolved	40.0	40.7		ug/L		102	85 - 118
Silver, Dissolved	40.0	40.7		ug/L		102	85 - 115

Lab Sample ID: LCS 280-523411/2-C
Matrix: Water
Analysis Batch: 524115

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 523725

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Selenium, Dissolved	40.0	40.5		ug/L		101	77 - 122

Lab Sample ID: 280-144325-3 MS
Matrix: Water
Analysis Batch: 524092

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-GW
Prep Type: Dissolved
Prep Batch: 523725

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic, Dissolved	3.0	J	40.0	42.5		ug/L		99	85 - 117
Barium, Dissolved	110		40.0	147		ug/L		100	85 - 118
Cadmium, Dissolved	ND		40.0	38.7		ug/L		97	85 - 115
Chromium, Dissolved	ND		40.0	40.1		ug/L		100	84 - 121
Lead, Dissolved	ND		40.0	38.3		ug/L		96	85 - 118
Silver, Dissolved	0.037	J	40.0	37.6		ug/L		94	85 - 115

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 280-144325-3 MS

Matrix: Water

Analysis Batch: 524115

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-GW

Prep Type: Dissolved

Prep Batch: 523725

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Selenium, Dissolved	0.41	J	40.0	40.1		ug/L		99	77 - 122

Lab Sample ID: 280-144325-3 MSD

Matrix: Water

Analysis Batch: 524092

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-GW

Prep Type: Dissolved

Prep Batch: 523725

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Arsenic, Dissolved	3.0	J	40.0	42.6		ug/L		99	85 - 117	0	20
Barium, Dissolved	110		40.0	147		ug/L		101	85 - 118	0	20
Cadmium, Dissolved	ND		40.0	40.1		ug/L		100	85 - 115	3	20
Chromium, Dissolved	ND		40.0	40.8		ug/L		102	84 - 121	2	20
Lead, Dissolved	ND		40.0	39.2		ug/L		98	85 - 118	2	20
Silver, Dissolved	0.037	J	40.0	38.8		ug/L		97	85 - 115	3	20

Lab Sample ID: 280-144325-3 MSD

Matrix: Water

Analysis Batch: 524115

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-GW

Prep Type: Dissolved

Prep Batch: 523725

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Selenium, Dissolved	0.41	J	40.0	40.8		ug/L		101	77 - 122	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 280-523884/1-A

Matrix: Water

Analysis Batch: 524113

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 523884

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0520	J	0.20	0.027	ug/L		01/18/21 15:51	01/19/21 18:00	1

Lab Sample ID: LCS 280-523884/2-A

Matrix: Water

Analysis Batch: 524113

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 523884

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	4.66		ug/L		93	84 - 120

Lab Sample ID: MB 280-523411/1-D

Matrix: Water

Analysis Batch: 524243

Client Sample ID: Method Blank

Prep Type: Dissolved

Prep Batch: 523977

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury, Dissolved	ND		0.20	0.027	ug/L		01/20/21 14:58	01/20/21 22:14	1

Lab Sample ID: LCS 280-523411/2-D

Matrix: Water

Analysis Batch: 524243

Client Sample ID: Lab Control Sample

Prep Type: Dissolved

Prep Batch: 523977

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury, Dissolved	5.00	4.60		ug/L		92	84 - 120

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 280-523966/1-A
Matrix: Solid
Analysis Batch: 524272

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523966

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		17	5.5	ug/Kg		01/21/21 14:45	01/21/21 17:16	1

Lab Sample ID: LCS 280-523966/2-A
Matrix: Solid
Analysis Batch: 524272

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523966

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	333	356		ug/Kg		107	87 - 111

Lab Sample ID: 280-144325-1 MS
Matrix: Solid
Analysis Batch: 524272

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8
Prep Type: Total/NA
Prep Batch: 523966

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	6.2	J	384	419		ug/Kg	⊛	109	87 - 111

Lab Sample ID: 280-144325-1 MSD
Matrix: Solid
Analysis Batch: 524272

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8
Prep Type: Total/NA
Prep Batch: 523966

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	6.2	J	414	454		ug/Kg	⊛	110	87 - 111	8	20

Consultant Work Product - Jacobs Engineering - Not CDOT Approved

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

GC/MS VOA

Prep Batch: 522885

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-1	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	5035	
280-144325-2	CDOT I270 ENV 12_2020-SB-18-18-20	Total/NA	Solid	5035	
MB 280-522885/3-A	Method Blank	Total/NA	Solid	5035	
LCS 280-522885/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-522885/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 522940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-3	CDOT I270 ENV 12_2020-SB-18-GW	Total/NA	Water	8260B	
280-144325-4	CDOT I270 ENV 12_2020-SB-TB-04	Total/NA	Water	8260B	
MB 280-522940/9	Method Blank	Total/NA	Water	8260B	
LCS 280-522940/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 280-522940/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 523544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-1	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	8260B	522885
280-144325-2	CDOT I270 ENV 12_2020-SB-18-18-20	Total/NA	Solid	8260B	522885
MB 280-522885/3-A	Method Blank	Total/NA	Solid	8260B	522885
LCS 280-522885/1-A	Lab Control Sample	Total/NA	Solid	8260B	522885
LCSD 280-522885/2-A	Lab Control Sample Dup	Total/NA	Solid	8260B	522885

GC/MS Semi VOA

Prep Batch: 522806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-1	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	3550C	
280-144325-2	CDOT I270 ENV 12_2020-SB-18-18-20	Total/NA	Solid	3550C	
MB 280-522806/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 280-522806/2-A	Lab Control Sample	Total/NA	Solid	3550C	
280-144325-1 MS	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	3550C	
280-144325-1 MSD	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	3550C	

Prep Batch: 523230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-3	CDOT I270 ENV 12_2020-SB-18-GW	Total/NA	Water	3520C	
MB 280-523230/1-A	Method Blank	Total/NA	Water	3520C	
LCS 280-523230/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 280-523230/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 523769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-1	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	8270D	522806
280-144325-2	CDOT I270 ENV 12_2020-SB-18-18-20	Total/NA	Solid	8270D	522806
MB 280-522806/1-A	Method Blank	Total/NA	Solid	8270D	522806
LCS 280-522806/2-A	Lab Control Sample	Total/NA	Solid	8270D	522806
280-144325-1 MS	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	8270D	522806
280-144325-1 MSD	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	8270D	522806

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

GC/MS Semi VOA

Prep Batch: 523852

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-1 - RE	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	3550C	
280-144325-2 - RE	CDOT I270 ENV 12_2020-SB-18-18-20	Total/NA	Solid	3550C	
MB 280-523852/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 280-523852/2-A	Lab Control Sample	Total/NA	Solid	3550C	
280-144325-1 MS - RE	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	3550C	
280-144325-1 MSD - RE	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	3550C	

Analysis Batch: 524058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-3	CDOT I270 ENV 12_2020-SB-18-GW	Total/NA	Water	8270D	523230
MB 280-523230/1-A	Method Blank	Total/NA	Water	8270D	523230
LCS 280-523230/2-A	Lab Control Sample	Total/NA	Water	8270D	523230
LCSD 280-523230/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	523230

Prep Batch: 524131

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-3 - RE	CDOT I270 ENV 12_2020-SB-18-GW	Total/NA	Water	3520C	
MB 280-524131/1-A	Method Blank	Total/NA	Water	3520C	
LCS 280-524131/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 280-524131/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 524185

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-1 - RE	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	8270D	523852
280-144325-2 - RE	CDOT I270 ENV 12_2020-SB-18-18-20	Total/NA	Solid	8270D	523852
MB 280-523852/1-A	Method Blank	Total/NA	Solid	8270D	523852
LCS 280-523852/2-A	Lab Control Sample	Total/NA	Solid	8270D	523852
280-144325-1 MS - RE	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	8270D	523852
280-144325-1 MSD - RE	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	8270D	523852

Analysis Batch: 524537

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-3 - RE	CDOT I270 ENV 12_2020-SB-18-GW	Total/NA	Water	8270D	524131
MB 280-524131/1-A	Method Blank	Total/NA	Water	8270D	524131
LCS 280-524131/2-A	Lab Control Sample	Total/NA	Water	8270D	524131
LCSD 280-524131/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	524131

GC VOA

Analysis Batch: 522815

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-3	CDOT I270 ENV 12_2020-SB-18-GW	Total/NA	Water	8015C	
280-144325-4	CDOT I270 ENV 12_2020-SB-TB-04	Total/NA	Water	8015C	
MB 280-522815/5	Method Blank	Total/NA	Water	8015C	
LCS 280-522815/15	Lab Control Sample	Total/NA	Water	8015C	
LCSD 280-522815/16	Lab Control Sample Dup	Total/NA	Water	8015C	

Prep Batch: 523965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-1	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	5035	
280-144325-2	CDOT I270 ENV 12_2020-SB-18-18-20	Total/NA	Solid	5035	

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QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

GC VOA (Continued)

Prep Batch: 523965 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-523965/3-A	Method Blank	Total/NA	Solid	5035	
LCS 280-523965/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-523965/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 524036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-1	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	8015C	523965
280-144325-2	CDOT I270 ENV 12_2020-SB-18-18-20	Total/NA	Solid	8015C	523965
MB 280-523965/3-A	Method Blank	Total/NA	Solid	8015C	523965
LCS 280-523965/1-A	Lab Control Sample	Total/NA	Solid	8015C	523965
LCSD 280-523965/2-A	Lab Control Sample Dup	Total/NA	Solid	8015C	523965

Analysis Batch: 524122

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-1	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	8015C	523965
280-144325-2	CDOT I270 ENV 12_2020-SB-18-18-20	Total/NA	Solid	8015C	523965
MB 280-523965/3-A	Method Blank	Total/NA	Solid	8015C	523965
LCS 280-523965/1-A	Lab Control Sample	Total/NA	Solid	8015C	523965
LCSD 280-523965/2-A	Lab Control Sample Dup	Total/NA	Solid	8015C	523965

GC Semi VOA

Prep Batch: 522804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-1	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	3546	
280-144325-2	CDOT I270 ENV 12_2020-SB-18-18-20	Total/NA	Solid	3546	
MB 280-522804/1-A	Method Blank	Total/NA	Solid	3546	
LCS 280-522804/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCS 280-522804/3-A	Lab Control Sample	Total/NA	Solid	3546	
280-144325-1 MS	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	3546	
280-144325-1 MS	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	3546	
280-144325-1 MSD	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	3546	
280-144325-1 MSD	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	3546	

Analysis Batch: 523040

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-1	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	8015C	522804
280-144325-2	CDOT I270 ENV 12_2020-SB-18-18-20	Total/NA	Solid	8015C	522804
MB 280-522804/1-A	Method Blank	Total/NA	Solid	8015C	522804
LCS 280-522804/2-A	Lab Control Sample	Total/NA	Solid	8015C	522804
LCS 280-522804/3-A	Lab Control Sample	Total/NA	Solid	8015C	522804
280-144325-1 MS	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	8015C	522804
280-144325-1 MS	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	8015C	522804
280-144325-1 MSD	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	8015C	522804
280-144325-1 MSD	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	8015C	522804

Prep Batch: 523119

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-3	CDOT I270 ENV 12_2020-SB-18-GW	Total/NA	Water	3510C	
MB 280-523119/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-523119/2-A	Lab Control Sample	Total/NA	Water	3510C	

Eurofins TestAmerica, Denver

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

GC Semi VOA (Continued)

Prep Batch: 523119 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-523119/4-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 280-523119/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
LCSD 280-523119/5-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 523570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-3	CDOT I270 ENV 12_2020-SB-18-GW	Total/NA	Water	8015C	523119
MB 280-523119/1-A	Method Blank	Total/NA	Water	8015C	523119
LCS 280-523119/2-A	Lab Control Sample	Total/NA	Water	8015C	523119
LCS 280-523119/4-A	Lab Control Sample	Total/NA	Water	8015C	523119
LCSD 280-523119/3-A	Lab Control Sample Dup	Total/NA	Water	8015C	523119
LCSD 280-523119/5-A	Lab Control Sample Dup	Total/NA	Water	8015C	523119

Metals

Filtration Batch: 523411

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-3	CDOT I270 ENV 12_2020-SB-18-GW	Dissolved	Water	FILTRATION	
MB 280-523411/1-C	Method Blank	Dissolved	Water	FILTRATION	
MB 280-523411/1-D	Method Blank	Dissolved	Water	FILTRATION	
LCS 280-523411/2-C	Lab Control Sample	Dissolved	Water	FILTRATION	
LCS 280-523411/2-D	Lab Control Sample	Dissolved	Water	FILTRATION	
280-144325-3 MS	CDOT I270 ENV 12_2020-SB-18-GW	Dissolved	Water	FILTRATION	
280-144325-3 MSD	CDOT I270 ENV 12_2020-SB-18-GW	Dissolved	Water	FILTRATION	

Prep Batch: 523494

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-3	CDOT I270 ENV 12_2020-SB-18-GW	Total/NA	Water	3020A	
MB 280-523494/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-523494/2-A	Lab Control Sample	Total/NA	Water	3020A	
280-144325-3 MS	CDOT I270 ENV 12_2020-SB-18-GW	Total/NA	Water	3020A	
280-144325-3 MSD	CDOT I270 ENV 12_2020-SB-18-GW	Total/NA	Water	3020A	

Prep Batch: 523725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-3	CDOT I270 ENV 12_2020-SB-18-GW	Dissolved	Water	3005A	523411
MB 280-523411/1-C	Method Blank	Dissolved	Water	3005A	523411
LCS 280-523411/2-C	Lab Control Sample	Dissolved	Water	3005A	523411
280-144325-3 MS	CDOT I270 ENV 12_2020-SB-18-GW	Dissolved	Water	3005A	523411
280-144325-3 MSD	CDOT I270 ENV 12_2020-SB-18-GW	Dissolved	Water	3005A	523411

Prep Batch: 523726

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-1	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	3050B-Sb	
280-144325-2	CDOT I270 ENV 12_2020-SB-18-18-20	Total/NA	Solid	3050B-Sb	
MB 280-523726/1-A	Method Blank	Total/NA	Solid	3050B-Sb	
LCS 280-523726/2-A	Lab Control Sample	Total/NA	Solid	3050B-Sb	
280-144325-1 MS	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	3050B-Sb	
280-144325-1 MSD	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	3050B-Sb	

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Metals

Prep Batch: 523727

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-1	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	3050B	
280-144325-2	CDOT I270 ENV 12_2020-SB-18-18-20	Total/NA	Solid	3050B	
MB 280-523727/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-523727/2-A	Lab Control Sample	Total/NA	Solid	3050B	
280-144325-1 MS	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	3050B	
280-144325-1 MSD	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	3050B	

Prep Batch: 523884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-3	CDOT I270 ENV 12_2020-SB-18-GW	Total/NA	Water	7470A	
MB 280-523884/1-A	Method Blank	Total/NA	Water	7470A	
LCS 280-523884/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 523934

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-3	CDOT I270 ENV 12_2020-SB-18-GW	Total/NA	Water	6020A	523494
MB 280-523494/1-A	Method Blank	Total/NA	Water	6020A	523494
LCS 280-523494/2-A	Lab Control Sample	Total/NA	Water	6020A	523494
280-144325-3 MS	CDOT I270 ENV 12_2020-SB-18-GW	Total/NA	Water	6020A	523494
280-144325-3 MSD	CDOT I270 ENV 12_2020-SB-18-GW	Total/NA	Water	6020A	523494

Prep Batch: 523966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-1	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	7471B	
280-144325-2	CDOT I270 ENV 12_2020-SB-18-18-20	Total/NA	Solid	7471B	
MB 280-523966/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 280-523966/2-A	Lab Control Sample	Total/NA	Solid	7471B	
280-144325-1 MS	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	7471B	
280-144325-1 MSD	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	7471B	

Prep Batch: 523977

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-3	CDOT I270 ENV 12_2020-SB-18-GW	Dissolved	Water	7470A	523411
MB 280-523411/1-D	Method Blank	Dissolved	Water	7470A	523411
LCS 280-523411/2-D	Lab Control Sample	Dissolved	Water	7470A	523411

Analysis Batch: 524092

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-1	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	6020A	523727
280-144325-2	CDOT I270 ENV 12_2020-SB-18-18-20	Total/NA	Solid	6020A	523727
280-144325-3	CDOT I270 ENV 12_2020-SB-18-GW	Dissolved	Water	6020A	523725
MB 280-523411/1-C	Method Blank	Dissolved	Water	6020A	523725
MB 280-523727/1-A	Method Blank	Total/NA	Solid	6020A	523727
LCS 280-523411/2-C	Lab Control Sample	Dissolved	Water	6020A	523725
LCS 280-523727/2-A	Lab Control Sample	Total/NA	Solid	6020A	523727
280-144325-1 MS	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	6020A	523727
280-144325-1 MSD	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	6020A	523727
280-144325-3 MS	CDOT I270 ENV 12_2020-SB-18-GW	Dissolved	Water	6020A	523725
280-144325-3 MSD	CDOT I270 ENV 12_2020-SB-18-GW	Dissolved	Water	6020A	523725

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Metals

Analysis Batch: 524093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-1	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	6020A	523726
280-144325-2	CDOT I270 ENV 12_2020-SB-18-18-20	Total/NA	Solid	6020A	523726
MB 280-523726/1-A	Method Blank	Total/NA	Solid	6020A	523726
LCS 280-523726/2-A	Lab Control Sample	Total/NA	Solid	6020A	523726
280-144325-1 MS	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	6020A	523726
280-144325-1 MSD	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	6020A	523726

Analysis Batch: 524113

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-3	CDOT I270 ENV 12_2020-SB-18-GW	Total/NA	Water	7470A	523884
MB 280-523884/1-A	Method Blank	Total/NA	Water	7470A	523884
LCS 280-523884/2-A	Lab Control Sample	Total/NA	Water	7470A	523884

Analysis Batch: 524115

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-3	CDOT I270 ENV 12_2020-SB-18-GW	Dissolved	Water	6020A	523725
MB 280-523411/1-C	Method Blank	Dissolved	Water	6020A	523725
LCS 280-523411/2-C	Lab Control Sample	Dissolved	Water	6020A	523725
280-144325-3 MS	CDOT I270 ENV 12_2020-SB-18-GW	Dissolved	Water	6020A	523725
280-144325-3 MSD	CDOT I270 ENV 12_2020-SB-18-GW	Dissolved	Water	6020A	523725

Analysis Batch: 524243

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-3	CDOT I270 ENV 12_2020-SB-18-GW	Dissolved	Water	7470A	523977
MB 280-523411/1-D	Method Blank	Dissolved	Water	7470A	523977
LCS 280-523411/2-D	Lab Control Sample	Dissolved	Water	7470A	523977

Analysis Batch: 524272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-1	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	7471B	523966
280-144325-2	CDOT I270 ENV 12_2020-SB-18-18-20	Total/NA	Solid	7471B	523966
MB 280-523966/1-A	Method Blank	Total/NA	Solid	7471B	523966
LCS 280-523966/2-A	Lab Control Sample	Total/NA	Solid	7471B	523966
280-144325-1 MS	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	7471B	523966
280-144325-1 MSD	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	7471B	523966

General Chemistry

Analysis Batch: 522839

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144325-1	CDOT I270 ENV 12_2020-SB-18-6-8	Total/NA	Solid	Moisture	
280-144325-2	CDOT I270 ENV 12_2020-SB-18-18-20	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8

Lab Sample ID: 280-144325-1

Date Collected: 01/06/21 10:30

Matrix: Solid

Date Received: 01/06/21 13:32

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			522839	01/07/21 13:32	JMH	TAL DEN

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8

Lab Sample ID: 280-144325-1

Date Collected: 01/06/21 10:30

Matrix: Solid

Date Received: 01/06/21 13:32

Percent Solids: 93.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.217 g	5 mL	522885	01/06/21 10:30	GO	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	523544	01/14/21 23:21	GPM	TAL DEN
Total/NA	Prep	3550C			31.3 g	1 mL	522806	01/07/21 10:47	DB	TAL DEN
Total/NA	Analysis	8270D		1			523769	01/18/21 00:22	RDP	TAL DEN
Total/NA	Prep	3550C	RE		30.9 g	1 mL	523852	01/19/21 09:23	DB	TAL DEN
Total/NA	Analysis	8270D	RE	1			524185	01/21/21 12:09	RDP	TAL DEN
Total/NA	Prep	5035			4.798 g	5 mL	523965	01/19/21 10:58	CAS	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	524036	01/20/21 02:52	CAS	TAL DEN
Total/NA	Prep	5035			4.798 g	5 mL	523965	01/19/21 10:58	CAS	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	524122	01/21/21 12:08	CAS	TAL DEN
Total/NA	Prep	3546			15.7 g	1 mL	522804	01/07/21 10:47	DB	TAL DEN
Total/NA	Analysis	8015C		1			523040	01/10/21 10:01	MAM	TAL DEN
Total/NA	Prep	3050B			1.278 g	100 mL	523727	01/18/21 14:30	EAS	TAL DEN
Total/NA	Analysis	6020A		1			524092	01/19/21 22:48	LMT	TAL DEN
Total/NA	Prep	3050B-Sb			1.135 g	100 mL	523726	01/18/21 15:30	EAS	TAL DEN
Total/NA	Analysis	6020A		1			524093	01/19/21 17:37	LMT	TAL DEN
Total/NA	Prep	7471B			.58 g	50 mL	523966	01/21/21 14:45	NK	TAL DEN
Total/NA	Analysis	7471B		1			524272	01/21/21 17:21	NK	TAL DEN

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-18-20

Lab Sample ID: 280-144325-2

Date Collected: 01/06/21 11:00

Matrix: Solid

Date Received: 01/06/21 13:32

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			522839	01/07/21 13:32	JMH	TAL DEN

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-18-20

Lab Sample ID: 280-144325-2

Date Collected: 01/06/21 11:00

Matrix: Solid

Date Received: 01/06/21 13:32

Percent Solids: 87.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	522885	01/06/21 11:00	GO	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	523544	01/14/21 23:43	GPM	TAL DEN
Total/NA	Prep	3550C			30.9 g	1 mL	522806	01/07/21 10:47	DB	TAL DEN
Total/NA	Analysis	8270D		1			523769	01/18/21 01:42	RDP	TAL DEN
Total/NA	Prep	3550C	RE		31.1 g	1 mL	523852	01/19/21 09:23	DB	TAL DEN
Total/NA	Analysis	8270D	RE	1			524185	01/21/21 13:30	RDP	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-18-20

Lab Sample ID: 280-144325-2

Date Collected: 01/06/21 11:00

Matrix: Solid

Date Received: 01/06/21 13:32

Percent Solids: 87.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.227 g	5 mL	523965	01/19/21 10:58	CAS	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	524036	01/20/21 03:16	CAS	TAL DEN
Total/NA	Prep	5035			5.227 g	5 mL	523965	01/19/21 10:58	CAS	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	524122	01/21/21 12:33	CAS	TAL DEN
Total/NA	Prep	3546			16.6 g	1 mL	522804	01/07/21 10:47	DB	TAL DEN
Total/NA	Analysis	8015C		1			523040	01/10/21 11:55	MAM	TAL DEN
Total/NA	Prep	3050B			1.171 g	100 mL	523727	01/18/21 14:30	EAS	TAL DEN
Total/NA	Analysis	6020A		1			524092	01/19/21 23:06	LMT	TAL DEN
Total/NA	Prep	3050B-Sb			1.311 g	100 mL	523726	01/18/21 15:30	EAS	TAL DEN
Total/NA	Analysis	6020A		1			524093	01/19/21 17:54	LMT	TAL DEN
Total/NA	Prep	7471B			.52 g	50 mL	523966	01/21/21 14:45	NK	TAL DEN
Total/NA	Analysis	7471B		1			524272	01/21/21 17:29	NK	TAL DEN

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-GW

Lab Sample ID: 280-144325-3

Date Collected: 01/06/21 11:30

Matrix: Water

Date Received: 01/06/21 13:32

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	522940	01/08/21 13:29	JLS	TAL DEN
Total/NA	Prep	3520C			1017.8 mL	1 mL	523230	01/12/21 11:33	JNM	TAL DEN
Total/NA	Analysis	8270D		1			524058	01/20/21 00:30	RDP	TAL DEN
Total/NA	Prep	3520C	RE		999 mL	1 mL	524131	01/20/21 14:21	JNM	TAL DEN
Total/NA	Analysis	8270D	RE	1			524537	01/26/21 02:20	RDP	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	522815	01/07/21 14:40	CAS	TAL DEN
Total/NA	Prep	3510C			1015.6 mL	1 mL	523119	01/11/21 13:14	AC	TAL DEN
Total/NA	Analysis	8015C		1			523570	01/17/21 03:08	MAM	TAL DEN
Dissolved	Filtration	FILTRATION			250 mL	250 mL	523411	01/13/21 12:52	MAB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	523725	01/18/21 14:30	EAS	TAL DEN
Dissolved	Analysis	6020A		1			524092	01/19/21 20:21	LMT	TAL DEN
Dissolved	Filtration	FILTRATION			250 mL	250 mL	523411	01/13/21 12:52	MAB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	523725	01/18/21 14:30	EAS	TAL DEN
Dissolved	Analysis	6020A		1			524115	01/20/21 09:11	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	523494	01/14/21 16:00	EC	TAL DEN
Total/NA	Analysis	6020A		1			523934	01/18/21 16:59	LMT	TAL DEN
Dissolved	Filtration	FILTRATION			250 mL	250 mL	523411	01/13/21 12:52	MAB	TAL DEN
Dissolved	Prep	7470A			30 mL	50 mL	523977	01/20/21 14:58	MRJ	TAL DEN
Dissolved	Analysis	7470A		1			524243	01/20/21 22:19	MRJ	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	523884	01/18/21 15:51	MRJ	TAL DEN
Total/NA	Analysis	7470A		1			524113	01/19/21 19:06	MRJ	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Client Sample ID: CDOT I270 ENV 12_2020-SB-TB-04

Lab Sample ID: 280-144325-4

Date Collected: 01/06/21 10:00

Matrix: Water

Date Received: 01/06/21 13:32

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	522940	01/08/21 19:02	JLS	TAL DEN
Total/NA	Analysis	8015C		1	5 mL	5 mL	522815	01/07/21 12:22	CAS	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-522804/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15 g	1 mL	522804	01/07/21 10:47	DB	TAL DEN
Total/NA	Analysis	8015C		1			523040	01/10/21 08:52	MAM	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-522806/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			30 g	1 mL	522806	01/07/21 10:47	DB	TAL DEN
Total/NA	Analysis	8270D		1			523769	01/17/21 23:28	RDP	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-522815/5

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015C		1	5 mL	5 mL	522815	01/07/21 10:50	CAS	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-522885/3-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	522885	01/07/21 05:43	GO	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	523544	01/14/21 18:27	GPM	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-522940/9

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	522940	01/08/21 11:46	JLS	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Client Sample ID: Method Blank

Lab Sample ID: MB 280-523119/1-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1000 mL	1 mL	523119	01/11/21 13:14	AC	TAL DEN
Total/NA	Analysis	8015C		1			523570	01/16/21 23:44	MAM	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-523230/1-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1 mL	523230	01/12/21 11:33	JNM	TAL DEN
Total/NA	Analysis	8270D		1			524058	01/19/21 23:10	RDP	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-523411/1-C

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	523411	01/13/21 12:52	MAB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	523725	01/18/21 14:30	EAS	TAL DEN
Dissolved	Analysis	6020A		1			524092	01/19/21 20:13	LMT	TAL DEN
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	523411	01/13/21 12:52	MAB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	523725	01/18/21 14:30	EAS	TAL DEN
Dissolved	Analysis	6020A		1			524115	01/20/21 09:03	LMT	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-523411/1-D

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	523411	01/13/21 12:52	MAB	TAL DEN
Dissolved	Prep	7470A			30 mL	50 mL	523977	01/20/21 14:58	MRJ	TAL DEN
Dissolved	Analysis	7470A		1			524243	01/20/21 22:14	MRJ	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-523494/1-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3020A			50 mL	50 mL	523494	01/14/21 16:00	EC	TAL DEN
Total/NA	Analysis	6020A		1			523934	01/18/21 16:51	LMT	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-523726/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B-Sb			1 g	100 mL	523726	01/18/21 15:30	EAS	TAL DEN
Total/NA	Analysis	6020A		1			524093	01/19/21 17:30	LMT	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Client Sample ID: Method Blank

Lab Sample ID: MB 280-523727/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1 g	100 mL	523727	01/18/21 14:30	EAS	TAL DEN
Total/NA	Analysis	6020A		1			524092	01/19/21 22:40	LMT	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-523852/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			30 g	1 mL	523852	01/19/21 09:23	DB	TAL DEN
Total/NA	Analysis	8270D		1			524185	01/21/21 11:16	RDP	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-523884/1-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			30 mL	50 mL	523884	01/18/21 15:51	MRJ	TAL DEN
Total/NA	Analysis	7470A		1			524113	01/19/21 18:00	MRJ	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-523965/3-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	523965	01/19/21 10:58	CAS	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	524036	01/19/21 22:04	CAS	TAL DEN
Total/NA	Prep	5035			5 g	5 mL	523965	01/19/21 10:58	CAS	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	524122	01/20/21 20:29	CAS	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-523966/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			.6 g	50 mL	523966	01/21/21 14:45	NK	TAL DEN
Total/NA	Analysis	7471B		1			524272	01/21/21 17:16	NK	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-524131/1-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1 mL	524131	01/20/21 14:21	JNM	TAL DEN
Total/NA	Analysis	8270D		1			524537	01/25/21 21:25	RDP	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-522804/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15 g	1 mL	522804	01/07/21 10:47	DB	TAL DEN
Total/NA	Analysis	8015C		1			523040	01/10/21 09:15	MAM	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-522804/3-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15 g	1 mL	522804	01/07/21 10:47	DB	TAL DEN
Total/NA	Analysis	8015C		1			523040	01/10/21 09:38	MAM	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-522806/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			30 g	1 mL	522806	01/07/21 10:47	DB	TAL DEN
Total/NA	Analysis	8270D		1			523769	01/17/21 23:55	RDP	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-522815/15

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015C		1	5 mL	5 mL	522815	01/07/21 11:13	CAS	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-522885/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	522885	01/07/21 05:43	GO	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	523544	01/14/21 19:11	GPM	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-522940/4

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	522940	01/08/21 10:38	JLS	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-523119/2-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1000 mL	1 mL	523119	01/11/21 13:14	AC	TAL DEN
Total/NA	Analysis	8015C		1			523570	01/17/21 00:06	MAM	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-523119/4-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1000 mL	1 mL	523119	01/11/21 13:14	AC	TAL DEN
Total/NA	Analysis	8015C		1			523570	01/17/21 00:52	MAM	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-523230/2-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1 mL	523230	01/12/21 11:33	JNM	TAL DEN
Total/NA	Analysis	8270D		1			524058	01/19/21 23:36	RDP	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-523411/2-C

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	523411	01/13/21 12:52	MAB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	523725	01/18/21 14:30	EAS	TAL DEN
Dissolved	Analysis	6020A		1			524092	01/19/21 20:17	LMT	TAL DEN
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	523411	01/13/21 12:52	MAB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	523725	01/18/21 14:30	EAS	TAL DEN
Dissolved	Analysis	6020A		1			524115	01/20/21 09:07	LMT	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-523411/2-D

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	523411	01/13/21 12:52	MAB	TAL DEN
Dissolved	Prep	7470A			30 mL	50 mL	523977	01/20/21 14:58	MRJ	TAL DEN
Dissolved	Analysis	7470A		1			524243	01/20/21 22:17	MRJ	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-523494/2-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3020A			50 mL	50 mL	523494	01/14/21 16:00	EC	TAL DEN
Total/NA	Analysis	6020A		1			523934	01/18/21 16:55	LMT	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-523726/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B-Sb			1 g	100 mL	523726	01/18/21 15:30	EAS	TAL DEN
Total/NA	Analysis	6020A		1			524093	01/19/21 17:33	LMT	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-523727/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1 g	100 mL	523727	01/18/21 14:30	EAS	TAL DEN
Total/NA	Analysis	6020A		1			524092	01/19/21 22:44	LMT	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-523852/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			30 g	1 mL	523852	01/19/21 09:23	DB	TAL DEN
Total/NA	Analysis	8270D		1			524185	01/21/21 11:43	RDP	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-523884/2-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			30 mL	50 mL	523884	01/18/21 15:51	MRJ	TAL DEN
Total/NA	Analysis	7470A		1			524113	01/19/21 18:02	MRJ	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-523965/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	523965	01/19/21 10:58	CAS	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	524036	01/19/21 21:16	CAS	TAL DEN
Total/NA	Prep	5035			5 g	5 mL	523965	01/19/21 10:58	CAS	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	524122	01/20/21 16:37	CAS	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-523966/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			.6 g	50 mL	523966	01/21/21 14:45	NK	TAL DEN
Total/NA	Analysis	7471B		1			524272	01/21/21 17:19	NK	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-524131/2-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1 mL	524131	01/20/21 14:21	JNM	TAL DEN
Total/NA	Analysis	8270D		1			524537	01/25/21 21:52	RDP	TAL DEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 280-522815/16

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015C		1	5 mL	5 mL	522815	01/07/21 11:36	CAS	TAL DEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 280-522885/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	522885	01/07/21 05:43	GO	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	523544	01/14/21 17:43	GPM	TAL DEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 280-522940/5

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	522940	01/08/21 11:01	JLS	TAL DEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 280-523119/3-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1000 mL	1 mL	523119	01/11/21 13:14	AC	TAL DEN
Total/NA	Analysis	8015C		1			523570	01/17/21 00:29	MAM	TAL DEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 280-523119/5-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			1000 mL	1 mL	523119	01/11/21 13:14	AC	TAL DEN
Total/NA	Analysis	8015C		1			523570	01/17/21 01:14	MAM	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 280-523230/3-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1 mL	523230	01/12/21 11:33	JNM	TAL DEN
Total/NA	Analysis	8270D		1			524058	01/20/21 00:03	RDP	TAL DEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 280-523965/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	523965	01/19/21 10:58	CAS	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	524036	01/19/21 21:40	CAS	TAL DEN
Total/NA	Prep	5035			5 g	5 mL	523965	01/19/21 10:58	CAS	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	524122	01/20/21 17:01	CAS	TAL DEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 280-524131/3-A

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1000 mL	1 mL	524131	01/20/21 14:21	JNM	TAL DEN
Total/NA	Analysis	8270D		1			524537	01/25/21 22:19	RDP	TAL DEN

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8

Lab Sample ID: 280-144325-1 MS

Date Collected: 01/06/21 10:30

Matrix: Solid

Date Received: 01/06/21 13:32

Percent Solids: 93.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			30.6 g	1 mL	522806	01/07/21 10:47	DB	TAL DEN
Total/NA	Analysis	8270D		1			523769	01/18/21 00:49	RDP	TAL DEN
Total/NA	Prep	3550C	RE		30.2 g	1 mL	523852	01/19/21 09:23	DB	TAL DEN
Total/NA	Analysis	8270D	RE	1			524185	01/21/21 12:36	RDP	TAL DEN
Total/NA	Prep	3546			15.6 g	1 mL	522804	01/07/21 10:47	DB	TAL DEN
Total/NA	Analysis	8015C		1			523040	01/10/21 10:23	MAM	TAL DEN
Total/NA	Prep	3546			16.5 g	1 mL	522804	01/07/21 10:47	DB	TAL DEN
Total/NA	Analysis	8015C		1			523040	01/10/21 11:09	MAM	TAL DEN
Total/NA	Prep	3050B			1.132 g	100 mL	523727	01/18/21 14:30	EAS	TAL DEN
Total/NA	Analysis	6020A		1			524092	01/19/21 22:55	LMT	TAL DEN
Total/NA	Prep	3050B-Sb			1.492 g	100 mL	523726	01/18/21 15:30	EAS	TAL DEN
Total/NA	Analysis	6020A		1			524093	01/19/21 17:44	LMT	TAL DEN
Total/NA	Prep	7471B			.56 g	50 mL	523966	01/21/21 14:45	NK	TAL DEN
Total/NA	Analysis	7471B		1			524272	01/21/21 17:24	NK	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-6-8

Lab Sample ID: 280-144325-1 MSD

Date Collected: 01/06/21 10:30

Matrix: Solid

Date Received: 01/06/21 13:32

Percent Solids: 93.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			31.2 g	1 mL	522806	01/07/21 10:47	DB	TAL DEN
Total/NA	Analysis	8270D		1			523769	01/18/21 01:16	RDP	TAL DEN
Total/NA	Prep	3550C	RE		31.9 g	1 mL	523852	01/19/21 09:23	DB	TAL DEN
Total/NA	Analysis	8270D	RE	1			524185	01/21/21 13:03	RDP	TAL DEN
Total/NA	Prep	3546			15.8 g	1 mL	522804	01/07/21 10:47	DB	TAL DEN
Total/NA	Analysis	8015C		1			523040	01/10/21 10:46	MAM	TAL DEN
Total/NA	Prep	3546			16.0 g	1 mL	522804	01/07/21 10:47	DB	TAL DEN
Total/NA	Analysis	8015C		1			523040	01/10/21 11:32	MAM	TAL DEN
Total/NA	Prep	3050B			1.297 g	100 mL	523727	01/18/21 14:30	EAS	TAL DEN
Total/NA	Analysis	6020A		1			524092	01/19/21 22:59	LMT	TAL DEN
Total/NA	Prep	3050B-Sb			1.366 g	100 mL	523726	01/18/21 15:30	EAS	TAL DEN
Total/NA	Analysis	6020A		1			524093	01/19/21 17:47	LMT	TAL DEN
Total/NA	Prep	7471B			.52 g	50 mL	523966	01/21/21 14:45	NK	TAL DEN
Total/NA	Analysis	7471B		1			524272	01/21/21 17:26	NK	TAL DEN

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-GW

Lab Sample ID: 280-144325-3 MS

Date Collected: 01/06/21 11:30

Matrix: Water

Date Received: 01/06/21 13:32

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			250 mL	250 mL	523411	01/13/21 12:52	MAB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	523725	01/18/21 14:30	EAS	TAL DEN
Dissolved	Analysis	6020A		1			524092	01/19/21 20:28	LMT	TAL DEN
Dissolved	Filtration	FILTRATION			250 mL	250 mL	523411	01/13/21 12:52	MAB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	523725	01/18/21 14:30	EAS	TAL DEN
Dissolved	Analysis	6020A		1			524115	01/20/21 09:18	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	523494	01/14/21 16:00	EC	TAL DEN
Total/NA	Analysis	6020A		1			523934	01/18/21 17:06	LMT	TAL DEN

Client Sample ID: CDOT I270 ENV 12_2020-SB-18-GW

Lab Sample ID: 280-144325-3 MSD

Date Collected: 01/06/21 11:30

Matrix: Water

Date Received: 01/06/21 13:32

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			250 mL	250 mL	523411	01/13/21 12:52	MAB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	523725	01/18/21 14:30	EAS	TAL DEN
Dissolved	Analysis	6020A		1			524092	01/19/21 20:32	LMT	TAL DEN
Dissolved	Filtration	FILTRATION			250 mL	250 mL	523411	01/13/21 12:52	MAB	TAL DEN
Dissolved	Prep	3005A			50 mL	50 mL	523725	01/18/21 14:30	EAS	TAL DEN
Dissolved	Analysis	6020A		1			524115	01/20/21 09:22	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	523494	01/14/21 16:00	EC	TAL DEN
Total/NA	Analysis	6020A		1			523934	01/18/21 17:10	LMT	TAL DEN

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Eurofins TestAmerica, Denver

Accreditation/Certification Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144325-1

Laboratory: Eurofins TestAmerica, Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21
A2LA	ISO/IEC 17025	2907.01	10-31-21
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	02-08-21
Arizona	State	AZ0713	12-21-21
Arkansas DEQ	State	19-047-0	06-01-21
California	State	2513	01-08-22
Connecticut	State	PH-0686	09-30-20 *
Florida	NELAP	E87667-57	07-01-21
Georgia	State	4025-011	01-08-22
Illinois	NELAP	2000172019-1	04-30-21
Iowa	State	IA#370	12-02-21
Kansas	NELAP	E-10166	04-30-21
Louisiana	NELAP	30785	06-30-14 *
Louisiana	NELAP	30785	06-30-21
Maine	State	2019011 (231)	03-03-21
Minnesota	NELAP	1788752	12-31-21
Nevada	State	CO000262020-1	07-31-21
New Hampshire	NELAP	205319	04-29-21
New Jersey	NELAP	190002	06-30-21
New York	NELAP	59923	04-01-21
North Carolina (WW/SW)	State	358	12-31-21
North Dakota	State	R-034	01-08-21 *
Oklahoma	State	2018-006	09-01-21
Oregon	NELAP	4025-011	12-08-22
Pennsylvania	NELAP	013	07-31-21
South Carolina	State	72002001	01-08-21 *
Texas	NELAP	TX104704183-08-TX	09-30-09 *
Texas	NELAP	T104704183-20-18	09-30-21
US Fish & Wildlife	US Federal Programs	058448	08-01-21
USDA	US Federal Programs	P330-18-00099	03-26-21
Utah	NELAP	QUAN5	06-30-13 *
Utah	NELAP	CO000262019-11	07-31-21
Virginia	NELAP	10490	06-14-21
Washington	State	C583-19	08-03-21
West Virginia DEP	State	354	02-28-21
Wisconsin	State	999615430	08-31-21
Wyoming (UST)	A2LA	2907.01	10-31-21

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 280-144325-1

Login Number: 144325

List Source: Eurofins TestAmerica, Denver

List Number: 1

Creator: O'Hara, Jake F

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	Received same day of collection; chilling process has begun.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Consultant Work Product - Not CDOT Approved - Jacobs Engineering

ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-144588-1
Client Project/Site: CDOT I-270 Env-Dec 2020

For:
Jacobs Engineering Group, Inc.
707 17th Street
Suite 2400
Denver, Colorado 80202

Attn: Mr. Jon Russ



Authorized for release by:
2/1/2021 10:43:28 AM

Michelle Johnston, Project Manager II
(303)736-0110
Michelle.Johnston@Eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*.	LCS and/or LCSD is outside acceptance limits, low biased.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Job ID: 280-144588-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: Jacobs Engineering Group, Inc.
Project: CDOT I-270 Env-Dec 2020
Report Number: 280-144588-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 1/14/2021 11:04 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 11.3° C.

The following samples were received at the laboratory outside the required temperature criteria: CDOT I270 SB37-8-10 (280-144588-1) and CDOT I270 TB-07 (280-144588-2). The samples are considered acceptable since they were collected and submitted to the laboratory on the same day and there was evidence that the chilling process had begun.

Insufficient sample volume was provided for the following sample for the 8015C DRO/ORO analysis: CDOT I270 TB-07 (280-144588-2). The laboratory received only tarred VOA vials for this sample and 8015C DRO/ORO requires 1 X 8oz soil jar; therefore, the request DRO/ORO analysis could not be performed for this sample.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples CDOT I270 SB37-8-10 (280-144588-1) and CDOT I270 TB-07 (280-144588-2) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 01/14/2021 and analyzed on 01/19/2021.

Samples CDOT I270 SB37-8-10 (280-144588-1)[50X] and CDOT I270 TB-07 (280-144588-2)[50X] required dilution prior to analysis. These samples were analyzed using the Methanol preserved vial because the DI water preserved vials were improperly stored. Analyzing from the Methanol vial comes with a 50X dilution factor. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GC/MS)

Sample CDOT I270 SB37-8-10 (280-144588-1) was analyzed for semivolatile organic compounds (GC/MS) in accordance with EPA SW-846 Method 8270D. The sample was prepared on 01/20/2021 and 01/25/2021 and analyzed on 01/22/2021 and 01/27/2021.

2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol, 4-Nitrophenol, Benzaldehyde, Benzoic acid and Phenol failed the recovery criteria low for LCS 280-524076/2-A. Refer to the QC report for details. 2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol, 4-Nitrophenol, Benzoic acid, and Benzaldehyde. These analytes have been identified as poor performing analytes when analyzed using this method. The associated sample was re-extracted and reanalyzed with confirming results; therefore, both sets of data have been reported and flagged accordingly.

2,4-Dinitrophenol, 2-Chlorophenol, Benzoic acid, Benzyl alcohol and Phenol failed the recovery criteria low for LCS 280-524424/2-A. Refer to the QC report for details. 2,4-Dinitrophenol, Benzoic acid, and Benzyl alcohol have been identified as poor performing analytes when analyzed using this method. This was an in-hold re-extraction as the original extraction batch also had low LCS recoveries for several analytes including Phenol. Both sets of data were reported and flagged accordingly.

Several analytes failed the recovery criteria low for the MS of sample CDOT I270 SB37-8-10 (280-144588-1) in batch 280-524273. 2,4-Dinitrophenol, Benzoic acid and Phenol failed the recovery criteria low for the MSD of sample CDOT I270 SB37-8-10 (280-144588-1) in

Case Narrative

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Job ID: 280-144588-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

batch 280-524273. Refer to the QC report for details. The associated LCS was out low for several analytes. The associated sample was re-extracted and reanalyzed with confirming results; therefore, both sets of data have been reported and flagged accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GASOLINE RANGE ORGANICS (GRO)

Samples CDOT I270 SB37-8-10 (280-144588-1) and CDOT I270 TB-07 (280-144588-2) were analyzed for Gasoline Range Organics (GRO) in accordance with EPA SW-846 Method 8015C - GRO. The samples were prepared on 01/19/2021 and analyzed on 01/21/2021.

Analysis for (CCV 280-524122/48) stopped due to mechanical failure of the instrument. The CCV was analyzed within 24 hours from the retention time marker, but greater than 12 hours from the last passing CCV.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DIESEL RANGE ORGANICS

Sample CDOT I270 SB37-8-10 (280-144588-1) was analyzed for diesel range organics in accordance with EPA SW-846 Method 8015C - DRO. The sample was prepared on 01/19/2021 and analyzed on 01/21/2021.

Diesel Range Organics [C10-C28] failed the recovery criteria low for the MS of sample CDOT I270 SB37-8-10 (280-144588-1) in batch 280-524217. Refer to the QC report for details. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action was deemed unnecessary.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP/MS)

Sample CDOT I270 SB37-8-10 (280-144588-1) was analyzed for metals (ICP/MS) in accordance with SW 846 6020A. The sample was prepared and analyzed on 01/19/2021.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP/MS)

Sample CDOT I270 SB37-8-10 (280-144588-1) was analyzed for Total Metals (ICP/MS) in accordance with 6020A. The sample was prepared and analyzed on 01/28/2021.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY (CVAA)

Sample CDOT I270 SB37-8-10 (280-144588-1) was analyzed for total mercury (CVAA) in accordance with EPA SW-846 Method 7471B. The sample was prepared and analyzed on 01/21/2021.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

Sample CDOT I270 SB37-8-10 (280-144588-1) was analyzed for percent solids in accordance with ASTM D2216-90. The sample was analyzed on 01/18/2021.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Client Sample ID: CDOT I270 SB37-8-10

Lab Sample ID: 280-144588-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	14	J	260	12	ug/Kg	50	✳	8260B	Total/NA
Bis(2-ethylhexyl) phthalate	50	J	360	50	ug/Kg	1	✳	8270D	Total/NA
Diesel Range Organics [C10-C28]	5.9	J F1	8.4	3.8	mg/Kg	1	✳	8015C	Total/NA
Motor Oil (C20-C38)	14	J	25	8.2	mg/Kg	1	✳	8015C	Total/NA
Arsenic	1.5		0.61	0.052	mg/Kg	1	✳	6020A	Total/NA
Silver	23	J	96	7.5	ug/Kg	1	✳	6020A	Total/NA
Barium	120		0.41	0.072	mg/Kg	1	✳	6020A	Total/NA
Cadmium	0.064	J	0.10	0.0096	mg/Kg	1	✳	6020A	Total/NA
Chromium	5.8		0.20	0.077	mg/Kg	1	✳	6020A	Total/NA
Lead	5.7		0.15	0.019	mg/Kg	1	✳	6020A	Total/NA
Selenium	0.14	J	0.51	0.14	mg/Kg	1	✳	6020A	Total/NA
Mercury	11	J	20	6.6	ug/Kg	1	✳	7471B	Total/NA

Client Sample ID: CDOT I270 TB-07

Lab Sample ID: 280-144588-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	150	J	670	130	ug/Kg	50		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Method Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL DEN
8015C	Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)	SW846	TAL DEN
8015C	Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)	SW846	TAL DEN
6020A	Metals (ICP/MS)	SW846	TAL DEN
7471B	Mercury (CVAA)	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN
3050B	Preparation, Metals	SW846	TAL DEN
3050B-Sb	Preparation, Metals (Antimony)	SW846	TAL DEN
3546	Microwave Extraction	SW846	TAL DEN
3550C	Ultrasonic Extraction	SW846	TAL DEN
5035	Closed System Purge and Trap	SW846	TAL DEN
7471B	Preparation, Mercury	SW846	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved

Sample Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-144588-1	CDOT I270 SB37-8-10	Solid	01/14/21 09:20	01/14/21 11:04	
280-144588-2	CDOT I270 TB-07	Solid	01/14/21 08:00	01/14/21 11:04	

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

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Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 SB37-8-10

Date Collected: 01/14/21 09:20

Date Received: 01/14/21 11:04

Lab Sample ID: 280-144588-1

Matrix: Solid

Percent Solids: 88.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		260	100	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
1,1,2,2-Tetrachloroethane	ND		260	15	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
1,1,2-Trichloroethane	ND		260	46	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
1,1,2-Trichlorotrifluoroethane	ND		1000	87	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
1,1-Dichloroethane	ND		260	11	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
1,1-Dichloroethene	ND		260	31	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
1,2,3-Trichlorobenzene	ND		260	42	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
1,2,4-Trichlorobenzene	ND		260	38	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
1,2-Dibromo-3-Chloropropane	ND		520	190	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
1,2-Dibromoethane	ND		260	27	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
1,2-Dichlorobenzene	ND		260	97	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
1,2-Dichloroethane	ND		260	36	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
1,2-Dichloropropane	ND		260	29	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
1,3-Dichlorobenzene	ND		260	25	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
1,4-Dichlorobenzene	ND		260	13	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
1,4-Dioxane	ND		26000	2900	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
2-Butanone (MEK)	ND		1000	200	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
2-Hexanone	ND		1000	250	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
4-Methyl-2-pentanone (MIBK)	ND		1000	230	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
Acetone	ND		3800	1900	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
Benzene	ND		260	7.9	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
Bromoform	ND		270	130	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
Bromomethane	ND		520	70	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
Carbon disulfide	ND		260	87	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
Carbon tetrachloride	ND		260	100	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
Chlorobenzene	ND		260	110	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
Chlorobromomethane	ND		260	130	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
Chlorodibromomethane	ND		260	120	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
Chloroethane	ND		520	100	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
Chloroform	ND		520	15	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
Chloromethane	ND		520	40	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
cis-1,2-Dichloroethene	ND		130	10	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
cis-1,3-Dichloropropene	ND		260	5.2	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
Cyclohexane	ND		260	92	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
Dichlorobromomethane	ND		260	110	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
Dichlorodifluoromethane	ND		520	140	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
Ethylbenzene	ND		260	16	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
Isopropylbenzene	ND		260	130	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
Methyl acetate	ND		520	140	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
Methyl tert-butyl ether	ND		1000	110	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
Methylcyclohexane	ND		260	22	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
Methylene Chloride	ND		260	83	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
m-Xylene & p-Xylene	ND		130	54	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
o-Xylene	ND		130	14	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
Styrene	ND		260	15	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
Tetrachloroethene	ND		260	100	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
Toluene	14 J		260	12	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
trans-1,2-Dichloroethene	ND		130	20	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50
trans-1,3-Dichloropropene	ND		260	4.3	ug/Kg	✱	01/14/21 09:20	01/19/21 20:36	50

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 SB37-8-10

Date Collected: 01/14/21 09:20

Date Received: 01/14/21 11:04

Lab Sample ID: 280-144588-1

Matrix: Solid

Percent Solids: 88.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		260	100	ug/Kg	☼	01/14/21 09:20	01/19/21 20:36	50
Trichlorofluoromethane	ND		520	170	ug/Kg	☼	01/14/21 09:20	01/19/21 20:36	50
Vinyl chloride	ND		260	70	ug/Kg	☼	01/14/21 09:20	01/19/21 20:36	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		58 - 140				01/14/21 09:20	01/19/21 20:36	50
4-Bromofluorobenzene (Surr)	93		76 - 127				01/14/21 09:20	01/19/21 20:36	50
Dibromofluoromethane (Surr)	98		75 - 121				01/14/21 09:20	01/19/21 20:36	50
Toluene-d8 (Surr)	96		80 - 126				01/14/21 09:20	01/19/21 20:36	50

Client Sample ID: CDOT I270 TB-07

Date Collected: 01/14/21 08:00

Date Received: 01/14/21 11:04

Lab Sample ID: 280-144588-2

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		170	66	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
1,1,2,2-Tetrachloroethane	ND		170	9.5	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
1,1,2-Trichloroethane	ND		170	29	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
1,1,2-Trichlorotrifluoroethane	ND		670	56	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
1,1-Dichloroethane	ND		170	7.0	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
1,1-Dichloroethene	ND		170	20	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
1,2,3-Trichlorobenzene	ND		170	27	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
1,2,4-Trichlorobenzene	ND		170	24	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
1,2-Dibromo-3-Chloropropane	ND		330	120	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
1,2-Dibromoethane	ND		170	17	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
1,2-Dichlorobenzene	ND		170	63	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
1,2-Dichloroethane	ND		170	23	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
1,2-Dichloropropane	ND		170	18	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
1,3-Dichlorobenzene	ND		170	16	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
1,4-Dichlorobenzene	ND		170	8.2	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
1,4-Dioxane	ND		17000	1900	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
2-Butanone (MEK)	150	J	670	130	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
2-Hexanone	ND		670	160	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
4-Methyl-2-pentanone (MIBK)	ND		670	150	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
Acetone	ND		2400	1200	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
Benzene	ND		170	5.1	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
Bromoform	ND		170	85	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
Bromomethane	ND		330	45	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
Carbon disulfide	ND		170	56	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
Carbon tetrachloride	ND		170	67	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
Chlorobenzene	ND		170	69	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
Chlorobromomethane	ND		170	82	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
Chlorodibromomethane	ND		170	76	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
Chloroethane	ND		330	67	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
Chloroform	ND		330	9.7	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
Chloromethane	ND		330	26	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
cis-1,2-Dichloroethene	ND		84	6.7	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
cis-1,3-Dichloropropene	ND		170	3.3	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
Cyclohexane	ND		170	59	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
Dichlorobromomethane	ND		170	71	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
Dichlorodifluoromethane	ND		330	92	ug/Kg		01/14/21 08:00	01/19/21 20:14	50

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 TB-07

Date Collected: 01/14/21 08:00

Date Received: 01/14/21 11:04

Lab Sample ID: 280-144588-2

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		170	10	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
Isopropylbenzene	ND		170	81	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
Methyl acetate	ND		330	92	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
Methyl tert-butyl ether	ND		670	71	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
Methylcyclohexane	ND		170	14	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
Methylene Chloride	ND		170	54	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
m-Xylene & p-Xylene	ND		84	35	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
o-Xylene	ND		84	8.9	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
Styrene	ND		170	9.4	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
Tetrachloroethene	ND		170	64	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
Toluene	ND		170	7.6	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
trans-1,2-Dichloroethene	ND		84	13	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
trans-1,3-Dichloropropene	ND		170	2.8	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
Trichloroethene	ND		170	64	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
Trichlorofluoromethane	ND		330	110	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
Vinyl chloride	ND		170	45	ug/Kg		01/14/21 08:00	01/19/21 20:14	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		58 - 140				01/14/21 08:00	01/19/21 20:14	50
4-Bromofluorobenzene (Surr)	93		76 - 127				01/14/21 08:00	01/19/21 20:14	50
Dibromofluoromethane (Surr)	96		75 - 121				01/14/21 08:00	01/19/21 20:14	50
Toluene-d8 (Surr)	97		80 - 126				01/14/21 08:00	01/19/21 20:14	50

Consultant Work Product - Jacobs Engineering Group, Inc.
-Not CDOT Approved-

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: CDOT I270 SB37-8-10

Date Collected: 01/14/21 09:20

Date Received: 01/14/21 11:04

Lab Sample ID: 280-144588-1

Matrix: Solid

Percent Solids: 88.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		360	26	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
1,2,4,5-Tetrachlorobenzene	ND		360	53	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
1,2,4-Trichlorobenzene	ND		360	31	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
1,2-Dichlorobenzene	ND	F1	360	24	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		360	24	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
1,3-Dichlorobenzene	ND	F1	360	13	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
1,3-Dinitrobenzene	ND		360	78	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
1,4-Dichlorobenzene	ND	F1	360	15	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
1,4-Dioxane	ND		720	72	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
1-Methylnaphthalene	ND		360	12	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
2,2'-oxybis[1-chloropropane]	ND		360	25	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
2,3,4,6-Tetrachlorophenol	ND		1700	150	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
2,4,5-Trichlorophenol	ND		360	11	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
2,4,6-Trichlorophenol	ND		360	11	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
2,4-Dichlorophenol	ND		360	11	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
2,4-Dimethylphenol	ND		360	72	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
2,4-Dinitrophenol	ND	*- F1	1700	360	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
2,4-Dinitrotoluene	ND		360	72	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
2,6-Dichlorophenol	ND		360	24	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
2,6-Dinitrotoluene	ND		360	31	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
2-Chloronaphthalene	ND		360	11	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
2-Chlorophenol	ND	F1	360	23	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
2-Methylnaphthalene	ND		360	21	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
2-Methylphenol	ND		360	14	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
2-Nitroaniline	ND		1700	55	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
2-Nitrophenol	ND		360	11	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
3 & 4 Methylphenol	ND		360	36	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
3,3'-Dichlorobenzidine	ND		720	98	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
3-Methylphenol	ND		360	36	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
3-Nitroaniline	ND		1700	80	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
4,6-Dinitro-2-methylphenol	ND	*	1700	360	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
4-Bromophenyl phenyl ether	ND		360	21	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
4-Chloro-3-methylphenol	ND		360	27	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
4-Chloroaniline	ND		360	89	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
4-Chlorophenyl phenyl ether	ND		360	23	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
4-Methylphenol	ND		360	36	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
4-Nitroaniline	ND		1700	79	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
4-Nitrophenol	ND	*-	1700	110	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
Acenaphthene	ND		360	11	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
Acenaphthylene	ND		360	90	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
Acetophenone	ND		360	22	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
Aniline	ND		360	140	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
Anthracene	ND		360	19	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
Azobenzene	ND		360	24	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
Benzaldehyde	ND	*-	360	73	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
Benzidine	ND		3600	1100	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
Benzo[a]anthracene	ND		360	22	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
Benzo[a]pyrene	ND		360	22	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1
Benzo[b]fluoranthene	ND		360	29	ug/Kg	✳	01/20/21 08:15	01/22/21 13:29	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: CDOT I270 SB37-8-10

Date Collected: 01/14/21 09:20

Date Received: 01/14/21 11:04

Lab Sample ID: 280-144588-1

Matrix: Solid

Percent Solids: 88.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		360	17	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Benzo[k]fluoranthene	ND		360	44	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Benzoic acid	ND	*- F1	1700	360	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Benzyl alcohol	ND	F1	360	11	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Bis(2-chloroethoxy)methane	ND		360	25	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Bis(2-chloroethyl)ether	ND		360	18	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Bis(2-ethylhexyl) phthalate	50	J	360	50	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Butyl benzyl phthalate	ND		360	47	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Caprolactam	ND		360	120	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Carbazole	ND		360	39	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Chrysene	ND		360	29	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Dibenz(a,h)anthracene	ND		360	21	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Dibenzofuran	ND		360	22	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Diethyl phthalate	ND		720	28	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Dimethyl phthalate	ND		360	25	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Di-n-butyl phthalate	ND		360	32	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Di-n-octyl phthalate	ND		360	44	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Diphenylamine	ND		360	48	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Famphur	ND		720	37	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Fluoranthene	ND		360	39	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Fluorene	ND		360	20	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Hexachlorobenzene	ND		360	32	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Hexachlorobutadiene	ND		360	11	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Hexachlorocyclopentadiene	ND		1700	120	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Hexachloroethane	ND	F1	360	23	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Hexadecane	ND		360	15	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Indeno[1,2,3-cd]pyrene	ND		360	24	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Isophorone	ND		360	19	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Naphthalene	ND		360	34	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Nitrobenzene	ND		360	24	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
N-Nitrosodimethylamine	ND		360	40	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
N-Nitrosodi-n-propylamine	ND		360	74	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
N-Nitrosodiphenylamine	ND		360	23	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Pentachlorophenol	ND		1700	360	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Phenanthrene	ND		360	19	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Phenol	ND	*- F1	360	20	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Pyrene	ND		360	13	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1
Pyridine	ND	F1	720	44	ug/Kg	☼	01/20/21 08:15	01/22/21 13:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	64		35 - 120	01/20/21 08:15	01/22/21 13:29	1
2-Fluorobiphenyl	61		46 - 120	01/20/21 08:15	01/22/21 13:29	1
2-Fluorophenol (Surr)	56		43 - 120	01/20/21 08:15	01/22/21 13:29	1
Nitrobenzene-d5 (Surr)	57		46 - 120	01/20/21 08:15	01/22/21 13:29	1
Phenol-d5 (Surr)	59		46 - 120	01/20/21 08:15	01/22/21 13:29	1
Terphenyl-d14 (Surr)	83		46 - 120	01/20/21 08:15	01/22/21 13:29	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE

Client Sample ID: CDOT I270 SB37-8-10

Date Collected: 01/14/21 09:20

Date Received: 01/14/21 11:04

Lab Sample ID: 280-144588-1

Matrix: Solid

Percent Solids: 88.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		370	27	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
1,2,4,5-Tetrachlorobenzene	ND		370	56	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
1,2,4-Trichlorobenzene	ND		370	32	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
1,2-Dichlorobenzene	ND		370	25	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		370	25	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
1,3-Dichlorobenzene	ND		370	14	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
1,3-Dinitrobenzene	ND		370	81	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
1,4-Dichlorobenzene	ND		370	15	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
1,4-Dioxane	ND		750	75	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
1-Methylnaphthalene	ND		370	13	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
2,2'-oxybis[1-chloropropane]	ND		370	26	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
2,3,4,6-Tetrachlorophenol	ND		1800	160	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
2,4,5-Trichlorophenol	ND		370	11	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
2,4,6-Trichlorophenol	ND		370	11	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
2,4-Dichlorophenol	ND		370	11	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
2,4-Dimethylphenol	ND		370	75	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
2,4-Dinitrophenol	ND	F1 *	1800	380	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
2,4-Dinitrotoluene	ND		370	75	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
2,6-Dichlorophenol	ND		370	25	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
2,6-Dinitrotoluene	ND		370	32	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
2-Chloronaphthalene	ND		370	11	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
2-Chlorophenol	ND	F1 *	370	24	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
2-Methylnaphthalene	ND		370	22	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
2-Methylphenol	ND		370	15	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
2-Nitroaniline	ND		1800	57	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
2-Nitrophenol	ND		370	11	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
3 & 4 Methylphenol	ND		370	37	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
3,3'-Dichlorobenzidine	ND		750	100	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
3-Methylphenol	ND		370	37	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
3-Nitroaniline	ND		1800	83	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
4,6-Dinitro-2-methylphenol	ND		1800	370	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
4-Bromophenyl phenyl ether	ND		370	22	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
4-Chloro-3-methylphenol	ND		370	28	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
4-Chloroaniline	ND		370	93	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
4-Chlorophenyl phenyl ether	ND		370	24	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
4-Methylphenol	ND		370	37	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
4-Nitroaniline	ND		1800	82	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
4-Nitrophenol	ND		1800	110	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
Acenaphthene	ND		370	12	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
Acenaphthylene	ND		370	93	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
Acetophenone	ND		370	23	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
Aniline	ND		370	150	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
Anthracene	ND		370	19	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
Azobenzene	ND		370	25	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
Benzaldehyde	ND		370	76	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
Benzidine	ND	F1	3700	1100	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
Benzo[a]anthracene	ND		370	23	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
Benzo[a]pyrene	ND		370	23	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1
Benzo[b]fluoranthene	ND		370	30	ug/Kg	✱	01/25/21 10:32	01/27/21 00:52	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE (Continued)

Client Sample ID: CDOT I270 SB37-8-10

Date Collected: 01/14/21 09:20

Date Received: 01/14/21 11:04

Lab Sample ID: 280-144588-1

Matrix: Solid

Percent Solids: 88.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		370	18	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Benzo[k]fluoranthene	ND		370	45	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Benzoic acid	ND	F1 *-	1800	370	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Benzyl alcohol	ND	F1 *-	370	11	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Bis(2-chloroethoxy)methane	ND		370	26	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Bis(2-chloroethyl)ether	ND		370	19	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Bis(2-ethylhexyl) phthalate	ND		370	52	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Butyl benzyl phthalate	ND		370	49	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Caprolactam	ND		370	120	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Carbazole	ND		370	41	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Chrysene	ND		370	31	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Dibenz(a,h)anthracene	ND		370	22	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Dibenzofuran	ND		370	23	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Diethyl phthalate	ND		750	30	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Dimethyl phthalate	ND		370	26	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Di-n-butyl phthalate	ND		370	33	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Di-n-octyl phthalate	ND		370	46	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Diphenylamine	ND		370	50	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Famphur	ND		750	39	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Fluoranthene	ND		370	41	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Fluorene	ND		370	20	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Hexachlorobenzene	ND		370	33	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Hexachlorobutadiene	ND		370	11	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Hexachlorocyclopentadiene	ND		1800	130	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Hexachloroethane	ND		370	24	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Hexadecane	ND		370	15	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Indeno[1,2,3-cd]pyrene	ND		370	25	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Isophorone	ND		370	19	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Naphthalene	ND		370	35	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Nitrobenzene	ND		370	25	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
N-Nitrosodimethylamine	ND		370	42	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
N-Nitrosodi-n-propylamine	ND		370	77	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
N-Nitrosodiphenylamine	ND		370	24	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Pentachlorophenol	ND		1800	370	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Phenanthrene	ND		370	19	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Phenol	ND	F1 *-	370	20	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Pyrene	ND		370	14	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1
Pyridine	ND		750	45	ug/Kg	☼	01/25/21 10:32	01/27/21 00:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	61		35 - 120	01/25/21 10:32	01/27/21 00:52	1
2-Fluorobiphenyl	65		46 - 120	01/25/21 10:32	01/27/21 00:52	1
2-Fluorophenol (Surr)	55		43 - 120	01/25/21 10:32	01/27/21 00:52	1
Nitrobenzene-d5 (Surr)	60		46 - 120	01/25/21 10:32	01/27/21 00:52	1
Phenol-d5 (Surr)	56		46 - 120	01/25/21 10:32	01/27/21 00:52	1
Terphenyl-d14 (Surr)	79		46 - 120	01/25/21 10:32	01/27/21 00:52	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Client Sample ID: CDOT I270 SB37-8-10

Date Collected: 01/14/21 09:20

Date Received: 01/14/21 11:04

Lab Sample ID: 280-144588-1

Matrix: Solid

Percent Solids: 88.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		2.5	0.94	mg/Kg	☼	01/19/21 10:58	01/21/21 11:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	93		77 - 123				01/19/21 10:58	01/21/21 11:44	1

Client Sample ID: CDOT I270 TB-07

Date Collected: 01/14/21 08:00

Date Received: 01/14/21 11:04

Lab Sample ID: 280-144588-2

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		2.0	0.76	mg/Kg		01/19/21 10:58	01/21/21 11:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	92		77 - 123				01/19/21 10:58	01/21/21 11:16	1

Consultant Work Product - Jacobs Engineering
 -Not CDOT Approved

Client Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Client Sample ID: CDOT I270 SB37-8-10

Date Collected: 01/14/21 09:20

Date Received: 01/14/21 11:04

Lab Sample ID: 280-144588-1

Matrix: Solid

Percent Solids: 88.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	5.9	J F1	8.4	3.8	mg/Kg	☼	01/19/21 12:41	01/21/21 19:31	1
Motor Oil (C20-C38)	14	J	25	8.2	mg/Kg	☼	01/19/21 12:41	01/21/21 19:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl (Surr)	56		49 - 115				01/19/21 12:41	01/21/21 19:31	1

Consultant Work Product - Jacobs Engineering
 -Not CDOT Approved-

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: CDOT I270 SB37-8-10

Date Collected: 01/14/21 09:20

Date Received: 01/14/21 11:04

Lab Sample ID: 280-144588-1

Matrix: Solid

Percent Solids: 88.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5		0.61	0.052	mg/Kg	✳	01/19/21 08:12	01/19/21 22:26	1
Silver	23	J	96	7.5	ug/Kg	✳	01/28/21 09:28	01/28/21 19:10	1
Barium	120		0.41	0.072	mg/Kg	✳	01/19/21 08:12	01/19/21 22:26	1
Cadmium	0.064	J	0.10	0.0096	mg/Kg	✳	01/19/21 08:12	01/19/21 22:26	1
Chromium	5.8		0.20	0.077	mg/Kg	✳	01/19/21 08:12	01/19/21 22:26	1
Lead	5.7		0.15	0.019	mg/Kg	✳	01/19/21 08:12	01/19/21 22:26	1
Selenium	0.14	J	0.51	0.14	mg/Kg	✳	01/19/21 08:12	01/19/21 22:26	1

Consultant Work Product - Jacobs Engineering Group, Inc.
-Not CDOT Approved-

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 7471B - Mercury (CVAA)

Client Sample ID: CDOT I270 SB37-8-10

Date Collected: 01/14/21 09:20

Date Received: 01/14/21 11:04

Lab Sample ID: 280-144588-1

Matrix: Solid

Percent Solids: 88.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	11	J	20	6.6	ug/Kg	☼	01/21/21 14:45	01/21/21 17:32	1

Consultant Work Product - Jacobs Engineering Group, Inc.
-Not CDOT Approved-

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

General Chemistry

Client Sample ID: CDOT I270 SB37-8-10

Date Collected: 01/14/21 09:20

Date Received: 01/14/21 11:04

Lab Sample ID: 280-144588-1

Matrix: Solid

Percent Solids: 88.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	11.9		0.1	0.1	%			01/18/21 14:26	1
Percent Solids	88.1		0.1	0.1	%			01/18/21 14:26	1

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (58-140)	BFB (76-127)	DBFM (75-121)	TOL (80-126)
280-144588-1	CDOT I270 SB37-8-10	93	93	98	96
280-144588-2	CDOT I270 TB-07	91	93	96	97
LCS 280-524027/1-A	Lab Control Sample	93	98	99	95
LCSD 280-524027/2-A	Lab Control Sample Dup	93	98	99	99
MB 280-524027/3-A	Method Blank	98	93	100	99
MB 280-524027/4-A	Method Blank	94	95	98	97

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (35-120)	FBP (46-120)	2FP (43-120)	NBZ (46-120)	PHL (46-120)	TPHL (46-120)
280-144588-1	CDOT I270 SB37-8-10	64	61	56	57	59	83
280-144588-1 - RE	CDOT I270 SB37-8-10	61	65	55	60	56	79
280-144588-1 MS - RE	CDOT I270 SB37-8-10	66	65	54	60	57	79
280-144588-1 MS	CDOT I270 SB37-8-10	72	67	52	59	57	87
280-144588-1 MSD - RE	CDOT I270 SB37-8-10	70	67	57	62	61	84
280-144588-1 MSD	CDOT I270 SB37-8-10	71	67	58	63	62	81
LCS 280-524076/2-A	Lab Control Sample	69	64	56	59	58	80
LCS 280-524424/2-A	Lab Control Sample	74	70	57	65	60	85
MB 280-524076/1-A	Method Blank	54	61	55	60	58	84
MB 280-524424/1-A	Method Blank	60	66	60	65	62	84

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TFT1
		(77-123)
280-144588-1	CDOT I270 SB37-8-10	93
280-144588-2	CDOT I270 TB-07	92
LCS 280-523965/1-A	Lab Control Sample	97
LCSD 280-523965/2-A	Lab Control Sample Dup	96
MB 280-523965/3-A	Method Blank	93

Surrogate Legend

TFT = a,a,a-Trifluorotoluene

Surrogate Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTPH1 (49-115)
280-144588-1	CDOT I270 SB37-8-10	56
280-144588-1 MS	CDOT I270 SB37-8-10	58
280-144588-1 MS	CDOT I270 SB37-8-10	59
280-144588-1 MSD	CDOT I270 SB37-8-10	73
280-144588-1 MSD	CDOT I270 SB37-8-10	59
LCS 280-523960/2-A	Lab Control Sample	72
LCS 280-523960/3-A	Lab Control Sample	77
MB 280-523960/1-A	Method Blank	52

Surrogate Legend

OTPH = o-Terphenyl (Surr)

Consultant Work Product - Jacobs Engineering
-Not CDOT Approved-

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-524027/3-A
Matrix: Solid
Analysis Batch: 524110

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524027

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1-Trichloroethane	ND		5.0	2.0	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.29	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
1,1,2-Trichloroethane	ND		5.0	0.88	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
1,1,2-Trichlorotrifluoroethane	ND		20	1.7	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
1,1-Dichloroethane	ND		5.0	0.21	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
1,1-Dichloroethene	ND		5.0	0.59	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
1,2,3-Trichlorobenzene	ND		5.0	0.81	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
1,2,4-Trichlorobenzene	ND		5.0	0.73	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
1,2-Dibromo-3-Chloropropane	ND		10	3.7	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
1,2-Dibromoethane	ND		5.0	0.52	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
1,2-Dichlorobenzene	ND		5.0	1.9	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
1,2-Dichloroethane	ND		5.0	0.70	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
1,2-Dichloropropane	ND		5.0	0.55	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
1,3-Dichlorobenzene	ND		5.0	0.48	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
1,4-Dichlorobenzene	ND		5.0	0.25	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
1,4-Dioxane	ND		500	56	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
2-Butanone (MEK)	ND		20	3.9	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
2-Hexanone	ND		20	4.9	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
4-Methyl-2-pentanone (MIBK)	ND		20	4.4	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
Acetone	ND		72	36	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
Benzene	ND		5.0	0.15	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
Bromoform	ND		5.1	2.6	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
Bromomethane	ND		10	1.4	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
Carbon disulfide	ND		5.0	1.7	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
Carbon tetrachloride	ND		5.0	2.0	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
Chlorobenzene	ND		5.0	2.1	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
Chlorobromomethane	ND		5.0	2.5	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
Chlorodibromomethane	ND		5.0	2.3	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
Chloroethane	ND		10	2.0	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
Chloroform	ND		10	0.29	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
Chloromethane	ND		10	0.77	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
cis-1,2-Dichloroethene	ND		2.5	0.20	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
cis-1,3-Dichloropropene	ND		5.0	0.10	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
Cyclohexane	ND		5.0	1.8	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
Dichlorobromomethane	ND		5.0	2.1	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
Dichlorodifluoromethane	ND		10	2.7	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
Ethylbenzene	ND		5.0	0.31	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
Isopropylbenzene	ND		5.0	2.4	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
Methyl acetate	ND		10	2.8	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
Methyl tert-butyl ether	ND		20	2.1	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
Methylcyclohexane	ND		5.0	0.42	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
Methylene Chloride	ND		5.0	1.6	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
m-Xylene & p-Xylene	ND		2.5	1.0	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
o-Xylene	ND		2.5	0.27	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
Styrene	ND		5.0	0.28	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
Tetrachloroethene	ND		5.0	1.9	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
Toluene	ND		5.0	0.23	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
trans-1,2-Dichloroethene	ND		2.5	0.39	ug/Kg		01/19/21 11:00	01/19/21 13:57	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-524027/3-A
Matrix: Solid
Analysis Batch: 524110

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524027

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		5.0	0.083	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
Trichloroethene	ND		5.0	1.9	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
Trichlorofluoromethane	ND		10	3.2	ug/Kg		01/19/21 11:00	01/19/21 13:57	1
Vinyl chloride	ND		5.0	1.3	ug/Kg		01/19/21 11:00	01/19/21 13:57	1

Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		58 - 140				01/19/21 11:00	01/19/21 13:57	1
4-Bromofluorobenzene (Surr)	93		76 - 127				01/19/21 11:00	01/19/21 13:57	1
Dibromofluoromethane (Surr)	100		75 - 121				01/19/21 11:00	01/19/21 13:57	1
Toluene-d8 (Surr)	99		80 - 126				01/19/21 11:00	01/19/21 13:57	1

Lab Sample ID: MB 280-524027/4-A
Matrix: Solid
Analysis Batch: 524110

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524027

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		250	99	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
1,1,1,2-Tetrachloroethane	ND		250	14	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
1,1,2-Trichloroethane	ND		250	44	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
1,1,2-Trichlorotrifluoroethane	ND		1000	83	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
1,1-Dichloroethane	ND		250	11	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
1,1-Dichloroethene	ND		250	30	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
1,2,3-Trichlorobenzene	ND		250	41	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
1,2,4-Trichlorobenzene	ND		250	37	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
1,2-Dibromo-3-Chloropropane	ND		500	180	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
1,2-Dibromoethane	ND		250	26	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
1,2-Dichloroethene	ND		250	94	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
1,2-Dichloroethane	ND		250	35	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
1,2-Dichloropropane	ND		250	28	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
1,3-Dichlorobenzene	ND		250	24	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
1,4-Dichlorobenzene	ND		250	12	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
1,4-Dioxane	ND		25000	2800	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
2-Butanone (MEK)	ND		1000	190	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
2-Hexanone	ND		1000	240	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
4-Methyl-2-pentanone (MIBK)	ND		1000	220	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
Acetone	ND		3600	1800	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
Benzene	ND		250	7.6	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
Bromoform	ND		260	130	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
Bromomethane	ND		500	68	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
Carbon disulfide	ND		250	83	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
Carbon tetrachloride	ND		250	100	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
Chlorobenzene	ND		250	100	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
Chlorobromomethane	ND		250	120	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
Chlorodibromomethane	ND		250	110	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
Chloroethane	ND		500	100	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
Chloroform	ND		500	15	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
Chloromethane	ND		500	39	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
cis-1,2-Dichloroethene	ND		130	10	ug/Kg		01/19/21 11:00	01/19/21 14:19	50

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-524027/4-A
Matrix: Solid
Analysis Batch: 524110

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524027

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		250	5.0	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
Cyclohexane	ND		250	88	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
Dichlorobromomethane	ND		250	110	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
Dichlorodifluoromethane	ND		500	140	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
Ethylbenzene	ND		250	15	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
Isopropylbenzene	ND		250	120	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
Methyl acetate	ND		500	140	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
Methyl tert-butyl ether	ND		1000	110	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
Methylcyclohexane	ND		250	21	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
Methylene Chloride	ND		250	80	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
m-Xylene & p-Xylene	ND		130	52	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
o-Xylene	ND		130	13	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
Styrene	ND		250	14	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
Tetrachloroethene	ND		250	96	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
Toluene	ND		250	11	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
trans-1,2-Dichloroethene	ND		130	20	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
trans-1,3-Dichloropropene	ND		250	4.2	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
Trichloroethene	ND		250	96	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
Trichlorofluoromethane	ND		500	160	ug/Kg		01/19/21 11:00	01/19/21 14:19	50
Vinyl chloride	ND		250	67	ug/Kg		01/19/21 11:00	01/19/21 14:19	50

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		58 - 140	01/19/21 11:00	01/19/21 14:19	50
4-Bromofluorobenzene (Surr)	95		76 - 127	01/19/21 11:00	01/19/21 14:19	50
Dibromofluoromethane (Surr)	98		75 - 121	01/19/21 11:00	01/19/21 14:19	50
Toluene-d8 (Surr)	97		80 - 126	01/19/21 11:00	01/19/21 14:19	50

Lab Sample ID: LCS 280-524027/1-A
Matrix: Solid
Analysis Batch: 524110

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524027

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1,1-Trichloroethane	50.0	46.9		ug/Kg		94	70 - 135
1,1,2,2-Tetrachloroethane	50.0	45.8		ug/Kg		92	65 - 135
1,1,2-Trichloroethane	50.0	49.8		ug/Kg		100	78 - 135
1,1,2-Trichlorotrifluoroethane	50.0	43.0		ug/Kg		86	50 - 150
1,1-Dichloroethane	50.0	46.5		ug/Kg		93	70 - 135
1,1-Dichloroethene	50.0	47.2		ug/Kg		94	79 - 135
1,2,3-Trichlorobenzene	50.0	49.3		ug/Kg		99	62 - 135
1,2,4-Trichlorobenzene	50.0	50.8		ug/Kg		102	65 - 135
1,2-Dibromo-3-Chloropropane	50.0	46.7		ug/Kg		93	66 - 150
1,2-Dibromoethane	50.0	45.8		ug/Kg		92	76 - 135
1,2-Dichlorobenzene	50.0	48.1		ug/Kg		96	73 - 135
1,2-Dichloroethane	50.0	43.7		ug/Kg		87	69 - 135
1,2-Dichloropropane	50.0	45.1		ug/Kg		90	72 - 121
1,3-Dichlorobenzene	50.0	46.7		ug/Kg		93	69 - 135
1,4-Dichlorobenzene	50.0	48.2		ug/Kg		96	73 - 135
1,4-Dioxane	1000	875		ug/Kg		88	52 - 135

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-524027/1-A
Matrix: Solid
Analysis Batch: 524110

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524027

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Butanone (MEK)	200	161		ug/Kg		80	45 - 177
2-Hexanone	200	166		ug/Kg		83	67 - 150
4-Methyl-2-pentanone (MIBK)	200	182		ug/Kg		91	69 - 150
Acetone	200	204		ug/Kg		102	65 - 150
Benzene	50.0	48.7		ug/Kg		97	75 - 135
Bromoform	50.0	48.2		ug/Kg		96	77 - 135
Bromomethane	50.0	48.4		ug/Kg		97	52 - 135
Carbon disulfide	50.0	44.5		ug/Kg		89	45 - 150
Carbon tetrachloride	50.0	48.4		ug/Kg		97	69 - 138
Chlorobenzene	50.0	45.6		ug/Kg		91	78 - 135
Chlorobromomethane	50.0	43.9		ug/Kg		88	74 - 135
Chlorodibromomethane	50.0	45.6		ug/Kg		91	77 - 135
Chloroethane	50.0	51.9		ug/Kg		104	51 - 145
Chloroform	50.0	47.3		ug/Kg		95	73 - 123
Chloromethane	50.0	43.0		ug/Kg		86	41 - 138
cis-1,2-Dichloroethene	50.0	47.3		ug/Kg		95	76 - 135
cis-1,3-Dichloropropene	50.0	47.7		ug/Kg		95	71 - 135
Cyclohexane	50.0	42.8		ug/Kg		86	50 - 150
Dichlorobromomethane	50.0	46.1		ug/Kg		92	73 - 135
Dichlorodifluoromethane	50.0	43.3		ug/Kg		87	32 - 152
Ethylbenzene	50.0	47.4		ug/Kg		95	73 - 125
Isopropylbenzene	50.0	49.3		ug/Kg		99	74 - 137
Methyl acetate	100	88.5		ug/Kg		88	50 - 150
Methyl tert-butyl ether	50.0	46.4		ug/Kg		93	71 - 141
Methylcyclohexane	50.0	42.3		ug/Kg		85	50 - 150
Methylene Chloride	50.0	46.1		ug/Kg		92	76 - 136
m-Xylene & p-Xylene	50.0	46.9		ug/Kg		94	77 - 135
o-Xylene	50.0	45.6		ug/Kg		91	75 - 135
Styrene	50.0	48.6		ug/Kg		97	76 - 135
Tetrachloroethene	50.0	45.1		ug/Kg		90	76 - 135
Toluene	50.0	47.2		ug/Kg		94	77 - 122
trans-1,2-Dichloroethene	50.0	48.9		ug/Kg		98	77 - 135
trans-1,3-Dichloropropene	50.0	47.5		ug/Kg		95	71 - 135
Trichloroethene	50.0	44.8		ug/Kg		90	77 - 135
Trichlorofluoromethane	50.0	48.0		ug/Kg		96	48 - 150
Vinyl chloride	50.0	48.0		ug/Kg		96	43 - 145

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	93		58 - 140
4-Bromofluorobenzene (Surr)	98		76 - 127
Dibromofluoromethane (Surr)	99		75 - 121
Toluene-d8 (Surr)	95		80 - 126

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-524027/2-A

Matrix: Solid

Analysis Batch: 524110

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 524027

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	%Rec. RPD Limit	
1,1,1-Trichloroethane	50.0	51.7		ug/Kg		103	70 - 135	10		20
1,1,2,2-Tetrachloroethane	50.0	49.7		ug/Kg		99	65 - 135	8		21
1,1,2-Trichloroethane	50.0	55.0		ug/Kg		110	78 - 135	10		20
1,1,2-Trichlorotrifluoroethane	50.0	45.8		ug/Kg		92	50 - 150	6		20
1,1-Dichloroethane	50.0	50.1		ug/Kg		100	70 - 135	8		20
1,1-Dichloroethene	50.0	50.6		ug/Kg		101	79 - 135	7		20
1,2,3-Trichlorobenzene	50.0	51.2		ug/Kg		102	62 - 135	4		31
1,2,4-Trichlorobenzene	50.0	51.4		ug/Kg		103	65 - 135	1		26
1,2-Dibromo-3-Chloropropane	50.0	49.4		ug/Kg		99	66 - 150	6		28
1,2-Dibromoethane	50.0	51.8		ug/Kg		104	76 - 135	12		20
1,2-Dichlorobenzene	50.0	50.9		ug/Kg		102	73 - 135	6		20
1,2-Dichloroethane	50.0	47.9		ug/Kg		96	69 - 135	9		20
1,2-Dichloropropane	50.0	47.9		ug/Kg		96	72 - 121	6		20
1,3-Dichlorobenzene	50.0	49.7		ug/Kg		99	69 - 135	6		20
1,4-Dichlorobenzene	50.0	51.3		ug/Kg		103	73 - 135	6		22
1,4-Dioxane	1000	996		ug/Kg		100	52 - 135	13		30
2-Butanone (MEK)	200	178		ug/Kg		89	45 - 177	10		32
2-Hexanone	200	189		ug/Kg		94	67 - 150	13		29
4-Methyl-2-pentanone (MIBK)	200	203		ug/Kg		101	69 - 150	11		25
Acetone	200	217		ug/Kg		109	65 - 150	6		28
Benzene	50.0	52.8		ug/Kg		106	75 - 135	8		20
Bromoform	50.0	53.6		ug/Kg		107	77 - 135	11		20
Bromomethane	50.0	48.7		ug/Kg		97	52 - 135	0		22
Carbon disulfide	50.0	47.5		ug/Kg		95	45 - 150	6		24
Carbon tetrachloride	50.0	52.4		ug/Kg		105	69 - 138	8		20
Chlorobenzene	50.0	52.3		ug/Kg		105	78 - 135	14		20
Chlorobromomethane	50.0	49.1		ug/Kg		98	74 - 135	11		21
Chlorodibromomethane	50.0	52.2		ug/Kg		104	77 - 135	13		20
Chloroethane	50.0	53.3		ug/Kg		107	51 - 145	3		22
Chloroform	50.0	50.6		ug/Kg		101	73 - 123	7		20
Chloromethane	50.0	44.8		ug/Kg		90	41 - 138	4		25
cis-1,2-Dichloroethene	50.0	51.8		ug/Kg		104	76 - 135	9		20
cis-1,3-Dichloropropene	50.0	54.1		ug/Kg		108	71 - 135	13		20
Cyclohexane	50.0	45.8		ug/Kg		92	50 - 150	7		30
Dichlorobromomethane	50.0	50.7		ug/Kg		101	73 - 135	9		20
Dichlorodifluoromethane	50.0	42.4		ug/Kg		85	32 - 152	2		28
Ethylbenzene	50.0	52.6		ug/Kg		105	73 - 125	10		20
Isopropylbenzene	50.0	51.9		ug/Kg		104	74 - 137	5		20
Methyl acetate	100	100		ug/Kg		100	50 - 150	12		30
Methyl tert-butyl ether	50.0	50.9		ug/Kg		102	71 - 141	9		20
Methylcyclohexane	50.0	44.7		ug/Kg		89	50 - 150	5		30
Methylene Chloride	50.0	48.6		ug/Kg		97	76 - 136	5		21
m-Xylene & p-Xylene	50.0	51.8		ug/Kg		104	77 - 135	10		20
o-Xylene	50.0	51.7		ug/Kg		103	75 - 135	12		20
Styrene	50.0	53.7		ug/Kg		107	76 - 135	10		20
Tetrachloroethene	50.0	51.3		ug/Kg		103	76 - 135	13		20
Toluene	50.0	51.4		ug/Kg		103	77 - 122	9		20
trans-1,2-Dichloroethene	50.0	52.4		ug/Kg		105	77 - 135	7		20

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-524027/2-A
Matrix: Solid
Analysis Batch: 524110

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 524027

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
trans-1,3-Dichloropropene	50.0	51.1		ug/Kg		102	71 - 135	7	20
Trichloroethene	50.0	49.9		ug/Kg		100	77 - 135	11	20
Trichlorofluoromethane	50.0	49.5		ug/Kg		99	48 - 150	3	33
Vinyl chloride	50.0	49.5		ug/Kg		99	43 - 145	3	24

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	93		58 - 140
4-Bromofluorobenzene (Surr)	98		76 - 127
Dibromofluoromethane (Surr)	99		75 - 121
Toluene-d8 (Surr)	99		80 - 126

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-524076/1-A
Matrix: Solid
Analysis Batch: 524273

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524076

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		330	24	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
1,2,4,5-Tetrachlorobenzene	ND		330	49	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
1,2,4-Trichlorobenzene	ND		330	28	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
1,2-Dichlorobenzene	ND		330	22	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		330	22	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
1,3-Dichlorobenzene	ND		330	12	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
1,3-Dinitrobenzene	ND		330	71	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
1,4-Dichlorobenzene	ND		330	14	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
1,4-Dioxane	ND		660	66	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
1-Methylnaphthalene	ND		330	11	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
2,2'-oxybis[1-chloropropane]	ND		330	23	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
2,3,4,6-Tetrachlorophenol	ND		1600	140	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
2,4,5-Trichlorophenol	ND		330	10	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
2,4,6-Trichlorophenol	ND		330	10	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
2,4-Dichlorophenol	ND		330	10	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
2,4-Dimethylphenol	ND		330	66	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
2,4-Dinitrophenol	ND		1600	330	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
2,4-Dinitrotoluene	ND		330	66	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
2,6-Dichlorophenol	ND		330	22	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
2,6-Dinitrotoluene	ND		330	28	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
2-Chloronaphthalene	ND		330	10	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
2-Chlorophenol	ND		330	21	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
2-Methylnaphthalene	ND		330	19	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
2-Methylphenol	ND		330	13	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
2-Nitroaniline	ND		1600	50	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
2-Nitrophenol	ND		330	10	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
3 & 4 Methylphenol	ND		330	33	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
3,3'-Dichlorobenzidine	ND		660	90	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
3-Methylphenol	ND		330	33	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
3-Nitroaniline	ND		1600	73	ug/Kg		01/20/21 08:15	01/22/21 12:35	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-524076/1-A
Matrix: Solid
Analysis Batch: 524273

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524076

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
4,6-Dinitro-2-methylphenol	ND		1600	330	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
4-Bromophenyl phenyl ether	ND		330	19	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
4-Chloro-3-methylphenol	ND		330	25	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
4-Chloroaniline	ND		330	82	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
4-Chlorophenyl phenyl ether	ND		330	21	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
4-Methylphenol	ND		330	33	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
4-Nitroaniline	ND		1600	73	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
4-Nitrophenol	ND		1600	97	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Acenaphthene	ND		330	10	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Acenaphthylene	ND		330	82	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Acetophenone	ND		330	20	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Aniline	ND		330	130	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Anthracene	ND		330	17	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Azobenzene	ND		330	22	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Benzaldehyde	ND		330	67	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Benzidine	ND		3300	990	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Benzo[a]anthracene	ND		330	20	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Benzo[a]pyrene	ND		330	20	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Benzo[b]fluoranthene	ND		330	26	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Benzo[g,h,i]perylene	ND		330	16	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Benzo[k]fluoranthene	ND		330	40	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Benzoic acid	ND		1600	330	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Benzyl alcohol	ND		330	10	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Bis(2-chloroethoxy)methane	ND		330	23	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Bis(2-chloroethyl)ether	ND		330	17	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Bis(2-ethylhexyl) phthalate	ND		330	46	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Butyl benzyl phthalate	ND		330	43	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Caprolactam	ND		330	110	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Carbazole	ND		330	36	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Chrysene	ND		330	27	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Dibenz(a,h)anthracene	ND		330	19	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Dibenzofuran	ND		330	20	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Diethyl phthalate	ND		660	26	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Dimethyl phthalate	ND		330	23	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Di-n-butyl phthalate	ND		330	29	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Di-n-octyl phthalate	ND		330	41	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Diphenylamine	ND		330	44	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Famphur	ND		660	34	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Fluoranthene	ND		330	36	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Fluorene	ND		330	18	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Hexachlorobenzene	ND		330	29	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Hexachlorobutadiene	ND		330	10	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Hexachlorocyclopentadiene	ND		1600	110	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Hexachloroethane	ND		330	21	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Hexadecane	ND		330	13	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Indeno[1,2,3-cd]pyrene	ND		330	22	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Isophorone	ND		330	17	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Naphthalene	ND		330	31	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Nitrobenzene	ND		330	22	ug/Kg		01/20/21 08:15	01/22/21 12:35	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-524076/1-A
Matrix: Solid
Analysis Batch: 524273

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524076

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodimethylamine	ND		330	37	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
N-Nitrosodi-n-propylamine	ND		330	68	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
N-Nitrosodiphenylamine	ND		330	21	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Pentachlorophenol	ND		1600	330	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Phenanthrene	ND		330	17	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Phenol	ND		330	18	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Pyrene	ND		330	12	ug/Kg		01/20/21 08:15	01/22/21 12:35	1
Pyridine	ND		660	40	ug/Kg		01/20/21 08:15	01/22/21 12:35	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	54		35 - 120	01/20/21 08:15	01/22/21 12:35	1
2-Fluorobiphenyl	61		46 - 120	01/20/21 08:15	01/22/21 12:35	1
2-Fluorophenol (Surr)	55		43 - 120	01/20/21 08:15	01/22/21 12:35	1
Nitrobenzene-d5 (Surr)	60		46 - 120	01/20/21 08:15	01/22/21 12:35	1
Phenol-d5 (Surr)	58		46 - 120	01/20/21 08:15	01/22/21 12:35	1
Terphenyl-d14 (Surr)	84		46 - 120	01/20/21 08:15	01/22/21 12:35	1

Lab Sample ID: LCS 280-524076/2-A
Matrix: Solid
Analysis Batch: 524273

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524076

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1'-Biphenyl	2670	1910		ug/Kg		72	60 - 120
1,2,4,5-Tetrachlorobenzene	2670	1920		ug/Kg		72	60 - 120
1,2,4-Trichlorobenzene	2670	1790		ug/Kg		67	59 - 120
1,2-Dichlorobenzene	2670	1690		ug/Kg		64	57 - 120
1,2-Diphenylhydrazine(as Azobenzene)	2700	1950		ug/Kg		73	60 - 120
1,3-Dichlorobenzene	2670	1630		ug/Kg		61	56 - 120
1,3-Dinitrobenzene	2670	2040		ug/Kg		77	66 - 120
1,4-Dichlorobenzene	2670	1700		ug/Kg		64	57 - 120
1,4-Dioxane	2670	930		ug/Kg		35	28 - 120
1-Methylnaphthalene	2670	1880		ug/Kg		71	57 - 120
2,2'-oxybis[1-chloropropane]	2670	1630		ug/Kg		61	46 - 120
2,3,4,6-Tetrachlorophenol	2670	1930		ug/Kg		72	63 - 120
2,4,5-Trichlorophenol	2670	1900		ug/Kg		71	65 - 120
2,4,6-Trichlorophenol	2670	1890		ug/Kg		71	64 - 120
2,4-Dichlorophenol	2670	1780		ug/Kg		67	64 - 120
2,4-Dimethylphenol	2670	1750		ug/Kg		66	60 - 120
2,4-Dinitrophenol	5330	902	J *	ug/Kg		17	52 - 120
2,4-Dinitrotoluene	2670	2110		ug/Kg		79	68 - 120
2,6-Dichlorophenol	2670	1870		ug/Kg		70	30 - 150
2,6-Dinitrotoluene	2670	1980		ug/Kg		74	68 - 120
2-Chloronaphthalene	2670	1880		ug/Kg		71	61 - 120
2-Chlorophenol	2670	1700		ug/Kg		64	62 - 120
2-Methylnaphthalene	2670	1880		ug/Kg		70	60 - 120
2-Methylphenol	2670	1860		ug/Kg		70	61 - 120
2-Nitroaniline	2670	1890		ug/Kg		71	63 - 120
2-Nitrophenol	2670	1690		ug/Kg		63	61 - 120

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-524076/2-A
Matrix: Solid
Analysis Batch: 524273

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524076

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
3 & 4 Methylphenol	2670	1900		ug/Kg		71	62 - 120
3,3'-Dichlorobenzidine	5330	3640		ug/Kg		68	22 - 120
3-Methylphenol	2670	1900		ug/Kg		71	62 - 120
3-Nitroaniline	2670	1590	J	ug/Kg		60	40 - 120
4,6-Dinitro-2-methylphenol	5330	2370	*-	ug/Kg		45	60 - 120
4-Bromophenyl phenyl ether	2670	1970		ug/Kg		74	66 - 120
4-Chloro-3-methylphenol	2670	1930		ug/Kg		72	62 - 120
4-Chloroaniline	2670	1380		ug/Kg		52	33 - 120
4-Chlorophenyl phenyl ether	2670	2020		ug/Kg		76	63 - 120
4-Methylphenol	2670	1900		ug/Kg		71	62 - 120
4-Nitroaniline	2670	1820		ug/Kg		68	58 - 120
4-Nitrophenol	5330	3490	*-	ug/Kg		65	67 - 120
Acenaphthene	2670	1930		ug/Kg		72	62 - 120
Acenaphthylene	2670	1870		ug/Kg		70	64 - 120
Acetophenone	2670	1580		ug/Kg		59	48 - 120
Aniline	2670	1130		ug/Kg		43	21 - 120
Anthracene	2670	2040		ug/Kg		77	66 - 120
Azobenzene	2670	1930		ug/Kg		73	59 - 120
Benzaldehyde	2670	470	*-	ug/Kg		18	30 - 150
Benzidine	5330	1500	J	ug/Kg		28	5 - 120
Benzo[a]anthracene	2670	2010		ug/Kg		75	64 - 120
Benzo[a]pyrene	2670	1970		ug/Kg		74	65 - 120
Benzo[b]fluoranthene	2670	1880		ug/Kg		70	58 - 120
Benzo[g,h,i]perylene	2670	1990		ug/Kg		75	58 - 120
Benzo[k]fluoranthene	2670	2150		ug/Kg		81	62 - 120
Benzoic acid	2670	611	J *-	ug/Kg		23	51 - 120
Benzyl alcohol	2670	1640		ug/Kg		61	61 - 120
Bis(2-chloroethoxy)methane	2670	1750		ug/Kg		66	58 - 120
Bis(2-chloroethyl)ether	2670	1820		ug/Kg		68	57 - 120
Bis(2-ethylhexyl) phthalate	2670	1990		ug/Kg		75	65 - 120
Butyl benzyl phthalate	2670	1980		ug/Kg		74	65 - 120
Caprolactam	2670	1770		ug/Kg		66	20 - 138
Carbazole	2670	2010		ug/Kg		76	65 - 120
Chrysene	2670	2060		ug/Kg		77	65 - 120
Dibenz(a,h)anthracene	2670	1980		ug/Kg		74	56 - 120
Dibenzofuran	2670	1990		ug/Kg		75	65 - 120
Diethyl phthalate	2670	2040		ug/Kg		76	68 - 120
Dimethyl phthalate	2670	2000		ug/Kg		75	66 - 120
Di-n-butyl phthalate	2670	2030		ug/Kg		76	66 - 120
Di-n-octyl phthalate	2670	1900		ug/Kg		71	55 - 120
Diphenylamine	2270	1680		ug/Kg		74	30 - 150
Fluoranthene	2670	2020		ug/Kg		76	64 - 120
Fluorene	2670	2030		ug/Kg		76	66 - 120
Hexachlorobenzene	2670	1970		ug/Kg		74	65 - 120
Hexachlorobutadiene	2670	1780		ug/Kg		67	58 - 120
Hexachlorocyclopentadiene	5330	3110		ug/Kg		58	43 - 120
Hexachloroethane	2670	1650		ug/Kg		62	56 - 120
Hexadecane	2670	1880		ug/Kg		71	45 - 135
Indeno[1,2,3-cd]pyrene	2670	1880		ug/Kg		71	46 - 120

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-524076/2-A
Matrix: Solid
Analysis Batch: 524273

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524076

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Isophorone	2670	1700		ug/Kg		64	56 - 120
Naphthalene	2670	1800		ug/Kg		68	59 - 120
Nitrobenzene	2670	1750		ug/Kg		66	55 - 120
N-Nitrosodimethylamine	2670	1530		ug/Kg		57	50 - 120
N-Nitrosodi-n-propylamine	2670	1840		ug/Kg		69	52 - 120
N-Nitrosodiphenylamine	2670	1950		ug/Kg		73	65 - 120
Pentachlorophenol	5330	2980		ug/Kg		56	50 - 120
Phenanthrene	2670	2010		ug/Kg		75	67 - 120
Phenol	2670	1640	*	ug/Kg		61	63 - 120
Pyrene	2670	2000		ug/Kg		75	66 - 120
Pyridine	5330	2270		ug/Kg		43	37 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	69		35 - 120
2-Fluorobiphenyl	64		46 - 120
2-Fluorophenol (Surr)	56		43 - 120
Nitrobenzene-d5 (Surr)	59		46 - 120
Phenol-d5 (Surr)	58		46 - 120
Terphenyl-d14 (Surr)	80		46 - 120

Lab Sample ID: 280-144588-1 MS
Matrix: Solid
Analysis Batch: 524273

Client Sample ID: CDOT I270 SB37-8-10
Prep Type: Total/NA
Prep Batch: 524076

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1'-Biphenyl	ND		2900	2190		ug/Kg	☼	76	60 - 120
1,2,4,5-Tetrachlorobenzene	ND		2900	2110		ug/Kg	☼	73	60 - 120
1,2,4-Trichlorobenzene	ND		2900	1850		ug/Kg	☼	64	59 - 120
1,2-Dichlorobenzene	ND	F1	2900	1630	F1	ug/Kg	☼	56	57 - 120
1,2-Diphenylhydrazine(as Azobenzene)	ND		2930	2270		ug/Kg	☼	77	60 - 120
1,3-Dichlorobenzene	ND	F1	2900	1560	F1	ug/Kg	☼	54	56 - 120
1,3-Dinitrobenzene	ND		2900	2340		ug/Kg	☼	81	66 - 120
1,4-Dichlorobenzene	ND	F1	2900	1630	F1	ug/Kg	☼	56	57 - 120
1,4-Dioxane	ND		2900	842		ug/Kg	☼	29	28 - 120
1-Methylnaphthalene	ND		2900	2090		ug/Kg	☼	72	57 - 120
2,2'-oxybis[1-chloropropane]	ND		2900	1640		ug/Kg	☼	57	46 - 120
2,3,4,6-Tetrachlorophenol	ND		2900	2230		ug/Kg	☼	77	63 - 120
2,4,5-Trichlorophenol	ND		2900	2240		ug/Kg	☼	77	65 - 120
2,4,6-Trichlorophenol	ND		2900	2180		ug/Kg	☼	75	64 - 120
2,4-Dichlorophenol	ND		2900	2080		ug/Kg	☼	72	64 - 120
2,4-Dimethylphenol	ND		2900	2040		ug/Kg	☼	70	60 - 120
2,4-Dinitrophenol	ND	*- F1	5800	2630	F1	ug/Kg	☼	45	52 - 120
2,4-Dinitrotoluene	ND		2900	2400		ug/Kg	☼	83	68 - 120
2,6-Dichlorophenol	ND		2900	2090		ug/Kg	☼	72	30 - 150
2,6-Dinitrotoluene	ND		2900	2260		ug/Kg	☼	78	68 - 120
2-Chloronaphthalene	ND		2900	2140		ug/Kg	☼	74	61 - 120
2-Chlorophenol	ND	F1	2900	1700	F1	ug/Kg	☼	58	62 - 120
2-Methylnaphthalene	ND		2900	2080		ug/Kg	☼	72	60 - 120

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-144588-1 MS

Matrix: Solid

Analysis Batch: 524273

Client Sample ID: CDOT I270 SB37-8-10

Prep Type: Total/NA

Prep Batch: 524076

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
2-Methylphenol	ND		2900	1960		ug/Kg	*	68	61 - 120
2-Nitroaniline	ND		2900	2140		ug/Kg	*	74	63 - 120
2-Nitrophenol	ND		2900	1790		ug/Kg	*	62	61 - 120
3 & 4 Methylphenol	ND		2900	1950		ug/Kg	*	67	62 - 120
3,3'-Dichlorobenzidine	ND		5800	4750		ug/Kg	*	82	22 - 120
3-Methylphenol	ND		2900	1950		ug/Kg	*	67	62 - 120
3-Nitroaniline	ND		2900	1990		ug/Kg	*	69	40 - 120
4,6-Dinitro-2-methylphenol	ND	*	5800	4080		ug/Kg	*	70	60 - 120
4-Bromophenyl phenyl ether	ND		2900	2310		ug/Kg	*	80	66 - 120
4-Chloro-3-methylphenol	ND		2900	2240		ug/Kg	*	77	62 - 120
4-Chloroaniline	ND		2900	1820		ug/Kg	*	63	33 - 120
4-Chlorophenyl phenyl ether	ND		2900	2260		ug/Kg	*	78	63 - 120
4-Methylphenol	ND		2900	1950		ug/Kg	*	67	62 - 120
4-Nitroaniline	ND		2900	2110		ug/Kg	*	73	58 - 120
4-Nitrophenol	ND	*	5800	3990		ug/Kg	*	69	67 - 120
Acenaphthene	ND		2900	2190		ug/Kg	*	76	62 - 120
Acenaphthylene	ND		2900	2140		ug/Kg	*	74	64 - 120
Acetophenone	ND		2900	1610		ug/Kg	*	56	48 - 120
Aniline	ND		2900	1370		ug/Kg	*	47	21 - 120
Anthracene	ND		2900	2370		ug/Kg	*	82	66 - 120
Azobenzene	ND		2900	2250		ug/Kg	*	77	59 - 120
Benzaldehyde	ND	*	2900	984		ug/Kg	*	34	30 - 150
Benzidine	ND		5800	1890	J	ug/Kg	*	33	5 - 120
Benzo[a]anthracene	ND		2900	2370		ug/Kg	*	82	64 - 120
Benzo[a]pyrene	ND		2900	2230		ug/Kg	*	77	65 - 120
Benzo[b]fluoranthene	ND		2900	2210		ug/Kg	*	76	58 - 120
Benzo[g,h,i]perylene	ND		2900	2240		ug/Kg	*	77	58 - 120
Benzo[k]fluoranthene	ND		2900	2430		ug/Kg	*	84	62 - 120
Benzoic acid	ND	*- F1	2900	1310	J F1	ug/Kg	*	45	51 - 120
Benzyl alcohol	ND	F1	2900	1710	F1	ug/Kg	*	59	61 - 120
Bis(2-chloroethoxy)methane	ND		2900	1900		ug/Kg	*	65	58 - 120
Bis(2-chloroethyl)ether	ND		2900	1790		ug/Kg	*	62	57 - 120
Bis(2-ethylhexyl) phthalate	50	J	2900	2490		ug/Kg	*	86	65 - 120
Butyl benzyl phthalate	ND		2900	2360		ug/Kg	*	81	65 - 120
Caprolactam	ND		2900	2060		ug/Kg	*	71	20 - 138
Carbazole	ND		2900	2260		ug/Kg	*	78	65 - 120
Chrysene	ND		2900	2440		ug/Kg	*	84	65 - 120
Dibenz(a,h)anthracene	ND		2900	2240		ug/Kg	*	77	56 - 120
Dibenzofuran	ND		2900	2230		ug/Kg	*	77	65 - 120
Diethyl phthalate	ND		2900	2360		ug/Kg	*	81	68 - 120
Dimethyl phthalate	ND		2900	2280		ug/Kg	*	79	66 - 120
Di-n-butyl phthalate	ND		2900	2220		ug/Kg	*	77	66 - 120
Di-n-octyl phthalate	ND		2900	2410		ug/Kg	*	83	55 - 120
Diphenylamine	ND		2470	1900		ug/Kg	*	77	30 - 150
Fluoranthene	ND		2900	2340		ug/Kg	*	81	64 - 120
Fluorene	ND		2900	2270		ug/Kg	*	78	66 - 120
Hexachlorobenzene	ND		2900	2270		ug/Kg	*	78	65 - 120
Hexachlorobutadiene	ND		2900	1840		ug/Kg	*	63	58 - 120
Hexachlorocyclopentadiene	ND		5800	3240		ug/Kg	*	56	43 - 120

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-144588-1 MS

Matrix: Solid

Analysis Batch: 524273

Client Sample ID: CDOT I270 SB37-8-10

Prep Type: Total/NA

Prep Batch: 524076

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits	
	Result	Qualifier		Result	Qualifier						
Hexachloroethane	ND	F1	2900	1570	F1	ug/Kg	☼	54	56 - 120		
Hexadecane	ND		2900	2130		ug/Kg	☼	73	45 - 135		
Indeno[1,2,3-cd]pyrene	ND		2900	2240		ug/Kg	☼	77	46 - 120		
Isophorone	ND		2900	1910		ug/Kg	☼	66	56 - 120		
Naphthalene	ND		2900	1910		ug/Kg	☼	66	59 - 120		
Nitrobenzene	ND		2900	1860		ug/Kg	☼	64	55 - 120		
N-Nitrosodimethylamine	ND		2900	1480		ug/Kg	☼	51	50 - 120		
N-Nitrosodi-n-propylamine	ND		2900	1930		ug/Kg	☼	67	52 - 120		
N-Nitrosodiphenylamine	ND		2900	2240		ug/Kg	☼	77	65 - 120		
Pentachlorophenol	ND		5800	3660		ug/Kg	☼	63	50 - 120		
Phenanthrene	ND		2900	2310		ug/Kg	☼	80	67 - 120		
Phenol	ND	*- F1	2900	1660	F1	ug/Kg	☼	57	63 - 120		
Pyrene	ND		2900	2470		ug/Kg	☼	85	66 - 120		
Pyridine	ND	F1	5800	2110	F1	ug/Kg	☼	36	37 - 120		
		MS	MS								
Surrogate	%Recovery	Qualifier	Limits								
2,4,6-Tribromophenol (Surr)	72		35 - 120								
2-Fluorobiphenyl	67		46 - 120								
2-Fluorophenol (Surr)	52		43 - 120								
Nitrobenzene-d5 (Surr)	59		46 - 120								
Phenol-d5 (Surr)	57		46 - 120								
Terphenyl-d14 (Surr)	87		46 - 120								

Lab Sample ID: 280-144588-1 MSD

Matrix: Solid

Analysis Batch: 524273

Client Sample ID: CDOT I270 SB37-8-10

Prep Type: Total/NA

Prep Batch: 524076

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	RPD
	Result	Qualifier		Result	Qualifier						RPD	Limit
1,1'-Biphenyl	ND		3000	2240		ug/Kg	☼	75	60 - 120	2	30	
1,2,4,5-Tetrachlorobenzene	ND		3000	2200		ug/Kg	☼	73	60 - 120	4	30	
1,2,4-Trichlorobenzene	ND		3000	2030		ug/Kg	☼	68	59 - 120	9	30	
1,2-Dichlorobenzene	ND	F1	3000	1880		ug/Kg	☼	63	57 - 120	14	30	
1,2-Diphenylhydrazine(as Azobenzene)	ND		3030	2250		ug/Kg	☼	74	60 - 120	1	30	
1,3-Dichlorobenzene	ND	F1	3000	1820		ug/Kg	☼	61	56 - 120	15	30	
1,3-Dinitrobenzene	ND		3000	2360		ug/Kg	☼	79	66 - 120	1	30	
1,4-Dichlorobenzene	ND	F1	3000	1900		ug/Kg	☼	63	57 - 120	16	30	
1,4-Dioxane	ND		3000	1060		ug/Kg	☼	35	28 - 120	22	30	
1-Methylnaphthalene	ND		3000	2180		ug/Kg	☼	73	57 - 120	4	30	
2,2'-oxybis[1-chloropropane]	ND		3000	1930		ug/Kg	☼	64	46 - 120	16	30	
2,3,4,6-Tetrachlorophenol	ND		3000	2240		ug/Kg	☼	75	63 - 120	0	30	
2,4,5-Trichlorophenol	ND		3000	2210		ug/Kg	☼	74	65 - 120	1	30	
2,4,6-Trichlorophenol	ND		3000	2210		ug/Kg	☼	74	64 - 120	2	30	
2,4-Dichlorophenol	ND		3000	2070		ug/Kg	☼	69	64 - 120	0	30	
2,4-Dimethylphenol	ND		3000	2090		ug/Kg	☼	70	60 - 120	3	30	
2,4-Dinitrophenol	ND	*- F1	6000	3000	F1	ug/Kg	☼	50	52 - 120	13	30	
2,4-Dinitrotoluene	ND		3000	2410		ug/Kg	☼	80	68 - 120	0	30	
2,6-Dichlorophenol	ND		3000	2170		ug/Kg	☼	72	30 - 150	4	30	
2,6-Dinitrotoluene	ND		3000	2290		ug/Kg	☼	76	68 - 120	1	30	

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-144588-1 MSD

Matrix: Solid

Analysis Batch: 524273

Client Sample ID: CDOT I270 SB37-8-10

Prep Type: Total/NA

Prep Batch: 524076

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		Limit
2-Chloronaphthalene	ND		3000	2200		ug/Kg	*	74	61 - 120	3	30
2-Chlorophenol	ND	F1	3000	1920		ug/Kg	*	64	62 - 120	13	30
2-Methylnaphthalene	ND		3000	2140		ug/Kg	*	71	60 - 120	3	30
2-Methylphenol	ND		3000	2150		ug/Kg	*	72	61 - 120	9	30
2-Nitroaniline	ND		3000	2120		ug/Kg	*	71	63 - 120	1	30
2-Nitrophenol	ND		3000	2010		ug/Kg	*	67	61 - 120	12	30
3 & 4 Methylphenol	ND		3000	2180		ug/Kg	*	73	62 - 120	11	30
3,3'-Dichlorobenzidine	ND		6000	4370		ug/Kg	*	73	22 - 120	8	30
3-Methylphenol	ND		3000	2180		ug/Kg	*	73	62 - 120	11	30
3-Nitroaniline	ND		3000	1900		ug/Kg	*	63	40 - 120	5	30
4,6-Dinitro-2-methylphenol	ND	*	6000	4240		ug/Kg	*	71	60 - 120	4	30
4-Bromophenyl phenyl ether	ND		3000	2270		ug/Kg	*	76	66 - 120	2	30
4-Chloro-3-methylphenol	ND		3000	2170		ug/Kg	*	72	62 - 120	3	30
4-Chloroaniline	ND		3000	1750		ug/Kg	*	58	33 - 120	4	30
4-Chlorophenyl phenyl ether	ND		3000	2290		ug/Kg	*	76	63 - 120	1	30
4-Methylphenol	ND		3000	2180		ug/Kg	*	73	62 - 120	11	30
4-Nitroaniline	ND		3000	2070		ug/Kg	*	69	58 - 120	2	30
4-Nitrophenol	ND	*	6000	3990		ug/Kg	*	67	67 - 120	0	30
Acenaphthene	ND		3000	2230		ug/Kg	*	74	62 - 120	2	30
Acenaphthylene	ND		3000	2150		ug/Kg	*	72	64 - 120	1	30
Acetophenone	ND		3000	1820		ug/Kg	*	61	48 - 120	12	30
Aniline	ND		3000	1420		ug/Kg	*	48	21 - 120	4	30
Anthracene	ND		3000	2340		ug/Kg	*	78	66 - 120	1	30
Azobenzene	ND		3000	2230		ug/Kg	*	74	59 - 120	1	30
Benzaldehyde	ND	*	3000	977		ug/Kg	*	33	30 - 150	1	50
Benzo[a]anthracene	ND		3000	1590	J	ug/Kg	*	27	5 - 120	17	50
Benzo[a]pyrene	ND		3000	2290		ug/Kg	*	76	64 - 120	3	30
Benzo[b]fluoranthene	ND		3000	2220		ug/Kg	*	74	65 - 120	0	30
Benzo[b]fluoranthene	ND		3000	2200		ug/Kg	*	73	58 - 120	0	30
Benzo[g,h,i]perylene	ND		3000	2290		ug/Kg	*	76	58 - 120	2	30
Benzo[k]fluoranthene	ND		3000	2400		ug/Kg	*	80	62 - 120	1	30
Benzoic acid	ND	*- F1	3000	1270	J F1	ug/Kg	*	42	51 - 120	3	30
Benzyl alcohol	ND	F1	3000	1920		ug/Kg	*	64	61 - 120	12	30
Bis(2-chloroethoxy)methane	ND		3000	2040		ug/Kg	*	68	58 - 120	7	30
Bis(2-chloroethyl)ether	ND		3000	2060		ug/Kg	*	69	57 - 120	14	30
Bis(2-ethylhexyl) phthalate	50	J	3000	2390		ug/Kg	*	80	65 - 120	4	30
Butyl benzyl phthalate	ND		3000	2250		ug/Kg	*	75	65 - 120	5	30
Caprolactam	ND		3000	1990		ug/Kg	*	66	20 - 138	4	30
Carbazole	ND		3000	2300		ug/Kg	*	77	65 - 120	2	30
Chrysene	ND		3000	2290		ug/Kg	*	76	65 - 120	7	30
Dibenz(a,h)anthracene	ND		3000	2270		ug/Kg	*	76	56 - 120	1	30
Dibenzofuran	ND		3000	2240		ug/Kg	*	75	65 - 120	1	30
Diethyl phthalate	ND		3000	2380		ug/Kg	*	79	68 - 120	1	30
Dimethyl phthalate	ND		3000	2290		ug/Kg	*	77	66 - 120	0	30
Di-n-butyl phthalate	ND		3000	2300		ug/Kg	*	77	66 - 120	3	30
Di-n-octyl phthalate	ND		3000	2320		ug/Kg	*	77	55 - 120	4	30
Diphenylamine	ND		2550	1900		ug/Kg	*	75	30 - 150	0	50
Fluoranthene	ND		3000	2410		ug/Kg	*	81	64 - 120	3	30
Fluorene	ND		3000	2290		ug/Kg	*	76	66 - 120	1	30

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-144588-1 MSD

Matrix: Solid

Analysis Batch: 524273

Client Sample ID: CDOT I270 SB37-8-10

Prep Type: Total/NA

Prep Batch: 524076

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
	Result	Qualifier	Added	Result	Qualifier						
Hexachlorobenzene	ND		3000	2290		ug/Kg	☼	76	65 - 120	1	30
Hexachlorobutadiene	ND		3000	2050		ug/Kg	☼	68	58 - 120	11	30
Hexachlorocyclopentadiene	ND		6000	3630		ug/Kg	☼	61	43 - 120	11	30
Hexachloroethane	ND	F1	3000	1830		ug/Kg	☼	61	56 - 120	15	30
Hexadecane	ND		3000	2220		ug/Kg	☼	74	45 - 135	4	30
Indeno[1,2,3-cd]pyrene	ND		3000	2180		ug/Kg	☼	73	46 - 120	3	30
Isophorone	ND		3000	1980		ug/Kg	☼	66	56 - 120	4	30
Naphthalene	ND		3000	2060		ug/Kg	☼	69	59 - 120	8	30
Nitrobenzene	ND		3000	2050		ug/Kg	☼	69	55 - 120	10	30
N-Nitrosodimethylamine	ND		3000	1690		ug/Kg	☼	57	50 - 120	14	30
N-Nitrosodi-n-propylamine	ND		3000	2090		ug/Kg	☼	70	52 - 120	8	30
N-Nitrosodiphenylamine	ND		3000	2250		ug/Kg	☼	75	65 - 120	0	30
Pentachlorophenol	ND		6000	3690		ug/Kg	☼	61	50 - 120	1	30
Phenanthrene	ND		3000	2280		ug/Kg	☼	76	67 - 120	1	30
Phenol	ND	*- F1	3000	1870	F1	ug/Kg	☼	62	63 - 120	12	30
Pyrene	ND		3000	2330		ug/Kg	☼	78	66 - 120	6	30
Pyridine	ND	F1	6000	2390		ug/Kg	☼	40	37 - 120	13	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	71		35 - 120
2-Fluorobiphenyl	67		46 - 120
2-Fluorophenol (Surr)	58		43 - 120
Nitrobenzene-d5 (Surr)	63		46 - 120
Phenol-d5 (Surr)	62		46 - 120
Terphenyl-d14 (Surr)	81		46 - 120

Lab Sample ID: MB 280-524424/1-A

Matrix: Solid

Analysis Batch: 524657

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 524424

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1'-Biphenyl	ND		330	24	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
1,2,4,5-Tetrachlorobenzene	ND		330	49	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
1,2,4-Trichlorobenzene	ND		330	28	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
1,2-Dichlorobenzene	ND		330	22	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		330	22	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
1,3-Dichlorobenzene	ND		330	12	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
1,3-Dinitrobenzene	ND		330	71	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
1,4-Dichlorobenzene	ND		330	14	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
1,4-Dioxane	ND		660	66	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
1-Methylnaphthalene	ND		330	11	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
2,2'-oxybis[1-chloropropane]	ND		330	23	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
2,3,4,6-Tetrachlorophenol	ND		1600	140	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
2,4,5-Trichlorophenol	ND		330	10	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
2,4,6-Trichlorophenol	ND		330	10	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
2,4-Dichlorophenol	ND		330	10	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
2,4-Dimethylphenol	ND		330	66	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
2,4-Dinitrophenol	ND		1600	330	ug/Kg		01/25/21 10:32	01/26/21 23:58	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-524424/1-A
Matrix: Solid
Analysis Batch: 524657

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524424

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
	Result	Qualifier							
2,4-Dinitrotoluene	ND		330	66	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
2,6-Dichlorophenol	ND		330	22	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
2,6-Dinitrotoluene	ND		330	28	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
2-Chloronaphthalene	ND		330	10	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
2-Chlorophenol	ND		330	21	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
2-Methylnaphthalene	ND		330	19	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
2-Methylphenol	ND		330	13	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
2-Nitroaniline	ND		1600	50	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
2-Nitrophenol	ND		330	10	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
3 & 4 Methylphenol	ND		330	33	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
3,3'-Dichlorobenzidine	ND		660	90	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
3-Methylphenol	ND		330	33	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
3-Nitroaniline	ND		1600	73	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
4,6-Dinitro-2-methylphenol	ND		1600	330	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
4-Bromophenyl phenyl ether	ND		330	19	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
4-Chloro-3-methylphenol	ND		330	25	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
4-Chloroaniline	ND		330	82	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
4-Chlorophenyl phenyl ether	ND		330	21	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
4-Methylphenol	ND		330	33	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
4-Nitroaniline	ND		1600	73	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
4-Nitrophenol	ND		1600	97	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Acenaphthene	ND		330	10	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Acenaphthylene	ND		330	82	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Acetophenone	ND		330	20	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Aniline	ND		330	130	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Anthracene	ND		330	17	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Azobenzene	ND		330	22	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Benzaldehyde	ND		330	67	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Benzidine	ND		3300	990	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Benzo[a]anthracene	ND		330	20	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Benzo[a]pyrene	ND		330	20	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Benzo[b]fluoranthene	ND		330	26	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Benzo[g,h,i]perylene	ND		330	16	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Benzo[k]fluoranthene	ND		330	40	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Benzoic acid	ND		1600	330	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Benzyl alcohol	ND		330	10	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Bis(2-chloroethoxy)methane	ND		330	23	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Bis(2-chloroethyl)ether	ND		330	17	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Bis(2-ethylhexyl) phthalate	ND		330	46	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Butyl benzyl phthalate	ND		330	43	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Caprolactam	ND		330	110	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Carbazole	ND		330	36	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Chrysene	ND		330	27	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Dibenz(a,h)anthracene	ND		330	19	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Dibenzofuran	ND		330	20	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Diethyl phthalate	ND		660	26	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Dimethyl phthalate	ND		330	23	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Di-n-butyl phthalate	ND		330	29	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Di-n-octyl phthalate	ND		330	41	ug/Kg		01/25/21 10:32	01/26/21 23:58	1

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-524424/1-A
Matrix: Solid
Analysis Batch: 524657

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524424

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diphenylamine	ND		330	44	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Famphur	ND		660	34	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Fluoranthene	ND		330	36	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Fluorene	ND		330	18	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Hexachlorobenzene	ND		330	29	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Hexachlorobutadiene	ND		330	10	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Hexachlorocyclopentadiene	ND		1600	110	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Hexachloroethane	ND		330	21	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Hexadecane	ND		330	13	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Indeno[1,2,3-cd]pyrene	ND		330	22	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Isophorone	ND		330	17	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Naphthalene	ND		330	31	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Nitrobenzene	ND		330	22	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
N-Nitrosodimethylamine	ND		330	37	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
N-Nitrosodi-n-propylamine	ND		330	68	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
N-Nitrosodiphenylamine	ND		330	21	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Pentachlorophenol	ND		1600	330	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Phenanthrene	ND		330	17	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Phenol	ND		330	18	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Pyrene	ND		330	12	ug/Kg		01/25/21 10:32	01/26/21 23:58	1
Pyridine	ND		660	40	ug/Kg		01/25/21 10:32	01/26/21 23:58	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	60		35 - 120	01/25/21 10:32	01/26/21 23:58	1
2-Fluorobiphenyl	66		46 - 120	01/25/21 10:32	01/26/21 23:58	1
2-Fluorophenol (Surr)	60		43 - 120	01/25/21 10:32	01/26/21 23:58	1
Nitrobenzene-d5 (Surr)	65		46 - 120	01/25/21 10:32	01/26/21 23:58	1
Phenol-d5 (Surr)	62		46 - 120	01/25/21 10:32	01/26/21 23:58	1
Terphenyl-d14 (Surr)	84		46 - 120	01/25/21 10:32	01/26/21 23:58	1

Lab Sample ID: LCS 280-524424/2-A
Matrix: Solid
Analysis Batch: 524657

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524424

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1'-Biphenyl	2670	1950		ug/Kg		73	60 - 120
1,2,4,5-Tetrachlorobenzene	2670	1940		ug/Kg		73	60 - 120
1,2,4-Trichlorobenzene	2670	1820		ug/Kg		68	59 - 120
1,2-Dichlorobenzene	2670	1650		ug/Kg		62	57 - 120
1,2-Diphenylhydrazine(as Azobenzene)	2700	1960		ug/Kg		73	60 - 120
1,3-Dichlorobenzene	2670	1610		ug/Kg		61	56 - 120
1,3-Dinitrobenzene	2670	2000		ug/Kg		75	66 - 120
1,4-Dichlorobenzene	2670	1680		ug/Kg		63	57 - 120
1,4-Dioxane	2670	1200		ug/Kg		45	28 - 120
1-Methylnaphthalene	2670	1890		ug/Kg		71	57 - 120
2,2'-oxybis[1-chloropropane]	2670	1600		ug/Kg		60	46 - 120
2,3,4,6-Tetrachlorophenol	2670	1890		ug/Kg		71	63 - 120
2,4,5-Trichlorophenol	2670	1920		ug/Kg		72	65 - 120

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-524424/2-A
Matrix: Solid
Analysis Batch: 524657

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524424

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,6-Trichlorophenol	2670	1870		ug/Kg		70	64 - 120
2,4-Dichlorophenol	2670	1780		ug/Kg		67	64 - 120
2,4-Dimethylphenol	2670	1790		ug/Kg		67	60 - 120
2,4-Dinitrophenol	5330	2720	*	ug/Kg		51	52 - 120
2,4-Dinitrotoluene	2670	2060		ug/Kg		77	68 - 120
2,6-Dichlorophenol	2670	1860		ug/Kg		70	30 - 150
2,6-Dinitrotoluene	2670	1980		ug/Kg		74	68 - 120
2-Chloronaphthalene	2670	1920		ug/Kg		72	61 - 120
2-Chlorophenol	2670	1630	*	ug/Kg		61	62 - 120
2-Methylnaphthalene	2670	1890		ug/Kg		71	60 - 120
2-Methylphenol	2670	1820		ug/Kg		68	61 - 120
2-Nitroaniline	2670	1830		ug/Kg		69	63 - 120
2-Nitrophenol	2670	1730		ug/Kg		65	61 - 120
3 & 4 Methylphenol	2670	1720		ug/Kg		64	62 - 120
3,3'-Dichlorobenzidine	5330	3380		ug/Kg		63	22 - 120
3-Methylphenol	2670	1720		ug/Kg		64	62 - 120
3-Nitroaniline	2670	1430	J	ug/Kg		54	40 - 120
4,6-Dinitro-2-methylphenol	5330	3850		ug/Kg		72	60 - 120
4-Bromophenyl phenyl ether	2670	2020		ug/Kg		76	66 - 120
4-Chloro-3-methylphenol	2670	1930		ug/Kg		72	62 - 120
4-Chloroaniline	2670	1300		ug/Kg		49	33 - 120
4-Chlorophenyl phenyl ether	2670	2010		ug/Kg		75	63 - 120
4-Methylphenol	2670	1720		ug/Kg		64	62 - 120
4-Nitroaniline	2670	1740		ug/Kg		65	58 - 120
4-Nitrophenol	5330	3570		ug/Kg		67	67 - 120
Acenaphthene	2670	1920		ug/Kg		72	62 - 120
Acenaphthylene	2670	1850		ug/Kg		69	64 - 120
Acetophenone	2670	1480		ug/Kg		56	48 - 120
Aniline	2670	1080		ug/Kg		40	21 - 120
Anthracene	2670	2030		ug/Kg		76	66 - 120
Azobenzene	2670	1940		ug/Kg		73	59 - 120
Benzaldehyde	2670	1400		ug/Kg		53	30 - 150
Benzidine	5330	1730	J	ug/Kg		32	5 - 120
Benzo[a]anthracene	2670	1960		ug/Kg		73	64 - 120
Benzo[a]pyrene	2670	1960		ug/Kg		73	65 - 120
Benzo[b]fluoranthene	2670	1900		ug/Kg		71	58 - 120
Benzo[g,h,i]perylene	2670	1970		ug/Kg		74	58 - 120
Benzo[k]fluoranthene	2670	2170		ug/Kg		81	62 - 120
Benzoic acid	2670	1130	J *	ug/Kg		42	51 - 120
Benzyl alcohol	2670	1530	*	ug/Kg		57	61 - 120
Bis(2-chloroethoxy)methane	2670	1760		ug/Kg		66	58 - 120
Bis(2-chloroethyl)ether	2670	1730		ug/Kg		65	57 - 120
Bis(2-ethylhexyl) phthalate	2670	1930		ug/Kg		72	65 - 120
Butyl benzyl phthalate	2670	1940		ug/Kg		73	65 - 120
Caprolactam	2670	1700		ug/Kg		64	20 - 138
Carbazole	2670	1980		ug/Kg		74	65 - 120
Chrysene	2670	2030		ug/Kg		76	65 - 120
Dibenz(a,h)anthracene	2670	1930		ug/Kg		73	56 - 120
Dibenzofuran	2670	1970		ug/Kg		74	65 - 120

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-524424/2-A
Matrix: Solid
Analysis Batch: 524657

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524424

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diethyl phthalate	2670	2000		ug/Kg		75	68 - 120
Dimethyl phthalate	2670	1980		ug/Kg		74	66 - 120
Di-n-butyl phthalate	2670	2020		ug/Kg		76	66 - 120
Di-n-octyl phthalate	2670	1830		ug/Kg		69	55 - 120
Diphenylamine	2270	1660		ug/Kg		73	30 - 150
Fluoranthene	2670	2030		ug/Kg		76	64 - 120
Fluorene	2670	1990		ug/Kg		75	66 - 120
Hexachlorobenzene	2670	1980		ug/Kg		74	65 - 120
Hexachlorobutadiene	2670	1870		ug/Kg		70	58 - 120
Hexachlorocyclopentadiene	5330	3340		ug/Kg		63	43 - 120
Hexachloroethane	2670	1660		ug/Kg		62	56 - 120
Hexadecane	2670	1860		ug/Kg		70	45 - 135
Indeno[1,2,3-cd]pyrene	2670	1760		ug/Kg		66	46 - 120
Isophorone	2670	1710		ug/Kg		64	56 - 120
Naphthalene	2670	1830		ug/Kg		69	59 - 120
Nitrobenzene	2670	1810		ug/Kg		68	55 - 120
N-Nitrosodimethylamine	2670	1520		ug/Kg		57	50 - 120
N-Nitrosodi-n-propylamine	2670	1730		ug/Kg		65	52 - 120
N-Nitrosodiphenylamine	2670	1980		ug/Kg		74	65 - 120
Pentachlorophenol	5330	3360		ug/Kg		63	50 - 120
Phenanthrene	2670	2010		ug/Kg		75	67 - 120
Phenol	2670	1540	*-	ug/Kg		58	63 - 120
Pyrene	2670	2010		ug/Kg		76	66 - 120
Pyridine	5330	2300		ug/Kg		43	37 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	74		35 - 120
2-Fluorobiphenyl	70		46 - 120
2-Fluorophenol (Surr)	57		43 - 120
Nitrobenzene-d5 (Surr)	65		46 - 120
Phenol-d5 (Surr)	60		46 - 120
Terphenyl-d14 (Surr)	85		46 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE

Lab Sample ID: 280-144588-1 MS
Matrix: Solid
Analysis Batch: 524657

Client Sample ID: CDOT I270 SB37-8-10
Prep Type: Total/NA
Prep Batch: 524424

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1'-Biphenyl - RE	ND		3020	2190		ug/Kg	✱	73	60 - 120
1,2,4,5-Tetrachlorobenzene - RE	ND		3020	2120		ug/Kg	✱	70	60 - 120
1,2,4-Trichlorobenzene - RE	ND		3020	1930		ug/Kg	✱	64	59 - 120
1,2-Dichlorobenzene - RE	ND		3020	1740		ug/Kg	✱	58	57 - 120
1,2-Diphenylhydrazine(as Azobenzene) - RE	ND		3050	2160		ug/Kg	✱	71	60 - 120
1,3-Dichlorobenzene - RE	ND		3020	1680		ug/Kg	✱	56	56 - 120
1,3-Dinitrobenzene - RE	ND		3020	2220		ug/Kg	✱	74	66 - 120
1,4-Dichlorobenzene - RE	ND		3020	1800		ug/Kg	✱	60	57 - 120

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE (Continued)

Lab Sample ID: 280-144588-1 MS

Matrix: Solid

Analysis Batch: 524657

Client Sample ID: CDOT I270 SB37-8-10

Prep Type: Total/NA

Prep Batch: 524424

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane - RE	ND		3020	1240		ug/Kg	*	41	28 - 120
1-Methylnaphthalene - RE	ND		3020	2080		ug/Kg	*	69	57 - 120
2,2'-oxybis[1-chloropropane] - RE	ND		3020	1770		ug/Kg	*	59	46 - 120
2,3,4,6-Tetrachlorophenol - RE	ND		3020	2190		ug/Kg	*	73	63 - 120
2,4,5-Trichlorophenol - RE	ND		3020	2140		ug/Kg	*	71	65 - 120
2,4,6-Trichlorophenol - RE	ND		3020	2120		ug/Kg	*	70	64 - 120
2,4-Dichlorophenol - RE	ND		3020	2010		ug/Kg	*	67	64 - 120
2,4-Dimethylphenol - RE	ND		3020	2000		ug/Kg	*	66	60 - 120
2,4-Dinitrophenol - RE	ND	F1 *	6030	2850	F1	ug/Kg	*	47	52 - 120
2,4-Dinitrotoluene - RE	ND		3020	2290		ug/Kg	*	76	68 - 120
2,6-Dichlorophenol - RE	ND		3020	2040		ug/Kg	*	68	30 - 150
2,6-Dinitrotoluene - RE	ND		3020	2210		ug/Kg	*	73	68 - 120
2-Chloronaphthalene - RE	ND		3020	2140		ug/Kg	*	71	61 - 120
2-Chlorophenol - RE	ND	F1 *	3020	1770	F1	ug/Kg	*	59	62 - 120
2-Methylnaphthalene - RE	ND		3020	2050		ug/Kg	*	68	60 - 120
2-Methylphenol - RE	ND		3020	1990		ug/Kg	*	66	61 - 120
2-Nitroaniline - RE	ND		3020	2040		ug/Kg	*	68	63 - 120
2-Nitrophenol - RE	ND		3020	1900		ug/Kg	*	63	61 - 120
3 & 4 Methylphenol - RE	ND		3020	1960		ug/Kg	*	65	62 - 120
3,3'-Dichlorobenzidine - RE	ND		6030	3940		ug/Kg	*	65	22 - 120
3-Methylphenol - RE	ND		3020	1960		ug/Kg	*	65	62 - 120
3-Nitroaniline - RE	ND		3020	1600	J	ug/Kg	*	53	40 - 120
4,6-Dinitro-2-methylphenol - RE	ND		6030	4360		ug/Kg	*	72	60 - 120
4-Bromophenyl phenyl ether - RE	ND		3020	2210		ug/Kg	*	73	66 - 120
4-Chloro-3-methylphenol - RE	ND		3020	2140		ug/Kg	*	71	62 - 120
4-Chloroaniline - RE	ND		3020	1410		ug/Kg	*	47	33 - 120
4-Chlorophenyl phenyl ether - RE	ND		3020	2250		ug/Kg	*	75	63 - 120
4-Methylphenol - RE	ND		3020	1960		ug/Kg	*	65	62 - 120
4-Nitroaniline - RE	ND		3020	1920		ug/Kg	*	64	58 - 120
4-Nitrophenol - RE	ND		6030	4060		ug/Kg	*	67	67 - 120
Acenaphthene - RE	ND		3020	2150		ug/Kg	*	71	62 - 120
Acenaphthylene - RE	ND		3020	2050		ug/Kg	*	68	64 - 120
Acetophenone - RE	ND		3020	1670		ug/Kg	*	55	48 - 120
Aniline - RE	ND		3020	1140		ug/Kg	*	38	21 - 120
Anthracene - RE	ND		3020	2220		ug/Kg	*	74	66 - 120
Azobenzene - RE	ND		3020	2140		ug/Kg	*	71	59 - 120
Benzaldehyde - RE	ND		3020	1530		ug/Kg	*	51	30 - 150
Benzidine - RE	ND	F1	6030	ND	F1	ug/Kg	*	0	5 - 120
Benzo[a]anthracene - RE	ND		3020	2270		ug/Kg	*	75	64 - 120
Benzo[a]pyrene - RE	ND		3020	2180		ug/Kg	*	72	65 - 120
Benzo[b]fluoranthene - RE	ND		3020	2110		ug/Kg	*	70	58 - 120
Benzo[g,h,i]perylene - RE	ND		3020	2220		ug/Kg	*	74	58 - 120
Benzo[k]fluoranthene - RE	ND		3020	2350		ug/Kg	*	78	62 - 120
Benzoic acid - RE	ND	F1 *	3020	1140	J F1	ug/Kg	*	38	51 - 120
Benzyl alcohol - RE	ND	F1 *	3020	1760	F1	ug/Kg	*	58	61 - 120
Bis(2-chloroethoxy)methane - RE	ND		3020	1910		ug/Kg	*	63	58 - 120
Bis(2-chloroethyl)ether - RE	ND		3020	1900		ug/Kg	*	63	57 - 120
Bis(2-ethylhexyl) phthalate - RE	ND		3020	2290		ug/Kg	*	76	65 - 120

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE (Continued)

Lab Sample ID: 280-144588-1 MS

Matrix: Solid

Analysis Batch: 524657

Client Sample ID: CDOT I270 SB37-8-10

Prep Type: Total/NA

Prep Batch: 524424

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Butyl benzyl phthalate - RE	ND		3020	2220		ug/Kg	⊛	74	65 - 120	
Caprolactam - RE	ND		3020	1890		ug/Kg	⊛	63	20 - 138	
Carbazole - RE	ND		3020	2160		ug/Kg	⊛	72	65 - 120	
Chrysene - RE	ND		3020	2310		ug/Kg	⊛	76	65 - 120	
Dibenz(a,h)anthracene - RE	ND		3020	2180		ug/Kg	⊛	72	56 - 120	
Dibenzofuran - RE	ND		3020	2170		ug/Kg	⊛	72	65 - 120	
Diethyl phthalate - RE	ND		3020	2250		ug/Kg	⊛	75	68 - 120	
Dimethyl phthalate - RE	ND		3020	2200		ug/Kg	⊛	73	66 - 120	
Di-n-butyl phthalate - RE	ND		3020	2210		ug/Kg	⊛	73	66 - 120	
Di-n-octyl phthalate - RE	ND		3020	2180		ug/Kg	⊛	72	55 - 120	
Diphenylamine - RE	ND		2560	1830		ug/Kg	⊛	71	30 - 150	
Fluoranthene - RE	ND		3020	2250		ug/Kg	⊛	74	64 - 120	
Fluorene - RE	ND		3020	2210		ug/Kg	⊛	73	66 - 120	
Hexachlorobenzene - RE	ND		3020	2180		ug/Kg	⊛	72	65 - 120	
Hexachlorobutadiene - RE	ND		3020	1980		ug/Kg	⊛	66	58 - 120	
Hexachlorocyclopentadiene - RE	ND		6030	3550		ug/Kg	⊛	59	43 - 120	
Hexachloroethane - RE	ND		3020	1750		ug/Kg	⊛	58	56 - 120	
Hexadecane - RE	ND		3020	2100		ug/Kg	⊛	70	45 - 135	
Indeno[1,2,3-cd]pyrene - RE	ND		3020	2090		ug/Kg	⊛	69	46 - 120	
Isophorone - RE	ND		3020	1900		ug/Kg	⊛	63	56 - 120	
Naphthalene - RE	ND		3020	1970		ug/Kg	⊛	65	59 - 120	
Nitrobenzene - RE	ND		3020	1960		ug/Kg	⊛	65	55 - 120	
N-Nitrosodimethylamine - RE	ND		3020	1630		ug/Kg	⊛	54	50 - 120	
N-Nitrosodi-n-propylamine - RE	ND		3020	1970		ug/Kg	⊛	65	52 - 120	
N-Nitrosodiphenylamine - RE	ND		3020	2180		ug/Kg	⊛	72	65 - 120	
Pentachlorophenol - RE	ND		6030	3790		ug/Kg	⊛	63	50 - 120	
Phenanthrene - RE	ND		3020	2190		ug/Kg	⊛	73	67 - 120	
Phenol - RE	ND	F1 *	3020	1720	F1	ug/Kg	⊛	57	63 - 120	
Pyrene - RE	ND		3020	2330		ug/Kg	⊛	77	66 - 120	
Pyridine - RE	ND		6030	2460		ug/Kg	⊛	41	37 - 120	

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr) - RE	66		35 - 120
2-Fluorobiphenyl - RE	65		46 - 120
2-Fluorophenol (Surr) - RE	54		43 - 120
Nitrobenzene-d5 (Surr) - RE	60		46 - 120
Phenol-d5 (Surr) - RE	57		46 - 120
Terphenyl-d14 (Surr) - RE	79		46 - 120

Lab Sample ID: 280-144588-1 MSD

Matrix: Solid

Analysis Batch: 524657

Client Sample ID: CDOT I270 SB37-8-10

Prep Type: Total/NA

Prep Batch: 524424

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	
	Result	Qualifier	Added	Result	Qualifier						RPD	Limit
1,1'-Biphenyl - RE	ND		2900	2150		ug/Kg	⊛	74	60 - 120	2	30	
1,2,4,5-Tetrachlorobenzene - RE	ND		2900	2100		ug/Kg	⊛	72	60 - 120	1	30	
1,2,4-Trichlorobenzene - RE	ND		2900	1970		ug/Kg	⊛	68	59 - 120	2	30	
1,2-Dichlorobenzene - RE	ND		2900	1800		ug/Kg	⊛	62	57 - 120	3	30	

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE (Continued)

Lab Sample ID: 280-144588-1 MSD

Matrix: Solid

Analysis Batch: 524657

Client Sample ID: CDOT I270 SB37-8-10

Prep Type: Total/NA

Prep Batch: 524424

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Diphenylhydrazine(as Azobenzene) - RE	ND		2930	2150		ug/Kg	☼	73	60 - 120	0	30
1,3-Dichlorobenzene - RE	ND		2900	1720		ug/Kg	☼	59	56 - 120	2	30
1,3-Dinitrobenzene - RE	ND		2900	2240		ug/Kg	☼	77	66 - 120	1	30
1,4-Dichlorobenzene - RE	ND		2900	1800		ug/Kg	☼	62	57 - 120	0	30
1,4-Dioxane - RE	ND		2900	1090		ug/Kg	☼	38	28 - 120	12	30
1-Methylnaphthalene - RE	ND		2900	2060		ug/Kg	☼	71	57 - 120	1	30
2,2'-oxybis[1-chloropropane] - RE	ND		2900	1810		ug/Kg	☼	62	46 - 120	2	30
2,3,4,6-Tetrachlorophenol - RE	ND		2900	2160		ug/Kg	☼	75	63 - 120	1	30
2,4,5-Trichlorophenol - RE	ND		2900	2180		ug/Kg	☼	75	65 - 120	2	30
2,4,6-Trichlorophenol - RE	ND		2900	2090		ug/Kg	☼	72	64 - 120	1	30
2,4-Dichlorophenol - RE	ND		2900	1990		ug/Kg	☼	68	64 - 120	1	30
2,4-Dimethylphenol - RE	ND		2900	1900		ug/Kg	☼	66	60 - 120	5	30
2,4-Dinitrophenol - RE	ND	F1 *	5800	3230		ug/Kg	☼	56	52 - 120	12	30
2,4-Dinitrotoluene - RE	ND		2900	2300		ug/Kg	☼	79	68 - 120	0	30
2,6-Dichlorophenol - RE	ND		2900	2050		ug/Kg	☼	71	30 - 150	1	30
2,6-Dinitrotoluene - RE	ND		2900	2200		ug/Kg	☼	76	68 - 120	1	30
2-Chloronaphthalene - RE	ND		2900	2100		ug/Kg	☼	72	61 - 120	2	30
2-Chlorophenol - RE	ND	F1 *	2900	1820		ug/Kg	☼	63	62 - 120	3	30
2-Methylnaphthalene - RE	ND		2900	2060		ug/Kg	☼	71	60 - 120	1	30
2-Methylphenol - RE	ND		2900	2020		ug/Kg	☼	70	61 - 120	1	30
2-Nitroaniline - RE	ND		2900	2120		ug/Kg	☼	73	63 - 120	3	30
2-Nitrophenol - RE	ND		2900	1940		ug/Kg	☼	67	61 - 120	2	30
3 & 4 Methylphenol - RE	ND		2900	2000		ug/Kg	☼	69	62 - 120	2	30
3,3'-Dichlorobenzidine - RE	ND		5800	4150		ug/Kg	☼	72	22 - 120	5	30
3-Methylphenol - RE	ND		2900	2000		ug/Kg	☼	69	62 - 120	2	30
3-Nitroaniline - RE	ND		2900	1650	J	ug/Kg	☼	57	40 - 120	3	30
4,6-Dinitro-2-methylphenol - RE	ND		5800	4610		ug/Kg	☼	79	60 - 120	6	30
4-Bromophenyl phenyl ether - RE	ND		2900	2270		ug/Kg	☼	78	66 - 120	3	30
4-Chloro-3-methylphenol - RE	ND		2900	2110		ug/Kg	☼	73	62 - 120	1	30
4-Chloroaniline - RE	ND		2900	1440		ug/Kg	☼	50	33 - 120	2	30
4-Chlorophenyl phenyl ether - RE	ND		2900	2210		ug/Kg	☼	76	63 - 120	2	30
4-Methylphenol - RE	ND		2900	2000		ug/Kg	☼	69	62 - 120	2	30
4-Nitroaniline - RE	ND		2900	1900		ug/Kg	☼	65	58 - 120	1	30
4-Nitrophenol - RE	ND		5800	3940		ug/Kg	☼	68	67 - 120	3	30
Acenaphthene - RE	ND		2900	2120		ug/Kg	☼	73	62 - 120	1	30
Acenaphthylene - RE	ND		2900	2050		ug/Kg	☼	71	64 - 120	0	30
Acetophenone - RE	ND		2900	1730		ug/Kg	☼	60	48 - 120	4	30
Aniline - RE	ND		2900	1180		ug/Kg	☼	41	21 - 120	3	30
Anthracene - RE	ND		2900	2310		ug/Kg	☼	80	66 - 120	4	30
Azobenzene - RE	ND		2900	2130		ug/Kg	☼	73	59 - 120	0	30
Benzaldehyde - RE	ND		2900	1580		ug/Kg	☼	54	30 - 150	3	50
Benzidine - RE	ND	F1	5800	ND	F1	ug/Kg	☼	0	5 - 120	NC	50
Benzo[a]anthracene - RE	ND		2900	2230		ug/Kg	☼	77	64 - 120	2	30
Benzo[a]pyrene - RE	ND		2900	2200		ug/Kg	☼	76	65 - 120	1	30
Benzo[b]fluoranthene - RE	ND		2900	2170		ug/Kg	☼	75	58 - 120	3	30
Benzo[g,h,i]perylene - RE	ND		2900	2230		ug/Kg	☼	77	58 - 120	1	30
Benzo[k]fluoranthene - RE	ND		2900	2390		ug/Kg	☼	82	62 - 120	1	30

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QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE (Continued)

Lab Sample ID: 280-144588-1 MSD

Matrix: Solid

Analysis Batch: 524657

Client Sample ID: CDOT I270 SB37-8-10

Prep Type: Total/NA

Prep Batch: 524424

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Added	Result						
Benzoic acid - RE	ND	F1 *-	2900	1300	J F1	ug/Kg	⊛	45	51 - 120	13	30
Benzyl alcohol - RE	ND	F1 *-	2900	1790		ug/Kg	⊛	62	61 - 120	2	30
Bis(2-chloroethoxy)methane - RE	ND		2900	1930		ug/Kg	⊛	66	58 - 120	1	30
Bis(2-chloroethyl)ether - RE	ND		2900	1960		ug/Kg	⊛	68	57 - 120	3	30
Bis(2-ethylhexyl) phthalate - RE	ND		2900	2280		ug/Kg	⊛	79	65 - 120	1	30
Butyl benzyl phthalate - RE	ND		2900	2220		ug/Kg	⊛	76	65 - 120	0	30
Caprolactam - RE	ND		2900	1870		ug/Kg	⊛	65	20 - 138	1	30
Carbazole - RE	ND		2900	2230		ug/Kg	⊛	77	65 - 120	3	30
Chrysene - RE	ND		2900	2290		ug/Kg	⊛	79	65 - 120	1	30
Dibenz(a,h)anthracene - RE	ND		2900	2230		ug/Kg	⊛	77	56 - 120	2	30
Dibenzofuran - RE	ND		2900	2180		ug/Kg	⊛	75	65 - 120	0	30
Diethyl phthalate - RE	ND		2900	2240		ug/Kg	⊛	77	68 - 120	0	30
Dimethyl phthalate - RE	ND		2900	2240		ug/Kg	⊛	77	66 - 120	2	30
Di-n-butyl phthalate - RE	ND		2900	2210		ug/Kg	⊛	76	66 - 120	0	30
Di-n-octyl phthalate - RE	ND		2900	2210		ug/Kg	⊛	76	55 - 120	1	30
Diphenylamine - RE	ND		2470	1820		ug/Kg	⊛	74	30 - 150	0	50
Fluoranthene - RE	ND		2900	2250		ug/Kg	⊛	78	64 - 120	0	30
Fluorene - RE	ND		2900	2190		ug/Kg	⊛	76	66 - 120	1	30
Hexachlorobenzene - RE	ND		2900	2230		ug/Kg	⊛	77	65 - 120	2	30
Hexachlorobutadiene - RE	ND		2900	1980		ug/Kg	⊛	68	58 - 120	0	30
Hexachlorocyclopentadiene - RE	ND		5800	3460		ug/Kg	⊛	60	43 - 120	2	30
Hexachloroethane - RE	ND		2900	1760		ug/Kg	⊛	61	56 - 120	1	30
Hexadecane - RE	ND		2900	2070		ug/Kg	⊛	71	45 - 135	2	30
Indeno[1,2,3-cd]pyrene - RE	ND		2900	2100		ug/Kg	⊛	73	46 - 120	1	30
Isophorone - RE	ND		2900	1910		ug/Kg	⊛	66	56 - 120	1	30
Naphthalene - RE	ND		2900	1990		ug/Kg	⊛	69	59 - 120	1	30
Nitrobenzene - RE	ND		2900	1960		ug/Kg	⊛	68	55 - 120	0	30
N-Nitrosodimethylamine - RE	ND		2900	1610		ug/Kg	⊛	55	50 - 120	1	30
N-Nitrosodi-n-propylamine - RE	ND		2900	2000		ug/Kg	⊛	69	52 - 120	2	30
N-Nitrosodiphenylamine - RE	ND		2900	2230		ug/Kg	⊛	77	65 - 120	2	30
Pentachlorophenol - RE	ND		5800	3880		ug/Kg	⊛	67	50 - 120	2	30
Phenanthrene - RE	ND		2900	2250		ug/Kg	⊛	78	67 - 120	3	30
Phenol - RE	ND	F1 *-	2900	1760	F1	ug/Kg	⊛	61	63 - 120	2	30
Pyrene - RE	ND		2900	2280		ug/Kg	⊛	78	66 - 120	2	30
Pyridine - RE	ND		5800	2400		ug/Kg	⊛	41	37 - 120	3	30

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr) - RE	70		35 - 120
2-Fluorobiphenyl - RE	67		46 - 120
2-Fluorophenol (Surr) - RE	57		43 - 120
Nitrobenzene-d5 (Surr) - RE	62		46 - 120
Phenol-d5 (Surr) - RE	61		46 - 120
Terphenyl-d14 (Surr) - RE	84		46 - 120

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Lab Sample ID: MB 280-523965/3-A
Matrix: Solid
Analysis Batch: 524122

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523965

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		2.0	0.76	mg/Kg		01/19/21 10:58	01/20/21 20:29	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	93		77 - 123				01/19/21 10:58	01/20/21 20:29	1

Lab Sample ID: LCS 280-523965/1-A
Matrix: Solid
Analysis Batch: 524122

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523965

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Gasoline Range Organics (GRO)-C6-C10	8.54	8.21		mg/Kg		96	75 - 135
Surrogate	%Recovery	LCS Qualifier	Limits				
a,a,a-Trifluorotoluene	97		77 - 123				

Lab Sample ID: LCSD 280-523965/2-A
Matrix: Solid
Analysis Batch: 524122

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 523965

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	8.54	8.40		mg/Kg		98	75 - 135	2	30
Surrogate	%Recovery	LCSD Qualifier	Limits						
a,a,a-Trifluorotoluene	96		77 - 123						

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Lab Sample ID: MB 280-523960/1-A
Matrix: Solid
Analysis Batch: 524217

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523960

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		8.0	3.6	mg/Kg		01/19/21 12:41	01/21/21 18:22	1
Motor Oil (C20-C38)	ND		24	7.8	mg/Kg		01/19/21 12:41	01/21/21 18:22	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	52		49 - 115				01/19/21 12:41	01/21/21 18:22	1

Lab Sample ID: LCS 280-523960/2-A
Matrix: Solid
Analysis Batch: 524217

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523960

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Diesel Range Organics [C10-C28]	132	97.2		mg/Kg		73	53 - 115

Eurofins TestAmerica, Denver

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Lab Sample ID: LCS 280-523960/2-A
Matrix: Solid
Analysis Batch: 524217

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523960

Surrogate	LCS %Recovery	LCS Qualifier	Limits
<i>o</i> -Terphenyl (Surr)	72		49 - 115

Lab Sample ID: LCS 280-523960/3-A
Matrix: Solid
Analysis Batch: 524217

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523960

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Motor Oil (C20-C38)	334	284		mg/Kg		85	57 - 115

Surrogate	LCS %Recovery	LCS Qualifier	Limits
<i>o</i> -Terphenyl (Surr)	77		49 - 115

Lab Sample ID: 280-144588-1 MS
Matrix: Solid
Analysis Batch: 524217

Client Sample ID: CDOT I270 SB37-8-10
Prep Type: Total/NA
Prep Batch: 523960

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Diesel Range Organics [C10-C28]	5.9	J F1	143	82.9	F1	mg/Kg	✱	54	56 - 115

Surrogate	MS %Recovery	MS Qualifier	Limits
<i>o</i> -Terphenyl (Surr)	58		49 - 115

Lab Sample ID: 280-144588-1 MS
Matrix: Solid
Analysis Batch: 524217

Client Sample ID: CDOT I270 SB37-8-10
Prep Type: Total/NA
Prep Batch: 523960

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Motor Oil (C20-C38)	14	J	345	269		mg/Kg	✱	74	57 - 115

Surrogate	MS %Recovery	MS Qualifier	Limits
<i>o</i> -Terphenyl (Surr)	59		49 - 115

Lab Sample ID: 280-144588-1 MSD
Matrix: Solid
Analysis Batch: 524217

Client Sample ID: CDOT I270 SB37-8-10
Prep Type: Total/NA
Prep Batch: 523960

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	5.9	J F1	141	104		mg/Kg	✱	70	56 - 115	22	23

Surrogate	MSD %Recovery	MSD Qualifier	Limits
<i>o</i> -Terphenyl (Surr)	73		49 - 115

QC Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Lab Sample ID: 280-144588-1 MSD
Matrix: Solid
Analysis Batch: 524217

Client Sample ID: CDOT I270 SB37-8-10
Prep Type: Total/NA
Prep Batch: 523960

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Motor Oil (C20-C38)	14	J	360	285		mg/Kg	✳	75	57 - 115	6	30
Surrogate	%Recovery	MSD Qualifier	MSD Limits								
<i>o</i> -Terphenyl (Surr)	59		49 - 115								

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-523807/1-A
Matrix: Solid
Analysis Batch: 524092

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523807

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.60	0.051	mg/Kg		01/19/21 08:12	01/19/21 21:34	1
Barium	ND		0.40	0.071	mg/Kg		01/19/21 08:12	01/19/21 21:34	1
Cadmium	ND		0.10	0.0094	mg/Kg		01/19/21 08:12	01/19/21 21:34	1
Chromium	ND		0.20	0.076	mg/Kg		01/19/21 08:12	01/19/21 21:34	1
Lead	ND		0.15	0.018	mg/Kg		01/19/21 08:12	01/19/21 21:34	1
Selenium	ND		0.50	0.13	mg/Kg		01/19/21 08:12	01/19/21 21:34	1

Lab Sample ID: LCS 280-523807/2-A
Matrix: Solid
Analysis Batch: 524092

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523807

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	20.0	19.1		mg/Kg		95	83 - 111
Barium	20.0	19.4		mg/Kg		97	86 - 120
Cadmium	20.0	18.9		mg/Kg		95	85 - 109
Chromium	20.0	19.7		mg/Kg		99	87 - 121
Lead	20.0	19.0		mg/Kg		95	81 - 125
Selenium	20.0	19.2		mg/Kg		96	78 - 108

Lab Sample ID: MB 280-524568/1-A
Matrix: Solid
Analysis Batch: 524904

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524568

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		100	7.8	ug/Kg		01/28/21 09:28	01/28/21 19:03	1

Lab Sample ID: LCS 280-524568/2-A
Matrix: Solid
Analysis Batch: 524904

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524568

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	20000	20300		ug/Kg		101	83 - 113

QC Sample Results

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 280-144588-1 MS
Matrix: Solid
Analysis Batch: 524904

Client Sample ID: CDOT I270 SB37-8-10
Prep Type: Total/NA
Prep Batch: 524568
 %Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Silver	23	J	19100	19300		ug/Kg	✱	101	83 - 113

Lab Sample ID: 280-144588-1 MSD
Matrix: Solid
Analysis Batch: 524904

Client Sample ID: CDOT I270 SB37-8-10
Prep Type: Total/NA
Prep Batch: 524568
 %Rec. RPD

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Silver	23	J	19500	19600		ug/Kg	✱	101	83 - 113	2	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 280-523966/1-A
Matrix: Solid
Analysis Batch: 524272

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523966

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		17	5.5	ug/Kg		01/21/21 14:45	01/21/21 17:16	1

Lab Sample ID: LCS 280-523966/2-A
Matrix: Solid
Analysis Batch: 524272

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523966
 %Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	333	356		ug/Kg		107	87 - 111

Consultant Work Product - Jacobs Engineering
 -Not CDOT Approved-

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QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

GC/MS VOA

Prep Batch: 524027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144588-1	CDOT I270 SB37-8-10	Total/NA	Solid	5035	
280-144588-2	CDOT I270 TB-07	Total/NA	Solid	5035	
MB 280-524027/3-A	Method Blank	Total/NA	Solid	5035	
MB 280-524027/4-A	Method Blank	Total/NA	Solid	5035	
LCS 280-524027/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-524027/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 524110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144588-1	CDOT I270 SB37-8-10	Total/NA	Solid	8260B	524027
280-144588-2	CDOT I270 TB-07	Total/NA	Solid	8260B	524027
MB 280-524027/3-A	Method Blank	Total/NA	Solid	8260B	524027
MB 280-524027/4-A	Method Blank	Total/NA	Solid	8260B	524027
LCS 280-524027/1-A	Lab Control Sample	Total/NA	Solid	8260B	524027
LCSD 280-524027/2-A	Lab Control Sample Dup	Total/NA	Solid	8260B	524027

GC/MS Semi VOA

Prep Batch: 524076

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144588-1	CDOT I270 SB37-8-10	Total/NA	Solid	3550C	
MB 280-524076/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 280-524076/2-A	Lab Control Sample	Total/NA	Solid	3550C	
280-144588-1 MS	CDOT I270 SB37-8-10	Total/NA	Solid	3550C	
280-144588-1 MSD	CDOT I270 SB37-8-10	Total/NA	Solid	3550C	

Analysis Batch: 524273

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144588-1	CDOT I270 SB37-8-10	Total/NA	Solid	8270D	524076
MB 280-524076/1-A	Method Blank	Total/NA	Solid	8270D	524076
LCS 280-524076/2-A	Lab Control Sample	Total/NA	Solid	8270D	524076
280-144588-1 MS	CDOT I270 SB37-8-10	Total/NA	Solid	8270D	524076
280-144588-1 MSD	CDOT I270 SB37-8-10	Total/NA	Solid	8270D	524076

Prep Batch: 524424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144588-1 - RE	CDOT I270 SB37-8-10	Total/NA	Solid	3550C	
MB 280-524424/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 280-524424/2-A	Lab Control Sample	Total/NA	Solid	3550C	
280-144588-1 MS - RE	CDOT I270 SB37-8-10	Total/NA	Solid	3550C	
280-144588-1 MSD - RE	CDOT I270 SB37-8-10	Total/NA	Solid	3550C	

Analysis Batch: 524657

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144588-1 - RE	CDOT I270 SB37-8-10	Total/NA	Solid	8270D	524424
MB 280-524424/1-A	Method Blank	Total/NA	Solid	8270D	524424
LCS 280-524424/2-A	Lab Control Sample	Total/NA	Solid	8270D	524424
280-144588-1 MS - RE	CDOT I270 SB37-8-10	Total/NA	Solid	8270D	524424
280-144588-1 MSD - RE	CDOT I270 SB37-8-10	Total/NA	Solid	8270D	524424

QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

GC VOA

Prep Batch: 523965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144588-1	CDOT I270 SB37-8-10	Total/NA	Solid	5035	
280-144588-2	CDOT I270 TB-07	Total/NA	Solid	5035	
MB 280-523965/3-A	Method Blank	Total/NA	Solid	5035	
LCS 280-523965/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-523965/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 524122

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144588-1	CDOT I270 SB37-8-10	Total/NA	Solid	8015C	523965
280-144588-2	CDOT I270 TB-07	Total/NA	Solid	8015C	523965
MB 280-523965/3-A	Method Blank	Total/NA	Solid	8015C	523965
LCS 280-523965/1-A	Lab Control Sample	Total/NA	Solid	8015C	523965
LCSD 280-523965/2-A	Lab Control Sample Dup	Total/NA	Solid	8015C	523965

GC Semi VOA

Prep Batch: 523960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144588-1	CDOT I270 SB37-8-10	Total/NA	Solid	3546	
MB 280-523960/1-A	Method Blank	Total/NA	Solid	3546	
LCS 280-523960/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCS 280-523960/3-A	Lab Control Sample	Total/NA	Solid	3546	
280-144588-1 MS	CDOT I270 SB37-8-10	Total/NA	Solid	3546	
280-144588-1 MS	CDOT I270 SB37-8-10	Total/NA	Solid	3546	
280-144588-1 MSD	CDOT I270 SB37-8-10	Total/NA	Solid	3546	
280-144588-1 MSD	CDOT I270 SB37-8-10	Total/NA	Solid	3546	

Analysis Batch: 524217

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144588-1	CDOT I270 SB37-8-10	Total/NA	Solid	8015C	523960
MB 280-523960/1-A	Method Blank	Total/NA	Solid	8015C	523960
LCS 280-523960/2-A	Lab Control Sample	Total/NA	Solid	8015C	523960
LCS 280-523960/3-A	Lab Control Sample	Total/NA	Solid	8015C	523960
280-144588-1 MS	CDOT I270 SB37-8-10	Total/NA	Solid	8015C	523960
280-144588-1 MS	CDOT I270 SB37-8-10	Total/NA	Solid	8015C	523960
280-144588-1 MSD	CDOT I270 SB37-8-10	Total/NA	Solid	8015C	523960
280-144588-1 MSD	CDOT I270 SB37-8-10	Total/NA	Solid	8015C	523960

Metals

Prep Batch: 523807

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144588-1	CDOT I270 SB37-8-10	Total/NA	Solid	3050B	
MB 280-523807/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-523807/2-A	Lab Control Sample	Total/NA	Solid	3050B	

Prep Batch: 523966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144588-1	CDOT I270 SB37-8-10	Total/NA	Solid	7471B	
MB 280-523966/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 280-523966/2-A	Lab Control Sample	Total/NA	Solid	7471B	

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QC Association Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Metals

Analysis Batch: 524092

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144588-1	CDOT I270 SB37-8-10	Total/NA	Solid	6020A	523807
MB 280-523807/1-A	Method Blank	Total/NA	Solid	6020A	523807
LCS 280-523807/2-A	Lab Control Sample	Total/NA	Solid	6020A	523807

Analysis Batch: 524272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144588-1	CDOT I270 SB37-8-10	Total/NA	Solid	7471B	523966
MB 280-523966/1-A	Method Blank	Total/NA	Solid	7471B	523966
LCS 280-523966/2-A	Lab Control Sample	Total/NA	Solid	7471B	523966

Prep Batch: 524568

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144588-1	CDOT I270 SB37-8-10	Total/NA	Solid	3050B-Sb	
MB 280-524568/1-A	Method Blank	Total/NA	Solid	3050B-Sb	
LCS 280-524568/2-A	Lab Control Sample	Total/NA	Solid	3050B-Sb	
280-144588-1 MS	CDOT I270 SB37-8-10	Total/NA	Solid	3050B-Sb	
280-144588-1 MSD	CDOT I270 SB37-8-10	Total/NA	Solid	3050B-Sb	

Analysis Batch: 524904

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144588-1	CDOT I270 SB37-8-10	Total/NA	Solid	6020A	524568
MB 280-524568/1-A	Method Blank	Total/NA	Solid	6020A	524568
LCS 280-524568/2-A	Lab Control Sample	Total/NA	Solid	6020A	524568
280-144588-1 MS	CDOT I270 SB37-8-10	Total/NA	Solid	6020A	524568
280-144588-1 MSD	CDOT I270 SB37-8-10	Total/NA	Solid	6020A	524568

General Chemistry

Analysis Batch: 523864

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-144588-1	CDOT I270 SB37-8-10	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Client Sample ID: CDOT I270 SB37-8-10

Lab Sample ID: 280-144588-1

Date Collected: 01/14/21 09:20

Matrix: Solid

Date Received: 01/14/21 11:04

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			523864	01/18/21 14:26	QJB	TAL DEN

Client Sample ID: CDOT I270 SB37-8-10

Lab Sample ID: 280-144588-1

Date Collected: 01/14/21 09:20

Matrix: Solid

Date Received: 01/14/21 11:04

Percent Solids: 88.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	4.59 mL	524027	01/14/21 09:20	GPM	TAL DEN
Total/NA	Analysis	8260B		50	5 g	5 mL	524110	01/19/21 20:36	GPM	TAL DEN
Total/NA	Prep	3550C			31.2 g	1 mL	524076	01/20/21 08:15	DB	TAL DEN
Total/NA	Analysis	8270D		1			524273	01/22/21 13:29	RDP	TAL DEN
Total/NA	Prep	3550C	RE		30.0 g	1 mL	524424	01/25/21 10:32	DB	TAL DEN
Total/NA	Analysis	8270D	RE	1			524657	01/27/21 00:52	RDP	TAL DEN
Total/NA	Prep	5035			5.131 g	5 mL	523965	01/19/21 10:58	CAS	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	524122	01/21/21 11:44	CAS	TAL DEN
Total/NA	Prep	3546			16.2 g	1 mL	523960	01/19/21 12:41	DB	TAL DEN
Total/NA	Analysis	8015C		1			524217	01/21/21 19:31	MAM	TAL DEN
Total/NA	Prep	3050B			1.115 g	100 mL	523807	01/19/21 08:12	MAB	TAL DEN
Total/NA	Analysis	6020A		1			524092	01/19/21 22:26	LMT	TAL DEN
Total/NA	Prep	3050B-Sb			1.180 g	100 mL	524568	01/28/21 09:28	MAB	TAL DEN
Total/NA	Analysis	6020A		1			524904	01/28/21 19:10	LMT	TAL DEN
Total/NA	Prep	7471B			.57 g	50 mL	523966	01/21/21 14:45	NK	TAL DEN
Total/NA	Analysis	7471B		1			524272	01/21/21 17:32	NK	TAL DEN

Client Sample ID: CDOT I270 TB-07

Lab Sample ID: 280-144588-2

Date Collected: 01/14/21 08:00

Matrix: Solid

Date Received: 01/14/21 11:04

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.6 g	3.75 mL	524027	01/14/21 08:00	GPM	TAL DEN
Total/NA	Analysis	8260B		50	5 g	5 mL	524110	01/19/21 20:14	GPM	TAL DEN
Total/NA	Prep	5035			5 g	5 mL	523965	01/19/21 10:58	CAS	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	524122	01/21/21 11:16	CAS	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-523807/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1 g	100 mL	523807	01/19/21 08:12	MAB	TAL DEN
Total/NA	Analysis	6020A		1			524092	01/19/21 21:34	LMT	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Client Sample ID: Method Blank

Lab Sample ID: MB 280-523960/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15 g	1 mL	523960	01/19/21 12:41	DB	TAL DEN
Total/NA	Analysis	8015C		1			524217	01/21/21 18:22	MAM	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-523965/3-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	523965	01/19/21 10:58	CAS	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	524122	01/20/21 20:29	CAS	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-523966/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			.6 g	50 mL	523966	01/21/21 14:45	NK	TAL DEN
Total/NA	Analysis	7471B		1			524272	01/21/21 17:16	NK	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-524027/3-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	524027	01/19/21 11:00	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	524110	01/19/21 13:57	GPM	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-524027/4-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	524027	01/19/21 11:00	GPM	TAL DEN
Total/NA	Analysis	8260B		50	5 g	5 mL	524110	01/19/21 14:19	GPM	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-524076/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			30 g	1 mL	524076	01/20/21 08:15	DB	TAL DEN
Total/NA	Analysis	8270D		1			524273	01/22/21 12:35	RDP	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Client Sample ID: Method Blank

Lab Sample ID: MB 280-524424/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			30 g	1 mL	524424	01/25/21 10:32	DB	TAL DEN
Total/NA	Analysis	8270D		1			524657	01/26/21 23:58	RDP	TAL DEN

Client Sample ID: Method Blank

Lab Sample ID: MB 280-524568/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B-Sb			1 g	100 mL	524568	01/28/21 09:28	MAB	TAL DEN
Total/NA	Analysis	6020A		1			524904	01/28/21 19:03	LMT	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-523807/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1 g	100 mL	523807	01/19/21 08:12	MAB	TAL DEN
Total/NA	Analysis	6020A		1			524092	01/19/21 21:38	LMT	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-523960/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15 g	1 mL	523960	01/19/21 12:41	DB	TAL DEN
Total/NA	Analysis	8015C		1			524217	01/21/21 18:45	MAM	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-523960/3-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15 g	1 mL	523960	01/19/21 12:41	DB	TAL DEN
Total/NA	Analysis	8015C		1			524217	01/21/21 19:08	MAM	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-523965/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	523965	01/19/21 10:58	CAS	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	524122	01/20/21 16:37	CAS	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-523966/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			.6 g	50 mL	523966	01/21/21 14:45	NK	TAL DEN
Total/NA	Analysis	7471B		1			524272	01/21/21 17:19	NK	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-524027/1-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	524027	01/19/21 11:00	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	524110	01/19/21 12:28	GPM	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-524076/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			30 g	1 mL	524076	01/20/21 08:15	DB	TAL DEN
Total/NA	Analysis	8270D		1			524273	01/22/21 13:02	RDP	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-524424/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			30 g	1 mL	524424	01/25/21 10:32	DB	TAL DEN
Total/NA	Analysis	8270D		1			524657	01/27/21 00:25	RDP	TAL DEN

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 280-524568/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B-Sb			1 g	100 mL	524568	01/28/21 09:28	MAB	TAL DEN
Total/NA	Analysis	6020A		1			524904	01/28/21 19:07	LMT	TAL DEN

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 280-523965/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	523965	01/19/21 10:58	CAS	TAL DEN
Total/NA	Analysis	8015C		1	0.1 mL	5 mL	524122	01/20/21 17:01	CAS	TAL DEN

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 280-524027/2-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5 g	5 mL	524027	01/19/21 11:00	GPM	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	524110	01/19/21 12:50	GPM	TAL DEN

Client Sample ID: CDOT I270 SB37-8-10

Lab Sample ID: 280-144588-1 MS

Date Collected: 01/14/21 09:20

Matrix: Solid

Date Received: 01/14/21 11:04

Percent Solids: 88.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			31.3 g	1 mL	524076	01/20/21 08:15	DB	TAL DEN
Total/NA	Analysis	8270D		1			524273	01/22/21 13:56	RDP	TAL DEN
Total/NA	Prep	3550C	RE		30.1 g	1 mL	524424	01/25/21 10:32	DB	TAL DEN
Total/NA	Analysis	8270D	RE	1			524657	01/27/21 01:18	RDP	TAL DEN
Total/NA	Prep	3546			15.8 g	1 mL	523960	01/19/21 12:41	DB	TAL DEN
Total/NA	Analysis	8015C		1			524217	01/21/21 19:54	MAM	TAL DEN
Total/NA	Prep	3546			16.5 g	1 mL	523960	01/19/21 12:41	DB	TAL DEN
Total/NA	Analysis	8015C		1			524217	01/21/21 20:40	MAM	TAL DEN
Total/NA	Prep	3050B-Sb			1.187 g	100 mL	524568	01/28/21 09:28	MAB	TAL DEN
Total/NA	Analysis	6020A		1			524904	01/28/21 19:17	LMT	TAL DEN

Client Sample ID: CDOT I270 SB37-8-10

Lab Sample ID: 280-144588-1 MSD

Date Collected: 01/14/21 09:20

Matrix: Solid

Date Received: 01/14/21 11:04

Percent Solids: 88.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			30.3 g	1 mL	524076	01/20/21 08:15	DB	TAL DEN
Total/NA	Analysis	8270D		1			524273	01/22/21 14:22	RDP	TAL DEN
Total/NA	Prep	3550C	RE		31.3 g	1 mL	524424	01/25/21 10:32	DB	TAL DEN
Total/NA	Analysis	8270D	RE	1			524657	01/27/21 01:45	RDP	TAL DEN
Total/NA	Prep	3546			16.0 g	1 mL	523960	01/19/21 12:41	DB	TAL DEN
Total/NA	Analysis	8015C		1			524217	01/21/21 20:17	MAM	TAL DEN
Total/NA	Prep	3546			15.8 g	1 mL	523960	01/19/21 12:41	DB	TAL DEN
Total/NA	Analysis	8015C		1			524217	01/21/21 21:03	MAM	TAL DEN
Total/NA	Prep	3050B-Sb			1.165 g	100 mL	524568	01/28/21 09:28	MAB	TAL DEN
Total/NA	Analysis	6020A		1			524904	01/28/21 19:21	LMT	TAL DEN

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: Jacobs Engineering Group, Inc.
 Project/Site: CDOT I-270 Env-Dec 2020

Job ID: 280-144588-1

Laboratory: Eurofins TestAmerica, Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21
A2LA	ISO/IEC 17025	2907.01	10-31-21
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	02-08-21
Arizona	State	AZ0713	12-21-21
Arkansas DEQ	State	19-047-0	06-01-21
California	State	2513	01-08-22
Connecticut	State	PH-0686	09-30-20 *
Florida	NELAP	E87667-57	07-01-21
Georgia	State	4025-011	01-08-22
Illinois	NELAP	2000172019-1	04-30-21
Iowa	State	IA#370	12-02-21
Kansas	NELAP	E-10166	04-30-21
Louisiana	NELAP	30785	06-30-14 *
Louisiana	NELAP	30785	06-30-21
Maine	State	2019011 (231)	03-03-21
Minnesota	NELAP	1788752	12-31-21
Nevada	State	CO000262020-1	07-31-21
New Hampshire	NELAP	205319	04-29-21
New Jersey	NELAP	190002	06-30-21
New York	NELAP	59923	04-01-21
North Carolina (WW/SW)	State	358	12-31-21
North Dakota	State	R-034	01-08-21 *
Oklahoma	State	2018-006	09-01-21
Oregon	NELAP	4025-011	12-08-22
Pennsylvania	NELAP	013	07-31-21
South Carolina	State	72002001	01-08-21 *
Texas	NELAP	TX104704183-08-TX	09-30-09 *
Texas	NELAP	T104704183-20-18	09-30-21
US Fish & Wildlife	US Federal Programs	058448	08-01-21
USDA	US Federal Programs	P330-18-00099	03-26-21
Utah	NELAP	QUAN5	06-30-13 *
Utah	NELAP	CO000262019-11	07-31-21
Virginia	NELAP	10490	06-14-21
Washington	State	C583-19	08-03-21
West Virginia DEP	State	354	02-28-21
Wisconsin	State	999615430	08-31-21
Wyoming (UST)	A2LA	2907.01	10-31-21

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Chain of Custody Record

Denver #280



Environment Testing America

Carrier Tracking No(s)

COC No: 280-104159-29871.6

Page: Page 1 of 1

Job #:

Sample Name: Buss

Lab P/N: 303 408 4462

Client Contact: Michelle Johnston
 E-Mail: Michelle.Johnston@Eurofins.com

State of Origin:

Address:

707 17th Street, Suite 2400
 City: Denver
 State Zip: CO, 80202
 Phone:
 Email: lion.russ@jacobs.com
 Project Name: CDO1 I-270 Env-Dec 2020
 Site: SSOW#

Due Date Requested:

TAT Requested (days): 15 business day

Compliance Project: Yes No

Purchase Order not required

WO #

Project # 28020733

SSOW#

Analysis Requested

Field Filtered Sample (Yes or No)	
Perform MS/MSD (Yes or No)	
<input checked="" type="checkbox"/>	8260B - VOCs (Terra Cores - 48 hour short holding time)
<input type="checkbox"/>	Moisture
<input checked="" type="checkbox"/>	8015C_GRO - TPH - GRO
<input checked="" type="checkbox"/>	8015C_DRO - TPH - DRO/ORO
<input checked="" type="checkbox"/>	Total 6020A + 7471B (solids)
<input checked="" type="checkbox"/>	8270D - SVOCs
<input checked="" type="checkbox"/>	8081B - Pesticides
<input checked="" type="checkbox"/>	8082A - PCBs
<input checked="" type="checkbox"/>	8015C GRO - TPH - GRO (waters)
<input checked="" type="checkbox"/>	8260B - VOCs (waters)
<input checked="" type="checkbox"/>	Total 6020A + 7470A (water)
<input checked="" type="checkbox"/>	Dissolved 6020A + 7471B (lab filtration/preservation)
<input checked="" type="checkbox"/>	Total Number of containers

Special Instructions/Note: IV.P Blank

- Preservation Codes:
- A - HCL
 - B - NaOH
 - C - Zn Acetate
 - D - Nitric Acid
 - E - NaHSO4
 - F - MeOH
 - G - Amchlor
 - H - Ascorbic Acid
 - I - Ice
 - J - DI Water
 - K - EDTA
 - L - EDA
 - M - Hexane
 - N - None
 - O - AsNaO2
 - P - Na2O4S
 - Q - Na2SO3
 - R - Na2S2O3
 - S - H2SO4
 - T - TSP Dodecahydrate
 - U - Acetone
 - V - MCAA
 - W - pH 4-5
 - Z - other (specify)



Possible Hazard Identification

Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: _____ Date: _____

Relinquished by: _____ Date/Time: 11/14/21 11:04 Company: SS

Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: Yes No Custody Seal No.: 1229824

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements:

Received by: _____ Date/Time: 11/14/21 11:04 Company: ETHADEN

Received by: _____ Date/Time: _____ Company: _____

Cooler Temperature(s) °C and Other Remarks: 11.1°C

Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 280-144588-1

Login Number: 144588

List Source: Eurofins TestAmerica, Denver

List Number: 1

Creator: Levegood, William D

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	Received same day of collection; chilling process has begun.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	False	Refer to Job Narrative for details.
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	