

LIMITED PHASE II ENVIRONMENTAL SITE ASSESSMENT

National Western Center Redevelopment Project

Denver, Colorado

Original Issue Date: July 27, 2015

Revision 1 Issue Date: November 20, 2015

Revision 2 Issue Date: December 31, 2015

Revision 3 Issue Date: March 22, 2016

Terracon Project No. 25157010



Prepared for:

City and County of Denver
Denver, Colorado

Prepared by:

Terracon Consultants, Inc.
Wheat Ridge, Colorado

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March 22, 2016

City and County of Denver
Department of Environmental Health
200 West 14th Avenue, Department 310
Denver, Colorado 80204

Attn: Mr. Dave Wilmoth, P.E., P.G.
P: 720.865.5438

Re: Limited Phase II Environmental Site Assessment Report, Revision 3
National Western Center
Redevelopment Project
Denver, Colorado
Terracon Project Number: 25157010

Dear Mr. Wilmoth:

Terracon Consultants, Inc. (Terracon) is pleased to submit Revision 1 to our original report for Limited Phase II Environmental Site Assessment activities completed at the above referenced site. The report presents data from our previous field activities that included advancement of soil borings; installation of groundwater monitoring wells and soil vapor points; test pit excavations; and collection of soil, groundwater, and soil vapor samples for laboratory analysis. These services were provided in accordance with Terracon Proposal No. P25150011. It also includes a review of an executive summary of Denver Public School Bus (DPS) Barn Site provided by City and County of Denver staff as well as information contained within the Pinyon Environmental Report also provided by the City and County of Denver, Department of Environmental Health.

Terracon appreciates this opportunity to provide environmental engineering services to the City and County of Denver. Should you have any questions or require additional information, please do not hesitate to contact our office.

Sincerely,
Terracon Consultants, Inc.

Mark E. White, P.G.
Environmental Department Manager

Daniel F. Schneider, P.E., CHMM
Senior Environmental Program Manager
Principal

Attachment

(File: 25157010 Environmental Site Assessment Report_Rev3.docx)



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LIMITED PHASE II ENVIRONMENTAL SITE ASSESSMENT OF THE NATIONAL WESTERN CENTER REDEVELOPMENT PROJECT, REVISION 3 DENVER, DENVER COUNTY, COLORADO

Terracon Project No. 25157010
Original Issue Date; July 27, 2015
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EXECUTIVE SUMMARY

BACKGROUND

The City and County of Denver (CCoD)'s North Denver Cornerstone Collaborative (NDCC) requested that the Department of Environmental Health (DEH) conduct preliminary environmental site investigations of the National Western Center (NWC) Redevelopment area to assess environmental conditions within the redevelopment area to further understand potential environmental impacts during planning efforts. The collective findings and their potential impacts to the redevelopment area are outlined in the following sections.

GROUNDWATER

A groundwater plume of a chlorinated volatile organic chemical, tetrachloroethylene (PCE), appears to extend from the southeast to the northwest portion of the NWC redevelopment area. The highest detected PCE concentration was 55 micrograms per liter ($\mu\text{g/L}$); the regulatory standard is 5 $\mu\text{g/L}$. The groundwater plume appears to originate from an off-site source to the southeast of the redevelopment area. The principal impact to redevelopment activities would be during construction dewatering and/or deep foundation construction within, or proximal to, the groundwater plume. Groundwater treatment may be necessary prior to dewatering effluent discharge to the South Platte River under Colorado Discharge Permit System Standards¹ for Stream Segment 14/15. Under Comprehensive Environmental Response Compensation and Liability Act (CERCLA), the responsible party (RP) for the contamination may be liable for any incurred costs resulting from PCE-related impacts that would require contaminated groundwater to be treated prior to release into the South Platte River.

¹ CDPS General Permit COG315000 – Remediation Activities Discharging to Surface Water. This permit and the authorization to discharge shall expire at midnight September 30, 2016 – Modified and Signed this day 20th day of May, 2014.

The Pinyon report² also supports Terracon's concept that hydraulically upgradient source(s) of PCE is impacting the groundwater at the NWC site. Supporting evidence is provided by groundwater sample analytical results from both Pinyon-installed monitoring wells and previously installed CDOT monitoring wells. PCE-impacted groundwater was detected at concentrations of 3.0, 22 and 53 µg/L in samples collected from monitoring wells MW-200, MW-201, and the CDOT well.

Given the depth to groundwater encountered during Terracon and Pinyon's investigative efforts and relatively low-level PCE concentrations observed in groundwater and soil gas, vapor intrusion is not likely given the anticipated shallow depth of construction. This conclusion is further supported in Pinyon's report based on a discussion with CDPHE technical reviewer Rob Breierle indicating that CDPHE "would not typically require a soil vapor investigation for a groundwater concentration of 22 µg/L, which is the concentration in the groundwater monitoring well (MW-200) next to the soil vapor point (SV-200) with the highest VOC concentration".

HISTORICAL URBAN FILL AREAS

Three historical urban fill areas (HUFs) were identified within or near the redevelopment area. HUFs pose four primary concerns to the NWC redevelopment:

1. Potential worker health-risk exposure during construction;
2. Differential settlement from heterogeneous distribution of organic and non-organic material and/or decomposition thereof;
3. As a potential groundwater contamination source leaching to groundwater; and
4. Potential generation and migration of explosive levels for methane gas from organic material decomposition.

The HUF in the northeast portion of the area is a documented landfill with significant landfill gas observed in 2004 (URS, 2004³). The landfill gas appears to be migrating to the south towards the adjacent residential area (Pinyon, 2015). The URS report documents elevated levels of carbon monoxide in the subsurface, which warrants further on-site investigation prior to acquisition (FEMA, 2002⁴). In the event that levels of landfill gas continue to be observed, acquisition of the property by the CCoD may necessitate a landfill gas mitigation/collection and possible treatment system components including a site-specific engineered barrier/cap. According to Ground

² *Subsurface Investigation, National Western Center Redevelopment, Pinyon Environmental, November 5, 2015.*

³ *DPS Bus Barn Terminal - Targeted Brownfields Assessment for USEPA, Phase II Environmental Site Assessment, URS, February 4, 2004.*

⁴ *Landfill Fires – Their Magnitude, Characteristics, and Mitigation, FEMA & US Dept. of Fire Administration, May 2002.*

Engineering, due to the thickness of the HUF, additional site settlement of up to five feet over the next several decades is estimated (Ground Eng., 2013⁵).

SUBSURFACE SOILS

The most significant soils impact was the extensive construction and demolition debris (C&D) scattered broadly through the western side of the development area. Based upon visual field observations conducted during test pit excavations for this project, the C&D did not appear to contain any regulated asbestos-containing materials. Due to the extensive area of C&D and large void spaces discovered in these areas, the debris may pose design and performance challenges for underground utilities, roadway and building construction.

Subsurface soils do not appear to be significantly impacted from heavy metals contamination or organic compounds. Consideration of entering the NWC property into the CDPHE Voluntary Cleanup Program may provide additional regulatory protection and allow the property to have corrective action applied and receive a “No Action Determination” at the end of the self-implemented and –directed actions. Implementation of a materials management plan (MMP) during construction, which is a component of the VCUP process, will provide guidance to address impacted soils management as it arises during site development activities.

PROPERTY ACQUISITION

To date, the environmental field investigations have been limited to CCoD- and Western Stock Show Association (WSSA) -owned properties. Although these investigations provide a “broad brush stroke” of environmental conditions within the proposed redevelopment area, these investigations do not negate the potential for additional Phase I and/or Phase II Environmental Site Assessments (ESAs) for individual private properties which will be acquired.

Property acquired as a part of the NWC redevelopment, at a minimum, should have a Phase I ESA conducted for the CCoD to assert CERCLA liability protection. Due to the extensive legacy industrial uses in the area, a significant portion of the properties will most likely have a Phase II ESA recommendation. The completion of the Phase II ESA will require additional time to complete environmental due diligence work for individual properties.

INVESTIGATIONS CONSTRAINTS AND LIMITATIONS

A Modified Transaction Screen report⁶ – which is a preliminary and limited scope ESA, was completed March 13, 2015 and identified numerous potential environmental conditions that may be present within the redevelopment area. Terracon completed a limited phase II ESA (Terracon,

⁵ *Subsurface Exploration Program and Geotechnical Recommendations, DPS Northeast Bus Terminal Site Redevelopment, Ground Engineering Consultants, Inc., August 1, 2013.*

⁶ *Modified Transaction Screen, National Western Center Redevelopment Project, March 13, 2015, Terracon Consultants, Inc.*

July 2015⁷) at the request of DEH. Environmental conditions were investigated through the installation of numerous groundwater monitoring wells, soil borings, soil vapor wells, and shallow excavated test pits/trenches. Pinyon completed an additional subsurface investigation that included the installation of a limited number of monitoring wells and soil vapor wells, the collection of groundwater and soil vapor samples from these wells, and groundwater sampling of an existing CDOT well.

These field investigations were limited to CCoD- and WSSA-owned property within the redevelopment area; intrusive sampling was not conducted on any privately held property or property owned by other governmental entities such as the Colorado Department of Transportation or Denver Public Schools.

In addition, the Coliseum property owned by the CCoD was not investigated due to the separate CERCLA/Superfund process ongoing at the property. Terracon was also provided with a supplemental environmental investigation⁸ that was completed by Pinyon Environmental to further assess the upgradient groundwater contamination and soil gas impacts.

⁷ *Limited Phase II Environmental Site Assessment, National Western Center Redevelopment Project, July 27, 2015, Terracon Consultants, Inc.*

⁸ *Subsurface Investigation, National Western Center Redevelopment, Pinyon Environmental, November 5, 2015.*

**LIMITED PHASE II ENVIRONMENTAL SITE ASSESSMENT
OF THE NATIONAL WESTERN CENTER
REDEVELOPMENT PROJECT, REVISION 3
DENVER, DENVER COUNTY, COLORADO**

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1.0 INTRODUCTION

Terracon Consultants, Inc. (Terracon) has completed Limited Phase II Environmental Site Assessment (ESA) activities at the properties located at the National Western Center (NWC) as described in our proposal dated January 12, 2015 (Proposal Number P25150011) and revised March 31, 2015. Authorization to proceed with the assessment activities was provided via letter on March 31, 2015 by Mr. Dave Wilmoth with the City and County of Denver (CCoD).

Site Name	National Western Center Redevelopment (the site)
Site Location/Address	Denver, Denver County, Colorado
General Site Description	Approximately 287 acres of historical and mixed use

A Topographic/Site Location Map is included as Exhibit 1 and a Site Map is included as Exhibit 2 in Appendix A.

The City and County of Denver, Western Stock Show Association (WSSA) and associated stakeholders completed a master plan for the redevelopment of the 108-year old NWC, which has been subsequently approved by Denver City Council. As part of the redevelopment, environmental concerns are present due to historical activities in the area. These historical activities have included: metal smelting, heavy industry, waste disposal in low areas along the South Platte River, two major highways and railroad yards. Potentially these activities may have impacted air, groundwater, and soil.

Terracon completed a Modified Transaction Screen (MTS) of the redevelopment area and presented the results in the report dated March 13, 2015 (Project Number 25157711). According to the MTS, the site currently is transected by three railroads. The site mainly consists of stock yards, parking lots, livestock arenas and commercial businesses.

Using the Denver County Assessor's website, the following addresses were input to determine the nature of the land use. In close proximity and/or adjacent to the property north are industrial

facilities (5100, 5120, 5140, and 5150 Race, and 5151 Franklin Street), to the east by multiple industrial and/or commercial facilities (4901, 5001 Race Street, 4800 Brighton Boulevard, 4400, 4900, 4910, 4980, 5040 Brighton Boulevard) and residential homes, to the south by industrial facilities (2060 East 38th Street and 3801, 4101, 4301, 4303, 4375 Brighton Boulevard), and to the west by the South Platte River, followed by multiple industrial facilities.

1.1 I-70 VASQUEZ CERCLA DISCUSSION

The site is located within the boundaries of the Vasquez Boulevard/I-70 (VB/I-70) Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) site, specifically within Operable Unit 1 (OU1) Residential Soils and a portion of Operable Unit 2 (OU2) Omaha and Grant Smelter, and was listed on the National Priorities List (NPL) in July 22, 1999. VB/I-70 OU1 is applicable only to residential properties within the CERCLA site boundary. Commercial and industrial properties which are not within the Omaha & Grant Smelter and Argo Smelter sites (i.e. the remaining portion of OU2 and OU3, respectively) are not included in the CERCLA remedial actions. In the VB/I-70 Record of Decision, the USEPA states, "While numerous commercial and industrial properties are also located within the Site [VB/I-70 Boundary], the levels of arsenic and lead at these properties do not appear to pose an unacceptable risk to workers in a commercial/industrial scenario based on the limited sampling that was performed. In March, 1998, the USEPA initiated cleanup with the removal and replacement of impacted soils on residential properties (OU1) and as of 2015 the majority of the residential properties have been cleaned up.

Terracon provided a list of 54 properties, which included commercial, industrial, and residential properties, within the redevelopment area to Lisa Farrel, the City's VB/I-70 Superfund project manager and to Paula Schmittel, US EPA Region 8 VB/I-70 Superfund Site remedial program manager to review. On September 21, 2015 via email, Lisa Farrel, stated that she had reviewed the list of 54 properties and found twelve residential properties were on Terracon's property list and subject to OU1 remedial actions. Of these, nine properties were sampled and found not to be impacted; three properties sampled and remediated.

Environmental History for Omaha and Grant Smelter:

The Omaha and Grant Smelter site is located on the southern portion of the NWC Redevelopment site, south of the I-70 highway, and is OU2 of the VB/I-70 Superfund Site.

In 1892, Denver's largest smelter (Omaha and Grant) was expanded, including building a 350-foot chimney, the tallest structure in the region and a visible symbol of an industry considered vital to the region. A year after the completion of the stack, the nation experienced an economic depression. These conditions combined with changes in smelting process technology, the depletion of readily available rich ores in the region, and the national labor strike of 1903 resulted

in the closing of the smelter. Over the years, the plant was gradually dismantled with only the stack remaining.

On December 15, 1936, CCoD announced plans to use the Omaha & Grant Smelter stack as a municipal incinerator, but use of the stack was not initiated at that time.

On November 18, 1944, CCoD revived the plan to use the Omaha and Grant Smelter stack for municipal refuse incineration. Soon after trash incineration commenced, CCoD received complaints about the process including issues of safety. No record of trash incineration beyond January 12, 1945 has been noted. The chimney was demolished February 26, 1950 to make way for the Denver Coliseum.

Disposition of heavy metal laden stack emissions in the surrounding area resulting in potential shallow soil contamination and transport of smelter waste outside of the smelter site itself is a potential environmental concern that this limited phase II environmental investigation sought to evaluate.

Environmental History for the Remainder of the NWC Redevelopment Area:

Terracon's MTS identified the following potential environmental concerns (PECs) associated with the site:

- Animal processing/rendering facilities: Rendering is a process in which waste animal tissue is converted to, or "rendered" into useful products, such as lard, tallow, and meat and bone meal. The rendering process can be done a number of ways, but usually consists of separating fatty materials from proteins and water. These processes generate a protein and water sludge, which can be further utilized for inedible rendering (not fit for human consumption), or sent to a wastewater treatment plant for treatment. Additional wastes generated by rendering include air emissions from volatile organic compounds (VOCs), such as organic sulfides. Depending on the animals rendered at the facility, other wastes, such as blood, carcasses, feathers, and particulate matter, may also have been generated. There is the possibility that these wastes were not properly managed, and may still exist in some form at the site. The potential for impacts associated with these processes include worker safety and soil/groundwater contamination, such as contact with wastes, putrescence, and odors.
- Railroads: Potential impacts from railroad uses include fuel spills, hazardous waste and/or materials; herbicide use around the rail spurs to prevent vegetative growth, heavy metals from coal spillage and railroad beds, and creosote leachate from installed railroad ties.
- Building demolition: Based on the numerous facilities historically present on the site, there is the potential that demolition debris from the current and/or previous buildings located on the site exists in the site's soil. Given the era of construction, operation and demolition, it is possible that asbestos-containing building materials (ACBMs) and lead-based paint products could be present at the site related to construction debris.

- Petroleum storage: Petroleum storage tanks, such as gasoline tanks, underground storage tanks (USTs) and oil sheds/houses present an environmental concern, due to the potential for leaks and spills to the surface and subsurface soils. Oil sheds/houses historically typical in the industry are related to railroads for fueling and maintenance purposes. Based on the readily available information, the contents, quantities and storage methods are unknown.
- Landfilling: Potential landfilling concerns include methane gas, hazardous materials, petroleum products, building demolition debris (asbestos and lead-based paint), and geotechnical concerns as previously discussed in the animal processing/rendering processes associated with the decay of matter relating to subsurface compression.
- Manure management and disposal: The potential concern is worker safety with respect to buried manure and the odor issue associated, gaseous emissions (methane/hydrogen sulfide), and geotechnical concerns for load-bearing/compression issues. Buried manure pits may be present due to the long history of livestock operations on the site and the need to manage manure, possible on site, over the past 125 years.
- Solvents: Dry cleaning facilities typically utilize a halogenated solvent, known as tetrachloroethylene (PCE), to remove stains from clothing. PCE is classified as a possible carcinogen, and when introduced into the environment, is highly mobile in groundwater. A former dry cleaning facility was identified at 1632 East 47th Avenue. Hazardous waste management and disposal practices at this facility are unknown.
- A Regional Transportation District (RTD) investigation (LT Environmental, June 2011) identified elevated concentrations of PCE in groundwater along the North Metro Corridor line transecting the National Western Center, which exceeded the Colorado Maximum Contaminant Levels (MCLs). The potential historical dry cleaning facility, the findings of the RTD's Limited Phase II Environmental Site Assessment, and the persistence of chlorinated solvents in the environment indicate a potential source may exist within the redevelopment area. PCE can under certain conditions biochemically degrade into the following degradation products: trichloroethylene (TCE), cis-1,2 dichloroethylene (DCE), and vinyl chloride (VC). All of the degradation compounds are classified as possible carcinogens and are highly mobile in groundwater.

1.2 STANDARD OF CARE

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time. Terracon makes no warranties, either express or implied, regarding the findings, conclusions, or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies, or other third parties supplying information used in the preparation of the report. These Phase II services were performed in accordance with the scope of work agreed with you, our client, as reflected in our proposal and while consistent with the practices of

professional judgment was not restricted by ASTM E1903-11, *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment*.

1.3 ADDITIONAL SCOPE LIMITATIONS

Findings, conclusions, and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, non-detectable, or not present during these services. We cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this environmental site investigation. Subsurface conditions may vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations, or exploratory services. The data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

1.4 RELIANCE

The following reliance language has been negotiated between CCoD and Terracon.

This report has been prepared for the exclusive use of the CCoD. Any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the express written authorization of CCoD and Terracon. Any unauthorized distribution or reuse is at the CCoD's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions, and limitations stated in the proposal, this report, and Terracon's Agreement for Services. The limitation of liability defined in the terms and conditions is the aggregate limit of Terracon's liability to CCoD and all relying parties unless otherwise agreed in writing.

2.0 PHASE II SITE INVESTIGATION

The following summarizes the environmental site investigation portion of the total contracted scope of services. The purpose of this investigation was to evaluate potential impacts to soil, groundwater, soil vapor, and proposed construction and development activities associated with the aforementioned PECs.

The Phase II Site Investigation scope of services was comprised of the following tasks:

- Attendance of multiple teleconferences and meetings to refine the Phase II ESA scope of services (SOS).
- Preparation of a site specific Health and Safety Plan (HASP).

- Several site meetings with utility locating services to clear the soil boring and test pit excavation locations of utilities.
- Drilling 54 soil borings for the collection of soil samples for field screening, lithological classification, and laboratory analysis.
- Continuous ambient air monitoring of the work area during drilling for flammable and/or combustible gases.
- Completing 16 soil borings as 2.0-inch diameter polyvinyl chloride (PVC) groundwater monitoring wells.
- Completing 20 of the soil borings as soil vapor points.
- Monitoring well development, measurement of depth to water (DTW), and collection of groundwater samples for laboratory analysis.
- Soil vapor field screening of the soil vapor points.
- Collection and laboratory analysis of soil vapor samples for VOCs
- Excavation of 10 test pits for evaluation of historical building demolition debris and collection of soil samples for laboratory analysis.
- Continuous observation of potential ACBM during the soil disturbance activities.
- Collection and analysis of 12 potential ACBM samples during boring and/or excavating.
- Digitization of the investigation locations for input into a Geographic Information System (GIS) database to create the site figures and presentation of the analytical data, and
- Limited Phase II ESA Report preparation.

2.1 PLAN DEVELOPMENT AND PRE-TASK PLANNING ACTIVITIES

A site-specific HASP was prepared for sampling activities to be conducted at the site. A HASP was prepared to perform the field work under United States Occupational Health and Safety Administration (OSHA) Level D personal protective equipment.

A 48-hour notice-of-intent to advance the borings was filed with the Utility Notification Center of Colorado to delineate the public subsurface utilities at the site. Terracon mobilized to the site prior to notifying the locating service to mark the proposed drilling and excavating locations. Terracon performed four on-site meetings with the utility locating services to identify the work areas in order to clear the intrusive activity locations of buried utilities.

On February 23, 2015, a Notice of Intent (NOI) to Construct Monitoring Hole(s) was filed with the Colorado Division of Water Resources (DWR). DWR requires that the NOI be filed at least three business days before the monitoring holes are constructed.

Terracon ordered sample kits from Colorado Analytical Laboratories, eAnalytical Laboratory, and Summit Scientific to include laboratory sample containers for collection of the soil, groundwater, soil vapor samples, and sample (replicate-duplicate).

2.2 SOIL BORING ADVANCEMENT

Terracon advanced 54 soil borings, completing 16 of the borings as groundwater monitoring wells and 20 of the soil borings as soil vapor points. Terracon provided an environmental scientist who also is a certified asbestos building inspector (CABI) to oversee the hollow-stem auger (HSA) drilling, log the soil borings, design and oversee monitoring well construction and collect field samples. These borings were placed in areas of concern identified as a PEC.

The drilling was performed from April 8, 2015 through May 28, 2015. Drilling was performed utilizing either a CME 55 or CME 75 truck-mounted HSA drill rig. The drill rig was used for soil sampling and selected construction of 2.0-inch diameter groundwater monitoring wells and installation of stainless-steel soil vapor points. During drilling, soil samples were collected either with a continuous core soil sampler or utilizing a 24-inch long split-spoon soil sampler driven every 2.5-feet during advancement.

Terracon classified the soils for type, color, grain size, and other soil characteristics. Soil boring logs representing the observed and interpolated stratification boundaries of the site soils are presented in Appendix B. Soil samples were collected and classified according to the Unified Soil Classification System (USCS) and estimated particle size range, plasticity, hardness, moisture content, color and any indications of observable potential environmental impact.

After reaching total drilling depths, soil borings (MW-01 through MW-16) were completed as groundwater monitoring wells as described in Section 2.4 or soil vapor points as described in Section 2.5. Soil boring, vapor point and groundwater monitoring well locations are illustrated on Exhibit 2 (Appendix A).

During drilling and monitoring well installation, the ambient air around the work area was screened continuously with a MultiRae® 6-Gas Meter to monitor for potential flammable gases. The instrument was calibrated each day prior to use according to the manufactures specifications.

Sixteen drums of drill cuttings and decontamination solids and five drums of purge water and decontamination fluids [investigation-derived waste (IDW)] were generated and stored in labeled 55-gallon drums in the parking lot located at 901 East 46th Avenue at the direction of CCoD.

2.2.1 SITE GEOLOGY AND HYDROGEOLOGY

The site is located at an approximate elevation of 5,190 feet above mean sea level. The topography of the site and surrounding area is predominantly flat and slopes slightly towards the northwest (Exhibit 1, Appendix A).

During drilling, building debris was encountered in the subsurface west of National Western Drive. This debris consisted of wood, glass, brick fragments, concrete, rebar and metal. This debris was encountered in soil borings: SB-08, SB-10, SB-14, SB-17, MW-01, MW-05, and MW-11. Generally, these materials were encountered from a depth of less than one-foot to a depth of

seven feet bgs. All of the test pit excavations were performed in this area and encountered similar materials at similar depths. The debris interspersed with silty sand and gravel. Beneath the debris layer, the subsurface lithology consists of interbedded layers of clayey sand with gravel, silty sand with gravel, and well graded sand with gravel.

Depth to bedrock is highly variable in the area. Bedrock consisting of weathered claystone of the Denver Formation was encountered in three soil borings during this investigation. Bedrock was present at a depth of 15.5 feet bgs in SB-04, 13 feet bgs in MW-10, and 13 feet bgs in MW-12. This shallower bedrock portion occurs in the central portion of the site. The observed soil stratigraphy and USCS group symbols are provided on the soil boring logs in Appendix B.

Groundwater occurred predominately in well-graded, medium to coarse sands with occasional gravel. On May 29, 2015, static groundwater level measurements were collected from the site groundwater monitoring wells (See Table 1, Appendix D). Depth to groundwater ranged from 6.07 feet bgs (MW-10) to 32.49 feet bgs (MW-14). The average depth to groundwater at the site is 23.36 feet bgs. A potentiometric surface map was developed from these groundwater elevations (Exhibit 3, Appendix A).

The contour map of the water level data indicates a northwestern groundwater flow direction beneath the site. This local flow direction is consistent with the regional northwesterly flow direction indicated on a regional water table map of the Denver metropolitan area (USGS 1996). Local groundwater flow directions may vary seasonally and annually based on precipitation patterns and other hydrogeologic influences.

The groundwater contour lines, as illustrated on Exhibit 3, were produced using the following methodology. Groundwater elevations were inputted into a Kriging spatial analysis tool. Kriging is a geostatistics method for interpolation in which the measured values are weighted to derive an estimated value for an unmeasured location. Weights are based on the distance between the measured points, the prediction positions, and the spatial arrangement among the measured points. Kriging is based on regionalized variable theory, which assumes that the spatial variation in the data being modeled is homogeneous across the surface. That is, the same pattern of variation can be observed at all locations on the surface (Royle et al., 1981). The Kriging produced a groundwater surface raster representative of the known points of control. The raster was then contoured via GIS spatial analyst tool and modified utilizing surface topography to approximate unknown contouring within the site area. The limitations are seasonal groundwater fluctuations and depth to groundwater measurements from one monitoring event. The measuring event occurred May 29, 2015 which was after heavy rainfall events that may have potentially increased the groundwater table. There are large areas at the site that do not have monitoring wells to help modify contour control points.

The site is located within the South Platte Alluvium Aquifer. Based on the soils encountered during the investigation, the physical parameters of groundwater flow, and published modeled values (CWCB, 2014). Hydraulic conductivity across the site is estimated to be between 360 to 375 feet

per day (ft/day) equivalent to 1.27×10^{-1} to 1.32×10^{-1} centimeters per second (cm/sec) and the transmissivity is estimated to be 50,000 gallons per day per foot (gpd/ft).

2.2.2 ATH FIELD SCREENING RESULTS

Terracon's field environmental scientist collected unsaturated soil samples from soil borings for field screening using the Ambient Temperature Headspace (ATH) method. A representative sample from each sampling interval was placed into individual labeled, sealable plastic bags. The bags were sealed and the contents were allowed to equilibrate to the surrounding ambient temperature.

Terracon used a MiniRae® photoionization detector (PID) equipped with a 10.6 electron-volt ultraviolet lamp to sample the headspace in the bag for the potential presence of VOC vapors. Prior to use, the PID was calibrated to a 100 parts per million (ppm) isobutylene standard in accordance with the manufacturer's specifications. After the equilibration period, the PID tip was inserted into the bag headspace and the PID response recorded on the soil boring logs in ppm. A summary of the elevated PID readings (>10 ppm) is provided in Table 2 of Appendix D.

The field screening results are reported in ppm on the soil boring logs in Appendix B.

2.3 SOIL SAMPLE COLLECTION AND ANALYSES

Soil samples were collected for laboratory analysis of Resource Conservation and Recovery Act (RCRA) 8 metals plus zinc from depths of 0 to 6 inches and 6 to 24 inches bgs from all of the soil borings and test pits. The soil samples were collected with a hand auger and the sample intervals were placed into a stainless steel mixing bowl to composite the soil. After mixing the soils, a representative sample was collected from each interval and placed into labeled laboratory provided sample jars for analysis. Collection of multiple composite samples can provide improved sampling precision and reduce the total number of analyses required compared to non-composite sampling (USEPA, 2001).

Laboratory soil samples that were collected utilizing the drilling rig were removed from the soil sampler and a portion of the soil core was placed into labeled soil jars for potential laboratory analysis. Soil samples from the test pits were collected using a clean trowel and placed directly into the sample jars. Soil samples collected for laboratory analysis were selected from the zone most likely to exhibit environmental impairment based on field observations, PID response, or visual indications of potential environmental impact.

The soil samples were labeled, placed into an iced cooler and delivered to the laboratory for analysis. The samples were hand-delivered under chain-of custody procedures to Summit Scientific in Golden, Colorado for analysis of VOCs by USEPA Method SW-846 8260B, total petroleum hydrocarbons (TPH) as gasoline range organics (GRO), diesel range organics (DRO) and oil range organics (ORO) by USEPA Method SW-846 8015B, semi-volatile organic

compounds (SVOCs) by USEPA Method SW-846 8270, and RCRA 8 metals plus zinc by USEPA Method SW-846 6020/200.8. In addition, soil samples TP-03 (10') and SB-10 (15') were analyzed for oil and grease by USEPA Method SW-846 9071B. A summary of the analytical results is provided in Tables: 3A, 3B, 3C, 3D, 4, and 5 of Appendix D. Laboratory reports and chain of custody forms are provided in Appendix G.

During drilling of soil boring SB-17, the CABI identified a suspect asbestos containing material at an approximate depth of 4 feet bgs. The CABI collected three samples of the material and placed it into sealable plastic bags and delivered the samples to the laboratory for analysis of asbestos. The samples were analyzed for asbestos by Reservoirs Environmental of Denver, Colorado utilizing polarized light microscopy. Upon analytical analysis, all materials were determined to be equal to or less than 1% or non-detect for asbestos. Point count PLM analysis was not necessary, per state asbestos regulations.

2.4 GROUNDWATER MONITORING WELL INSTALLATION AND DEVELOPMENT

Soil borings MW-01 through MW-16 were completed as groundwater monitoring wells. The monitoring well depths were constructed at depths ranging from 15 feet bgs (MW-05, MW-10, MW-11, MW-15) to 40 feet bgs (MW-02, MW-03). The wells were constructed with 10 feet of 2.0-inch diameter PVC well screen and associated casing. A clean, silica sand filter pack was placed from the bottom of the well to approximately one to two feet above the top of well screen, followed by a hydrated bentonite chip annular seal to approximately 0.5 feet bgs. The monitoring wells were fitted with J-plug well caps and either a locking three foot tall steel well vault or a bolt-down, flush-mounted well cover set in concrete. Monitoring well construction details are provided on the soil borings logs in Appendix B. These monitoring wells do not have to be permitted with the Colorado Division of Water Resources (DWR), provided that they are abandoned in accordance with Colorado Water Well Construction Rules within one year of construction.

A Terracon environmental scientist visited the site to collect static groundwater levels, develop the monitoring wells, and collect groundwater samples for laboratory analysis. Depth to groundwater ranged from 6.24 feet below the top of monitoring well casing (TOC) in MW-10 to 33.31 feet below TOC in MW-07, when gauged on May 29, 2015. Monitoring wells MW-01 through MW-16 were developed by repeatedly surging the wells with a 2.0-inch diameter PVC surge block and purging the groundwater from the wells with a single-use PVC bailer.

Development was considered complete and the well adequately purged for sampling after ten well casing volumes of water had been removed, while measuring the groundwater physical parameters (pH, temperature, and conductivity) fluctuate less than ten percent over three consecutive measurements, and the sediment load had been removed (Terracon, 2013). During the development process, approximately 15 gallons of water were removed from each well.

Monitoring wells MW-01 through MW-16 were sampled after development as described in Section 2.5. Groundwater monitoring well development forms are provided in Appendix C. Purged groundwater (liquid IDW) was stored in labeled poly drums on-site.

2.5 SOIL VAPOR POINT INSTALLATION AND SAMPLING

Twenty locations were selected for installation of soil vapor points during this investigation. The soil vapor points were installed with the HSA rig to a depth of 5 feet bgs in general accordance with Terracon's – *Soil Gas Investigation Guidance Document (August 2013)*. Eleven of the locations were completed as nested soil vapor points where a lower vapor point was installed to a depth of 10 feet bgs and the upper vapor point was installed at 5 feet bgs. The points were constructed with a 6-inch long section of 0.5-inch diameter factory manufactured stainless steel. The vapor points were connected to Tygon® tubing that extends to land surface. The lower vapor points were connected to red tubing and the upper points were connected to clear tubing for distinction. A clean, silica sand filter pack was placed from the bottom of the boring to approximately one foot above the top of the vapor point, followed by a hydrated bentonite chip annular seal to approximately 0.5 feet bgs. The completed vapor points were protected with either a locking three foot tall steel well vault or a bolt-down, flush-mounted well cover set in concrete. The soil vapor point locations are provided on Exhibit 2. Soil vapor point construction details are provided on the logs in Appendix B.

The soil vapor points were screened in the field utilizing a MultiRae® six-gas detector, photoionization detector (PID) equipped with a 10.6 electron-volt ultraviolet lamp. Prior to use, the PID was calibrated to a 100 parts per million (ppm) isobutylene standard in accordance with the manufacturer's specifications. The PID will not detect methane which has a higher ionization potential than 10.6 eV. The MultiRae® six-gas detector was used to assess potential explosive gas (methane) as well as (carbon monoxide, hydrogen sulfide, oxygen, and sulfur dioxide)

A peristaltic pump was connected to the vapor points to evacuate approximately three well volumes of air from the point. During the evacuation process the extracted vapor was placed into a Tedlar® bag and screened with the PID for measurements of: oxygen, percentage of the LEL, hydrogen sulfide, sulfur dioxide, VOCs, and carbon monoxide. Three volumes of Tedlar® bags were collected and measured with the PID (Terracon, 2013). The screening results are provided in Table 6 of Appendix D. As noted on the table, soil vapor points were purged three times, field readings were taken for each purge, and reported in the table.

Soil vapor samples were collected for laboratory analysis of VOCs including alkanes and petroleum hydrocarbons, total volatile (TVPH) as hexane from vapor points: SV-02, SV-06, SV-08, SV-12, SV-17, SV-19, and groundwater monitoring well MW-06. The vapor samples were collected within a Tedlar® bag for laboratory analysis. The samples and completed chain of custody forms were courier delivered to the laboratory for analysis. The samples were analyzed by eAnalytical Laboratory of Loveland, Colorado utilizing USEPA Method TO-14. A summary of

the analytical results is provided in Table 7 of Appendix D. The laboratory reports are provided in Appendix G4.

2.6 GROUNDWATER SAMPLE COLLECTION AND ANALYSES

Following well development as per section 2.4, groundwater samples were collected from monitoring wells MW-01 through MW-16 using a single-use PVC bailer. Immediately following collection of groundwater sample MW-07, a sample (replicate-duplicate) (MW-07D) was collected from well MW-07 using the same bailer. A sample (replicate-duplicate) was also collected from monitoring well MW-12 and was labeled MW-12D following the procedures previously discussed. The groundwater samples, replicate samples, and equipment rinsate sample (NWSS-Rinsate) were hand-delivered to Summit Scientific for analysis of VOCs (EPA Method SW-846 8260B). Groundwater samples were also analyzed by Summit Scientific for dissolved RCRA 8 metals plus zinc by USEPA Method SW-846 200.8/245.1. The laboratory filtered the dissolved metals samples prior to analysis. A summary of the VOC constituents and dissolved metals is provided in Table 8 of Appendix D. The laboratory reports are provided in Appendix G.

Groundwater samples were collected from monitoring wells MW-01, MW-05, MW-07, MW-07D, MW-09, MW-10, MW-11, MW-12, MW-12D, MW-13, and MW-15 and submitted for analysis of nitrites, nitrates, total Kjeldahl nitrogen (ammonia and organically bonded nitrogen) by USEPA Method 300 and SM 4500-Norg-B. Total nitrogen which is the sum of (nitrate, nitrite, ammonia, and organically bonded nitrogen) was calculated by the laboratory based on the results. These analyses were performed by Colorado Analytical of Brighton, Colorado. A summary of the analytical results is provided in Table 9 of Appendix D. All of the nitrogen compound samples were not filtered prior to analysis, so the results represent unfiltered (biased-conservative) sample results. Laboratory reports are provided in Appendix G.

2.7 TEST PIT EXCAVATIONS

Ten test pits were excavated at the site to visually inspect the subsurface soils and to collect samples for laboratory analysis. A Terracon CABI provided field oversight during the soil disturbance activities. The test pits were excavated at the western portion of the project site on properties that are currently utilized for parking. The historical structures on these lots have been demolished and appear to have been buried throughout these areas. The test pits were excavated utilizing a backhoe to an approximate depth of 10 feet deep, 3 feet wide, and 10 feet long. The locations of the test pits are provided on Exhibit 2 and historical structure debris photos are provided in Appendix E.

Soil samples were collected from the test pit excavations for laboratory analysis of RCRA 8 metals plus zinc. A summary of these results is provided in Table 3D of Appendix D. Soil samples were collected from test pits: TP-03, TP-06, TP-07, and TP-08 for laboratory analysis of SVOCs. A summary of these results is provided in Table 4 of Appendix D. The laboratory reports are provided in Appendix G.

During excavation of test pits TP-01, TP-02, and TP-07 samples of suspect asbestos containing materials were collected for laboratory analysis. These materials consisted of black fibrous tar, brown fibrous roofing material, and ceramic fragments. Nine samples were collected by the CABI and placed into sealable plastic bags. The samples and completed chain of custody forms were hand delivered to Reservoirs Environmental, Inc. of Denver, Colorado for analysis of asbestos. The samples were analyzed for asbestos by Reservoirs Environmental of Denver, Colorado utilizing polarized light microscopy. Upon analytical analysis, all materials were determined to be non-detect for asbestos except for one sample that was trace but did not require point count analysis. The laboratory reports are provided in Appendix G.

2.8 EQUIPMENT DECONTAMINATION

Non-expendable sampling equipment was decontaminated at the beginning of the project and decontaminated between each soil sampling location. Downhole and development sampling equipment (split-barrel spoons, surge block, and water level indicator) were hand-scrubbed in an Alconox™ and potable water solution and rinsed with potable water between sample locations.

On May 1, 2015, rinsate sample NWSS-Rinsate was collected and analyzed to evaluate the adequacy of the decontamination of the well sampling equipment (interface probe). The rinsate sample was collected following the decontamination of the probe after measuring the water level in monitoring well MW-16. Rinsate sample NWSS-Rinsate was obtained by spraying the probe tip with distilled water and collecting the water into 40-milliliter vials. Sample NWSS-Rinsate was labeled, placed into an iced-cooler and hand-delivered to Summit Scientific in Golden, Colorado for analysis of VOCs (EPA Method 8260B).

2.9 INVESTIGATION-DERIVED WASTE

Sixteen labeled drums of solid IDW (drill cuttings and decontamination solids) and five labeled drums of liquid IDW (decontamination fluids and well development purge water) were generated during field activities. The drums were affixed with non-hazardous waste labels indicating the drum contents, Terracon contact information and the date the waste was generated. The drums are stored in the parking lot located at 901 East 46th Avenue.

2.10 SURVEYING AND GEOGRAPHIC INFORMATION SYSTEM

Digitization of the investigation locations for input into a Geographic Information System (GIS) database was performed to create the site figures and presentation of the analytical data. A Terracon environmental scientist collected geographic locations of soil borings, monitoring wells, soil vapor points, and test pits utilizing a Trimble Geo XH and Geo Beacon receiver with sub-meter accuracy. The geographical data was differentially corrected to enhance the quality of location data gathered. Differential Global Positioning System (DGPS) is a systematically accurate method to collecting location data. DGPS requires two receivers that are relatively nearby. The variance between the receivers and satellite signals is recorded by the Trimble Geo

XH. The field DGPS data was processed to a base station using Trimble software to increase position accuracy. A report of the post processed DGPS data is shown in the table below with 99.1% of all the DGPS points with a positional accuracy less than 100 cm.

Estimated accuracies of DGPS data for corrected positions:

Range	Percentage
■ 0-15 cm	47.5
■ 15-30 cm	15.9
■ 30-50 cm	27.4
■ 50-100 cm	8.3
■ 100-200 cm	0.9

Falcon Surveying of Lakewood, Colorado completed the survey of the groundwater monitoring well locations to provide respective ground surface elevations and top of casing (TOC) elevations. The elevation data Falcon Survey collected was tied to a known bench mark near SB-7 at 47th street and National Western Drive. The United States Coastal Geodetic Survey Benchmark Z-62 has an elevation of 5,166.08 ft.

The geographical data collected was compiled with laboratory analytical data into a comprehensive geodatabase by a Terracon geographical information system (GIS) specialist into HARN State Plane Colorado Central FIPS 0502 coordinate system as requested by CCoD.

3.0 SUMMARY OF ANALYTICAL RESULTS

The following sections summarize the soil, groundwater, and soil vapor analytical results of qualified data used in comparing to established regulatory thresholds. A summary of the analytical results is provided in Tables 3, 4, 5, 7, 8, and 9 (Appendix D). The Colorado Analytical Laboratories, eAnalytical Laboratory, Reservoirs Environmental and Summit Scientific analytical reports are provided in Appendix G.

Constituent detections were compared to USEPA Residential and Industrial Regional Screening Levels (RSL, January 2015); USEPA Superfund Record of Decision: Vasquez Boulevard and I-70 OU1 (ROD VB/I-70 OU1, September 25, 2003) Colorado Department of Labor and Employment (CDLE), Division of Oil and Public Safety (OPS) Risk-Based Screening Levels (RBSLs, October, 2005); Colorado Department of Public Health and Environment (CDPHE) Colorado Soil Evaluation Values (CSEV) Groundwater Protection Levels (March, 2014); ColoradoBasic Standards for Ground Water (CBSGW) (Regulation 41, January 31, 2013); CDPHE Indoor Air Guidance (September, 2004); and CDPHE Air Screening Concentrations Table (March 12, 2012). A summary of soil, groundwater, and soil vapor analytical results is presented in Sections 3.1, 3.2, and 3.3 below.

3.1 SOIL DATA SUMMARY

RCRA 8 metals plus zinc, SVOCs, and total petroleum hydrocarbons (TPH) constituents detected in soil samples were compared to the USEPA ROD VB/I-70 OU1 (2003), the USEPA residential and industrial RSLs (2015), and the CDLE-OPS, RBSL (2005). TPH components (i.e. GRO, DRO, & ORO) are evaluated separately for the purposes of Colorado Oil and Public Safety's Petroleum Storage Tank regulations. Under the regulations, exceedance of the 500 mg/kg TPH standard in any of the three ranges then requires further analytical analysis of SVOCS (Method 8270) to determine if polyaromatic hydrocarbons (PAHs) exceed risk based screening levels. All soil data is reported on a dry weight basis.

The following is a narrative of the test results.

- Arsenic concentrations detected in soil samples ranged from a low of 0.329 mg/kg (SV-13 6-24") to a high of 28.1 mg/kg in the soil sample collected from SV-20 (0-6"). The USEPA Industrial RSL for arsenic in soil is 3.0 mg/kg. In consultation with CDPHE's Voluntary Cleanup Program, the agency stated since the area is within the VB I-70 Superfund OU1 area, it is appropriate to compare arsenic soil sample results to the Record of Decision Alternative 6 arsenic cleanup standard of 70 mg/kg or parts per million (ppm) (USEPA, 2003) refer to correspondence related to OU1 arsenic standard in Appendix F.
- Lead concentrations detected in soil samples ranged from MW-12/0-6" (403 mg/kg), SB-05/0-6" (773 mg/kg), SB-05/6-12" (571 mg/kg), SB-08/0-6" (560 mg/kg), SB-08/6-24" (790 mg/kg), SV-16/6-24" (571 mg/kg) to SV-20/0-6" (875 mg/kg). The USEPA residential RSL for lead in soil is 400 mg/kg and the industrial RSL for lead is 800 mg/kg.
- SVOC concentrations detected in soil samples were encountered in TP-3 at a depth of 10 feet bgs. Benzo(a)anthracene was detected at 14 mg/kg, benzo(b)fluoranthene was detected at 26 mg/kg, and benzo(k)fluoranthene was detected at 13 mg/kg. The USEPA Industrial RSLs are 2.9 mg/kg, 2.9 mg/kg, and 0.29 mg/kg, respectively.
- TPH results for each organic range (i.e. GRO, DRO, ORO) did not exceed the threshold value of 500 mg/kg and therefore PAH analysis was not required.

TPH as gasoline organics (GRO) were detected in soil samples ranged from 2.3 milligrams per kilogram (mg/kg) in the soil sample collected from TP-6 at a depth of six feet bgs and at 0.72 mg/kg in the soil sample collected from TP-6 at a depth of eight feet bgs.

TPH as diesel range organics (DRO) were detected in the soil samples ranged from TP-6 at a depth of six feet bgs (240 mg/kg), and at a depth of eight feet (180 mg/kg), and TPH DRO was detected at 500 mg/kg in the soil sample collected from TP-07 at a depth of seven feet bgs. The CDLE-OPS, RBSL for TPH in soil is 500 mg/kg.

- TPH as oil range organics (ORO) were detected at 220 mg/kg in the soil sample collected from TP-07 at a depth of seven feet bgs.

TPH as oil and grease N-Hexane Extractable Material (HEM) were detected at 320 mg/kg in the soil sample collected from TP-03 at a depth of ten feet bgs.

- Remaining analysis of soil samples for RCRA 8 metals plus zinc, SVOCs, and TPH were either not detected above the analytical method reporting limits or were below applicable regulatory screening levels.
- Laboratory analysis of 12 asbestos-containing material (ACM) samples were collected from the four test pits containing suspect ACM. The ACM results are presented in Appendix G of the report and were 1% or less asbestos or non-detect.

3.2 GROUNDWATER DATA SUMMARY

VOCs and RCRA 8 metals plus zinc constituents detected in groundwater samples were compared to the CDPHE CBSGW groundwater MCL standard (2013). Nitrates/nitrite, total nitrogen constituents detected in groundwater were compared to the CDPHE CBSGW domestic and agricultural groundwater standard (2013). The following is a narrative of the test results.

- PCE was detected in all collected groundwater samples above the analytical method reporting limit of 1.0 µg/L with the exception of groundwater samples collected from MW-01 and MW-02 (refer to Table 8 Appendix D). The current CBSGW groundwater MCL standard for this site (5 µg/L) is used due to the anticipation of construction dewatering in this area. PCE exceeding 5 µg/L was detected in the groundwater samples collected from MW-03 (31.4 µg/L), MW-06 (55.3 µg/L), MW-08 (57.0 µg/L), MW-10 (30.7 µg/L), MW-12 (38.9 µg/L) MW-12D (43.5 µg/L) (replicate-duplicate), MW-15 (44.4 µg/L), and MW-16 (55.9 µg/L).
- TCE was detected in the groundwater samples collected from monitoring wells MW-06 (1.43 µg/L), MW-08 (1.43 µg/L), MW-12 (1.15 µg/L), and MW-13 (1.08 µg/L). The current CBSGW groundwater standard for TCE is 5.0 µg/L.
- DCE was detected in the groundwater sample collected from MW-13 at 9.86 µg/L. The current CBSGW groundwater MCL standard for this site (14 µg/L) is used due to the anticipation of construction dewatering in this area that would be discharged to stormwater sewer leading to the South Platte River.
- Dissolved arsenic was detected in the groundwater samples collected from MW-03 (0.0127 mg/L), MW-07 (0.0192 mg/L), and MW-07D (replicate-duplicate) (0.0216 mg/L). The current CBSGW groundwater standard is 0.01 mg/L.

- Nitrates were detected in the groundwater samples collected from MW-05 (14 mg/L), MW-12 (10.16 mg/L), MW-12D (replicate-duplicate) (10.27 mg/L), and MW-15 (11.09 mg/L) (refer to Table 9, Appendix B). The current CBSGW domestic groundwater standard for nitrates is 10 mg/L and the current agricultural groundwater standard is 100 mg/L. Nitrogen containing compound samples (nitrate, nitrite, & TKN) collected as a part of the investigation were not filtered and hence represent conservative results. Applicable state groundwater standards are based on filtered samples so a direct comparison to the state groundwater standards is not applicable.
- Total nitrogen was detected in the groundwater samples collected from MW-01 (15.7 mg/L), MW-05 (16.6 mg/L), MW-07 (12.4 mg/L), MW-07D (replicate-duplicate) (12.9 mg/L), MW-09 (13.4 mg/L), MW-10 (11.1 mg/L), MW-11 (11.5 mg/L), MW-12 (17.4 mg/L), MW-12D (replicate-duplicate) (16.6 mg/L), MW-13 (19.9 mg/L), and MW-15 (16.7 mg/L). The current CBSGW domestic groundwater standard is 10 mg/L and the agricultural groundwater standard is 100 mg/L. Nitrogen containing compound samples (nitrate, nitrite, & TKN) collected as a part of the investigation were not filtered and hence represent conservative results. Applicable state groundwater standards are based on filtered samples so a direct comparison to the state groundwater standards is not applicable.
- Remaining analysis of the groundwater samples for VOCs, nitrates/nitrite, total nitrogen, and RCRA 8 metals plus zinc were either not detected above the analytical method reporting limits or were below their respective CDPHE CBSGW.

3.3 SOIL VAPOR SUMMARY

Petroleum hydrocarbon constituents detected in soil vapor samples were compared to the CDLE-OPS RBSLs (2005). Other VOC constituents were compared to the CDPHE Indoor Air Screening Concentrations (2012) and USEPA RSL (2014) Composite Worker Ambient Air Table. The following is a narrative of the test results.

- Field screening of all the soil vapor points with the MultiRae® 6-gas measured elevated levels of the LEL in SV-02S (99%), SV-08 (45%), SV-12S (100%), and SV-12D (100%). The USEPA action level for a combustible atmosphere is a LEL greater than 10% (USEPA Office of Solid Waste and Emergency Regulations (OSWER) Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air – June 2015).
- Analytical results for Alkanes (i.e.: methane, ethane and propane) were evaluated from soil vapor samples collected from selected soil vapor wells. Alkanes were detected in SV-02S (14.5% methane, 1.27% ethane, and 0.016% propane by volume in air). According to discussions with CCoD, the source of the elevated alkanes observed in SV-2 were confirmed to be thermogenic natural gas from a natural gas pipeline leak in the area, which subsequent to the investigation has been repaired by Xcel Energy.

- The methane analytical result for SV-12S was 16.3% by volume in air which is well above methane's lower explosive limit of 5% by volume in air. USEPA Office of Solid Waste and Emergency Regulations (OSWER) "Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air" identify use condition levels of methane of greater than 10% of the LEL, which is equivalent to 0.5% by volume in air, as critical.

- PCE was detected in soil vapor samples: SV-06 (180 µg/m³), SV-08 (161 µg/m³), SV-12 (20.2 µg/m³), SV-13 (42.2 µg/m³), SV-17 (3,146 µg/m³), SV-19 (835 µg/m³), and MW-06 (54.8 µg/m³). In comparing these soil vapor concentrations to CDPHE Indoor Air Screening Concentration to the Work Action Level for PCE (1,750 µg/m³) consistent with the intended future land use and applying a 10x attenuation factor to account for attenuation through a concrete slab floor, all the results expect for SV-17 would be less than the applicable action level. A complete vapor intrusion assessment following USEPA vapor intrusion guidance was not completed as part of the redevelopment area ESA.

- Benzene was detected in the soil vapor sample collected from SV-12 (29.2 µg/m³). This benzene concentration does not exceed the CDPHE Indoor Air Screening Concentration for Worker Action Level (16 µg/m³) after applying a 10x attenuation factor to account for attenuation through a concrete floor slab. A complete vapor intrusion assessment following USEPA vapor intrusion guidance was not completed as part of the redevelopment area ESA.

- Ethylbenzene was detected in the soil vapor sample collected from SV-12 (26.6 µg/m³). This ethylbenzene concentration exceeds the CDPHE Indoor Air Screening Concentration for the Residential Remediation Goal (9.7 µg/m³) and below the respective Residential Action Level (97 µg/m³), Worker Remediation Goal (49 µg/m³), and Worker Action Level (490 µg/m³). A 10x attenuation factor is applied to these values to account for diminishment of the compound as it passes through a concrete floor slab. Based on the proposed property use, a conservative value is the Worker Remediation Goal that represents a 1x10⁻⁶ prescribed carcinogenic risk.

- Toluene (55.2 µg/m³) and total xylenes (637 µg/m³), were detected in soil vapor sample SV-12. These concentrations are below their respective, calculated CDPHE Indoor Air Screening Concentrations.

- TVPH was detected in the soil vapor samples collected from SV-12 (190 mg/m³), exceeds the USEPA RSLs Composite Worker Ambient Air Concentration (130 mg/m³). TVPH was also detected in SV-17 (3.15 mg/m³) and MW-06 (81.9 mg/m³) below the USEPA RSLs Composite Worker Ambient Air Concentration (130 mg/m³). A 10x attenuation factor is

applied to these values to account for retardation of the compound as it passes through a concrete floor slab. The goals for CDPHE Indoor Air Screening Concentrations have not been established for TVPH.

- Remaining analysis of the soil vapor samples for alkanes, VOCs, and TVPH were either not detected above the analytical method reporting limits or were below their respective CDPHE Indoor Air Screening Concentrations.

4.0 QUALITY ASSURANCE/QUALITY CONTROL

The data was reconciled according to the data quality objectives (DQOs) by the assessment of data precision, accuracy, representativeness, comparability, completeness and sensitivity.

Precision is the degree of agreement among individual measurements of the same property usually under prescribed similar conditions. Field precision was achieved by consistently following sampling protocols. Laboratory accuracy was assessed by examining the results of laboratory and field replicate samples. The result is expressed in terms of the relative percent difference (RPD). The assessment of precision is detailed below.

Accuracy is the degree of agreement of a measurement with an accepted reference or true value. Field accuracy was achieved by adhering to sample collection, handling, preservation and holding time requirements. Laboratory accuracy was assessed by examining the results of laboratory spike samples and surrogates. The result is expressed in terms of the percent recovery (%R). The assessment of accuracy is detailed below.

Representativeness is the degree to which a sample or group of samples reflects the characteristics of the media at the sampling point and how well the sampling point represents the actual parameter variations that are being studied. Analytical methods, sampling protocols and locations representative of the media and conditions being measured were set forth in the SAP. Representativeness was achieved by consistently following these methods and protocols.

Comparability is a qualitative parameter that expresses the confidence with which one set of data can be compared to another. The collected data were comparable as the collection techniques were in accordance with standard quality assurance procedures and the subcontracted laboratories used standardized analytical methods and consistent reporting units for the samples reported on a dry weight basis.

Completeness is the amount of valid data obtained compared to the amount that is expected, and necessary, to meet the DQOs. Although deviations to the sampling occurred due to site conditions, all planned samples were collected and one additional sampling location was added to the investigation. No data were found to be unusable.

Sensitivity is based on the analytical instrument reporting limits, and which are compared to regulatory requirements. The laboratory reporting limits and method detection limits were considered and found acceptable relative to thresholds of regulatory comparison.

4.1 REPLICATE-DUPLICATE SAMPLES

4.1.1 SOIL

Replicate-duplicate soil samples were collected from soil borings: MW-02, MW-07, MW-10, and MW-16 for RCRA 8 metals plus zinc. The precision of the sampling program is calculated by the RPD method. RPDs were calculated only for results at or above method reporting limits. Terracon does not calculate RPDs for estimated values because of the inherent uncertainty of the analyte concentrations.

Per Terracon's internal operating procedures, an RPD of 50%, or less, is acceptable for soil samples. The calculated RPDs for MW-2 (0-6") silver (59%), MW-2 (0-6") mercury (84%), MW-10 (6-24") cadmium (70%), MW-16 (0-6") cadmium (58%), and MW-16 (6-24") mercury (70%) were above 50%. Remaining calculated RPDs were below 50%, and their precision of the soil sampling program was determined to be acceptable. Samples exceeding the RPD acceptance criteria were all below soil screening levels. Quality assurance/quality control sample analyses for soil is provided in Table 10A of Appendix D.

4.1.2 GROUNDWATER

Dissolved metals, PCE, and nitrite/nitrates/total nitrogen were detected in the groundwater samples collected from monitoring wells MW-07 and MW-12. Replicate-duplicate samples were collected from these wells for analysis and are identified as MW-07D and MW-12D. The precision of the sampling program is calculated by the RPD method. RPDs were calculated for these samples.

Per Terracon's internal operating procedures, an RPD of 30%, or less, is acceptable for groundwater samples. The calculated RPDs for MW-7 arsenic (12%), barium (19%), cadmium (6%), chromium (5%), selenium (10%), silver (2%), zinc (15%), PCE (10%), nitrate/nitrogen (1%), nitrite/nitrogen (1%), total Kjeldahl nitrogen (9%), total nitrogen (4%) was less than 30%, therefore the precision of the groundwater sampling program was determined to be acceptable.

The calculated RPDs for MW-12 arsenic (4%), barium (6%), selenium (5%), silver (9%), PCE (11%), nitrate/nitrogen (1%), nitrite/nitrogen (1%), total Kjeldahl nitrogen (13%), total nitrogen (5%) was less than 30%, therefore the precision of the groundwater sampling program was determined to be acceptable. RPD was not calculated for non-detected constituents' cadmium, chromium, and zinc. Quality assurance/quality control sample analyses for groundwater is provided in Table 10B of Appendix D.

4.2 RINSATE SAMPLE

Sample NWSS-RINSATE was collected and analyzed to evaluate the adequacy of the decontamination of the well sampling equipment (interface probe). The rinsate sample was collected following the decontamination of the probe after measuring the water level in monitoring

well MW-16. Rinsate sample NWSS-Rinsate was obtained by spraying the probe tip with distilled water and collecting the water into 40-milliliter vials. The rinsate sample was analyzed for VOCs by USEPA Method 8260B.

Laboratory analysis of rinsate sample NWSS-Rinsate did not detect VOCS above the analytical method reporting limits, indicating a low potential for cross-contamination of samples via the sampling equipment using decontamination protocol developed for the project. A quality assurance/quality control sample analysis for the sample is provided in Table 10C of Appendix D.

5.0 DATA EVALUATION

The data set is limited and testing represents an analytical “snapshot” of site conditions.

5.1 SOIL

Arsenic concentrations detected in soil were below the VB/I-70 OU1 (residential) arsenic cleanup standard of 70 mg/kg (USEPA, 2003). The average background level of lead in the soils is approximately 8 to 15 mg/kg (USEPA, 2003). The background levels of arsenic may have potentially contributed to the concentrations that exceed the USEPA Industrial RSL of (3.0 mg/kg).

Elevated concentrations of lead were present in the soil samples collected from SB-05/0-6” (773 mg/kg), SB-08/0-6” (560 mg/kg), SB-08/6-24” (790 mg/kg), MW-12/0-6” (403 mg/kg), SV-20/0-6” (875 mg/kg), and TP-02/2’ (536 mg/kg). The average background level of lead in the soils is approximately 195 mg/kg (USEPA, 2003). Background level of lead and/or lead containing product usage from historical businesses in the area, may have potentially contributed to this occurrence. Lead in Soil Exceedance Map is provided as Exhibit 4A in Appendix A.

Petroleum hydrocarbons as diesel range organics were detected at 500 mg/kg in the soil sample collected from test pit TP-07 at a depth of 7 feet bgs. Laboratory analysis of this soil sample for SVOCs did not detect concentrations above the analytical method reporting limits.

SVOCs that exhibited an exceedance of the USEPA RSLs in soil occurred in the samples collected from TP-03 at a depth of 10 feet bgs. Benzo(a)anthracene was detected at 14 mg/kg, benzo(b)fluoranthene was detected at 26 mg/kg, and benzo(a)pyrene was detected at 13 mg/kg. The USEPA Industrial RSLs for these individual constituents is 2.9 mg/kg for each constituent. TP-03 is located in the area where former auto repair businesses, biofuels refinery, fertilizer rendering, and lard refining were historically performed. SVOC and TPH Concentration Map is provided as Exhibit 4B in Appendix A.

Based on the soil sampling and analytical program, petroleum-impacted soil is present in the parking lot areas west of National Western Drive. These areas are where historical buildings were once present and possibly were demolished in place and buried.

The limited scope of this LSI was not sufficient to assess the lateral and vertical extents of soil impacts. Additionally, of soil impacts or the potential for off-site sources of impacts from facilities off-site. Additional soil sampling and analysis would need to be completed to further evaluate extents and sources of soil impacts or addressed through a Materials Management Plan to manage contaminated soils during redevelopment earth moving activities.

5.2 GROUNDWATER

The results of groundwater sampling of site monitoring wells indicate that the chlorinated hydrocarbon PCE is present in the groundwater at a concentration that exceeds the (CBSGW). The occurrence of PCE in the groundwater may be attributable to historical operations in the area and/or current dry cleaning operations in the site vicinity. The highest PCE detections in groundwater occurred in the samples collected from the eastern portion of the project site.

PCE was detected in the groundwater samples collected from MW-03 (31.4 µg/L), MW-06 (55.3 µg/L), MW-08 (57 µg/L), MW-15 (44.4 µg/L), and MW-16 (55.9 µg/L) and may be attributable to a historical dry cleaners operation that once was present at 1632 East 47th Avenue. PCE was also detected in the north/central portion of the site in the groundwater samples collected from monitoring wells MW-10 (30.7 µg/L) and MW-12 (38.9 µg/L). The occurrence of PCE in this area may be attributable to historical machinery repair operations in the area and/or potential off-site sources. A PCE Concentration in Groundwater Map is provided as Exhibit 5A in Appendix A.

Dissolved arsenic in groundwater that exceeds the CDPHE groundwater standard of 0.01 mg/L occurred in the groundwater samples collected from MW-03 (0.0127 mg/L), MW-07 (0.0192 mg/L), and (replicate-duplicate) sample MW-07D (0.0216 mg/L). The occurrence of dissolved arsenic in the groundwater may be attributable to anthropogenic and/or natural sources in this area. Arsenic is nearly immobile in topsoil, and leaches at a slow rate, on the scale of decades or more (Aten et al., 1980). Further investigation would be necessary to determine the source as anthropogenic and/or background. Dissolved Arsenic Concentration in Groundwater Map is provided as Exhibit 5B in Appendix A.

5.3 SOIL VAPOR

Each soil vapor well was purged three times. Field screening readings were taken each time and all three vapor well purge readings were reported in Table 6, Appendix G. Soil vapor screening measured vapors that exhibited a high percentage of the lower explosive limit (LEL) in the vapor stream sampled from SV-02S (99%), SV-08 (45%), SV-12S (100%), and SV-12D (100%). Methane was detected in SV-02 (14.5%) and SV-12 (16.3%). Ethane and propane was detected in SV-02 (1.27% and 0.016%, respectively). It should be noted that the SV-08 LEL readings were inconsistent during purging at 45%, 5% and 0% for the 1st, 2nd and 3rd readings, respectively, which may indicate the first reading is anomalous. Other soils vapor well readings were consistent during purging.

SV-02 is located at the southwest portion of the project area near an historic landfill and natural gas pipelines. Based on alkane analysis, the presence of methane, ethane and propane indicate thermogenic gas rather than biogenic gas (Weatherford Laboratories, 2011). The source of the alkane gases in the soil is likely a natural gas pipeline leak as previously reported. SV-08 is located in a lot west of National Western Drive. This area exhibited large amounts of building debris during the investigation possibly buried decomposing material is the source of these vapors. SV-12S and SV-12D are located along Brighton Boulevard across from the Denver Public Schools (DPS) property that was reportedly used as a landfill. Based the non-detection of ethane and propane from the alkane analysis indicates biogenic gas rather than thermogenic gas. The source of methane could potentially be methane generating materials beneath the DPS property.

Soil gas concentrations of PCE were detected in soil gas wells (i.e. SV-17S and SV-19D) that exceeded the screening levels reference on table 7. These wells are located within the boundary of the PCE groundwater plume. Additionally, elevated concentrations of PCE were detected in the vapor sample collected from monitoring well MW-06 (54.8 $\mu\text{g}/\text{m}^3$). The well head of this monitoring well were fitted with a coupling in order to extract soil vapor from this well. Since this well was completed as a groundwater monitoring well and not a soil gas well, the results may or may not be representative of soil gas impacts.

6.0 CONCLUSIONS

Terracon provides the following conclusions:

6.1 SOILS

- Building debris is present in the subsurface west of National Western Drive. These areas are presently used as parking lots. This debris material consists of bricks, wood, concrete, rebar, and steel. This debris was encountered from a depth of less than one foot bgs to a depth of seven feet bgs.
- The western portion of the site subsurface lithology consists of interbedded layers of sand silt with gravel, well graded sand with gravel, and interbedded silty clay.
- The central portion of the site subsurface lithology consists of sandy silty clay to clayey sand, well graded sand with gravel, and shallow weathered claystone bedrock high/ridge at a depth of 13 to 15.5 feet bgs.
- The eastern portion of the site subsurface lithology consists of silty sand with gravel, well graded sand with gravel, and well graded sand with cobbles.
- Arsenic concentrations detected in soil were below the I-70/Vasquez Boulevard OU1 cleanup standard of 70 mg/kg (USEPA, 2003). The background levels of arsenic in the

area may have potentially contributed to the concentrations that exceed the USEPA residential and industrial RSL.

- Lead was detected in 6 soil samples that exceeded USEPA Residential and Industrial RSL. The background levels of lead in the area may have potentially contributed to the concentrations that exceed the USEPA Residential and Industrial RSL.
- Since no storage tanks were identified in the redevelopment area, the spatially-limited SVOC exceedances of the USEPA industrial soil screening levels related to soil observed on site would indicate a limited impact of subsurface soil which could be addressed during redevelopment through implementation of a Materials Management Plan (MMP) and Colorado Department of Public Health and Environment's (CDPHE) Voluntary Cleanup Program (VCUP).
- VOCs were not detected in the soil samples collected during this investigation that exceeded USEPA residential or industrial RSLs or CDPHE CSEV Groundwater Protection Levels.

6.2 GROUNDWATER

- Groundwater predominantly occurred in well-graded, medium to coarse sands with occasional gravel, as previously stated in the report and as cited in the soil boring logs, at depths ranging from 6.07 feet bgs (MW-10) to 32.49 feet bgs (MW-14). The inferred groundwater flow direction is toward the northwest.
- Dissolved arsenic in groundwater that exceeds the current CDPHE groundwater standard of 0.01 mg/L occurred in the groundwater samples collected from MW-03 (0.0127 mg/L), MW-07 (0.0192 mg/L), and (replicate-duplicate) sample MW-07D (0.0216 mg/L). Further investigation would be necessary to determine the source as anthropogenic and/or naturally occurring.
- PCE in groundwater that exceeds the current CBSGW of 5 µg/L occurred in the groundwater samples collected from MW-03 (31.4 µg/L), MW-06 (55.3 µg/L), MW-08 (57 µg/L), MW-10 (30.7 µg/L), MW-12 (43.5 µg/L), MW-15 (44.4 µg/L), and MW-16 (55.9 µg/L). Further investigation would be necessary to determine the source and/or sources of PCE impacts.
- TCE in groundwater was detected below the current CBSGW of 5 µg/L.
- DCE in groundwater was detected below the current CBSGW of 5 µg/L.

- Nitrates were detected in the some groundwater samples collected which were greater than 10 mg/L; all sample results were less than 20 mg/L. The current CBSGW domestic groundwater standard for nitrates is 10 mg/L and the current agricultural groundwater standard is 100 mg/L. Nitrogen containing compound samples (nitrate, nitrite, & TKN) collected as a part of the investigation were not filtered prior to testing and therefore represent biased-conservative results. Applicable state groundwater standards are based on filtered samples so a direct comparison is not applicable. Nitrogen containing compound results in some areas were slightly above the most stringent standard of 10 mg/L. Considering the conservative nature of the unfiltered samples results (biased conservatively high), filtered sample results would likely be significantly less than this standard.

6.3 SOIL VAPOR

- Field screening of all the soil vapor points with the MultiRae® 6-gas measured elevated levels of the LEL in SV-02S (99%), SV-12S (100%), and SV-12D (100%). SV-08 LEL readings were inconsistent during purging at 45%, 5% and 0% for the 1st, 2nd and 3rd reading, respectively, which may indicate the first reading is anomalous. Other LEL readings were consistent. Soil gas concentrations of PCE were detected in soil gas wells (i.e. SV-17S and SV-19D) that exceeded the screening levels reference on table 7. These wells are located within the boundary of the PCE groundwater plume which transects the site. Further investigation or evaluation of soil gas impacts and impacts to the planned redevelopment of the property may be warranted.
- Benzene was detected in the soil vapor sample collected from SV-12 (29.2 µg/m³). Further investigation or evaluation of soil gas impacts and impacts to the planned redevelopment of the property may be warranted. Further

7.0 RECOMMENDATIONS

Terracon provides the following recommendations with respect to this limited environmental site investigation:

- Supplemental environmental investigation utilizing test pits to define the horizontal and vertical extent of construction debris buried west of National Western Drive. Field investigation may encounter Potentially Asbestos Containing Material (PACM). A Colorado Asbestos Building Inspector (CABI) should observe all intrusive activities to verify compliance with current regulations related PACM.
- Site soil vapor concentrations as noted above and in the Pinyon report potentially emanating from an off-site source may affect site infrastructure development as well as building construction. Additional assessment of soil vapor should be considered within the proposed redevelopment and construction area. The installation of additional vapor points near landfills and proposed structures should be used to evaluate the presence of

alkanes (methane, ethane, and propane) and VOCs specifically (PCE, TCE, DCE, etc. and benzene as well as other regulated hydrocarbons).

- Given the results of this investigation and the historical activities both on the subject parcels and adjacent to the site, the City and County of Denver and other partners in the redevelopment of the National Western Center should consider entering the project site into the CDPHE Voluntary Cleanup Program (VCUP) to facilitate on-site remediation of environmental contamination. The VCUP program provides property owners with the resources to aid cleanups and protection from regulatory enforcement over environmental liability. Once accepted into the VCUP, environmental remediation tax credits may be available for qualified expenses in remediating the property. As part of the VCUP, a Materials Management Plan (MMP) will be prepared to manage environmentally impacted soils, groundwater and soil vapor encountered during site infrastructure installation/relocation as well as new construction activities.
- In the event that underground storage tanks (USTs) and/or UST-related fuel releases are discovered during redevelopment, the CDLE-OPS Petroleum Storage Tank Fund may provide resources to assist eligible tank owner/operators and non-responsible parties with tank assessment, characterization, removal and remediation of petroleum releases.
- Monitoring wells should be permitted if they are intended for permanent (i.e. greater than one year) use. In the event monitoring wells are not intended for future sampling, monitoring wells should be properly abandoned in accordance with water well construction rules.

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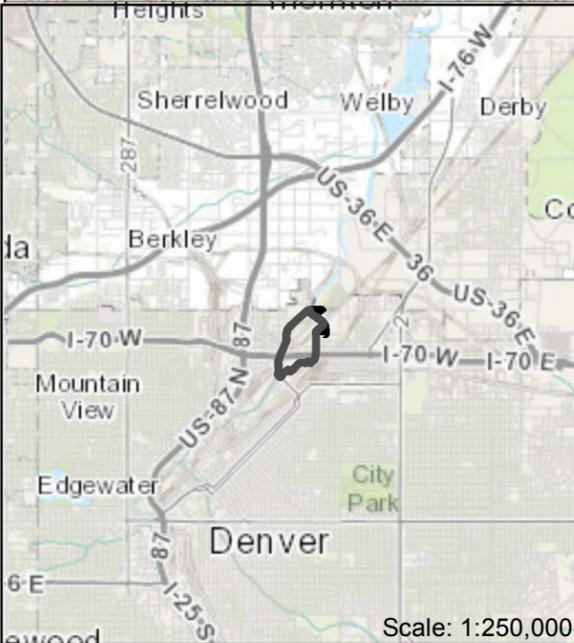
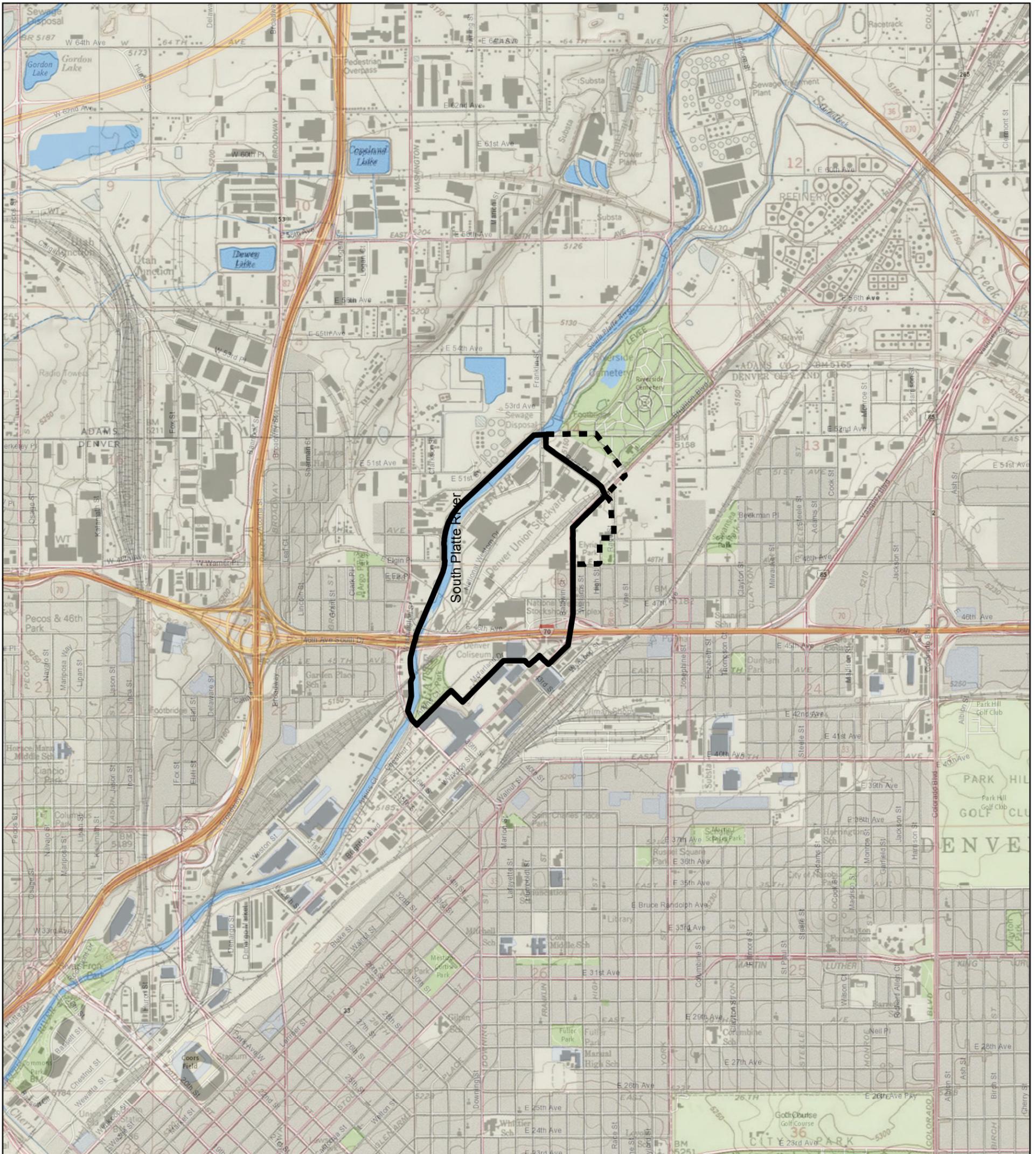
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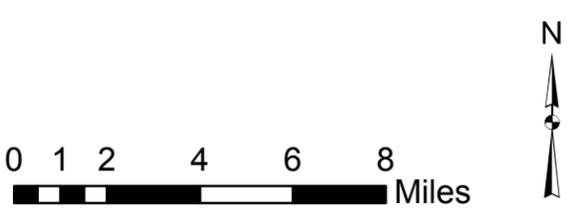
APPENDIX A

EXHIBITS



Legend

- Primary Study Area Boundary
- Secondary Study Boundary



Project No.: 25157010
 Drawn By: MRH
 Checked By: MEW
 Date: July 2015

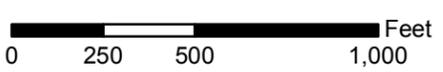
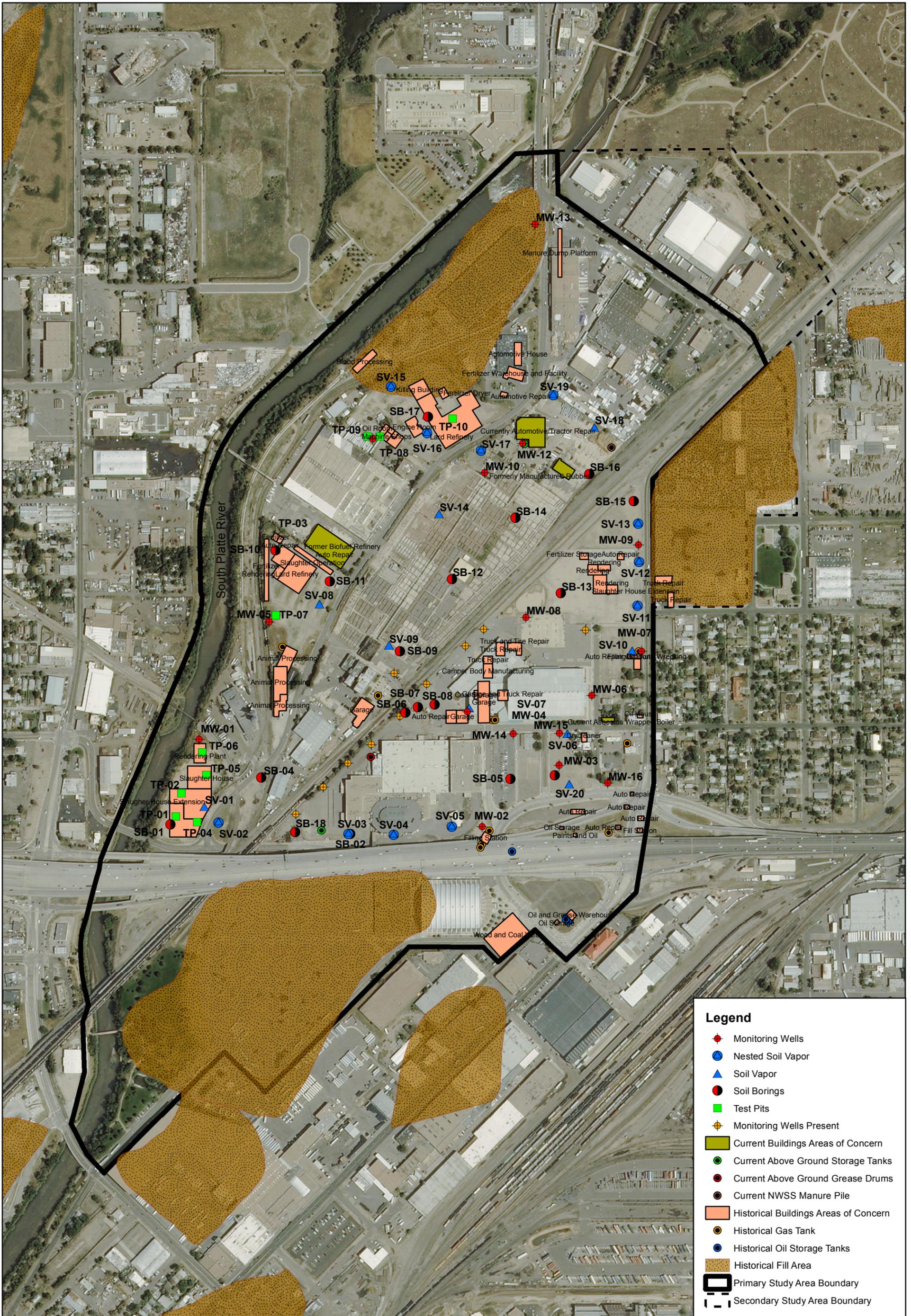
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TOPOGRAPHIC/SITE LOCATION MAP

NATIONAL WESTERN COMPLEX REDEVELOPMENT PROJECT
 DENVER, COLORADO

EXHIBIT

1



Coordinate System: State Plane Colorado Central FIPS 0502
 Projection: Lambert Conformal Conic
 Datum: North American 1983 HARN



Project No.: 25157010
 Drawn By: MRH
 Checked By: MEW
 Date: July 2015

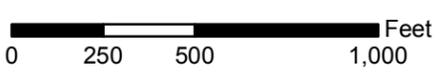
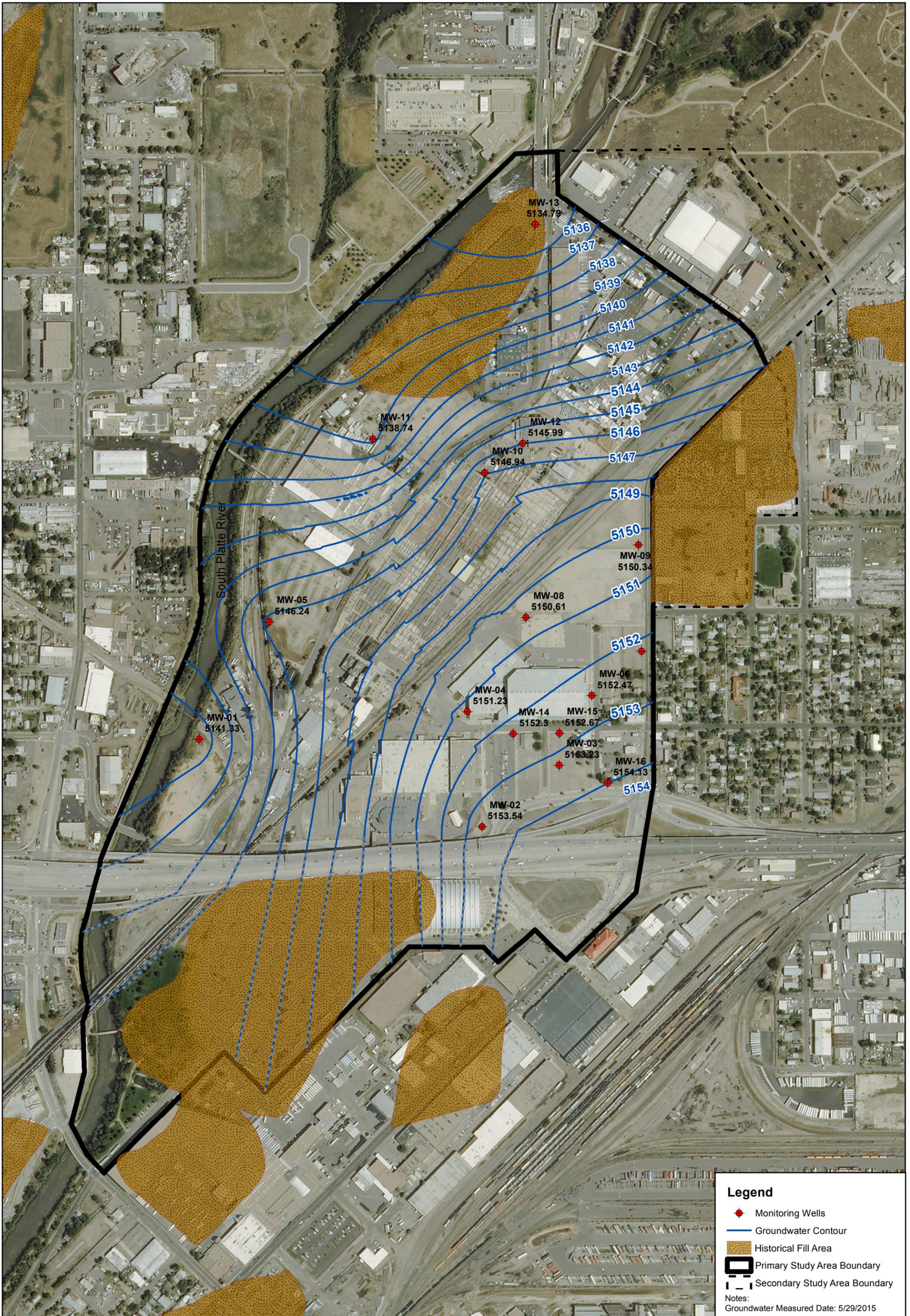
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SITE MAP

NATIONAL WESTERN CENTER
 REDEVELOPMENT PROJECT
 DENVER, COLORADO

EXHIBIT

2



Coordinate System: State Plane Colorado Central FIPS 0502
 Projection: Lambert Conformal Conic
 Datum: North American 1983 HARN



Project No.: 25157010
 Drawn By: MRH
 Checked By: MEW
 Date: July 2015

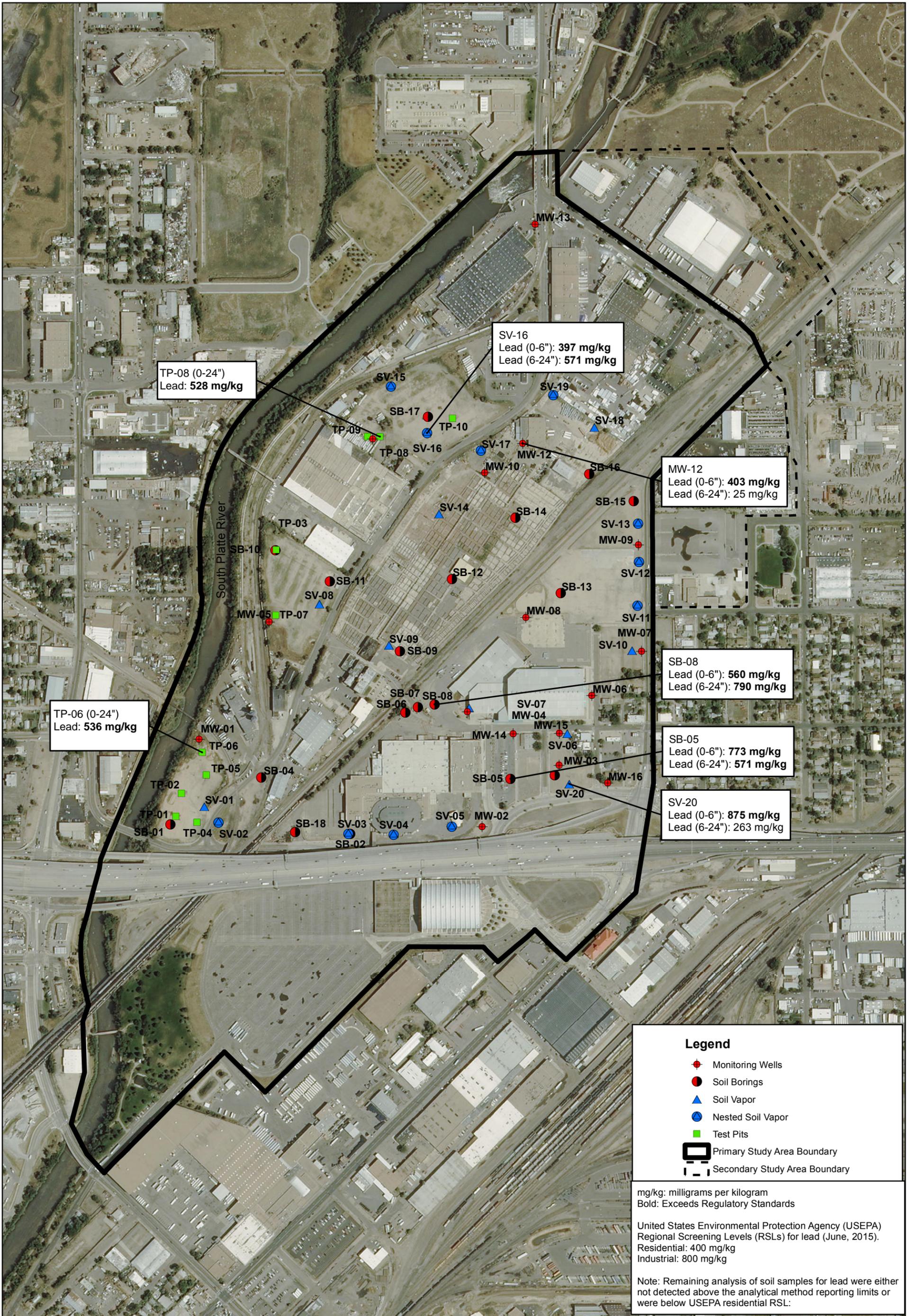
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POTENTIOMETRIC SURFACE MAP

NATIONAL WESTERN CENTER
 REDEVELOPMENT PROJECT
 DENVER, COLORADO

EXHIBIT

3



TP-06 (0-24")
Lead: 536 mg/kg

TP-08 (0-24")
Lead: 528 mg/kg

SV-16
Lead (0-6"): 397 mg/kg
Lead (6-24"): 571 mg/kg

MW-12
Lead (0-6"): 403 mg/kg
Lead (6-24"): 25 mg/kg

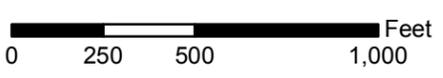
SB-08
Lead (0-6"): 560 mg/kg
Lead (6-24"): 790 mg/kg

SB-05
Lead (0-6"): 773 mg/kg
Lead (6-24"): 571 mg/kg

SV-20
Lead (0-6"): 875 mg/kg
Lead (6-24"): 263 mg/kg

- Legend**
- Monitoring Wells
 - Soil Borings
 - ▲ Soil Vapor
 - ▲ Nested Soil Vapor
 - Test Pits
 - ▭ Primary Study Area Boundary
 - - - Secondary Study Area Boundary

mg/kg: milligrams per kilogram
Bold: Exceeds Regulatory Standards
 United States Environmental Protection Agency (USEPA)
 Regional Screening Levels (RSLs) for lead (June, 2015).
 Residential: 400 mg/kg
 Industrial: 800 mg/kg
 Note: Remaining analysis of soil samples for lead were either not detected above the analytical method reporting limits or were below USEPA residential RSL:



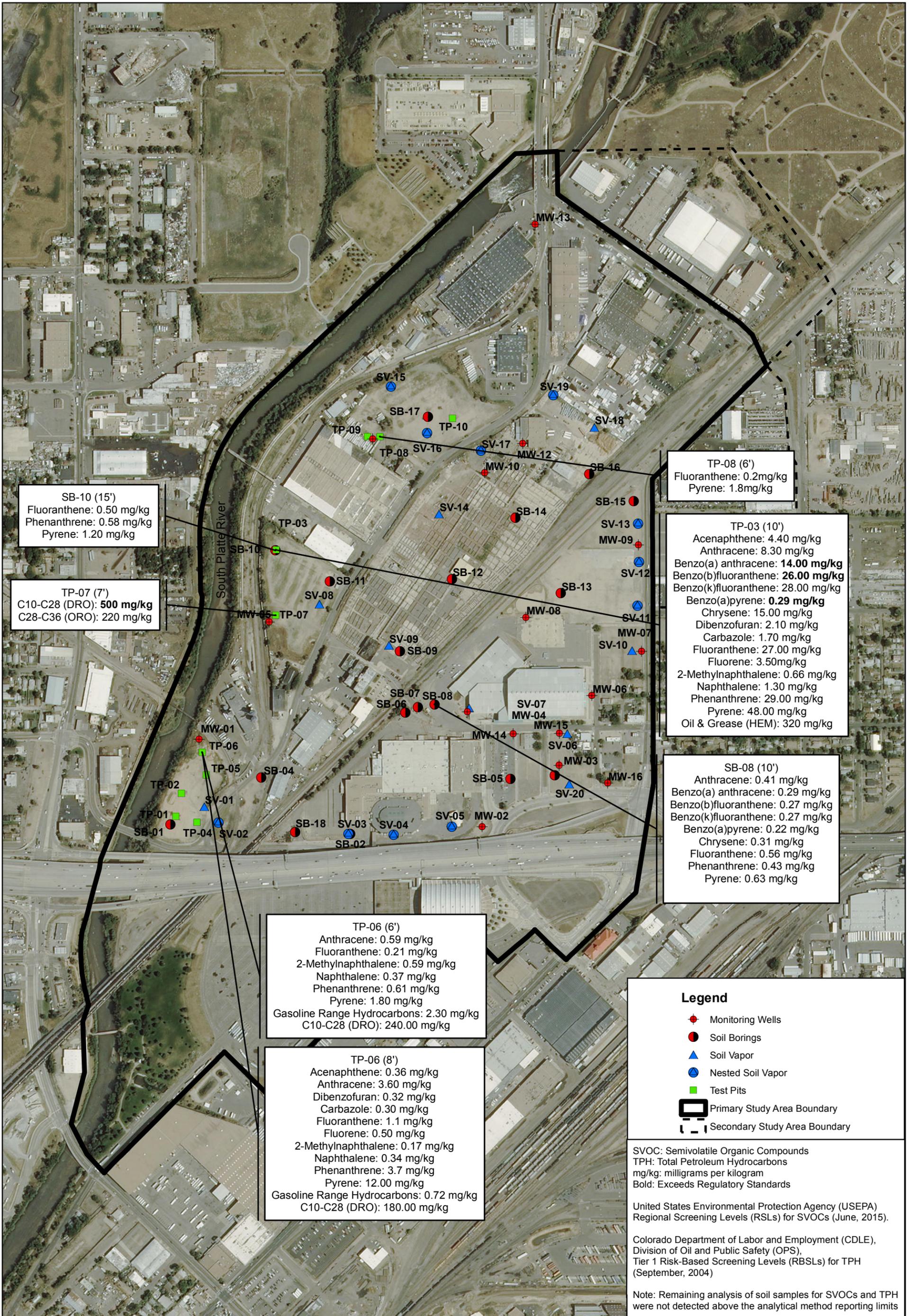
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LEAD IN SOIL EXCEEDANCE MAP
 NATIONAL WESTERN CENTER
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 DENVER, COLORADO

EXHIBIT
4A



SB-10 (15')
 Fluoranthene: 0.50 mg/kg
 Phenanthrene: 0.58 mg/kg
 Pyrene: 1.20 mg/kg

TP-07 (7')
 C10-C28 (DRO): **500 mg/kg**
 C28-C36 (ORO): 220 mg/kg

TP-08 (6')
 Fluoranthene: 0.2mg/kg
 Pyrene: 1.8mg/kg

TP-03 (10')
 Acenaphthene: 4.40 mg/kg
 Anthracene: 8.30 mg/kg
 Benzo(a) anthracene: **14.00 mg/kg**
 Benzo(b)fluoranthene: **26.00 mg/kg**
 Benzo(k)fluoranthene: 28.00 mg/kg
 Benzo(a)pyrene: **0.29 mg/kg**
 Chrysene: 15.00 mg/kg
 Dibenzofuran: 2.10 mg/kg
 Carbazole: 1.70 mg/kg
 Fluoranthene: 27.00 mg/kg
 Fluorene: 3.50mg/kg
 2-Methylnaphthalene: 0.66 mg/kg
 Naphthalene: 1.30 mg/kg
 Phenanthrene: 29.00 mg/kg
 Pyrene: 48.00 mg/kg
 Oil & Grease (HEM): 320 mg/kg

SB-08 (10')
 Anthracene: 0.41 mg/kg
 Benzo(a) anthracene: 0.29 mg/kg
 Benzo(b)fluoranthene: 0.27 mg/kg
 Benzo(k)fluoranthene: 0.27 mg/kg
 Benzo(a)pyrene: 0.22 mg/kg
 Chrysene: 0.31 mg/kg
 Fluoranthene: 0.56 mg/kg
 Phenanthrene: 0.43 mg/kg
 Pyrene: 0.63 mg/kg

TP-06 (6')
 Anthracene: 0.59 mg/kg
 Fluoranthene: 0.21 mg/kg
 2-Methylnaphthalene: 0.59 mg/kg
 Naphthalene: 0.37 mg/kg
 Phenanthrene: 0.61 mg/kg
 Pyrene: 1.80 mg/kg
 Gasoline Range Hydrocarbons: 2.30 mg/kg
 C10-C28 (DRO): 240.00 mg/kg

TP-06 (8')
 Acenaphthene: 0.36 mg/kg
 Anthracene: 3.60 mg/kg
 Dibenzofuran: 0.32 mg/kg
 Carbazole: 0.30 mg/kg
 Fluoranthene: 1.1 mg/kg
 Fluorene: 0.50 mg/kg
 2-Methylnaphthalene: 0.17 mg/kg
 Naphthalene: 0.34 mg/kg
 Phenanthrene: 3.7 mg/kg
 Pyrene: 12.00 mg/kg
 Gasoline Range Hydrocarbons: 0.72 mg/kg
 C10-C28 (DRO): 180.00 mg/kg

Legend

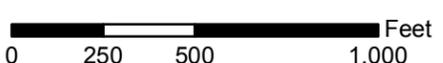
- Monitoring Wells
- Soil Borings
- ▲ Soil Vapor
- ▲ Nested Soil Vapor
- Test Pits
- ▭ Primary Study Area Boundary
- - - Secondary Study Area Boundary

SVOC: Semivolatile Organic Compounds
 TPH: Total Petroleum Hydrocarbons
 mg/kg: milligrams per kilogram
 Bold: Exceeds Regulatory Standards

United States Environmental Protection Agency (USEPA)
 Regional Screening Levels (RSLs) for SVOCs (June, 2015).

Colorado Department of Labor and Employment (CDLE),
 Division of Oil and Public Safety (OPS),
 Tier 1 Risk-Based Screening Levels (RBSLs) for TPH
 (September, 2004)

Note: Remaining analysis of soil samples for SVOCs and TPH
 were not detected above the analytical method reporting limits



Coordinate System: State Plane Colorado Central FIPS 0502
 Projection: Lambert Conformal Conic
 Datum: North American 1983 HARN

Project No.: 25157010
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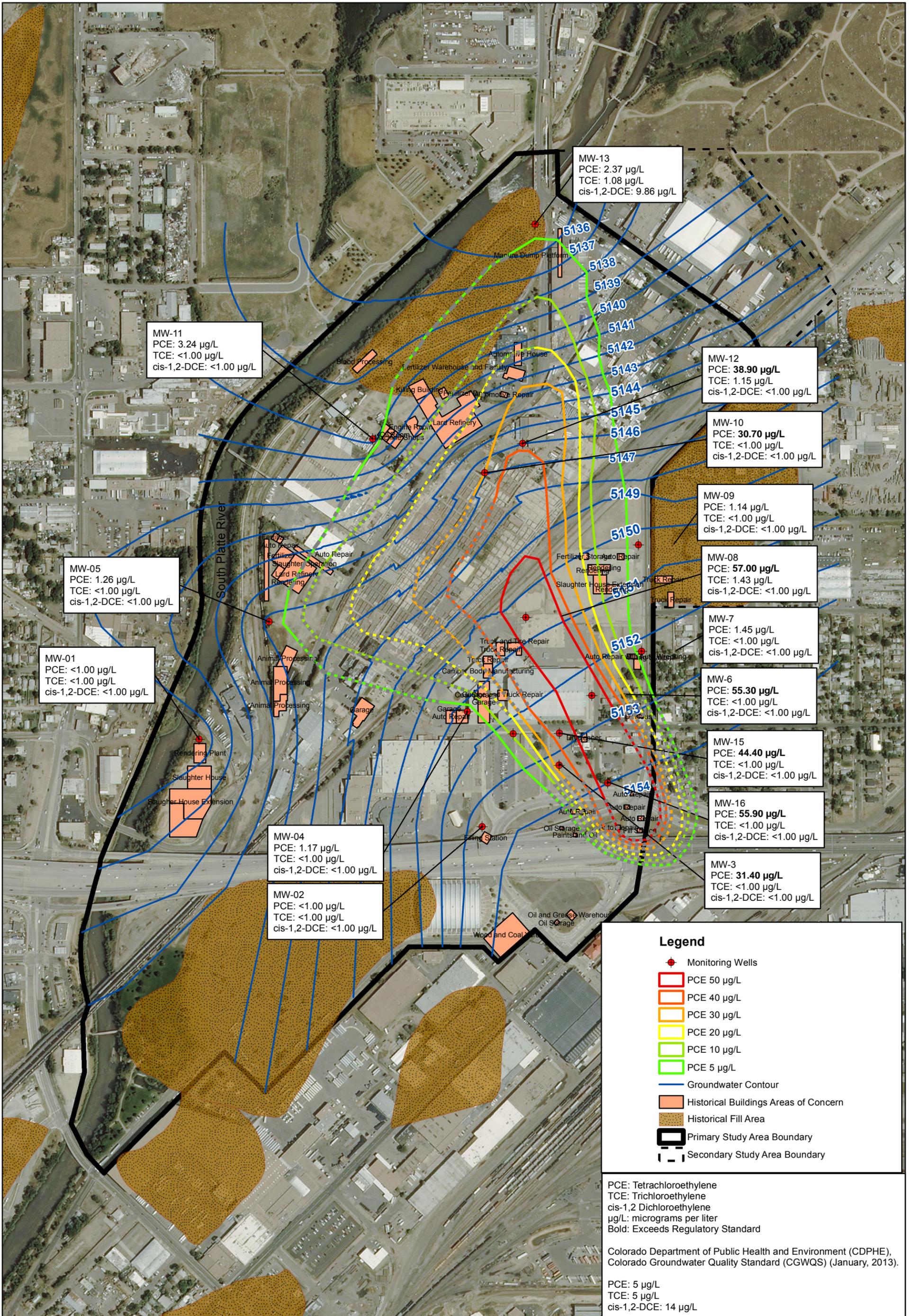
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**SVOC AND TPH DETECTED
 CONSTITUENTS IN SOIL MAP**

NATIONAL WESTERN CENTER
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 DENVER, COLORADO

EXHIBIT
4B



MW-11
 PCE: 3.24 µg/L
 TCE: <1.00 µg/L
 cis-1,2-DCE: <1.00 µg/L

MW-13
 PCE: 2.37 µg/L
 TCE: 1.08 µg/L
 cis-1,2-DCE: 9.86 µg/L

MW-12
 PCE: **38.90 µg/L**
 TCE: 1.15 µg/L
 cis-1,2-DCE: <1.00 µg/L

MW-10
 PCE: **30.70 µg/L**
 TCE: <1.00 µg/L
 cis-1,2-DCE: <1.00 µg/L

MW-09
 PCE: 1.14 µg/L
 TCE: <1.00 µg/L
 cis-1,2-DCE: <1.00 µg/L

MW-08
 PCE: **57.00 µg/L**
 TCE: 1.43 µg/L
 cis-1,2-DCE: <1.00 µg/L

MW-7
 PCE: 1.45 µg/L
 TCE: <1.00 µg/L
 cis-1,2-DCE: <1.00 µg/L

MW-6
 PCE: **55.30 µg/L**
 TCE: <1.00 µg/L
 cis-1,2-DCE: <1.00 µg/L

MW-15
 PCE: **44.40 µg/L**
 TCE: <1.00 µg/L
 cis-1,2-DCE: <1.00 µg/L

MW-16
 PCE: **55.90 µg/L**
 TCE: <1.00 µg/L
 cis-1,2-DCE: <1.00 µg/L

MW-3
 PCE: **31.40 µg/L**
 TCE: <1.00 µg/L
 cis-1,2-DCE: <1.00 µg/L

MW-05
 PCE: 1.26 µg/L
 TCE: <1.00 µg/L
 cis-1,2-DCE: <1.00 µg/L

MW-01
 PCE: <1.00 µg/L
 TCE: <1.00 µg/L
 cis-1,2-DCE: <1.00 µg/L

MW-04
 PCE: 1.17 µg/L
 TCE: <1.00 µg/L
 cis-1,2-DCE: <1.00 µg/L

MW-02
 PCE: <1.00 µg/L
 TCE: <1.00 µg/L
 cis-1,2-DCE: <1.00 µg/L

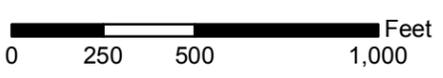
Legend

- Monitoring Wells
- PCE 50 µg/L
- PCE 40 µg/L
- PCE 30 µg/L
- PCE 20 µg/L
- PCE 10 µg/L
- PCE 5 µg/L
- Groundwater Contour
- Historical Buildings Areas of Concern
- Historical Fill Area
- ▭ Primary Study Area Boundary
- ▭ Secondary Study Area Boundary

PCE: Tetrachloroethylene
 TCE: Trichloroethylene
 cis-1,2 Dichloroethylene
 µg/L: micrograms per liter
 Bold: Exceeds Regulatory Standard

Colorado Department of Public Health and Environment (CDPHE),
 Colorado Groundwater Quality Standard (CGWQS) (January, 2013).

PCE: 5 µg/L
 TCE: 5 µg/L
 cis-1,2-DCE: 14 µg/L



Coordinate System: State Plane Colorado Central FIPS 0502
 Projection: Lambert Conformal Conic
 Datum: North American 1983 HARN

Project No.: 25157010
 Drawn By: MRH
 Checked By: MEW
 Date: July 2015

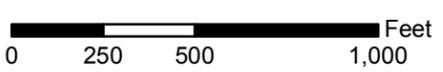
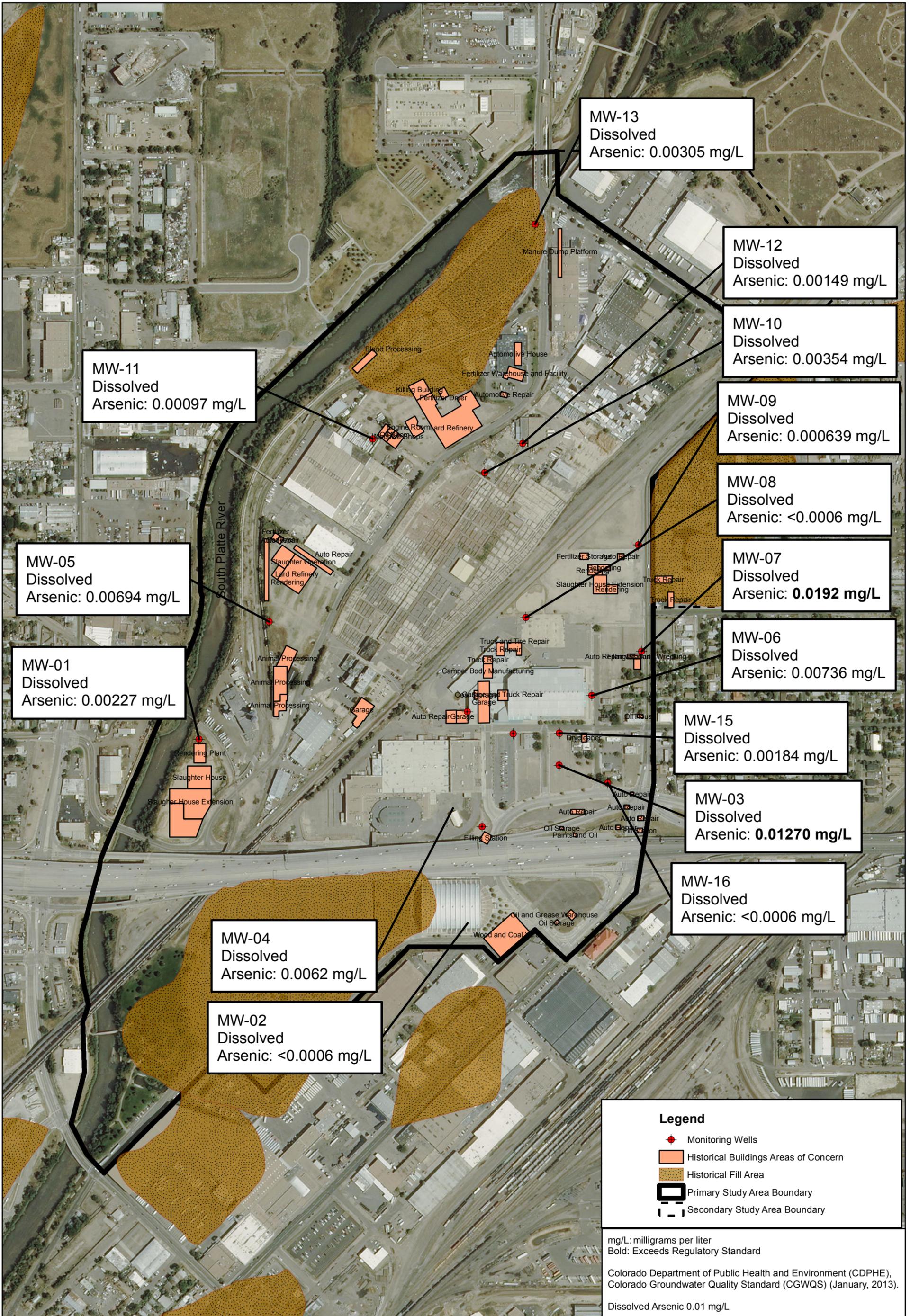
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 PH. (303) 423-3300 terracon.com

PCE CONSTITUENTS IN GROUNDWATER MAP

NATIONAL WESTERN CENTER REDEVELOPMENT PROJECT
 DENVER, COLORADO

EXHIBIT
5A



Coordinate System: State Plane Colorado Central FIPS 0502
 Projection: Lambert Conformal Conic
 Datum: North American 1983 HARN

Project No.: 25157010
 Drawn By: MRH
 Checked By: MEW
 Date: July 2015

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DISSOLVED ARSENIC CONSTITUENTS IN GROUNDWATER MAP

NATIONAL WESTERN CENTER REDEVELOPMENT PROJECT
 DENVER, COLORADO

EXHIBIT
5B

APPENDIX B

SOIL BORING LOGS GROUNDWATER MONITORING WELL AND SOIL VAPOR POINT CONSTRUCTION DETAILS

SOIL BORING LOG NO. SB-01

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.78044° Longitude: -104.97648°	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	SPT N-VALUE	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
DEPTH	MATERIAL DESCRIPTION							
2.0	FILL - SILTY SAND WITH GRAVEL (SM) , fine grained, light brown, dry							
5.5	SM - SILTY SAND WITH GRAVEL (SM) , with cobbles, coarse grained, light brown, dry	5			3	50-4-4-5	0.00	
8.0	SANDY LEAN CLAY (CL) , dark brown, moist							
9.5	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light gray, dry				24	3-6-7-8	7.20	
16.0	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light gray, moist	10			20	5-6-7-6	0.60	
16.0	Boring Terminated at 16 Feet	15	▽					

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

WATER LEVEL OBSERVATIONS

▽ OBSERVED DURING DRILLING ACTIVITIES

Notes:



Boring Started: 4/8/2015	Boring Completed: 4/8/2015
Drill Rig: CME-45	Driller: TERRACON DRILLING
Project No.: 25157010	Exhibit: B-17

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

SOIL BORING LOG NO. SB-02

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.78027° Longitude: -104.97281°	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	SPT N-VALUE	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
DEPTH	MATERIAL DESCRIPTION							
0.5	ASPHALT							
	WELL GRADED SAND WITH GRAVEL (SW) , fine to coarse grained, brown, moist				25	5-5-6-10	17.70	
5.5	WELL GRADED SAND WITH GRAVEL (SW) , with cobbles, fine to coarse grained, brown, moist	5			16	12-13-14-18	18.00	
		10			16	7-10-10-10	18.20	
		15			16	7-11-9-10	13.95	SB-02 (15')
20.0	Boring Terminated at 20 Feet	20	▽					

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS
▽ OBSERVED DURING DRILLING ACTIVITIES



Boring Started: 4/8/2015

Boring Completed: 4/8/2015

Drill Rig: CME-45

Driller: TERRACON DRILLING

Project No.: 25157010

Exhibit: B-18

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

SOIL BORING LOG NO. SB-03

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.78118° Longitude: -104.96861°	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	SPT N-VALUE	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
DEPTH	MATERIAL DESCRIPTION							
4.0	SILTY SAND WITH GRAVEL (SM) , fine to coarse grained, brown, dry				21.5	2-4-4-7	0.00	
7.5	WELL GRADED SAND (SW) , medium to coarse grained, light gray, dry	5						
9.5	WELL GRADED SAND WITH SILT (SW-SM) , medium to coarse grained, light brown, dry				23	10-10-14-14	0.00	
11.5	WELL GRADED SAND (SW) , medium grained, light brown to light gray, dry	10						
	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light brown, dry				23	6-8-8-10	0.00	
		15						
					15	21-12-11-11	0.00	
		20						
					19	7-10-14-17	0.00	SB-03 (25')
25.0	Boring Terminated at 25 Feet	25						

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS



Boring Started: 4/9/2015

Boring Completed: 4/9/2015

Drill Rig: CME-45

Driller: TERRACON DRILLING

Project No.: 25157010

Exhibit: B-19

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

SOIL BORING LOG NO. SB-04

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	SPT N-VALUE	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
	See Exhibit A-2 Latitude: 39.78117° Longitude: -104.97462°							
	MATERIAL DESCRIPTION							
3.0	WELL GRADED SAND WITH SILT (SW-SM) , fine grained, dark gray, dry				4	5-5-4-6	103.3	
5.0	WELL GRADED SAND WITH SILT AND GRAVEL (OL) , fine grained, black, moist							
8.5	WELL GRADED SAND WITH GRAVEL (SW) , with cobbles, fine to coarse grained, light gray to light brown, dry				13	9-9-7-6	48.40	
15.5	WELL GRADED SAND WITH GRAVEL (SW) , fine to coarse grained, light gray to light brown, dry				21	12-16-14-18	301.8	SB-04 (15')
16.0	SEDIMENTARY BEDROCK - CLAYSTONE , brown, moderately weathered							
	<i>Boring Terminated at 16 Feet</i>							

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS
 OBSERVED DURING DRILLING ACTIVITIES



Boring Started: 4/8/2015

Boring Completed: 4/8/2015

Drill Rig: CME-45

Driller: TERRACON DRILLING

Project No.: 25157010

Exhibit: B-20

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

SOIL BORING LOG NO. SB-05

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.78113° Longitude: -104.96951°	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	SPT N-VALUE	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
DEPTH	MATERIAL DESCRIPTION							
6.0	SILTY SAND , fine grained, light brown, dry	5			25	2-2-2-2	83.00	
9.0	WELL GRADED SAND WITH GRAVEL , fine to coarse grained, light brown, dry	10			18	12-13-17-24	37.30	MW-05 (5')
16.0	SILTY SAND , fine grained, light brown, dry	15			19	8-12-16-18	22.40	
25.0	WELL GRADED SAND WITH GRAVEL , coarse grained, light brown, dry	20			22	7-10-13-17	19.55	
25.0	Boring Terminated at 25 Feet	25			19	13-14-17-24	19.95	

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS



Boring Started: 4/8/2015	Boring Completed: 4/8/2015
Drill Rig: CME-45	Driller: TERRACON DRILLING
Project No.: 25157010	Exhibit: B-21

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

SOIL BORING LOG NO. SB-06

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.78218° Longitude: -104.97166°	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	SPT N-VALUE	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
DEPTH	MATERIAL DESCRIPTION							
0.5	ASPHALT							
	WELL GRADED SAND WITH SILT (SW-SM) , fine to coarse grained, brown to light brown, dry				4	7-5-4-3	66.20	
5.0	SILTY SAND WITH GRAVEL (SM) , fine grained, dark brown, dry	5						
					24	2-2-3-3	22.8	
12.0	SANDY SILTY CLAY (CL-ML) , medium plasticity, dark brown, moist	10						
					22	1-2-3-4	23.7	
14.0	SILTY SAND WITH GRAVEL (SM) , fine to coarse grained, brown, dry	15						
17.0	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light brown, wet	15						
					16	4-4-3-8	24.35	SB-06 (20')
20.0	Boring Terminated at 20 Feet	20	▽					

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

WATER LEVEL OBSERVATIONS
▽ OBSERVED DURING DRILLING ACTIVITIES

Notes:



Boring Started: 4/8/2015

Boring Completed: 4/8/2015

Drill Rig: CME-45

Driller: TERRACON DRILLING

Project No.: 25157010

Exhibit: B-22

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

SOIL BORING LOG NO. SB-07

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.78227° Longitude: -104.9714°	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	SPT N-VALUE	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
DEPTH	MATERIAL DESCRIPTION							
0.5	ASPHALT							
2.5	WELL GRADED SAND WITH GRAVEL (SW) , fine to coarse grained, brown, dry							
4.5	SANDY SILTY CLAY (CL-ML) , medium to coarse grained, medium plasticity, dark brown, dry				16	3-8-8-5	0.00	
6.0	WELL GRADED SAND WITH GRAVEL (SW) , with cobbles, fine to coarse grained, light brown, dry	5						
	WELL GRADED SAND WITH GRAVEL (SW) , coarse grained, light brown, wet		▽		16.5	6-8-12-6	0.00	SB-07 (5')
10.0	Boring Terminated at 10 Feet	10			6	12-12-7-5	0.00	

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

WATER LEVEL OBSERVATIONS

▽ OBSERVED DURING DRILLING ACTIVITIES

Notes:



Boring Started: 4/14/2015	Boring Completed: 4/14/2015
Drill Rig: CME-45	Driller: TERRACON DRILLING
Project No.: 25157010	Exhibit: B-23

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

SOIL BORING LOG NO. SB-08

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.78231° Longitude: -104.97106°	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	SPT N-VALUE	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
DEPTH	MATERIAL DESCRIPTION							
0.5	ASPHALT							
3.0	FILL - SILTY SAND WITH GRAVEL (SM) , fine grained, brown, dry, brick fragments encountered				8	15-3-2-2	134.4	
5.0	WELL GRADED SAND WITH GRAVEL (SW) , fine to coarse grained, light gray, dry							
5.0	SANDY SILTY CLAY WITH GRAVEL (CL-ML) , fine to coarse grained, dark brown, dry				22	2-2-3-5	286.7	
12.5	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light brown, moist				12	8-8-10-10	149.5	SB-08 (10')
16.0	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light brown, wet		▽		18.5	6-10-10-7	35.40	
20.0	Boring Terminated at 20 Feet							

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

WATER LEVEL OBSERVATIONS
▽ OBSERVED DURING DRILLING ACTIVITIES

Notes:



Boring Started: 4/9/2015

Boring Completed: 4/9/2015

Drill Rig: CME-45

Driller: TERRACON DRILLING

Project No.: 25157010

Exhibit: B-24

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

SOIL BORING LOG NO. SB-09

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.78316° Longitude: -104.97177°	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	SPT N-VALUE	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
DEPTH	MATERIAL DESCRIPTION							
0.5	ASPHALT							
4.0	SANDY SILTY CLAY (CL-ML) , fine to coarse grained, medium plasticity, brown, moist							
5.0		5	▽					
10.0	WELL GRADED SAND WITH GRAVEL (SW) , coarse grained, light brown, wet							
10.0	Boring Terminated at 10 Feet	10						

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

WATER LEVEL OBSERVATIONS

▽ OBSERVED DURING DRILLING ACTIVITIES

Notes:



Boring Started: 4/13/2015	Boring Completed: 4/13/2015
Drill Rig: CME-45	Driller: TERRACON DRILLING
Project No.: 25157010	Exhibit: B-25

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

SOIL BORING LOG NO. SB-10

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.78477° Longitude: 104.9743°	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	SPT N-VALUE	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
DEPTH	MATERIAL DESCRIPTION							
4.5	SILTY SAND WITH GRAVEL (SM) , with cobbles, fine to coarse grained, brown, dry, encountered metal, glass, and wood debris	5			13	9-9-10-10	8.68	
6.5	CONCRETE , with rebar							
8.0	SILTY CLAYEY SAND (SC-SM) , fine to coarse grained, dark brown, dry				23	4-4-5-5	12.85	
9.5	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light brown, dry				26	2-2-3-3	11.60	
13.0	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, black, moist	10			26	2-2-4-4	15.60	
15.5	SILTY CLAYEY SAND (SC-SM) , fine to coarse grained, black to dark brown, moist				21	5-6-7-10	0.00	
18.0	WELL GRADED SAND WITH GRAVEL (SW) , fine to coarse grained, light gray, dry	15			19	13-15-17-24	1.00	SB-10 (15')
21.0	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light gray to light brown, moist				26	14-15-18-21	0.00	
22.0	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light gray to light brown, wet Boring Terminated at 22 Feet	20	▽					

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with cement-bentonite grout upon completion.

WATER LEVEL OBSERVATIONS
▽ OBSERVED DURING DRILLING ACTIVITIES

Notes:



Boring Started: 4/10/2015	Boring Completed: 4/10/2015
Drill Rig: CME-45	Driller: TERRACON DRILLING
Project No.: 25157010	Exhibit: B-26

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

SOIL BORING LOG NO. SB-11

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.78427° Longitude: 104.97319°	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	SPT N-VALUE	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
DEPTH	MATERIAL DESCRIPTION							
4.0	FILL - SILTY SAND WITH GRAVEL (SM) , fine to coarse grained, brown, dry	5			25	2-2-3-3	0.00	
9.5	SANDY SILTY CLAY WITH GRAVEL (CL-ML) , fine grained, low plasticity, dark brown, moist	10			26	2-2-4-5	0.00	
9.5		10			25	2-3-4-5	0.00	
17.5	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light brown, moist	15	▽		14	7-9-10-10	0.00	
17.5		15			17	7-8-13-20	0.00	
17.5	Boring Terminated at 17.5 Feet	15			9	13-50-4-4	1.00	
17.5		15			20	17-23-17-17	1.00	SB-11 (15')

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS
▽ OBSERVED DURING DRILLING ACTIVITIES



Boring Started: 4/10/2015

Boring Completed: 4/10/2015

Drill Rig: CME-45

Driller: TERRACON DRILLING

Project No.: 25157010

Exhibit: B-27

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

SOIL BORING LOG NO. SB-12

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.7843° Longitude: -104.97068°	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	SPT N-VALUE	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
DEPTH	MATERIAL DESCRIPTION							
0.5	ASPHALT							
3.5	SANDY SILTY CLAY (CL-ML) , fine grained, low plasticity, brown, moist				2.5	2-3-5-8	0.00	
6.5	WELL GRADED SAND WITH GRAVEL (SW) , coarse grained, light brown, wet	5	▽		19	8-5-3-4	0.00	SB-12 (4')
6.5	Boring Terminated at 6.5 Feet							

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS

▽ OBSERVED DURING DRILLING ACTIVITIES



Boring Started: 4/13/2015

Boring Completed: 4/13/2015

Drill Rig: CME-45

Driller: TERRACON DRILLING

Project No.: 25157010

Exhibit: B-28

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

SOIL BORING LOG NO. SB-13

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.78407° Longitude: -104.96846°	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	SPT N-VALUE	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
DEPTH	MATERIAL DESCRIPTION							
4.0	WELL GRADED SAND WITH GRAVEL (SW) , fine to coarse grained, dark brown, dry							
5.0	WELL GRADED SAND WITH GRAVEL (SW) , coarse grained, light brown, dry	5				21	7-7-7-7	314.9
10.0		10				13	7-7-7-6	8.25
14.0	SILTY SAND (SM) , fine to coarse grained, light brown, dry	15				21	10-11-13-14	8.25
17.0	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, gray, dry	20				21	8-10-14-14	307.3
21.0	WELL GRADED SAND WITH GRAVEL (SW) , fine to coarse grained, light brown, moist	25	▽			13	10-12-8-9	307.3
25.0	WELL GRADED SAND WITH GRAVEL (SW) , fine to coarse grained, light brown, moist	20				22	10-12-14-16	305.8
25.0	WELL GRADED SAND WITH GRAVEL (SW) , fine to coarse grained, light brown, moist	17.5				17.5	21-19-21-19	305.8
25.0	WELL GRADED SAND WITH GRAVEL (SW) , fine to coarse grained, light brown, moist	20.5				20.5	11-11-16-16	78.70
25.0	WELL GRADED SAND WITH GRAVEL (SW) , fine to coarse grained, light brown, moist	10.5				10.5	10-14-17-16	78.70
25.0	Boring Terminated at 25 Feet	25						

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

WATER LEVEL OBSERVATIONS
▽ OBSERVED DURING DRILLING ACTIVITIES

Notes:



Boring Started: 4/9/2015

Boring Completed: 4/9/2015

Drill Rig: CME-45

Driller: TERRACON DRILLING

Project No.: 25157010

Exhibit: B-29

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

SOIL BORING LOG NO. SB-14

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.78526° Longitude: -104.96938°	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	SPT N-VALUE	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
DEPTH	MATERIAL DESCRIPTION							
2.0	FILL - SILTY SAND (SM) , fine to coarse grained, brown, dry							
5.0	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, brown, moist, encountered brick fragments	5			7.5	3-2-3-5	0.00	
7.0	CONCRETE , with rebar							
9.0	SANDY SILTY CLAY (CL-ML) , medium to coarse grained, medium plasticity, brown, moist				21	4-5-15-14	0.00	
12.0	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light brown, moist	10			13.5	8-6-5-4	0.00	
15.0	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light brown, wet	15	▽		17	1-2-2-2	0.00	SB-14 (12')
Boring Terminated at 15 Feet								

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method: HOLLOW STEM AUGER		Notes:
Abandonment Method: Borings backfilled with soil cuttings upon completion.		
WATER LEVEL OBSERVATIONS		
▽ <i>OBSERVED DURING DRILLING ACTIVITIES</i>		
		Boring Started: 4/13/2015 Boring Completed: 4/13/2015 Drill Rig: CME-45 Driller: TERRACON DRILLING Project No.: 25157010 Exhibit: B-30

Terracon
10625 W I-70 Frontage Road N., Ste. 3
Wheat Ridge, Colorado

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

SOIL BORING LOG NO. SB-15

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	SPT N-VALUE	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
	See Exhibit A-2 Latitude: 39.78552° Longitude: -104.96695°							
	MATERIAL DESCRIPTION							
6.5	FILL - SILTY SAND (SM) , fine grained, brown, dry	5						
						17	3-2-2-5	308.7
6.5	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light brown, dry					26	2-3-4-7	39.65
								SB-15 (5')
14.0	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light gray to pink, dry	10				18	7-9-12-12	39.65
16.0	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light brown, moist					22	9-12-13-14	8.60
16.5	SANDY SILTY CLAY (CL-ML) , medium to coarse grained, brown, moist					18	12-20-30-28	8.60
16.5	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light brown, moist	15				18	12-13-13-14	6.85
22.5	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light brown, wet	20	▽			11	12-20-22-24	6.85
22.5						17	15-17-23-29	1.65
25.0	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light brown, wet	25				11.5	13-15-21-25	1.65
	Boring Terminated at 25 Feet							

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

WATER LEVEL OBSERVATIONS

▽ OBSERVED DURING DRILLING ACTIVITIES

Notes:



Boring Started: 4/9/2015	Boring Completed: 4/9/2015
Drill Rig: CME-45	Driller: TERRACON DRILLING
Project No.: 25157010	Exhibit: B-31

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

SOIL BORING LOG NO. SB-16

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.78595° Longitude: -104.96786°	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	SPT N-VALUE	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
DEPTH	MATERIAL DESCRIPTION							
1.0	CONCRETE							
	WELL GRADED SAND WITH GRAVEL (SW) , fine to coarse grained, brown, dry							
4.5					23	15-20-20-15	0.00	
5.5	SANDY SILTY CLAY (CL-ML) , fine grained, medium plasticity, brown, moist	5						
7.0	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light gray, dry				18	13-17-22-17	0.00	
	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light gray, moist				18	6-13-12-18	0.00	
12.0		10	▽		10	21-25-31-22	0.00	SB-16 (11')
	WELL GRADED SAND WITH GRAVEL (SW) , with cobbles, fine to coarse grained, light brown, wet				15.5	7-7-7-8	0.00	
15.0	Boring Terminated at 15 Feet	15						

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

WATER LEVEL OBSERVATIONS

▽ OBSERVED DURING DRILLING ACTIVITIES

Notes:



Boring Started: 4/14/2015	Boring Completed: 4/14/2015
Drill Rig: CME-45	Driller: TERRACON DRILLING
Project No.: 25157010	Exhibit: B-32

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

SOIL BORING LOG NO. SB-17

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	SPT N-VALUE	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)	
	See Exhibit A-2 Latitude: 39.78687° Longitude: 104.97116°								
	DEPTH MATERIAL DESCRIPTION								
7.0	SILTY SAND WITH GRAVEL (SM) , fine to coarse grained, dark brown, dry, brick fragments encountered	5				10	3-2-8-10	0.00	
7.0		5				2.5	50-4-4-1	0.00	
12.0	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light gray, dry	10				17	5-8-10-12	0.00	
12.0		10				16	12-12-12-16	0.00	
15.0	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light gray, moist	15	▽			18.5	10-10-13-14	0.00	SB-17 (15')
	Boring Terminated at 15 Feet								

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

Notes:

WATER LEVEL OBSERVATIONS
▽ OBSERVED DURING DRILLING ACTIVITIES



Boring Started: 4/13/2015

Boring Completed: 4/13/2015

Drill Rig: CME-45

Driller: TERRACON DRILLING

Project No.: 25157010

Exhibit: B-33

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

SOIL BORING LOG NO. SB-18

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.7867° Longitude: -104.96775°	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	SPT N-VALUE	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
DEPTH	MATERIAL DESCRIPTION							
0.5	ASPHALT							
4.5	CLAYEY SAND WITH GRAVEL (SC) , fine to coarse grained, low plasticity, dark brown, moist							
7.0	SANDY SILTY CLAY WITH GRAVEL (CL-ML) , medium to coarse grained, low plasticity, dark brown, moist	5			10	1-1-1-1	0.00	
8.0	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light brown, moist		▽					
8.0	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light brown, moist				16.5	1-1-3-5	0.00	SB-18 (7')
12.0	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light brown, moist	10			7	6-8-9-10	0.00	
12.0	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light brown, moist				9	6-6-6-5	0.00	
Boring Terminated at 12 Feet								

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

WATER LEVEL OBSERVATIONS

▽ OBSERVED DURING DRILLING ACTIVITIES

Notes:



Boring Started: 4/14/2015	Boring Completed: 4/14/2015
Drill Rig: CME-45	Driller: TERRACON DRILLING
Project No.: 25157010	Exhibit: B-34

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

MONITORING WELL LOG NO. MW-05

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION	INSTALLATION DETAILS	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	SPT N-VALUE	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
	See Exhibit A-2 Latitude: 39.78364° Longitude: -104.97444°	Well Completion: Monument							
	SILTY SAND WITH GRAVEL (SM) , with cobbles, fine to coarse grained, brown, dry	cement grout bentonite seal							
2.0	SANDY SILT WITH GRAVEL (ML) , fine to coarse grained, dark brown, dry, brick fragments	2" PVC riser w/ silica sand pack				1	15-1-1-12	0.00	
		0.01" slotted 2" PVC screen w/ silica sand filter pack	5			7	1-1-1-1	0.00	
			10	▽		9	2-2-2-2	0.00	
			15	▽		16	1-2-2-2	0.00	MW-05 (10')
15.0	Boring Terminated at 15 Feet								

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with silica sand filter pack, bentonite grout, and cement to ground surface upon completion.

Notes:

large void space encountered used 43 bags of silica sand and 12 bags of bentonite chips.

WATER LEVEL OBSERVATIONS

- ▽ OBSERVED DURING DRILLING ACTIVITIES
- ▽ MEASURED 5/29/2015



Well Started: 4/15/2015

Well Completed: 4/15/2015

Drill Rig: CME-45

Driller: TERRACON DRILLING

Project No.: 25157010

Exhibit: B-5

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

MONITORING WELL LOG NO. MW-07

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.78314° Longitude: -104.96681°	INSTALLATION DETAILS	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
DEPTH	MATERIAL DESCRIPTION	Well Completion: Surface Mount						
3.0	SANDY SILT (ML) , fine grained, brown, dry	cement grout bentonite seal						
8.0	SILTY SAND (SW-SC) , fine to coarse grained, light brown to light gray, dry							
11.5	WELL GRADED SAND WITH GRAVEL (SW) , with cobbles, fine to coarse grained, light brown, dry					41	1.20	
14.0	SANDY CLAY (CL-ML) , fine to coarse grained, brown, dry					26	1.50	
	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light brown to light gray, dry					60	2.70	
		2" PVC riser w/ silica sand pack 0.01" slotted 2" PVC screen w/ silica sand filter pack						
						20	2.60	
					▽	38	2.70	
					▽	26	2.70	MW-07 (30')
38.0	Boring Terminated at 38 Feet							

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method: HOLLOW STEM AUGER		Notes:
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.		
WATER LEVEL OBSERVATIONS		
▽ OBSERVED DURING DRILLING ACTIVITIES		Well Started: 4/24/2015
▽ MEASURED 5/29/2015		Well Completed: 4/24/2015
 10625 W I-70 Frontage Road N., Ste. 3 Wheat Ridge, Colorado		Drill Rig: CME-75
		Driller: VINE ENVIRONMENTAL
		Project No.: 25157010
		Exhibit: B-7

MONITORING WELL LOG NO. MW-08

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.78369° Longitude: -104.96918°	INSTALLATION DETAILS	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)					
DEPTH	MATERIAL DESCRIPTION	Well Completion: Surface Mount											
3.0	CLAYEY SAND WITH GRAVEL (SC) , fine grained, brown, dry	cement grout bentonite seal	0 - 5										
5.0	WELL GRADED SAND WITH GRAVEL (SW) , fine to coarse grained, light brown, dry, concrete present at 4 ft.												
11.0	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light brown, dry	2" PVC riser w/ silica sand pack	5 - 15					16 0.90					
14.0	SILTY CLAY WITH SAND (SC-SM) , fine grained, reddish-brown, moist							0.01" slotted 2" PVC screen w/ silica sand filter pack	15 - 30				36 1.10
38.0	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light gray, dry												
								36 1.10					
								36 0.90					
								30 0.50 MW-08 (30')					
Boring Terminated at 38 Feet													

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with cement-bentonite grout upon completion.

WATER LEVEL OBSERVATIONS
 OBSERVED DURING DRILLING ACTIVITIES
 MEASURED 5/29/2015

Notes:

10625 W I-70 Frontage Road N., Ste. 3
Wheat Ridge, Colorado

Well Started: 4/23/2015	Well Completed: 4/23/2015
Drill Rig: CME-75	Driller: VINE ENVIRONMENTAL
Project No.: 25157010	Exhibit: B-8

MONITORING WELL LOG NO. MW-10

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.78598° Longitude: -104.97001°	INSTALLATION DETAILS	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)	
DEPTH	MATERIAL DESCRIPTION	Well Completion: Surface Mount							
9.5	SANDY SILTY CLAY (GL-ML) , fine grained, medium plasticity, dark brown, dry	cement grout bentonite seal 2" PVC riser w/ silica sand pack 0.01" slotted 2" PVC screen w/ silica sand filter pack	5	▽			38	0.00	
13.0	WELL GRADED SAND WITH GRAVEL (SW) , fine grained, dark brown, moist		10	▽			27	0.00	MW-10 (10')
15.0	SEDIMENTARY BEDROCK - CLAYSTONE , light brown to reddish-brown, dry		15						
Boring Terminated at 15 Feet									

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with cement-bentonite grout upon completion.

Notes:

WATER LEVEL OBSERVATIONS
 ▽ OBSERVED DURING DRILLING ACTIVITIES
 ▽ MEASURED 5/29/2015



Well Started: 4/29/2015

Well Completed: 4/29/2015

Drill Rig: CME-75

Driller: VINE ENVIRONMENTAL

Project No.: 25157010

Exhibit: B-10

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

MONITORING WELL LOG NO. MW-11

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION	INSTALLATION DETAILS	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	SPT N-VALUE	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
	See Exhibit A-2 Latitude: 39.78653° Longitude: -104.97229°	Well Completion: Surface Mount							
	SILTY SAND WITH GRAVEL (SM) , fine grained, dark brown, dry	cement grout bentonite seal	2.0						
	SANDY SILT WITH GRAVEL (ML) , fine to coarse grained, brown, moist, concrete fragments encountered	2" PVC riser w/ silica sand pack 0.01" slotted 2" PVC screen w/ silica sand filter pack	5			14	3-2-2-1	0.00	
			10	▽		7	1-1-2-1	0.00	MW-11 (5')
			15.0						

Boring Terminated at 15 Feet

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with silica sand filter pack, bentonite grout, and cement to ground surface upon completion.

WATER LEVEL OBSERVATIONS
 ▽ OBSERVED DURING DRILLING ACTIVITIES
 ▽ MEASURED 5/29/2015

Notes:



Well Started: 4/24/2015

Well Completed: 4/24/2015

Drill Rig: CME-75

Driller: VINE ENVIRONMENTAL

Project No.: 25157010

Exhibit: B-11

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

MONITORING WELL LOG NO. MW-12

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.78644° Longitude: -104.96922°	INSTALLATION DETAILS	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
DEPTH	MATERIAL DESCRIPTION	Well Completion: Surface Mount						
8.5	CLAYEY SAND (CL-ML) , fine grained, medium plasticity, dark brown, dry	cement grout bentonite seal 2" PVC riser w/ silica sand pack 0.01" slotted 2" PVC screen w/ silica sand filter pack	5	▽				
13.0	WELL GRADED SAND WITH GRAVEL (SW) , fine grained, brown, moist		10	▽		16	1.10	MW-12 (9')
15.0	SEDIMENTARY BEDROCK - CLAYSTONE , light brown to reddish-brown, dry		15			16	1.30	
Boring Terminated at 15 Feet								

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with cement-bentonite grout upon completion.

Notes:

WATER LEVEL OBSERVATIONS
▽ OBSERVED DURING DRILLING ACTIVITIES
▽ MEASURED 5/29/2015



Well Started: 5/1/2015

Well Completed: 5/1/2015

Drill Rig: CME-75

Driller: VINE ENVIRONMENTAL

Project No.: 25157010

Exhibit: B-12

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

MONITORING WELL LOG NO. MW-16

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.78105° Longitude: -104.96752°	INSTALLATION DETAILS Well Completion: Surface Mount	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
DEPTH	MATERIAL DESCRIPTION							
0.0	SILTY SAND WITH GRAVEL , fine to coarse grained, dark brown to reddish-brown, dry	cement grout bentonite seal	0					
6.0	WELL GRADED SAND WITH GRAVEL , medium to coarse grained, light brown to light gray, dry		5					
9.0	SILTY SAND , fine grained, brown, dry		10			41	1.90	
16.0	WELL GRADED SAND WITH GRAVEL , medium to coarse grained, brown to light gray, dry, cobble encountered at 22 ft.		15			32	1.10	
			20			35	2.30	
			25			24	1.20	
		2" PVC riser w/ silica sand pack	25			32	2.30	MW-16 (29')
		0.01" slotted 2" PVC screen w/ silica sand filter pack	30	▽				
			30	▽				
			35			34	3.60	
39.0	Boring Terminated at 39 Feet							

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with cement-bentonite grout upon completion.

WATER LEVEL OBSERVATIONS

▽ OBSERVED DURING DRILLING ACTIVITIES

▽ MEASURED 5/29/2015



10625 W I-70 Frontage Road N., Ste. 3
Wheat Ridge, Colorado

Notes:

Well Started: 4/28/2015	Well Completed: 4/28/2015
Drill Rig: CME-75	Driller: VINE ENVIRONMENTAL
Project No.: 25157010	Exhibit: B-16

SOIL VAPOR LOG NO. SV-01

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION	INSTALLATION DETAILS	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
	See Exhibit A-2 Latitude: 39.78072° Longitude: -104.97579°							
	DEPTH							
	MATERIAL DESCRIPTION							
5.0	WELL GRADED SAND WITH GRAVEL (SW) , medium grained, light brown, dry	Well Completion: Monument cement grout tubing w/ bentonite seal	5					
	Boring Terminated at 5 Feet	6" stainless steel vapor implant w/ 10/20 silica sand filter pack						

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with cement-bentonite grout upon completion.

Notes:

WATER LEVEL OBSERVATIONS



Well Started: 4/29/2015

Well Completed: 4/29/2015

Drill Rig: CME-75

Driller: VINE ENVIRONMENTAL

Project No.: 25157010

Exhibit: B-35

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

SOIL VAPOR LOG NO. SV-02

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.78046° Longitude: -104.9755°	INSTALLATION DETAILS	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
DEPTH	MATERIAL DESCRIPTION	Well Completion: Surface Mount						
3.0	WELL GRADED SAND WITH SILT (SW-SM) , fine grained, dark gray, dry	cement grout tubing w/ bentonite seal						
5.0	WELL GRADED SAND WITH SILT AND GRAVEL (OL) , fine grained, black, moist	6" stainless steel vapor implant w/ 10/20 silica sand filter pack tubing w/ bentonite seal	5					
10.0	WELL GRADED SAND WITH GRAVEL (SW) , with cobbles, fine to coarse grained, light gray to light brown, dry		10					
Boring Terminated at 10 Feet		6" stainless steel vapor implant w/ 10/20 silica sand filter pack						

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with cement-bentonite grout upon completion.

WATER LEVEL OBSERVATIONS

Notes:

<p>10625 W I-70 Frontage Road N., Ste. 3 Wheat Ridge, Colorado</p>	Well Started: 4/28/2015	Well Completed: 4/28/2015
	Drill Rig: CME-75	Driller: VINE ENVIRONMENTAL
	Project No.: 25157010	Exhibit: B-36

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

SOIL VAPOR LOG NO. SV-03

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.78026° Longitude: -104.97284°	INSTALLATION DETAILS	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
DEPTH	MATERIAL DESCRIPTION							
0.5	ASPHALT							
	WELL GRADED SAND WITH GRAVEL (SW) , with cobbles, fine to coarse grained, brown, dry	Well Completion: Surface Mount						
		cement grout tubing w/ bentonite seal						
		6" stainless steel vapor implant w/ 10/20 silica sand filter pack tubing w/ bentonite seal	5					
10.0	Boring Terminated at 10 Feet	6" stainless steel vapor implant w/ 10/20 silica sand filter pack	10					

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method: HOLLOW STEM AUGER		Notes:
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.		
WATER LEVEL OBSERVATIONS		Well Started: 4/27/2015 Well Completed: 4/27/2015 Drill Rig: CME-75 Driller: VINE ENVIRONMENTAL Project No.: 25157010 Exhibit: B-37

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

SOIL VAPOR LOG NO. SV-04

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.78025° Longitude: -104.97192°	INSTALLATION DETAILS	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
DEPTH	MATERIAL DESCRIPTION	Well Completion: Surface Mount						
0.5	ASPHALT	cement grout tubing w/ bentonite seal 6" stainless steel vapor implant w/ 10/20 silica sand filter pack tubing w/ bentonite seal 6" stainless steel vapor implant w/ 10/20 silica sand filter pack	-					
10.0	WELL GRADED SAND WITH GRAVEL (SW) , with cobbles, fine to coarse grained, brown, dry <i>Boring Terminated at 10 Feet</i>		5					
			10					

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with cement-bentonite grout upon completion.

WATER LEVEL OBSERVATIONS

Notes:

<p>10625 W I-70 Frontage Road N., Ste. 3 Wheat Ridge, Colorado</p>	Well Started: 4/28/2015	Well Completed: 4/28/2015
	Drill Rig: CME-75	Driller: VINE ENVIRONMENTAL
	Project No.: 25157010	Exhibit: B-38

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

SOIL VAPOR LOG NO. SV-05

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.78038° Longitude: -104.97072°	INSTALLATION DETAILS	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
DEPTH	MATERIAL DESCRIPTION	Well Completion: Surface Mount						
0.5	ASPHALT	cement grout tubing w/ bentonite seal 6" stainless steel vapor implant w/ 10/20 silica sand filter pack tubing w/ bentonite seal 6" stainless steel vapor implant w/ 10/20 silica sand filter pack	-					
10.0	WELL GRADED SAND WITH GRAVEL (SW) , with cobbles, fine to coarse grained, brown, dry <i>Boring Terminated at 10 Feet</i>		5					
			10					

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with cement-bentonite grout upon completion.

Notes:

WATER LEVEL OBSERVATIONS



Well Started: 4/28/2015	Well Completed: 4/28/2015
Drill Rig: CME-75	Driller: VINE ENVIRONMENTAL
Project No.: 25157010	Exhibit: B-39

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

SOIL VAPOR LOG NO. SV-07

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.78225° Longitude: -104.97035°	INSTALLATION DETAILS	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
DEPTH	MATERIAL DESCRIPTION	Well Completion: Surface Mount						
0.5	ASPHALT	cement grout tubing w/ bentonite seal 6" stainless steel vapor implant w/ 10/20 silica sand filter pack	-					
2.0	FILL - SANDY SILT (ML) , fine grained, brown, dry		-					
5.0	WELL GRADED SAND WITH GRAVEL (SW) , medium to coarse grained, light brown to gray, dry		5					
Boring Terminated at 5 Feet								

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with cement-bentonite grout upon completion.

Notes:

WATER LEVEL OBSERVATIONS



Well Started: 4/28/2015	Well Completed: 4/28/2015
Drill Rig: CME-75	Driller: VINE ENVIRONMENTAL
Project No.: 25157010	Exhibit: B-41

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

SOIL VAPOR LOG NO. SV-08

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION	INSTALLATION DETAILS	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
	See Exhibit A-2 Latitude: 39.78391° Longitude: -104.9734°	Well Completion: Surface Mount						
	DEPTH	MATERIAL DESCRIPTION						
5.0	FILL - SILTY SAND WITH GRAVEL (SM) , fine to coarse grained, dark brown, dry	cement grout tubing w/ bentonite seal 6" stainless steel vapor implant w/ 10/20 silica sand filter pack	5					
	Boring Terminated at 5 Feet							

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with cement-bentonite grout upon completion.

Notes:

WATER LEVEL OBSERVATIONS



Well Started: 4/29/2015

Well Completed: 4/29/2015

Drill Rig: CME-75

Driller: VINE ENVIRONMENTAL

Project No.: 25157010

Exhibit: B-42

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

SOIL VAPOR LOG NO. SV-09

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.78325° Longitude: -104.97199°	INSTALLATION DETAILS	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
DEPTH	MATERIAL DESCRIPTION	Well Completion: Surface Mount						
0.5	ASPHALT	cement grout tubing w/ bentonite seal 6" stainless steel vapor implant w/ 10/20 silica sand filter pack						
5.0	SANDY SILTY CLAY (CL-ML) , fine to coarse grained, medium plasticity, brown, moist							
Boring Terminated at 5 Feet			5					

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method: HOLLOW STEM AUGER		Notes:
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.		
WATER LEVEL OBSERVATIONS	<p>10625 W I-70 Frontage Road N., Ste. 3 Wheat Ridge, Colorado</p>	Well Started: 4/29/2015
		Well Completed: 4/29/2015
		Drill Rig: CME-75
		Driller: VINE ENVIRONMENTAL
		Project No.: 25157010
		Exhibit: B-43

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

SOIL VAPOR LOG NO. SV-10

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.78315° Longitude: -104.96701°	INSTALLATION DETAILS	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
DEPTH	MATERIAL DESCRIPTION	Well Completion: Surface Mount						
3.0	SANDY SILT (ML) , with gravel, fine to coarse grained, brown, dry	cement grout tubing w/ bentonite seal 6" stainless steel vapor implant w/ 10/20 silica sand filter pack						
5.0	SILTY SAND (SW-SC) , fine to coarse grained, light brown to light gray, dry							
Boring Terminated at 5 Feet			5					

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with cement-bentonite grout upon completion.

Notes:

WATER LEVEL OBSERVATIONS



Well Started: 4/27/2015	Well Completed: 4/27/2015
Drill Rig: CME-75	Driller: VINE ENVIRONMENTAL
Project No.: 25157010	Exhibit: B-44

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

SOIL VAPOR LOG NO. SV-17

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION	INSTALLATION DETAILS	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
	See Exhibit A-2 Latitude: 39.78633° Longitude: -104.97008°	Well Completion: Surface Mount						
	DEPTH	MATERIAL DESCRIPTION						
8.5	SANDY SILTY CLAY WITH GRAVEL (CL-ML) , fine grained, medium plasticity, dark brown, dry	cement grout tubing w/ bentonite seal	5					
10.0	WELL GRADED SAND WITH GRAVEL (SW) , fine grained, brown, moist	6" stainless steel vapor implant w/ 10/20 silica sand filter pack tubing w/ bentonite seal	10					
	Boring Terminated at 10 Feet							

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with cement-bentonite grout upon completion.

Notes:

WATER LEVEL OBSERVATIONS



Well Started: 5/1/2015	Well Completed: 5/1/2015
Drill Rig: CME-75	Driller: VINE ENVIRONMENTAL
Project No.: 25157010	Exhibit: B-51

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

SOIL VAPOR LOG NO. SV-18

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION See Exhibit A-2 Latitude: 39.7867° Longitude: -104.96775°	INSTALLATION DETAILS	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
DEPTH	MATERIAL DESCRIPTION							
0.5	ASPHALT	Well Completion: Surface Mount cement grout tubing w/ bentonite seal 6" stainless steel vapor implant w/ 10/20 silica sand filter pack						
5.0	WELL GRADED SAND WITH GRAVEL (SW) , fine to coarse grained, brown, dry							
Boring Terminated at 5 Feet			5					

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method:
HOLLOW STEM AUGER

Abandonment Method:
Borings backfilled with cement-bentonite grout upon completion.

Notes:

WATER LEVEL OBSERVATIONS



Well Started: 4/29/2015

Well Completed: 4/29/2015

Drill Rig: CME-75

Driller: VINE ENVIRONMENTAL

Project No.: 25157010

Exhibit: B-52

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

SOIL VAPOR LOG NO. SV-20

PROJECT: National Western Complex
Redevelopment Project

CLIENT: City and County of Denver

SITE: Various Addresses
Denver, Colorado

GRAPHIC LOG	LOCATION	INSTALLATION DETAILS	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	OVA/PID (ppm)	SAMPLE SENT TO LAB (ID NUMBER)
DEPTH	MATERIAL DESCRIPTION	Well Completion:						
	See Exhibit A-2 Latitude: 39.78104° Longitude: -104.96831°	Surface Mount						
5.0	SILTY SAND WITH GRAVEL , fine grained, brown, dry	cement grout tubing w/ bentonite seal	5					
	Boring Terminated at 5 Feet	6" stainless steel vapor implant w/ 10/20 silica sand filter pack tubing w/ bentonite seal 6" stainless steel vapor implant w/ 10/20 silica sand filter pack						

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Automatic

Advancement Method: HOLLOW STEM AUGER		Notes:
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.		
WATER LEVEL OBSERVATIONS		Well Started: 4/28/2015 Well Completed: 4/28/2015 Drill Rig: CME-75 Driller: VINE ENVIRONMENTAL Project No.: 25157010 Exhibit: B-54

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG NATIONAL WESTERN COMPLEX.GPJ TERRACON2012.GDT 6/1/15

APPENDIX C

GROUNDWATER MONITORING WELL DEVELOPMENT FORMS



Well Development Form

Project Name:	National Western - 25157010	Well No.:	MW-01
Method of Development:	Surge and purge	Date:	4/29/2015
Field Professional:	Sarah Bruns	Pump Type:	NA
Reviewed By:		Serial No.:	NA
	Before	Reference Point	After
Depth to Water (ft.):	20.68	TOC	20.68
Depth to Sediment (ft.):	NA	NA	NA
Total Depth of the Well (ft.):	23.61	TOC	23.61
Initial Water Column Height (ft.):	2.93	NA	NA
Diameter of the Well (inches):	2	NA	2

Volume of Water Conversion

Casing Volume (gal) = (Total Depth - Depth to Water) x Volume of Water Conversion

1" Well 0.041 gal/ft. 4" Well 0.653 Casing Volume (gal): 0.47

2" Well 0.163 gal/ft. 6" Well 1.469 **Development Volume = Casing Volume x 10**

Development Volume (gal): 4.7

Time	pH	TDS	Temp.	Conductivity	Pump Rate	Vol. of Water Removed	Water Level	Comments
		g/L	(°C)	(mmhos)	(gal/minute)	(gal)	(ft.)	
855	6.96	1.869	14.56	2865	NA	2		inky, brown, silty
859	6.95	1.815	14.58	2790	NA	3		inky, brown, silty
903	6.95	1.778	14.60	2735	NA	4		inky, brown, silty
908	6.95	1.793	14.57	2755	NA	5		inky, brown, silty
912	6.96	1.753	14.57	2695	NA	6		inky, brown, silty
915	6.95	1.756	14.60	2673	NA	7		inky, brown, silty
917	6.95	1.728	14.63	2658	NA	8	20.68	inky, brown, silty

Development is considered complete and the well adequately purged for sampling when the following are satisfied:

1. Ten well casing volumes of water have been removed while measuring the groundwater physical parameters on the above table.
2. Sediment load has been removed.
3. When parameters (pH, temperature, conductivity) vary less than +/- 10% over three consecutive measurements.

TOC: top of casing
 NA: not applicable



Well Development Form

Project Name:	National Western - 25157010		Well No.:	MW-02
Method of Development:	Surge and purge		Date:	4/29/2015
Field Professional:	Sarah Bruns		Pump Type:	NA
Reviewed By:			Serial No.:	NA
	Before	Reference Point	After	
Depth to Water (ft.):	31.55	TOC	31.6	
Depth to Sediment (ft.):	NA	NA	NA	
Total Depth of the Well (ft.):	38.95	TOC	38.95	
Initial Water Column Height (ft.):	7.40	NA	NA	
Diameter of the Well (inches):	2	NA	2	

Volume of Water Conversion

Casing Volume (gal) = (Total Depth - Depth to Water) x Volume of Water Conversion

1" Well 0.041 gal/ft. 4" Well 0.653 Casing Volume (gal): 1.2

2" Well 0.163 gal/ft. 6" Well 1.469 **Development Volume = Casing Volume x 10**

Development Volume (gal): 12

Time	pH	TDS	Temp.	Conductivity	Pump Rate	Vol. of Water Removed	Water Level	Comments
		g/L	(°C)	(mmhos)	(gal/minute)	(gal)	(ft.)	
1411	7.07	1.110	16.01	1708	NA	2		Brown, silty
1415	7.08	1.116	15.83	1718	NA	3		Brown, silty
1418	7.09	1.106	15.80	1701	NA	4		Brown, silty
1422	7.11	1.154	15.40	1774	NA	6		Brown, silty
1426	7.11	1.146	15.39	1762	NA	7		Brown, silty
1429	7.11	1.132	15.43	1741	NA	8		Brown, silty
1434	7.13	1.175	15.45	1809	NA	10		Brown, silty
1439	7.12	1.169	15.52	1799	NA	11		Brown, silty
1442	7.11	1.160	15.54	1784	NA	12	31.60	Brown, silty

Development is considered complete and the well adequately purged for sampling when the following are satisfied:

1. Ten well casing volumes of water have been removed while measuring the groundwater physical parameters on the above table.
2. Sediment load has been removed.
3. When parameters (pH, temperature, conductivity) vary less than +/- 10% over three consecutive measurements.

TOC: top of casing

NA: not applicable



Well Development Form

Project Name:	National Western - 25157010		Well No.:	MW-03	
Method of Development:	Surge and purge		Date:	4/30/2015	
Field Professional:	Sarah Bruns		Pump Type:	NA	
Reviewed By:			Serial No.:	NA	
	Before	Reference Point	After		
Depth to Water (ft.):	32.47	TOC	33.8		
Depth to Sediment (ft.):	NA	NA	NA		
Total Depth of the Well (ft.):	39.21	TOC	39.21		
Initial Water Column Height (ft.):	6.74	NA	NA		
Diameter of the Well (inches):	2	NA	2		

Volume of Water Conversion

Casing Volume (gal) = (Total Depth - Depth to Water) x Volume of Water Conversion

1" Well 0.041 gal/ft. 4" Well 0.653 Casing Volume (gal): 1.09

2" Well 0.163 gal/ft. 6" Well 1.469 **Development Volume = Casing Volume x 10**

Development Volume (gal): 10.9

Time	pH	TDS	Temp.	Conductivity	Pump Rate	Vol. of Water Removed	Water Level	Comments
		g/L	(°C)	(mmhos)	(gal/minute)	(gal)	(ft.)	
1106	7.00	1.022	16.10	1572	NA	2		Brown, silty
1109	7.02	1.005	16.01	1545	NA	3		Brown, silty
1112	7.03	0.992	15.94	1526	NA	4		Brown, silty
1117	7.05	1.016	15.66	1564	NA	6		Brown, silty
1120	7.05	1.006	15.72	1547	NA	7		Brown, silty
1123	7.05	1.001	15.71	1539	NA	8		Brown, silty
1127	7.07	1.040	15.60	1599	NA	10		Brown, silty
1130	7.05	1.022	15.62	1573	NA	11	32.80	Brown, silty

Development is considered complete and the well adequately purged for sampling when the following are satisfied:

1. Ten well casing volumes of water have been removed while measuring the groundwater physical parameters on the above table.
2. Sediment load has been removed.
3. When parameters (pH, temperature, conductivity) vary less than +/- 10% over three consecutive measurements.

TOC: top of casing

NA: not applicable



Well Development Form

Project Name:	National Western - 25157010	Well No.:	MW-04
Method of Development:	Surge and purge	Date:	4/30/2015
Field Professional:	Sarah Bruns	Pump Type:	NA
Reviewed By:		Serial No.:	NA
	Before	Reference Point	After
Depth to Water (ft.):	19.55	TOC	19.57
Depth to Sediment (ft.):	NA	NA	NA
Total Depth of the Well (ft.):	27.05	TOC	27.05
Initial Water Column Height (ft.):	7.50	NA	NA
Diameter of the Well (inches):	2	NA	2

Volume of Water Conversion

$$\text{Casing Volume (gal)} = (\text{Total Depth} - \text{Depth to Water}) \times \text{Volume of Water Conversion}$$

1" Well 0.041 gal/ft. 4" Well 0.653 Casing Volume (gal): 1.2

2" Well 0.163 gal/ft. 6" Well 1.469 **Development Volume = Casing Volume x 10**

Development Volume (gal): 12

Time	pH	TDS	Temp.	Conductivity	Pump Rate	Vol. of Water Removed	Water Level	Comments
		g/L	(°C)	(mmhos)	(gal/minute)	(gal)	(ft.)	
935	6.96	1.030	15.51	1585	NA	2		very silty, brown
939	6.98	1.020	15.47	1569	NA	3		very silty, brown
942	6.98	1.019	15.47	1568	NA	4		very silty, brown
946	7.04	1.058	15.41	1628	NA	6		very silty, brown
949	7.05	1.052	15.40	1618	NA	7		very silty, brown
952	7.04	1.048	15.40	1612	NA	8		very silty, brown
957	7.08	1.067	15.39	1641	NA	10		very silty, brown
1000	7.07	1.060	15.38	1630	NA	11		very silty, brown
1003	7.06	1.054	15.38	1622	NA	12	19.57	very silty, brown

Development is considered complete and the well adequately purged for sampling when the following are satisfied:

1. Ten well casing volumes of water have been removed while measuring the groundwater physical parameters on the above table.
2. Sediment load has been removed.
3. When parameters (pH, temperature, conductivity) vary less than +/- 10% over three consecutive measurements.

TOC: top of casing

NA: not applicable



Well Development Form

Project Name:	National Western - 25157010		Well No.:	MW-05
Method of Development:	Surge and purge		Date:	4/29/2015
Field Professional:	Sarah Bruns		Pump Type:	NA
Reviewed By:			Serial No.:	NA
	Before	Reference Point	After	
Depth to Water (ft.):	15.33	TOC	16.10	
Depth to Sediment (ft.):	NA	NA	NA	
Total Depth of the Well (ft.):	18.89	TOC	18.89	
Initial Water Column Height (ft.):	3.56	NA	NA	
Diameter of the Well (inches):	2	NA	2	

Volume of Water Conversion

Casing Volume (gal) = (Total Depth - Depth to Water) x Volume of Water Conversion

1" Well 0.041 gal/ft. 4" Well 0.653 Casing Volume (gal): 0.58

2" Well 0.163 gal/ft. 6" Well 1.469 **Development Volume = Casing Volume x 10**

Development Volume (gal): 5.8

Time	pH	TDS	Temp.	Conductivity	Pump Rate	Vol. of Water Removed	Water Level	Comments
		g/L	(°C)	(mmhos)	(gal/minute)	(gal)	(ft.)	
1001	10.07	0.886	15.50	1361	NA	2		silty, gray
1006	9.55	0.874	15.41	1343	NA	3.5		silty, gray
1009	9.30	0.868	15.36	1334	NA	4		silty, gray
1016	8.46	1.035	15.14	1594	NA	5		silty, gray
1019	8.36	1.031	15.13	1586	NA	6		silty, gray
1022	8.35	1.028	15.18	1582	NA	7		gray, cloudy
1025	8.35	1.024	15.20	1575	NA	8	16.10	gray, cloudy
								Fast recovery rate

Development is considered complete and the well adequately purged for sampling when the following are satisfied:

1. Ten well casing volumes of water have been removed while measuring the groundwater physical parameters on the above table.
2. Sediment load has been removed.
3. When parameters (pH, temperature, conductivity) vary less than +/- 10% over three consecutive measurements.

TOC: top of casing

NA: not applicable



Well Development Form

Project Name:	National Western - 25157010	Well No.:	MW-06
Method of Development:	Surge and purge	Date:	4/30/2015
Field Professional:	Sarah Bruns	Pump Type:	NA
Reviewed By:		Serial No.:	NA
	Before	Reference Point	After
Depth to Water (ft.):	31.17	TOC	31.20
Depth to Sediment (ft.):	NA	NA	NA
Total Depth of the Well (ft.):	37.51	TOC	37.51
Initial Water Column Height (ft.):	6.34	NA	NA
Diameter of the Well (inches):	2	NA	2

Volume of Water Conversion

Casing Volume (gal) = (Total Depth - Depth to Water) x Volume of Water Conversion

1" Well 0.041 gal/ft. 4" Well 0.653 Casing Volume (gal): 1.03

2" Well 0.163 gal/ft. 6" Well 1.469 **Development Volume = Casing Volume x 10**

Development Volume (gal): 10.3

Time	pH	TDS	Temp.	Conductivity	Pump Rate	Vol. of Water Removed	Water Level	Comments
		g/L	(°C)	(mmhos)	(gal/minute)	(gal)	(ft.)	
1236	7.07	1.017	16.72	1564	NA	2		brown, silty
1239	7.03	0.997	16.50	1533	NA	3		brown, silty
1242	7.03	0.975	16.39	1500	NA	4		brown, silty
1246	7.03	1.016	15.72	1563	NA	6		brown, silty
1249	7.03	0.998	15.75	1534	NA	7		brown, silty
1251	7.03	0.994	15.81	1530	NA	8		brown, silty
1255	7.06	1.021	15.73	1571	NA	10		brown, silty
1257	7.06	1.010	15.81	1554	NA	11	31.20	brown, silty

Development is considered complete and the well adequately purged for sampling when the following are satisfied:

1. Ten well casing volumes of water have been removed while measuring the groundwater physical parameters on the above table.
2. Sediment load has been removed.
3. When parameters (pH, temperature, conductivity) vary less than +/- 10% over three consecutive measurements.

TOC: top of casing

NA: not applicable



Well Development Form

Project Name:	National Western - 25157010	Well No.:	MW-07
Method of Development:	Surge and purge	Date:	4/30/2015
Field Professional:	Sarah Bruns	Pump Type:	NA
Reviewed By:		Serial No.:	NA
	Before	Reference Point	After
Depth to Water (ft.):	33.31	TOC	35.51
Depth to Sediment (ft.):	NA	NA	NA
Total Depth of the Well (ft.):	38.84	TOC	38.84
Initial Water Column Height (ft.):	5.53	NA	NA
Diameter of the Well (inches):	2	NA	2

Volume of Water Conversion

Casing Volume (gal) = (Total Depth - Depth to Water) x Volume of Water Conversion

1" Well 0.041 gal/ft. 4" Well 0.653 Casing Volume (gal): 0.90

2" Well 0.163 gal/ft. 6" Well 1.469 ***Development Volume = Casing Volume x 10***

Development Volume (gal): 9.0

Time	pH	TDS	Temp.	Conductivity	Pump Rate	Vol. of Water Removed	Water Level	Comments
		g/L	(°C)	(mmhos)	(gal/minute)	(gal)	(ft.)	
1347	7.28	0.868	15.93	1336	NA	2		brown, silty
1350	7.23	0.866	15.47	1332	NA	3		brown, silty
1357	7.25	0.868	15.68	1336	NA	4.5		brown, silty
14.0	7.24	0.930	15.26	1431	NA	6.5		brown, silty
1404	7.24	0.928	15.30	1428	NA	7.5		brown, silty
1409	7.25	0.918	15.32	1413	NA	9	35.51	brown, silty

Development is considered complete and the well adequately purged for sampling when the following are satisfied:

1. Ten well casing volumes of water have been removed while measuring the groundwater physical parameters on the above table.
2. Sediment load has been removed.
3. When parameters (pH, temperature, conductivity) vary less than +/- 10% over three consecutive measurements.

TOC: top of casing

NA: not applicable



Well Development Form

Project Name:	National Western - 25157010		Well No.:	MW-08	
Method of Development:	Surge and purge		Date:	5/1/2015	
Field Professional:	Sarah Bruns		Pump Type:	NA	
Reviewed By:			Serial No.:	NA	
	Before	Reference Point	After		
Depth to Water (ft.):	30.85	TOC	30.87		
Depth to Sediment (ft.):	NA	NA	NA		
Total Depth of the Well (ft.):	38.00	TOC	38.00		
Initial Water Column Height (ft.):	7.15	NA	NA		
Diameter of the Well (inches):	2	NA	2		

Volume of Water Conversion

Casing Volume (gal) = (Total Depth - Depth to Water) x Volume of Water Conversion

1" Well 0.041 gal/ft. 4" Well 0.653 Casing Volume (gal): 1.16

2" Well 0.163 gal/ft. 6" Well 1.469 **Development Volume = Casing Volume x 10**

Development Volume (gal): 11.6

Time	pH	TDS	Temp.	Conductivity	Pump Rate	Vol. of Water Removed	Water Level	Comments
		g/L	(°C)	(mmhos)	(gal/minute)	(gal)	(ft.)	
1029	7.05	0.897	15.36	1380	NA	2		brown, silty
1031	7.01	0.887	15.35	1364	NA	3		brown, silty
1033	7.01	0.881	15.35	1355	NA	4		brown, silty
1037	7.05	0.897	15.25	1380	NA	6		brown, silty
1040	7.07	0.895	15.26	1376	NA	7		brown, silty
1045	7.08	0.896	15.26	1379	NA	8	38.83	brown, silty
1207							30.87	slightly silty, cloudy

Development is considered complete and the well adequately purged for sampling when the following are satisfied:

1. Ten well casing volumes of water have been removed while measuring the groundwater physical parameters on the above table.
2. Sediment load has been removed.
3. When parameters (pH, temperature, conductivity) vary less than +/- 10% over three consecutive measurements.

TOC: top of casing

NA: not applicable



Well Development Form

Project Name:	National Western - 25157010	Well No.:	MW-09
Method of Development:	Surge and purge	Date:	4/29/2015
Field Professional:	Sarah Bruns	Pump Type:	NA
Reviewed By:		Serial No.:	NA
	Before	Reference Point	After
Depth to Water (ft.):	30.35	TOC	* water level indicator malfunctioning
Depth to Sediment (ft.):	NA	NA	NA
Total Depth of the Well (ft.):	38.77	TOC	38.77
Initial Water Column Height (ft.):	8.42	NA	NA
Diameter of the Well (inches):	2	NA	2

Volume of Water Conversion

Casing Volume (gal) = (Total Depth - Depth to Water) x Volume of Water Conversion

1" Well 0.041 gal/ft. 4" Well 0.653 Casing Volume (gal): 1.37

2" Well 0.163 gal/ft. 6" Well 1.469 ***Development Volume = Casing Volume x 10***

Development Volume (gal): 13.7

Time	pH	TDS	Temp.	Conductivity	Pump Rate	Vol. of Water Removed	Water Level	Comments
		g/L	(°C)	(mmhos)	(gal/minute)	(gal)	(ft.)	
1212	7.09	1.024	16.14	1575	NA	2		very silty, brown
1215	7.05	1.000	16.01	1538	NA	3		very silty, brown
1218	7.03	0.993	15.85	1527	NA	4		very silty, brown
1222	7.04	1.043	15.41	1605	NA	6		very silty, brown
1225	7.06	1.039	15.45	1599	NA	7		very silty, brown
1229	7.06	1.037	15.54	1596	NA	8		very silty, brown
1235	7.04	1.055	15.26	1624	NA	11.5		very silty, brown
1239	7.03	1.052	15.39	1618	NA	13		very silty, brown
1242	7.02	1.056	15.32	1629	NA	14		very silty, brown

Development is considered complete and the well adequately purged for sampling when the following are satisfied:

1. Ten well casing volumes of water have been removed while measuring the groundwater physical parameters on the above table.
2. Sediment load has been removed.
3. When parameters (pH, temperature, conductivity) vary less than +/- 10% over three consecutive measurements.

TOC: top of casing

NA: not applicable



Well Development Form

Project Name:	National Western - 25157010	Well No.:	MW-11
Method of Development:	Surge and purge	Date:	4/29/2015
Field Professional:	Sarah Bruns	Pump Type:	NA
Reviewed By:		Serial No.:	NA
	Before	Reference Point	After
Depth to Water (ft.):	10.09	TOC	10.45
Depth to Sediment (ft.):	NA	NA	NA
Total Depth of the Well (ft.):	13.35	TOC	13.35
Initial Water Column Height (ft.):	3.26	NA	NA
Diameter of the Well (inches):	2	NA	2

Volume of Water Conversion

Casing Volume (gal) = (Total Depth - Depth to Water) x Volume of Water Conversion

1" Well 0.041 gal/ft. 4" Well 0.653 Casing Volume (gal): 0.53

2" Well 0.163 gal/ft. 6" Well 1.469 **Development Volume = Casing Volume x 10**

Development Volume (gal): 5.3

Time	pH	TDS	Temp.	Conductivity	Pump Rate	Vol. of Water Removed	Water Level	Comments
		g/L	(°C)	(mmhos)	(gal/minute)	(gal)	(ft.)	
1101	7.11	1.442	13.71	2216	NA	2		brown, silty
1103	7.12	1.401	13.69	2149	NA	3		brown, silty
1106	7.12	1.341	13.63	2059	NA	4		brown, silty
1110	7.17	1.460	13.19	2242	NA	5.5		brown, silty
1112	7.16	1.416	13.46	2177	NA	6		brown, silty
1114	7.16	1.398	13.47	2135	NA	7		brown, silty
1116	7.15	1.381	13.48	2128	NA	8	10.45	brown, silty

Development is considered complete and the well adequately purged for sampling when the following are satisfied:

1. Ten well casing volumes of water have been removed while measuring the groundwater physical parameters on the above table.
2. Sediment load has been removed.
3. When parameters (pH, temperature, conductivity) vary less than +/- 10% over three consecutive measurements.

TOC: top of casing

NA: not applicable



Well Development Form

Project Name:	National Western - 25157010		Well No.:	MW-12	
Method of Development:	Surge and purge		Date:	5/4/2015	
Field Professional:	Marshall Haworth		Pump Type:	NA	
Reviewed By:			Serial No.:	NA	
	Before	Reference Point	After		
Depth to Water (ft.):	8.47	TOC	8.57		
Depth to Sediment (ft.):	NA	NA	NA		
Total Depth of the Well (ft.):	14.60	TOC	14.60		
Initial Water Column Height (ft.):	6.13	NA	NA		
Diameter of the Well (inches):	2	NA	2		

Volume of Water Conversion

Casing Volume (gal) = (Total Depth - Depth to Water) x Volume of Water Conversion

1" Well 0.041 gal/ft. 4" Well 0.653 Casing Volume (gal): 0.99

2" Well 0.163 gal/ft. 6" Well 1.469 **Development Volume = Casing Volume x 10**

Development Volume (gal): 9.99

Time	pH	TDS	Temp.	Conductivity	Pump Rate	Vol. of Water Removed	Water Level	Comments
		g/L	(°C)	(mmhos)	(gal/minute)	(gal)	(ft.)	
1337	6.84	1.075	13.25	1653	NA	1		silty, brown
1344	7.12	1.027	13.46	1580	NA	2		silty, brown
1347	7.10	1.016	13.33	1562	NA	3		silty, brown
1352	7.10	1.008	13.36	1551	NA	4		silty, brown
1356	7.07	1.096	13.24	1686	NA	5		silty, brown
1359	7.07	1.094	13.21	1683	NA	6		silty, brown
1402	7.06	1.084	13.24	1667	NA	7		silty, brown
1407	7.06	1.093	13.24	1680	NA	8		silty, brown
1410	7.06	1.088	13.22	1672	NA	9		silty, brown
1412	7.07	1.082	13.26	1664	NA	10	8.57	silty, brown

Development is considered complete and the well adequately purged for sampling when the following are satisfied:

1. Ten well casing volumes of water have been removed while measuring the groundwater physical parameters on the above table.
2. Sediment load has been removed.
3. When parameters (pH, temperature, conductivity) vary less than +/- 10% over three consecutive measurements.

TOC: top of casing

NA: not applicable



Well Development Form

Project Name:	National Western - 25157010	Well No.:	MW-13
Method of Development:	Surge and purge	Date:	5/29/2015
Field Professional:	Sarah Bruns	Pump Type:	NA
Reviewed By:		Serial No.:	NA
	Before	Reference Point	After
Depth to Water (ft.):	9.28	TOC	9.34
Depth to Sediment (ft.):	NA	NA	NA
Total Depth of the Well (ft.):	18.35	TOC	18.35
Initial Water Column Height (ft.):	9.07	NA	NA
Diameter of the Well (inches):	2	NA	2

Volume of Water Conversion

Casing Volume (gal) = (Total Depth - Depth to Water) x Volume of Water Conversion

1" Well 0.041 gal/ft. 4" Well 0.653 Casing Volume (gal): 1.47

2" Well 0.163 gal/ft. 6" Well 1.469 ***Development Volume = Casing Volume x 10***

Development Volume (gal): 14.7

Time	pH	TDS	Temp.	Conductivity	Pump Rate	Vol. of Water Removed	Water Level	Comments
		g/L	(°C)	(mmhos)	(gal/minute)	(gal)	(ft.)	
819	6.91	1.056	16.27	1623	NA	2		very silty, brown
823	6.91	1.003	16.12	1542	NA	4		very silty, brown
825	6.90	0.998	16.08	1534	NA	5		very silty, brown
828	6.90	1.080	15.9	1661	NA	7		very silty, brown
831	6.90	1.065	15.88	1637	NA	9		very silty, brown
833	6.89	1.066	15.88	1639	NA	10		very silty, brown
837	6.91	1.120	15.86	1721	NA	12		very silty, brown
839	6.90	1.050	15.87	1613	NA	14		very silty, brown
841	6.90	1.038	15.87	1596	NA	15	9.34	very silty, brown

Development is considered complete and the well adequately purged for sampling when the following are satisfied:

1. Ten well casing volumes of water have been removed while measuring the groundwater physical parameters on the above table.
2. Sediment load has been removed.
3. When parameters (pH, temperature, conductivity) vary less than +/- 10% over three consecutive measurements.

TOC: top of casing

NA: not applicable



Well Development Form

Project Name:	National Western - 25157010		Well No.:	MW-15	
Method of Development:	Surge and purge		Date:	5/6/2015	
Field Professional:	Marshall Haworth		Pump Type:	NA	
Reviewed By:			Serial No.:	NA	
	Before	Reference Point	After		
Depth to Water (ft.):	32.41	TOC	32.43		
Depth to Sediment (ft.):	NA	NA	NA		
Total Depth of the Well (ft.):	39.15	TOC	39.15		
Initial Water Column Height (ft.):	6.74	NA	NA		
Diameter of the Well (inches):	2	NA	2		

Volume of Water Conversion

Casing Volume (gal) = (Total Depth - Depth to Water) x Volume of Water Conversion

1" Well 0.041 gal/ft. 4" Well 0.653 Casing Volume (gal): 1.09

2" Well 0.163 gal/ft. 6" Well 1.469 **Development Volume = Casing Volume x 10**

Development Volume (gal): 10.98

Time	pH	TDS	Temp.	Conductivity	Pump Rate	Vol. of Water Removed	Water Level	Comments
		g/L	(°C)	(mmhos)	(gal/minute)	(gal)	(ft.)	
1135	7.17	1.186	15.54	1825	NA	1		silty, brown
1138	7.14	1.160	15.50	1785	NA	2		silty, brown
1141	7.16	1.143	15.46	1759	NA	3		silty, brown
1145	7.17	1.128	15.46	1736	NA	4		silty, brown
1148	7.16	1.109	15.47	1707	NA	5		silty, brown
1151	7.16	1.117	15.31	1719	NA	6		silty, brown
1153	7.16	1.110	15.34	1708	NA	7		silty, brown
1156	7.16	1.101	15.36	1695	NA	8		silty, brown
1200	7.16	1.099	15.38	1691	NA	9		silty, brown
1211	7.19	1.120	15.46	1724	NA	10		silty, brown
1213	7.19	1.116	15.44	1717	NA	11		silty, brown
1215	7.19	1.116	15.46	1717	NA	12	32.43	silty, brown

Development is considered complete and the well adequately purged for sampling when the following are satisfied:

1. Ten well casing volumes of water have been removed while measuring the groundwater physical parameters on the above table.
2. Sediment load has been removed.
3. When parameters (pH, temperature, conductivity) vary less than +/- 10% over three consecutive measurements.

TOC: top of casing

NA: not applicable



Well Development Form

Project Name:	National Western - 25157010		Well No.:	MW-16	
Method of Development:	Surge and purge		Date:	5/1/2015	
Field Professional:	Sarah Bruns		Pump Type:	NA	
Reviewed By:			Serial No.:	NA	
	Before	Reference Point	After		
Depth to Water (ft.):	31.07	TOC	34.84		
Depth to Sediment (ft.):	NA	NA	NA		
Total Depth of the Well (ft.):	38.23	TOC	38.23		
Initial Water Column Height (ft.):	7.16	NA	NA		
Diameter of the Well (inches):	2	NA	2		

Volume of Water Conversion

Casing Volume (gal) = (Total Depth - Depth to Water) x Volume of Water Conversion

1" Well 0.041 gal/ft. 4" Well 0.653 Casing Volume (gal): 1.16

2" Well 0.163 gal/ft. 6" Well 1.469 **Development Volume = Casing Volume x 10**

Development Volume (gal): 11.6

Time	pH	TDS	Temp.	Conductivity	Pump Rate	Vol. of Water Removed	Water Level	Comments
		g/L	(°C)	(mmhos)	(gal/minute)	(gal)	(ft.)	
913	7.07	0.864	15.26	1329	NA	2		silty, brown
917	7.05	0.873	15.27	1343	NA	3		silty, brown
919	7.03	0.882	15.27	1357	NA	4		silty, brown
922	7.00	0.988	15.25	1520	NA	6		silty, brown
925	7.01	0.990	15.27	1524	NA	7		silty, brown
927	7.00	0.994	15.28	1530	NA	8		silty, brown
931	7.02	1.026	15.26	1579	NA	10		silty, brown
933	7.03	1.023	15.27	1574	NA	11		silty, brown
935	7.02	1.019	15.28	1568	NA	12	34.84	silty, brown

Development is considered complete and the well adequately purged for sampling when the following are satisfied:

1. Ten well casing volumes of water have been removed while measuring the groundwater physical parameters on the above table.
2. Sediment load has been removed.
3. When parameters (pH, temperature, conductivity) vary less than +/- 10% over three consecutive measurements.

TOC: top of casing

NA: not applicable

APPENDIX D

ANALYTICAL SUMMARY TABLES

Table 1
Groundwater Level Measurements and Survey Data
National Western Complex
Denver, Colorado
Terracon Project Number 25157010

Monitoring Well	Ground Surface Elevation (MSL)	TOC (MSL)	DTW (5/29/15) (BGS)	GW Elevation (AMSL)
MW-01	5158.87	5163.10	17.54	5141.33
MW-02	5184.77	5184.20	31.23	5153.54
MW-03	5185.36	5185.05	32.13	5153.23
MW-04	5170.51	5170.04	19.28	5151.23
MW-05	5161.32	5165.72	15.08	5146.24
MW-06	5183.30	5183.06	30.83	5152.47
MW-07	5185.18	5184.70	32.95	5152.23
MW-08	5181.19	5180.69	30.58	5150.61
MW-09	5180.34	5179.94	30.00	5150.34
MW-10	5153.01	5152.51	6.07	5146.94
MW-11	5146.53	5146.14	7.79	5138.74
MW-12	5154.23	5153.76	8.24	5145.99
MW-13	5144.09	5143.64	9.30	5134.79
MW-14	5184.79	5184.16	32.49	5152.30
MW-15	5184.79	5183.99	32.12	5152.67
MW-16	5184.81	5184.13	30.68	5154.13

DTW : Depth to Groundwater
TOC : Top of Casing
BGS : Below Ground Surface
GW : Groundwater
AMSL : Above Mean Sea Level

Table 2
Photoionization Detector Readings
Exceeding 10 ppm Isobutylene Equivalents
National Western Complex
Denver, Colorado
Terracon Project Number 25157010

Soil Boring ID/Depth (feet bgs)	PID Results (ppm)
SB-02/4-5	17.7
SB-02/9-10	18.0
SB-02/14-15	18.2
SB-02/19-20	14.0
SB-04/4-5	103.3
SB-04/9-10	48.4
SB-04/14-15	301.8
SB-05/4-5	83.0
SB-05/9-10	37.3
SB-05/14-15	22.4
SB-05/19-20	19.6
SB-05/25-26	20.0
SB-06/2.5-3.5	66.2
SB-06/7-8	22.8
SB-06/12-13	23.7
SB-06/17-18	24.4
SB-08/4-5	134.4
SB-08/9-10	286.7
SB-08/14-15	149.5
SB-08/19-20	35.4
SB-10/8-9	12.9
SB-10/11-12	11.6
SB-10/13-14	15.6
SB-13/3-4	314.9
SB-13/11-12	307.3
SB-13/13-14	307.3
SB-13/16-17	305.8
SB-13/18-19	305.8
SB-13/21-22	78.7
SB-13/23-24	78.7
SB-15/3-4	308.7
SB-15/6-7	39.7
SB-15/8-9	39.7

bgs : below ground surface

PID : Photoionization Detector with a 10.6
electron-volt ultraviolet lamp

ppm : parts per million

Table 3A
Metal Constituents Detected in Soil
Soil Borings
National Western Complex
Denver, Colorado
Terracon Project Number 25157010

Sample Name	Sample Date	Sample Depth	Metals (mg/kg)								
			Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Zinc	Mercury
SB-01 (0-6")	4/8/2015	0-6"	1.43	134	0.141	7.17	6.46	0.962	<0.105	85.7	<0.0526
SB-01 (6-12")	4/8/2015	6-12"	1.35	63.6	0.203	5.23	14.3	<0.0567	<0.1113	35.0	<0.0515
SB-02 (0-6")	4/8/2015	0-6"	0.757	66.5	0.150	10.4	11.0	0.114	<0.107	72.2	<0.0534
SB-02 (6-12")	4/8/2015	6-12"	1.84	102	0.167	14.2	14.8	0.175	<0.108	115	<0.0542
SB-03 (0-6")	4/9/2015	0-6"	4.40	261	0.333	12.3	14.0	0.345	<0.110	54.5	<0.0523
SB-03 (6-24")	4/9/2015	6-24"	2.49	89.9	0.266	9.17	24.4	0.0923	0.121	55.5	<0.0561
SB-04 (0-6")	4/8/2015	0-6"	3.28	186	1.01	6.79	142	0.159	0.284	263	0.135
SB-04 (6-12")	4/8/2015	6-12"	3.21	164	1.10	6.51	126	0.193	0.235	246	0.102
SB-05 (0-6")	4/8/2015	0-6"	20.2	218	5.69	10.1	773	0.336	3.60	398	0.418
SB-05 (6-12")	4/8/2015	6-12"	13.6	127	4.49	7.69	571	0.193	2.65	187	0.22
SB-06 (0-6")	4/8/2015	0-6"	3.89	87.6	0.675	7.17	35.2	<0.0536	0.178	57.1	<0.0536
SB-06 (6-12")	4/8/2015	6-12"	3.52	64.0	0.502	4.90	32.3	<0.0482	0.141	32.2	<0.0460
SB-07 (0-6")	4/14/2015	0-6"	1.77	95.2	0.195	7.52	33.1	0.366	0.432	109	<0.0661
SB-07 (6-24")	4/14/2015	6-24"	2.15	79.5	0.286	5.50	50.8	0.0845	0.594	92.3	0.434
SB-08 (0-6")	4/9/2015	0-6"	14.3	158	1.82	8.85	560	0.203	0.373	236	0.699
SB-08 (6-24")	4/9/2015	6-24"	6.19	134	1.57	8.17	790	0.155	0.437	272	0.992
SB-09 (0-6")	4/13/2015	0-6"	4.01	190	0.470	12.1	31.0	0.235	0.113	66.0	<0.0483
SB-09 (6-24")	4/13/2015	6-24"	2.93	188	0.157	14.3	23.2	0.216	<0.108	72.3	<0.0451
SB-10 (0-6")	4/10/2015	0-6"	3.48	101	1.11	7.93	59.8	0.189	0.181	109	0.0994
SB-10 (6-24")	4/10/2015	6-24"	3.34	129	0.986	5.09	72.3	0.139	0.254	140	0.0731
SB-11 (0-6")	4/10/2015	0-6"	7.95	142	0.992	14.4	80.3	0.248	0.761	175	0.191
SB-11 (6-24")	4/10/2015	6-24"	6.51	136	1.01	13.0	76.3	0.184	0.785	167	0.140
SB-12 (0-6")	4/13/2015	0-6"	3.55	159	0.311	11.0	41.5	0.150	0.230	52.2	0.250
SB-12 (6-24")	4/13/2015	6-24"	7.30	159	<0.111	9.24	9.09	0.122	<0.111	33.5	<0.0490
SB-13 (0-6")	4/9/2015	0-6"	1.89	50.4	0.213	3.28	24.7	<0.0523	0.145	58.0	0.0473
SB-13 (6-24")	4/9/2015	6-24"	1.71	43.2	0.218	3.20	21.5	<0.0518	0.112	47.2	<0.0518
SB-14 (0-6")	4/13/2015	0-6"	1.64	43.1	<0.109	2.07	3.08	<0.0546	<0.109	18.5	<0.0546
SB-14 (6-24")	4/13/2015	6-24"	2.09	53.9	0.820	3.88	26.8	0.0982	<0.0982	43.5	<0.0481
SB-15 (0-6")	4/9/2015	0-6"	1.99	51.1	0.209	3.97	7.42	<0.0530	<0.106	23.7	<0.0429
SB-15 (6-24")	4/9/2015	6-24"	0.990	46.5	<0.102	3.49	4.47	<0.0511	<0.102	17.0	<0.0424
SB-16 (0-6")	4/14/2015	0-6"	1.80	38.4	0.389	5.81	8.98	<0.0484	<0.0968	18.3	<0.0557
SB-16 (6-24")	4/14/2015	6-24"	1.14	21.6	0.162	2.50	4.38	<0.0564	<0.113	13.5	<0.0564
SB-17 (0-6")	4/13/2015	0-6"	6.88	215	0.304	5.02	18.2	1.04	<0.107	31.8	<0.0536
SB-17 (6-24")	4/13/2015	6-24"	7.64	254	0.778	7.70	290	1.03	<0.122	101	0.0629
SB-18 (0-6")	4/14/2015	0-6"	1.02	53.0	0.325	5.11	17.2	0.259	0.116	87.9	<0.0535
SB-18 (6-24")	4/14/2015	6-24"	2.84	66.2	0.370	8.23	61.5	0.0971	0.226	118	<0.0532
EPA Residential RSLs ¹			NA	15,000	70	1.2E+05	400	390	390	23,000	9.4
EPA Industrial RSLs ¹			NA	2.20E+05	980	1.80E+06	800	5,800	5,800	3.50E+05	40
OU1 Residential RBACTL ²			70								

1) Environmental Protection Agency (EPA) Regional Screening Levels (RSLs), January 2015

2) EPA Risk-Based Alternative Cleanup Target Level (RBACTL)-Superfund Record of Decision: Vasquez Boulevard and I-70, (EPA ID: CO0002259588) OU01. Denver, CO, September 25, 2003.

<: Less than the Analytical Method Reporting Limit

Bold: Exceeds EPA Residential RSL

mg/kg: milligrams per kilogram

NA: Not Applicable

Table 3B
Metal Constituents Detected in Soil
Groundwater Monitoring Well Borings
National Western Complex
Denver, Colorado
Terracon Project Number 25157010

Sample Name	Sample Date	Sample Depth	Metals (mg/kg)								
			Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Zinc	Mercury
MW-01 (0-6")	4/15/2015	0-6"	2.86	97.6	0.410	6.34	31.2	0.0898	0.135	52.3	<0.0577
MW-01 (6-24")	4/15/2015	6-24"	2.20	63.3	0.230	5.97	13.5	0.0648	<0.108	38.8	<0.0613
MW-02 (0-6")	4/21/2015	0-6"	4.89	83.1	1.05	9.53	124	0.220	0.470	110	0.0709
MW-02 (0-6")-D	4/21/2015	0-6"	5.49	104	1.15	9.95	136	0.208	0.574	127	0.0795
MW-02 (6-24")	4/21/2015	6-24"	8.51	109	1.44	14.2	241	0.236	1.02	124	0.475
MW-02 (6-24")-D	4/21/2015	6-24"	11.4	126	2.36	12.8	390	0.276	1.88	173	0.194
MW-03 (0-6")	4/21/2015	0-6"	2.14	95.7	0.661	16.2	40.5	0.120	<0.106	58.0	<0.0459
MW-03 (6-24")	4/21/2015	6-24"	16.6	218	8.69	8.70	512	0.323	2.76	547	0.235
MW-04 (0-6")	4/21/2015	0-6"	0.951	55.5	<0.109	8.80	8.35	0.203	<0.109	82.7	<0.0545
MW-04 (6-24")	4/21/2015	6-24"	8.57	71.8	4.52	5.71	52.9	0.213	0.117	55.3	0.183
MW-05 (0-6")	4/15/2015	0-6"	5.15	172	1.53	7.56	172	0.210	0.615	572	0.0656
MW-05 (6-24")	4/15/2015	6-24"	6.40	202	1.58	11.3	196	0.217	0.806	719	0.0800
MW-06 (0-6")	4/22/2015	0-6"	1.23	38.1	0.274	4.06	25.9	0.196	0.141	28.3	<0.0541
MW-06 (6-24")	4/22/2015	6-24"	1.05	31.7	0.141	2.60	11.3	<0.0533	<0.107	20.4	<0.0533
MW-07 (0-6")	4/24/2015	0-6"	3.88	134	1.19	11.0	75.8	0.234	0.296	80.5	<0.0543
MW-07 (0-6")-D	4/24/2015	0-6"	4.32	155	1.57	13.0	75.7	0.237	0.318	118	<0.0470
MW-07 (6-24")	4/24/2015	6-24"	3.24	135	0.471	9.23	44.4	0.218	0.225	59.2	<0.0595
MW-07 (6-24")-D	4/24/2015	6-24"	2.15	114	0.346	7.25	38.6	0.357	0.151	47.4	<0.0564
MW-08 (0-6")	4/23/2015	0-6"	9.86	125	0.292	8.07	66.5	0.219	0.137	66.5	0.0766
MW-08 (6-24")	4/23/2015	6-24"	2.78	158	0.137	13.6	23.3	0.288	<0.111	64.9	<0.0502
MW-09 (0-6")	4/24/2015	0-6"	3.06	121	0.780	9.00	21.3	0.187	0.143	51.4	<0.0543
MW-09 (6-24")	4/24/2015	6-24"	1.48	88.9	0.136	7.08	7.79	0.140	<0.108	29.8	<0.0452
MW-10 (0-6")	4/29/2015	0-6"	2.61	155	0.207	13.1	10.9	0.169	<0.113	76.1	<0.0498
MW-10 (0-6")-D	4/29/2015	0-6"	2.07	146	0.136	12.7	11.1	0.182	<0.116	71.6	<0.0512
MW-10 (6-24")	4/29/2015	6-24"	5.09	169	0.380	13.6	10.2	0.360	<0.109	76.1	<0.0475
MW-10 (6-24")-D	4/29/2015	6-24"	3.98	159	0.182	13.8	8.92	0.254	<0.131	79.2	<0.0550
MW-11 (0-6")	4/15/2015	0-6"	7.99	111	2.28	4.87	234	0.183	0.846	164	0.209
MW-11 (6-24")	4/15/2015	6-24"	3.42	146	0.640	8.17	120	0.193	0.222	105	0.125
MW-12 (0-6")	5/1/2015	0-6"	13.3	141	1.23	8.98	403	0.316	1.86	122	0.114
MW-12 (6-24")	5/1/2015	6-24"	4.61	163	0.291	17.7	25.0	0.334	0.176	79.7	<0.0479
MW-13 (0-6")	5/28/2015	0-6"	3.39	97.0	2.12	9.00	69.8	0.806	0.408	119	0.0868
MW-13 (6-24")	5/28/2015	6-24"	3.12	123	2.24	8.48	52.4	0.735	0.231	124	0.0992
MW-14 (0-6")	4/22/2015	0-6"	5.94	94.5	1.59	6.29	134	<0.0535	0.444	145	0.0716
MW-14 (6-24")	4/22/2015	6-24"	3.82	103	0.694	9.41	66.3	<0.0562	0.273	74.4	<0.0508
MW-15 (0-6")	4/30/2015	0-6"	2.21	88.4	0.208	14.1	13.4	0.403	0.261	56.8	<0.0536
MW-15 (6-24")	4/30/2015	6-24"	2.37	113	0.116	15.9	13.6	0.254	0.260	49.0	<0.0435
MW-16 (0-6")	4/28/2015	0-6"	3.24	133	0.265	10.3	19.6	<0.0548	<0.110	56.3	<0.0465
MW-16 (0-6")-D	4/28/2015	0-6"	3.99	145	0.480	12.5	33.1	0.0767	0.197	72.0	<0.0484
MW-16 (6-24")	4/28/2015	6-24"	9.65	135	0.961	12.4	67.9	0.116	0.238	101	0.0742
MW-16 (6-24")-D	4/28/2015	6-24"	9.43	148	0.893	13.1	60.4	0.128	0.261	102	0.154
EPA Residential RSLs ¹			NA	15,000	70	1.2E+05	400	390	390	23,000	9.4
EPA Industrial RSLs ¹			NA	220,000	980	1.80E+06	800	5,800	5,800	350,000	40
OU1 Residential RBACTL ²			70								

1) Environmental Protection Agency (EPA) Regional Screening Levels (RSLs), January 2015

2) EPA Risk-Based Alternative Cleanup Target Level (RBACTL)-Superfund Record of Decision: Vasquez Boulevard and I-70, (EPA ID: CO0002259588) OU01. Denver, CO, September 25, 2003.

<: Less than the Analytical Method Reporting Limit

Bold: Exceeds EPA Residential RSL

mg/kg: milligrams per kilogram

NA: Not Applicable

Table 3C
Metal Constituents Detected in Soil
Soil Vapor Point Borings
National Western Complex
Denver, Colorado
Terracon Project Number 25157010

Sample Name	Sample Date	Sample Depth	Metals (mg/kg)								
			Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Zinc	Mercury
SV-01 (0-6")	4/29/2015	0-6"	7.41	112	1.82	7.36	74.6	0.370	0.341	160	<0.0524
SV-01 (6-24")	4/29/2015	6-24"	4.43	269	0.647	5.69	97	0.338	1.28	238	<0.0494
SV-02 (0-6")	4/28/2015	0-6"	12.6	688	2.79	8.16	282	0.524	0.441	425	0.297
SV-02 (6-24")	4/28/2015	6-24"	6.77	175	3.85	5.65	98.3	0.212	0.394	1370	0.102
SV-03 (0-6")	4/27/2015	0-6"	1.14	180	0.326	11.8	12.1	0.305	<0.109	115	0.298
SV-03 (6-24")	4/27/2015	6-24"	1.23	94.8	<0.245	9.38	27.6	0.249	0.125	102	<0.0440
SV-04 (0-6")	4/28/2015	0-6"	2.15	92.4	0.263	5.80	25.2	<0.0480	0.164	62.8	<0.0473
SV-04 (6-24")	4/28/2015	6-24"	1.19	71.6	<0.0964	4.40	5.58	<0.0482	<0.0964	21.5	<0.0450
SV-05 (0-6")	4/28/2015	0-6"	1.33	47.1	<0.110	4.52	5.61	<0.0549	<0.110	22.0	<0.0549
SV-05 (6-24")	4/28/2015	6-24"	1.34	48.2	<0.108	5.66	4.72	<0.0538	<0.108	19.4	<0.0538
SV-06 (0-6")	4/28/2015	0-6"	6.67	171	2.12	14.4	192	0.179	0.547	349	0.365
SV-06 (6-24")	4/28/2015	6-24"	1.63	128	0.271	11.2	16.0	<0.0569	0.178	48.1	<0.0474
SV-07 (0-6")	4/28/2015	0-6"	3.75	74.0	0.572	4.86	62.6	0.0682	0.295	55.0	0.0488
SV-07 (6-24")	4/28/2015	6-24"	1.30	45.8	0.177	2.63	12.4	<0.0520	<0.104	16.1	<0.0520
SV-08 (0-6")	4/29/2015	0-6"	6.69	113	1.04	15.4	49.4	0.153	0.674	149	0.669
SV-08 (6-24")	4/29/2015	6-24"	3.93	272	1.00	7.02	130	0.0829	0.124	288	0.217
SV-09 (0-6")	4/29/2015	0-6"	6.33	176	1.15	12.1	62.7	0.240	0.314	66.4	<0.0539
SV-09 (6-24")	4/29/2015	6-24"	1.93	75.3	<0.120	15.3	10.0	0.207	<0.120	74.7	<0.0503
SV-10 (0-6")	4/27/2015	0-6"	8.12	93.3	1.06	8.18	95.2	0.187	0.541	52.8	0.0670
SV-10 (6-24")	4/27/2015	6-24"	3.30	149	0.308	10.9	32.7	0.197	0.211	51.1	<0.0562
SV-11 (0-6")	4/27/2015	0-6"	1.70	72.3	0.675	5.77	14.6	0.136	<0.0952	34.2	<0.0457
SV-11 (6-24")	4/27/2015	6-24"	1.35	66.4	0.394	8.17	11.7	0.128	<0.111	31.4	<0.0469
SV-12 (0-6")	4/27/2015	0-6"	0.751	47.4	<0.104	6.24	5.07	0.0834	<0.104	22.4	<0.0518
SV-12 (6-24")	4/27/2015	6-24"	0.796	29.4	0.247	2.95	19.1	0.0591	<0.0926	19.3	<0.0432
SV-13 (0-6")	4/27/2015	0-6"	1.02	47.9	<0.105	4.80	6.07	0.258	<0.105	19.4	<0.0467
SV-13 (6-24")	4/27/2015	6-24"	0.329	15.6	<0.101	1.59	2.23	<0.0507	<0.101	<10.1	<0.0445
SV-14 (0-6")	5/1/2015	0-6"	4.95	133	1.27	12.0	108	0.276	0.585	65.5	<0.0506
SV-14 (6-24")	5/1/2015	6-24"	4.16	114	1.03	9.87	90.7	0.236	0.491	53.0	<0.0544
SV-15 (0-6")	4/29/2015	0-6"	2.20	63.1	0.957	4.31	25.8	<0.0554	<0.111	60.7	<0.0457
SV-15 (6-24")	4/29/2015	6-24"	2.10	81.5	1.29	8.61	44.0	0.0579	<0.114	88.6	0.0820
SV-16 (0-6")	4/29/2015	0-6"	14.6	540	2.52	9.14	397	0.433	3.51	2670	0.189
SV-16 (6-24")	4/29/2015	6-24"	16.9	956	0.978	12.8	571	0.452	6.50	4870	0.200
SV-17 (0-6")	5/1/2015	0-6"	11.8	170	0.607	17.6	88.3	0.465	0.451	94.1	<0.0586
SV-17 (6-24")	5/1/2015	6-24"	2.58	137	0.133	13.3	8.59	0.173	<0.119	55.1	<0.0461
SV-18 (0-6")	4/29/2015	0-6"	8.89	86.2	1.23	2.94	229	0.283	1.05	103	0.331
SV-18 (6-24")	4/29/2015	6-24"	7.08	178	1.11	10.7	197	0.539	0.825	0.0529	0.0529
SV-19 (0-6")	5/1/2015	0-6"	10.0	144	1.49	6.43	265	0.300	0.857	198	0.145
SV-19 (6-24")	5/1/2015	6-24"	3.48	71.4	0.274	6.42	27.4	0.134	0.225	30.4	<0.0545
SV-20 (0-6")	4/28/2015	0-6"	28.1	292	5.90	12.6	875	0.506	2.29	405	0.846
SV-20 (6-24")	4/28/2015	6-24"	9.62	372	2.01	17.2	263	0.278	0.906	137	0.0591
EPA Residential RSLs ¹			NA	15,000	70	1.2E+05	400	390	390	23,000	9.4
EPA Industrial RSLs ¹			NA	220,000	980	1.80E+06	800	5,800	5,800	350,000	40
OU1 Residential RBACTL ²			70								

1) Environmental Protection Agency (EPA) Regional Screening Levels (RSLs), January 2015

2) EPA Risk-Based Alternative Cleanup Target Level (RBACTL)-Superfund Record of Decision: Vasquez Boulevard and I-70, (EPA ID: CO0002259588) OU01. Denver, CO, September 25, 2003.

<: Less than the Analytical Method Reporting Limit

Bold: Exceeds EPA Residential RSL

Bold + Shaded: Exceeds EPA Industrial RSL

mg/kg: milligrams per kilogram

NA: Not Applicable

Table 3D
Metal Constituents Detected in Soil
Test Pit Excavations
National Western Complex
Denver, Colorado
Terracon Project Number 25157010

Sample Name	Sample Date	Sample Depth	Metals (mg/kg)								
			Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Zinc	Mercury
TP-01 (0-2')	5/7/2015	0-2'	1.59	119	0.216	5.45	43.6	0.11	0.156	107	0.135
TP-02 (0-2')	5/7/2015	0-2'	4.23	188	0.303	6.79	44.9	0.136	0.462	299	<0.0527
TP-03 (0-2')	5/7/2015	0-2'	4.17	76.8	1.71	5.17	20.6	0.138	<0.106	61.5	<0.0529
TP-04 (2')	5/8/2015	2'	5.59	425	0.898	8.22	143	0.613	0.594	359	0.0850
TP-06 (2')	5/8/2015	2'	3.62	230	1.99	9.61	536	0.166	1.20	430	0.162
TP-07 (2')	5/8/2015	2'	6.49	175	0.735	18.70	69.8	0.247	0.659	152	0.999
TP-08 (2')	5/8/2015	2'	4.30	422	0.842	8.82	528	0.403	0.301	233	0.564
TP-10 (2')	5/8/2015	2'	2.47	114	0.264	6.93	22.1	0.147	<0.107	45.6	<0.0537
EPA Residential RSLs ¹			NA	15,000	70	1.2E+05	400	390	390	23,000	9.4
EPA Industrial RSLs ¹			NA	2.20E+05	980	1.80E+06	800	5,800	5,800	3.50E+05	40
OU1 Residential RBACTL ²			70								

1) Environmental Protection Agency (EPA) Regional Screening Levels (RSLs), January 2015

2) EPA Risk-Based Alternative Cleanup Target Level (RBACTL)-Superfund Record of Decision: Vasquez Boulevard and I-70, (EPA ID: CO0002259588) OU01. Denver, CO, September 25, 2003.

<: Less than the Analytical Method Reporting Limit

Bold: Exceeds EPA Residential RSL

mg/kg: milligrams per kilogram

NA: Not Applicable

Table 4
SVOC Constituents Detected in Soil
National Western Complex
Denver, Colorado
Terracon Project Number 25157010

Sample Name	Sample Date	Sample Depth	SVOC (mg/kg)														
			Acenaphthene	Anthracene	Benzo(a) anthracene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Chrysene	Dibenzofuran	Carbazole	Fluoranthene	Fluorene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene
SB-08 (10')	4/9/2015	10'	<0.33	0.41	0.29	0.27	0.27	0.22	0.31	<0.33	<0.33	0.56	<0.33	<0.33	<0.33	0.43	0.63
SB-10 (15')	4/10/2015	15'	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	0.5	<0.33	<0.33	<0.33	0.58	1.20
TP-03 (10')	5/7/2015	10'	4.40	8.30	14.00	26.00	28.00	13.00	15.00	2.10	1.70	27.00	3.50	0.66	1.30	29.00	48.00
TP-06 (6')	5/8/2015	6'	<0.33	0.59	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	0.21	<0.33	0.59	0.37	0.610	1.80
TP-06 (8')	5/8/2015	8'	0.36	3.60	<0.33	<0.33	<0.33	<0.33	<0.33	0.32	0.30	1.1	0.50	0.17	0.34	3.70	12.00
TP-07 (7')	5/8/2015	7'	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
TP-08 (6')	5/8/2015	6'	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	0.20	<0.33	<0.33	<0.33	<0.33	1.80
EPA Industrial RSLs ¹			45,000	230,000	2.9	2.9	2.9	2.9	290	NE	NE	30,000	30,000	3,000	17	NE	23,000
CDPHE Groundwater Protection ²			1,000	1,000	1,000	1,000	1,000	1,000	1,000	NE	NE	1,000	1,000	7.4	23	NE	1,000

1) Environmental Protection Agency (EPA) Industrial Regional Screening Levels (RSLs), January 2015

2) Colorado Department of Public Health and Environment (CDPHE) Groundwater Protection Values Soil Cleanup Table, March 2014

<: Less than the Analytical Method Reporting Limit

Bold: Exceeds an EPA Industrial RSL

mg/kg: milligrams per kilogram

NE: Not Established

SVOC : Semi-Volatile Organic Compounds

Table 5
VOC and TPH Constituents Detected in Soil
National Western Complex
Denver, Colorado
Terracon Project Number 25157010

Sample Name	Sample Date	Sample Depth	VOCs (mg/kg)		TPH (mg/kg)			
			Naphthalene	1,2,4-Trimethylbenzene	Gasoline Range Hydrocarbons	C10-C28 (DRO)	C28-C36 (ORO)	Oil & Grease (HEM)
TP-03 (10')	5/7/2015	10'	<0.010	<0.005	<0.50	<50	<50	320
TP-06 (6')	5/8/2015	6'	0.084	0.012	2.3	240	<50	NA
TP-06 (8')	5/8/2015	8'	0.03	<0.005	0.72	180	<50	NA
TP-07 (7')	5/8/2015	7'	<0.010	<0.005	<0.50	500	220	NA
TP-08 (6')	5/8/2015	6'	<0.010	<0.005	<0.50	<50	<50	NA
EPA Industrial RSLs ¹			17	240	NE	NE	NE	NE
CDPHE Groundwater Protection ²			23	NE	NE	NE	NE	NE
CDLE OPS RBSL ³			NE	NE	500	500	500	500

1) Environmental Protection Agency (EPA) Industrial Regional Screening Levels (RSLs), January 2015

2) Colorado Department of Public Health and Environment (CDPHE) Groundwater Protection Values Soil Cleanup Table, March 2014

3) Colorado Department of Labor and Employment (CDLE) Division of Oil and Public Safety (OPS) Risk Based Screening Levels (RBSLs), October 2005

<: Less than the Analytical Method Reporting Limit

Bold: Exceeds a CDLE OPS RBSL

mg/kg: milligrams per kilogram

NE: Not Established

VOC : Volatile Organic Compound

TPH: Total Petroleum Hydrocarbons

DRO : Diesel Range Organics

ORO: Oil Range Organics

HEM: N-Hexane Extractable Material

Table 6
Soil Vapor Field Screening
National Western Complex
Denver, Colorado
Terracon Project Number 25157010

Vapor Point	Sample Date	Minimum O ₂ %	LEL %	CO ppm	H ₂ S ppm	VOC ppm	SO ₂ ppm	Minimum O ₂ %	LEL %	CO ppm	H ₂ S ppm	VOC ppm	SO ₂ ppm	Minimum O ₂ %	LEL %	CO ppm	H ₂ S ppm	VOC ppm	SO ₂ ppm	
SV-01 S	5/14/2015	9.6	0	0	0	1	0.5	9.4	0	0	0	1	0.4	10.2	0	0	0	1	0.3	
SV-02 S	5/14/2015	1.3	99	0	0	1	0.7	0	99	0	1.2	1	1.1	0	99	11	1.4	1	1.2	
SV-02 D		Unable to sample, vapor point below groundwater table																		
SV-03 S	5/21/2015	11.4	0	0	0	0.2	0	9.5	0	0	0	0.3	0	7.5	0	0	0	0	0	
SV-03 D	5/21/2015	4.1	0	8	0	2.6	0	3.1	0	0	0	0.5	0	3.0	0	0	0	0.4	0	
SV-04 S	5/22/2015	19.0	0	0	0	0	0	19.2	0	0	0	0	0	19.2	0	0	0	0	0	
SV-04 D	5/22/2015	19.3	0	0	0	0	0	19.1	0	0	0	0	0	19.0	0	0	0	0	0	
SV-05 S	5/22/2015	19.0	0	0	0	0	0	18.8	0	0	0	0	0	18.8	0	0	0	0	0	
SV-05 D	5/22/2015	18.4	0	0	0	0	0	18.2	0	0	0	0	0	18.2	0	0	0	0	0	
SV-06 S	5/22/2015	19.0	0	0	0	0	0	18.9	0	0	0	0	0	18.9	0	0	0	0	0	
SV-07 S	5/22/2015	19.1	0	0	0	0	0	19.0	0	0	0	0	0	19.1	0	0	0	0	0	
SV-08 S	5/14/2015	0.0	45	0	1.3	1	1.3	0.0	5	0	0	1	0.9	0	0	0	0	1	0.8	
SV-09 S	5/20/2015	15.4	0	1	0	1.1	0	16.1	0	1	0	0.6	0	16.1	0	2	0	0.6	0	
SV-10 S	5/21/2015	19.6	0	0	0	0.5	0	19.9	0	0	0	0.3	0	19.9	0	0	0	0.3	0	
SV-11 S	5/21/2015	8.7	0	0	0	0.1	0	8.0	0	0	0	0.2	0	8.0	0	0	0	0.1	0	
SV-11 D	5/21/2015	9.6	0	0	0	0.6	0	8.0	0	0	0	0.6	0	7.7	0	0	0	0.7	0	
SV-12 S	5/21/2015	0.2	100	0	0	0.1	0	0.3	100	0	0	0.3	0	0.9	100	0	0	0.6	0	
SV-12 D	5/21/2015	4.2	100	0	0	0.8	0	1.5	100	0	0	1.1	0	1.2	100	0	0	0.7	0	
SV-13 S	5/22/2015	15.4	0	0	0	0	0	14.9	0	0	0	0	0	14.6	0	0	0	0	0	
SV-13 D	5/22/2015	14.0	0	0	0	0	0	13.7	0	0	0	0	0	13.8	0	0	0	0	0	
SV-14 S	5/20/2015	14.6	0	2	0	0.5	0	14.1	0	0	0	0.8	0	14.1	0	0	0	0.8	0	
SV-15 S	5/22/2015	6.3	0	0	0.9	1	1.0	6.3	0	0	0	0	0.8	7.0	0	0	0	0	0.8	
SV-15 D	5/22/2015	Unable to sample, vapor point below groundwater table																		
SV-16 S	5/14/2015	13.4	4	11	1.1	1	0.9	12.1	4	0	0.9	1	0.9	11.0	4	0	0.9	1	0.8	
SV-16 D	5/14/2015	8.5	4	0	0	1	0.7	8.2	4	0	0	1	0.6	8.3	4	0	0	1	0.6	
SV-17 S	5/14/2015	13.8	4	0	1.7	1	1.7	14.0	4	0	1.3	1	1.2	14.2	4	0	1.1	1	1.2	
SV-17 D		Unable to sample, vapor point below groundwater table																		
SV-18 S	5/14/2014	5.1	4	0	1.3	1	1.3	4.0	4	0	1.1	1	1.1	4.0	4	0	1.1	1	1.1	
SV-19 S	5/14/2015	16.8	0	0	1.9	0	1.9	16.9	4	0	2.1	0	2.1	16.9	4	0	2.2	0	2.1	
SV-19 D	5/14/2015	17.1	4	0	2.1	1	2.0	17.2	0	0	1.2	1	1.2	17.2	0	0	0.9	1	0.9	
SV-20 S	5/22/2015	16.4	0	0	0	0	0	16.4	0	0	0	0	0	16.3	0	0	0	0	0	
MW-06	5/21/2015	20.0	0	0	0	6.3	0	19.9	0	0	0	6.2	0	19.9	0	0	0	5.3	0	
MW-08	5/21/2015	18.6	0	2	0	2.2	0	18.5	0	1	0	2.3	0	18.5	0	0	0	2.5	0	

O₂ % : Percent oxygen

LEL % : Percent Lower Explosive Limit

CO : Carbon monoxide

H₂S : Hydrogen Sulfide

VOC : Volatile Organic Compound

SO₂ : Sulfur Dioxide

PPM : Parts per million

S: Shallow Vapor Point (5 ft bgs)

D: Deep Vapor Point (10 ft bgs)

Note: Each soil vapor point was purged of three air volumes prior to collection of sample for laboratory analysis. Data provided represents each air volume removed utilizing a peristaltic pump and screened with a MultiRae 6-gas monitor equipped with a 10.2 electron-volt ultraviolet lamp

Table 7
 Constituents Detected in Soil Vapor
 Laboratory Analyses
 National Western Complex
 Denver, Colorado
 Terracon Project Number 25157010

Sample Name	Sample Date	VOCs ($\mu\text{g}/\text{m}^3$)					Alkanes (%)			TVPH (mg/m^3)
		Benzene	Ethylbenzene	Tetrachloroethene	Toluene	Total Xylenes	Methane	Ethane	Propane	
SV-02 S	5/14/2015	<10.0	<10.0	<10.0	<10.0	<10.0	14.5	1.27	0.016	<1.0
SV-06 S	5/22/2015	<10.0	<10.0	180	<10.0	<10.0	NA	NA	NA	<1.0
SV-08 S	5/14/2015	<10.0	<10.0	161	<10.0	<10.0	<0.007	<0.004	<0.002	<1.0
SV-12 S	5/21/2015	29.2	26.6	20.2	55.2	637	16.3	<0.004	<0.002	190
SV-13 S	5/22/2015	<10.0	<10.0	42.2	<10.0	<10.0	NA	NA	NA	<1.0
SV-17 S	5/14/2015	<10.0	<10.0	3,146	<10.0	<10.0	<0.007	<0.004	<0.002	3.15
SV-19 D	5/14/2015	<10.0	<10.0	835	<10.0	<10.0	NA	NA	NA	<1.0
MW-06	5/21/2015	<10.0	<10.0	54.8	<10.0	<10.0	<0.007	<0.004	<0.002	81.9
CDPHE Air Screening Concentration ¹		1.6	4.9	47.2	22,000	440	NE	NE	NE	NE
Calculated CDPHE Indoor Air Screening Concentration ²		16	49	472	220,000	4,400	NE	NE	NE	NE
EPA RSLs Composite Worker Ambient Air Table ³		1.6	4.9	47	22,000	440	NE	NE	NE	13
Calculated EPA RSLs Indoor Air Screening Concentration ³		16	49	470	220,000	4,400	NE	NE	NE	130
USEPA action level for a combustible atmosphere ⁴		NE	NE	NE	NE	NE	1%	NE	NE	NE

1) Colorado Department of Public Health and Environment (CDPHE) Air Screening Concentrations Table - Worker Remediation Goal, March 12, 2012.
 2) Calculated CDPHE Indoor Air Screening Concentration from Sub-Slab Soil Vapor Data (includes a 10X attenuation factor) - Worker Remediation Goal
 3) Environmental Protection Agency (EPA) Regional Screening Levels (RSLs) Composite Worker Ambient Air Table, November 2014
 5) OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air, June 2015.
 <: Less than the Analytical Method Reporting Limit
 Bold: Exceeds Regulatory Standard
 S: Shallow Vapor Point (5 ft. bgs)
 D: Deep Vapor Point (10 ft. bgs)
 $\mu\text{g}/\text{m}^3$: micrograms per cubic meter
 mg/m^3 : milligrams per cubic meter
 TVPH: Total Volatile Organic Compounds
 NE: Not Established

Table 8
Dissolved Metals and VOC Constituents Detected in Groundwater
National Western Complex
Denver, Colorado
Terracon Project Number 25157010

Sample Name	Sample Date	Metals (mg/L)									VOCs (µg/L)		
		Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Zinc	Mercury	cis-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene
MW-01	4/29/2015	0.00227	0.215	<0.00005	<0.001	<0.001	<0.001	0.000221	0.00827	<0.0002	<1.0	<1.0	<1.0
MW-02	4/29/2015	<0.0006	0.0829	<0.00005	0.00114	<0.001	0.00203	0.000261	<0.003	<0.0002	<1.0	<1.0	<1.0
MW-03	4/30/2015	0.0127	0.536	0.000777	0.00156	0.00304	0.00241	0.000171	0.0568	<0.0002	<1.0	31.4	<1.0
MW-04	4/30/2015	0.0062	0.87	0.00104	0.0027	<0.001	0.00104	0.000194	0.0477	<0.0002	<1.0	1.17	<1.0
MW-05	4/29/2015	0.00694	0.110	<0.00005	<0.001	0.00172	0.00364	0.00112	0.00536	<0.0002	<1.0	1.26	<1.0
MW-06	4/30/2015	0.00736	0.559	0.000706	0.00137	0.00221	0.00192	0.000195	0.0729	<0.0002	<1.0	55.3	1.29
MW-07	4/30/2015	0.0192	1.43	0.00355	0.00347	<0.001	0.00334	0.000166	0.15	<0.0002	<1.0	1.45	<1.0
MW-07D	4/30/2015	0.0216	1.73	0.00376	0.00364	<0.001	0.0037	0.000162	0.174	<0.0002	<1.0	1.61	<1.0
MW-08	5/1/2015	<0.0006	0.0786	0.0000592	0.00743	<0.001	0.00294	0.000151	0.00535	<0.0002	<1.0	57.0	1.43
MW-09	4/29/2015	0.000639	0.0713	<0.00005	<0.001	<0.001	0.00308	0.000388	<0.003	<0.0002	<1.0	1.14	<1.0
MW-10	4/30/2015	0.00354	0.0898	0.000108	<0.001	0.00175	0.00366	0.000137	0.00683	<0.0002	<1.0	30.7	<1.0
MW-11	4/29/2015	0.000976	0.0882	0.000202	<0.001	<0.001	0.00194	0.000603	0.00854	<0.0002	<1.0	3.24	<1.0
MW-12	5/4/2015	0.00149	0.0582	<0.00005	<0.001	<0.001	0.00376	0.000552	<0.003	<0.0002	<1.0	38.9	1.15
MW-12D	5/4/2015	0.00155	0.0549	<0.00005	<0.001	<0.001	0.00356	0.000505	<0.003	<0.0002	<1.0	43.5	<1.0
MW-13	5/29/2015	0.00305	0.13	<0.00005	<0.001	<0.001	<0.001	<0.00005	<0.003	<0.0002	9.86	2.37	1.08
MW-15	5/6/2015	0.00184	0.0734	<0.00005	0.00112	<0.001	0.00398	<0.00005	0.014	<0.0002	<1.0	44.4	<1.0
MW-16	5/1/2015	<0.0006	0.0732	<0.00005	0.0181	<0.001	0.00331	0.000145	0.0203	<0.0002	<1.0	55.9	<1.0
NWSS-Rinsate	5/1/2015	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<1.0
CGS ¹		0.01	2.0	0.005	0.1	0.05	0.05	0.05	NE	0.002	14	5 *	5

1) CDPHE, (CGWQS), January 31, 2013.

<: Less than the Analytical Method Reporting Limit

Bold: Exceeds a Regulatory Standard

5 µg/L * : CDPHE CGWQS Standard used for anticipated construction dewatering in this area.

mg/L: milligrams per liter

µg/L: micrograms per liter

NE: Not Established

NA : Not Analyzed

Table 9
Nitrate/Nitrite/Nitrogen Constituents Detected in Groundwater
National Western Complex
Denver, Colorado
Terracon Project Number 25157010

Sample Name	Sample Date	NITRATES/NITROGEN (mg/L)				
		Nitrate	Nitrate/Nitrite	Nitrite	Total Kjeldahl Nitrogen	Total Nitrogen
MW-01	4/29/2015	<0.05	<0.05	<0.03	15.7	15.7
MW-05	4/29/2015	14.0	14.0	<0.03	2.6	16.6
MW-07	4/30/2015	7.30	7.30	<0.03	5.1	12.4
MW-07D	4/30/2015	7.38	7.38	<0.03	5.6	12.9
MW-09	4/29/2015	7.43	7.43	<0.03	5.9	13.4
MW-10	4/30/2015	9.75	9.75	<0.03	1.3	11.1
MW-11	4/29/2015	3.08	3.08	<0.03	8.4	11.5
MW-12	5/4/2015	10.16	10.16	<0.03	7.2	17.4
MW-12D	5/4/2015	10.27	10.27	<0.03	6.3	16.6
MW-13	5/29/2015	0.99	0.99	<0.03	18.9	19.9
MW-15	5/6/2015	11.09	11.09	<0.03	5.6	16.7
CDPHE Agricultural Standards ¹		100	100	10	NE	100
CDPHE Domestic Standards ¹		10	10	1.0	NE	10

1) Colorado Department of Public Health and Environment (CDPHE) Water Quality Control Commission, Regulation 41, January 2013

<: Less than the Analytical Method Reporting Limit

Bold: Exceeds Regulatory Standard

mg/L: milligrams per liter

NE: Not Established

D: Replicate (Duplicate)

Total Kjeldahl Nitrogen (TKN): The sum of ammonia and organically bonded nitrogen

Total Nitrogen: The sum of nitrate, nitrite, ammonia, and organically bonded nitrogen

Table 10A
Quality Assurance / Quality Control Samples (Soil)
National Western Complex
Denver, Colorado
Terracon Project Number 25157010

Sample Name	Sample Date	Sample Depth	Metals (mg/kg)								
			Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Zinc	Mercury
MW-02 (0-6")	4/21/2015	0-6"	4.89	83.1	1.05	9.53	124	0.22	0.47	110	0.0709
MW-02 (0-6") - D	4/21/2015	0-6"	5.49	104	1.15	9.95	136	0.208	0.574	127	0.0795
RPD for MW-2 (0-6")			12	22	9	4	9	6	20	14	11
MW-02 (6-24")	4/21/2015	6-24"	8.51	109	1.44	14.2	241	0.236	1.02	124	0.475
MW-02 (6-24") - D	4/21/2015	6-24"	11.4	126	2.36	12.8	390	0.276	1.88	173	0.194
RPD for MW-2 (6-24")			29	14	48	10	47	16	59	33	84
MW-07 (0-6")	4/24/2015	0-6"	3.88	134	1.19	11.0	75.8	0.234	0.296	80.5	<0.0543
MW-07 (0-6") - D	4/24/2015	0-6"	4.32	155	1.57	13.0	75.7	0.237	0.318	118	<0.0470
RPD for MW-7 (0-6")			11	15	28	17	0	1	7	38	NC
MW-07 (6-24")	4/24/2015	6-24"	3.24	135	0.471	9.23	44.4	0.218	0.225	59.2	<0.0595
MW-07 (6-24") - D	4/24/2015	6-24"	2.15	114	0.346	7.25	38.6	0.357	0.151	47.4	<0.0564
RPD for MW-7 (6-24")			40	17	31	24	14	48	39	22	NC
MW-10 (0-6")	4/29/2015	0-6"	2.61	155	0.207	13.1	10.9	0.169	<0.113	76.1	<0.0498
MW-10 (0-6") - D	4/29/2015	0-6"	2.07	146	0.136	12.7	11.1	0.182	<0.116	71.6	<0.0512
RPD for MW-10 (0-6")			23	6	41	3	2	7	NC	6	NC
MW-10 (6-24")	4/29/2015	6-24"	5.09	169	0.380	13.6	10.2	0.360	<0.109	76.1	<0.0475
MW-10 (6-24") - D	4/29/2015	6-24"	3.98	159	0.182	13.8	8.92	0.254	<0.131	79.2	<0.0550
RPD for MW-10 (6-24")			24	6	70	1	13	35	NC	4	NC
MW-16 (0-6")	4/28/2015	0-6"	3.24	133	0.265	10.3	19.6	<0.0548	<0.110	56.3	<0.0465
MW-16 (0-6") - D	4/28/2015	0-6"	3.99	145	0.480	12.5	33.1	0.0767	0.197	72.0	<0.0484
RPD for MW-16 (0-6")			21	9	58	19	51	NC	NC	24	NC
MW-16 (6-24")	4/28/2015	6-24"	9.65	135	0.961	12.4	67.9	0.116	0.238	101	0.0742
MW-16 (6-24") - D	4/28/2015	6-24"	9.43	148	0.893	13.1	60.4	0.128	0.261	102	0.154
RPD for MW-16 (6-24")			2	9	7	5	12	10	9	1	70

mg/kg : milligrams per kilogram

RPD : Relative Percent Difference

NC : RPD not calculated for non detected constituents

< : Less than Analytical Method Reporting Limit

RPD acceptance criteria for soils is < 50%

Table 10B
 Quality Assurance / Quality Control Samples (Groundwater)
 National Western Complex
 Denver, Colorado
 Terracon Project Number 25157010

Sample Name	Sample Date	Metals (mg/L)							VOCs (µg/L)	Nitrates/Nitrogen (mg/L)			
		Arsenic	Barium	Cadmium	Chromium	Selenium	Silver	Zinc	Tetrachloroethene	Nitrates/Nitrogen	Nitrate/Nitrite	Total Kjeldahl Nitrogen	Total Nitrogen
MW-07	4/30/2015	0.0192	1.43	0.00355	0.00347	0.00334	0.000166	0.150	1.45	7.30	7.30	5.1	12.4
MW-07D	4/30/2015	0.0216	1.73	0.00376	0.00364	0.00370	0.000162	0.174	1.61	7.38	7.38	5.6	12.9
RPD for MW-7		12	19	6	5	10	2	15	10	1	1	9	4
MW-12	5/4/2015	0.00149	0.0582	<0.00005	<0.001	0.00376	0.000552	<0.003	38.9	10.16	10.16	7.2	17.4
MW-12D	5/4/2015	0.00155	0.0549	<0.00005	<0.001	0.00356	0.000505	<0.003	43.5	10.27	10.27	6.3	16.6
RPD for MW-12		4	6	NC	NC	5	9	NC	11	1	1	13	5

Table 10C
 Quality Assurance / Quality Control Sample (Rinsate)

Sample Name	Sample Date	VOCs (µg/L)
NWSS-Rinsate	5/1/2015	ND

mg/L : milligrams per liter
 µg/L : micrograms per liter
 RPD : Relative Percent Difference
 NC : RPD not calculated for non detected constituents
 ND : Not detected
 VOCs : Volatile organic compounds
 < : Less than Analytical Method Reporting Limit
 RPD acceptance criteria for groundwater is < 30%

APPENDIX E

PHOTO LOG: TEST PIT EXCAVATION AND IMPACTED SOILS ENCOUNTERED

PHOTO LOG: TEST PIT EXCAVATION AND
IMPACTED SOILS ENCOUNTERED

National Western Center ■ Denver, Colorado
May 7-8, 2015 ■ Terracon Project No. 25157010



Photo #1 View of soil profile and building debris from TP-01.



Photo #2 View of excavated material from TP-01.



Photo #3 View of soil profile and building debris from TP-02.



Photo #4 View of excavated material from TP-02.



Photo #5 View of shallow soil profile and building debris from TP-03.



Photo #6 View of shallow soil profile and building debris from TP-03.

PHOTO LOG: TEST PIT EXCAVATION AND
IMPACTED SOILS ENCOUNTERED
National Western Center ■ Denver, Colorado
May 7-8, 2015 ■ Terracon Project No. 25157010



Photo #7 View of deep soil profile and building debris from TP-03.



Photo #8 View of excavated material from TP-03.



Photo #9 View of soil profile and shallow concrete slab from TP-04.



Photo #10 View of soil profile and building debris from TP-05.



Photo #11 View of soil profile and building debris from TP-05.



Photo #12 View of impacted soils and excavated material from TP-06.

PHOTO LOG: TEST PIT EXCAVATION AND
IMPACTED SOILS ENCOUNTERED
National Western Center ■ Denver, Colorado
May 7-8, 2015 ■ Terracon Project No. 25157010



Photo #13 View of impacted soils from TP-06.



Photo #14 View of excavated material from TP-06.



Photo #15 View of excavated material from TP-06.



Photo #16 View of excavated material from TP-06.



Photo #17 View of excavated material from TP-07.



Photo #18 View of soil profile and building debris from TP-07.

PHOTO LOG: TEST PIT EXCAVATION AND
IMPACTED SOILS ENCOUNTERED
National Western Center ■ Denver, Colorado
May 7-8, 2015 ■ Terracon Project No. 25157010



Photo #19 View of soil profile and building debris from TP-07.



Photo #20 View of soil profile and building debris from TP-07.



Photo #21 View of soil profile and building debris from TP-07.



Photo #22 View of soil profile and building debris from TP-07.



Photo #23 View of soil profile and building debris from TP-07.



Photo #24 View of soil profile and building debris from TP-07.

PHOTO LOG: TEST PIT EXCAVATION AND
IMPACTED SOILS ENCOUNTERED
National Western Center ■ Denver, Colorado
May 7-8, 2015 ■ Terracon Project No. 25157010



Photo #25 View of soil profile and building debris from TP-07.



Photo #26 View of soil profile and building debris from TP-07.



Photo #27 View of soil profile and building debris from TP-07.



Photo #28 View of soil profile and building debris from TP-07.



Photo #29 View of soil profile and building debris from TP-07.



Photo #30 View of soil profile and building debris from TP-07.

PHOTO LOG: TEST PIT EXCAVATION AND
IMPACTED SOILS ENCOUNTERED
National Western Center ■ Denver, Colorado
May 7-8, 2015 ■ Terracon Project No. 25157010



Photo #31 View of soil profile and building debris from TP-08.



Photo #32 View of soil profile and building debris from TP-08.



Photo #33 View of excavated material from TP-08.



Photo #34 View of soil profile and shallow concrete slab from TP-09.



Photo #35 View of soil profile and shallow concrete slab from TP-09.



Photo #36 View of soil profile and building debris from TP-10.

PHOTO LOG: TEST PIT EXCAVATION AND
IMPACTED SOILS ENCOUNTERED
National Western Center ■ Denver, Colorado
May 7-8, 2015 ■ Terracon Project No. 25157010



Photo #37 View of excavated material from TP-10.



Photo #38 View of encountered soils from SB-04.



Photo #39 View of encountered soils from SB-10.



Photo #40 View of encountered soils from SB-10.

APPENDIX F

CORRESPONDANCE RELATED TO USEPA VB/I-70 OU1 ARSENIC STANDARD

From: Wilmoth, David J. - Environmental Quality Division [<mailto:Dave.Wilmoth@denvergov.org>]
Sent: Monday, June 15, 2015 3:14 PM
To: Hoffman, Steven B.; White, Mark E
Cc: Clayton, Zachery W. - Environmental Quality Division; Vanderloop, Celia L. - CPD North Denver Cornerstone
Subject: Arsenic in Soil Standard

Steve and Mark,

Fonda with CDPHE got back to me this afternoon regarding the appropriate arsenic in soil standard to compare NWC phase II soil results. Fonda stated that the appropriate standard to be using is 70 mg/kg, the OU1 residential soil cleanup level.

Thanks,

*Dave Wilmoth, PE, PG
City and County of Denver
Dept. Of Environmental Health
Env. Quality Division
200 W. 14th Ave, Dept. 310
Denver, CO 80204*

*Phone: (720) 865-5438
Fax: (720) 865-5534*

dave.wilmoth@denvergov.org

APPENDIX G

LABORATORY REPORTS

G1

**Summit Scientific Laboratory Reports for Soil
Samples**

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

April 15, 2015

Steve Hoffman

Terracon - Wheat Ridge

10625 West I-70 Frontage Road, Suite 3

Wheat Ridge, CO 80033

RE: National Western Complex

Enclosed are the results of analyses for samples received by Summit Scientific on 04/08/15 19:01. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury
President



Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/15/15 11:47

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB-1 (0-6")	1504089-01	Soil	04/08/15 09:00	04/08/15 19:01
SB-1 (6-12")	1504089-02	Soil	04/08/15 09:00	04/08/15 19:01
SB-2 (0-6")	1504089-03	Soil	04/08/15 12:30	04/08/15 19:01
SB-2 (6-12")	1504089-04	Soil	04/08/15 12:30	04/08/15 19:01
SB-4 (0-6")	1504089-05	Soil	04/08/15 10:40	04/08/15 19:01
SB-4 (6-12")	1504089-06	Soil	04/08/15 10:40	04/08/15 19:01
SB-5 (0-6")	1504089-07	Soil	04/08/15 14:15	04/08/15 19:01
SB-5 (6-12")	1504089-08	Soil	04/08/15 14:15	04/08/15 19:01
SB-6 (0-6")	1504089-09	Soil	04/08/15 16:40	04/08/15 19:01
SB-6 (6-12")	1504089-10	Soil	04/08/15 16:40	04/08/15 19:01
SB-2 (15')	1504089-11	Soil	04/08/15 13:15	04/08/15 19:01
SB-4 (15')	1504089-12	Soil	04/08/15 11:45	04/08/15 19:01
SB-5 (5')	1504089-13	Soil	04/08/15 14:30	04/08/15 19:01
SB-6 (20')	1504089-14	Soil	04/08/15 17:20	04/08/15 19:01

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

Summit Scientific

1504089.1

741 Corporate Circle Suite I ♦ Golden, Colorado 80401
 303-277-9310 ♦ 303-374-5933 Fax

Page 1 of 2

Client: Terracon Consultants

Address: 10625 West I-70 Frontage Road North, Suite 3

City/State/Zip: Wheat Ridge, CO 80033

Phone: (303) 454-5275 Fax: (303) 423-3353

Sampler Name: Marshall Haworth

Project Manager: Steve Hoffman

E-Mail: sbhoffman@terracon.com

Project Name: National Western Complex

Project Number: 25157010

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix		Analyze For:				Special Instructions	
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	VOC's 8260B	TPH 8270		RCRA 8+Zinc
SB-1 (0-6")	4-8-15	0900	1			X									
SB-1 (6-12")	4-8-15	0900	1			X									
SB-2 (0-6")	4-8-15	1230	1			X									
SB-2 (6-12")	4-8-15	1230	1			X									
SB-4 (0-6")	4-8-15	1040	1			X									
SB-4 (6-12")	4-8-15	1040	1			X									
SB-5 (0-6")	4-8-15	1415	1			X									
SB-5 (6-12")	4-8-15	1415	1			X									
SB-6 (0-6")	4-8-15	1640	1			X									
SB-6 (6-12")	4-8-15	1640	1			X									
Relinquished by: <i>Marshall Haworth</i>		Date/Time: 4-8-15 1901	Received by: <i>[Signature]</i>		Date/Time: 4/8/15 1901	Turn Around Time (Check)			Notes:						
Relinquished by:		Date/Time:	Received by:		Date/Time:	Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/>			Standard <input checked="" type="checkbox"/>						
Relinquished by:		Date/Time:	Received in Lab by:		Date/Time:	48 Hours <input type="checkbox"/>			Sample Integrity:						
Relinquished by:		Date/Time:	Received in Lab by:		Date/Time:	Temperature Upon Receipt: 5.2			Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>						

www.s2scientific.com

S2

Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

Sample Receipt Checklist

S2 Work Order: 1504089

Client: Terracon

Client Project ID: National Western Conference

Shipped Via: HD

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Airbill #: _____

Matrix (check all that apply): Air Soil/Solid Water Other: _____
 (Describe)

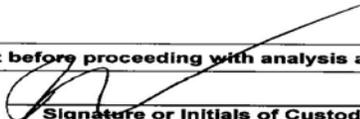
Cooler ID					
Temp (°C)	<u>5.2</u>				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.				
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
If custody seals are present, are they intact ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present?			<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, etc.				
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

Ban Shrawsbury
 Custodian Printed Name


 Signature or Initials of Custodian

4/15/15 11:45
 Date/Time





Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

SB-1 (0-6")
1504089-01 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/08/15 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.43	0.105	mg/kg dry	1	1504078	04/09/15	04/09/15	EPA 6020A	
Barium	134	0.105	"	"	"	"	"	"	
Cadmium	0.141	0.105	"	"	"	"	"	"	
Chromium	7.17	0.526	"	"	"	"	"	"	
Lead	6.46	0.105	"	"	"	"	"	"	
Selenium	0.962	0.0526	"	"	"	"	"	"	
Silver	ND	0.105	"	"	"	"	"	"	

Date Sampled: **04/08/15 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	85.7	10.5	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/08/15 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0526	mg/kg dry	1	1504093	04/09/15	04/10/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/08/15 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.0		%	1	1504094	04/09/15	04/10/15	% calculation	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

**SB-1 (6-12")
 1504089-02 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/08/15 09:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.35	0.113	mg/kg dry	1	1504078	04/09/15	04/09/15	EPA 6020A	
Barium	63.6	0.113	"	"	"	"	"	"	
Cadmium	0.203	0.113	"	"	"	"	"	"	
Chromium	5.23	0.567	"	"	"	"	"	"	
Lead	14.3	0.113	"	"	"	"	"	"	
Selenium	ND	0.0567	"	"	"	"	"	"	
Silver	ND	0.113	"	"	"	"	"	"	

Date Sampled: **04/08/15 09:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	35.0	11.3	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/08/15 09:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0515	mg/kg dry	1	1504093	04/09/15	04/10/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/08/15 09:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	88.2		%	1	1504094	04/09/15	04/10/15	% calculation	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

SB-2 (0-6")
1504089-03 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/08/15 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.757	0.107	mg/kg dry	1	1504078	04/09/15	04/09/15	EPA 6020A	
Barium	66.5	0.107	"	"	"	"	"	"	
Cadmium	0.150	0.107	"	"	"	"	"	"	
Chromium	10.4	0.534	"	"	"	"	"	"	
Lead	11.0	0.107	"	"	"	"	"	"	
Selenium	0.114	0.0534	"	"	"	"	"	"	
Silver	ND	0.107	"	"	"	"	"	"	

Date Sampled: **04/08/15 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	72.2	10.7	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/08/15 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0534	mg/kg dry	1	1504093	04/09/15	04/10/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/08/15 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	93.7		%	1	1504094	04/09/15	04/10/15	% calculation	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

SB-2 (6-12")
1504089-04 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/08/15 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.84	0.108	mg/kg dry	1	1504078	04/09/15	04/09/15	EPA 6020A	
Barium	102	0.108	"	"	"	"	"	"	
Cadmium	0.167	0.108	"	"	"	"	"	"	
Chromium	14.2	0.542	"	"	"	"	"	"	
Lead	14.8	0.108	"	"	"	"	"	"	
Selenium	0.175	0.0542	"	"	"	"	"	"	
Silver	ND	0.108	"	"	"	"	"	"	

Date Sampled: **04/08/15 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	115	10.8	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/08/15 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0542	mg/kg dry	1	1504093	04/09/15	04/10/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/08/15 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	92.2		%	1	1504094	04/09/15	04/10/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

SB-4 (0-6")
1504089-05 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/08/15 10:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.28	0.0919	mg/kg dry	1	1504078	04/09/15	04/09/15	EPA 6020A	
Barium	186	0.0919	"	"	"	"	"	"	
Cadmium	1.01	0.0919	"	"	"	"	"	"	
Chromium	6.79	0.460	"	"	"	"	"	"	
Lead	142	0.0919	"	"	"	"	"	"	
Selenium	0.159	0.0460	"	"	"	"	"	"	
Silver	0.284	0.0919	"	"	"	"	"	"	

Date Sampled: **04/08/15 10:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	263	9.19	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/08/15 10:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.135	0.0528	mg/kg dry	1	1504093	04/09/15	04/10/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/08/15 10:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	94.7		%	1	1504094	04/09/15	04/10/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

SB-4 (6-12")
1504089-06 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/08/15 10:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.21	0.106	mg/kg dry	1	1504078	04/09/15	04/09/15	EPA 6020A	
Barium	164	0.106	"	"	"	"	"	"	
Cadmium	1.10	0.106	"	"	"	"	"	"	
Chromium	6.51	0.528	"	"	"	"	"	"	
Lead	126	0.106	"	"	"	"	"	"	
Selenium	0.193	0.0528	"	"	"	"	"	"	
Silver	0.235	0.106	"	"	"	"	"	"	

Date Sampled: **04/08/15 10:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	246	10.6	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/08/15 10:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.102	0.0528	mg/kg dry	1	1504093	04/09/15	04/10/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/08/15 10:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	94.7		%	1	1504094	04/09/15	04/10/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

**SB-5 (0-6")
 1504089-07 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/08/15 14:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	20.2	0.107	mg/kg dry	1	1504078	04/09/15	04/09/15	EPA 6020A	
Barium	218	0.107	"	"	"	"	"	"	
Cadmium	5.69	0.107	"	"	"	"	"	"	
Chromium	10.1	0.536	"	"	"	"	"	"	
Lead	773	0.107	"	"	"	"	"	"	
Selenium	0.336	0.0536	"	"	"	"	"	"	
Silver	3.60	0.107	"	"	"	"	"	"	

Date Sampled: **04/08/15 14:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	398	10.7	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/08/15 14:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.418	0.0536	mg/kg dry	1	1504093	04/09/15	04/10/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/08/15 14:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	93.2		%	1	1504094	04/09/15	04/10/15	% calculation	

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Terracon - Wheat Ridge
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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

SB-5 (6-12")
1504089-08 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/08/15 14:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	13.6	0.107	mg/kg dry	1	1504078	04/09/15	04/09/15	EPA 6020A	
Barium	127	0.107	"	"	"	"	"	"	
Cadmium	4.49	0.107	"	"	"	"	"	"	
Chromium	7.69	0.534	"	"	"	"	"	"	
Lead	571	0.107	"	"	"	"	"	"	
Selenium	0.193	0.0534	"	"	"	"	"	"	
Silver	2.65	0.107	"	"	"	"	"	"	

Date Sampled: **04/08/15 14:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	187	10.7	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/08/15 14:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.220	0.0486	mg/kg dry	1	1504093	04/09/15	04/10/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/08/15 14:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	93.6		%	1	1504094	04/09/15	04/10/15	% calculation	

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Terracon - Wheat Ridge
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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

**SB-6 (0-6")
 1504089-09 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/08/15 16:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.89	0.107	mg/kg dry	1	1504078	04/09/15	04/09/15	EPA 6020A	
Barium	87.6	0.107	"	"	"	"	"	"	
Cadmium	0.675	0.107	"	"	"	"	"	"	
Chromium	7.17	0.536	"	"	"	"	"	"	
Lead	35.2	0.107	"	"	"	"	"	"	
Selenium	ND	0.0536	"	"	"	"	"	"	
Silver	0.178	0.107	"	"	"	"	"	"	

Date Sampled: **04/08/15 16:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	57.1	10.7	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/08/15 16:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0536	mg/kg dry	1	1504093	04/09/15	04/10/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/08/15 16:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	93.2		%	1	1504094	04/09/15	04/10/15	% calculation	

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Terracon - Wheat Ridge
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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

SB-6 (6-12")
1504089-10 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/08/15 16:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.52	0.0965	mg/kg dry	1	1504078	04/09/15	04/09/15	EPA 6020A	
Barium	64.0	0.0965	"	"	"	"	"	"	
Cadmium	0.502	0.0965	"	"	"	"	"	"	
Chromium	4.90	0.482	"	"	"	"	"	"	
Lead	32.3	0.0965	"	"	"	"	"	"	
Selenium	ND	0.0482	"	"	"	"	"	"	
Silver	0.141	0.0965	"	"	"	"	"	"	

Date Sampled: **04/08/15 16:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	32.2	9.65	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/08/15 16:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0460	mg/kg dry	1	1504093	04/09/15	04/10/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/08/15 16:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.7		%	1	1504094	04/09/15	04/10/15	% calculation	

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Terracon - Wheat Ridge
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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

SB-2 (15')
1504089-11 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/08/15 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504091	04/09/15	04/11/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/08/15 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		110 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/08/15 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504092	04/09/15	04/09/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

SB-2 (15')
1504089-11 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504092	04/09/15	04/09/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"	"

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

SB-2 (15')
1504089-11 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504092	04/09/15	04/09/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: **04/08/15 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		99.2 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		96.5 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.4 %		21-167	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

SB-4 (15')
1504089-12 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/08/15 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504091	04/09/15	04/11/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/08/15 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		112 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/08/15 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504092	04/09/15	04/09/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

SB-4 (15')
1504089-12 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample	ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504092	04/09/15	04/09/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"	"

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Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

SB-4 (15')
1504089-12 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504092	04/09/15	04/09/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: 04/08/15 11:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		97.1 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.8 %		21-167	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

SB-5 (5')
1504089-13 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/08/15 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504091	04/09/15	04/11/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/08/15 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		112 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/08/15 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504092	04/09/15	04/09/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

SB-5 (5')
1504089-13 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504092	04/09/15	04/09/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"	"

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

SB-5 (5')
1504089-13 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504092	04/09/15	04/09/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: **04/08/15 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		95.9 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.3 %		21-167	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

SB-6 (20')
1504089-14 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/08/15 17:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504091	04/09/15	04/11/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/08/15 17:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		115 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/08/15 17:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504092	04/09/15	04/09/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

SB-6 (20')
1504089-14 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504092	04/09/15	04/09/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"	"

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SB-6 (20')
1504089-14 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504092	04/09/15	04/09/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: **04/08/15 17:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		93.4 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		95.7 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.3 %		21-167	"	"	"	"	

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Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1504091 - EPA 3550A

Blank (1504091-BLK1)			Prepared & Analyzed: 04/09/15								
C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
<i>Surrogate: o-Terphenyl</i>	<i>11.1</i>		<i>"</i>	<i>12.2</i>		<i>91.2</i>	<i>70-130</i>				
LCS (1504091-BS1)			Prepared & Analyzed: 04/09/15								
C10-C28 (DRO)	609	50	mg/kg	501		122	50-150				
<i>Surrogate: o-Terphenyl</i>	<i>14.2</i>		<i>"</i>	<i>12.2</i>		<i>116</i>	<i>70-130</i>				
Matrix Spike (1504091-MS1)			Source: 1504072-01		Prepared & Analyzed: 04/09/15						
C10-C28 (DRO)	791	50	mg/kg	486	188	124	50-150				
<i>Surrogate: o-Terphenyl</i>	<i>17.8</i>		<i>"</i>	<i>11.8</i>		<i>151</i>	<i>70-130</i>				<i>S-02</i>
Matrix Spike Dup (1504091-MSD1)			Source: 1504072-01		Prepared & Analyzed: 04/09/15						
C10-C28 (DRO)	765	50	mg/kg	485	188	119	50-150	3.25	20		
<i>Surrogate: o-Terphenyl</i>	<i>17.1</i>		<i>"</i>	<i>11.8</i>		<i>144</i>	<i>70-130</i>				<i>S-02</i>

Summit Scientific

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 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting		Spike Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

Batch 1504092 - EPA 5030 Soil MS

Blank (1504092-BLK1)

Prepared & Analyzed: 04/09/15

Benzene	ND	0.0020	mg/kg
Bromobenzene	ND	0.0050	"
Bromochloromethane	ND	0.0050	"
Bromodichloromethane	ND	0.0050	"
Bromoform	ND	0.0050	"
Bromomethane	ND	0.010	"
n-Butylbenzene	ND	0.0050	"
sec-Butylbenzene	ND	0.0050	"
tert-Butylbenzene	ND	0.0050	"
Carbon tetrachloride	ND	0.0050	"
Chlorobenzene	ND	0.0050	"
Chloroethane	ND	0.0050	"
Chloroform	ND	0.0050	"
Chloromethane	ND	0.015	"
2-Chlorotoluene	ND	0.0050	"
4-Chlorotoluene	ND	0.0050	"
Chlorodibromomethane	ND	0.010	"
1,2-Dibromo-3-chloropropane	ND	0.015	"
1,2-Dibromoethane (EDB)	ND	0.0050	"
Dibromomethane	ND	0.0050	"
1,2-Dichlorobenzene	ND	0.0050	"
1,3-Dichlorobenzene	ND	0.0050	"
1,4-Dichlorobenzene	ND	0.0050	"
Dichlorodifluoromethane	ND	0.0050	"
Tert-amyl methyl ether	ND	0.0050	"
1,1-Dichloroethane	ND	0.0050	"
1,2-Dichloroethane (EDC)	ND	0.0050	"
Tert-butyl alcohol	ND	0.020	"
1,1-Dichloroethene	ND	0.0050	"
Ethyl tert-butyl ether	ND	0.010	"
cis-1,2-Dichloroethene	ND	0.0050	"
Di-isopropyl ether	ND	0.0050	"
trans-1,2-Dichloroethene	ND	0.0050	"
Methyl tert-butyl ether	ND	0.015	"
1,2-Dichloropropane	ND	0.0050	"
1,3-Dichloropropane	ND	0.0050	"
2,2-Dichloropropane	ND	0.010	"
1,1-Dichloropropene	ND	0.0050	"

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504092 - EPA 5030 Soil MS

Blank (1504092-BLK1)

Prepared & Analyzed: 04/09/15

cis-1,3-Dichloropropene	ND	0.0050	mg/kg							
trans-1,3-Dichloropropene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Hexachlorobutadiene	ND	0.0050	"							
Isopropylbenzene	ND	0.0050	"							
p-Isopropyltoluene	ND	0.010	"							
Methylene Chloride	ND	0.015	"							
Naphthalene	ND	0.010	"							
n-Propylbenzene	ND	0.0050	"							
Styrene	ND	0.010	"							
1,1,2,2-Tetrachloroethane	ND	0.0050	"							
1,1,1,2-Tetrachloroethane	ND	0.0050	"							
Tetrachloroethene	ND	0.0050	"							
Toluene	ND	0.0050	"							
1,2,3-Trichlorobenzene	ND	0.0050	"							
1,2,4-Trichlorobenzene	ND	0.0050	"							
1,1,2-Trichloroethane	ND	0.0050	"							
1,1,1-Trichloroethane	ND	0.0050	"							
Trichloroethene	ND	0.0050	"							
Trichlorofluoromethane	ND	0.0050	"							
1,2,3-Trichloropropane	ND	0.010	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
Vinyl chloride	ND	0.0050	"							
m,p-Xylene	ND	0.010	"							
o-Xylene	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0400</i>		<i>"</i>	<i>0.0396</i>	<i>101</i>	<i>23-173</i>				
<i>Surrogate: Toluene-d8</i>	<i>0.0386</i>		<i>"</i>	<i>0.0400</i>	<i>96.4</i>	<i>20-170</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0378</i>		<i>"</i>	<i>0.0400</i>	<i>94.6</i>	<i>21-167</i>				

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10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/15/15 11:47

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504092 - EPA 5030 Soil MS

LCS (1504092-BS1)

Prepared & Analyzed: 04/09/15

Benzene	0.142	0.0020	mg/kg	0.150		94.4	58-130			
Bromobenzene	0.150	0.0050	"	0.150		99.9	87-115			
Bromochloromethane	0.131	0.0050	"	0.150		87.0	82-122			
Bromodichloromethane	0.144	0.0050	"	0.150		95.8	84-119			
Bromoform	0.157	0.0050	"	0.150		105	76-119			
Bromomethane	0.0982	0.010	"	0.150		65.5	39-152			
n-Butylbenzene	0.156	0.0050	"	0.150		104	70-131			
sec-Butylbenzene	0.148	0.0050	"	0.150		98.8	74-124			
tert-Butylbenzene	0.146	0.0050	"	0.150		97.7	77-121			
Carbon tetrachloride	0.144	0.0050	"	0.150		95.8	66-127			
Chlorobenzene	0.149	0.0050	"	0.150		99.6	82-120			
Chloroethane	0.131	0.0050	"	0.150		87.4	63-126			
Chloroform	0.141	0.0050	"	0.150		94.0	82-120			
Chloromethane	0.115	0.015	"	0.150		76.8	57-133			
2-Chlorotoluene	0.136	0.0050	"	0.150		90.7	82-117			
4-Chlorotoluene	0.143	0.0050	"	0.150		95.4	81-119			
Chlorodibromomethane	0.150	0.010	"	0.150		100	82-124			
1,2-Dibromo-3-chloropropane	0.138	0.015	"	0.150		91.8	62-128			
1,2-Dibromoethane (EDB)	0.163	0.0050	"	0.150		109	86-122			
Dibromomethane	0.155	0.0050	"	0.150		104	83-124			
1,2-Dichlorobenzene	0.150	0.0050	"	0.150		100	84-120			
1,3-Dichlorobenzene	0.150	0.0050	"	0.150		100	81-118			
1,4-Dichlorobenzene	0.146	0.0050	"	0.150		97.5	80-118			
Dichlorodifluoromethane	0.148	0.0050	"	0.150		98.5	25-141			
Tert-amyl methyl ether	0.143	0.0050	"	0.149		95.6	50-147			
1,1-Dichloroethane	0.136	0.0050	"	0.150		90.8	78-120			
1,2-Dichloroethane (EDC)	0.136	0.0050	"	0.150		90.8	81-125			
Tert-butyl alcohol	0.731	0.020	"	0.747		97.9	64-127			
1,1-Dichloroethene	0.154	0.0050	"	0.150		102	71-122			
Ethyl tert-butyl ether	0.139	0.010	"	0.150		92.4	80-122			
cis-1,2-Dichloroethene	0.145	0.0050	"	0.150		96.5	84-121			
Di-isopropyl ether	0.126	0.0050	"	0.150		83.9	78-120			
trans-1,2-Dichloroethene	0.156	0.0050	"	0.150		104	77-125			
Methyl tert-butyl ether	0.149	0.015	"	0.150		99.5	77-124			
1,2-Dichloropropane	0.136	0.0050	"	0.150		90.8	88-114			
1,3-Dichloropropane	0.146	0.0050	"	0.150		97.0	86-122			
2,2-Dichloropropane	0.175	0.010	"	0.150		117	32-150			
1,1-Dichloropropene	0.149	0.0050	"	0.150		99.5	71-123			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504092 - EPA 5030 Soil MS

LCS (1504092-BS1)

Prepared & Analyzed: 04/09/15

cis-1,3-Dichloropropene	0.165	0.0050	mg/kg	0.150		110	74-125			
trans-1,3-Dichloropropene	0.164	0.0050	"	0.150		109	72-126			
Ethylbenzene	0.146	0.0050	"	0.150		97.3	74-139			
Hexachlorobutadiene	0.162	0.0050	"	0.150		108	56-144			
Isopropylbenzene	0.152	0.0050	"	0.150		101	72-124			
p-Isopropyltoluene	0.150	0.010	"	0.150		99.9	72-123			
Methylene Chloride	0.0772	0.015	"	0.150		51.5	10-183			
Naphthalene	0.165	0.010	"	0.150		110	66-138			
n-Propylbenzene	0.147	0.0050	"	0.150		97.7	76-121			
Styrene	0.155	0.010	"	0.150		103	76-133			
1,1,2,2-Tetrachloroethane	0.147	0.0050	"	0.150		97.7	60-137			
1,1,1,2-Tetrachloroethane	0.150	0.0050	"	0.150		99.8	86-121			
Tetrachloroethene	0.160	0.0050	"	0.150		106	69-131			
Toluene	0.146	0.0050	"	0.150		97.6	61-134			
1,2,3-Trichlorobenzene	0.166	0.0050	"	0.150		111	63-142			
1,2,4-Trichlorobenzene	0.170	0.0050	"	0.150		113	63-141			
1,1,2-Trichloroethane	0.157	0.0050	"	0.150		105	75-136			
1,1,1-Trichloroethane	0.148	0.0050	"	0.150		98.4	71-126			
Trichloroethene	0.150	0.0050	"	0.150		100	86-118			
Trichlorofluoromethane	0.160	0.0050	"	0.150		107	62-128			
1,2,3-Trichloropropane	0.132	0.010	"	0.150		87.7	80-118			
1,3,5-Trimethylbenzene	0.147	0.0050	"	0.150		97.9	72-121			
1,2,4-Trimethylbenzene	0.145	0.0050	"	0.150		96.7	78-126			
Vinyl chloride	0.133	0.0050	"	0.150		88.4	63-134			
m,p-Xylene	0.297	0.010	"	0.300		99.1	73-137			
o-Xylene	0.147	0.0050	"	0.150		98.0	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0357</i>		<i>"</i>	<i>0.0396</i>		<i>90.2</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0395</i>		<i>"</i>	<i>0.0400</i>		<i>98.8</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0375</i>		<i>"</i>	<i>0.0400</i>		<i>93.8</i>	<i>21-167</i>			

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Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

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04/15/15 11:47

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504092 - EPA 5030 Soil MS

Matrix Spike (1504092-MS1)

Source: 1504091-01

Prepared & Analyzed: 04/09/15

Analyte	Result	Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Notes
Benzene	0.0978	0.0020	mg/kg	0.149	ND	65.4	30-131			
Bromobenzene	0.103	0.0050	"	0.149	ND	68.7	39-124			
Bromochloromethane	0.0966	0.0050	"	0.149	ND	64.7	62-121			
Bromodichloromethane	0.103	0.0050	"	0.149	ND	69.3	51-120			
Bromoform	0.117	0.0050	"	0.149	ND	78.1	52-125			
Bromomethane	0.0867	0.010	"	0.149	ND	58.0	10-152			
n-Butylbenzene	0.102	0.0050	"	0.149	ND	68.1	10-144			
sec-Butylbenzene	0.0967	0.0050	"	0.149	ND	64.7	10-140			
tert-Butylbenzene	0.0954	0.0050	"	0.149	ND	63.9	16-132			
Carbon tetrachloride	0.0984	0.0050	"	0.149	ND	65.9	46-125			
Chlorobenzene	0.102	0.0050	"	0.149	ND	68.1	42-125			
Chloroethane	0.0938	0.0050	"	0.149	ND	62.8	46-125			
Chloroform	0.0993	0.0050	"	0.149	ND	66.4	57-118			
Chloromethane	0.0845	0.015	"	0.149	ND	56.6	33-132			
2-Chlorotoluene	0.0914	0.0050	"	0.149	ND	61.2	30-125			
4-Chlorotoluene	0.0965	0.0050	"	0.149	ND	64.6	29-127			
Chlorodibromomethane	0.111	0.010	"	0.149	ND	74.4	54-124			
1,2-Dibromo-3-chloropropane	0.110	0.015	"	0.149	ND	73.8	10-175			
1,2-Dibromoethane (EDB)	0.120	0.0050	"	0.149	ND	80.3	65-125			
Dibromomethane	0.117	0.0050	"	0.149	ND	78.0	64-127			
1,2-Dichlorobenzene	0.104	0.0050	"	0.149	ND	69.6	24-134			
1,3-Dichlorobenzene	0.101	0.0050	"	0.149	ND	67.4	22-130			
1,4-Dichlorobenzene	0.101	0.0050	"	0.149	ND	67.9	21-131			
Dichlorodifluoromethane	0.103	0.0050	"	0.149	ND	68.7	47-117			
Tert-amyl methyl ether	0.105	0.0050	"	0.149	ND	70.4	60-124			
1,1-Dichloroethane	0.0941	0.0050	"	0.149	ND	63.0	55-119			
1,2-Dichloroethane (EDC)	0.104	0.0050	"	0.149	ND	69.9	65-124			
Tert-butyl alcohol	0.638	0.020	"	0.744	ND	85.7	64-131			
1,1-Dichloroethene	0.109	0.0050	"	0.149	ND	73.0	42-145			
Ethyl tert-butyl ether	0.100	0.010	"	0.149	ND	66.9	60-119			
cis-1,2-Dichloroethene	0.103	0.0050	"	0.149	ND	69.2	56-121			
Di-isopropyl ether	0.0886	0.0050	"	0.149	ND	59.3	40-132			
trans-1,2-Dichloroethene	0.110	0.0050	"	0.149	ND	73.6	52-126			
Methyl tert-butyl ether	0.114	0.015	"	0.149	ND	76.0	64-124			
1,2-Dichloropropane	0.0966	0.0050	"	0.149	ND	64.7	61-115			
1,3-Dichloropropane	0.108	0.0050	"	0.149	ND	72.1	66-123			
2,2-Dichloropropane	0.120	0.010	"	0.149	ND	80.3	35-127			
1,1-Dichloropropene	0.100	0.0050	"	0.149	ND	66.9	52-119			

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 10625 West I-70 Frontage Road, Suite 3
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Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504092 - EPA 5030 Soil MS

Matrix Spike (1504092-MS1)	Source: 1504091-01			Prepared & Analyzed: 04/09/15						
cis-1,3-Dichloropropene	0.123	0.0050	mg/kg	0.149	ND	82.7	47-122			
trans-1,3-Dichloropropene	0.123	0.0050	"	0.149	ND	82.2	51-119			
Ethylbenzene	0.0983	0.0050	"	0.149	ND	65.8	22-153			
Hexachlorobutadiene	0.0999	0.0050	"	0.149	ND	66.8	10-149			
Isopropylbenzene	0.102	0.0050	"	0.149	ND	68.3	18-135			
p-Isopropyltoluene	0.0977	0.010	"	0.149	ND	65.4	12-132			
Methylene Chloride	0.103	0.015	"	0.149	ND	69.0	10-167			
Naphthalene	0.127	0.010	"	0.149	ND	84.7	10-158			
n-Propylbenzene	0.0959	0.0050	"	0.149	ND	64.2	15-134			
Styrene	0.108	0.010	"	0.149	ND	72.0	33-135			
1,1,2,2-Tetrachloroethane	0.114	0.0050	"	0.149	ND	76.2	10-166			
1,1,1,2-Tetrachloroethane	0.103	0.0050	"	0.149	ND	68.9	49-123			
Tetrachloroethene	0.107	0.0050	"	0.149	ND	71.6	33-134			
Toluene	0.100	0.0050	"	0.149	ND	67.1	30-134			
1,2,3-Trichlorobenzene	0.116	0.0050	"	0.149	ND	77.9	10-155			
1,2,4-Trichlorobenzene	0.116	0.0050	"	0.149	ND	77.4	10-152			
1,1,2-Trichloroethane	0.118	0.0050	"	0.149	ND	78.8	46-139			
1,1,1-Trichloroethane	0.103	0.0050	"	0.149	ND	68.7	51-124			
Trichloroethene	0.104	0.0050	"	0.149	ND	69.4	16-187			
Trichlorofluoromethane	0.112	0.0050	"	0.149	ND	75.3	53-125			
1,2,3-Trichloropropane	0.127	0.010	"	0.149	ND	85.2	69-118			
1,3,5-Trimethylbenzene	0.0964	0.0050	"	0.149	ND	64.5	20-128			
1,2,4-Trimethylbenzene	0.0968	0.0050	"	0.149	ND	64.8	17-142			
Vinyl chloride	0.0950	0.0050	"	0.149	ND	63.6	50-134			
m,p-Xylene	0.201	0.010	"	0.299	ND	67.3	10-159			
o-Xylene	0.0991	0.0050	"	0.149	ND	66.3	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0400		"	0.0394		101	23-173			
Surrogate: Toluene-d8	0.0397		"	0.0398		99.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0392		"	0.0398		98.4	21-167			

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Project: National Western Complex

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Project Manager: Steve Hoffman

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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504092 - EPA 5030 Soil MS

Matrix Spike Dup (1504092-MSD1)	Source: 1504091-01			Prepared & Analyzed: 04/09/15						
Benzene	0.104	0.0020	mg/kg	0.146	ND	71.4	30-131	6.57	34	
Bromobenzene	0.112	0.0050	"	0.146	ND	76.9	39-124	9.21	21	
Bromochloromethane	0.0994	0.0050	"	0.146	ND	68.0	62-121	2.84	20	
Bromodichloromethane	0.109	0.0050	"	0.146	ND	74.9	51-120	5.63	22	
Bromoform	0.128	0.0050	"	0.146	ND	87.5	52-125	9.19	22	
Bromomethane	0.100	0.010	"	0.146	ND	68.4	10-152	14.3	90	
n-Butylbenzene	0.109	0.0050	"	0.146	ND	74.5	10-144	6.70	52	
sec-Butylbenzene	0.103	0.0050	"	0.146	ND	70.4	10-140	6.27	45	
tert-Butylbenzene	0.101	0.0050	"	0.146	ND	69.3	16-132	6.03	33	
Carbon tetrachloride	0.104	0.0050	"	0.146	ND	70.9	46-125	5.26	22	
Chlorobenzene	0.110	0.0050	"	0.146	ND	75.2	42-125	7.75	18	
Chloroethane	0.0974	0.0050	"	0.146	ND	66.6	46-125	3.71	24	
Chloroform	0.104	0.0050	"	0.146	ND	71.2	57-118	4.72	19	
Chloromethane	0.0870	0.015	"	0.146	ND	59.5	33-132	2.83	18	
2-Chlorotoluene	0.0960	0.0050	"	0.146	ND	65.7	30-125	4.93	24	
4-Chlorotoluene	0.103	0.0050	"	0.146	ND	70.2	29-127	6.26	24	
Chlorodibromomethane	0.118	0.010	"	0.146	ND	80.9	54-124	6.28	22	
1,2-Dibromo-3-chloropropane	0.121	0.015	"	0.146	ND	82.4	10-175	8.90	39	
1,2-Dibromoethane (EDB)	0.129	0.0050	"	0.146	ND	88.5	65-125	7.57	22	
Dibromomethane	0.126	0.0050	"	0.146	ND	86.4	64-127	7.98	19	
1,2-Dichlorobenzene	0.112	0.0050	"	0.146	ND	76.5	24-134	7.31	26	
1,3-Dichlorobenzene	0.111	0.0050	"	0.146	ND	75.9	22-130	9.79	27	
1,4-Dichlorobenzene	0.108	0.0050	"	0.146	ND	73.7	21-131	6.05	25	
Dichlorodifluoromethane	0.108	0.0050	"	0.146	ND	74.0	47-117	5.29	36	
Tert-amyl methyl ether	0.109	0.0050	"	0.146	ND	74.8	60-124	3.97	40	
1,1-Dichloroethane	0.0995	0.0050	"	0.146	ND	68.1	55-119	5.62	22	
1,2-Dichloroethane (EDC)	0.111	0.0050	"	0.146	ND	75.9	65-124	6.09	19	
Tert-butyl alcohol	0.663	0.020	"	0.728	ND	91.1	64-131	3.90	24	
1,1-Dichloroethene	0.113	0.0050	"	0.146	ND	77.5	42-145	3.82	22	
Ethyl tert-butyl ether	0.104	0.010	"	0.146	ND	70.9	60-119	3.61	38	
cis-1,2-Dichloroethene	0.107	0.0050	"	0.146	ND	73.3	56-121	3.59	21	
Di-isopropyl ether	0.0922	0.0050	"	0.146	ND	63.1	40-132	3.95	108	
trans-1,2-Dichloroethene	0.114	0.0050	"	0.146	ND	78.1	52-126	3.82	22	
Methyl tert-butyl ether	0.117	0.015	"	0.146	ND	80.1	64-124	3.01	28	
1,2-Dichloropropane	0.103	0.0050	"	0.146	ND	70.3	61-115	6.19	17	
1,3-Dichloropropane	0.114	0.0050	"	0.146	ND	78.1	66-123	5.85	24	
2,2-Dichloropropane	0.125	0.010	"	0.146	ND	85.3	35-127	3.97	29	
1,1-Dichloropropene	0.109	0.0050	"	0.146	ND	74.7	52-119	8.82	21	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504092 - EPA 5030 Soil MS

Matrix Spike Dup (1504092-MSD1)	Source: 1504091-01			Prepared & Analyzed: 04/09/15						
cis-1,3-Dichloropropene	0.129	0.0050	mg/kg	0.146	ND	88.4	47-122	4.57	40	
trans-1,3-Dichloropropene	0.129	0.0050	"	0.146	ND	87.9	51-119	4.56	52	
Ethylbenzene	0.105	0.0050	"	0.146	ND	71.8	22-153	6.58	24	
Hexachlorobutadiene	0.109	0.0050	"	0.146	ND	74.5	10-149	8.70	59	
Isopropylbenzene	0.108	0.0050	"	0.146	ND	73.6	18-135	5.39	33	
p-Isopropyltoluene	0.104	0.010	"	0.146	ND	71.4	12-132	6.55	38	
Methylene Chloride	0.108	0.015	"	0.146	ND	73.6	10-167	4.28	102	
Naphthalene	0.140	0.010	"	0.146	ND	95.8	10-158	10.2	42	
n-Propylbenzene	0.102	0.0050	"	0.146	ND	69.9	15-134	6.40	37	
Styrene	0.114	0.010	"	0.146	ND	77.8	33-135	5.61	22	
1,1,2,2-Tetrachloroethane	0.122	0.0050	"	0.146	ND	83.4	10-166	6.83	45	
1,1,1,2-Tetrachloroethane	0.110	0.0050	"	0.146	ND	75.2	49-123	6.47	21	
Tetrachloroethene	0.113	0.0050	"	0.146	ND	77.2	33-134	5.44	26	
Toluene	0.108	0.0050	"	0.146	ND	74.0	30-134	7.68	30	
1,2,3-Trichlorobenzene	0.129	0.0050	"	0.146	ND	88.2	10-155	10.3	40	
1,2,4-Trichlorobenzene	0.127	0.0050	"	0.146	ND	86.9	10-152	9.48	42	
1,1,2-Trichloroethane	0.125	0.0050	"	0.146	ND	85.3	46-139	5.71	34	
1,1,1-Trichloroethane	0.107	0.0050	"	0.146	ND	73.4	51-124	4.48	22	
Trichloroethene	0.110	0.0050	"	0.146	ND	75.0	16-187	5.53	19	
Trichlorofluoromethane	0.117	0.0050	"	0.146	ND	80.3	53-125	4.31	20	
1,2,3-Trichloropropane	0.125	0.010	"	0.146	ND	85.8	69-118	1.49	23	
1,3,5-Trimethylbenzene	0.102	0.0050	"	0.146	ND	69.7	20-128	5.50	31	
1,2,4-Trimethylbenzene	0.103	0.0050	"	0.146	ND	70.7	17-142	6.57	40	
Vinyl chloride	0.101	0.0050	"	0.146	ND	68.8	50-134	5.63	22	
m,p-Xylene	0.213	0.010	"	0.292	ND	72.8	10-159	5.61	68	
o-Xylene	0.107	0.0050	"	0.146	ND	73.0	31-151	7.48	38	
Surrogate: 1,2-Dichloroethane-d4	0.0390		"	0.0386		101	23-173			
Surrogate: Toluene-d8	0.0390		"	0.0390		100	20-170			
Surrogate: 4-Bromofluorobenzene	0.0387		"	0.0390		99.2	21-167			

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504078 - EPA 3050B

Blank (1504078-BLK1)

Prepared & Analyzed: 04/09/15

Arsenic	ND	0.100	mg/kg wet							
Barium	ND	0.100	"							
Cadmium	ND	0.100	"							
Chromium	ND	0.500	"							
Lead	ND	0.100	"							
Selenium	ND	0.0500	"							
Silver	ND	0.100	"							
Zinc	ND	10.0	"							

LCS (1504078-BS1)

Prepared & Analyzed: 04/09/15

Arsenic	122	0.250	mg/kg wet	99.6		123	78.4-140			
Barium	356	0.250	"	310		115	83.2-117			
Cadmium	207	0.250	"	182		114	81.9-118			
Chromium	158	1.25	"	136		116	80.1-121			
Lead	129	0.250	"	115		112	81.8-119			
Selenium	177	0.125	"	150		118	77.3-123			
Silver	46.9	0.250	"	40.4		116	75-125			
Zinc	163	25.0	"	133		123	80.7-132			

Duplicate (1504078-DUP1)

Source: 1504079-16

Prepared & Analyzed: 04/09/15

Arsenic	0.794	0.106	mg/kg dry		0.595		28.7	20		QR-03
Barium	28.0	0.106	"		19.8		34.5	20		QR-03
Cadmium	0.132	0.106	"		0.0867		41.5	20		QR-03
Chromium	3.39	0.531	"		2.67		23.5	20		QR-03
Lead	5.17	0.106	"		3.58		36.4	20		QR-03
Selenium	0.234	0.0531	"		0.352		40.5	20		QR-03
Silver	0.0577	0.106	"		0.0539		6.90	20		QR-03
Zinc	28.2	10.6	"		21.3		27.8	20		QR-03

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1504078 - EPA 3050B

Matrix Spike (1504078-MS1)

Source: 1504079-16

Prepared & Analyzed: 04/09/15

Arsenic	41.4	0.0919	mg/kg dry	36.8	0.595	111	75-125			
Barium	57.6	0.0919	"	36.8	19.8	103	75-125			
Cadmium	2.28	0.0919	"	1.84	0.0867	119	75-125			
Chromium	44.3	0.460	"	36.8	2.67	113	75-125			
Lead	23.5	0.0919	"	18.4	3.58	108	75-125			
Selenium	4.35	0.0460	"	3.68	0.352	109	75-125			
Silver	2.15	0.0919	"	1.84	0.0539	114	75-125			
Zinc	65.4	9.19	"	36.8	21.3	120	75-125			

Matrix Spike Dup (1504078-MSD1)

Source: 1504079-16

Prepared & Analyzed: 04/09/15

Arsenic	42.8	0.0939	mg/kg dry	37.6	0.595	112	75-125	3.31	25	
Barium	60.9	0.0939	"	37.6	19.8	110	75-125	5.59	25	
Cadmium	2.19	0.0939	"	1.88	0.0867	112	75-125	4.02	25	
Chromium	45.7	0.469	"	37.6	2.67	114	75-125	3.05	25	
Lead	24.0	0.0939	"	18.8	3.58	109	75-125	2.03	25	
Selenium	4.28	0.0469	"	3.76	0.352	105	75-125	1.65	25	
Silver	2.20	0.0939	"	1.88	0.0539	114	75-125	2.19	25	
Zinc	69.8	9.39	"	37.6	21.3	129	75-125	6.44	25	QM-07

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

Total Mercury by EPA Method 7471 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1504093 - EPA 7471A

Blank (1504093-BLK1)			Prepared: 04/09/15 Analyzed: 04/10/15								
Mercury	ND	0.0500	mg/kg wet								
LCS (1504093-BS1)			Prepared: 04/09/15 Analyzed: 04/10/15								
Mercury	0.500	0.0500	mg/kg wet	0.500		100	80-120				
Duplicate (1504093-DUP1)			Source: 1504089-01			Prepared: 04/09/15 Analyzed: 04/10/15					
Mercury	0.00755	0.0526	mg/kg dry		0.00849			11.7		20	
Matrix Spike (1504093-MS1)			Source: 1504089-01			Prepared: 04/09/15 Analyzed: 04/10/15					
Mercury	0.469	0.0470	mg/kg dry	0.470	0.00849	97.9	80-120				
Matrix Spike Dup (1504093-MSD1)			Source: 1504089-01			Prepared: 04/09/15 Analyzed: 04/10/15					
Mercury	0.484	0.0526	mg/kg dry	0.497	0.00849	95.8	80-120	3.28		20	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/15/15 11:47

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504094 - General Preparation

Duplicate (1504094-DUP1)		Source: 1504091-03		Prepared: 04/09/15 Analyzed: 04/10/15	
% Solids	84.2	%		83.8	0.476 20
Duplicate (1504094-DUP2)		Source: 1504065-01		Prepared: 04/09/15 Analyzed: 04/10/15	
% Solids	75.0	%		74.0	1.34 20

Summit Scientific

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/15/15 11:47

Notes and Definitions

- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

April 19, 2015

Steve Hoffman

Terracon - Wheat Ridge

10625 West I-70 Frontage Road, Suite 3

Wheat Ridge, CO 80033

RE: National Western Complex

Enclosed are the results of analyses for samples received by Summit Scientific on 04/09/15 18:37. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury
President



Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/19/15 13:31

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB-3 (0-6")	1504101-01	Soil	04/09/15 08:30	04/09/15 18:37
SB-3 (6-24")	1504101-02	Soil	04/09/15 08:30	04/09/15 18:37
SB-8 (0-6")	1504101-03	Soil	04/09/15 10:20	04/09/15 18:37
SB-8 (6-24")	1504101-04	Soil	04/09/15 10:20	04/09/15 18:37
SB-13 (0-6")	1504101-05	Soil	04/09/15 12:00	04/09/15 18:37
SB-13 (6-24")	1504101-06	Soil	04/09/15 12:00	04/09/15 18:37
SB-15 (0-6")	1504101-07	Soil	04/09/15 15:00	04/09/15 18:37
SB-15 (6-24")	1504101-08	Soil	04/09/15 15:00	04/09/15 18:37
SB-3 (25')	1504101-09	Soil	04/09/15 09:40	04/09/15 18:37
SB-8 (10')	1504101-10	Soil	04/09/15 10:45	04/09/15 18:37
SB-13 (5')	1504101-11	Soil	04/09/15 12:10	04/09/15 18:37
SB-15 (5')	1504101-12	Soil	04/09/15 15:20	04/09/15 18:37

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

Summit Scientific

1504101.2

741 Corporate Circle Suite 1 ♦ Golden, Colorado 80401
 303-277-9310 ♦ 303-374-5933 Fax

Page 2 of 2

Client: Terracon Consultants

Address: 10625 West I-70 Frontage Road North, Suite 3
 City/State/Zip: Wheat Ridge, CO 80033
 Phone: (303) 454-5275 Fax: (303) 423-3353
 Sampler Name: Marshall Haworth

Project Manager: Steve Hoffman

E-Mail: sbhoffman@terracon.com

Project Name: National Western Complex

Project Number: 25157010

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix		Analyze For:				Special Instructions			
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	VOC's 8260B	TPH 8270		PCRA 8-Zinc		
SB-3 (25')	4-9-15	0940	1			X			X			X	X				
SB-8 (10')	4-9-15	1045	1			X			X			X	X				
SB-13 (5')	4-9-15	1210	1			X			X			X	X				
SB-15 (5')	4-9-15	1520	1			X			X			X	X				
Relinquished by: <i>Marshall Haworth</i>	Date/Time: 4-9-15 1837	Received by: <i>[Signature]</i>	Date/Time: 4/19/15					Turn Around Time (Check)				Notes: On Ice					
								Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 Hours <input type="checkbox"/>									
Relinquished by:	Date/Time:	Received in Lab by:	Date/Time:					Sample Integrity: Temperature Upon Receipt: 5.7 Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>									

www.s2scientific.com

S₂

Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

Sample Receipt Checklist

S2 Work Order: 1504101

Client: Terracon Client Project ID: National Western Complex

Shipped Via: HD Airbill #: _____
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

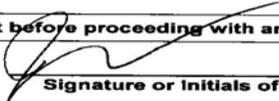
Matrix (check all that apply): Air Soil/Solid Water Other: _____
(Describe)

Cooler ID				
Temp (°C)	<u>5.7</u>			

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C ⁽¹⁾ ?				
NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>			
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
If custody seals are present, are they intact ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present?			<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Note the type of preservative in the Comments column – HCl, H ₂ SO ₄ , NaOH, etc.			<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Record the pH in Comments.			<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?			<input checked="" type="checkbox"/>	
Additional Comments (if any):				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

Ben Shrawsbury
 Custodian Printed Name


 Signature or Initials of Custodian

4/19/15 2005
 Date/Time





Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

SB-3 (0-6")
1504101-01 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/09/15 08:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	4.40	0.110	mg/kg dry	1	1504115	04/10/15	04/10/15	EPA 6020A	
Barium	261	0.110	"	"	"	"	"	"	
Cadmium	0.333	0.110	"	"	"	"	"	"	
Chromium	12.3	0.551	"	"	"	"	"	"	
Lead	14.0	0.110	"	"	"	"	"	"	
Selenium	0.345	0.0551	"	"	"	"	"	"	
Silver	ND	0.110	"	"	"	"	"	"	

Date Sampled: **04/09/15 08:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	54.5	11.0	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/09/15 08:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0523	mg/kg dry	1	1504101	04/10/15	04/10/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/09/15 08:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.2		%	1	1504117	04/10/15	04/13/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

SB-3 (6-24")
1504101-02 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/09/15 08:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.49	0.112	mg/kg dry	1	1504115	04/10/15	04/10/15	EPA 6020A	
Barium	89.9	0.112	"	"	"	"	"	"	
Cadmium	0.266	0.112	"	"	"	"	"	"	
Chromium	9.17	0.561	"	"	"	"	"	"	
Lead	24.4	0.112	"	"	"	"	"	"	
Selenium	0.0923	0.0561	"	"	"	"	"	"	
Silver	0.121	0.112	"	"	"	"	"	"	

Date Sampled: **04/09/15 08:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	55.5	11.2	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/09/15 08:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0561	mg/kg dry	1	1504101	04/10/15	04/10/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/09/15 08:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	89.1		%	1	1504117	04/10/15	04/13/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

SB-8 (0-6")
1504101-03 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/09/15 10:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	14.3	0.109	mg/kg dry	1	1504115	04/10/15	04/10/15	EPA 6020A	
Barium	158	0.109	"	"	"	"	"	"	
Cadmium	1.82	0.109	"	"	"	"	"	"	
Chromium	8.85	0.543	"	"	"	"	"	"	
Lead	560	0.109	"	"	"	"	"	"	
Selenium	0.203	0.0543	"	"	"	"	"	"	
Silver	0.373	0.109	"	"	"	"	"	"	

Date Sampled: **04/09/15 10:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	236	10.9	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/09/15 10:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.699	0.0459	mg/kg dry	1	1504101	04/10/15	04/10/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/09/15 10:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	92.0		%	1	1504117	04/10/15	04/13/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

SB-8 (6-24")
1504101-04 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/09/15 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	6.19	0.0981	mg/kg dry	1	1504115	04/10/15	04/10/15	EPA 6020A	
Barium	134	0.0981	"	"	"	"	"	"	
Cadmium	1.57	0.0981	"	"	"	"	"	"	
Chromium	8.17	0.491	"	"	"	"	"	"	
Lead	790	0.0981	"	"	"	"	"	"	
Selenium	0.155	0.0491	"	"	"	"	"	"	
Silver	0.437	0.0981	"	"	"	"	"	"	

Date Sampled: **04/09/15 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	272	9.81	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/09/15 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	0.992	0.0561	mg/kg dry	1	1504101	04/10/15	04/10/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/09/15 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.1		%	1	1504117	04/10/15	04/13/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

SB-13 (0-6")
1504101-05 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/09/15 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.89	0.105	mg/kg dry	1	1504115	04/10/15	04/10/15	EPA 6020A	
Barium	50.4	0.105	"	"	"	"	"	"	
Cadmium	0.213	0.105	"	"	"	"	"	"	
Chromium	3.28	0.523	"	"	"	"	"	"	
Lead	24.7	0.105	"	"	"	"	"	"	
Selenium	ND	0.0523	"	"	"	"	"	"	
Silver	0.145	0.105	"	"	"	"	"	"	

Date Sampled: **04/09/15 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	58.0	10.5	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/09/15 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.0473	0.0444	mg/kg dry	1	1504101	04/10/15	04/10/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/09/15 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	95.6		%	1	1504117	04/10/15	04/13/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

**SB-13 (6-24")
 1504101-06 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/09/15 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.71	0.104	mg/kg dry	1	1504115	04/10/15	04/10/15	EPA 6020A	
Barium	43.2	0.104	"	"	"	"	"	"	
Cadmium	0.218	0.104	"	"	"	"	"	"	
Chromium	3.20	0.518	"	"	"	"	"	"	
Lead	21.5	0.104	"	"	"	"	"	"	
Selenium	ND	0.0518	"	"	"	"	"	"	
Silver	0.112	0.104	"	"	"	"	"	"	

Date Sampled: **04/09/15 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	47.2	10.4	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/09/15 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0518	mg/kg dry	1	1504101	04/10/15	04/10/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/09/15 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	96.5		%	1	1504117	04/10/15	04/13/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

SB-15 (0-6")
1504101-07 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/09/15 15:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.99	0.106	mg/kg dry	1	1504115	04/10/15	04/10/15	EPA 6020A	
Barium	51.1	0.106	"	"	"	"	"	"	
Cadmium	0.209	0.106	"	"	"	"	"	"	
Chromium	3.97	0.530	"	"	"	"	"	"	
Lead	7.42	0.106	"	"	"	"	"	"	
Selenium	ND	0.0530	"	"	"	"	"	"	
Silver	ND	0.106	"	"	"	"	"	"	

Date Sampled: **04/09/15 15:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	23.7	10.6	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/09/15 15:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0429	mg/kg dry	1	1504101	04/10/15	04/10/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/09/15 15:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	94.3		%	1	1504117	04/10/15	04/13/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

SB-15 (6-24")
1504101-08 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/09/15 15:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.990	0.102	mg/kg dry	1	1504115	04/10/15	04/10/15	EPA 6020A	
Barium	46.5	0.102	"	"	"	"	"	"	
Cadmium	ND	0.102	"	"	"	"	"	"	
Chromium	3.49	0.511	"	"	"	"	"	"	
Lead	4.47	0.102	"	"	"	"	"	"	
Selenium	ND	0.0511	"	"	"	"	"	"	
Silver	ND	0.102	"	"	"	"	"	"	

Date Sampled: **04/09/15 15:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	17.0	10.2	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/09/15 15:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0424	mg/kg dry	1	1504101	04/10/15	04/10/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/09/15 15:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	97.9		%	1	1504117	04/10/15	04/13/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

SB-3 (25')
1504101-09 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/09/15 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504109	04/10/15	04/11/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/09/15 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		107 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/09/15 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504111	04/10/15	04/11/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

SB-3 (25')
1504101-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample	ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504111	04/10/15	04/11/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"	"

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

SB-3 (25')
1504101-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504111	04/10/15	04/11/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: 04/09/15 09:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		111 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.6 %	21-167		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270D

Date Sampled: 04/09/15 09:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	330	ug/kg	1	1504171	04/16/15	04/17/15	EPA 8270D	
Acenaphthylene	ND	330	"	"	"	"	"	"	
Anthracene	ND	330	"	"	"	"	"	"	
Benzo (a) anthracene	ND	330	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	330	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	330	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	330	"	"	"	"	"	"	
Benzo (a) pyrene	ND	330	"	"	"	"	"	"	
Benzyl alcohol	ND	330	"	"	"	"	"	"	
Pyridine	ND	330	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	330	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	330	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	330	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	330	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	330	"	"	"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

SB-3 (25')
1504101-09 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D

Compound Name	Result	Limit (ug/kg)	Unit	Sample ID	Date 1	Date 2	Method
4-Bromophenyl phenyl ether	ND	330	ug/kg	1	1504171	04/16/15	04/17/15 EPA 8270D
Butyl benzyl phthalate	ND	330	"	"	"	"	"
4-Chloroaniline	ND	330	"	"	"	"	"
4-Chloro-3-methylphenol	ND	330	"	"	"	"	"
2-Chloronaphthalene	ND	330	"	"	"	"	"
2-Chlorophenol	ND	330	"	"	"	"	"
4-Chlorophenyl phenyl ether	ND	330	"	"	"	"	"
Chrysene	ND	330	"	"	"	"	"
Dibenz (a,h) anthracene	ND	330	"	"	"	"	"
Dibenzofuran	ND	330	"	"	"	"	"
Di-n-butyl phthalate	ND	330	"	"	"	"	"
1,2-Dichlorobenzene	ND	330	"	"	"	"	"
1,3-Dichlorobenzene	ND	330	"	"	"	"	"
1,4-Dichlorobenzene	ND	330	"	"	"	"	"
2,4-Dichlorophenol	ND	330	"	"	"	"	"
Diethyl phthalate	ND	330	"	"	"	"	"
2,4-Dimethylphenol	ND	330	"	"	"	"	"
Carbazole	ND	330	"	"	"	"	"
Dimethyl phthalate	ND	330	"	"	"	"	"
4,6-Dinitro-2-methylphenol	ND	330	"	"	"	"	"
2,4-Dinitrophenol	ND	330	"	"	"	"	"
Azobenzene	ND	330	"	"	"	"	"
2,4-Dinitrotoluene	ND	330	"	"	"	"	"
2,6-Dinitrotoluene	ND	330	"	"	"	"	"
Di-n-octyl phthalate	ND	330	"	"	"	"	"
Fluoranthene	ND	330	"	"	"	"	"
Fluorene	ND	330	"	"	"	"	"
Hexachlorobenzene	ND	330	"	"	"	"	"
Hexachlorobutadiene	ND	330	"	"	"	"	"
Hexachlorocyclopentadiene	ND	330	"	"	"	"	"
Hexachloroethane	ND	330	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	330	"	"	"	"	"
Isophorone	ND	330	"	"	"	"	"
2-Methylnaphthalene	ND	330	"	"	"	"	"
2-Methylphenol	ND	330	"	"	"	"	"
4-Methylphenol	ND	330	"	"	"	"	"
Naphthalene	ND	330	"	"	"	"	"

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

SB-3 (25')
1504101-09 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
1,4-Dinitrobenzene	ND	330	ug/kg	1	1504171	04/16/15	04/17/15	EPA 8270D
2-Nitroaniline	ND	330	"	"	"	"	"	"
1,3-Dinitrobenzene	ND	330	"	"	"	"	"	"
3-Nitroaniline	ND	330	"	"	"	"	"	"
1,2-Dinitrobenzene	ND	330	"	"	"	"	"	"
4-Nitroaniline	ND	330	"	"	"	"	"	"
Nitrobenzene	ND	330	"	"	"	"	"	"
2-Nitrophenol	ND	330	"	"	"	"	"	"
4-Nitrophenol	ND	330	"	"	"	"	"	"
2,3,4,6-Tetrachlorophenol	ND	330	"	"	"	"	"	"
N-Nitrosodi-n-propylamine	ND	330	"	"	"	"	"	"
Pentachlorophenol	ND	330	"	"	"	"	"	"
Phenanthrene	ND	330	"	"	"	"	"	"
Phenol	ND	330	"	"	"	"	"	"
Aniline	ND	330	"	"	"	"	"	"
Pyrene	ND	330	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	330	"	"	"	"	"	"
2,4,5-Trichlorophenol	ND	330	"	"	"	"	"	"
2,4,6-Trichlorophenol	ND	330	"	"	"	"	"	"

Date Sampled: 04/09/15 09:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Fluorophenol		103 %	30-200		"	"	"	"	
Surrogate: Phenol-d6		166 %	30-200		"	"	"	"	
Surrogate: Nitrobenzene-d5		220 %	30-230		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		151 %	30-200		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		127 %	30-200		"	"	"	"	
Surrogate: Terphenyl-d14		220 %	30-300		"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

SB-8 (10')
1504101-10 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/09/15 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504109	04/10/15	04/11/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/09/15 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		119 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/09/15 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504111	04/10/15	04/11/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

SB-8 (10')
1504101-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504111	04/10/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"

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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

SB-8 (10')
1504101-10 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504111	04/10/15	04/11/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: 04/09/15 10:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.7 %	21-167		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270D

Date Sampled: 04/09/15 10:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	330	ug/kg	1	1504171	04/16/15	04/17/15	EPA 8270D	
Acenaphthylene	ND	330	"	"	"	"	"	"	
Anthracene	410	330	"	"	"	"	"	"	
Benzo (a) anthracene	290	330	"	"	"	"	"	"	
Benzo (b) fluoranthene	270	330	"	"	"	"	"	"	
Benzo (k) fluoranthene	270	330	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	330	"	"	"	"	"	"	
Benzo (a) pyrene	220	330	"	"	"	"	"	"	
Benzyl alcohol	ND	330	"	"	"	"	"	"	
Pyridine	ND	330	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	330	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	330	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	330	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	330	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	330	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	330	"	"	"	"	"	"	

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

SB-8 (10')
1504101-10 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D

Compound	Result	330	ug/kg	1	1504171	04/16/15	04/17/15	EPA 8270D
Butyl benzyl phthalate	ND	330	ug/kg	1	1504171	04/16/15	04/17/15	EPA 8270D
4-Chloroaniline	ND	330	"	"	"	"	"	"
4-Chloro-3-methylphenol	ND	330	"	"	"	"	"	"
2-Chloronaphthalene	ND	330	"	"	"	"	"	"
2-Chlorophenol	ND	330	"	"	"	"	"	"
4-Chlorophenyl phenyl ether	ND	330	"	"	"	"	"	"
Chrysene	310	330	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	330	"	"	"	"	"	"
Dibenzofuran	ND	330	"	"	"	"	"	"
Di-n-butyl phthalate	ND	330	"	"	"	"	"	"
1,2-Dichlorobenzene	ND	330	"	"	"	"	"	"
1,3-Dichlorobenzene	ND	330	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	330	"	"	"	"	"	"
2,4-Dichlorophenol	ND	330	"	"	"	"	"	"
Diethyl phthalate	ND	330	"	"	"	"	"	"
2,4-Dimethylphenol	ND	330	"	"	"	"	"	"
Carbazole	ND	330	"	"	"	"	"	"
Dimethyl phthalate	ND	330	"	"	"	"	"	"
4,6-Dinitro-2-methylphenol	ND	330	"	"	"	"	"	"
2,4-Dinitrophenol	ND	330	"	"	"	"	"	"
Azobenzene	ND	330	"	"	"	"	"	"
2,4-Dinitrotoluene	ND	330	"	"	"	"	"	"
2,6-Dinitrotoluene	ND	330	"	"	"	"	"	"
Di-n-octyl phthalate	ND	330	"	"	"	"	"	"
Fluoranthene	560	330	"	"	"	"	"	"
Fluorene	ND	330	"	"	"	"	"	"
Hexachlorobenzene	ND	330	"	"	"	"	"	"
Hexachlorobutadiene	ND	330	"	"	"	"	"	"
Hexachlorocyclopentadiene	ND	330	"	"	"	"	"	"
Hexachloroethane	ND	330	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	330	"	"	"	"	"	"
Isophorone	ND	330	"	"	"	"	"	"
2-Methylnaphthalene	ND	330	"	"	"	"	"	"
2-Methylphenol	ND	330	"	"	"	"	"	"
4-Methylphenol	ND	330	"	"	"	"	"	"
Naphthalene	ND	330	"	"	"	"	"	"
1,4-Dinitrobenzene	ND	330	"	"	"	"	"	"

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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

SB-8 (10')
1504101-10 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
2-Nitroaniline	ND	330	ug/kg	1	1504171	04/16/15	04/17/15	EPA 8270D
1,3-Dinitrobenzene	ND	330	"	"	"	"	"	"
3-Nitroaniline	ND	330	"	"	"	"	"	"
1,2-Dinitrobenzene	ND	330	"	"	"	"	"	"
4-Nitroaniline	ND	330	"	"	"	"	"	"
Nitrobenzene	ND	330	"	"	"	"	"	"
2-Nitrophenol	ND	330	"	"	"	"	"	"
4-Nitrophenol	ND	330	"	"	"	"	"	"
2,3,4,6-Tetrachlorophenol	ND	330	"	"	"	"	"	"
N-Nitrosodi-n-propylamine	ND	330	"	"	"	"	"	"
Pentachlorophenol	ND	330	"	"	"	"	"	"
Phenanthrene	430	330	"	"	"	"	"	"
Phenol	ND	330	"	"	"	"	"	"
Aniline	ND	330	"	"	"	"	"	"
Pyrene	630	330	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	330	"	"	"	"	"	"
2,4,5-Trichlorophenol	ND	330	"	"	"	"	"	"
2,4,6-Trichlorophenol	ND	330	"	"	"	"	"	"

Date Sampled: **04/09/15 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Fluorophenol		129 %	30-200		"	"	"	"	
Surrogate: Phenol-d6		137 %	30-200		"	"	"	"	
Surrogate: Nitrobenzene-d5		142 %	30-200		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		131 %	30-200		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		108 %	30-200		"	"	"	"	
Surrogate: Terphenyl-d14		171 %	30-300		"	"	"	"	

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

SB-13 (5')
1504101-11 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/09/15 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504109	04/10/15	04/11/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/09/15 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		116 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/09/15 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504111	04/10/15	04/11/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

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Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

SB-13 (5')
1504101-11 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample	Date	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504111	04/10/15	04/11/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"	"

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Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

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SB-13 (5')
1504101-11 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504111	04/10/15	04/11/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: 04/09/15 12:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		111 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.3 %	21-167		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270D

Date Sampled: 04/09/15 12:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	330	ug/kg	1	1504171	04/16/15	04/17/15	EPA 8270D	
Acenaphthylene	ND	330	"	"	"	"	"	"	
Anthracene	ND	330	"	"	"	"	"	"	
Benzo (a) anthracene	ND	330	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	330	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	330	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	330	"	"	"	"	"	"	
Benzo (a) pyrene	ND	330	"	"	"	"	"	"	
Benzyl alcohol	ND	330	"	"	"	"	"	"	
Pyridine	ND	330	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	330	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	330	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	330	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	330	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	330	"	"	"	"	"	"	

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SB-13 (5')
1504101-11 (Soil)

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Semivolatile Organic Compounds by EPA Method 8270D

Compound Name	Result	Limit	Unit	Sample ID	Date	Date	Method
4-Bromophenyl phenyl ether	ND	330	ug/kg	1	1504171	04/16/15	04/17/15 EPA 8270D
Butyl benzyl phthalate	ND	330	"	"	"	"	"
4-Chloroaniline	ND	330	"	"	"	"	"
4-Chloro-3-methylphenol	ND	330	"	"	"	"	"
2-Chloronaphthalene	ND	330	"	"	"	"	"
2-Chlorophenol	ND	330	"	"	"	"	"
4-Chlorophenyl phenyl ether	ND	330	"	"	"	"	"
Chrysene	ND	330	"	"	"	"	"
Dibenz (a,h) anthracene	ND	330	"	"	"	"	"
Dibenzofuran	ND	330	"	"	"	"	"
Di-n-butyl phthalate	ND	330	"	"	"	"	"
1,2-Dichlorobenzene	ND	330	"	"	"	"	"
1,3-Dichlorobenzene	ND	330	"	"	"	"	"
1,4-Dichlorobenzene	ND	330	"	"	"	"	"
2,4-Dichlorophenol	ND	330	"	"	"	"	"
Diethyl phthalate	ND	330	"	"	"	"	"
2,4-Dimethylphenol	ND	330	"	"	"	"	"
Carbazole	ND	330	"	"	"	"	"
Dimethyl phthalate	ND	330	"	"	"	"	"
4,6-Dinitro-2-methylphenol	ND	330	"	"	"	"	"
2,4-Dinitrophenol	ND	330	"	"	"	"	"
Azobenzene	ND	330	"	"	"	"	"
2,4-Dinitrotoluene	ND	330	"	"	"	"	"
2,6-Dinitrotoluene	ND	330	"	"	"	"	"
Di-n-octyl phthalate	ND	330	"	"	"	"	"
Fluoranthene	ND	330	"	"	"	"	"
Fluorene	ND	330	"	"	"	"	"
Hexachlorobenzene	ND	330	"	"	"	"	"
Hexachlorobutadiene	ND	330	"	"	"	"	"
Hexachlorocyclopentadiene	ND	330	"	"	"	"	"
Hexachloroethane	ND	330	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	330	"	"	"	"	"
Isophorone	ND	330	"	"	"	"	"
2-Methylnaphthalene	ND	330	"	"	"	"	"
2-Methylphenol	ND	330	"	"	"	"	"
4-Methylphenol	ND	330	"	"	"	"	"
Naphthalene	ND	330	"	"	"	"	"

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Project: National Western Complex

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SB-13 (5')
1504101-11 (Soil)

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Semivolatile Organic Compounds by EPA Method 8270D

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
1,4-Dinitrobenzene	ND	330	ug/kg	1	1504171	04/16/15	04/17/15	EPA 8270D
2-Nitroaniline	ND	330	"	"	"	"	"	"
1,3-Dinitrobenzene	ND	330	"	"	"	"	"	"
3-Nitroaniline	ND	330	"	"	"	"	"	"
1,2-Dinitrobenzene	ND	330	"	"	"	"	"	"
4-Nitroaniline	ND	330	"	"	"	"	"	"
Nitrobenzene	ND	330	"	"	"	"	"	"
2-Nitrophenol	ND	330	"	"	"	"	"	"
4-Nitrophenol	ND	330	"	"	"	"	"	"
2,3,4,6-Tetrachlorophenol	ND	330	"	"	"	"	"	"
N-Nitrosodi-n-propylamine	ND	330	"	"	"	"	"	"
Pentachlorophenol	ND	330	"	"	"	"	"	"
Phenanthrene	ND	330	"	"	"	"	"	"
Phenol	ND	330	"	"	"	"	"	"
Aniline	ND	330	"	"	"	"	"	"
Pyrene	ND	330	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	330	"	"	"	"	"	"
2,4,5-Trichlorophenol	ND	330	"	"	"	"	"	"
2,4,6-Trichlorophenol	ND	330	"	"	"	"	"	"

Date Sampled: 04/09/15 12:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Fluorophenol		141 %	30-200		"	"	"	"	
Surrogate: Phenol-d6		149 %	30-200		"	"	"	"	
Surrogate: Nitrobenzene-d5		151 %	30-200		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		142 %	30-200		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		137 %	30-200		"	"	"	"	
Surrogate: Terphenyl-d14		185 %	30-300		"	"	"	"	

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SB-15 (5')
1504101-12 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/09/15 15:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504109	04/10/15	04/11/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/09/15 15:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		114 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/09/15 15:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504111	04/10/15	04/11/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

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SB-15 (5')
1504101-12 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample	ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504111	04/10/15	04/11/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"	"

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SB-15 (5')
1504101-12 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504111	04/10/15	04/11/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: 04/09/15 15:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.9 %	21-167		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270D

Date Sampled: 04/09/15 15:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	330	ug/kg	1	1504171	04/16/15	04/17/15	EPA 8270D	
Acenaphthylene	ND	330	"	"	"	"	"	"	
Anthracene	ND	330	"	"	"	"	"	"	
Benzo (a) anthracene	ND	330	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	330	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	330	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	330	"	"	"	"	"	"	
Benzo (a) pyrene	ND	330	"	"	"	"	"	"	
Benzyl alcohol	ND	330	"	"	"	"	"	"	
Pyridine	ND	330	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	330	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	330	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	330	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	330	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	330	"	"	"	"	"	"	

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SB-15 (5')
1504101-12 (Soil)

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Semivolatile Organic Compounds by EPA Method 8270D

Compound Name	Result	Limit (ug/kg)	Unit	Sample ID	Date 1	Date 2	Method
4-Bromophenyl phenyl ether	ND	330	ug/kg	1	1504171	04/16/15	EPA 8270D
Butyl benzyl phthalate	ND	330	"	"	"	"	"
4-Chloroaniline	ND	330	"	"	"	"	"
4-Chloro-3-methylphenol	ND	330	"	"	"	"	"
2-Chloronaphthalene	ND	330	"	"	"	"	"
2-Chlorophenol	ND	330	"	"	"	"	"
4-Chlorophenyl phenyl ether	ND	330	"	"	"	"	"
Chrysene	ND	330	"	"	"	"	"
Dibenz (a,h) anthracene	ND	330	"	"	"	"	"
Dibenzofuran	ND	330	"	"	"	"	"
Di-n-butyl phthalate	ND	330	"	"	"	"	"
1,2-Dichlorobenzene	ND	330	"	"	"	"	"
1,3-Dichlorobenzene	ND	330	"	"	"	"	"
1,4-Dichlorobenzene	ND	330	"	"	"	"	"
2,4-Dichlorophenol	ND	330	"	"	"	"	"
Diethyl phthalate	ND	330	"	"	"	"	"
2,4-Dimethylphenol	ND	330	"	"	"	"	"
Carbazole	ND	330	"	"	"	"	"
Dimethyl phthalate	ND	330	"	"	"	"	"
4,6-Dinitro-2-methylphenol	ND	330	"	"	"	"	"
2,4-Dinitrophenol	ND	330	"	"	"	"	"
Azobenzene	ND	330	"	"	"	"	"
2,4-Dinitrotoluene	ND	330	"	"	"	"	"
2,6-Dinitrotoluene	ND	330	"	"	"	"	"
Di-n-octyl phthalate	ND	330	"	"	"	"	"
Fluoranthene	ND	330	"	"	"	"	"
Fluorene	ND	330	"	"	"	"	"
Hexachlorobenzene	ND	330	"	"	"	"	"
Hexachlorobutadiene	ND	330	"	"	"	"	"
Hexachlorocyclopentadiene	ND	330	"	"	"	"	"
Hexachloroethane	ND	330	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	330	"	"	"	"	"
Isophorone	ND	330	"	"	"	"	"
2-Methylnaphthalene	ND	330	"	"	"	"	"
2-Methylphenol	ND	330	"	"	"	"	"
4-Methylphenol	ND	330	"	"	"	"	"
Naphthalene	ND	330	"	"	"	"	"

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SB-15 (5')
1504101-12 (Soil)

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Semivolatile Organic Compounds by EPA Method 8270D

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
1,4-Dinitrobenzene	ND	330	ug/kg	1	1504171	04/16/15	04/17/15	EPA 8270D
2-Nitroaniline	ND	330	"	"	"	"	"	"
1,3-Dinitrobenzene	ND	330	"	"	"	"	"	"
3-Nitroaniline	ND	330	"	"	"	"	"	"
1,2-Dinitrobenzene	ND	330	"	"	"	"	"	"
4-Nitroaniline	ND	330	"	"	"	"	"	"
Nitrobenzene	ND	330	"	"	"	"	"	"
2-Nitrophenol	ND	330	"	"	"	"	"	"
4-Nitrophenol	ND	330	"	"	"	"	"	"
2,3,4,6-Tetrachlorophenol	ND	330	"	"	"	"	"	"
N-Nitrosodi-n-propylamine	ND	330	"	"	"	"	"	"
Pentachlorophenol	ND	330	"	"	"	"	"	"
Phenanthrene	ND	330	"	"	"	"	"	"
Phenol	ND	330	"	"	"	"	"	"
Aniline	ND	330	"	"	"	"	"	"
Pyrene	ND	330	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	330	"	"	"	"	"	"
2,4,5-Trichlorophenol	ND	330	"	"	"	"	"	"
2,4,6-Trichlorophenol	ND	330	"	"	"	"	"	"

Date Sampled: 04/09/15 15:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Fluorophenol		157 %	30-200		"	"	"	"	
Surrogate: Phenol-d6		161 %	30-200		"	"	"	"	
Surrogate: Nitrobenzene-d5		160 %	30-200		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		148 %	30-200		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		135 %	30-200		"	"	"	"	
Surrogate: Terphenyl-d14		186 %	30-300		"	"	"	"	

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1504109 - EPA 3550A

Blank (1504109-BLK1)			Prepared & Analyzed: 04/10/15								
C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
<i>Surrogate: o-Terphenyl</i>	<i>15.0</i>		<i>"</i>	<i>12.2</i>		<i>123</i>	<i>70-130</i>				
LCS (1504109-BS1)			Prepared & Analyzed: 04/10/15								
C10-C28 (DRO)	493	50	mg/kg	501		98.3	50-150				
<i>Surrogate: o-Terphenyl</i>	<i>13.9</i>		<i>"</i>	<i>12.2</i>		<i>114</i>	<i>70-130</i>				
Matrix Spike (1504109-MS1)			Source: 1504081-01		Prepared & Analyzed: 04/10/15						
C10-C28 (DRO)	519	50	mg/kg	495	11.5	102	50-150				
<i>Surrogate: o-Terphenyl</i>	<i>14.0</i>		<i>"</i>	<i>12.1</i>		<i>116</i>	<i>70-130</i>				
Matrix Spike Dup (1504109-MSD1)			Source: 1504081-01		Prepared & Analyzed: 04/10/15						
C10-C28 (DRO)	486	50	mg/kg	490	11.5	96.8	50-150	6.45	20		
<i>Surrogate: o-Terphenyl</i>	<i>13.3</i>		<i>"</i>	<i>11.9</i>		<i>111</i>	<i>70-130</i>				

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 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504111 - EPA 5030 Soil MS

Blank (1504111-BLK1)

Prepared: 04/10/15 Analyzed: 04/11/15

Benzene	ND	0.0020	mg/kg
Bromobenzene	ND	0.0050	"
Bromochloromethane	ND	0.0050	"
Bromodichloromethane	ND	0.0050	"
Bromoform	ND	0.0050	"
Bromomethane	ND	0.010	"
n-Butylbenzene	ND	0.0050	"
sec-Butylbenzene	ND	0.0050	"
tert-Butylbenzene	ND	0.0050	"
Carbon tetrachloride	ND	0.0050	"
Chlorobenzene	ND	0.0050	"
Chloroethane	ND	0.0050	"
Chloroform	ND	0.0050	"
Chloromethane	ND	0.015	"
2-Chlorotoluene	ND	0.0050	"
4-Chlorotoluene	ND	0.0050	"
Chlorodibromomethane	ND	0.010	"
1,2-Dibromo-3-chloropropane	ND	0.015	"
1,2-Dibromoethane (EDB)	ND	0.0050	"
Dibromomethane	ND	0.0050	"
1,2-Dichlorobenzene	ND	0.0050	"
1,3-Dichlorobenzene	ND	0.0050	"
1,4-Dichlorobenzene	ND	0.0050	"
Dichlorodifluoromethane	ND	0.0050	"
Tert-amyl methyl ether	ND	0.0050	"
1,1-Dichloroethane	ND	0.0050	"
1,2-Dichloroethane (EDC)	ND	0.0050	"
Tert-butyl alcohol	ND	0.020	"
1,1-Dichloroethene	ND	0.0050	"
Ethyl tert-butyl ether	ND	0.010	"
cis-1,2-Dichloroethene	ND	0.0050	"
Di-isopropyl ether	ND	0.0050	"
trans-1,2-Dichloroethene	ND	0.0050	"
Methyl tert-butyl ether	ND	0.015	"
1,2-Dichloropropane	ND	0.0050	"
1,3-Dichloropropane	ND	0.0050	"
2,2-Dichloropropane	ND	0.010	"
1,1-Dichloropropene	ND	0.0050	"

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Reported:
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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD		

Batch 1504111 - EPA 5030 Soil MS

Blank (1504111-BLK1)

Prepared: 04/10/15 Analyzed: 04/11/15

cis-1,3-Dichloropropene	ND	0.0050	mg/kg							
trans-1,3-Dichloropropene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Hexachlorobutadiene	ND	0.0050	"							
Isopropylbenzene	ND	0.0050	"							
p-Isopropyltoluene	ND	0.010	"							
Methylene Chloride	ND	0.015	"							
Naphthalene	ND	0.010	"							
n-Propylbenzene	ND	0.0050	"							
Styrene	ND	0.010	"							
1,1,2,2-Tetrachloroethane	ND	0.0050	"							
1,1,1,2-Tetrachloroethane	ND	0.0050	"							
Tetrachloroethene	ND	0.0050	"							
Toluene	ND	0.0050	"							
1,2,3-Trichlorobenzene	ND	0.0050	"							
1,2,4-Trichlorobenzene	ND	0.0050	"							
1,1,2-Trichloroethane	ND	0.0050	"							
1,1,1-Trichloroethane	ND	0.0050	"							
Trichloroethene	ND	0.0050	"							
Trichlorofluoromethane	ND	0.0050	"							
1,2,3-Trichloropropane	ND	0.010	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
Vinyl chloride	ND	0.0050	"							
m,p-Xylene	ND	0.010	"							
o-Xylene	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0415</i>		<i>"</i>	<i>0.0396</i>		<i>105</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0396</i>		<i>"</i>	<i>0.0400</i>		<i>98.9</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0390</i>		<i>"</i>	<i>0.0400</i>		<i>97.6</i>	<i>21-167</i>			

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Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504111 - EPA 5030 Soil MS

LCS (1504111-BS1)

Prepared: 04/10/15 Analyzed: 04/11/15

Benzene	0.149	0.0020	mg/kg	0.150		99.6	58-130			
Bromobenzene	0.152	0.0050	"	0.150		101	87-115			
Bromochloromethane	0.148	0.0050	"	0.150		98.6	82-122			
Bromodichloromethane	0.152	0.0050	"	0.150		101	84-119			
Bromoform	0.153	0.0050	"	0.150		102	76-119			
Bromomethane	0.159	0.010	"	0.150		106	39-152			
n-Butylbenzene	0.151	0.0050	"	0.150		100	70-131			
sec-Butylbenzene	0.148	0.0050	"	0.150		98.7	74-124			
tert-Butylbenzene	0.147	0.0050	"	0.150		98.1	77-121			
Carbon tetrachloride	0.148	0.0050	"	0.150		98.3	66-127			
Chlorobenzene	0.150	0.0050	"	0.150		99.7	82-120			
Chloroethane	0.151	0.0050	"	0.150		101	63-126			
Chloroform	0.149	0.0050	"	0.150		99.4	82-120			
Chloromethane	0.150	0.015	"	0.150		100	57-133			
2-Chlorotoluene	0.151	0.0050	"	0.150		101	82-117			
4-Chlorotoluene	0.149	0.0050	"	0.150		99.2	81-119			
Chlorodibromomethane	0.153	0.010	"	0.150		102	82-124			
1,2-Dibromo-3-chloropropane	0.160	0.015	"	0.150		107	62-128			
1,2-Dibromoethane (EDB)	0.152	0.0050	"	0.150		102	86-122			
Dibromomethane	0.154	0.0050	"	0.150		103	83-124			
1,2-Dichlorobenzene	0.150	0.0050	"	0.150		100	84-120			
1,3-Dichlorobenzene	0.151	0.0050	"	0.150		101	81-118			
1,4-Dichlorobenzene	0.150	0.0050	"	0.150		100	80-118			
Dichlorodifluoromethane	0.136	0.0050	"	0.150		90.7	25-141			
Tert-amyl methyl ether	0.146	0.0050	"	0.149		97.8	50-147			
1,1-Dichloroethane	0.147	0.0050	"	0.150		98.3	78-120			
1,2-Dichloroethane (EDC)	0.150	0.0050	"	0.150		100	81-125			
Tert-butyl alcohol	0.691	0.020	"	0.747		92.6	64-127			
1,1-Dichloroethene	0.146	0.0050	"	0.150		97.0	71-122			
Ethyl tert-butyl ether	0.145	0.010	"	0.150		96.6	80-122			
cis-1,2-Dichloroethene	0.150	0.0050	"	0.150		100	84-121			
Di-isopropyl ether	0.148	0.0050	"	0.150		98.4	78-120			
trans-1,2-Dichloroethene	0.149	0.0050	"	0.150		99.5	77-125			
Methyl tert-butyl ether	0.147	0.015	"	0.150		98.3	77-124			
1,2-Dichloropropane	0.148	0.0050	"	0.150		98.7	88-114			
1,3-Dichloropropane	0.153	0.0050	"	0.150		102	86-122			
2,2-Dichloropropane	0.134	0.010	"	0.150		89.6	32-150			
1,1-Dichloropropene	0.169	0.0050	"	0.150		113	71-123			

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Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/19/15 13:31

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504111 - EPA 5030 Soil MS

LCS (1504111-BS1)

Prepared: 04/10/15 Analyzed: 04/11/15

cis-1,3-Dichloropropene	0.155	0.0050	mg/kg	0.150		103	74-125			
trans-1,3-Dichloropropene	0.153	0.0050	"	0.150		102	72-126			
Ethylbenzene	0.149	0.0050	"	0.150		99.7	74-139			
Hexachlorobutadiene	0.147	0.0050	"	0.150		98.0	56-144			
Isopropylbenzene	0.148	0.0050	"	0.150		98.7	72-124			
p-Isopropyltoluene	0.147	0.010	"	0.150		98.3	72-123			
Methylene Chloride	0.148	0.015	"	0.150		98.7	10-183			
Naphthalene	0.143	0.010	"	0.150		95.1	66-138			
n-Propylbenzene	0.152	0.0050	"	0.150		101	76-121			
Styrene	0.156	0.010	"	0.150		104	76-133			
1,1,2,2-Tetrachloroethane	0.148	0.0050	"	0.150		98.9	60-137			
1,1,1,2-Tetrachloroethane	0.151	0.0050	"	0.150		101	86-121			
Tetrachloroethene	0.145	0.0050	"	0.150		97.0	69-131			
Toluene	0.145	0.0050	"	0.150		96.8	61-134			
1,2,3-Trichlorobenzene	0.152	0.0050	"	0.150		101	63-142			
1,2,4-Trichlorobenzene	0.154	0.0050	"	0.150		102	63-141			
1,1,2-Trichloroethane	0.154	0.0050	"	0.150		102	75-136			
1,1,1-Trichloroethane	0.148	0.0050	"	0.150		98.7	71-126			
Trichloroethene	0.151	0.0050	"	0.150		100	86-118			
Trichlorofluoromethane	0.143	0.0050	"	0.150		95.3	62-128			
1,2,3-Trichloropropane	0.135	0.010	"	0.150		90.0	80-118			
1,3,5-Trimethylbenzene	0.149	0.0050	"	0.150		99.4	72-121			
1,2,4-Trimethylbenzene	0.150	0.0050	"	0.150		99.7	78-126			
Vinyl chloride	0.146	0.0050	"	0.150		97.3	63-134			
m,p-Xylene	0.294	0.010	"	0.300		97.9	73-137			
o-Xylene	0.147	0.0050	"	0.150		98.1	73-141			
Surrogate: 1,2-Dichloroethane-d4	0.0406		"	0.0396		103	23-173			
Surrogate: Toluene-d8	0.0403		"	0.0400		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0388		"	0.0400		97.0	21-167			

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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504111 - EPA 5030 Soil MS

Matrix Spike (1504111-MS1)	Source: 1504101-09			Prepared: 04/10/15		Analyzed: 04/11/15	
Benzene	0.125	0.0020	mg/kg	0.145	ND	86.1	30-131
Bromobenzene	0.129	0.0050	"	0.145	ND	88.6	39-124
Bromochloromethane	0.135	0.0050	"	0.145	ND	93.1	62-121
Bromodichloromethane	0.133	0.0050	"	0.145	ND	91.6	51-120
Bromoform	0.147	0.0050	"	0.145	ND	101	52-125
Bromomethane	0.132	0.010	"	0.145	ND	90.8	10-152
n-Butylbenzene	0.128	0.0050	"	0.145	ND	87.9	10-144
sec-Butylbenzene	0.125	0.0050	"	0.145	ND	85.8	10-140
tert-Butylbenzene	0.122	0.0050	"	0.145	ND	84.1	16-132
Carbon tetrachloride	0.129	0.0050	"	0.145	ND	88.8	46-125
Chlorobenzene	0.127	0.0050	"	0.145	ND	87.1	42-125
Chloroethane	0.130	0.0050	"	0.145	ND	89.6	46-125
Chloroform	0.128	0.0050	"	0.145	ND	88.1	57-118
Chloromethane	0.125	0.015	"	0.145	ND	86.2	33-132
2-Chlorotoluene	0.120	0.0050	"	0.145	ND	82.8	30-125
4-Chlorotoluene	0.122	0.0050	"	0.145	ND	83.8	29-127
Chlorodibromomethane	0.143	0.010	"	0.145	ND	98.1	54-124
1,2-Dibromo-3-chloropropane	0.159	0.015	"	0.145	ND	109	10-175
1,2-Dibromoethane (EDB)	0.143	0.0050	"	0.145	ND	98.3	65-125
Dibromomethane	0.143	0.0050	"	0.145	ND	98.5	64-127
1,2-Dichlorobenzene	0.129	0.0050	"	0.145	ND	88.4	24-134
1,3-Dichlorobenzene	0.125	0.0050	"	0.145	ND	86.1	22-130
1,4-Dichlorobenzene	0.121	0.0050	"	0.145	ND	83.5	21-131
Dichlorodifluoromethane	0.133	0.0050	"	0.145	ND	91.6	47-117
Tert-amyl methyl ether	0.135	0.0050	"	0.145	ND	93.5	60-124
1,1-Dichloroethane	0.125	0.0050	"	0.145	ND	86.1	55-119
1,2-Dichloroethane (EDC)	0.138	0.0050	"	0.145	ND	94.7	65-124
Tert-butyl alcohol	0.718	0.020	"	0.724	ND	99.2	64-131
1,1-Dichloroethene	0.131	0.0050	"	0.145	ND	90.2	42-145
Ethyl tert-butyl ether	0.130	0.010	"	0.145	ND	89.2	60-119
cis-1,2-Dichloroethene	0.129	0.0050	"	0.145	ND	88.4	56-121
trans-1,2-Dichloroethene	0.128	0.0050	"	0.145	ND	88.0	52-126
Di-isopropyl ether	0.129	0.0050	"	0.145	ND	89.0	40-132
Methyl tert-butyl ether	0.139	0.015	"	0.145	ND	95.7	64-124
1,2-Dichloropropane	0.126	0.0050	"	0.145	ND	86.9	61-115
1,3-Dichloropropane	0.141	0.0050	"	0.145	ND	97.1	66-123
2,2-Dichloropropane	0.115	0.010	"	0.145	ND	79.1	35-127
1,1-Dichloropropene	0.147	0.0050	"	0.145	ND	101	52-119

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Project: National Western Complex
Project Number: 25157010
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Reported:
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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504111 - EPA 5030 Soil MS

Matrix Spike (1504111-MS1)	Source: 1504101-09			Prepared: 04/10/15		Analyzed: 04/11/15	
cis-1,3-Dichloropropene	0.144	0.0050	mg/kg	0.145	ND	99.1	47-122
trans-1,3-Dichloropropene	0.142	0.0050	"	0.145	ND	97.7	51-119
Ethylbenzene	0.126	0.0050	"	0.145	ND	86.5	22-153
Hexachlorobutadiene	0.123	0.0050	"	0.145	ND	84.7	10-149
Isopropylbenzene	0.125	0.0050	"	0.145	ND	86.2	18-135
p-Isopropyltoluene	0.122	0.010	"	0.145	ND	83.9	12-132
Methylene Chloride	0.129	0.015	"	0.145	ND	88.8	10-167
Naphthalene	0.138	0.010	"	0.145	ND	95.2	10-158
n-Propylbenzene	0.126	0.0050	"	0.145	ND	86.7	15-134
Styrene	0.134	0.010	"	0.145	ND	92.0	33-135
1,1,2,2-Tetrachloroethane	0.136	0.0050	"	0.145	ND	93.2	10-166
1,1,1,2-Tetrachloroethane	0.130	0.0050	"	0.145	ND	89.6	49-123
Tetrachloroethene	0.128	0.0050	"	0.145	ND	88.0	33-134
Toluene	0.122	0.0050	"	0.145	ND	84.1	30-134
1,2,3-Trichlorobenzene	0.133	0.0050	"	0.145	ND	91.4	10-155
1,2,4-Trichlorobenzene	0.130	0.0050	"	0.145	ND	89.5	10-152
1,1,2-Trichloroethane	0.143	0.0050	"	0.145	ND	98.5	46-139
1,1,1-Trichloroethane	0.130	0.0050	"	0.145	ND	89.7	51-124
Trichloroethene	0.132	0.0050	"	0.145	ND	91.0	16-187
Trichlorofluoromethane	0.135	0.0050	"	0.145	ND	93.1	53-125
1,2,3-Trichloropropane	0.113	0.010	"	0.145	ND	78.0	69-118
1,3,5-Trimethylbenzene	0.123	0.0050	"	0.145	ND	84.6	20-128
1,2,4-Trimethylbenzene	0.123	0.0050	"	0.145	ND	84.5	17-142
Vinyl chloride	0.129	0.0050	"	0.145	ND	88.4	50-134
m,p-Xylene	0.243	0.010	"	0.291	ND	83.8	10-159
o-Xylene	0.124	0.0050	"	0.145	ND	85.4	31-151
Surrogate: 1,2-Dichloroethane-d4	0.0424		"	0.0384		110	23-173
Surrogate: Toluene-d8	0.0384		"	0.0388		99.0	20-170
Surrogate: 4-Bromofluorobenzene	0.0393		"	0.0388		101	21-167

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Reported:
04/19/15 13:31

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504111 - EPA 5030 Soil MS

Matrix Spike Dup (1504111-MSD1)	Source: 1504101-09			Prepared: 04/10/15		Analyzed: 04/11/15				
Benzene	0.122	0.0020	mg/kg	0.140	ND	87.1	30-131	2.25	34	
Bromobenzene	0.124	0.0050	"	0.140	ND	88.2	39-124	3.86	21	
Bromochloromethane	0.138	0.0050	"	0.140	ND	98.0	62-121	1.64	20	
Bromodichloromethane	0.133	0.0050	"	0.140	ND	94.8	51-120	0.0275	22	
Bromoform	0.150	0.0050	"	0.140	ND	107	52-125	1.90	22	
Bromomethane	0.0918	0.010	"	0.140	ND	65.3	10-152	35.9	90	
n-Butylbenzene	0.123	0.0050	"	0.140	ND	87.4	10-144	4.00	52	
sec-Butylbenzene	0.119	0.0050	"	0.140	ND	85.1	10-140	4.25	45	
tert-Butylbenzene	0.117	0.0050	"	0.140	ND	83.3	16-132	4.36	33	
Carbon tetrachloride	0.126	0.0050	"	0.140	ND	89.6	46-125	2.53	22	
Chlorobenzene	0.124	0.0050	"	0.140	ND	88.1	42-125	2.26	18	
Chloroethane	0.126	0.0050	"	0.140	ND	89.5	46-125	3.52	24	
Chloroform	0.127	0.0050	"	0.140	ND	90.2	57-118	1.16	19	
Chloromethane	0.125	0.015	"	0.140	ND	89.2	33-132	0.0386	18	
2-Chlorotoluene	0.115	0.0050	"	0.140	ND	82.0	30-125	4.47	24	
4-Chlorotoluene	0.115	0.0050	"	0.140	ND	81.9	29-127	5.72	24	
Chlorodibromomethane	0.141	0.010	"	0.140	ND	100	54-124	1.29	22	
1,2-Dibromo-3-chloropropane	0.175	0.015	"	0.140	ND	125	10-175	10.1	39	
1,2-Dibromoethane (EDB)	0.146	0.0050	"	0.140	ND	104	65-125	2.42	22	
Dibromomethane	0.146	0.0050	"	0.140	ND	104	64-127	1.93	19	
1,2-Dichlorobenzene	0.127	0.0050	"	0.140	ND	90.2	24-134	1.48	26	
1,3-Dichlorobenzene	0.122	0.0050	"	0.140	ND	86.7	22-130	2.73	27	
1,4-Dichlorobenzene	0.120	0.0050	"	0.140	ND	85.5	21-131	1.08	25	
Dichlorodifluoromethane	0.128	0.0050	"	0.140	ND	90.9	47-117	4.26	36	
1,1-Dichloroethane	0.123	0.0050	"	0.140	ND	87.8	55-119	1.47	22	
Tert-amyl methyl ether	0.138	0.0050	"	0.140	ND	98.8	60-124	2.05	40	
1,2-Dichloroethane (EDC)	0.138	0.0050	"	0.140	ND	98.4	65-124	0.404	19	
1,1-Dichloroethene	0.127	0.0050	"	0.140	ND	90.7	42-145	2.81	22	
Tert-butyl alcohol	0.789	0.020	"	0.699	ND	113	64-131	9.37	24	
Ethyl tert-butyl ether	0.131	0.010	"	0.140	ND	93.6	60-119	1.32	38	
cis-1,2-Dichloroethene	0.126	0.0050	"	0.140	ND	89.6	56-121	2.10	21	
trans-1,2-Dichloroethene	0.125	0.0050	"	0.140	ND	88.8	52-126	2.48	22	
Di-isopropyl ether	0.128	0.0050	"	0.140	ND	91.4	40-132	0.746	108	
1,2-Dichloropropane	0.126	0.0050	"	0.140	ND	89.5	61-115	0.482	17	
Methyl tert-butyl ether	0.143	0.015	"	0.140	ND	102	64-124	2.75	28	
1,3-Dichloropropane	0.141	0.0050	"	0.140	ND	100	66-123	0.427	24	
2,2-Dichloropropane	0.111	0.010	"	0.140	ND	79.1	35-127	3.43	29	
1,1-Dichloropropene	0.143	0.0050	"	0.140	ND	102	52-119	2.70	21	

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/19/15 13:31

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504111 - EPA 5030 Soil MS

Matrix Spike Dup (1504111-MSD1)	Source: 1504101-09			Prepared: 04/10/15		Analyzed: 04/11/15				
cis-1,3-Dichloropropene	0.146	0.0050	mg/kg	0.140	ND	104	47-122	1.05	40	
trans-1,3-Dichloropropene	0.144	0.0050	"	0.140	ND	102	51-119	1.05	52	
Ethylbenzene	0.121	0.0050	"	0.140	ND	86.3	22-153	3.61	24	
Hexachlorobutadiene	0.120	0.0050	"	0.140	ND	85.4	10-149	2.61	59	
Isopropylbenzene	0.121	0.0050	"	0.140	ND	86.4	18-135	3.20	33	
p-Isopropyltoluene	0.117	0.010	"	0.140	ND	83.3	12-132	4.15	38	
Methylene Chloride	0.128	0.015	"	0.140	ND	91.2	10-167	0.740	102	
Naphthalene	0.149	0.010	"	0.140	ND	106	10-158	7.43	42	
n-Propylbenzene	0.119	0.0050	"	0.140	ND	84.9	15-134	5.55	37	
Styrene	0.132	0.010	"	0.140	ND	93.7	33-135	1.58	22	
1,1,2,2-Tetrachloroethane	0.138	0.0050	"	0.140	ND	98.0	10-166	1.59	45	
1,1,1,2-Tetrachloroethane	0.128	0.0050	"	0.140	ND	91.0	49-123	1.94	21	
Tetrachloroethane	0.124	0.0050	"	0.140	ND	88.1	33-134	3.29	26	
Toluene	0.119	0.0050	"	0.140	ND	84.5	30-134	2.95	30	
1,2,3-Trichlorobenzene	0.137	0.0050	"	0.140	ND	97.8	10-155	3.32	40	
1,2,4-Trichlorobenzene	0.133	0.0050	"	0.140	ND	94.6	10-152	2.07	42	
1,1,2-Trichloroethane	0.145	0.0050	"	0.140	ND	103	46-139	1.39	34	
1,1,1-Trichloroethane	0.127	0.0050	"	0.140	ND	90.3	51-124	2.81	22	
Trichloroethene	0.128	0.0050	"	0.140	ND	91.2	16-187	3.27	19	
Trichlorofluoromethane	0.132	0.0050	"	0.140	ND	94.0	53-125	2.42	20	
1,2,3-Trichloropropane	0.108	0.010	"	0.140	ND	77.1	69-118	4.59	23	
1,3,5-Trimethylbenzene	0.116	0.0050	"	0.140	ND	82.9	20-128	5.48	31	
1,2,4-Trimethylbenzene	0.117	0.0050	"	0.140	ND	83.5	17-142	4.57	40	
Vinyl chloride	0.125	0.0050	"	0.140	ND	89.1	50-134	2.69	22	
m,p-Xylene	0.239	0.010	"	0.281	ND	85.0	10-159	1.97	68	
o-Xylene	0.121	0.0050	"	0.140	ND	86.5	31-151	2.13	38	
Surrogate: 1,2-Dichloroethane-d4	0.0418		"	0.0371		113	23-173			
Surrogate: Toluene-d8	0.0379		"	0.0375		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0391		"	0.0375		104	21-167			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch 1504171 - EPA 5030 Soil MS

Blank (1504171-BLK1)

Prepared: 04/16/15 Analyzed: 04/17/15

Acenaphthene	ND	330	ug/kg
Acenaphthylene	ND	330	"
Anthracene	ND	330	"
Benzo (a) anthracene	ND	330	"
Benzo (b) fluoranthene	ND	330	"
Benzo (k) fluoranthene	ND	330	"
Benzo (g,h,i) perylene	ND	330	"
Benzo (a) pyrene	ND	330	"
Benzyl alcohol	ND	330	"
Pyridine	ND	330	"
Bis(2-chloroethoxy)methane	ND	330	"
N-Nitrosodimethylamine	ND	330	"
Bis(2-chloroethyl)ether	ND	330	"
Bis(2-chloroisopropyl)ether	ND	330	"
Bis(2-ethylhexyl)phthalate	ND	330	"
4-Bromophenyl phenyl ether	ND	330	"
Butyl benzyl phthalate	ND	330	"
4-Chloroaniline	ND	330	"
4-Chloro-3-methylphenol	ND	330	"
2-Chloronaphthalene	ND	330	"
2-Chlorophenol	ND	330	"
4-Chlorophenyl phenyl ether	ND	330	"
Chrysene	ND	330	"
Dibenz (a,h) anthracene	ND	330	"
Dibenzofuran	ND	330	"
Di-n-butyl phthalate	ND	330	"
1,2-Dichlorobenzene	ND	330	"
1,3-Dichlorobenzene	ND	330	"
1,4-Dichlorobenzene	ND	330	"
2,4-Dichlorophenol	ND	330	"
Diethyl phthalate	ND	330	"
2,4-Dimethylphenol	ND	330	"
Carbazole	ND	330	"
Dimethyl phthalate	ND	330	"
4,6-Dinitro-2-methylphenol	ND	330	"
2,4-Dinitrophenol	ND	330	"
Azobenzene	ND	330	"
2,4-Dinitrotoluene	ND	330	"

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 Project Number: 25157010
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Semivolatile Organic Compounds by EPA Method 8270D - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504171 - EPA 5030 Soil MS

Blank (1504171-BLK1)

Prepared: 04/16/15 Analyzed: 04/17/15

2,6-Dinitrotoluene	ND	330	ug/kg							
Di-n-octyl phthalate	ND	330	"							
Fluoranthene	ND	330	"							
Fluorene	ND	330	"							
Hexachlorobenzene	ND	330	"							
Hexachlorobutadiene	ND	330	"							
Hexachlorocyclopentadiene	ND	330	"							
Hexachloroethane	ND	330	"							
Indeno (1,2,3-cd) pyrene	ND	330	"							
Isophorone	ND	330	"							
2-Methylnaphthalene	ND	330	"							
2-Methylphenol	ND	330	"							
4-Methylphenol	ND	330	"							
Naphthalene	ND	330	"							
1,4-Dinitrobenzene	ND	330	"							
2-Nitroaniline	ND	330	"							
1,3-Dinitrobenzene	ND	330	"							
3-Nitroaniline	ND	330	"							
1,2-Dinitrobenzene	ND	330	"							
4-Nitroaniline	ND	330	"							
Nitrobenzene	ND	330	"							
2-Nitrophenol	ND	330	"							
4-Nitrophenol	ND	330	"							
2,3,4,6-Tetrachlorophenol	ND	330	"							
N-Nitrosodi-n-propylamine	ND	330	"							
Pentachlorophenol	ND	330	"							
Phenanthrene	ND	330	"							
Phenol	ND	330	"							
Aniline	ND	330	"							
Pyrene	ND	330	"							
1,2,4-Trichlorobenzene	ND	330	"							
2,4,5-Trichlorophenol	ND	330	"							
2,4,6-Trichlorophenol	ND	330	"							
Surrogate: 2-Fluorophenol	2550		"	1660		153	30-200			
Surrogate: Phenol-d6	2750		"	1640		168	30-200			
Surrogate: Nitrobenzene-d5	2810		"	1650		170	30-200			
Surrogate: 2-Fluorobiphenyl	2620		"	1660		158	30-200			
Surrogate: 2,4,6-Tribromophenol	1420		"	1660		85.5	30-200			

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Terracon - Wheat Ridge
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Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/19/15 13:31

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504171 - EPA 5030 Soil MS

Blank (1504171-BLK1)

Prepared: 04/16/15 Analyzed: 04/17/15

Surrogate: Terphenyl-d14 3750 ug/kg 1660 226 30-300

LCS (1504171-BS1)

Prepared: 04/16/15 Analyzed: 04/17/15

Acenaphthene	1290	330	ug/kg	1660		77.7	45-139			
Acenaphthylene	ND	330	"				68-113			
Anthracene	ND	330	"				63-119			
Benzo (a) anthracene	ND	330	"				18-181			
Benzo (b) fluoranthene	ND	330	"				10-169			
Benzo (k) fluoranthene	ND	330	"				10-184			
Benzo (g,h,i) perylene	ND	330	"				10-176			
Benzo (a) pyrene	ND	330	"				14-178			
4-Chloro-3-methylphenol	2830	330	"	3320		85.2	64-122			
2-Chlorophenol	2440	330	"	3320		73.5	64-121			
Chrysene	ND	330	"				10-184			
Dibenz (a,h) anthracene	ND	330	"				10-171			
1,4-Dichlorobenzene	1170	330	"	1660		70.7	64-118			
2,4-Dinitrotoluene	1260	330	"	1660		76.0	64-118			
Fluoranthene	ND	330	"				58-127			
Fluorene	ND	330	"				67-113			
Indeno (1,2,3-cd) pyrene	ND	330	"				11-175			
2-Methylnaphthalene	ND	330	"				5-5			
Naphthalene	ND	330	"				62-118			
4-Nitrophenol	1590	330	"	3320		47.8	29-112			
N-Nitrosodi-n-propylamine	1120	330	"	1650		67.9	60-130			
Phenol	2340	330	"	3320		70.4	57-106			
Pyrene	1450	330	"	1640		88.3	22-174			
1,2,4-Trichlorobenzene	1260	330	"	1650		76.4	68-120			
Surrogate: 2-Fluorophenol	2640		"	1660		159	30-200			
Surrogate: Phenol-d6	2720		"	1640		166	30-200			
Surrogate: Nitrobenzene-d5	2790		"	1650		169	30-200			
Surrogate: 2-Fluorobiphenyl	2680		"	1660		161	30-200			
Surrogate: 2,4,6-Tribromophenol	2380		"	1660		143	30-200			
Surrogate: Terphenyl-d14	3710		"	1660		223	30-300			

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Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504171 - EPA 5030 Soil MS

Duplicate (1504171-DUP1)	Source: 1504101-09			Prepared: 04/16/15 Analyzed: 04/17/15		
Acenaphthene	ND	330	ug/kg		ND	200
Acenaphthylene	ND	330	"		ND	200
Anthracene	ND	330	"		ND	200
Benzo (a) anthracene	ND	330	"		ND	200
Benzo (b) fluoranthene	ND	330	"		ND	200
Benzo (k) fluoranthene	ND	330	"		ND	200
Benzo (g,h,i) perylene	ND	330	"		ND	200
Benzo (a) pyrene	ND	330	"		ND	200
4-Chloro-3-methylphenol	ND	330	"		ND	200
2-Chlorophenol	ND	330	"		ND	200
Chrysene	ND	330	"		ND	200
Dibenz (a,h) anthracene	ND	330	"		ND	200
1,4-Dichlorobenzene	ND	330	"		ND	200
2,4-Dinitrotoluene	ND	330	"		ND	200
Fluoranthene	ND	330	"		ND	200
Fluorene	ND	330	"		ND	200
Indeno (1,2,3-cd) pyrene	ND	330	"		ND	200
2-Methylnaphthalene	ND	330	"		ND	200
Naphthalene	ND	330	"		ND	200
4-Nitrophenol	ND	330	"		ND	200
N-Nitrosodi-n-propylamine	ND	330	"		ND	200
Pentachlorophenol	ND	330	"	0.00		200
Phenol	ND	330	"		ND	200
Pyrene	ND	330	"		ND	200
1,2,4-Trichlorobenzene	ND	330	"		ND	200
Surrogate: 2-Fluorophenol	2260		"	1670	136	30-200
Surrogate: Phenol-d6	2450		"	1650	149	30-200
Surrogate: Nitrobenzene-d5	2980		"	1660	180	30-200
Surrogate: 2-Fluorobiphenyl	2290		"	1670	137	30-200
Surrogate: 2,4,6-Tribromophenol	1650		"	1670	99.0	30-200
Surrogate: Terphenyl-d14	2420		"	1670	145	30-300

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Project: National Western Complex
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Semivolatile Organic Compounds by EPA Method 8270D - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1504171 - EPA 5030 Soil MS

Matrix Spike (1504171-MS1)	Source: 1504101-10			Prepared: 04/16/15		Analyzed: 04/17/15	
Acenaphthene	1080	330	ug/kg	1650	ND	65.5	32-136
Acenaphthylene	ND	330	"		ND		45-114
Anthracene	1190	330	"		412		38-121
Benzo (a) anthracene	610	330	"		286		28-135
Benzo (b) fluoranthene	571	330	"		266		10-161
Benzo (k) fluoranthene	590	330	"		275		10-172
Benzo (g,h,i) perylene	ND	330	"		ND		10-149
Benzo (a) pyrene	443	330	"		223		11-148
4-Chloro-3-methylphenol	2580	330	"	3300	ND	78.2	38-126
2-Chlorophenol	2480	330	"	3300	ND	75.2	49-113
Chrysene	760	330	"		310		10-142
Dibenz (a,h) anthracene	ND	330	"		ND		10-129
1,4-Dichlorobenzene	1090	330	"	1650	ND	66.2	46-113
2,4-Dinitrotoluene	1230	330	"	1650	ND	74.8	19-131
Fluoranthene	1120	330	"		556		40-141
Fluorene	ND	330	"		ND		45-118
Indeno (1,2,3-cd) pyrene	ND	330	"		ND		10-150
2-Methylnaphthalene	ND	330	"		ND		5-150
Naphthalene	ND	330	"		ND		51-111
4-Nitrophenol	2680	330	"	3300	ND	81.3	21-110
N-Nitrosodi-n-propylamine	827	330	"	1640	ND	50.3	50-130
Phenol	2020	330	"	3300	ND	61.3	41-104
Pyrene	2880	330	"	1630	630	138	10-150
1,2,4-Trichlorobenzene	1170	330	"	1640	ND	71.6	49-115
<i>Surrogate: 2-Fluorophenol</i>	2200		"	1650		133	30-200
<i>Surrogate: Phenol-d6</i>	2080		"	1630		127	30-200
<i>Surrogate: Nitrobenzene-d5</i>	1790		"	1640		109	30-200
<i>Surrogate: 2-Fluorobiphenyl</i>	2440		"	1650		148	30-200
<i>Surrogate: 2,4,6-Tribromophenol</i>	1520		"	1650		92.3	30-200
<i>Surrogate: Terphenyl-d14</i>	2820		"	1650		171	30-300

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504115 - EPA 3050B

Blank (1504115-BLK1)

Prepared & Analyzed: 04/10/15

Arsenic	ND	0.100	mg/kg wet							
Barium	ND	0.100	"							
Cadmium	ND	0.100	"							
Chromium	ND	0.500	"							
Lead	ND	0.100	"							
Selenium	ND	0.0500	"							
Silver	ND	0.100	"							
Zinc	ND	10.0	"							

LCS (1504115-BS1)

Prepared & Analyzed: 04/10/15

Arsenic	106	0.250	mg/kg wet	99.6		106	78.4-140			
Barium	285	0.250	"	310		91.8	83.2-117			
Cadmium	174	0.250	"	182		95.4	81.9-118			
Chromium	140	1.25	"	136		103	80.1-121			
Lead	108	0.250	"	115		94.1	81.8-119			
Selenium	157	0.125	"	150		105	77.3-123			
Silver	31.0	0.250	"	40.4		76.8	75-125			
Zinc	159	25.0	"	133		119	80.7-132			

Duplicate (1504115-DUP1)

Source: 1504101-01

Prepared & Analyzed: 04/10/15

Arsenic	5.67	0.122	mg/kg dry		4.40			25.2	20	QR-03
Barium	243	0.122	"		261			7.19	20	
Cadmium	0.364	0.122	"		0.333			8.87	20	
Chromium	12.0	0.608	"		12.3			1.83	20	
Lead	33.3	0.122	"		14.0			81.7	20	QR-03
Selenium	0.152	0.0608	"		0.345			77.4	20	QR-03
Silver	0.169	0.122	"		0.104			48.1	20	QR-03
Zinc	71.1	12.2	"		54.5			26.4	20	QR-03

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1504115 - EPA 3050B

Matrix Spike (1504115-MS1)

Source: 1504101-01

Prepared & Analyzed: 04/10/15

Arsenic	47.9	0.105	mg/kg dry	41.9	4.40	104	75-125				
Barium	229	0.105	"	41.9	261	NR	75-125				QM-07
Cadmium	2.37	0.105	"	2.10	0.333	97.2	75-125				
Chromium	56.1	0.524	"	41.9	12.3	104	75-125				
Lead	63.2	0.105	"	21.0	14.0	235	75-125				QM-07
Selenium	3.46	0.0524	"	4.19	0.345	74.2	75-125				QM-07
Silver	2.13	0.105	"	2.10	0.104	96.6	75-125				
Zinc	130	10.5	"	41.9	54.5	181	75-125				QM-07

Matrix Spike Dup (1504115-MSD1)

Source: 1504101-01

Prepared & Analyzed: 04/10/15

Arsenic	53.6	0.122	mg/kg dry	45.1	4.40	109	75-125	11.3	25		
Barium	218	0.122	"	45.1	261	NR	75-125	5.10	25		QM-07
Cadmium	2.56	0.122	"	2.25	0.333	99.1	75-125	7.77	25		
Chromium	59.8	0.608	"	45.1	12.3	105	75-125	6.42	25		
Lead	72.4	0.122	"	22.5	14.0	259	75-125	13.5	25		QM-07
Selenium	3.90	0.0608	"	4.51	0.345	78.8	75-125	12.0	25		
Silver	2.45	0.122	"	2.25	0.104	104	75-125	13.8	25		
Zinc	141	12.2	"	45.1	54.5	192	75-125	7.81	25		QM-07

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

Total Mercury by EPA Method 7471 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1504101 - EPA 7471A

Blank (1504101-BLK1)

Prepared & Analyzed: 04/10/15

Mercury ND 0.0500 mg/kg wet

LCS (1504101-BS1)

Prepared & Analyzed: 04/10/15

Mercury 0.517 0.0500 mg/kg wet 0.500 103 80-120

Duplicate (1504101-DUP1)

Source: 1504101-01

Prepared & Analyzed: 04/10/15

Mercury 0.0164 0.0510 mg/kg dry 0.0240 38.1 20 QR-01

Matrix Spike (1504101-MS1)

Source: 1504101-01

Prepared & Analyzed: 04/10/15

Mercury 0.513 0.0500 mg/kg dry 0.500 0.0240 97.8 80-120

Matrix Spike Dup (1504101-MSD1)

Source: 1504101-01

Prepared & Analyzed: 04/10/15

Mercury 0.553 0.0527 mg/kg dry 0.527 0.0240 100 80-120 7.43 20

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 13:31

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504117 - General Preparation

Duplicate (1504117-DUP1)	Source: 1504101-01			Prepared: 04/10/15	Analyzed: 04/13/15
% Solids	81.0		%	82.2	1.47 20

Summit Scientific

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/19/15 13:31

Notes and Definitions

- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QR-01 Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

April 30, 2015

Steve Hoffman

Terracon - Wheat Ridge

10625 West I-70 Frontage Road, Suite 3

Wheat Ridge, CO 80033

RE: National Western Complex

Enclosed are the results of analyses for samples received by Summit Scientific on 04/10/15 18:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury
President



Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/30/15 18:14

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB-10 (0-6")	1504129-01	Soil	04/10/15 08:30	04/10/15 18:50
SB-10 (6-24")	1504129-02	Soil	04/10/15 08:30	04/10/15 18:50
SB-10 (15')	1504129-03	Soil	04/10/15 11:00	04/10/15 18:50
SB-11 (0-6")	1504129-04	Soil	04/10/15 13:10	04/10/15 18:50
SB-11 (6-24")	1504129-05	Soil	04/10/15 13:10	04/10/15 18:50
SB-11 (15')	1504129-06	Soil	04/10/15 14:15	04/10/15 18:50

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/30/15 18:14

Summit Scientific 1504129

741 Corporate Circle Suite I ♦ Golden, Colorado 80401
 303-277-9310 ♦ 303-374-5933 Fax

Page 1 of 1

Client: Terracon Consultants

Address: 10625 West I-70 Frontage Road North, Suite 3
 City/State/Zip: Wheat Ridge, CO 80033
 Phone: (303) 454-5275 Fax: (303) 423-3353
 Sampler Name: Marshall Haworth

Project Manager: Steve Hoffman
 E-Mail: sbhoffman@terracon.com
 Project Name: National Western Complex
 Project Number: 25157010

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:						Special Instructions						
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	VOC's 8260B	TPH 8290-8015B	PCRA 8-Zinc	8270C								
SB-10 (0-6")	4-10-15	0830	1			X																	
SB-10 (6-24")	4-10-15	0830	1			X																	
SB-10 (15')	4-10-15	1100	1			X								X	X		X						
SB-11 (0-6")	4-10-15	1310	1			X								X	X		X						
SB-11 (6-24")	4-10-15	1310	1			X								X	X		X						
SB-11 (15')	4-10-15	1415	1			X								X	X		X						
Relinquished by: <u>Marshall Haworth</u> Date/Time: <u>4-10-15 1850</u>				Received by: <u>[Signature]</u> Date/Time: <u>4-10-15 1850</u>				Turn Around Time (Check)				Notes:											
Relinquished by:				Received by:				Same Day <input type="checkbox"/>				72 Hours <input type="checkbox"/>											
Relinquished by:				Received by:				24 Hours <input type="checkbox"/>				Standard <input checked="" type="checkbox"/>											
Relinquished by:				Received in Lab by:				48 Hours <input type="checkbox"/>				Sample Integrity:											
Relinquished by:				Received in Lab by:				Temperature Upon Receipt: <u>17.4</u>				Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>											

www.s2scientific.com



Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/30/15 18:14

Sample Receipt Checklist

S2 Work Order: 1504129

Client: Terracon

Client Project ID: National Western Complex

Shipped Via: HO

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Airbill #: _____

Matrix (check all that apply): Air Soil/Solid Water Other: _____
 (Describe)

Cooler ID					
Temp (°C)	<u>17.4</u>				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C ⁽¹⁾ ?				
NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>			
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
If custody seals are present, are they intact ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present?			<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, etc.			<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Record the pH in Comments.			<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

Brian Shrewsbury
 Custodian Printed Name

[Signature]
 Signature or Initials of Custodian

4/30/15 1941
 Date/Time

[Signature]



Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/30/15 18:14

**SB-10 (0-6")
 1504129-01 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/10/15 08:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.48	0.106	mg/kg dry	1	1504135	04/14/15	04/14/15	EPA 6020A	
Barium	101	0.106	"	"	"	"	"	"	
Cadmium	1.11	0.106	"	"	"	"	"	"	
Chromium	7.93	0.532	"	"	"	"	"	"	
Lead	59.8	0.106	"	"	"	"	"	"	
Selenium	0.189	0.0532	"	"	"	"	"	"	
Silver	0.181	0.106	"	"	"	"	"	"	

Date Sampled: **04/10/15 08:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	109	10.6	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/10/15 08:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	0.0994	0.0532	mg/kg dry	1	1504153	04/15/15	04/16/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/10/15 08:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.0		%	1	1504150	04/14/15	04/15/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/30/15 18:14

SB-10 (6-24")
1504129-02 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/10/15 08:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.34	0.106	mg/kg dry	1	1504135	04/14/15	04/14/15	EPA 6020A	
Barium	129	0.106	"	"	"	"	"	"	
Cadmium	0.986	0.106	"	"	"	"	"	"	
Chromium	5.99	0.532	"	"	"	"	"	"	
Lead	72.3	0.106	"	"	"	"	"	"	
Selenium	0.139	0.0532	"	"	"	"	"	"	
Silver	0.254	0.106	"	"	"	"	"	"	

Date Sampled: **04/10/15 08:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	140	10.6	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/10/15 08:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.0731	0.0532	mg/kg dry	1	1504153	04/15/15	04/16/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/10/15 08:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	94.0		%	1	1504150	04/14/15	04/15/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/30/15 18:14

SB-10 (15')
1504129-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/10/15 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504151	04/14/15	04/14/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/10/15 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		111 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/10/15 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504140	04/14/15	04/15/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/30/15 18:14

SB-10 (15')
1504129-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample	ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504140	04/14/15	04/15/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"	"

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/30/15 18:14

SB-10 (15')
1504129-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504140	04/14/15	04/15/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: 04/10/15 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.8 %	21-167		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270D

Date Sampled: 04/10/15 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	330	ug/kg	1	1504171	04/16/15	04/17/15	EPA 8270D	
Acenaphthylene	ND	330	"	"	"	"	"	"	
Anthracene	ND	330	"	"	"	"	"	"	
Benzo (a) anthracene	ND	330	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	330	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	330	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	330	"	"	"	"	"	"	
Benzo (a) pyrene	ND	330	"	"	"	"	"	"	
Benzyl alcohol	ND	330	"	"	"	"	"	"	
Pyridine	ND	330	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	330	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	330	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	330	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	330	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	330	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/30/15 18:14

SB-10 (15')
1504129-03 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D

Compound Name	Result	Limit	Unit	Sample ID	Date 1	Date 2	Method
4-Bromophenyl phenyl ether	ND	330	ug/kg	1	1504171	04/16/15	EPA 8270D
Butyl benzyl phthalate	ND	330	"	"	"	"	"
4-Chloroaniline	ND	330	"	"	"	"	"
4-Chloro-3-methylphenol	ND	330	"	"	"	"	"
2-Chloronaphthalene	ND	330	"	"	"	"	"
2-Chlorophenol	ND	330	"	"	"	"	"
4-Chlorophenyl phenyl ether	ND	330	"	"	"	"	"
Chrysene	ND	330	"	"	"	"	"
Dibenz (a,h) anthracene	ND	330	"	"	"	"	"
Dibenzofuran	ND	330	"	"	"	"	"
Di-n-butyl phthalate	ND	330	"	"	"	"	"
1,2-Dichlorobenzene	ND	330	"	"	"	"	"
1,3-Dichlorobenzene	ND	330	"	"	"	"	"
1,4-Dichlorobenzene	ND	330	"	"	"	"	"
2,4-Dichlorophenol	ND	330	"	"	"	"	"
Diethyl phthalate	ND	330	"	"	"	"	"
2,4-Dimethylphenol	ND	330	"	"	"	"	"
Carbazole	ND	330	"	"	"	"	"
Dimethyl phthalate	ND	330	"	"	"	"	"
4,6-Dinitro-2-methylphenol	ND	330	"	"	"	"	"
2,4-Dinitrophenol	ND	330	"	"	"	"	"
Azobenzene	ND	330	"	"	"	"	"
2,4-Dinitrotoluene	ND	330	"	"	"	"	"
2,6-Dinitrotoluene	ND	330	"	"	"	"	"
Di-n-octyl phthalate	ND	330	"	"	"	"	"
Fluoranthene	500	330	"	"	"	"	"
Fluorene	ND	330	"	"	"	"	"
Hexachlorobenzene	ND	330	"	"	"	"	"
Hexachlorobutadiene	ND	330	"	"	"	"	"
Hexachlorocyclopentadiene	ND	330	"	"	"	"	"
Hexachloroethane	ND	330	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	330	"	"	"	"	"
Isophorone	ND	330	"	"	"	"	"
2-Methylnaphthalene	ND	330	"	"	"	"	"
2-Methylphenol	ND	330	"	"	"	"	"
4-Methylphenol	ND	330	"	"	"	"	"
Naphthalene	ND	330	"	"	"	"	"

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/30/15 18:14

SB-10 (15')
1504129-03 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
1,4-Dinitrobenzene	ND	330	ug/kg	1	1504171	04/16/15	04/17/15	EPA 8270D
2-Nitroaniline	ND	330	"	"	"	"	"	"
1,3-Dinitrobenzene	ND	330	"	"	"	"	"	"
3-Nitroaniline	ND	330	"	"	"	"	"	"
1,2-Dinitrobenzene	ND	330	"	"	"	"	"	"
4-Nitroaniline	ND	330	"	"	"	"	"	"
Nitrobenzene	ND	330	"	"	"	"	"	"
2-Nitrophenol	ND	330	"	"	"	"	"	"
4-Nitrophenol	ND	330	"	"	"	"	"	"
2,3,4,6-Tetrachlorophenol	ND	330	"	"	"	"	"	"
N-Nitrosodi-n-propylamine	ND	330	"	"	"	"	"	"
Pentachlorophenol	ND	330	"	"	"	"	"	"
Phenanthrene	580	330	"	"	"	"	"	"
Phenol	ND	330	"	"	"	"	"	"
Aniline	ND	330	"	"	"	"	"	"
Pyrene	1200	330	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	330	"	"	"	"	"	"
2,4,5-Trichlorophenol	ND	330	"	"	"	"	"	"
2,4,6-Trichlorophenol	ND	330	"	"	"	"	"	"

Date Sampled: 04/10/15 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Fluorophenol		156 %	30-200		"	"	"	"	
Surrogate: Phenol-d6		157 %	30-200		"	"	"	"	
Surrogate: Nitrobenzene-d5		165 %	30-200		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		156 %	30-200		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		161 %	30-200		"	"	"	"	
Surrogate: Terphenyl-d14		367 %	30-300		"	"	"	"	S-02

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/30/15 18:14

**SB-10 (15')
 1504129-03 (Soil)**

Summit Scientific

Oil and Grease by EPA 9071B (Solids)

Date Sampled: **04/10/15 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Oil & Grease (HEM)	ND	1.00	mg/kg	1	1504278	04/28/15	04/29/15	EPA 9071B	

Summit Scientific

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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/30/15 18:14

SB-11 (0-6")
1504129-04 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/10/15 13:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	7.95	0.123	mg/kg dry	1	1504135	04/14/15	04/14/15	EPA 6020A	
Barium	142	0.123	"	"	"	"	"	"	
Cadmium	0.992	0.123	"	"	"	"	"	"	
Chromium	14.4	0.617	"	"	"	"	"	"	
Lead	80.3	0.123	"	"	"	"	"	"	
Selenium	0.248	0.0617	"	"	"	"	"	"	
Silver	0.761	0.123	"	"	"	"	"	"	

Date Sampled: **04/10/15 13:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	175	12.3	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/10/15 13:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.191	0.0528	mg/kg dry	1	1504153	04/15/15	04/16/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/10/15 13:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	81.1		%	1	1504150	04/14/15	04/15/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/30/15 18:14

SB-11 (6-24")
1504129-05 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/10/15 13:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	6.51	0.101	mg/kg dry	1	1504135	04/14/15	04/14/15	EPA 6020A	
Barium	136	0.101	"	"	"	"	"	"	
Cadmium	1.01	0.101	"	"	"	"	"	"	
Chromium	13.0	0.503	"	"	"	"	"	"	
Lead	76.3	0.101	"	"	"	"	"	"	
Selenium	0.184	0.0503	"	"	"	"	"	"	
Silver	0.785	0.101	"	"	"	"	"	"	

Date Sampled: **04/10/15 13:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	167	10.1	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/10/15 13:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.140	0.0560	mg/kg dry	1	1504153	04/15/15	04/16/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/10/15 13:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	89.3		%	1	1504150	04/14/15	04/15/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/30/15 18:14

SB-11 (15')
1504129-06 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/10/15 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504151	04/14/15	04/14/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/10/15 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		109 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/10/15 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504140	04/14/15	04/15/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/30/15 18:14

SB-11 (15')
1504129-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample	ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504140	04/14/15	04/15/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"	"

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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/30/15 18:14

**SB-11 (15')
 1504129-06 (Soil)**

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504140	04/14/15	04/15/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: 04/10/15 14:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		97.6 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.3 %		21-167	"	"	"	"	

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 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/30/15 18:14

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504151 - EPA 3550A

Blank (1504151-BLK1)

Prepared: 04/14/15 Analyzed: 04/15/15

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
<i>Surrogate: o-Terphenyl</i>	13.8		"	12.2		113	70-130			

LCS (1504151-BS1)

Prepared: 04/14/15 Analyzed: 04/15/15

C10-C28 (DRO)	461	50	mg/kg	501		92.0	50-150			
<i>Surrogate: o-Terphenyl</i>	13.5		"	12.2		111	70-130			

Matrix Spike (1504151-MS1)

Source: 1504125-02

Prepared: 04/14/15 Analyzed: 04/15/15

C10-C28 (DRO)	1020	50	mg/kg	485	928	18.9	50-150			QM-07
<i>Surrogate: o-Terphenyl</i>	15.6		"	11.8		132	70-130			S-02

Matrix Spike Dup (1504151-MSD1)

Source: 1504125-02

Prepared: 04/14/15 Analyzed: 04/15/15

C10-C28 (DRO)	993	50	mg/kg	487	928	13.4	50-150	2.62	20	QM-07
<i>Surrogate: o-Terphenyl</i>	19.5		"	11.9		164	70-130			S-02

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 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/30/15 18:14

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting		Spike Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

Batch 1504140 - EPA 5030 Soil MS

Blank (1504140-BLK1)

Prepared & Analyzed: 04/14/15

Benzene	ND	0.0020	mg/kg						
Bromobenzene	ND	0.0050	"						
Bromochloromethane	ND	0.0050	"						
Bromodichloromethane	ND	0.0050	"						
Bromoform	ND	0.0050	"						
Bromomethane	ND	0.010	"						
n-Butylbenzene	ND	0.0050	"						
sec-Butylbenzene	ND	0.0050	"						
tert-Butylbenzene	ND	0.0050	"						
Carbon tetrachloride	ND	0.0050	"						
Chlorobenzene	ND	0.0050	"						
Chloroethane	ND	0.0050	"						
Chloroform	ND	0.0050	"						
Chloromethane	ND	0.015	"						
2-Chlorotoluene	ND	0.0050	"						
4-Chlorotoluene	ND	0.0050	"						
Chlorodibromomethane	ND	0.010	"						
1,2-Dibromo-3-chloropropane	ND	0.015	"						
1,2-Dibromoethane (EDB)	ND	0.0050	"						
Dibromomethane	ND	0.0050	"						
1,2-Dichlorobenzene	ND	0.0050	"						
1,3-Dichlorobenzene	ND	0.0050	"						
1,4-Dichlorobenzene	ND	0.0050	"						
Dichlorodifluoromethane	ND	0.0050	"						
Tert-amyl methyl ether	ND	0.0050	"						
1,1-Dichloroethane	ND	0.0050	"						
1,2-Dichloroethane (EDC)	ND	0.0050	"						
Tert-butyl alcohol	ND	0.020	"						
1,1-Dichloroethene	ND	0.0050	"						
Ethyl tert-butyl ether	ND	0.010	"						
cis-1,2-Dichloroethene	ND	0.0050	"						
Di-isopropyl ether	ND	0.0050	"						
trans-1,2-Dichloroethene	ND	0.0050	"						
Methyl tert-butyl ether	ND	0.015	"						
1,2-Dichloropropane	ND	0.0050	"						
1,3-Dichloropropane	ND	0.0050	"						
2,2-Dichloropropane	ND	0.010	"						
1,1-Dichloropropene	ND	0.0050	"						

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/30/15 18:14

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504140 - EPA 5030 Soil MS

Blank (1504140-BLK1)

Prepared & Analyzed: 04/14/15

cis-1,3-Dichloropropene	ND	0.0050	mg/kg							
trans-1,3-Dichloropropene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Hexachlorobutadiene	ND	0.0050	"							
Isopropylbenzene	ND	0.0050	"							
p-Isopropyltoluene	ND	0.010	"							
Methylene Chloride	ND	0.015	"							
Naphthalene	ND	0.010	"							
n-Propylbenzene	ND	0.0050	"							
Styrene	ND	0.010	"							
1,1,2,2-Tetrachloroethane	ND	0.0050	"							
1,1,1,2-Tetrachloroethane	ND	0.0050	"							
Tetrachloroethene	ND	0.0050	"							
Toluene	ND	0.0050	"							
1,2,3-Trichlorobenzene	ND	0.0050	"							
1,2,4-Trichlorobenzene	ND	0.0050	"							
1,1,2-Trichloroethane	ND	0.0050	"							
1,1,1-Trichloroethane	ND	0.0050	"							
Trichloroethene	ND	0.0050	"							
Trichlorofluoromethane	ND	0.0050	"							
1,2,3-Trichloropropane	ND	0.010	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
Vinyl chloride	ND	0.0050	"							
m,p-Xylene	ND	0.010	"							
o-Xylene	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0387		"	0.0396	97.7	23-173				
Surrogate: Toluene-d8	0.0391		"	0.0400	97.8	20-170				
Surrogate: 4-Bromofluorobenzene	0.0363		"	0.0400	90.8	21-167				

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/30/15 18:14

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504140 - EPA 5030 Soil MS

LCS (1504140-BS1)

Prepared & Analyzed: 04/14/15

Benzene	0.141	0.0020	mg/kg	0.150	94.0	58-130
Bromobenzene	0.138	0.0050	"	0.150	91.9	87-115
Bromochloromethane	0.136	0.0050	"	0.150	90.7	82-122
Bromodichloromethane	0.143	0.0050	"	0.150	95.0	84-119
Bromoform	0.146	0.0050	"	0.150	97.0	76-119
Bromomethane	0.161	0.010	"	0.150	108	39-152
n-Butylbenzene	0.154	0.0050	"	0.150	103	70-131
sec-Butylbenzene	0.148	0.0050	"	0.150	98.6	74-124
tert-Butylbenzene	0.143	0.0050	"	0.150	95.5	77-121
Carbon tetrachloride	0.154	0.0050	"	0.150	103	66-127
Chlorobenzene	0.144	0.0050	"	0.150	96.0	82-120
Chloroethane	0.145	0.0050	"	0.150	96.9	63-126
Chloroform	0.137	0.0050	"	0.150	91.6	82-120
Chloromethane	0.138	0.015	"	0.150	91.9	57-133
2-Chlorotoluene	0.141	0.0050	"	0.150	94.0	82-117
4-Chlorotoluene	0.139	0.0050	"	0.150	92.7	81-119
Chlorodibromomethane	0.147	0.010	"	0.150	97.7	82-124
1,2-Dibromo-3-chloropropane	0.153	0.015	"	0.150	102	62-128
1,2-Dibromoethane (EDB)	0.141	0.0050	"	0.150	94.0	86-122
Dibromomethane	0.144	0.0050	"	0.150	96.2	83-124
1,2-Dichlorobenzene	0.141	0.0050	"	0.150	93.8	84-120
1,3-Dichlorobenzene	0.142	0.0050	"	0.150	94.9	81-118
1,4-Dichlorobenzene	0.141	0.0050	"	0.150	93.7	80-118
Dichlorodifluoromethane	0.152	0.0050	"	0.150	101	25-141
Tert-amyl methyl ether	0.132	0.0050	"	0.149	88.1	50-147
1,1-Dichloroethane	0.138	0.0050	"	0.150	91.7	78-120
1,2-Dichloroethane (EDC)	0.139	0.0050	"	0.150	92.5	81-125
Tert-butyl alcohol	0.591	0.020	"	0.747	79.1	64-127
1,1-Dichloroethene	0.149	0.0050	"	0.150	99.5	71-122
Ethyl tert-butyl ether	0.130	0.010	"	0.150	86.8	80-122
cis-1,2-Dichloroethene	0.137	0.0050	"	0.150	91.4	84-121
Di-isopropyl ether	0.135	0.0050	"	0.150	89.7	78-120
trans-1,2-Dichloroethene	0.143	0.0050	"	0.150	95.1	77-125
Methyl tert-butyl ether	0.131	0.015	"	0.150	87.6	77-124
1,2-Dichloropropane	0.135	0.0050	"	0.150	90.1	88-114
1,3-Dichloropropane	0.141	0.0050	"	0.150	94.0	86-122
2,2-Dichloropropane	0.164	0.010	"	0.150	109	32-150
1,1-Dichloropropene	0.172	0.0050	"	0.150	115	71-123

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/30/15 18:14

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504140 - EPA 5030 Soil MS

LCS (1504140-BS1)

Prepared & Analyzed: 04/14/15

cis-1,3-Dichloropropene	0.154	0.0050	mg/kg	0.150		103	74-125			
trans-1,3-Dichloropropene	0.152	0.0050	"	0.150		101	72-126			
Ethylbenzene	0.147	0.0050	"	0.150		97.9	74-139			
Hexachlorobutadiene	0.155	0.0050	"	0.150		103	56-144			
Isopropylbenzene	0.148	0.0050	"	0.150		98.6	72-124			
p-Isopropyltoluene	0.145	0.010	"	0.150		96.8	72-123			
Methylene Chloride	0.145	0.015	"	0.150		97.0	10-183			
Naphthalene	0.129	0.010	"	0.150		85.9	66-138			
n-Propylbenzene	0.149	0.0050	"	0.150		99.2	76-121			
Styrene	0.150	0.010	"	0.150		100	76-133			
1,1,2,2-Tetrachloroethane	0.133	0.0050	"	0.150		88.7	60-137			
1,1,1,2-Tetrachloroethane	0.144	0.0050	"	0.150		95.7	86-121			
Tetrachloroethene	0.152	0.0050	"	0.150		101	69-131			
Toluene	0.138	0.0050	"	0.150		91.8	61-134			
1,2,3-Trichlorobenzene	0.140	0.0050	"	0.150		93.4	63-142			
1,2,4-Trichlorobenzene	0.149	0.0050	"	0.150		99.1	63-141			
1,1,2-Trichloroethane	0.137	0.0050	"	0.150		91.6	75-136			
1,1,1-Trichloroethane	0.146	0.0050	"	0.150		97.5	71-126			
Trichloroethene	0.148	0.0050	"	0.150		98.5	86-118			
Trichlorofluoromethane	0.155	0.0050	"	0.150		103	62-128			
1,2,3-Trichloropropane	0.122	0.010	"	0.150		81.5	80-118			
1,3,5-Trimethylbenzene	0.144	0.0050	"	0.150		96.0	72-121			
1,2,4-Trimethylbenzene	0.141	0.0050	"	0.150		94.1	78-126			
Vinyl chloride	0.146	0.0050	"	0.150		97.2	63-134			
m,p-Xylene	0.285	0.010	"	0.300		95.1	73-137			
o-Xylene	0.141	0.0050	"	0.150		94.2	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0397</i>		<i>"</i>	<i>0.0396</i>		<i>100</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0399</i>		<i>"</i>	<i>0.0400</i>		<i>99.8</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0405</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>21-167</i>			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/30/15 18:14

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504140 - EPA 5030 Soil MS

Matrix Spike (1504140-MS1)	Source: 1504145-02			Prepared & Analyzed: 04/14/15						
Benzene	0.130	0.0020	mg/kg	0.150	ND	86.5	30-131			
Bromobenzene	0.125	0.0050	"	0.150	ND	83.6	39-124			
Bromochloromethane	0.139	0.0050	"	0.150	ND	92.4	62-121			
Bromodichloromethane	0.137	0.0050	"	0.150	ND	91.4	51-120			
Bromoform	0.149	0.0050	"	0.150	ND	99.2	52-125			
Bromomethane	0.122	0.010	"	0.150	ND	81.4	10-152			
n-Butylbenzene	0.102	0.0050	"	0.150	ND	67.7	10-144			
sec-Butylbenzene	0.105	0.0050	"	0.150	ND	70.3	10-140			
tert-Butylbenzene	0.110	0.0050	"	0.150	ND	73.3	16-132			
Carbon tetrachloride	0.138	0.0050	"	0.150	ND	91.8	46-125			
Chlorobenzene	0.125	0.0050	"	0.150	ND	83.5	42-125			
Chloroethane	0.141	0.0050	"	0.150	ND	94.2	46-125			
Chloroform	0.133	0.0050	"	0.150	ND	88.5	57-118			
Chloromethane	0.137	0.015	"	0.150	ND	91.4	33-132			
2-Chlorotoluene	0.117	0.0050	"	0.150	ND	78.3	30-125			
4-Chlorotoluene	0.115	0.0050	"	0.150	ND	76.9	29-127			
Chlorodibromomethane	0.144	0.010	"	0.150	ND	95.7	54-124			
1,2-Dibromo-3-chloropropane	0.159	0.015	"	0.150	ND	106	10-175			
1,2-Dibromoethane (EDB)	0.142	0.0050	"	0.150	ND	94.9	65-125			
Dibromomethane	0.147	0.0050	"	0.150	ND	97.7	64-127			
1,2-Dichlorobenzene	0.118	0.0050	"	0.150	ND	78.8	24-134			
1,3-Dichlorobenzene	0.116	0.0050	"	0.150	ND	77.1	22-130			
1,4-Dichlorobenzene	0.116	0.0050	"	0.150	ND	77.3	21-131			
Dichlorodifluoromethane	0.146	0.0050	"	0.150	ND	97.1	47-117			
Tert-amyl methyl ether	0.137	0.0050	"	0.149	ND	91.4	60-124			
1,1-Dichloroethane	0.133	0.0050	"	0.150	ND	88.5	55-119			
1,2-Dichloroethane (EDC)	0.137	0.0050	"	0.150	ND	91.2	65-124			
Tert-butyl alcohol	0.720	0.020	"	0.747	ND	96.4	64-131			
1,1-Dichloroethene	0.141	0.0050	"	0.150	ND	93.9	42-145			
Ethyl tert-butyl ether	0.133	0.010	"	0.150	ND	88.7	60-119			
cis-1,2-Dichloroethene	0.135	0.0050	"	0.150	ND	90.1	56-121			
Di-isopropyl ether	0.134	0.0050	"	0.150	ND	89.5	40-132			
trans-1,2-Dichloroethene	0.138	0.0050	"	0.150	ND	91.8	52-126			
Methyl tert-butyl ether	0.138	0.015	"	0.150	ND	92.1	64-124			
1,2-Dichloropropane	0.129	0.0050	"	0.150	ND	86.1	61-115			
1,3-Dichloropropane	0.141	0.0050	"	0.150	ND	93.9	66-123			
2,2-Dichloropropane	0.155	0.010	"	0.150	ND	104	35-127			
1,1-Dichloropropene	0.155	0.0050	"	0.150	ND	103	52-119			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/30/15 18:14

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504140 - EPA 5030 Soil MS

Matrix Spike (1504140-MS1)	Source: 1504145-02			Prepared & Analyzed: 04/14/15						
cis-1,3-Dichloropropene	0.155	0.0050	mg/kg	0.150	ND	103	47-122			
trans-1,3-Dichloropropene	0.153	0.0050	"	0.150	ND	102	51-119			
Ethylbenzene	0.123	0.0050	"	0.150	ND	82.3	22-153			
Hexachlorobutadiene	0.0679	0.0050	"	0.150	ND	45.2	10-149			
Isopropylbenzene	0.119	0.0050	"	0.150	ND	79.1	18-135			
p-Isopropyltoluene	0.105	0.010	"	0.150	ND	69.9	12-132			
Methylene Chloride	0.159	0.015	"	0.150	ND	106	10-167			
Naphthalene	0.118	0.010	"	0.150	ND	78.6	10-158			
n-Propylbenzene	0.118	0.0050	"	0.150	ND	78.8	15-134			
Styrene	0.131	0.010	"	0.150	ND	87.4	33-135			
1,1,2,2-Tetrachloroethane	0.140	0.0050	"	0.150	ND	93.2	10-166			
1,1,1,2-Tetrachloroethane	0.130	0.0050	"	0.150	ND	86.5	49-123			
Tetrachloroethene	0.127	0.0050	"	0.150	ND	84.4	33-134			
Toluene	0.124	0.0050	"	0.150	ND	82.9	30-134			
1,2,3-Trichlorobenzene	0.0968	0.0050	"	0.150	ND	64.5	10-155			
1,2,4-Trichlorobenzene	0.0998	0.0050	"	0.150	ND	66.5	10-152			
1,1,2-Trichloroethane	0.142	0.0050	"	0.150	ND	94.9	46-139			
1,1,1-Trichloroethane	0.140	0.0050	"	0.150	ND	93.2	51-124			
Trichloroethene	0.132	0.0050	"	0.150	ND	88.2	16-187			
Trichlorofluoromethane	0.148	0.0050	"	0.150	ND	98.7	53-125			
1,2,3-Trichloropropane	0.118	0.010	"	0.150	ND	78.6	69-118			
1,3,5-Trimethylbenzene	0.118	0.0050	"	0.150	ND	78.5	20-128			
1,2,4-Trimethylbenzene	0.113	0.0050	"	0.150	ND	75.6	17-142			
Vinyl chloride	0.143	0.0050	"	0.150	ND	95.0	50-134			
m,p-Xylene	0.240	0.010	"	0.300	ND	80.1	10-159			
o-Xylene	0.122	0.0050	"	0.150	ND	81.1	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0429		"	0.0396		108	23-173			
Surrogate: Toluene-d8	0.0401		"	0.0400		100	20-170			
Surrogate: 4-Bromofluorobenzene	0.0400		"	0.0400		100	21-167			

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/30/15 18:14

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504140 - EPA 5030 Soil MS

Matrix Spike Dup (1504140-MSD1)	Source: 1504145-02			Prepared & Analyzed: 04/14/15						
Benzene	0.129	0.0020	mg/kg	0.150	ND	86.0	30-131	0.580	34	
Bromobenzene	0.119	0.0050	"	0.150	ND	79.3	39-124	5.26	21	
Bromochloromethane	0.137	0.0050	"	0.150	ND	91.0	62-121	1.50	20	
Bromodichloromethane	0.136	0.0050	"	0.150	ND	90.7	51-120	0.703	22	
Bromoform	0.144	0.0050	"	0.150	ND	96.3	52-125	2.99	22	
Bromomethane	0.150	0.010	"	0.150	ND	100	10-152	20.7	90	
n-Butylbenzene	0.0925	0.0050	"	0.150	ND	61.7	10-144	9.40	52	
sec-Butylbenzene	0.0966	0.0050	"	0.150	ND	64.4	10-140	8.82	45	
tert-Butylbenzene	0.102	0.0050	"	0.150	ND	67.9	16-132	7.67	33	
Carbon tetrachloride	0.135	0.0050	"	0.150	ND	89.7	46-125	2.25	22	
Chlorobenzene	0.123	0.0050	"	0.150	ND	81.9	42-125	1.96	18	
Chloroethane	0.140	0.0050	"	0.150	ND	93.1	46-125	1.15	24	
Chloroform	0.132	0.0050	"	0.150	ND	87.8	57-118	0.771	19	
Chloromethane	0.134	0.015	"	0.150	ND	89.2	33-132	2.44	18	
2-Chlorotoluene	0.110	0.0050	"	0.150	ND	73.5	30-125	6.35	24	
4-Chlorotoluene	0.108	0.0050	"	0.150	ND	71.9	29-127	6.75	24	
Chlorodibromomethane	0.141	0.010	"	0.150	ND	93.9	54-124	1.94	22	
1,2-Dibromo-3-chloropropane	0.148	0.015	"	0.150	ND	98.4	10-175	7.11	39	
1,2-Dibromoethane (EDB)	0.139	0.0050	"	0.150	ND	93.0	65-125	2.07	22	
Dibromomethane	0.146	0.0050	"	0.150	ND	97.3	64-127	0.451	19	
1,2-Dichlorobenzene	0.110	0.0050	"	0.150	ND	73.2	24-134	7.42	26	
1,3-Dichlorobenzene	0.109	0.0050	"	0.150	ND	72.5	22-130	6.10	27	
1,4-Dichlorobenzene	0.108	0.0050	"	0.150	ND	71.7	21-131	7.51	25	
Dichlorodifluoromethane	0.144	0.0050	"	0.150	ND	95.8	47-117	1.31	36	
1,1-Dichloroethane	0.132	0.0050	"	0.150	ND	88.1	55-119	0.521	22	
Tert-amyl methyl ether	0.137	0.0050	"	0.149	ND	91.7	60-124	0.351	40	
1,2-Dichloroethane (EDC)	0.138	0.0050	"	0.150	ND	91.9	65-124	0.743	19	
1,1-Dichloroethene	0.140	0.0050	"	0.150	ND	93.4	42-145	0.598	22	
Tert-butyl alcohol	0.709	0.020	"	0.747	ND	95.0	64-131	1.47	24	
Ethyl tert-butyl ether	0.133	0.010	"	0.150	ND	88.7	60-119	0.0677	38	
cis-1,2-Dichloroethene	0.132	0.0050	"	0.150	ND	87.8	56-121	2.63	21	
trans-1,2-Dichloroethene	0.135	0.0050	"	0.150	ND	89.8	52-126	2.20	22	
Di-isopropyl ether	0.133	0.0050	"	0.150	ND	88.7	40-132	0.921	108	
1,2-Dichloropropane	0.128	0.0050	"	0.150	ND	85.6	61-115	0.606	17	
Methyl tert-butyl ether	0.139	0.015	"	0.150	ND	92.7	64-124	0.606	28	
1,3-Dichloropropane	0.138	0.0050	"	0.150	ND	92.1	66-123	1.87	24	
2,2-Dichloropropane	0.150	0.010	"	0.150	ND	100	35-127	3.20	29	
1,1-Dichloropropene	0.152	0.0050	"	0.150	ND	101	52-119	1.86	21	

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/30/15 18:14

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504140 - EPA 5030 Soil MS

Matrix Spike Dup (1504140-MSD1)	Source: 1504145-02			Prepared & Analyzed: 04/14/15						
cis-1,3-Dichloropropene	0.150	0.0050	mg/kg	0.150	ND	100	47-122	3.15	40	
trans-1,3-Dichloropropene	0.148	0.0050	"	0.150	ND	98.8	51-119	3.17	52	
Ethylbenzene	0.120	0.0050	"	0.150	ND	79.8	22-153	3.11	24	
Hexachlorobutadiene	0.0595	0.0050	"	0.150	ND	39.7	10-149	13.1	59	
Isopropylbenzene	0.113	0.0050	"	0.150	ND	75.3	18-135	5.00	33	
p-Isopropyltoluene	0.0963	0.010	"	0.150	ND	64.2	12-132	8.47	38	
Methylene Chloride	0.156	0.015	"	0.150	ND	104	10-167	1.90	102	
Naphthalene	0.108	0.010	"	0.150	ND	72.1	10-158	8.60	42	
n-Propylbenzene	0.110	0.0050	"	0.150	ND	73.6	15-134	6.72	37	
Styrene	0.127	0.010	"	0.150	ND	84.7	33-135	3.21	22	
1,1,2,2-Tetrachloroethane	0.132	0.0050	"	0.150	ND	88.1	10-166	5.65	45	
1,1,1,2-Tetrachloroethane	0.127	0.0050	"	0.150	ND	84.8	49-123	2.01	21	
Tetrachloroethene	0.121	0.0050	"	0.150	ND	81.0	33-134	4.18	26	
Toluene	0.122	0.0050	"	0.150	ND	81.4	30-134	1.87	30	
1,2,3-Trichlorobenzene	0.0868	0.0050	"	0.150	ND	57.9	10-155	10.8	40	
1,2,4-Trichlorobenzene	0.0900	0.0050	"	0.150	ND	60.0	10-152	10.3	42	
1,1,2-Trichloroethane	0.142	0.0050	"	0.150	ND	94.7	46-139	0.211	34	
1,1,1-Trichloroethane	0.136	0.0050	"	0.150	ND	90.8	51-124	2.65	22	
Trichloroethene	0.133	0.0050	"	0.150	ND	88.7	16-187	0.520	19	
Trichlorofluoromethane	0.145	0.0050	"	0.150	ND	96.8	53-125	1.86	20	
1,2,3-Trichloropropane	0.105	0.010	"	0.150	ND	69.8	69-118	11.8	23	
1,3,5-Trimethylbenzene	0.111	0.0050	"	0.150	ND	74.1	20-128	5.82	31	
1,2,4-Trimethylbenzene	0.106	0.0050	"	0.150	ND	70.7	17-142	6.62	40	
Vinyl chloride	0.140	0.0050	"	0.150	ND	93.5	50-134	1.57	22	
m,p-Xylene	0.233	0.010	"	0.300	ND	77.5	10-159	3.29	68	
o-Xylene	0.118	0.0050	"	0.150	ND	78.5	31-151	3.23	38	
Surrogate: 1,2-Dichloroethane-d4	0.0424		"	0.0396		107	23-173			
Surrogate: Toluene-d8	0.0404		"	0.0400		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0402		"	0.0400		100	21-167			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/30/15 18:14

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control
Summit Scientific

Analyte	Reporting		Spike Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

Batch 1504171 - EPA 5030 Soil MS

Blank (1504171-BLK1)

Prepared: 04/16/15 Analyzed: 04/17/15

Acenaphthene	ND	330	ug/kg
Acenaphthylene	ND	330	"
Anthracene	ND	330	"
Benzo (a) anthracene	ND	330	"
Benzo (b) fluoranthene	ND	330	"
Benzo (k) fluoranthene	ND	330	"
Benzo (g,h,i) perylene	ND	330	"
Benzo (a) pyrene	ND	330	"
Benzyl alcohol	ND	330	"
Pyridine	ND	330	"
Bis(2-chloroethoxy)methane	ND	330	"
N-Nitrosodimethylamine	ND	330	"
Bis(2-chloroethyl)ether	ND	330	"
Bis(2-chloroisopropyl)ether	ND	330	"
Bis(2-ethylhexyl)phthalate	ND	330	"
4-Bromophenyl phenyl ether	ND	330	"
Butyl benzyl phthalate	ND	330	"
4-Chloroaniline	ND	330	"
4-Chloro-3-methylphenol	ND	330	"
2-Chloronaphthalene	ND	330	"
2-Chlorophenol	ND	330	"
4-Chlorophenyl phenyl ether	ND	330	"
Chrysene	ND	330	"
Dibenz (a,h) anthracene	ND	330	"
Dibenzofuran	ND	330	"
Di-n-butyl phthalate	ND	330	"
1,2-Dichlorobenzene	ND	330	"
1,3-Dichlorobenzene	ND	330	"
1,4-Dichlorobenzene	ND	330	"
2,4-Dichlorophenol	ND	330	"
Diethyl phthalate	ND	330	"
2,4-Dimethylphenol	ND	330	"
Carbazole	ND	330	"
Dimethyl phthalate	ND	330	"
4,6-Dinitro-2-methylphenol	ND	330	"
2,4-Dinitrophenol	ND	330	"
Azobenzene	ND	330	"
2,4-Dinitrotoluene	ND	330	"

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Semivolatile Organic Compounds by EPA Method 8270D - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504171 - EPA 5030 Soil MS

Blank (1504171-BLK1)

Prepared: 04/16/15 Analyzed: 04/17/15

2,6-Dinitrotoluene	ND	330	ug/kg							
Di-n-octyl phthalate	ND	330	"							
Fluoranthene	ND	330	"							
Fluorene	ND	330	"							
Hexachlorobenzene	ND	330	"							
Hexachlorobutadiene	ND	330	"							
Hexachlorocyclopentadiene	ND	330	"							
Hexachloroethane	ND	330	"							
Indeno (1,2,3-cd) pyrene	ND	330	"							
Isophorone	ND	330	"							
2-Methylnaphthalene	ND	330	"							
2-Methylphenol	ND	330	"							
4-Methylphenol	ND	330	"							
Naphthalene	ND	330	"							
1,4-Dinitrobenzene	ND	330	"							
2-Nitroaniline	ND	330	"							
1,3-Dinitrobenzene	ND	330	"							
3-Nitroaniline	ND	330	"							
1,2-Dinitrobenzene	ND	330	"							
4-Nitroaniline	ND	330	"							
Nitrobenzene	ND	330	"							
2-Nitrophenol	ND	330	"							
4-Nitrophenol	ND	330	"							
2,3,4,6-Tetrachlorophenol	ND	330	"							
N-Nitrosodi-n-propylamine	ND	330	"							
Pentachlorophenol	ND	330	"							
Phenanthrene	ND	330	"							
Phenol	ND	330	"							
Aniline	ND	330	"							
Pyrene	ND	330	"							
1,2,4-Trichlorobenzene	ND	330	"							
2,4,5-Trichlorophenol	ND	330	"							
2,4,6-Trichlorophenol	ND	330	"							
Surrogate: 2-Fluorophenol	2550		"	1660		153	30-200			
Surrogate: Phenol-d6	2750		"	1640		168	30-200			
Surrogate: Nitrobenzene-d5	2810		"	1650		170	30-200			
Surrogate: 2-Fluorobiphenyl	2620		"	1660		158	30-200			
Surrogate: 2,4,6-Tribromophenol	1420		"	1660		85.5	30-200			

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 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
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Reported:
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Semivolatile Organic Compounds by EPA Method 8270D - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504171 - EPA 5030 Soil MS

Blank (1504171-BLK1)

Prepared: 04/16/15 Analyzed: 04/17/15

Surrogate: Terphenyl-d14 3750 ug/kg 1660 226 30-300

LCS (1504171-BS1)

Prepared: 04/16/15 Analyzed: 04/17/15

Acenaphthene	1290	330	ug/kg	1660		77.7	45-139			
Acenaphthylene	ND	330	"				68-113			
Anthracene	ND	330	"				63-119			
Benzo (a) anthracene	ND	330	"				18-181			
Benzo (b) fluoranthene	ND	330	"				10-169			
Benzo (k) fluoranthene	ND	330	"				10-184			
Benzo (g,h,i) perylene	ND	330	"				10-176			
Benzo (a) pyrene	ND	330	"				14-178			
4-Chloro-3-methylphenol	2830	330	"	3320		85.2	64-122			
2-Chlorophenol	2440	330	"	3320		73.5	64-121			
Chrysene	ND	330	"				10-184			
Dibenz (a,h) anthracene	ND	330	"				10-171			
1,4-Dichlorobenzene	1170	330	"	1660		70.7	64-118			
2,4-Dinitrotoluene	1260	330	"	1660		76.0	64-118			
Fluoranthene	ND	330	"				58-127			
Fluorene	ND	330	"				67-113			
Indeno (1,2,3-cd) pyrene	ND	330	"				11-175			
2-Methylnaphthalene	ND	330	"				5-5			
Naphthalene	ND	330	"				62-118			
4-Nitrophenol	1590	330	"	3320		47.8	29-112			
N-Nitrosodi-n-propylamine	1120	330	"	1650		67.9	60-130			
Phenol	2340	330	"	3320		70.4	57-106			
Pyrene	1450	330	"	1640		88.3	22-174			
1,2,4-Trichlorobenzene	1260	330	"	1650		76.4	68-120			
Surrogate: 2-Fluorophenol	2640		"	1660		159	30-200			
Surrogate: Phenol-d6	2720		"	1640		166	30-200			
Surrogate: Nitrobenzene-d5	2790		"	1650		169	30-200			
Surrogate: 2-Fluorobiphenyl	2680		"	1660		161	30-200			
Surrogate: 2,4,6-Tribromophenol	2380		"	1660		143	30-200			
Surrogate: Terphenyl-d14	3710		"	1660		223	30-300			

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Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/30/15 18:14

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504171 - EPA 5030 Soil MS

Duplicate (1504171-DUP1)	Source: 1504101-09			Prepared: 04/16/15	Analyzed: 04/17/15
Acenaphthene	ND	330	ug/kg	ND	200
Acenaphthylene	ND	330	"	ND	200
Anthracene	ND	330	"	ND	200
Benzo (a) anthracene	ND	330	"	ND	200
Benzo (b) fluoranthene	ND	330	"	ND	200
Benzo (k) fluoranthene	ND	330	"	ND	200
Benzo (g,h,i) perylene	ND	330	"	ND	200
Benzo (a) pyrene	ND	330	"	ND	200
4-Chloro-3-methylphenol	ND	330	"	ND	200
2-Chlorophenol	ND	330	"	ND	200
Chrysene	ND	330	"	ND	200
Dibenz (a,h) anthracene	ND	330	"	ND	200
1,4-Dichlorobenzene	ND	330	"	ND	200
2,4-Dinitrotoluene	ND	330	"	ND	200
Fluoranthene	ND	330	"	ND	200
Fluorene	ND	330	"	ND	200
Indeno (1,2,3-cd) pyrene	ND	330	"	ND	200
2-Methylnaphthalene	ND	330	"	ND	200
Naphthalene	ND	330	"	ND	200
4-Nitrophenol	ND	330	"	ND	200
N-Nitrosodi-n-propylamine	ND	330	"	ND	200
Pentachlorophenol	ND	330	"	0.00	200
Phenol	ND	330	"	ND	200
Pyrene	ND	330	"	ND	200
1,2,4-Trichlorobenzene	ND	330	"	ND	200
Surrogate: 2-Fluorophenol	2260		"	1670	136 30-200
Surrogate: Phenol-d6	2450		"	1650	149 30-200
Surrogate: Nitrobenzene-d5	2980		"	1660	180 30-200
Surrogate: 2-Fluorobiphenyl	2290		"	1670	137 30-200
Surrogate: 2,4,6-Tribromophenol	1650		"	1670	99.0 30-200
Surrogate: Terphenyl-d14	2420		"	1670	145 30-300

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Project: National Western Complex
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Semivolatile Organic Compounds by EPA Method 8270D - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1504171 - EPA 5030 Soil MS

Matrix Spike (1504171-MS1)	Source: 1504101-10			Prepared: 04/16/15		Analyzed: 04/17/15	
Acenaphthene	1080	330	ug/kg	1650	ND	65.5	32-136
Acenaphthylene	ND	330	"		ND		45-114
Anthracene	1190	330	"		412		38-121
Benzo (a) anthracene	610	330	"		286		28-135
Benzo (b) fluoranthene	571	330	"		266		10-161
Benzo (k) fluoranthene	590	330	"		275		10-172
Benzo (g,h,i) perylene	ND	330	"		ND		10-149
Benzo (a) pyrene	443	330	"		223		11-148
4-Chloro-3-methylphenol	2580	330	"	3300	ND	78.2	38-126
2-Chlorophenol	2480	330	"	3300	ND	75.2	49-113
Chrysene	760	330	"		310		10-142
Dibenz (a,h) anthracene	ND	330	"		ND		10-129
1,4-Dichlorobenzene	1090	330	"	1650	ND	66.2	46-113
2,4-Dinitrotoluene	1230	330	"	1650	ND	74.8	19-131
Fluoranthene	1120	330	"		556		40-141
Fluorene	ND	330	"		ND		45-118
Indeno (1,2,3-cd) pyrene	ND	330	"		ND		10-150
2-Methylnaphthalene	ND	330	"		ND		5-150
Naphthalene	ND	330	"		ND		51-111
4-Nitrophenol	2680	330	"	3300	ND	81.3	21-110
N-Nitrosodi-n-propylamine	827	330	"	1640	ND	50.3	50-130
Phenol	2020	330	"	3300	ND	61.3	41-104
Pyrene	2880	330	"	1630	630	138	10-150
1,2,4-Trichlorobenzene	1170	330	"	1640	ND	71.6	49-115
Surrogate: 2-Fluorophenol	2200		"	1650		133	30-200
Surrogate: Phenol-d6	2080		"	1630		127	30-200
Surrogate: Nitrobenzene-d5	1790		"	1640		109	30-200
Surrogate: 2-Fluorobiphenyl	2440		"	1650		148	30-200
Surrogate: 2,4,6-Tribromophenol	1520		"	1650		92.3	30-200
Surrogate: Terphenyl-d14	2820		"	1650		171	30-300

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 10625 West I-70 Frontage Road, Suite 3
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Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/30/15 18:14

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch 1504135 - EPA 3050B

Blank (1504135-BLK1)

Prepared & Analyzed: 04/14/15

Arsenic	ND	0.100	mg/kg wet							
Barium	ND	0.100	"							
Cadmium	ND	0.100	"							
Chromium	ND	0.500	"							
Lead	ND	0.100	"							
Selenium	ND	0.0500	"							
Silver	ND	0.100	"							
Zinc	ND	10.0	"							

LCS (1504135-BS1)

Prepared & Analyzed: 04/14/15

Arsenic	106	0.250	mg/kg wet	99.6		107	78.4-140			
Barium	311	0.250	"	310		100	83.2-117			
Cadmium	190	0.250	"	182		104	81.9-118			
Chromium	138	1.25	"	136		102	80.1-121			
Lead	121	0.250	"	115		105	81.8-119			
Selenium	157	0.125	"	150		104	77.3-123			
Silver	39.8	0.250	"	40.4		98.4	75-125			
Zinc	155	25.0	"	133		117	80.7-132			

Duplicate (1504135-DUP1)

Source: 1504145-02

Prepared & Analyzed: 04/14/15

Arsenic	0.931	0.110	mg/kg dry		1.11		17.4	20		
Barium	38.9	0.110	"		37.5		3.65	20		
Cadmium	0.0268	0.110	"		0.0365		30.4	20		QR-01
Chromium	8.93	0.548	"		11.2		22.2	20		QR-03
Lead	4.47	0.110	"		5.00		11.2	20		
Selenium	0.105	0.0548	"		0.285		92.2	20		QR-03
Silver	1.27	0.110	"		0.106		169	20		QR-03
Zinc	18.5	11.0	"		20.4		9.86	20		

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Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/30/15 18:14

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1504135 - EPA 3050B

Matrix Spike (1504135-MS1)

Source: 1504145-02

Prepared & Analyzed: 04/14/15

Arsenic	44.2	0.110	mg/kg dry	42.2	1.11	102	75-125		
Barium	86.4	0.110	"	42.2	37.5	116	75-125		
Cadmium	2.22	0.110	"	2.11	0.0365	103	75-125		
Chromium	57.0	0.548	"	42.2	11.2	109	75-125		
Lead	26.4	0.110	"	21.1	5.00	101	75-125		
Selenium	4.29	0.0548	"	4.22	0.285	95.0	75-125		
Silver	2.31	0.110	"	2.11	0.106	104	75-125		
Zinc	66.1	11.0	"	42.2	20.4	108	75-125		

Matrix Spike Dup (1504135-MSD1)

Source: 1504145-02

Prepared & Analyzed: 04/14/15

Arsenic	41.4	0.110	mg/kg dry	42.1	1.11	95.8	75-125	6.42	25
Barium	85.5	0.110	"	42.1	37.5	114	75-125	1.11	25
Cadmium	2.17	0.110	"	2.10	0.0365	101	75-125	2.16	25
Chromium	55.8	0.548	"	42.1	11.2	106	75-125	2.16	25
Lead	25.8	0.110	"	21.0	5.00	98.9	75-125	2.22	25
Selenium	4.01	0.0548	"	4.21	0.285	88.6	75-125	6.74	25
Silver	2.38	0.110	"	2.10	0.106	108	75-125	2.87	25
Zinc	59.9	11.0	"	42.1	20.4	94.0	75-125	9.79	25

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Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/30/15 18:14

Total Mercury by EPA Method 7471 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1504153 - EPA 7471A

Blank (1504153-BLK1)			Prepared: 04/15/15 Analyzed: 04/16/15								
Mercury	ND	0.0500	mg/kg wet								
LCS (1504153-BS1)			Prepared: 04/15/15 Analyzed: 04/16/15								
Mercury	0.454	0.0500	mg/kg wet	0.500		90.7	80-120				
Duplicate (1504153-DUP1)			Source: 1504121-01		Prepared: 04/15/15 Analyzed: 04/16/15						
Mercury	0.0273	0.0500	mg/kg dry		0.0324				17.3	20	
Matrix Spike (1504153-MS1)			Source: 1504121-01		Prepared: 04/15/15 Analyzed: 04/16/15						
Mercury	0.509	0.0595	mg/kg dry	0.552	0.0324	86.3	80-120				
Matrix Spike Dup (1504153-MSD1)			Source: 1504121-01		Prepared: 04/15/15 Analyzed: 04/16/15						
Mercury	0.490	0.0537	mg/kg dry	0.537	0.0324	85.2	80-120	3.79		20	

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Reported:
 04/30/15 18:14

Oil and Grease by EPA 9071B (Solids) - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike	Source	%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504278 - General Preparation

Blank (1504278-BLK1)		Prepared: 04/28/15 Analyzed: 04/29/15								
Oil & Grease (HEM)	ND	1.00	mg/kg							
LCS (1504278-BS1)		Prepared: 04/28/15 Analyzed: 04/29/15								
Oil & Grease (HEM)	2.36	1.00	mg/kg	2.00		118	80.1-120			
Duplicate (1504278-DUP1)		Source: 1504129-03		Prepared: 04/28/15 Analyzed: 04/29/15						
Oil & Grease (HEM)	0.0400	1.00	mg/kg		0.0900			76.9	200	
Matrix Spike (1504278-MS1)		Source: 1504129-03		Prepared: 04/28/15 Analyzed: 04/29/15						
Oil & Grease (HEM)	1.96	1.00	mg/kg	2.00	0.0900	93.5	21-162			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/30/15 18:14

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504150 - General Preparation

Duplicate (1504150-DUP1)	Source: 1504121-01			Prepared: 04/14/15	Analyzed: 04/15/15
% Solids	82.6		%	84.0	1.68 20

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/30/15 18:14

Notes and Definitions

- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QR-01 Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

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741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

April 19, 2015

Steve Hoffman

Terracon - Wheat Ridge

10625 West I-70 Frontage Road, Suite 3

Wheat Ridge, CO 80033

RE: National Western Complex

Enclosed are the results of analyses for samples received by Summit Scientific on 04/14/15 10:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury
President



Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/19/15 14:05

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB-9 (0-6")	1504147-01	Soil	04/13/15 15:15	04/14/15 10:30
SB-9 (6-24")	1504147-02	Soil	04/13/15 15:15	04/14/15 10:30
SB-12 (0-6")	1504147-03	Soil	04/13/15 14:15	04/14/15 10:30
SB-12 (6-24")	1504147-04	Soil	04/13/15 14:15	04/14/15 10:30
SB-14 (0-6")	1504147-05	Soil	04/13/15 12:00	04/14/15 10:30
SB-14 (6-24")	1504147-06	Soil	04/13/15 12:00	04/14/15 10:30
SB-17 (0-6")	1504147-07	Soil	04/13/15 09:35	04/14/15 10:30
SB-17 (6-24")	1504147-08	Soil	04/13/15 09:35	04/14/15 10:30
SB-9 (4')	1504147-09	Soil	04/13/15 15:30	04/14/15 10:30
SB-12 (4')	1504147-10	Soil	04/13/15 14:40	04/14/15 10:30
SB-14 (12')	1504147-11	Soil	04/13/15 13:00	04/14/15 10:30
SB-17 (15')	1504147-12	Soil	04/13/15 10:30	04/14/15 10:30

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

Summit Scientific

1504147.1

741 Corporate Circle Suite I ♦ Golden, Colorado 80401
 303-277-9310 ♦ 303-374-5933 Fax

Page 1 of 2

Client: Terracon Consultants

Address: 10625 West I-70 Frontage Road North, Suite 3
 City/State/Zip: Wheat Ridge, CO 80033
 Phone: (303) 454-5275 Fax: (303) 423-3353
 Sampler Name: Marshall Haworth

Project Manager: Steve Hoffman
 E-Mail: sbhoffman@terracon.com
 Project Name: National Western Complex
 Project Number: 25157010

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:				Special Instructions		
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	VOC's 8260B	TPH 8015	RCRA 8+Zinc			
SB-9 (0-6")	4-13-15	1515	1			X			X								
SB-9 (6-24")	4-13-15	1515	1			X			X								
SB-12 (0-6")	4-13-15	1415	1			X			X								
SB-12 (6-24")	4-13-15	1415	1			X			X								
SB-14 (0-6")	4-13-15	1200	1			X			X								
SB-14 (6-24")	4-13-15	1200	1			X			X								
SB-17 (0-6")	4-13-15	0935	1			X			X								
SB-17 (6-24")	4-13-15	0935	1			X			X								
Relinquished by: <i>Marshall Haworth</i>		Date/Time: 4-13-15 1800		Received by: <i>S. Hoffman</i>		Date/Time: 4-14-15 1030		Turn Around Time (Check)				Notes:					
								Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/>				Standard <input checked="" type="checkbox"/>					
Relinquished by: <i>S. Hoffman</i>		Date/Time: 4/14/15 11:05		Received by: <i>[Signature]</i>		Date/Time: 4-14-15 1105		48 Hours <input type="checkbox"/>				Sample Integrity:					
Relinquished by:		Date/Time:		Received in Lab by:		Date/Time:		Temperature Upon Receipt: 2.0°C				Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

Summit Scientific

1504147.2

741 Corporate Circle Suite I ♦ Golden, Colorado 80401
 303-277-9310 ♦ 303-374-5933 Fax

Page 2 of 2

Client: Terracon Consultants

Address: 10625 West I-70 Frontage Road North, Suite 3
 City/State/Zip: Wheat Ridge, CO 80033
 Phone: (303) 454-5275 Fax: (303) 423-3353
 Sampler Name: Marshall Haworth

Project Manager: Steve Hoffman

E-Mail: sbhoffman@terracon.com

Project Name: National Western Complex

Project Number: 25157010

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:						Special Instructions					
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	VOC's 8260B	TPH 8015	RCRA 8+Zinc								
SB-9 (4')	4-13-15	1530	1		X			X				X	X									
SB-12 (4')	4-13-15	1440	1		X			X				X	X									
SB-14 (12')	4-13-15	1300	1		X			X				X	X									
SB-17 (15')	4-13-15	1030	1		X			X				X	X									
Relinquished by: <i>M. Haworth</i> Date/Time: 4-13-15 1800				Received by: <i>M. Denton</i> Date/Time: 4/14/15 1030				Turn Around Time (Check)						Notes:								
Relinquished by: <i>M. Denton</i> Date/Time: 4/14/15 11:05				Received in Lab by:				Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/>						Standard <input checked="" type="checkbox"/>								
								24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/>														
								Sample Integrity:														
								Temperature Upon Receipt:														
								Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>														

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S₂

Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

Sample Receipt Checklist

S2 Work Order: 1504147

Client: Terracon

Client Project ID: National Western Complex

Shipped Via: PJ

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Airbill #: _____

Matrix (check all that apply): Air Soil/Solid Water Other: _____
 (Describe)

Cooler ID					
Temp (°C)	<u>2.0</u>				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.	X			
Were all samples received intact ⁽¹⁾ ?	X			
Was adequate sample volume provided ⁽¹⁾ ?	X			
If custody seals are present, are they intact ⁽¹⁾ ?			X	
Are short holding time analytes or samples with HTs due within 48 hours present?			X	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	X			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	X			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	X			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	X		X	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			X	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, etc.			X	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.			X	
If dissolved metals are requested, were samples field filtered?			X	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

Ben Shrewsbury
 Custodian Printed Name

[Signature]
 Signature or Initials of Custodian

4/14/15 1642
 Date/Time

[Signature]



Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

**SB-9 (0-6")
 1504147-01 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/13/15 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	4.01	0.109	mg/kg dry	1	1504148	04/14/15	04/16/15	EPA 6020A	
Barium	190	0.109	"	"	"	"	"	"	
Cadmium	0.470	0.109	"	"	"	"	"	"	
Chromium	12.1	0.543	"	"	"	"	"	"	
Lead	31.0	0.109	"	"	"	"	"	"	
Selenium	0.235	0.0543	"	"	"	"	"	"	
Silver	0.113	0.109	"	"	"	"	"	"	

Date Sampled: **04/13/15 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	66.0	10.9	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/13/15 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0483	mg/kg dry	1	1504154	04/15/15	04/16/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/13/15 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.1		%	1	1504179	04/16/15	04/17/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

SB-9 (6-24")
1504147-02 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/13/15 15:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.93	0.108	mg/kg dry	1	1504148	04/14/15	04/16/15	EPA 6020A	
Barium	188	0.108	"	"	"	"	"	"	
Cadmium	0.157	0.108	"	"	"	"	"	"	
Chromium	14.3	0.541	"	"	"	"	"	"	
Lead	23.2	0.108	"	"	"	"	"	"	
Selenium	0.216	0.0541	"	"	"	"	"	"	
Silver	ND	0.108	"	"	"	"	"	"	

Date Sampled: **04/13/15 15:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	72.3	10.8	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/13/15 15:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0451	mg/kg dry	1	1504154	04/15/15	04/16/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/13/15 15:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	92.5		%	1	1504179	04/16/15	04/17/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

SB-12 (0-6")
1504147-03 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/13/15 14:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.55	0.109	mg/kg dry	1	1504148	04/14/15	04/16/15	EPA 6020A	
Barium	159	0.109	"	"	"	"	"	"	
Cadmium	0.311	0.109	"	"	"	"	"	"	
Chromium	11.0	0.543	"	"	"	"	"	"	
Lead	41.5	0.109	"	"	"	"	"	"	
Selenium	0.150	0.0543	"	"	"	"	"	"	
Silver	0.230	0.109	"	"	"	"	"	"	

Date Sampled: **04/13/15 14:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	52.2	10.9	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/13/15 14:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.250	0.0456	mg/kg dry	1	1504154	04/15/15	04/16/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/13/15 14:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	92.1		%	1	1504179	04/16/15	04/17/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

SB-12 (6-24")
1504147-04 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/13/15 14:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	7.30	0.111	mg/kg dry	1	1504148	04/14/15	04/16/15	EPA 6020A	
Barium	159	0.111	"	"	"	"	"	"	
Cadmium	ND	0.111	"	"	"	"	"	"	
Chromium	9.24	0.556	"	"	"	"	"	"	
Lead	9.09	0.111	"	"	"	"	"	"	
Selenium	0.122	0.0556	"	"	"	"	"	"	
Silver	ND	0.111	"	"	"	"	"	"	

Date Sampled: **04/13/15 14:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	33.5	11.1	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/13/15 14:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0490	mg/kg dry	1	1504154	04/15/15	04/16/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/13/15 14:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	89.9		%	1	1504179	04/16/15	04/17/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

SB-14 (0-6")
1504147-05 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/13/15 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.64	0.109	mg/kg dry	1	1504148	04/14/15	04/16/15	EPA 6020A	
Barium	43.1	0.109	"	"	"	"	"	"	
Cadmium	ND	0.109	"	"	"	"	"	"	
Chromium	2.07	0.546	"	"	"	"	"	"	
Lead	3.08	0.109	"	"	"	"	"	"	
Selenium	ND	0.0546	"	"	"	"	"	"	
Silver	ND	0.109	"	"	"	"	"	"	

Date Sampled: **04/13/15 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	18.5	10.9	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/13/15 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0546	mg/kg dry	1	1504154	04/15/15	04/16/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/13/15 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	91.6		%	1	1504179	04/16/15	04/17/15	% calculation	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

SB-14 (6-24")
1504147-06 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/13/15 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.09	0.0982	mg/kg dry	1	1504148	04/14/15	04/16/15	EPA 6020A	
Barium	53.9	0.0982	"	"	"	"	"	"	
Cadmium	0.820	0.0982	"	"	"	"	"	"	
Chromium	3.88	0.491	"	"	"	"	"	"	
Lead	26.8	0.0982	"	"	"	"	"	"	
Selenium	0.0982	0.0491	"	"	"	"	"	"	
Silver	ND	0.0982	"	"	"	"	"	"	

Date Sampled: **04/13/15 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	43.5	9.82	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/13/15 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0481	mg/kg dry	1	1504154	04/15/15	04/16/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/13/15 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.6		%	1	1504179	04/16/15	04/17/15	% calculation	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

SB-17 (0-6")
1504147-07 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/13/15 09:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	6.88	0.107	mg/kg dry	1	1504148	04/14/15	04/16/15	EPA 6020A	
Barium	215	0.107	"	"	"	"	"	"	
Cadmium	0.304	0.107	"	"	"	"	"	"	
Chromium	5.02	0.536	"	"	"	"	"	"	
Lead	18.2	0.107	"	"	"	"	"	"	
Selenium	1.04	0.0536	"	"	"	"	"	"	
Silver	ND	0.107	"	"	"	"	"	"	

Date Sampled: **04/13/15 09:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	31.8	10.7	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/13/15 09:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0536	mg/kg dry	1	1504154	04/15/15	04/16/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/13/15 09:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	93.2		%	1	1504179	04/16/15	04/17/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

**SB-17 (6-24")
 1504147-08 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/13/15 09:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	7.64	0.122	mg/kg dry	1	1504148	04/14/15	04/16/15	EPA 6020A	
Barium	254	0.122	"	"	"	"	"	"	
Cadmium	0.778	0.122	"	"	"	"	"	"	
Chromium	7.70	0.611	"	"	"	"	"	"	
Lead	290	0.122	"	"	"	"	"	"	
Selenium	1.03	0.0611	"	"	"	"	"	"	
Silver	ND	0.122	"	"	"	"	"	"	

Date Sampled: **04/13/15 09:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	101	12.2	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/13/15 09:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.0629	0.0611	mg/kg dry	1	1504154	04/15/15	04/16/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/13/15 09:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	81.9		%	1	1504179	04/16/15	04/17/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

SB-9 (4')
1504147-09 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/13/15 15:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504151	04/14/15	04/14/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/13/15 15:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		109 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/13/15 15:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504140	04/14/15	04/15/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

SB-9 (4')
1504147-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504140	04/14/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

SB-9 (4')
1504147-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504140	04/14/15	04/15/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: **04/13/15 15:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		108 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		98.0 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.2 %		21-167	"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

SB-12 (4')
1504147-10 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/13/15 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504151	04/14/15	04/14/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/13/15 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		109 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/13/15 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504140	04/14/15	04/15/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

SB-12 (4')
1504147-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504140	04/14/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

SB-12 (4')
1504147-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504140	04/14/15	04/15/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: 04/13/15 14:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		106 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		96.9 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.8 %		21-167	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

SB-14 (12')
1504147-11 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/13/15 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504151	04/14/15	04/14/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/13/15 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		107 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/13/15 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504140	04/14/15	04/15/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

SB-14 (12')
1504147-11 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504140	04/14/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

**SB-14 (12')
 1504147-11 (Soil)**

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504140	04/14/15	04/15/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: **04/13/15 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		108 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		97.4 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.6 %		21-167	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

SB-17 (15')
1504147-12 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/13/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504151	04/14/15	04/14/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/13/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		109 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/13/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504140	04/14/15	04/15/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

SB-17 (15')
1504147-12 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504140	04/14/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

**SB-17 (15')
 1504147-12 (Soil)**

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504140	04/14/15	04/15/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: 04/13/15 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		112 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		97.6 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.9 %		21-167	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504151 - EPA 3550A

Blank (1504151-BLK1)

Prepared: 04/14/15 Analyzed: 04/15/15

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	13.8		"	12.2		113	70-130			

LCS (1504151-BS1)

Prepared: 04/14/15 Analyzed: 04/15/15

C10-C28 (DRO)	461	50	mg/kg	501		92.0	50-150			
Surrogate: o-Terphenyl	13.5		"	12.2		111	70-130			

Matrix Spike (1504151-MS1)

Source: 1504125-02

Prepared: 04/14/15 Analyzed: 04/15/15

C10-C28 (DRO)	1020	50	mg/kg	485	928	18.9	50-150			QM-07
Surrogate: o-Terphenyl	15.6		"	11.8		132	70-130			S-02

Matrix Spike Dup (1504151-MSD1)

Source: 1504125-02

Prepared: 04/14/15 Analyzed: 04/15/15

C10-C28 (DRO)	993	50	mg/kg	487	928	13.4	50-150	2.62	20	QM-07
Surrogate: o-Terphenyl	19.5		"	11.9		164	70-130			S-02

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 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting		Spike Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

Batch 1504140 - EPA 5030 Soil MS

Blank (1504140-BLK1)

Prepared & Analyzed: 04/14/15

Benzene	ND	0.0020	mg/kg						
Bromobenzene	ND	0.0050	"						
Bromochloromethane	ND	0.0050	"						
Bromodichloromethane	ND	0.0050	"						
Bromoform	ND	0.0050	"						
Bromomethane	ND	0.010	"						
n-Butylbenzene	ND	0.0050	"						
sec-Butylbenzene	ND	0.0050	"						
tert-Butylbenzene	ND	0.0050	"						
Carbon tetrachloride	ND	0.0050	"						
Chlorobenzene	ND	0.0050	"						
Chloroethane	ND	0.0050	"						
Chloroform	ND	0.0050	"						
Chloromethane	ND	0.015	"						
2-Chlorotoluene	ND	0.0050	"						
4-Chlorotoluene	ND	0.0050	"						
Chlorodibromomethane	ND	0.010	"						
1,2-Dibromo-3-chloropropane	ND	0.015	"						
1,2-Dibromoethane (EDB)	ND	0.0050	"						
Dibromomethane	ND	0.0050	"						
1,2-Dichlorobenzene	ND	0.0050	"						
1,3-Dichlorobenzene	ND	0.0050	"						
1,4-Dichlorobenzene	ND	0.0050	"						
Dichlorodifluoromethane	ND	0.0050	"						
Tert-amyl methyl ether	ND	0.0050	"						
1,1-Dichloroethane	ND	0.0050	"						
1,2-Dichloroethane (EDC)	ND	0.0050	"						
Tert-butyl alcohol	ND	0.020	"						
1,1-Dichloroethene	ND	0.0050	"						
Ethyl tert-butyl ether	ND	0.010	"						
cis-1,2-Dichloroethene	ND	0.0050	"						
Di-isopropyl ether	ND	0.0050	"						
trans-1,2-Dichloroethene	ND	0.0050	"						
Methyl tert-butyl ether	ND	0.015	"						
1,2-Dichloropropane	ND	0.0050	"						
1,3-Dichloropropane	ND	0.0050	"						
2,2-Dichloropropane	ND	0.010	"						
1,1-Dichloropropene	ND	0.0050	"						

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10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/19/15 14:05

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504140 - EPA 5030 Soil MS

Blank (1504140-BLK1)

Prepared & Analyzed: 04/14/15

cis-1,3-Dichloropropene	ND	0.0050	mg/kg							
trans-1,3-Dichloropropene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Hexachlorobutadiene	ND	0.0050	"							
Isopropylbenzene	ND	0.0050	"							
p-Isopropyltoluene	ND	0.010	"							
Methylene Chloride	ND	0.015	"							
Naphthalene	ND	0.010	"							
n-Propylbenzene	ND	0.0050	"							
Styrene	ND	0.010	"							
1,1,2,2-Tetrachloroethane	ND	0.0050	"							
1,1,1,2-Tetrachloroethane	ND	0.0050	"							
Tetrachloroethene	ND	0.0050	"							
Toluene	ND	0.0050	"							
1,2,3-Trichlorobenzene	ND	0.0050	"							
1,2,4-Trichlorobenzene	ND	0.0050	"							
1,1,2-Trichloroethane	ND	0.0050	"							
1,1,1-Trichloroethane	ND	0.0050	"							
Trichloroethene	ND	0.0050	"							
Trichlorofluoromethane	ND	0.0050	"							
1,2,3-Trichloropropane	ND	0.010	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
Vinyl chloride	ND	0.0050	"							
m,p-Xylene	ND	0.010	"							
o-Xylene	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0387		"	0.0396	97.7	23-173				
Surrogate: Toluene-d8	0.0391		"	0.0400	97.8	20-170				
Surrogate: 4-Bromofluorobenzene	0.0363		"	0.0400	90.8	21-167				

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Project: National Western Complex

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 04/19/15 14:05

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504140 - EPA 5030 Soil MS

LCS (1504140-BS1)

Prepared & Analyzed: 04/14/15

Benzene	0.141	0.0020	mg/kg	0.150		94.0	58-130			
Bromobenzene	0.138	0.0050	"	0.150		91.9	87-115			
Bromochloromethane	0.136	0.0050	"	0.150		90.7	82-122			
Bromodichloromethane	0.143	0.0050	"	0.150		95.0	84-119			
Bromoform	0.146	0.0050	"	0.150		97.0	76-119			
Bromomethane	0.161	0.010	"	0.150		108	39-152			
n-Butylbenzene	0.154	0.0050	"	0.150		103	70-131			
sec-Butylbenzene	0.148	0.0050	"	0.150		98.6	74-124			
tert-Butylbenzene	0.143	0.0050	"	0.150		95.5	77-121			
Carbon tetrachloride	0.154	0.0050	"	0.150		103	66-127			
Chlorobenzene	0.144	0.0050	"	0.150		96.0	82-120			
Chloroethane	0.145	0.0050	"	0.150		96.9	63-126			
Chloroform	0.137	0.0050	"	0.150		91.6	82-120			
Chloromethane	0.138	0.015	"	0.150		91.9	57-133			
2-Chlorotoluene	0.141	0.0050	"	0.150		94.0	82-117			
4-Chlorotoluene	0.139	0.0050	"	0.150		92.7	81-119			
Chlorodibromomethane	0.147	0.010	"	0.150		97.7	82-124			
1,2-Dibromo-3-chloropropane	0.153	0.015	"	0.150		102	62-128			
1,2-Dibromoethane (EDB)	0.141	0.0050	"	0.150		94.0	86-122			
Dibromomethane	0.144	0.0050	"	0.150		96.2	83-124			
1,2-Dichlorobenzene	0.141	0.0050	"	0.150		93.8	84-120			
1,3-Dichlorobenzene	0.142	0.0050	"	0.150		94.9	81-118			
1,4-Dichlorobenzene	0.141	0.0050	"	0.150		93.7	80-118			
Dichlorodifluoromethane	0.152	0.0050	"	0.150		101	25-141			
1,1-Dichloroethane	0.138	0.0050	"	0.150		91.7	78-120			
Tert-amyl methyl ether	0.132	0.0050	"	0.149		88.1	50-147			
1,2-Dichloroethane (EDC)	0.139	0.0050	"	0.150		92.5	81-125			
Tert-butyl alcohol	0.591	0.020	"	0.747		79.1	64-127			
1,1-Dichloroethene	0.149	0.0050	"	0.150		99.5	71-122			
Ethyl tert-butyl ether	0.130	0.010	"	0.150		86.8	80-122			
cis-1,2-Dichloroethene	0.137	0.0050	"	0.150		91.4	84-121			
Di-isopropyl ether	0.135	0.0050	"	0.150		89.7	78-120			
trans-1,2-Dichloroethene	0.143	0.0050	"	0.150		95.1	77-125			
Methyl tert-butyl ether	0.131	0.015	"	0.150		87.6	77-124			
1,2-Dichloropropane	0.135	0.0050	"	0.150		90.1	88-114			
1,3-Dichloropropane	0.141	0.0050	"	0.150		94.0	86-122			
2,2-Dichloropropane	0.164	0.010	"	0.150		109	32-150			
1,1-Dichloropropene	0.172	0.0050	"	0.150		115	71-123			

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/19/15 14:05

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504140 - EPA 5030 Soil MS

LCS (1504140-BS1)

Prepared & Analyzed: 04/14/15

cis-1,3-Dichloropropene	0.154	0.0050	mg/kg	0.150		103	74-125			
trans-1,3-Dichloropropene	0.152	0.0050	"	0.150		101	72-126			
Ethylbenzene	0.147	0.0050	"	0.150		97.9	74-139			
Hexachlorobutadiene	0.155	0.0050	"	0.150		103	56-144			
Isopropylbenzene	0.148	0.0050	"	0.150		98.6	72-124			
p-Isopropyltoluene	0.145	0.010	"	0.150		96.8	72-123			
Methylene Chloride	0.145	0.015	"	0.150		97.0	10-183			
Naphthalene	0.129	0.010	"	0.150		85.9	66-138			
n-Propylbenzene	0.149	0.0050	"	0.150		99.2	76-121			
Styrene	0.150	0.010	"	0.150		100	76-133			
1,1,2,2-Tetrachloroethane	0.133	0.0050	"	0.150		88.7	60-137			
1,1,1,2-Tetrachloroethane	0.144	0.0050	"	0.150		95.7	86-121			
Tetrachloroethene	0.152	0.0050	"	0.150		101	69-131			
Toluene	0.138	0.0050	"	0.150		91.8	61-134			
1,2,3-Trichlorobenzene	0.140	0.0050	"	0.150		93.4	63-142			
1,2,4-Trichlorobenzene	0.149	0.0050	"	0.150		99.1	63-141			
1,1,2-Trichloroethane	0.137	0.0050	"	0.150		91.6	75-136			
1,1,1-Trichloroethane	0.146	0.0050	"	0.150		97.5	71-126			
Trichloroethene	0.148	0.0050	"	0.150		98.5	86-118			
Trichlorofluoromethane	0.155	0.0050	"	0.150		103	62-128			
1,2,3-Trichloropropane	0.122	0.010	"	0.150		81.5	80-118			
1,3,5-Trimethylbenzene	0.144	0.0050	"	0.150		96.0	72-121			
1,2,4-Trimethylbenzene	0.141	0.0050	"	0.150		94.1	78-126			
Vinyl chloride	0.146	0.0050	"	0.150		97.2	63-134			
m,p-Xylene	0.285	0.010	"	0.300		95.1	73-137			
o-Xylene	0.141	0.0050	"	0.150		94.2	73-141			
Surrogate: 1,2-Dichloroethane-d4	0.0397		"	0.0396		100	23-173			
Surrogate: Toluene-d8	0.0399		"	0.0400		99.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0405		"	0.0400		101	21-167			

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Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504140 - EPA 5030 Soil MS

Matrix Spike (1504140-MS1)	Source: 1504145-02			Prepared & Analyzed: 04/14/15						
Benzene	0.130	0.0020	mg/kg	0.150	ND	86.5	30-131			
Bromobenzene	0.125	0.0050	"	0.150	ND	83.6	39-124			
Bromochloromethane	0.139	0.0050	"	0.150	ND	92.4	62-121			
Bromodichloromethane	0.137	0.0050	"	0.150	ND	91.4	51-120			
Bromoform	0.149	0.0050	"	0.150	ND	99.2	52-125			
Bromomethane	0.122	0.010	"	0.150	ND	81.4	10-152			
n-Butylbenzene	0.102	0.0050	"	0.150	ND	67.7	10-144			
sec-Butylbenzene	0.105	0.0050	"	0.150	ND	70.3	10-140			
tert-Butylbenzene	0.110	0.0050	"	0.150	ND	73.3	16-132			
Carbon tetrachloride	0.138	0.0050	"	0.150	ND	91.8	46-125			
Chlorobenzene	0.125	0.0050	"	0.150	ND	83.5	42-125			
Chloroethane	0.141	0.0050	"	0.150	ND	94.2	46-125			
Chloroform	0.133	0.0050	"	0.150	ND	88.5	57-118			
Chloromethane	0.137	0.015	"	0.150	ND	91.4	33-132			
2-Chlorotoluene	0.117	0.0050	"	0.150	ND	78.3	30-125			
4-Chlorotoluene	0.115	0.0050	"	0.150	ND	76.9	29-127			
Chlorodibromomethane	0.144	0.010	"	0.150	ND	95.7	54-124			
1,2-Dibromo-3-chloropropane	0.159	0.015	"	0.150	ND	106	10-175			
1,2-Dibromoethane (EDB)	0.142	0.0050	"	0.150	ND	94.9	65-125			
Dibromomethane	0.147	0.0050	"	0.150	ND	97.7	64-127			
1,2-Dichlorobenzene	0.118	0.0050	"	0.150	ND	78.8	24-134			
1,3-Dichlorobenzene	0.116	0.0050	"	0.150	ND	77.1	22-130			
1,4-Dichlorobenzene	0.116	0.0050	"	0.150	ND	77.3	21-131			
Dichlorodifluoromethane	0.146	0.0050	"	0.150	ND	97.1	47-117			
1,1-Dichloroethane	0.133	0.0050	"	0.150	ND	88.5	55-119			
Tert-amyl methyl ether	0.137	0.0050	"	0.149	ND	91.4	60-124			
1,2-Dichloroethane (EDC)	0.137	0.0050	"	0.150	ND	91.2	65-124			
1,1-Dichloroethene	0.141	0.0050	"	0.150	ND	93.9	42-145			
Tert-butyl alcohol	0.720	0.020	"	0.747	ND	96.4	64-131			
cis-1,2-Dichloroethene	0.135	0.0050	"	0.150	ND	90.1	56-121			
Ethyl tert-butyl ether	0.133	0.010	"	0.150	ND	88.7	60-119			
trans-1,2-Dichloroethene	0.138	0.0050	"	0.150	ND	91.8	52-126			
Di-isopropyl ether	0.134	0.0050	"	0.150	ND	89.5	40-132			
1,2-Dichloropropane	0.129	0.0050	"	0.150	ND	86.1	61-115			
Methyl tert-butyl ether	0.138	0.015	"	0.150	ND	92.1	64-124			
1,3-Dichloropropane	0.141	0.0050	"	0.150	ND	93.9	66-123			
2,2-Dichloropropane	0.155	0.010	"	0.150	ND	104	35-127			
1,1-Dichloropropene	0.155	0.0050	"	0.150	ND	103	52-119			

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/19/15 14:05

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504140 - EPA 5030 Soil MS

Matrix Spike (1504140-MS1)	Source: 1504145-02			Prepared & Analyzed: 04/14/15						
cis-1,3-Dichloropropene	0.155	0.0050	mg/kg	0.150	ND	103	47-122			
trans-1,3-Dichloropropene	0.153	0.0050	"	0.150	ND	102	51-119			
Ethylbenzene	0.123	0.0050	"	0.150	ND	82.3	22-153			
Hexachlorobutadiene	0.0679	0.0050	"	0.150	ND	45.2	10-149			
Isopropylbenzene	0.119	0.0050	"	0.150	ND	79.1	18-135			
p-Isopropyltoluene	0.105	0.010	"	0.150	ND	69.9	12-132			
Methylene Chloride	0.159	0.015	"	0.150	ND	106	10-167			
Naphthalene	0.118	0.010	"	0.150	ND	78.6	10-158			
n-Propylbenzene	0.118	0.0050	"	0.150	ND	78.8	15-134			
Styrene	0.131	0.010	"	0.150	ND	87.4	33-135			
1,1,2,2-Tetrachloroethane	0.140	0.0050	"	0.150	ND	93.2	10-166			
1,1,1,2-Tetrachloroethane	0.130	0.0050	"	0.150	ND	86.5	49-123			
Tetrachloroethene	0.127	0.0050	"	0.150	ND	84.4	33-134			
Toluene	0.124	0.0050	"	0.150	ND	82.9	30-134			
1,2,3-Trichlorobenzene	0.0968	0.0050	"	0.150	ND	64.5	10-155			
1,2,4-Trichlorobenzene	0.0998	0.0050	"	0.150	ND	66.5	10-152			
1,1,2-Trichloroethane	0.142	0.0050	"	0.150	ND	94.9	46-139			
1,1,1-Trichloroethane	0.140	0.0050	"	0.150	ND	93.2	51-124			
Trichloroethene	0.132	0.0050	"	0.150	ND	88.2	16-187			
Trichlorofluoromethane	0.148	0.0050	"	0.150	ND	98.7	53-125			
1,2,3-Trichloropropane	0.118	0.010	"	0.150	ND	78.6	69-118			
1,3,5-Trimethylbenzene	0.118	0.0050	"	0.150	ND	78.5	20-128			
1,2,4-Trimethylbenzene	0.113	0.0050	"	0.150	ND	75.6	17-142			
Vinyl chloride	0.143	0.0050	"	0.150	ND	95.0	50-134			
m,p-Xylene	0.240	0.010	"	0.300	ND	80.1	10-159			
o-Xylene	0.122	0.0050	"	0.150	ND	81.1	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0429		"	0.0396		108	23-173			
Surrogate: Toluene-d8	0.0401		"	0.0400		100	20-170			
Surrogate: 4-Bromofluorobenzene	0.0400		"	0.0400		100	21-167			

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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504140 - EPA 5030 Soil MS

Matrix Spike Dup (1504140-MSD1)	Source: 1504145-02			Prepared & Analyzed: 04/14/15						
Benzene	0.129	0.0020	mg/kg	0.150	ND	86.0	30-131	0.580	34	
Bromobenzene	0.119	0.0050	"	0.150	ND	79.3	39-124	5.26	21	
Bromochloromethane	0.137	0.0050	"	0.150	ND	91.0	62-121	1.50	20	
Bromodichloromethane	0.136	0.0050	"	0.150	ND	90.7	51-120	0.703	22	
Bromoform	0.144	0.0050	"	0.150	ND	96.3	52-125	2.99	22	
Bromomethane	0.150	0.010	"	0.150	ND	100	10-152	20.7	90	
n-Butylbenzene	0.0925	0.0050	"	0.150	ND	61.7	10-144	9.40	52	
sec-Butylbenzene	0.0966	0.0050	"	0.150	ND	64.4	10-140	8.82	45	
tert-Butylbenzene	0.102	0.0050	"	0.150	ND	67.9	16-132	7.67	33	
Carbon tetrachloride	0.135	0.0050	"	0.150	ND	89.7	46-125	2.25	22	
Chlorobenzene	0.123	0.0050	"	0.150	ND	81.9	42-125	1.96	18	
Chloroethane	0.140	0.0050	"	0.150	ND	93.1	46-125	1.15	24	
Chloroform	0.132	0.0050	"	0.150	ND	87.8	57-118	0.771	19	
Chloromethane	0.134	0.015	"	0.150	ND	89.2	33-132	2.44	18	
2-Chlorotoluene	0.110	0.0050	"	0.150	ND	73.5	30-125	6.35	24	
4-Chlorotoluene	0.108	0.0050	"	0.150	ND	71.9	29-127	6.75	24	
Chlorodibromomethane	0.141	0.010	"	0.150	ND	93.9	54-124	1.94	22	
1,2-Dibromo-3-chloropropane	0.148	0.015	"	0.150	ND	98.4	10-175	7.11	39	
1,2-Dibromoethane (EDB)	0.139	0.0050	"	0.150	ND	93.0	65-125	2.07	22	
Dibromomethane	0.146	0.0050	"	0.150	ND	97.3	64-127	0.451	19	
1,2-Dichlorobenzene	0.110	0.0050	"	0.150	ND	73.2	24-134	7.42	26	
1,3-Dichlorobenzene	0.109	0.0050	"	0.150	ND	72.5	22-130	6.10	27	
1,4-Dichlorobenzene	0.108	0.0050	"	0.150	ND	71.7	21-131	7.51	25	
Dichlorodifluoromethane	0.144	0.0050	"	0.150	ND	95.8	47-117	1.31	36	
Tert-amyl methyl ether	0.137	0.0050	"	0.149	ND	91.7	60-124	0.351	40	
1,1-Dichloroethane	0.132	0.0050	"	0.150	ND	88.1	55-119	0.521	22	
1,2-Dichloroethane (EDC)	0.138	0.0050	"	0.150	ND	91.9	65-124	0.743	19	
Tert-butyl alcohol	0.709	0.020	"	0.747	ND	95.0	64-131	1.47	24	
1,1-Dichloroethene	0.140	0.0050	"	0.150	ND	93.4	42-145	0.598	22	
Ethyl tert-butyl ether	0.133	0.010	"	0.150	ND	88.7	60-119	0.0677	38	
cis-1,2-Dichloroethene	0.132	0.0050	"	0.150	ND	87.8	56-121	2.63	21	
Di-isopropyl ether	0.133	0.0050	"	0.150	ND	88.7	40-132	0.921	108	
trans-1,2-Dichloroethene	0.135	0.0050	"	0.150	ND	89.8	52-126	2.20	22	
Methyl tert-butyl ether	0.139	0.015	"	0.150	ND	92.7	64-124	0.606	28	
1,2-Dichloropropane	0.128	0.0050	"	0.150	ND	85.6	61-115	0.606	17	
1,3-Dichloropropane	0.138	0.0050	"	0.150	ND	92.1	66-123	1.87	24	
2,2-Dichloropropane	0.150	0.010	"	0.150	ND	100	35-127	3.20	29	
1,1-Dichloropropene	0.152	0.0050	"	0.150	ND	101	52-119	1.86	21	

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Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/19/15 14:05

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504140 - EPA 5030 Soil MS

Matrix Spike Dup (1504140-MSD1)	Source: 1504145-02			Prepared & Analyzed: 04/14/15						
cis-1,3-Dichloropropene	0.150	0.0050	mg/kg	0.150	ND	100	47-122	3.15	40	
trans-1,3-Dichloropropene	0.148	0.0050	"	0.150	ND	98.8	51-119	3.17	52	
Ethylbenzene	0.120	0.0050	"	0.150	ND	79.8	22-153	3.11	24	
Hexachlorobutadiene	0.0595	0.0050	"	0.150	ND	39.7	10-149	13.1	59	
Isopropylbenzene	0.113	0.0050	"	0.150	ND	75.3	18-135	5.00	33	
p-Isopropyltoluene	0.0963	0.010	"	0.150	ND	64.2	12-132	8.47	38	
Methylene Chloride	0.156	0.015	"	0.150	ND	104	10-167	1.90	102	
Naphthalene	0.108	0.010	"	0.150	ND	72.1	10-158	8.60	42	
n-Propylbenzene	0.110	0.0050	"	0.150	ND	73.6	15-134	6.72	37	
Styrene	0.127	0.010	"	0.150	ND	84.7	33-135	3.21	22	
1,1,2,2-Tetrachloroethane	0.132	0.0050	"	0.150	ND	88.1	10-166	5.65	45	
1,1,1,2-Tetrachloroethane	0.127	0.0050	"	0.150	ND	84.8	49-123	2.01	21	
Tetrachloroethene	0.121	0.0050	"	0.150	ND	81.0	33-134	4.18	26	
Toluene	0.122	0.0050	"	0.150	ND	81.4	30-134	1.87	30	
1,2,3-Trichlorobenzene	0.0868	0.0050	"	0.150	ND	57.9	10-155	10.8	40	
1,2,4-Trichlorobenzene	0.0900	0.0050	"	0.150	ND	60.0	10-152	10.3	42	
1,1,2-Trichloroethane	0.142	0.0050	"	0.150	ND	94.7	46-139	0.211	34	
1,1,1-Trichloroethane	0.136	0.0050	"	0.150	ND	90.8	51-124	2.65	22	
Trichloroethene	0.133	0.0050	"	0.150	ND	88.7	16-187	0.520	19	
Trichlorofluoromethane	0.145	0.0050	"	0.150	ND	96.8	53-125	1.86	20	
1,2,3-Trichloropropane	0.105	0.010	"	0.150	ND	69.8	69-118	11.8	23	
1,3,5-Trimethylbenzene	0.111	0.0050	"	0.150	ND	74.1	20-128	5.82	31	
1,2,4-Trimethylbenzene	0.106	0.0050	"	0.150	ND	70.7	17-142	6.62	40	
Vinyl chloride	0.140	0.0050	"	0.150	ND	93.5	50-134	1.57	22	
m,p-Xylene	0.233	0.010	"	0.300	ND	77.5	10-159	3.29	68	
o-Xylene	0.118	0.0050	"	0.150	ND	78.5	31-151	3.23	38	
Surrogate: 1,2-Dichloroethane-d4	0.0424		"	0.0396		107	23-173			
Surrogate: Toluene-d8	0.0404		"	0.0400		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0402		"	0.0400		100	21-167			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1504148 - EPA 3050B

Blank (1504148-BLK1)

Prepared: 04/14/15 Analyzed: 04/15/15

Arsenic	ND	0.100	mg/kg wet							
Barium	ND	0.100	"							
Cadmium	ND	0.100	"							
Chromium	ND	0.500	"							
Lead	ND	0.100	"							
Selenium	ND	0.0500	"							
Silver	ND	0.100	"							
Zinc	ND	10.0	"							

LCS (1504148-BS1)

Prepared: 04/14/15 Analyzed: 04/16/15

Arsenic	84.3	0.250	mg/kg wet	99.6		84.6	78.4-140
Barium	263	0.250	"	310		84.8	83.2-117
Cadmium	156	0.250	"	182		85.9	81.9-118
Chromium	139	1.25	"	136		102	80.1-121
Lead	99.6	0.250	"	115		86.6	81.8-119
Selenium	129	0.125	"	150		86.3	77.3-123
Silver	40.4	0.250	"	40.4		100	75-125
Zinc	127	25.0	"	133		95.8	80.7-132

Duplicate (1504148-DUP1)

Source: 1504142-01

Prepared: 04/14/15 Analyzed: 04/16/15

Arsenic	2.98	0.111	mg/kg dry		3.31		10.5	20
Barium	50.6	0.111	"		57.4		12.7	20
Cadmium	0.0742	0.111	"		0.100		29.6	20
Chromium	4.91	0.556	"		5.25		6.69	20
Lead	5.52	0.111	"		6.21		11.8	20
Selenium	0.160	0.0556	"		0.316		65.3	20
Silver	ND	0.111	"		0.00890			20
Zinc	20.0	11.1	"		22.3		10.9	20

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504148 - EPA 3050B

Matrix Spike (1504148-MS1)

Source: 1504142-01 Prepared: 04/14/15 Analyzed: 04/16/15

Arsenic	39.1	0.111	mg/kg dry	42.9	3.31	83.4	75-125			
Barium	86.4	0.111	"	42.9	57.4	67.5	75-125			
Cadmium	1.91	0.111	"	2.15	0.100	84.3	75-125			
Chromium	41.9	0.556	"	42.9	5.25	85.4	75-125			
Lead	23.3	0.111	"	21.5	6.21	79.5	75-125			
Selenium	3.50	0.0556	"	4.29	0.316	74.0	75-125			
Silver	1.89	0.111	"	2.15	0.00890	87.4	75-125			
Zinc	56.8	11.1	"	42.9	22.3	80.1	75-125			

Matrix Spike Dup (1504148-MSD1)

Source: 1504142-01 Prepared: 04/14/15 Analyzed: 04/16/15

Arsenic	50.8	0.111	mg/kg dry	43.9	3.31	108	75-125	25.9	25	
Barium	120	0.111	"	43.9	57.4	143	75-125	32.6	25	
Cadmium	2.51	0.111	"	2.19	0.100	110	75-125	27.1	25	
Chromium	54.5	0.556	"	43.9	5.25	112	75-125	26.1	25	
Lead	30.6	0.111	"	21.9	6.21	111	75-125	27.3	25	
Selenium	4.14	0.0556	"	4.39	0.316	87.2	75-125	16.9	25	
Silver	2.50	0.111	"	2.19	0.00890	114	75-125	28.1	25	
Zinc	74.2	11.1	"	43.9	22.3	118	75-125	26.6	25	

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

Total Mercury by EPA Method 7471 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504154 - EPA 7471A

Blank (1504154-BLK1)			Prepared: 04/15/15 Analyzed: 04/16/15							
Mercury	ND	0.0500	mg/kg wet							
LCS (1504154-BS1)			Prepared: 04/15/15 Analyzed: 04/16/15							
Mercury	0.496	0.0500	mg/kg wet	0.500		99.2	80-120			
Duplicate (1504154-DUP1)			Source: 1504131-01		Prepared: 04/15/15 Analyzed: 04/16/15					
Mercury	0.00757	0.0500	mg/kg dry		0.00644			16.1	20	
Matrix Spike (1504154-MS1)			Source: 1504131-01		Prepared: 04/15/15 Analyzed: 04/16/15					
Mercury	0.534	0.0557	mg/kg dry	0.537	0.00644	98.3	80-120			
Matrix Spike Dup (1504154-MSD1)			Source: 1504131-01		Prepared: 04/15/15 Analyzed: 04/16/15					
Mercury	0.533	0.0557	mg/kg dry	0.545	0.00644	96.5	80-120	0.232	20	

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Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/19/15 14:05

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504179 - General Preparation

Duplicate (1504179-DUP1)	Source: 1504147-01			Prepared: 04/16/15	Analyzed: 04/17/15
% Solids	94.4		%	92.1	2.47 20

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/19/15 14:05

Notes and Definitions

- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

April 22, 2015

Steve Hoffman

Terracon - Wheat Ridge

10625 West I-70 Frontage Road, Suite 3

Wheat Ridge, CO 80033

RE: National Western Complex

Enclosed are the results of analyses for samples received by Summit Scientific on 04/14/15 16:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury
President



Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/22/15 06:56

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB-7 (0-6")	1504153-01	Soil	04/14/15 09:20	04/14/15 16:40
SB-7 (6-24")	1504153-02	Soil	04/14/15 09:20	04/14/15 16:40
SB-7 (5')	1504153-03	Soil	04/14/15 10:00	04/14/15 16:40
SB-16 (0-6")	1504153-04	Soil	04/14/15 14:30	04/14/15 16:40
SB-16 (6-24")	1504153-05	Soil	04/14/15 14:30	04/14/15 16:40
SB-16 (11')	1504153-06	Soil	04/14/15 15:20	04/14/15 16:40
SB-18 (0-6")	1504153-07	Soil	04/14/15 07:30	04/14/15 16:40
SB-18 (6-24")	1504153-08	Soil	04/14/15 07:30	04/14/15 16:40
SB-18 (7')	1504153-09	Soil	04/14/15 07:55	04/14/15 16:40

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/22/15 06:56

Summit Scientific 1504153

741 Corporate Circle Suite I ♦ Golden, Colorado 80401
 303-277-9310 ♦ 303-374-5933 Fax

Page 1 of 1

Client: Terracon Consultants

Address: 10625 West I-70 Frontage Road North, Suite 3
 City/State/Zip: Wheat Ridge, CO 80033
 Phone: (303) 454-5275 Fax: (303) 423-3353
 Sampler Name: Marshall Haworth

Project Manager: Steve Hoffman

E-Mail: sbhoffman@terracon.com

Project Name: National Western Complex

Project Number: 25157010

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix				Analyze For:				Special Instructions		
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	VOC's 8280B	TPH 8015	RCRA 8+Zinc				
SB-7 (0-6")	4-14-15	0920	1		X			X										
SB-7 (6-24")	4-14-15	0920	1		X			X										
SB-7 (5")	4-14-15	1000	1		X			X										
SB-16 (0-6")	4-14-15	1430	1		X			X										
SB-16 (6-24")	4-14-15	1430	1		X			X										
SB-16 (11")	4-14-15	1520	1		X			X										
SB-18 (0-6")	4-14-15	0730	1		X			X										
SB-18 (6-24")	4-14-15	0730	1		X			X										
SB-18 (7")	4-14-15	0755	1		X			X										

Relinquished by:	Date/Time: 4-14-15 1640	Received by:	Date/Time: 4/14/15 1640	Turn Around Time (Check)	Notes:	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day <input type="checkbox"/>	72 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 Hours <input type="checkbox"/>	on ice
Relinquished by:	Date/Time:	Received in Lab by:	Date/Time:	Sample Integrity:		
				Temperature Upon Receipt: 5.4 Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

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S₂

Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/22/15 06:56

Sample Receipt Checklist

S2 Work Order: 1504153

Client: Terracon Client Project ID: National Western Complex

Shipped Via: HD Airbill #: _____
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Matrix (check all that apply): Air Soil/Solid Water Other: _____
(Describe)

Cooler ID				
Temp (°C)	5.4			

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.	X			
Were all samples received intact ⁽¹⁾ ?	X			
Was adequate sample volume provided ⁽¹⁾ ?	X			
If custody seals are present, are they intact ⁽¹⁾ ?			X	
Are short holding time analytes or samples with HTs due within 48 hours present?			X	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	X			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	X			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	X			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	X			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.		A		
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, etc.			X	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.			X	
If dissolved metals are requested, were samples field filtered?			X	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

Ben Shrewsbury
 Custodian Printed Name

[Signature]
 Signature or Initials of Custodian

4/14/15 1627
 Date/Time

[Signature]



Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/22/15 06:56

SB-7 (0-6")
1504153-01 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/14/15 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.77	0.132	mg/kg dry	1	1504182	04/16/15	04/17/15	EPA 6020A	
Barium	95.2	0.132	"	"	"	"	"	"	
Cadmium	0.195	0.132	"	"	"	"	"	"	
Chromium	7.52	0.661	"	"	"	"	"	"	
Lead	33.1	0.132	"	"	"	"	"	"	
Selenium	0.366	0.0661	"	"	"	"	"	"	
Silver	0.432	0.132	"	"	"	"	"	"	

Date Sampled: **04/14/15 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	109	13.2	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/14/15 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0661	mg/kg dry	1	1504170	04/16/15	04/16/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/14/15 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	75.6		%	1	1504179	04/16/15	04/17/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/22/15 06:56

SB-7 (6-24")
1504153-02 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/14/15 09:20**

Analyte	Result	Reporting			Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units							
Arsenic	2.15	0.115	mg/kg dry	1	1504182	04/16/15	04/17/15	EPA 6020A		
Barium	79.5	0.115	"	"	"	"	"	"		
Cadmium	0.286	0.115	"	"	"	"	"	"		
Chromium	5.50	0.575	"	"	"	"	"	"		
Lead	50.8	0.115	"	"	"	"	"	"		
Selenium	0.0845	0.0575	"	"	"	"	"	"		
Silver	0.594	0.115	"	"	"	"	"	"		

Date Sampled: **04/14/15 09:20**

Analyte	Result	Reporting			Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units							
Zinc	92.3	11.5	"	"	"	"	"	"		

Total Mercury by EPA Method 7471

Date Sampled: **04/14/15 09:20**

Analyte	Result	Reporting			Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units							
Mercury	0.434	0.0644	mg/kg dry	1	1504170	04/16/15	04/16/15	EPA 7471		

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/14/15 09:20**

Analyte	Result	Reporting			Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units							
% Solids	77.7		%	1	1504179	04/16/15	04/17/15	% calculation		

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/22/15 06:56

SB-7 (5')
1504153-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/14/15 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504183	04/16/15	04/16/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/14/15 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		121 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/14/15 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504184	"	04/17/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/22/15 06:56

SB-7 (5')
1504153-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample	ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504184	04/16/15	04/17/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"	"

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/22/15 06:56

SB-7 (5')
1504153-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504184	04/16/15	04/17/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: **04/14/15 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		106 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		98.1 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.8 %		21-167	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/22/15 06:56

SB-16 (0-6")
1504153-04 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/14/15 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.80	0.0968	mg/kg dry	1	1504182	04/16/15	04/17/15	EPA 6020A	
Barium	38.4	0.0968	"	"	"	"	"	"	
Cadmium	0.389	0.0968	"	"	"	"	"	"	
Chromium	5.81	0.484	"	"	"	"	"	"	
Lead	8.98	0.0968	"	"	"	"	"	"	
Selenium	ND	0.0484	"	"	"	"	"	"	
Silver	ND	0.0968	"	"	"	"	"	"	

Date Sampled: **04/14/15 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	18.3	9.68	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/14/15 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0557	mg/kg dry	1	1504170	04/16/15	04/16/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/14/15 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.7		%	1	1504179	04/16/15	04/17/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/22/15 06:56

SB-16 (6-24")
1504153-05 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/14/15 14:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.14	0.113	mg/kg dry	1	1504182	04/16/15	04/17/15	EPA 6020A	
Barium	21.6	0.113	"	"	"	"	"	"	
Cadmium	0.162	0.113	"	"	"	"	"	"	
Chromium	2.50	0.564	"	"	"	"	"	"	
Lead	4.38	0.113	"	"	"	"	"	"	
Selenium	ND	0.0564	"	"	"	"	"	"	
Silver	ND	0.113	"	"	"	"	"	"	

Date Sampled: **04/14/15 14:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	13.5	11.3	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/14/15 14:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0564	mg/kg dry	1	1504170	04/16/15	04/16/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/14/15 14:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	88.7		%	1	1504179	04/16/15	04/17/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/22/15 06:56

SB-16 (11')
1504153-06 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/14/15 15:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504183	04/16/15	04/16/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/14/15 15:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		114 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/14/15 15:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504184	"	04/17/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/22/15 06:56

SB-16 (11')
1504153-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample	ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504184	04/16/15	04/17/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"	"

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/22/15 06:56

SB-16 (11')
1504153-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504184	04/16/15	04/17/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: 04/14/15 15:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		98.8 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.5 %		21-167	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/22/15 06:56

SB-18 (0-6")
1504153-07 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/14/15 07:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.02	0.0916	mg/kg dry	1	1504182	04/16/15	04/17/15	EPA 6020A	
Barium	53.0	0.0916	"	"	"	"	"	"	
Cadmium	0.325	0.0916	"	"	"	"	"	"	
Chromium	5.11	0.458	"	"	"	"	"	"	
Lead	17.2	0.0916	"	"	"	"	"	"	
Selenium	0.259	0.0458	"	"	"	"	"	"	
Silver	0.116	0.0916	"	"	"	"	"	"	

Date Sampled: **04/14/15 07:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	87.9	9.16	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/14/15 07:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0535	mg/kg dry	1	1504170	04/16/15	04/16/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/14/15 07:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.5		%	1	1504179	04/16/15	04/17/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/22/15 06:56

**SB-18 (6-24")
 1504153-08 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/14/15 07:30**

Analyte	Result	Reporting			Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units							
Arsenic	2.84	0.106	mg/kg dry	1	1504182	04/16/15	04/17/15	EPA 6020A		
Barium	66.2	0.106	"	"	"	"	"	"	"	
Cadmium	0.370	0.106	"	"	"	"	"	"	"	
Chromium	8.23	0.532	"	"	"	"	"	"	"	
Lead	61.5	0.106	"	"	"	"	"	"	"	
Selenium	0.0971	0.0532	"	"	"	"	"	"	"	
Silver	0.226	0.106	"	"	"	"	"	"	"	

Date Sampled: **04/14/15 07:30**

Analyte	Result	Reporting			Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units							
Zinc	118	10.6	"	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/14/15 07:30**

Analyte	Result	Reporting			Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units							
Mercury	ND	0.0532	mg/kg dry	1	1504170	04/16/15	04/16/15	EPA 7471		

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/14/15 07:30**

Analyte	Result	Reporting			Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units							
% Solids	94.0		%	1	1504179	04/16/15	04/17/15	% calculation		

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/22/15 06:56

SB-18 (7')
1504153-09 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/14/15 07:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504183	04/16/15	04/16/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/14/15 07:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		118 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/14/15 07:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504184	"	04/17/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/22/15 06:56

SB-18 (7')
1504153-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample	ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504184	04/16/15	04/17/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"	"

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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/22/15 06:56

SB-18 (7')
1504153-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504184	04/16/15	04/17/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: 04/14/15 07:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		97.8 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.8 %		21-167	"	"	"	"	

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/22/15 06:56

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1504183 - EPA 3550A

Blank (1504183-BLK1)				Prepared & Analyzed: 04/16/15							
C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
<i>Surrogate: o-Terphenyl</i>	13.9		"	12.2	114	70-130					
LCS (1504183-BS1)				Prepared & Analyzed: 04/16/15							
C10-C28 (DRO)	581	50	mg/kg	501	116	50-150					
<i>Surrogate: o-Terphenyl</i>	15.3		"	12.2	126	70-130					
Matrix Spike (1504183-MS1)				Source: 1504153-03		Prepared & Analyzed: 04/16/15					
C10-C28 (DRO)	587	50	mg/kg	496	13.4	116	50-150				
<i>Surrogate: o-Terphenyl</i>	15.6		"	12.1	129	70-130					
Matrix Spike Dup (1504183-MSD1)				Source: 1504153-03		Prepared & Analyzed: 04/16/15					
C10-C28 (DRO)	528	50	mg/kg	495	13.4	104	50-150	10.7	20		
<i>Surrogate: o-Terphenyl</i>	14.2		"	12.1	118	70-130					

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Reported:
 04/22/15 06:56

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting		Spike Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

Batch 1504184 - EPA 5030 Soil MS

Blank (1504184-BLK1)

Prepared: 04/16/15 Analyzed: 04/17/15

Benzene	ND	0.0020	mg/kg						
Bromobenzene	ND	0.0050	"						
Bromochloromethane	ND	0.0050	"						
Bromodichloromethane	ND	0.0050	"						
Bromoform	ND	0.0050	"						
Bromomethane	ND	0.010	"						
n-Butylbenzene	ND	0.0050	"						
sec-Butylbenzene	ND	0.0050	"						
tert-Butylbenzene	ND	0.0050	"						
Carbon tetrachloride	ND	0.0050	"						
Chlorobenzene	ND	0.0050	"						
Chloroethane	ND	0.0050	"						
Chloroform	ND	0.0050	"						
Chloromethane	ND	0.015	"						
2-Chlorotoluene	ND	0.0050	"						
4-Chlorotoluene	ND	0.0050	"						
Chlorodibromomethane	ND	0.010	"						
1,2-Dibromo-3-chloropropane	ND	0.015	"						
1,2-Dibromoethane (EDB)	ND	0.0050	"						
Dibromomethane	ND	0.0050	"						
1,2-Dichlorobenzene	ND	0.0050	"						
1,3-Dichlorobenzene	ND	0.0050	"						
1,4-Dichlorobenzene	ND	0.0050	"						
Dichlorodifluoromethane	ND	0.0050	"						
Tert-amyl methyl ether	ND	0.0050	"						
1,1-Dichloroethane	ND	0.0050	"						
1,2-Dichloroethane (EDC)	ND	0.0050	"						
Tert-butyl alcohol	ND	0.020	"						
1,1-Dichloroethene	ND	0.0050	"						
Ethyl tert-butyl ether	ND	0.010	"						
cis-1,2-Dichloroethene	ND	0.0050	"						
Di-isopropyl ether	ND	0.0050	"						
trans-1,2-Dichloroethene	ND	0.0050	"						
Methyl tert-butyl ether	ND	0.015	"						
1,2-Dichloropropane	ND	0.0050	"						
1,3-Dichloropropane	ND	0.0050	"						
2,2-Dichloropropane	ND	0.010	"						
1,1-Dichloropropene	ND	0.0050	"						

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Project: National Western Complex
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Reported:
 04/22/15 06:56

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504184 - EPA 5030 Soil MS

Blank (1504184-BLK1)

Prepared: 04/16/15 Analyzed: 04/17/15

cis-1,3-Dichloropropene	ND	0.0050	mg/kg							
trans-1,3-Dichloropropene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Hexachlorobutadiene	ND	0.0050	"							
Isopropylbenzene	ND	0.0050	"							
p-Isopropyltoluene	ND	0.010	"							
Methylene Chloride	ND	0.015	"							
Naphthalene	ND	0.010	"							
n-Propylbenzene	ND	0.0050	"							
Styrene	ND	0.010	"							
1,1,2,2-Tetrachloroethane	ND	0.0050	"							
1,1,1,2-Tetrachloroethane	ND	0.0050	"							
Tetrachloroethene	ND	0.0050	"							
Toluene	ND	0.0050	"							
1,2,3-Trichlorobenzene	ND	0.0050	"							
1,2,4-Trichlorobenzene	ND	0.0050	"							
1,1,2-Trichloroethane	ND	0.0050	"							
1,1,1-Trichloroethane	ND	0.0050	"							
Trichloroethene	ND	0.0050	"							
Trichlorofluoromethane	ND	0.0050	"							
1,2,3-Trichloropropane	ND	0.010	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
Vinyl chloride	ND	0.0050	"							
m,p-Xylene	ND	0.010	"							
o-Xylene	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0395		"	0.0396	99.8	23-173				
Surrogate: Toluene-d8	0.0388		"	0.0400	97.1	20-170				
Surrogate: 4-Bromofluorobenzene	0.0369		"	0.0400	92.2	21-167				

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/22/15 06:56

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504184 - EPA 5030 Soil MS

LCS (1504184-BS1)

Prepared: 04/16/15 Analyzed: 04/17/15

Benzene	0.141	0.0020	mg/kg	0.150		94.2	58-130			
Bromobenzene	0.149	0.0050	"	0.150		99.2	87-115			
Bromochloromethane	0.144	0.0050	"	0.150		95.7	82-122			
Bromodichloromethane	0.146	0.0050	"	0.150		97.6	84-119			
Bromoform	0.150	0.0050	"	0.150		99.9	76-119			
Bromomethane	0.181	0.010	"	0.150		121	39-152			
n-Butylbenzene	0.156	0.0050	"	0.150		104	70-131			
sec-Butylbenzene	0.150	0.0050	"	0.150		99.9	74-124			
tert-Butylbenzene	0.147	0.0050	"	0.150		98.0	77-121			
Carbon tetrachloride	0.145	0.0050	"	0.150		96.6	66-127			
Chlorobenzene	0.146	0.0050	"	0.150		97.2	82-120			
Chloroethane	0.147	0.0050	"	0.150		98.3	63-126			
Chloroform	0.146	0.0050	"	0.150		97.4	82-120			
Chloromethane	0.140	0.015	"	0.150		93.1	57-133			
2-Chlorotoluene	0.149	0.0050	"	0.150		99.2	82-117			
4-Chlorotoluene	0.147	0.0050	"	0.150		98.1	81-119			
Chlorodibromomethane	0.149	0.010	"	0.150		99.4	82-124			
1,2-Dibromo-3-chloropropane	0.161	0.015	"	0.150		107	62-128			
1,2-Dibromoethane (EDB)	0.146	0.0050	"	0.150		97.2	86-122			
Dibromomethane	0.148	0.0050	"	0.150		98.8	83-124			
1,2-Dichlorobenzene	0.150	0.0050	"	0.150		100	84-120			
1,3-Dichlorobenzene	0.151	0.0050	"	0.150		101	81-118			
1,4-Dichlorobenzene	0.148	0.0050	"	0.150		98.6	80-118			
Dichlorodifluoromethane	0.134	0.0050	"	0.150		89.6	25-141			
Tert-amyl methyl ether	0.141	0.0050	"	0.149		94.6	50-147			
1,1-Dichloroethane	0.143	0.0050	"	0.150		95.1	78-120			
1,2-Dichloroethane (EDC)	0.137	0.0050	"	0.150		91.2	81-125			
Tert-butyl alcohol	0.665	0.020	"	0.747		89.0	64-127			
1,1-Dichloroethene	0.147	0.0050	"	0.150		97.7	71-122			
Ethyl tert-butyl ether	0.139	0.010	"	0.150		92.8	80-122			
cis-1,2-Dichloroethene	0.148	0.0050	"	0.150		98.6	84-121			
Di-isopropyl ether	0.141	0.0050	"	0.150		93.9	78-120			
trans-1,2-Dichloroethene	0.150	0.0050	"	0.150		100	77-125			
Methyl tert-butyl ether	0.141	0.015	"	0.150		94.1	77-124			
1,2-Dichloropropane	0.139	0.0050	"	0.150		92.7	88-114			
1,3-Dichloropropane	0.144	0.0050	"	0.150		95.8	86-122			
2,2-Dichloropropane	0.147	0.010	"	0.150		97.7	32-150			
1,1-Dichloropropene	0.165	0.0050	"	0.150		110	71-123			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/22/15 06:56

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504184 - EPA 5030 Soil MS

LCS (1504184-BS1)

Prepared: 04/16/15 Analyzed: 04/17/15

cis-1,3-Dichloropropene	0.149	0.0050	mg/kg	0.150		99.4	74-125			
trans-1,3-Dichloropropene	0.147	0.0050	"	0.150		98.1	72-126			
Ethylbenzene	0.146	0.0050	"	0.150		97.5	74-139			
Hexachlorobutadiene	0.155	0.0050	"	0.150		103	56-144			
Isopropylbenzene	0.147	0.0050	"	0.150		98.0	72-124			
p-Isopropyltoluene	0.150	0.010	"	0.150		99.8	72-123			
Methylene Chloride	0.151	0.015	"	0.150		100	10-183			
Naphthalene	0.139	0.010	"	0.150		92.9	66-138			
n-Propylbenzene	0.152	0.0050	"	0.150		101	76-121			
Styrene	0.154	0.010	"	0.150		103	76-133			
1,1,2,2-Tetrachloroethane	0.144	0.0050	"	0.150		96.0	60-137			
1,1,1,2-Tetrachloroethane	0.146	0.0050	"	0.150		97.5	86-121			
Tetrachloroethene	0.148	0.0050	"	0.150		98.9	69-131			
Toluene	0.139	0.0050	"	0.150		92.6	61-134			
1,2,3-Trichlorobenzene	0.151	0.0050	"	0.150		101	63-142			
1,2,4-Trichlorobenzene	0.157	0.0050	"	0.150		105	63-141			
1,1,2-Trichloroethane	0.145	0.0050	"	0.150		96.5	75-136			
1,1,1-Trichloroethane	0.148	0.0050	"	0.150		98.5	71-126			
Trichloroethene	0.144	0.0050	"	0.150		96.2	86-118			
Trichlorofluoromethane	0.150	0.0050	"	0.150		99.7	62-128			
1,2,3-Trichloropropane	0.128	0.010	"	0.150		85.4	80-118			
1,3,5-Trimethylbenzene	0.149	0.0050	"	0.150		99.1	72-121			
1,2,4-Trimethylbenzene	0.148	0.0050	"	0.150		98.7	78-126			
Vinyl chloride	0.142	0.0050	"	0.150		94.6	63-134			
m,p-Xylene	0.287	0.010	"	0.300		95.6	73-137			
o-Xylene	0.144	0.0050	"	0.150		96.1	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0395</i>		<i>"</i>	<i>0.0396</i>		<i>99.8</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0402</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0392</i>		<i>"</i>	<i>0.0400</i>		<i>98.0</i>	<i>21-167</i>			

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/22/15 06:56

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504184 - EPA 5030 Soil MS

Matrix Spike (1504184-MS1)	Source: 1504153-03			Prepared: 04/16/15		Analyzed: 04/17/15	
Benzene	0.109	0.0020	mg/kg	0.150	ND	73.0	30-131
Bromobenzene	0.111	0.0050	"	0.150	ND	73.8	39-124
Bromochloromethane	0.117	0.0050	"	0.150	ND	77.7	62-121
Bromodichloromethane	0.116	0.0050	"	0.150	ND	77.2	51-120
Bromoform	0.127	0.0050	"	0.150	ND	84.7	52-125
Bromomethane	0.138	0.010	"	0.150	ND	91.8	10-152
n-Butylbenzene	0.111	0.0050	"	0.150	ND	73.8	10-144
sec-Butylbenzene	0.108	0.0050	"	0.150	ND	72.3	10-140
tert-Butylbenzene	0.107	0.0050	"	0.150	ND	71.2	16-132
Carbon tetrachloride	0.115	0.0050	"	0.150	ND	76.7	46-125
Chlorobenzene	0.109	0.0050	"	0.150	ND	72.6	42-125
Chloroethane	0.120	0.0050	"	0.150	ND	79.7	46-125
Chloroform	0.112	0.0050	"	0.150	ND	74.8	57-118
Chloromethane	0.114	0.015	"	0.150	ND	76.1	33-132
2-Chlorotoluene	0.108	0.0050	"	0.150	ND	71.7	30-125
4-Chlorotoluene	0.106	0.0050	"	0.150	ND	70.5	29-127
Chlorodibromomethane	0.122	0.010	"	0.150	ND	81.1	54-124
1,2-Dibromo-3-chloropropane	0.139	0.015	"	0.150	ND	92.6	10-175
1,2-Dibromoethane (EDB)	0.123	0.0050	"	0.150	ND	82.0	65-125
Dibromomethane	0.123	0.0050	"	0.150	ND	82.2	64-127
1,2-Dichlorobenzene	0.110	0.0050	"	0.150	ND	73.3	24-134
1,3-Dichlorobenzene	0.109	0.0050	"	0.150	ND	72.9	22-130
1,4-Dichlorobenzene	0.107	0.0050	"	0.150	ND	71.4	21-131
Dichlorodifluoromethane	0.117	0.0050	"	0.150	ND	78.2	47-117
Tert-amyl methyl ether	0.117	0.0050	"	0.149	ND	78.1	60-124
1,1-Dichloroethane	0.111	0.0050	"	0.150	ND	73.8	55-119
1,2-Dichloroethane (EDC)	0.115	0.0050	"	0.150	ND	77.0	65-124
Tert-butyl alcohol	0.592	0.020	"	0.747	ND	79.3	64-131
1,1-Dichloroethene	0.121	0.0050	"	0.150	ND	80.9	42-145
cis-1,2-Dichloroethene	0.113	0.0050	"	0.150	ND	75.5	56-121
Ethyl tert-butyl ether	0.113	0.010	"	0.150	ND	75.6	60-119
Di-isopropyl ether	0.112	0.0050	"	0.150	ND	74.5	40-132
trans-1,2-Dichloroethene	0.109	0.0050	"	0.150	ND	72.5	52-126
1,2-Dichloropropane	0.109	0.0050	"	0.150	ND	72.4	61-115
Methyl tert-butyl ether	0.116	0.015	"	0.150	ND	77.0	64-124
1,3-Dichloropropane	0.119	0.0050	"	0.150	ND	79.4	66-123
2,2-Dichloropropane	0.137	0.010	"	0.150	ND	91.6	35-127
1,1-Dichloropropene	0.133	0.0050	"	0.150	ND	88.6	52-119

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/22/15 06:56

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504184 - EPA 5030 Soil MS

Matrix Spike (1504184-MS1)	Source: 1504153-03			Prepared: 04/16/15		Analyzed: 04/17/15				
cis-1,3-Dichloropropene	0.128	0.0050	mg/kg	0.150	ND	85.4	47-122			
trans-1,3-Dichloropropene	0.126	0.0050	"	0.150	ND	84.3	51-119			
Ethylbenzene	0.110	0.0050	"	0.150	ND	73.1	22-153			
Hexachlorobutadiene	0.0954	0.0050	"	0.150	ND	63.6	10-149			
Isopropylbenzene	0.110	0.0050	"	0.150	ND	73.4	18-135			
p-Isopropyltoluene	0.106	0.010	"	0.150	ND	70.7	12-132			
Methylene Chloride	0.113	0.015	"	0.150	ND	75.5	10-167			
Naphthalene	0.105	0.010	"	0.150	ND	69.8	10-158			
n-Propylbenzene	0.112	0.0050	"	0.150	ND	74.5	15-134			
Styrene	0.115	0.010	"	0.150	ND	76.6	33-135			
1,1,2,2-Tetrachloroethane	0.119	0.0050	"	0.150	ND	79.4	10-166			
1,1,1,2-Tetrachloroethane	0.112	0.0050	"	0.150	ND	74.5	49-123			
Tetrachloroethene	0.114	0.0050	"	0.150	ND	75.8	33-134			
Toluene	0.108	0.0050	"	0.150	ND	71.8	30-134			
1,2,3-Trichlorobenzene	0.105	0.0050	"	0.150	ND	69.9	10-155			
1,2,4-Trichlorobenzene	0.109	0.0050	"	0.150	ND	72.5	10-152			
1,1,2-Trichloroethane	0.122	0.0050	"	0.150	ND	81.2	46-139			
1,1,1-Trichloroethane	0.118	0.0050	"	0.150	ND	78.6	51-124			
Trichloroethene	0.116	0.0050	"	0.150	ND	77.6	16-187			
Trichlorofluoromethane	0.127	0.0050	"	0.150	ND	84.7	53-125			
1,2,3-Trichloropropane	0.0966	0.010	"	0.150	ND	64.4	69-118			QM-07
1,3,5-Trimethylbenzene	0.109	0.0050	"	0.150	ND	73.0	20-128			
1,2,4-Trimethylbenzene	0.108	0.0050	"	0.150	ND	71.8	17-142			
Vinyl chloride	0.121	0.0050	"	0.150	ND	80.6	50-134			
m,p-Xylene	0.213	0.010	"	0.300	ND	71.1	10-159			
o-Xylene	0.108	0.0050	"	0.150	ND	71.9	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0439		"	0.0396		111	23-173			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0402		"	0.0400		100	21-167			

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Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/22/15 06:56

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504184 - EPA 5030 Soil MS

Matrix Spike Dup (1504184-MSD1)	Source: 1504153-03			Prepared: 04/16/15		Analyzed: 04/17/15				
Benzene	0.115	0.0020	mg/kg	0.150	ND	76.9	30-131	5.26	34	
Bromobenzene	0.115	0.0050	"	0.150	ND	76.5	39-124	3.67	21	
Bromochloromethane	0.127	0.0050	"	0.150	ND	84.9	62-121	8.78	20	
Bromodichloromethane	0.125	0.0050	"	0.150	ND	83.4	51-120	7.74	22	
Bromoform	0.137	0.0050	"	0.150	ND	91.4	52-125	7.54	22	
Bromomethane	0.130	0.010	"	0.150	ND	86.5	10-152	5.99	90	
n-Butylbenzene	0.0962	0.0050	"	0.150	ND	64.2	10-144	14.0	52	
sec-Butylbenzene	0.0990	0.0050	"	0.150	ND	66.0	10-140	9.14	45	
tert-Butylbenzene	0.101	0.0050	"	0.150	ND	67.4	16-132	5.43	33	
Carbon tetrachloride	0.115	0.0050	"	0.150	ND	76.5	46-125	0.313	22	
Chlorobenzene	0.113	0.0050	"	0.150	ND	75.5	42-125	3.89	18	
Chloroethane	0.117	0.0050	"	0.150	ND	78.2	46-125	1.85	24	
Chloroform	0.117	0.0050	"	0.150	ND	77.8	57-118	3.96	19	
Chloromethane	0.111	0.015	"	0.150	ND	74.3	33-132	2.45	18	
2-Chlorotoluene	0.107	0.0050	"	0.150	ND	71.4	30-125	0.531	24	
4-Chlorotoluene	0.105	0.0050	"	0.150	ND	70.1	29-127	0.569	24	
Chlorodibromomethane	0.131	0.010	"	0.150	ND	87.0	54-124	7.07	22	
1,2-Dibromo-3-chloropropane	0.156	0.015	"	0.150	ND	104	10-175	11.8	39	
1,2-Dibromoethane (EDB)	0.131	0.0050	"	0.150	ND	87.4	65-125	6.33	22	
Dibromomethane	0.136	0.0050	"	0.150	ND	90.8	64-127	9.94	19	
1,2-Dichlorobenzene	0.113	0.0050	"	0.150	ND	75.6	24-134	3.01	26	
1,3-Dichlorobenzene	0.110	0.0050	"	0.150	ND	73.4	22-130	0.656	27	
1,4-Dichlorobenzene	0.106	0.0050	"	0.150	ND	70.8	21-131	0.731	25	
Dichlorodifluoromethane	0.110	0.0050	"	0.150	ND	73.6	47-117	6.04	36	
Tert-amyl methyl ether	0.125	0.0050	"	0.149	ND	83.8	60-124	7.14	40	
1,1-Dichloroethane	0.115	0.0050	"	0.150	ND	76.5	55-119	3.67	22	
1,2-Dichloroethane (EDC)	0.127	0.0050	"	0.150	ND	84.6	65-124	9.48	19	
Tert-butyl alcohol	0.674	0.020	"	0.747	ND	90.2	64-131	12.9	24	
1,1-Dichloroethene	0.117	0.0050	"	0.150	ND	77.7	42-145	3.99	22	
cis-1,2-Dichloroethene	0.119	0.0050	"	0.150	ND	79.3	56-121	4.93	21	
Ethyl tert-butyl ether	0.120	0.010	"	0.150	ND	79.7	60-119	5.31	38	
Di-isopropyl ether	0.118	0.0050	"	0.150	ND	78.4	40-132	5.15	108	
trans-1,2-Dichloroethene	0.116	0.0050	"	0.150	ND	77.5	52-126	6.64	22	
Methyl tert-butyl ether	0.126	0.015	"	0.150	ND	84.0	64-124	8.72	28	
1,2-Dichloropropane	0.118	0.0050	"	0.150	ND	78.8	61-115	8.44	17	
1,3-Dichloropropane	0.127	0.0050	"	0.150	ND	84.4	66-123	6.03	24	
2,2-Dichloropropane	0.115	0.010	"	0.150	ND	76.9	35-127	17.5	29	
1,1-Dichloropropene	0.132	0.0050	"	0.150	ND	88.1	52-119	0.566	21	

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Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504184 - EPA 5030 Soil MS

Matrix Spike Dup (1504184-MSD1)	Source: 1504153-03			Prepared: 04/16/15		Analyzed: 04/17/15				
cis-1,3-Dichloropropene	0.137	0.0050	mg/kg	0.150	ND	91.4	47-122	6.70	40	
trans-1,3-Dichloropropene	0.135	0.0050	"	0.150	ND	90.1	51-119	6.70	52	
Ethylbenzene	0.109	0.0050	"	0.150	ND	72.7	22-153	0.549	24	
Hexachlorobutadiene	0.0799	0.0050	"	0.150	ND	53.3	10-149	17.7	59	
Isopropylbenzene	0.107	0.0050	"	0.150	ND	71.2	18-135	3.10	33	
p-Isopropyltoluene	0.0970	0.010	"	0.150	ND	64.7	12-132	8.92	38	
Methylene Chloride	0.131	0.015	"	0.150	ND	87.3	10-167	14.5	102	
Naphthalene	0.118	0.010	"	0.150	ND	78.9	10-158	12.2	42	
n-Propylbenzene	0.105	0.0050	"	0.150	ND	70.3	15-134	5.78	37	
Styrene	0.119	0.010	"	0.150	ND	79.4	33-135	3.64	22	
1,1,2,2-Tetrachloroethane	0.119	0.0050	"	0.150	ND	79.1	10-166	0.353	45	
1,1,1,2-Tetrachloroethane	0.117	0.0050	"	0.150	ND	77.8	49-123	4.31	21	
Tetrachloroethene	0.111	0.0050	"	0.150	ND	74.3	33-134	2.08	26	
Toluene	0.111	0.0050	"	0.150	ND	74.0	30-134	3.07	30	
1,2,3-Trichlorobenzene	0.106	0.0050	"	0.150	ND	70.5	10-155	0.855	40	
1,2,4-Trichlorobenzene	0.106	0.0050	"	0.150	ND	70.5	10-152	2.71	42	
1,1,2-Trichloroethane	0.133	0.0050	"	0.150	ND	88.8	46-139	8.92	34	
1,1,1-Trichloroethane	0.116	0.0050	"	0.150	ND	77.3	51-124	1.69	22	
Trichloroethene	0.125	0.0050	"	0.150	ND	83.4	16-187	7.20	19	
Trichlorofluoromethane	0.121	0.0050	"	0.150	ND	80.4	53-125	5.31	20	
1,2,3-Trichloropropane	0.100	0.010	"	0.150	ND	67.0	69-118	3.87	23	QM-07
1,3,5-Trimethylbenzene	0.106	0.0050	"	0.150	ND	70.4	20-128	3.54	31	
1,2,4-Trimethylbenzene	0.104	0.0050	"	0.150	ND	69.1	17-142	3.78	40	
Vinyl chloride	0.114	0.0050	"	0.150	ND	76.2	50-134	5.56	22	
m,p-Xylene	0.215	0.010	"	0.300	ND	71.7	10-159	0.798	68	
o-Xylene	0.109	0.0050	"	0.150	ND	72.7	31-151	1.11	38	
Surrogate: 1,2-Dichloroethane-d4	0.0429		"	0.0396		108	23-173			
Surrogate: Toluene-d8	0.0411		"	0.0400		103	20-170			
Surrogate: 4-Bromofluorobenzene	0.0408		"	0.0400		102	21-167			

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/22/15 06:56

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch 1504182 - EPA 3050B

Blank (1504182-BLK1)

Prepared: 04/16/15 Analyzed: 04/17/15

Arsenic	ND	0.100	mg/kg wet							
Barium	ND	0.100	"							
Cadmium	ND	0.100	"							
Chromium	ND	0.500	"							
Lead	ND	0.100	"							
Selenium	ND	0.0500	"							
Silver	ND	0.100	"							
Zinc	ND	10.0	"							

LCS (1504182-BS1)

Prepared: 04/16/15 Analyzed: 04/17/15

Arsenic	90.0	0.250	mg/kg wet	99.6	90.3	78.4-140
Barium	266	0.250	"	310	85.7	83.2-117
Cadmium	154	0.250	"	182	84.8	81.9-118
Chromium	114	1.25	"	136	83.6	80.1-121
Lead	97.9	0.250	"	115	85.2	81.8-119
Selenium	132	0.125	"	150	88.1	77.3-123
Silver	30.8	0.250	"	40.4	76.4	75-125
Zinc	138	25.0	"	133	104	80.7-132

Duplicate (1504182-DUP1)

Source: 1504153-01

Prepared: 04/16/15 Analyzed: 04/17/15

Arsenic	1.70	0.132	mg/kg dry	1.77	3.98	20
Barium	111	0.132	"	95.2	15.0	20
Cadmium	0.205	0.132	"	0.195	4.75	20
Chromium	7.64	0.661	"	7.52	1.59	20
Lead	43.4	0.132	"	33.1	27.0	20 QR-03
Selenium	0.163	0.0661	"	0.366	76.8	20 QR-03
Silver	0.434	0.132	"	0.432	0.635	20
Zinc	221	13.2	"	109	68.0	20 QR-03

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/22/15 06:56

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1504182 - EPA 3050B

Matrix Spike (1504182-MS1)	Source: 1504153-01			Prepared: 04/16/15		Analyzed: 04/17/15					
Arsenic	48.1	0.132	mg/kg dry	52.9	1.77	87.6	75-125				
Barium	153	0.132	"	52.9	95.2	108	75-125				
Cadmium	2.49	0.132	"	2.65	0.195	86.8	75-125				
Chromium	54.9	0.661	"	52.9	7.52	89.6	75-125				
Lead	65.9	0.132	"	26.5	33.1	124	75-125				
Selenium	4.60	0.0661	"	5.29	0.366	80.1	75-125				
Silver	3.00	0.132	"	2.65	0.432	96.9	75-125				
Zinc	192	13.2	"	52.9	109	157	75-125				QM-07

Matrix Spike Dup (1504182-MSD1)	Source: 1504153-01			Prepared: 04/16/15		Analyzed: 04/17/15					
Arsenic	47.0	0.132	mg/kg dry	50.5	1.77	89.5	75-125	2.41	25		
Barium	123	0.132	"	50.5	95.2	55.0	75-125	21.5	25		QM-07
Cadmium	2.38	0.132	"	2.52	0.195	86.7	75-125	4.38	25		
Chromium	52.1	0.661	"	50.5	7.52	88.4	75-125	5.22	25		
Lead	54.0	0.132	"	25.2	33.1	83.1	75-125	19.8	25		
Selenium	4.48	0.0661	"	5.05	0.366	81.6	75-125	2.61	25		
Silver	2.64	0.132	"	2.52	0.432	87.6	75-125	12.5	25		
Zinc	156	13.2	"	50.5	109	93.8	75-125	20.6	25		

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/22/15 06:56

Total Mercury by EPA Method 7471 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1504170 - EPA 7471A

Blank (1504170-BLK1)			Prepared & Analyzed: 04/16/15								
Mercury	ND	0.0500	mg/kg wet								
LCS (1504170-BS1)			Prepared & Analyzed: 04/16/15								
Mercury	0.508	0.0500	mg/kg wet	0.500		102	80-120				
Duplicate (1504170-DUP1)			Source: 1504157-01		Prepared & Analyzed: 04/16/15						
Mercury	0.0516	0.0598	mg/kg dry		0.0533			3.33	20		
Matrix Spike (1504170-MS1)			Source: 1504157-01		Prepared & Analyzed: 04/16/15						
Mercury	0.619	0.0598	mg/kg dry	0.598	0.0533	94.6	80-120				
Matrix Spike Dup (1504170-MSD1)			Source: 1504157-01		Prepared & Analyzed: 04/16/15						
Mercury	0.623	0.0598	mg/kg dry	0.598	0.0533	95.2	80-120	0.616	20		

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/22/15 06:56

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504179 - General Preparation

Duplicate (1504179-DUP1)	Source: 1504147-01			Prepared: 04/16/15	Analyzed: 04/17/15
% Solids	94.4		%	92.1	2.47 20

Summit Scientific

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/22/15 06:56

Notes and Definitions

- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

April 24, 2015

Steve Hoffman

Terracon - Wheat Ridge

10625 West I-70 Frontage Road, Suite 3

Wheat Ridge, CO 80033

RE: National Western Complex

Enclosed are the results of analyses for samples received by Summit Scientific on 04/15/15 18:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury
President



Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/24/15 18:02

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1 (0-6")	1504160-01	Soil	04/15/15 08:00	04/15/15 18:50
MW-1 (6-24")	1504160-02	Soil	04/15/15 08:00	04/15/15 18:50
MW-1 (10')	1504160-03	Soil	04/15/15 09:30	04/15/15 18:50
MW-5 (0-6")	1504160-04	Soil	04/15/15 13:15	04/15/15 18:50
MW-5 (6-24")	1504160-05	Soil	04/15/15 13:15	04/15/15 18:50
MW-5 (10')	1504160-06	Soil	04/15/15 13:50	04/15/15 18:50
MW-11 (0-6")	1504160-07	Soil	04/15/15 15:55	04/15/15 18:50
MW-11 (6-24")	1504160-08	Soil	04/15/15 15:55	04/15/15 18:50
MW-11 (5')	1504160-09	Soil	04/15/15 16:10	04/15/15 18:50

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/24/15 18:02

Summit Scientific

1504160

741 Corporate Circle Suite I ♦ Golden, Colorado 80401
 303-277-9310 ♦ 303-374-5933 Fax

Client: Terracon Consultants

Page 1 of 1

Address: 10625 West I-70 Frontage Road North, Suite 3
 City/State/Zip: Wheat Ridge, CO 80033
 Phone: (303) 454-5275 Fax: (303) 423-3353
 Sampler Name: Marshall Haworth

Project Manager: Steve Hoffman
 E-Mail: sbhoffman@terracon.com
 Project Name: National Western Complex
 Project Number: 25157010

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix		Analyze For:				Special Instructions	
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	VOC's 8260B	TPH 8015		RCRA 8+Zinc
MW-1 (0-6")	4-15-15	0800	1			X									
MW-1 (6-24")	4-15-15	0800	1			X									
MW-1 (10")	4-15-15	0930	1			X									
MW-5 (0-6")	4-15-15	1315	1			X				X	X				
MW-5 (6-24")	4-15-15	1315	1			X						X			
MW-5 (10")	4-15-15	1350	1			X				X	X				
MW-U (0-6")	4-15-15	1555	1			X				X	X				
MW-U (6-24")	4-15-15	1555	1			X						X			
MW-U (5")	4-15-15	1610	1			X				X	X				

Relinquished by:	Date/Time: 4-15-15 1850	Received by:	Date/Time: 4/15/15 1850	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 Hours <input type="checkbox"/>	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:		
Relinquished by:	Date/Time:	Received in Lab by:	Date/Time:		
				Sample Integrity: <u>20°C</u> Temperature Upon Receipt: Intact: Yes <input type="checkbox"/> No <input type="checkbox"/>	

www.s2scientific.com



Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/24/15 18:02

Sample Receipt Checklist

S2 Work Order: 1504160

Client: Terracon

Client Project ID: National Western Complex

Shipped Via: AD

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Airbill #: _____

Matrix (check all that apply): Air Soil/Solid Water Other: _____
 (Describe)

Cooler ID					
Temp (°C)	<u>20.0</u>				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C ⁽¹⁾ ?				
NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>			
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
If custody seals are present, are they intact ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present?			<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, etc.			<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Record the pH in Comments.			<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

Ben Shrewsbury
 Custodian Printed Name

Signature or Initials of Custodian

4/24/15 13:15
 Date/Time



Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/24/15 18:02

**MW-1 (0-6")
 1504160-01 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/15/15 08:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.86	0.0968	mg/kg dry	1	1504182	04/16/15	04/17/15	EPA 6020A	
Barium	97.6	0.0968	"	"	"	"	"	"	
Cadmium	0.410	0.0968	"	"	"	"	"	"	
Chromium	6.34	0.484	"	"	"	"	"	"	
Lead	31.2	0.0968	"	"	"	"	"	"	
Selenium	0.0898	0.0484	"	"	"	"	"	"	
Silver	0.135	0.0968	"	"	"	"	"	"	

Date Sampled: **04/15/15 08:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	52.3	9.68	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/15/15 08:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0577	mg/kg dry	1	1504170	04/16/15	04/16/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/15/15 08:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.7		%	1	1504195	04/17/15	04/20/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/24/15 18:02

**MW-1 (6-24")
 1504160-02 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/15/15 08:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.20	0.108	mg/kg dry	1	1504182	04/16/15	04/17/15	EPA 6020A	
Barium	63.3	0.108	"	"	"	"	"	"	
Cadmium	0.230	0.108	"	"	"	"	"	"	
Chromium	5.97	0.539	"	"	"	"	"	"	
Lead	13.5	0.108	"	"	"	"	"	"	
Selenium	0.0648	0.0539	"	"	"	"	"	"	
Silver	ND	0.108	"	"	"	"	"	"	

Date Sampled: **04/15/15 08:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	38.8	10.8	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/15/15 08:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0613	mg/kg dry	1	1504170	04/16/15	04/16/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/15/15 08:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	81.6		%	1	1504195	04/17/15	04/20/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/24/15 18:02

MW-1 (10')
1504160-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/15/15 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504183	04/16/15	04/16/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/15/15 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		113 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/15/15 09:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504184	"	04/17/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/24/15 18:02

MW-1 (10')
1504160-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample	ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504184	04/16/15	04/17/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"	"

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/24/15 18:02

MW-1 (10')
1504160-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504184	04/16/15	04/17/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: 04/15/15 09:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		100 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		96.4 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.8 %		21-167	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/24/15 18:02

MW-5 (0-6")
1504160-04 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/15/15 13:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	5.15	0.105	mg/kg dry	1	1504182	04/16/15	04/17/15	EPA 6020A	
Barium	172	0.105	"	"	"	"	"	"	
Cadmium	1.53	0.105	"	"	"	"	"	"	
Chromium	7.56	0.526	"	"	"	"	"	"	
Lead	172	0.105	"	"	"	"	"	"	
Selenium	0.210	0.0526	"	"	"	"	"	"	
Silver	0.615	0.105	"	"	"	"	"	"	

Date Sampled: **04/15/15 13:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	572	10.5	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/15/15 13:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.0656	0.0526	mg/kg dry	1	1504170	04/16/15	04/16/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/15/15 13:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	95.0		%	1	1504195	04/17/15	04/20/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/24/15 18:02

MW-5 (6-24")
1504160-05 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/15/15 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	6.40	0.0995	mg/kg dry	1	1504182	04/16/15	04/17/15	EPA 6020A	
Barium	202	0.0995	"	"	"	"	"	"	
Cadmium	1.58	0.0995	"	"	"	"	"	"	
Chromium	11.3	0.497	"	"	"	"	"	"	
Lead	196	0.0995	"	"	"	"	"	"	
Selenium	0.217	0.0497	"	"	"	"	"	"	
Silver	0.806	0.0995	"	"	"	"	"	"	

Date Sampled: **04/15/15 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	719	9.95	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/15/15 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	0.0800	0.0561	mg/kg dry	1	1504170	04/16/15	04/16/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/15/15 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.1		%	1	1504195	04/17/15	04/20/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/24/15 18:02

MW-5 (10')
1504160-06 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/15/15 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504183	04/16/15	04/16/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/15/15 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		123 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/15/15 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504184	"	04/17/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/24/15 18:02

MW-5 (10')
1504160-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample	ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504184	04/16/15	04/17/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"	"

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/24/15 18:02

MW-5 (10')
1504160-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504184	04/16/15	04/17/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: 04/15/15 13:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		97.4 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.2 %		21-167	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/24/15 18:02

**MW-11 (0-6")
 1504160-07 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/15/15 15:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	7.99	0.111	mg/kg dry	1	1504182	04/16/15	04/17/15	EPA 6020A	
Barium	111	0.111	"	"	"	"	"	"	
Cadmium	2.28	0.111	"	"	"	"	"	"	
Chromium	4.87	0.555	"	"	"	"	"	"	
Lead	234	0.111	"	"	"	"	"	"	
Selenium	0.183	0.0555	"	"	"	"	"	"	
Silver	0.846	0.111	"	"	"	"	"	"	

Date Sampled: **04/15/15 15:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	164	11.1	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/15/15 15:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.209	0.0555	mg/kg dry	1	1504170	04/16/15	04/16/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/15/15 15:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	90.1		%	1	1504195	04/17/15	04/20/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/24/15 18:02

MW-11 (6-24")
1504160-08 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/15/15 15:55**

Analyte	Result	Reporting			Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units							
Arsenic	3.42	0.100	mg/kg dry		1	1504182	04/16/15	04/17/15	EPA 6020A	
Barium	146	0.100	"		"	"	"	"	"	
Cadmium	0.640	0.100	"		"	"	"	"	"	
Chromium	8.17	0.502	"		"	"	"	"	"	
Lead	120	0.100	"		"	"	"	"	"	
Selenium	0.193	0.0502	"		"	"	"	"	"	
Silver	0.222	0.100	"		"	"	"	"	"	

Date Sampled: **04/15/15 15:55**

Analyte	Result	Reporting			Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units							
Zinc	105	10.0	"		"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/15/15 15:55**

Analyte	Result	Reporting			Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units							
Mercury	0.125	0.0554	mg/kg dry		1	1504170	04/16/15	04/16/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/15/15 15:55**

Analyte	Result	Reporting			Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units							
% Solids	90.3		%		1	1504195	04/17/15	04/20/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/24/15 18:02

MW-11 (5')
1504160-09 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/15/15 16:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504183	04/16/15	04/16/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/15/15 16:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		119 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/15/15 16:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504184	"	04/17/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/24/15 18:02

**MW-11 (5')
 1504160-09 (Soil)**

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample	ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504184	04/16/15	04/17/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"	"

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/24/15 18:02

MW-11 (5')
1504160-09 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504184	04/16/15	04/17/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: 04/15/15 16:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		95.3 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		96.2 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.4 %		21-167	"	"	"	"	

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Project: National Western Complex
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 Project Manager: Steve Hoffman

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Extractable Petroleum Hydrocarbons by 8015 - Quality Control
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Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504183 - EPA 3550A

Blank (1504183-BLK1)

Prepared & Analyzed: 04/16/15

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	13.9		"	12.2		114	70-130			

LCS (1504183-BS1)

Prepared & Analyzed: 04/16/15

C10-C28 (DRO)	581	50	mg/kg	501		116	50-150			
Surrogate: o-Terphenyl	15.3		"	12.2		126	70-130			

Matrix Spike (1504183-MS1)

Source: 1504153-03

Prepared & Analyzed: 04/16/15

C10-C28 (DRO)	587	50	mg/kg	496	13.4	116	50-150			
Surrogate: o-Terphenyl	15.6		"	12.1		129	70-130			

Matrix Spike Dup (1504183-MSD1)

Source: 1504153-03

Prepared & Analyzed: 04/16/15

C10-C28 (DRO)	528	50	mg/kg	495	13.4	104	50-150	10.7	20	
Surrogate: o-Terphenyl	14.2		"	12.1		118	70-130			

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Volatile Organic Compounds by EPA Method 8260B - Quality Control
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Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504184 - EPA 5030 Soil MS

Blank (1504184-BLK1)

Prepared: 04/16/15 Analyzed: 04/17/15

Benzene	ND	0.0020	mg/kg
Bromobenzene	ND	0.0050	"
Bromochloromethane	ND	0.0050	"
Bromodichloromethane	ND	0.0050	"
Bromoform	ND	0.0050	"
Bromomethane	ND	0.010	"
n-Butylbenzene	ND	0.0050	"
sec-Butylbenzene	ND	0.0050	"
tert-Butylbenzene	ND	0.0050	"
Carbon tetrachloride	ND	0.0050	"
Chlorobenzene	ND	0.0050	"
Chloroethane	ND	0.0050	"
Chloroform	ND	0.0050	"
Chloromethane	ND	0.015	"
2-Chlorotoluene	ND	0.0050	"
4-Chlorotoluene	ND	0.0050	"
Chlorodibromomethane	ND	0.010	"
1,2-Dibromo-3-chloropropane	ND	0.015	"
1,2-Dibromoethane (EDB)	ND	0.0050	"
Dibromomethane	ND	0.0050	"
1,2-Dichlorobenzene	ND	0.0050	"
1,3-Dichlorobenzene	ND	0.0050	"
1,4-Dichlorobenzene	ND	0.0050	"
Dichlorodifluoromethane	ND	0.0050	"
Tert-amyl methyl ether	ND	0.0050	"
1,1-Dichloroethane	ND	0.0050	"
1,2-Dichloroethane (EDC)	ND	0.0050	"
Tert-butyl alcohol	ND	0.020	"
1,1-Dichloroethene	ND	0.0050	"
Ethyl tert-butyl ether	ND	0.010	"
cis-1,2-Dichloroethene	ND	0.0050	"
Di-isopropyl ether	ND	0.0050	"
trans-1,2-Dichloroethene	ND	0.0050	"
Methyl tert-butyl ether	ND	0.015	"
1,2-Dichloropropane	ND	0.0050	"
1,3-Dichloropropane	ND	0.0050	"
2,2-Dichloropropane	ND	0.010	"
1,1-Dichloropropene	ND	0.0050	"

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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504184 - EPA 5030 Soil MS

Blank (1504184-BLK1)

Prepared: 04/16/15 Analyzed: 04/17/15

cis-1,3-Dichloropropene	ND	0.0050	mg/kg							
trans-1,3-Dichloropropene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Hexachlorobutadiene	ND	0.0050	"							
Isopropylbenzene	ND	0.0050	"							
p-Isopropyltoluene	ND	0.010	"							
Methylene Chloride	ND	0.015	"							
Naphthalene	ND	0.010	"							
n-Propylbenzene	ND	0.0050	"							
Styrene	ND	0.010	"							
1,1,2,2-Tetrachloroethane	ND	0.0050	"							
1,1,1,2-Tetrachloroethane	ND	0.0050	"							
Tetrachloroethene	ND	0.0050	"							
Toluene	ND	0.0050	"							
1,2,3-Trichlorobenzene	ND	0.0050	"							
1,2,4-Trichlorobenzene	ND	0.0050	"							
1,1,2-Trichloroethane	ND	0.0050	"							
1,1,1-Trichloroethane	ND	0.0050	"							
Trichloroethene	ND	0.0050	"							
Trichlorofluoromethane	ND	0.0050	"							
1,2,3-Trichloropropane	ND	0.010	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
Vinyl chloride	ND	0.0050	"							
m,p-Xylene	ND	0.010	"							
o-Xylene	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0395		"	0.0396	99.8	23-173				
Surrogate: Toluene-d8	0.0388		"	0.0400	97.1	20-170				
Surrogate: 4-Bromofluorobenzene	0.0369		"	0.0400	92.2	21-167				

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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

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Volatile Organic Compounds by EPA Method 8260B - Quality Control
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Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504184 - EPA 5030 Soil MS

LCS (1504184-BS1)

Prepared: 04/16/15 Analyzed: 04/17/15

Benzene	0.141	0.0020	mg/kg	0.150		94.2	58-130			
Bromobenzene	0.149	0.0050	"	0.150		99.2	87-115			
Bromochloromethane	0.144	0.0050	"	0.150		95.7	82-122			
Bromodichloromethane	0.146	0.0050	"	0.150		97.6	84-119			
Bromoform	0.150	0.0050	"	0.150		99.9	76-119			
Bromomethane	0.181	0.010	"	0.150		121	39-152			
n-Butylbenzene	0.156	0.0050	"	0.150		104	70-131			
sec-Butylbenzene	0.150	0.0050	"	0.150		99.9	74-124			
tert-Butylbenzene	0.147	0.0050	"	0.150		98.0	77-121			
Carbon tetrachloride	0.145	0.0050	"	0.150		96.6	66-127			
Chlorobenzene	0.146	0.0050	"	0.150		97.2	82-120			
Chloroethane	0.147	0.0050	"	0.150		98.3	63-126			
Chloroform	0.146	0.0050	"	0.150		97.4	82-120			
Chloromethane	0.140	0.015	"	0.150		93.1	57-133			
2-Chlorotoluene	0.149	0.0050	"	0.150		99.2	82-117			
4-Chlorotoluene	0.147	0.0050	"	0.150		98.1	81-119			
Chlorodibromomethane	0.149	0.010	"	0.150		99.4	82-124			
1,2-Dibromo-3-chloropropane	0.161	0.015	"	0.150		107	62-128			
1,2-Dibromoethane (EDB)	0.146	0.0050	"	0.150		97.2	86-122			
Dibromomethane	0.148	0.0050	"	0.150		98.8	83-124			
1,2-Dichlorobenzene	0.150	0.0050	"	0.150		100	84-120			
1,3-Dichlorobenzene	0.151	0.0050	"	0.150		101	81-118			
1,4-Dichlorobenzene	0.148	0.0050	"	0.150		98.6	80-118			
Dichlorodifluoromethane	0.134	0.0050	"	0.150		89.6	25-141			
Tert-amyl methyl ether	0.141	0.0050	"	0.149		94.6	50-147			
1,1-Dichloroethane	0.143	0.0050	"	0.150		95.1	78-120			
1,2-Dichloroethane (EDC)	0.137	0.0050	"	0.150		91.2	81-125			
Tert-butyl alcohol	0.665	0.020	"	0.747		89.0	64-127			
1,1-Dichloroethene	0.147	0.0050	"	0.150		97.7	71-122			
Ethyl tert-butyl ether	0.139	0.010	"	0.150		92.8	80-122			
cis-1,2-Dichloroethene	0.148	0.0050	"	0.150		98.6	84-121			
Di-isopropyl ether	0.141	0.0050	"	0.150		93.9	78-120			
trans-1,2-Dichloroethene	0.150	0.0050	"	0.150		100	77-125			
Methyl tert-butyl ether	0.141	0.015	"	0.150		94.1	77-124			
1,2-Dichloropropane	0.139	0.0050	"	0.150		92.7	88-114			
1,3-Dichloropropane	0.144	0.0050	"	0.150		95.8	86-122			
2,2-Dichloropropane	0.147	0.010	"	0.150		97.7	32-150			
1,1-Dichloropropene	0.165	0.0050	"	0.150		110	71-123			

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/24/15 18:02

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504184 - EPA 5030 Soil MS

LCS (1504184-BS1)

Prepared: 04/16/15 Analyzed: 04/17/15

cis-1,3-Dichloropropene	0.149	0.0050	mg/kg	0.150		99.4	74-125			
trans-1,3-Dichloropropene	0.147	0.0050	"	0.150		98.1	72-126			
Ethylbenzene	0.146	0.0050	"	0.150		97.5	74-139			
Hexachlorobutadiene	0.155	0.0050	"	0.150		103	56-144			
Isopropylbenzene	0.147	0.0050	"	0.150		98.0	72-124			
p-Isopropyltoluene	0.150	0.010	"	0.150		99.8	72-123			
Methylene Chloride	0.151	0.015	"	0.150		100	10-183			
Naphthalene	0.139	0.010	"	0.150		92.9	66-138			
n-Propylbenzene	0.152	0.0050	"	0.150		101	76-121			
Styrene	0.154	0.010	"	0.150		103	76-133			
1,1,2,2-Tetrachloroethane	0.144	0.0050	"	0.150		96.0	60-137			
1,1,1,2-Tetrachloroethane	0.146	0.0050	"	0.150		97.5	86-121			
Tetrachloroethene	0.148	0.0050	"	0.150		98.9	69-131			
Toluene	0.139	0.0050	"	0.150		92.6	61-134			
1,2,3-Trichlorobenzene	0.151	0.0050	"	0.150		101	63-142			
1,2,4-Trichlorobenzene	0.157	0.0050	"	0.150		105	63-141			
1,1,2-Trichloroethane	0.145	0.0050	"	0.150		96.5	75-136			
1,1,1-Trichloroethane	0.148	0.0050	"	0.150		98.5	71-126			
Trichloroethene	0.144	0.0050	"	0.150		96.2	86-118			
Trichlorofluoromethane	0.150	0.0050	"	0.150		99.7	62-128			
1,2,3-Trichloropropane	0.128	0.010	"	0.150		85.4	80-118			
1,3,5-Trimethylbenzene	0.149	0.0050	"	0.150		99.1	72-121			
1,2,4-Trimethylbenzene	0.148	0.0050	"	0.150		98.7	78-126			
Vinyl chloride	0.142	0.0050	"	0.150		94.6	63-134			
m,p-Xylene	0.287	0.010	"	0.300		95.6	73-137			
o-Xylene	0.144	0.0050	"	0.150		96.1	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0395</i>		<i>"</i>	<i>0.0396</i>		<i>99.8</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0402</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0392</i>		<i>"</i>	<i>0.0400</i>		<i>98.0</i>	<i>21-167</i>			

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Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

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Volatile Organic Compounds by EPA Method 8260B - Quality Control
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Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504184 - EPA 5030 Soil MS

Matrix Spike (1504184-MS1)	Source: 1504153-03			Prepared: 04/16/15		Analyzed: 04/17/15	
Benzene	0.109	0.0020	mg/kg	0.150	ND	73.0	30-131
Bromobenzene	0.111	0.0050	"	0.150	ND	73.8	39-124
Bromochloromethane	0.117	0.0050	"	0.150	ND	77.7	62-121
Bromodichloromethane	0.116	0.0050	"	0.150	ND	77.2	51-120
Bromoform	0.127	0.0050	"	0.150	ND	84.7	52-125
Bromomethane	0.138	0.010	"	0.150	ND	91.8	10-152
n-Butylbenzene	0.111	0.0050	"	0.150	ND	73.8	10-144
sec-Butylbenzene	0.108	0.0050	"	0.150	ND	72.3	10-140
tert-Butylbenzene	0.107	0.0050	"	0.150	ND	71.2	16-132
Carbon tetrachloride	0.115	0.0050	"	0.150	ND	76.7	46-125
Chlorobenzene	0.109	0.0050	"	0.150	ND	72.6	42-125
Chloroethane	0.120	0.0050	"	0.150	ND	79.7	46-125
Chloroform	0.112	0.0050	"	0.150	ND	74.8	57-118
Chloromethane	0.114	0.015	"	0.150	ND	76.1	33-132
2-Chlorotoluene	0.108	0.0050	"	0.150	ND	71.7	30-125
4-Chlorotoluene	0.106	0.0050	"	0.150	ND	70.5	29-127
Chlorodibromomethane	0.122	0.010	"	0.150	ND	81.1	54-124
1,2-Dibromo-3-chloropropane	0.139	0.015	"	0.150	ND	92.6	10-175
1,2-Dibromoethane (EDB)	0.123	0.0050	"	0.150	ND	82.0	65-125
Dibromomethane	0.123	0.0050	"	0.150	ND	82.2	64-127
1,2-Dichlorobenzene	0.110	0.0050	"	0.150	ND	73.3	24-134
1,3-Dichlorobenzene	0.109	0.0050	"	0.150	ND	72.9	22-130
1,4-Dichlorobenzene	0.107	0.0050	"	0.150	ND	71.4	21-131
Dichlorodifluoromethane	0.117	0.0050	"	0.150	ND	78.2	47-117
Tert-amyl methyl ether	0.117	0.0050	"	0.149	ND	78.1	60-124
1,1-Dichloroethane	0.111	0.0050	"	0.150	ND	73.8	55-119
1,2-Dichloroethane (EDC)	0.115	0.0050	"	0.150	ND	77.0	65-124
Tert-butyl alcohol	0.592	0.020	"	0.747	ND	79.3	64-131
1,1-Dichloroethene	0.121	0.0050	"	0.150	ND	80.9	42-145
cis-1,2-Dichloroethene	0.113	0.0050	"	0.150	ND	75.5	56-121
Ethyl tert-butyl ether	0.113	0.010	"	0.150	ND	75.6	60-119
Di-isopropyl ether	0.112	0.0050	"	0.150	ND	74.5	40-132
trans-1,2-Dichloroethene	0.109	0.0050	"	0.150	ND	72.5	52-126
1,2-Dichloropropane	0.109	0.0050	"	0.150	ND	72.4	61-115
Methyl tert-butyl ether	0.116	0.015	"	0.150	ND	77.0	64-124
1,3-Dichloropropane	0.119	0.0050	"	0.150	ND	79.4	66-123
2,2-Dichloropropane	0.137	0.010	"	0.150	ND	91.6	35-127
1,1-Dichloropropene	0.133	0.0050	"	0.150	ND	88.6	52-119

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Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/24/15 18:02

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504184 - EPA 5030 Soil MS

Matrix Spike (1504184-MS1)	Source: 1504153-03			Prepared: 04/16/15		Analyzed: 04/17/15				
cis-1,3-Dichloropropene	0.128	0.0050	mg/kg	0.150	ND	85.4	47-122			
trans-1,3-Dichloropropene	0.126	0.0050	"	0.150	ND	84.3	51-119			
Ethylbenzene	0.110	0.0050	"	0.150	ND	73.1	22-153			
Hexachlorobutadiene	0.0954	0.0050	"	0.150	ND	63.6	10-149			
Isopropylbenzene	0.110	0.0050	"	0.150	ND	73.4	18-135			
p-Isopropyltoluene	0.106	0.010	"	0.150	ND	70.7	12-132			
Methylene Chloride	0.113	0.015	"	0.150	ND	75.5	10-167			
Naphthalene	0.105	0.010	"	0.150	ND	69.8	10-158			
n-Propylbenzene	0.112	0.0050	"	0.150	ND	74.5	15-134			
Styrene	0.115	0.010	"	0.150	ND	76.6	33-135			
1,1,2,2-Tetrachloroethane	0.119	0.0050	"	0.150	ND	79.4	10-166			
1,1,1,2-Tetrachloroethane	0.112	0.0050	"	0.150	ND	74.5	49-123			
Tetrachloroethane	0.114	0.0050	"	0.150	ND	75.8	33-134			
Toluene	0.108	0.0050	"	0.150	ND	71.8	30-134			
1,2,3-Trichlorobenzene	0.105	0.0050	"	0.150	ND	69.9	10-155			
1,2,4-Trichlorobenzene	0.109	0.0050	"	0.150	ND	72.5	10-152			
1,1,2-Trichloroethane	0.122	0.0050	"	0.150	ND	81.2	46-139			
1,1,1-Trichloroethane	0.118	0.0050	"	0.150	ND	78.6	51-124			
Trichloroethene	0.116	0.0050	"	0.150	ND	77.6	16-187			
Trichlorofluoromethane	0.127	0.0050	"	0.150	ND	84.7	53-125			
1,2,3-Trichloropropane	0.0966	0.010	"	0.150	ND	64.4	69-118			QM-07
1,3,5-Trimethylbenzene	0.109	0.0050	"	0.150	ND	73.0	20-128			
1,2,4-Trimethylbenzene	0.108	0.0050	"	0.150	ND	71.8	17-142			
Vinyl chloride	0.121	0.0050	"	0.150	ND	80.6	50-134			
m,p-Xylene	0.213	0.010	"	0.300	ND	71.1	10-159			
o-Xylene	0.108	0.0050	"	0.150	ND	71.9	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0439		"	0.0396		111	23-173			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0402		"	0.0400		100	21-167			

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/24/15 18:02

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504184 - EPA 5030 Soil MS

Matrix Spike Dup (1504184-MSD1)	Source: 1504153-03			Prepared: 04/16/15		Analyzed: 04/17/15				
Benzene	0.115	0.0020	mg/kg	0.150	ND	76.9	30-131	5.26	34	
Bromobenzene	0.115	0.0050	"	0.150	ND	76.5	39-124	3.67	21	
Bromochloromethane	0.127	0.0050	"	0.150	ND	84.9	62-121	8.78	20	
Bromodichloromethane	0.125	0.0050	"	0.150	ND	83.4	51-120	7.74	22	
Bromoform	0.137	0.0050	"	0.150	ND	91.4	52-125	7.54	22	
Bromomethane	0.130	0.010	"	0.150	ND	86.5	10-152	5.99	90	
n-Butylbenzene	0.0962	0.0050	"	0.150	ND	64.2	10-144	14.0	52	
sec-Butylbenzene	0.0990	0.0050	"	0.150	ND	66.0	10-140	9.14	45	
tert-Butylbenzene	0.101	0.0050	"	0.150	ND	67.4	16-132	5.43	33	
Carbon tetrachloride	0.115	0.0050	"	0.150	ND	76.5	46-125	0.313	22	
Chlorobenzene	0.113	0.0050	"	0.150	ND	75.5	42-125	3.89	18	
Chloroethane	0.117	0.0050	"	0.150	ND	78.2	46-125	1.85	24	
Chloroform	0.117	0.0050	"	0.150	ND	77.8	57-118	3.96	19	
Chloromethane	0.111	0.015	"	0.150	ND	74.3	33-132	2.45	18	
2-Chlorotoluene	0.107	0.0050	"	0.150	ND	71.4	30-125	0.531	24	
4-Chlorotoluene	0.105	0.0050	"	0.150	ND	70.1	29-127	0.569	24	
Chlorodibromomethane	0.131	0.010	"	0.150	ND	87.0	54-124	7.07	22	
1,2-Dibromo-3-chloropropane	0.156	0.015	"	0.150	ND	104	10-175	11.8	39	
1,2-Dibromoethane (EDB)	0.131	0.0050	"	0.150	ND	87.4	65-125	6.33	22	
Dibromomethane	0.136	0.0050	"	0.150	ND	90.8	64-127	9.94	19	
1,2-Dichlorobenzene	0.113	0.0050	"	0.150	ND	75.6	24-134	3.01	26	
1,3-Dichlorobenzene	0.110	0.0050	"	0.150	ND	73.4	22-130	0.656	27	
1,4-Dichlorobenzene	0.106	0.0050	"	0.150	ND	70.8	21-131	0.731	25	
Dichlorodifluoromethane	0.110	0.0050	"	0.150	ND	73.6	47-117	6.04	36	
Tert-amyl methyl ether	0.125	0.0050	"	0.149	ND	83.8	60-124	7.14	40	
1,1-Dichloroethane	0.115	0.0050	"	0.150	ND	76.5	55-119	3.67	22	
1,2-Dichloroethane (EDC)	0.127	0.0050	"	0.150	ND	84.6	65-124	9.48	19	
Tert-butyl alcohol	0.674	0.020	"	0.747	ND	90.2	64-131	12.9	24	
1,1-Dichloroethene	0.117	0.0050	"	0.150	ND	77.7	42-145	3.99	22	
cis-1,2-Dichloroethene	0.119	0.0050	"	0.150	ND	79.3	56-121	4.93	21	
Ethyl tert-butyl ether	0.120	0.010	"	0.150	ND	79.7	60-119	5.31	38	
Di-isopropyl ether	0.118	0.0050	"	0.150	ND	78.4	40-132	5.15	108	
trans-1,2-Dichloroethene	0.116	0.0050	"	0.150	ND	77.5	52-126	6.64	22	
Methyl tert-butyl ether	0.126	0.015	"	0.150	ND	84.0	64-124	8.72	28	
1,2-Dichloropropane	0.118	0.0050	"	0.150	ND	78.8	61-115	8.44	17	
1,3-Dichloropropane	0.127	0.0050	"	0.150	ND	84.4	66-123	6.03	24	
2,2-Dichloropropane	0.115	0.010	"	0.150	ND	76.9	35-127	17.5	29	
1,1-Dichloropropene	0.132	0.0050	"	0.150	ND	88.1	52-119	0.566	21	

Summit Scientific

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/24/15 18:02

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504184 - EPA 5030 Soil MS

Matrix Spike Dup (1504184-MSD1)	Source: 1504153-03			Prepared: 04/16/15		Analyzed: 04/17/15				
cis-1,3-Dichloropropene	0.137	0.0050	mg/kg	0.150	ND	91.4	47-122	6.70	40	
trans-1,3-Dichloropropene	0.135	0.0050	"	0.150	ND	90.1	51-119	6.70	52	
Ethylbenzene	0.109	0.0050	"	0.150	ND	72.7	22-153	0.549	24	
Hexachlorobutadiene	0.0799	0.0050	"	0.150	ND	53.3	10-149	17.7	59	
Isopropylbenzene	0.107	0.0050	"	0.150	ND	71.2	18-135	3.10	33	
p-Isopropyltoluene	0.0970	0.010	"	0.150	ND	64.7	12-132	8.92	38	
Methylene Chloride	0.131	0.015	"	0.150	ND	87.3	10-167	14.5	102	
Naphthalene	0.118	0.010	"	0.150	ND	78.9	10-158	12.2	42	
n-Propylbenzene	0.105	0.0050	"	0.150	ND	70.3	15-134	5.78	37	
Styrene	0.119	0.010	"	0.150	ND	79.4	33-135	3.64	22	
1,1,2,2-Tetrachloroethane	0.119	0.0050	"	0.150	ND	79.1	10-166	0.353	45	
1,1,1,2-Tetrachloroethane	0.117	0.0050	"	0.150	ND	77.8	49-123	4.31	21	
Tetrachloroethene	0.111	0.0050	"	0.150	ND	74.3	33-134	2.08	26	
Toluene	0.111	0.0050	"	0.150	ND	74.0	30-134	3.07	30	
1,2,3-Trichlorobenzene	0.106	0.0050	"	0.150	ND	70.5	10-155	0.855	40	
1,2,4-Trichlorobenzene	0.106	0.0050	"	0.150	ND	70.5	10-152	2.71	42	
1,1,2-Trichloroethane	0.133	0.0050	"	0.150	ND	88.8	46-139	8.92	34	
1,1,1-Trichloroethane	0.116	0.0050	"	0.150	ND	77.3	51-124	1.69	22	
Trichloroethene	0.125	0.0050	"	0.150	ND	83.4	16-187	7.20	19	
Trichlorofluoromethane	0.121	0.0050	"	0.150	ND	80.4	53-125	5.31	20	
1,2,3-Trichloropropane	0.100	0.010	"	0.150	ND	67.0	69-118	3.87	23	QM-07
1,3,5-Trimethylbenzene	0.106	0.0050	"	0.150	ND	70.4	20-128	3.54	31	
1,2,4-Trimethylbenzene	0.104	0.0050	"	0.150	ND	69.1	17-142	3.78	40	
Vinyl chloride	0.114	0.0050	"	0.150	ND	76.2	50-134	5.56	22	
m,p-Xylene	0.215	0.010	"	0.300	ND	71.7	10-159	0.798	68	
o-Xylene	0.109	0.0050	"	0.150	ND	72.7	31-151	1.11	38	
Surrogate: 1,2-Dichloroethane-d4	0.0429		"	0.0396		108	23-173			
Surrogate: Toluene-d8	0.0411		"	0.0400		103	20-170			
Surrogate: 4-Bromofluorobenzene	0.0408		"	0.0400		102	21-167			

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/24/15 18:02

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike	Source		%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1504182 - EPA 3050B

Blank (1504182-BLK1)

Prepared: 04/16/15 Analyzed: 04/17/15

Arsenic	ND	0.100	mg/kg wet							
Barium	ND	0.100	"							
Cadmium	ND	0.100	"							
Chromium	ND	0.500	"							
Lead	ND	0.100	"							
Selenium	ND	0.0500	"							
Silver	ND	0.100	"							
Zinc	ND	10.0	"							

LCS (1504182-BS1)

Prepared: 04/16/15 Analyzed: 04/17/15

Arsenic	90.0	0.250	mg/kg wet	99.6	90.3	78.4-140
Barium	266	0.250	"	310	85.7	83.2-117
Cadmium	154	0.250	"	182	84.8	81.9-118
Chromium	114	1.25	"	136	83.6	80.1-121
Lead	97.9	0.250	"	115	85.2	81.8-119
Selenium	132	0.125	"	150	88.1	77.3-123
Silver	30.8	0.250	"	40.4	76.4	75-125
Zinc	138	25.0	"	133	104	80.7-132

Duplicate (1504182-DUP1)

Source: 1504153-01

Prepared: 04/16/15 Analyzed: 04/17/15

Arsenic	1.70	0.132	mg/kg dry	1.77	3.98	20
Barium	111	0.132	"	95.2	15.0	20
Cadmium	0.205	0.132	"	0.195	4.75	20
Chromium	7.64	0.661	"	7.52	1.59	20
Lead	43.4	0.132	"	33.1	27.0	20 QR-03
Selenium	0.163	0.0661	"	0.366	76.8	20 QR-03
Silver	0.434	0.132	"	0.432	0.635	20
Zinc	221	13.2	"	109	68.0	20 QR-03

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/24/15 18:02

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1504182 - EPA 3050B

Matrix Spike (1504182-MS1)	Source: 1504153-01			Prepared: 04/16/15		Analyzed: 04/17/15				
Arsenic	48.1	0.132	mg/kg dry	52.9	1.77	87.6	75-125			
Barium	153	0.132	"	52.9	95.2	108	75-125			
Cadmium	2.49	0.132	"	2.65	0.195	86.8	75-125			
Chromium	54.9	0.661	"	52.9	7.52	89.6	75-125			
Lead	65.9	0.132	"	26.5	33.1	124	75-125			
Selenium	4.60	0.0661	"	5.29	0.366	80.1	75-125			
Silver	3.00	0.132	"	2.65	0.432	96.9	75-125			
Zinc	192	13.2	"	52.9	109	157	75-125			QM-07

Matrix Spike Dup (1504182-MSD1)	Source: 1504153-01			Prepared: 04/16/15		Analyzed: 04/17/15				
Arsenic	47.0	0.132	mg/kg dry	50.5	1.77	89.5	75-125	2.41	25	
Barium	123	0.132	"	50.5	95.2	55.0	75-125	21.5	25	QM-07
Cadmium	2.38	0.132	"	2.52	0.195	86.7	75-125	4.38	25	
Chromium	52.1	0.661	"	50.5	7.52	88.4	75-125	5.22	25	
Lead	54.0	0.132	"	25.2	33.1	83.1	75-125	19.8	25	
Selenium	4.48	0.0661	"	5.05	0.366	81.6	75-125	2.61	25	
Silver	2.64	0.132	"	2.52	0.432	87.6	75-125	12.5	25	
Zinc	156	13.2	"	50.5	109	93.8	75-125	20.6	25	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/24/15 18:02

Total Mercury by EPA Method 7471 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1504170 - EPA 7471A

Blank (1504170-BLK1)			Prepared & Analyzed: 04/16/15								
Mercury	ND	0.0500	mg/kg wet								
LCS (1504170-BS1)			Prepared & Analyzed: 04/16/15								
Mercury	0.508	0.0500	mg/kg wet	0.500		102	80-120				
Duplicate (1504170-DUP1)			Source: 1504157-01		Prepared & Analyzed: 04/16/15						
Mercury	0.0516	0.0598	mg/kg dry		0.0533			3.33	20		
Matrix Spike (1504170-MS1)			Source: 1504157-01		Prepared & Analyzed: 04/16/15						
Mercury	0.619	0.0598	mg/kg dry	0.598	0.0533	94.6	80-120				
Matrix Spike Dup (1504170-MSD1)			Source: 1504157-01		Prepared & Analyzed: 04/16/15						
Mercury	0.623	0.0598	mg/kg dry	0.598	0.0533	95.2	80-120	0.616	20		

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/24/15 18:02

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504195 - General Preparation

Duplicate (1504195-DUP1)	Source: 1504160-01		Prepared: 04/17/15	Analyzed: 04/20/15
% Solids	86.0	%	86.7	0.811 20

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/24/15 18:02

Notes and Definitions

- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

April 27, 2015

Steve Hoffman

Terracon - Wheat Ridge

10625 West I-70 Frontage Road, Suite 3

Wheat Ridge, CO 80033

RE: National Western Complex

Enclosed are the results of analyses for samples received by Summit Scientific on 04/22/15 09:18. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', written in a cursive style.

Paul Shrewsbury
President



Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/27/15 15:07

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-2 (0-6")	1504201-01	Soil	04/21/15 07:30	04/22/15 09:18
MW-2 (0-6")-D	1504201-02	Soil	04/21/15 07:30	04/22/15 09:18
MW-2 (6-24")	1504201-03	Soil	04/21/15 07:30	04/22/15 09:18
MW-2 (6-24")-D	1504201-04	Soil	04/21/15 07:30	04/22/15 09:18
MW-2 (25')	1504201-05	Soil	04/21/15 10:15	04/22/15 09:18
MW-2 (25')-D	1504201-06	Soil	04/21/15 10:15	04/22/15 09:18
MW-4 (0-6")	1504201-07	Soil	04/21/15 12:30	04/22/15 09:18
MW-4 (6-24")	1504201-08	Soil	04/21/15 12:30	04/22/15 09:18
MW-4 (20')	1504201-09	Soil	04/21/15 13:45	04/22/15 09:18
MW-3 (0-6")	1504201-10	Soil	04/21/15 14:45	04/22/15 09:18
MW-3 (6-24")	1504201-11	Soil	04/21/15 14:45	04/22/15 09:18
MW-3 (32')	1504201-12	Soil	04/21/15 16:00	04/22/15 09:18

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/27/15 15:07

Summit Scientific

15042011

741 Corporate Circle Suite I ♦ Golden, Colorado 80401
 303-277-9310 ♦ 303-374-5933 Fax

Page 1 of 2

Client: Terracon Consultants

Address: 10625 West I-70 Frontage Road North, Suite 3

City/State/Zip: Wheat Ridge, CO 80033

Phone: (303) 454-5275 Fax: (303) 423-3353

Sampler Name: Marshall Haworth

Project Manager: Steve Hoffman

E-Mail: sbhoffman@terracon.com

Project Name: National Western Complex

Project Number: 25157010

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:						Special Instructions						
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	VOC's 8260B	TPH 8015	RCRA 8+Zinc									
MW-2 (0-6")	4-21-15	0730	1		X			X															
MW-2 (0-6")-D	4-21-15	0730	1		X			X															
MW-2 (6-24")	4-21-15	0730	1		X			X															
MW-2 (6-24")-D	4-21-15	0730	1		X			X															
MW-2 (25")	4-21-15	1015	1		X			X				X	X										
MW-2 (25")-D	4-21-15	1015	1		X			X				X	X										
MW-4 (0-6")	4-21-15	1230	1		X			X															
MW-4 (6-24")	4-21-15	1230	1		X			X															
MW-4 (20")	4-21-15	1345	1		X			X				X	X										
MW-4 (30-6")	4-21-15	1445	1		X			X				X	X										
Relinquished by: <i>Marshall Haworth</i>		Date/Time: 4/22/15 800	Received by: <i>Steve Hoffman</i>		Date/Time: 4/22/15 800	Turn Around Time (Check)			Notes:														
Relinquished by: <i>Steve Hoffman</i>		Date/Time: 4/22/15 918	Received by: <i>Theresa Ferguson</i>		Date/Time: 4/22/15 9:18	Same Day <input type="checkbox"/>			72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 Hours <input type="checkbox"/> Sample Integrity: <input checked="" type="checkbox"/> Temperature Upon Receipt: <i>100C</i> Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>														
Relinquished by:		Date/Time:	Received in Lab by:		Date/Time:																		

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/27/15 15:07

Sample Receipt Checklist

S2 Work Order: 1504201
 Client: Terracon Client Project ID: National Western Complex
 Shipped Via: FD Airbill #: _____
(UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Matrix (check all that apply): Air Soil/Solid Water Other: _____
(Describe)

Cooler ID					
Temp (°C)	<u>1.0</u>				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.				
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
If custody seals are present, are they intact ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, etc.				
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾ If No, then contact the client before proceeding with analysis and note in case narrative.

Paul Shrewsbury
 Custodian Printed Name

[Signature]
 Signature or Initials of Custodian

4-22-15
 Date/Time

[Signature]



Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/27/15 15:07

**MW-2 (0-6")
 1504201-01 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/21/15 07:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	4.89	0.111	mg/kg dry	1	1504226	04/22/15	04/23/15	EPA 6020A	
Barium	83.1	0.111	"	"	"	"	"	"	
Cadmium	1.05	0.111	"	"	"	"	"	"	
Chromium	9.53	0.557	"	"	"	"	"	"	
Lead	124	0.111	"	"	"	"	"	"	
Selenium	0.220	0.0557	"	"	"	"	"	"	
Silver	0.470	0.111	"	"	"	"	"	"	

Date Sampled: **04/21/15 07:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	110	11.1	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/21/15 07:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	0.0709	0.0503	mg/kg dry	1	1504235	04/23/15	04/23/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/21/15 07:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.8		%	1	1504228	04/22/15	04/23/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/27/15 15:07

**MW-2 (0-6")-D
 1504201-02 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/21/15 07:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	5.49	0.0996	mg/kg dry	1	1504226	04/22/15	04/23/15	EPA 6020A	
Barium	104	0.0996	"	"	"	"	"	"	
Cadmium	1.15	0.0996	"	"	"	"	"	"	
Chromium	9.95	0.498	"	"	"	"	"	"	
Lead	136	0.0996	"	"	"	"	"	"	
Selenium	0.208	0.0498	"	"	"	"	"	"	
Silver	0.574	0.0996	"	"	"	"	"	"	

Date Sampled: **04/21/15 07:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	127	9.96	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/21/15 07:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	0.0795	0.0436	mg/kg dry	1	1504235	04/23/15	04/23/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/21/15 07:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.0		%	1	1504228	04/22/15	04/23/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/27/15 15:07

MW-2 (6-24")
1504201-03 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/21/15 07:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	8.51	0.102	mg/kg dry	1	1504226	04/22/15	04/23/15	EPA 6020A	
Barium	109	0.102	"	"	"	"	"	"	
Cadmium	1.44	0.102	"	"	"	"	"	"	
Chromium	14.2	0.511	"	"	"	"	"	"	
Lead	241	0.102	"	"	"	"	"	"	
Selenium	0.236	0.0511	"	"	"	"	"	"	
Silver	1.02	0.102	"	"	"	"	"	"	

Date Sampled: **04/21/15 07:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	124	10.2	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/21/15 07:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.475	0.0453	mg/kg dry	1	1504235	04/23/15	04/23/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/21/15 07:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	87.5		%	1	1504228	04/22/15	04/23/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/27/15 15:07

**MW-2 (6-24")-D
 1504201-04 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/21/15 07:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	11.4	0.113	mg/kg dry	1	1504226	04/22/15	04/23/15	EPA 6020A	
Barium	126	0.113	"	"	"	"	"	"	
Cadmium	2.36	0.113	"	"	"	"	"	"	
Chromium	12.8	0.565	"	"	"	"	"	"	
Lead	390	0.113	"	"	"	"	"	"	
Selenium	0.276	0.0565	"	"	"	"	"	"	
Silver	1.88	0.113	"	"	"	"	"	"	

Date Sampled: **04/21/15 07:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	173	11.3	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/21/15 07:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.194	0.0504	mg/kg dry	1	1504235	04/23/15	04/23/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/21/15 07:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	88.5		%	1	1504228	04/22/15	04/23/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/27/15 15:07

MW-2 (25')
1504201-05 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/21/15 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	45	mg/kg	1	1504241	04/23/15	04/23/15	8015M	
C28-C36 (ORO)	ND	45	"	"	"	"	"	"	

Date Sampled: **04/21/15 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		121 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/21/15 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504243	04/23/15	04/24/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/27/15 15:07

MW-2 (25')
1504201-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample	ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504243	04/23/15	04/24/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"	"

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/27/15 15:07

**MW-2 (25')
 1504201-05 (Soil)**

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504243	04/23/15	04/24/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: 04/21/15 10:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		66.3 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		99.5 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		85.0 %		21-167	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/27/15 15:07

MW-2 (25')-D
1504201-06 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/21/15 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504241	04/23/15	04/23/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/21/15 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		122 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/21/15 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504243	04/23/15	04/24/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/27/15 15:07

MW-2 (25')-D
1504201-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample	ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504243	04/23/15	04/24/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"	"

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/27/15 15:07

MW-2 (25')-D
1504201-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504243	04/23/15	04/24/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: **04/21/15 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		115 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		97.6 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.4 %		21-167	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/27/15 15:07

**MW-4 (0-6")
 1504201-07 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/21/15 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.951	0.109	mg/kg dry	1	1504226	04/22/15	04/23/15	EPA 6020A	
Barium	55.5	0.109	"	"	"	"	"	"	
Cadmium	ND	0.109	"	"	"	"	"	"	
Chromium	8.80	0.545	"	"	"	"	"	"	
Lead	8.35	0.109	"	"	"	"	"	"	
Selenium	0.203	0.0545	"	"	"	"	"	"	
Silver	ND	0.109	"	"	"	"	"	"	

Date Sampled: **04/21/15 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	82.7	10.9	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/21/15 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0545	mg/kg dry	1	1504235	04/23/15	04/23/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/21/15 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	91.7		%	1	1504228	04/22/15	04/23/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/27/15 15:07

MW-4 (6-24")
1504201-08 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/21/15 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	8.57	0.108	mg/kg dry	1	1504226	04/22/15	04/23/15	EPA 6020A	
Barium	71.8	0.108	"	"	"	"	"	"	
Cadmium	4.52	0.108	"	"	"	"	"	"	
Chromium	5.71	0.542	"	"	"	"	"	"	
Lead	52.9	0.108	"	"	"	"	"	"	
Selenium	0.213	0.0542	"	"	"	"	"	"	
Silver	0.117	0.108	"	"	"	"	"	"	

Date Sampled: **04/21/15 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	55.3	10.8	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/21/15 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.183	0.0542	mg/kg dry	1	1504235	04/23/15	04/23/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/21/15 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	92.2		%	1	1504228	04/22/15	04/23/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/27/15 15:07

**MW-4 (20')
 1504201-09 (Soil)**

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/21/15 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504241	04/23/15	04/23/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/21/15 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		124 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/21/15 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504243	04/23/15	04/24/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/27/15 15:07

MW-4 (20')
1504201-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample	ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504243	04/23/15	04/24/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"	"

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Terracon - Wheat Ridge
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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/27/15 15:07

**MW-4 (20')
 1504201-09 (Soil)**

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504243	04/23/15	04/24/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: 04/21/15 13:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		106 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		97.7 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.4 %		21-167	"	"	"	"	

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/27/15 15:07

MW-3 (0-6")
1504201-10 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/21/15 14:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.14	0.106	mg/kg dry	1	1504226	04/22/15	04/23/15	EPA 6020A	
Barium	95.7	0.106	"	"	"	"	"	"	
Cadmium	0.661	0.106	"	"	"	"	"	"	
Chromium	16.2	0.532	"	"	"	"	"	"	
Lead	40.5	0.106	"	"	"	"	"	"	
Selenium	0.120	0.0532	"	"	"	"	"	"	
Silver	ND	0.106	"	"	"	"	"	"	

Date Sampled: **04/21/15 14:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	58.0	10.6	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/21/15 14:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0459	mg/kg dry	1	1504235	04/23/15	04/23/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/21/15 14:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	94.0		%	1	1504228	04/22/15	04/23/15	% calculation	

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/27/15 15:07

MW-3 (6-24")
1504201-11 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/21/15 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	16.6	0.0988	mg/kg dry	1	1504226	04/22/15	04/23/15	EPA 6020A	
Barium	218	0.0988	"	"	"	"	"	"	
Cadmium	8.69	0.0988	"	"	"	"	"	"	
Chromium	8.70	0.494	"	"	"	"	"	"	
Lead	512	0.0988	"	"	"	"	"	"	
Selenium	0.323	0.0494	"	"	"	"	"	"	
Silver	2.76	0.0988	"	"	"	"	"	"	

Date Sampled: **04/21/15 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	547	9.88	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/21/15 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	0.235	0.0551	mg/kg dry	1	1504235	04/23/15	04/23/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/21/15 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.8		%	1	1504228	04/22/15	04/23/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/27/15 15:07

MW-3 (32')
1504201-12 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/21/15 16:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504241	04/23/15	04/23/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/21/15 16:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		123 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/21/15 16:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504243	04/23/15	04/24/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/27/15 15:07

MW-3 (32')
1504201-12 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample	ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504243	04/23/15	04/24/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"	"

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/27/15 15:07

**MW-3 (32')
 1504201-12 (Soil)**

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504243	04/23/15	04/24/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: 04/21/15 16:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		98.2 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.2 %		21-167	"	"	"	"	

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Terracon - Wheat Ridge
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 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/27/15 15:07

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1504241 - EPA 3550A

Blank (1504241-BLK1)				Prepared & Analyzed: 04/23/15							
C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
<i>Surrogate: o-Terphenyl</i>	<i>13.9</i>		<i>"</i>	<i>12.2</i>		<i>114</i>	<i>70-130</i>				
LCS (1504241-BS1)				Prepared & Analyzed: 04/23/15							
C10-C28 (DRO)	568	50	mg/kg	501		113	50-150				
<i>Surrogate: o-Terphenyl</i>	<i>14.7</i>		<i>"</i>	<i>12.2</i>		<i>120</i>	<i>70-130</i>				
Matrix Spike (1504241-MS1)				Source: 1504187-01		Prepared & Analyzed: 04/23/15					
C10-C28 (DRO)	580	50	mg/kg	478	8.52	120	50-150				
<i>Surrogate: o-Terphenyl</i>	<i>15.1</i>		<i>"</i>	<i>11.6</i>		<i>130</i>	<i>70-130</i>				
Matrix Spike Dup (1504241-MSD1)				Source: 1504187-01		Prepared & Analyzed: 04/23/15					
C10-C28 (DRO)	535	50	mg/kg	495	8.52	106	50-150	8.17	20		
<i>Surrogate: o-Terphenyl</i>	<i>13.7</i>		<i>"</i>	<i>12.1</i>		<i>113</i>	<i>70-130</i>				

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Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting		Spike Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

Batch 1504243 - EPA 5030 Soil MS

Blank (1504243-BLK1)

Prepared & Analyzed: 04/23/15

Benzene	ND	0.0020	mg/kg						
Bromobenzene	ND	0.0050	"						
Bromochloromethane	ND	0.0050	"						
Bromodichloromethane	ND	0.0050	"						
Bromoform	ND	0.0050	"						
Bromomethane	ND	0.010	"						
n-Butylbenzene	ND	0.0050	"						
sec-Butylbenzene	ND	0.0050	"						
tert-Butylbenzene	ND	0.0050	"						
Carbon tetrachloride	ND	0.0050	"						
Chlorobenzene	ND	0.0050	"						
Chloroethane	ND	0.0050	"						
Chloroform	ND	0.0050	"						
Chloromethane	ND	0.015	"						
2-Chlorotoluene	ND	0.0050	"						
4-Chlorotoluene	ND	0.0050	"						
Chlorodibromomethane	ND	0.010	"						
1,2-Dibromo-3-chloropropane	ND	0.015	"						
1,2-Dibromoethane (EDB)	ND	0.0050	"						
Dibromomethane	ND	0.0050	"						
1,2-Dichlorobenzene	ND	0.0050	"						
1,3-Dichlorobenzene	ND	0.0050	"						
1,4-Dichlorobenzene	ND	0.0050	"						
Dichlorodifluoromethane	ND	0.0050	"						
Tert-amyl methyl ether	ND	0.0050	"						
1,1-Dichloroethane	ND	0.0050	"						
1,2-Dichloroethane (EDC)	ND	0.0050	"						
Tert-butyl alcohol	ND	0.020	"						
1,1-Dichloroethene	ND	0.0050	"						
Ethyl tert-butyl ether	ND	0.010	"						
cis-1,2-Dichloroethene	ND	0.0050	"						
Di-isopropyl ether	ND	0.0050	"						
trans-1,2-Dichloroethene	ND	0.0050	"						
Methyl tert-butyl ether	ND	0.015	"						
1,2-Dichloropropane	ND	0.0050	"						
1,3-Dichloropropane	ND	0.0050	"						
2,2-Dichloropropane	ND	0.010	"						
1,1-Dichloropropene	ND	0.0050	"						

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/27/15 15:07

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504243 - EPA 5030 Soil MS

Blank (1504243-BLK1)

Prepared & Analyzed: 04/23/15

cis-1,3-Dichloropropene	ND	0.0050	mg/kg							
trans-1,3-Dichloropropene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Hexachlorobutadiene	ND	0.0050	"							
Isopropylbenzene	ND	0.0050	"							
p-Isopropyltoluene	ND	0.010	"							
Methylene Chloride	ND	0.015	"							
Naphthalene	ND	0.010	"							
n-Propylbenzene	ND	0.0050	"							
Styrene	ND	0.010	"							
1,1,2,2-Tetrachloroethane	ND	0.0050	"							
1,1,1,2-Tetrachloroethane	ND	0.0050	"							
Tetrachloroethene	ND	0.0050	"							
Toluene	ND	0.0050	"							
1,2,3-Trichlorobenzene	ND	0.0050	"							
1,2,4-Trichlorobenzene	ND	0.0050	"							
1,1,2-Trichloroethane	ND	0.0050	"							
1,1,1-Trichloroethane	ND	0.0050	"							
Trichloroethene	ND	0.0050	"							
Trichlorofluoromethane	ND	0.0050	"							
1,2,3-Trichloropropane	ND	0.010	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
Vinyl chloride	ND	0.0050	"							
m,p-Xylene	ND	0.010	"							
o-Xylene	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0393</i>		<i>"</i>	<i>0.0396</i>	<i>99.3</i>	<i>23-173</i>				
<i>Surrogate: Toluene-d8</i>	<i>0.0391</i>		<i>"</i>	<i>0.0400</i>	<i>97.8</i>	<i>20-170</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0380</i>		<i>"</i>	<i>0.0400</i>	<i>95.0</i>	<i>21-167</i>				

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/27/15 15:07

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504243 - EPA 5030 Soil MS

LCS (1504243-BS1)

Prepared & Analyzed: 04/23/15

Benzene	0.131	0.0020	mg/kg	0.150		87.1	58-130			
Bromobenzene	0.132	0.0050	"	0.150		88.3	87-115			
Bromochloromethane	0.129	0.0050	"	0.150		85.9	82-122			
Bromodichloromethane	0.133	0.0050	"	0.150		88.8	84-119			
Bromoform	0.131	0.0050	"	0.150		87.6	76-119			
Bromomethane	0.138	0.010	"	0.150		92.1	39-152			
n-Butylbenzene	0.131	0.0050	"	0.150		87.6	70-131			
sec-Butylbenzene	0.127	0.0050	"	0.150		84.6	74-124			
tert-Butylbenzene	0.128	0.0050	"	0.150		85.7	77-121			
Carbon tetrachloride	0.124	0.0050	"	0.150		82.8	66-127			
Chlorobenzene	0.131	0.0050	"	0.150		87.3	82-120			
Chloroethane	0.132	0.0050	"	0.150		87.9	63-126			
Chloroform	0.128	0.0050	"	0.150		85.6	82-120			
Chloromethane	0.121	0.015	"	0.150		80.4	57-133			
2-Chlorotoluene	0.124	0.0050	"	0.150		82.4	82-117			
4-Chlorotoluene	0.127	0.0050	"	0.150		84.4	81-119			
Chlorodibromomethane	0.131	0.010	"	0.150		87.6	82-124			
1,2-Dibromo-3-chloropropane	0.141	0.015	"	0.150		94.0	62-128			
1,2-Dibromoethane (EDB)	0.134	0.0050	"	0.150		89.1	86-122			
Dibromomethane	0.130	0.0050	"	0.150		86.5	83-124			
1,2-Dichlorobenzene	0.133	0.0050	"	0.150		88.5	84-120			
1,3-Dichlorobenzene	0.132	0.0050	"	0.150		87.7	81-118			
1,4-Dichlorobenzene	0.126	0.0050	"	0.150		83.7	80-118			
Dichlorodifluoromethane	0.120	0.0050	"	0.150		80.0	25-141			
Tert-amyl methyl ether	0.128	0.0050	"	0.149		85.4	50-147			
1,1-Dichloroethane	0.128	0.0050	"	0.150		85.3	78-120			
1,2-Dichloroethane (EDC)	0.131	0.0050	"	0.150		87.1	81-125			
Tert-butyl alcohol	0.580	0.020	"	0.747		77.6	64-127			
1,1-Dichloroethene	0.125	0.0050	"	0.150		83.4	71-122			
Ethyl tert-butyl ether	0.127	0.010	"	0.150		84.8	80-122			
cis-1,2-Dichloroethene	0.131	0.0050	"	0.150		87.5	84-121			
Di-isopropyl ether	0.129	0.0050	"	0.150		85.8	78-120			
trans-1,2-Dichloroethene	0.129	0.0050	"	0.150		86.1	77-125			
Methyl tert-butyl ether	0.129	0.015	"	0.150		85.8	77-124			
1,2-Dichloropropane	0.133	0.0050	"	0.150		88.9	88-114			
1,3-Dichloropropane	0.134	0.0050	"	0.150		89.2	86-122			
2,2-Dichloropropane	0.115	0.010	"	0.150		76.7	32-150			
1,1-Dichloropropene	0.126	0.0050	"	0.150		84.2	71-123			

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/27/15 15:07

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504243 - EPA 5030 Soil MS

LCS (1504243-BS1)

Prepared & Analyzed: 04/23/15

cis-1,3-Dichloropropene	0.132	0.0050	mg/kg	0.150		88.3	74-125			
trans-1,3-Dichloropropene	0.134	0.0050	"	0.150		89.1	72-126			
Ethylbenzene	0.141	0.0050	"	0.150		94.2	74-139			
Hexachlorobutadiene	0.130	0.0050	"	0.150		86.8	56-144			
Isopropylbenzene	0.129	0.0050	"	0.150		86.3	72-124			
p-Isopropyltoluene	0.127	0.010	"	0.150		84.8	72-123			
Methylene Chloride	0.126	0.015	"	0.150		84.1	10-183			
Naphthalene	0.133	0.010	"	0.150		88.4	66-138			
n-Propylbenzene	0.132	0.0050	"	0.150		88.2	76-121			
Styrene	0.134	0.010	"	0.150		89.6	76-133			
1,1,2,2-Tetrachloroethane	0.129	0.0050	"	0.150		85.9	60-137			
1,1,1,2-Tetrachloroethane	0.132	0.0050	"	0.150		87.9	86-121			
Tetrachloroethene	0.126	0.0050	"	0.150		84.1	69-131			
Toluene	0.125	0.0050	"	0.150		83.0	61-134			
1,2,3-Trichlorobenzene	0.136	0.0050	"	0.150		90.8	63-142			
1,2,4-Trichlorobenzene	0.140	0.0050	"	0.150		93.2	63-141			
1,1,2-Trichloroethane	0.140	0.0050	"	0.150		93.0	75-136			
1,1,1-Trichloroethane	0.124	0.0050	"	0.150		82.8	71-126			
Trichloroethene	0.130	0.0050	"	0.150		87.0	86-118			
Trichlorofluoromethane	0.125	0.0050	"	0.150		83.1	62-128			
1,2,3-Trichloropropane	0.125	0.010	"	0.150		83.3	80-118			
1,3,5-Trimethylbenzene	0.127	0.0050	"	0.150		84.6	72-121			
1,2,4-Trimethylbenzene	0.127	0.0050	"	0.150		84.8	78-126			
Vinyl chloride	0.124	0.0050	"	0.150		82.4	63-134			
m,p-Xylene	0.281	0.010	"	0.300		93.6	73-137			
o-Xylene	0.130	0.0050	"	0.150		86.9	73-141			
Surrogate: 1,2-Dichloroethane-d4	0.0406		"	0.0396		102	23-173			
Surrogate: Toluene-d8	0.0409		"	0.0400		102	20-170			
Surrogate: 4-Bromofluorobenzene	0.0393		"	0.0400		98.2	21-167			

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Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

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 04/27/15 15:07

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504243 - EPA 5030 Soil MS

Matrix Spike (1504243-MS1)	Source: 1504210-01			Prepared & Analyzed: 04/23/15						
Benzene	0.100	0.0020	mg/kg	0.150	ND	67.0	30-131			
Bromobenzene	0.0916	0.0050	"	0.150	ND	61.1	39-124			
Bromochloromethane	0.110	0.0050	"	0.150	ND	73.5	62-121			
Bromodichloromethane	0.109	0.0050	"	0.150	ND	72.6	51-120			
Bromoform	0.113	0.0050	"	0.150	ND	75.4	52-125			
Bromomethane	0.109	0.010	"	0.150	ND	72.3	10-152			
n-Butylbenzene	0.0566	0.0050	"	0.150	ND	37.8	10-144			
sec-Butylbenzene	0.0606	0.0050	"	0.150	ND	40.4	10-140			
tert-Butylbenzene	0.0689	0.0050	"	0.150	ND	45.9	16-132			
Carbon tetrachloride	0.0877	0.0050	"	0.150	ND	58.4	46-125			
Chlorobenzene	0.0952	0.0050	"	0.150	ND	63.5	42-125			
Chloroethane	0.104	0.0050	"	0.150	ND	69.3	46-125			
Chloroform	0.103	0.0050	"	0.150	ND	68.5	57-118			
Chloromethane	0.0976	0.015	"	0.150	ND	65.0	33-132			
2-Chlorotoluene	0.0778	0.0050	"	0.150	ND	51.9	30-125			
4-Chlorotoluene	0.0797	0.0050	"	0.150	ND	53.2	29-127			
Chlorodibromomethane	0.112	0.010	"	0.150	ND	74.8	54-124			
1,2-Dibromo-3-chloropropane	0.127	0.015	"	0.150	ND	84.7	10-175			
1,2-Dibromoethane (EDB)	0.115	0.0050	"	0.150	ND	76.7	65-125			
Dibromomethane	0.117	0.0050	"	0.150	ND	78.2	64-127			
1,2-Dichlorobenzene	0.0888	0.0050	"	0.150	ND	59.2	24-134			
1,3-Dichlorobenzene	0.0820	0.0050	"	0.150	ND	54.7	22-130			
1,4-Dichlorobenzene	0.0816	0.0050	"	0.150	ND	54.4	21-131			
Dichlorodifluoromethane	0.0945	0.0050	"	0.150	ND	63.0	47-117			
Tert-amyl methyl ether	0.112	0.0050	"	0.149	ND	74.8	60-124			
1,1-Dichloroethane	0.101	0.0050	"	0.150	ND	67.3	55-119			
1,2-Dichloroethane (EDC)	0.113	0.0050	"	0.150	ND	75.5	65-124			
Tert-butyl alcohol	0.614	0.020	"	0.747	ND	82.2	64-131			
1,1-Dichloroethene	0.0972	0.0050	"	0.150	ND	64.8	42-145			
cis-1,2-Dichloroethene	0.105	0.0050	"	0.150	ND	70.3	56-121			
Ethyl tert-butyl ether	0.109	0.010	"	0.150	ND	72.9	60-119			
Di-isopropyl ether	0.105	0.0050	"	0.150	ND	69.7	40-132			
trans-1,2-Dichloroethene	0.101	0.0050	"	0.150	ND	67.4	52-126			
1,2-Dichloropropane	0.105	0.0050	"	0.150	ND	70.1	61-115			
Methyl tert-butyl ether	0.119	0.015	"	0.150	ND	79.2	64-124			
1,3-Dichloropropane	0.114	0.0050	"	0.150	ND	76.3	66-123			
2,2-Dichloropropane	0.0896	0.010	"	0.150	ND	59.7	35-127			
1,1-Dichloropropene	0.0917	0.0050	"	0.150	ND	61.1	52-119			

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10625 West I-70 Frontage Road, Suite 3
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Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/27/15 15:07

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504243 - EPA 5030 Soil MS

Matrix Spike (1504243-MS1)	Source: 1504210-01			Prepared & Analyzed: 04/23/15						
cis-1,3-Dichloropropene	0.113	0.0050	mg/kg	0.150	ND	75.2	47-122			
trans-1,3-Dichloropropene	0.114	0.0050	"	0.150	ND	75.9	51-119			
Ethylbenzene	0.0960	0.0050	"	0.150	ND	64.0	22-153			
Hexachlorobutadiene	0.0320	0.0050	"	0.150	ND	21.4	10-149			
Isopropylbenzene	0.0796	0.0050	"	0.150	ND	53.0	18-135			
p-Isopropyltoluene	0.0617	0.010	"	0.150	ND	41.1	12-132			
Methylene Chloride	0.0945	0.015	"	0.150	ND	63.0	10-167			
Naphthalene	0.105	0.010	"	0.150	0.00156	69.0	10-158			
n-Propylbenzene	0.0749	0.0050	"	0.150	ND	50.0	15-134			
Styrene	0.0980	0.010	"	0.150	ND	65.4	33-135			
1,1,2,2-Tetrachloroethane	0.108	0.0050	"	0.150	ND	72.0	10-166			
1,1,1,2-Tetrachloroethane	0.100	0.0050	"	0.150	ND	66.7	49-123			
Tetrachloroethane	0.0841	0.0050	"	0.150	ND	56.1	33-134			
Toluene	0.0932	0.0050	"	0.150	0.000450	61.9	30-134			
1,2,3-Trichlorobenzene	0.0779	0.0050	"	0.150	ND	51.9	10-155			
1,2,4-Trichlorobenzene	0.0731	0.0050	"	0.150	ND	48.7	10-152			
1,1,2-Trichloroethane	0.121	0.0050	"	0.150	ND	80.6	46-139			
1,1,1-Trichloroethane	0.0941	0.0050	"	0.150	ND	62.8	51-124			
Trichloroethene	0.100	0.0050	"	0.150	ND	66.7	16-187			
Trichlorofluoromethane	0.0965	0.0050	"	0.150	ND	64.3	53-125			
1,2,3-Trichloropropane	0.155	0.010	"	0.150	ND	103	69-118			
1,3,5-Trimethylbenzene	0.0758	0.0050	"	0.150	ND	50.6	20-128			
1,2,4-Trimethylbenzene	0.0736	0.0050	"	0.150	ND	49.1	17-142			
Vinyl chloride	0.0975	0.0050	"	0.150	ND	65.0	50-134			
m,p-Xylene	0.191	0.010	"	0.300	ND	63.6	10-159			
o-Xylene	0.0912	0.0050	"	0.150	ND	60.8	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0452		"	0.0396		114	23-173			
Surrogate: Toluene-d8	0.0405		"	0.0400		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0409		"	0.0400		102	21-167			

Summit Scientific

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/27/15 15:07

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504243 - EPA 5030 Soil MS

Matrix Spike Dup (1504243-MSD1)	Source: 1504210-01			Prepared & Analyzed: 04/23/15						
Benzene	0.118	0.0020	mg/kg	0.150	ND	78.8	30-131	16.3	34	
Bromobenzene	0.105	0.0050	"	0.150	ND	70.3	39-124	14.0	21	
Bromochloromethane	0.132	0.0050	"	0.150	ND	88.1	62-121	18.0	20	
Bromodichloromethane	0.127	0.0050	"	0.150	ND	84.4	51-120	15.0	22	
Bromoform	0.132	0.0050	"	0.150	ND	88.0	52-125	15.4	22	
Bromomethane	0.135	0.010	"	0.150	ND	89.9	10-152	21.7	90	
n-Butylbenzene	0.0576	0.0050	"	0.150	ND	38.4	10-144	1.73	52	
sec-Butylbenzene	0.0639	0.0050	"	0.150	ND	42.6	10-140	5.40	45	
tert-Butylbenzene	0.0739	0.0050	"	0.150	ND	49.3	16-132	7.02	33	
Carbon tetrachloride	0.105	0.0050	"	0.150	ND	69.9	46-125	17.9	22	
Chlorobenzene	0.110	0.0050	"	0.150	ND	73.4	42-125	14.5	18	
Chloroethane	0.121	0.0050	"	0.150	ND	80.9	46-125	15.4	24	
Chloroform	0.122	0.0050	"	0.150	ND	81.6	57-118	17.4	19	
Chloromethane	0.115	0.015	"	0.150	ND	76.4	33-132	16.1	18	
2-Chlorotoluene	0.0897	0.0050	"	0.150	ND	59.8	30-125	14.2	24	
4-Chlorotoluene	0.0918	0.0050	"	0.150	ND	61.2	29-127	14.0	24	
Chlorodibromomethane	0.129	0.010	"	0.150	ND	85.7	54-124	13.6	22	
1,2-Dibromo-3-chloropropane	0.157	0.015	"	0.150	ND	105	10-175	21.4	39	
1,2-Dibromoethane (EDB)	0.137	0.0050	"	0.150	ND	91.3	65-125	17.4	22	
Dibromomethane	0.137	0.0050	"	0.150	ND	91.1	64-127	15.3	19	
1,2-Dichlorobenzene	0.100	0.0050	"	0.150	ND	66.7	24-134	11.9	26	
1,3-Dichlorobenzene	0.0935	0.0050	"	0.150	ND	62.3	22-130	13.1	27	
1,4-Dichlorobenzene	0.0927	0.0050	"	0.150	ND	61.8	21-131	12.7	25	
Dichlorodifluoromethane	0.110	0.0050	"	0.150	ND	73.5	47-117	15.4	36	
Tert-amyl methyl ether	0.133	0.0050	"	0.149	ND	89.2	60-124	17.6	40	
1,1-Dichloroethane	0.119	0.0050	"	0.150	ND	79.5	55-119	16.7	22	
1,2-Dichloroethane (EDC)	0.132	0.0050	"	0.150	ND	88.0	65-124	15.3	19	
Tert-butyl alcohol	0.697	0.020	"	0.747	ND	93.4	64-131	12.7	24	
1,1-Dichloroethene	0.115	0.0050	"	0.150	ND	76.8	42-145	16.9	22	
cis-1,2-Dichloroethene	0.125	0.0050	"	0.150	ND	83.6	56-121	17.4	21	
Ethyl tert-butyl ether	0.130	0.010	"	0.150	ND	86.5	60-119	17.0	38	
Di-isopropyl ether	0.126	0.0050	"	0.150	ND	84.0	40-132	18.6	108	
trans-1,2-Dichloroethene	0.120	0.0050	"	0.150	ND	80.3	52-126	17.4	22	
Methyl tert-butyl ether	0.139	0.015	"	0.150	ND	92.9	64-124	15.8	28	
1,2-Dichloropropane	0.124	0.0050	"	0.150	ND	82.5	61-115	16.2	17	
1,3-Dichloropropane	0.133	0.0050	"	0.150	ND	88.8	66-123	15.2	24	
2,2-Dichloropropane	0.105	0.010	"	0.150	ND	69.8	35-127	15.6	29	
1,1-Dichloropropene	0.109	0.0050	"	0.150	ND	72.6	52-119	17.2	21	

Summit Scientific

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/27/15 15:07

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504243 - EPA 5030 Soil MS

Matrix Spike Dup (1504243-MSD1)	Source: 1504210-01			Prepared & Analyzed: 04/23/15						
cis-1,3-Dichloropropene	0.132	0.0050	mg/kg	0.150	ND	88.1	47-122	15.8	40	
trans-1,3-Dichloropropene	0.133	0.0050	"	0.150	ND	88.9	51-119	15.8	52	
Ethylbenzene	0.110	0.0050	"	0.150	ND	73.1	22-153	13.3	24	
Hexachlorobutadiene	0.0308	0.0050	"	0.150	ND	20.5	10-149	4.01	59	
Isopropylbenzene	0.0891	0.0050	"	0.150	ND	59.4	18-135	11.3	33	
p-Isopropyltoluene	0.0651	0.010	"	0.150	ND	43.4	12-132	5.40	38	
Methylene Chloride	0.117	0.015	"	0.150	ND	78.3	10-167	21.7	102	
Naphthalene	0.117	0.010	"	0.150	0.00156	77.3	10-158	11.2	42	
n-Propylbenzene	0.0833	0.0050	"	0.150	ND	55.5	15-134	10.5	37	
Styrene	0.112	0.010	"	0.150	ND	75.0	33-135	13.7	22	
1,1,2,2-Tetrachloroethane	0.122	0.0050	"	0.150	ND	81.4	10-166	12.2	45	
1,1,1,2-Tetrachloroethane	0.116	0.0050	"	0.150	ND	77.0	49-123	14.4	21	
Tetrachloroethane	0.0955	0.0050	"	0.150	ND	63.7	33-134	12.7	26	
Toluene	0.109	0.0050	"	0.150	0.000450	72.4	30-134	15.7	30	
1,2,3-Trichlorobenzene	0.0784	0.0050	"	0.150	ND	52.3	10-155	0.691	40	
1,2,4-Trichlorobenzene	0.0738	0.0050	"	0.150	ND	49.2	10-152	1.02	42	
1,1,2-Trichloroethane	0.143	0.0050	"	0.150	ND	95.5	46-139	16.9	34	
1,1,1-Trichloroethane	0.112	0.0050	"	0.150	ND	74.5	51-124	17.2	22	
Trichloroethene	0.120	0.0050	"	0.150	ND	79.7	16-187	17.8	19	
Trichlorofluoromethane	0.113	0.0050	"	0.150	ND	75.0	53-125	15.3	20	
1,2,3-Trichloropropane	0.153	0.010	"	0.150	ND	102	69-118	0.701	23	
1,3,5-Trimethylbenzene	0.0859	0.0050	"	0.150	ND	57.2	20-128	12.4	31	
1,2,4-Trimethylbenzene	0.0825	0.0050	"	0.150	ND	55.0	17-142	11.4	40	
Vinyl chloride	0.115	0.0050	"	0.150	ND	76.6	50-134	16.4	22	
m,p-Xylene	0.218	0.010	"	0.300	ND	72.8	10-159	13.4	68	
o-Xylene	0.104	0.0050	"	0.150	ND	69.4	31-151	13.2	38	
Surrogate: 1,2-Dichloroethane-d4	0.0466		"	0.0396		118	23-173			
Surrogate: Toluene-d8	0.0407		"	0.0400		102	20-170			
Surrogate: 4-Bromofluorobenzene	0.0407		"	0.0400		102	21-167			

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/27/15 15:07

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504226 - EPA 3050B

Blank (1504226-BLK1)

Prepared: 04/22/15 Analyzed: 04/23/15

Arsenic	ND	0.100	mg/kg wet							
Barium	ND	0.100	"							
Cadmium	ND	0.100	"							
Chromium	ND	0.500	"							
Lead	ND	0.100	"							
Selenium	ND	0.0500	"							
Silver	ND	0.100	"							
Zinc	ND	10.0	"							

LCS (1504226-BS1)

Prepared: 04/22/15 Analyzed: 04/23/15

Arsenic	118	0.250	mg/kg wet	99.6		119	78.4-140			
Barium	313	0.250	"	310		101	83.2-117			
Cadmium	207	0.250	"	182		114	81.9-118			
Chromium	162	1.25	"	136		119	80.1-121			
Lead	130	0.250	"	115		113	81.8-119			
Selenium	184	0.125	"	150		123	77.3-123			
Silver	47.5	0.250	"	40.4		118	75-125			
Zinc	138	25.0	"	133		104	80.7-132			

Duplicate (1504226-DUP1)

Source: 1504195-01

Prepared: 04/22/15 Analyzed: 04/23/15

Arsenic	3.58	0.0997	mg/kg dry		3.59			0.439	20	
Barium	140	0.0997	"		124			12.3	20	
Cadmium	0.498	0.0997	"		0.497			0.232	20	
Chromium	6.96	0.498	"		8.09			15.0	20	
Lead	110	0.0997	"		99.3			10.2	20	
Selenium	0.348	0.0498	"		0.540			43.1	20	QR-03
Silver	0.275	0.0997	"		0.216			24.1	20	QR-03
Zinc	257	9.97	"		176			37.5	20	QR-03

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/27/15 15:07

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1504226 - EPA 3050B

Matrix Spike (1504226-MS1)

Source: 1504195-01 Prepared: 04/22/15 Analyzed: 04/23/15

Analyte	Result	Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Notes
Arsenic	45.1	0.112	mg/kg dry	41.6	3.59	100	75-125			
Barium	168	0.112	"	41.6	124	107	75-125			
Cadmium	2.50	0.112	"	2.08	0.497	96.4	75-125			
Chromium	52.8	0.559	"	41.6	8.09	108	75-125			
Lead	124	0.112	"	20.8	99.3	120	75-125			
Selenium	5.15	0.0559	"	4.16	0.540	111	75-125			
Silver	1.57	0.112	"	2.08	0.216	65.1	75-125			QM-07
Zinc	235	11.2	"	41.6	176	143	75-125			QM-07

Matrix Spike Dup (1504226-MSD1)

Source: 1504195-01 Prepared: 04/22/15 Analyzed: 04/23/15

Analyte	Result	Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Notes
Arsenic	44.6	0.0995	mg/kg dry	39.8	3.59	103	75-125	1.20	25	
Barium	160	0.0995	"	39.8	124	90.5	75-125	5.17	25	
Cadmium	2.59	0.0995	"	1.99	0.497	105	75-125	3.75	25	
Chromium	52.4	0.498	"	39.8	8.09	111	75-125	0.806	25	
Lead	123	0.0995	"	19.9	99.3	121	75-125	0.721	25	
Selenium	5.01	0.0498	"	3.98	0.540	112	75-125	2.70	25	
Silver	1.92	0.0995	"	1.99	0.216	85.7	75-125	20.3	25	
Zinc	242	9.95	"	39.8	176	166	75-125	2.77	25	QM-07

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/27/15 15:07

Total Mercury by EPA Method 7471 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike	Source		%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1504235 - EPA 7471A

Blank (1504235-BLK1)		Prepared & Analyzed: 04/23/15									
Mercury	ND	0.0500	mg/kg wet								
LCS (1504235-BS1)		Prepared & Analyzed: 04/23/15									
Mercury	0.543	0.0500	mg/kg wet	0.500		109	80-120				
Duplicate (1504235-DUP1)		Source: 1504195-01		Prepared & Analyzed: 04/23/15							
Mercury	0.265	0.0477	mg/kg dry		0.325			20.5	20		QR-03
Matrix Spike (1504235-MS1)		Source: 1504195-01		Prepared & Analyzed: 04/23/15							
Mercury	0.754	0.0559	mg/kg dry	0.525	0.325	81.8	80-120				
Matrix Spike Dup (1504235-MSD1)		Source: 1504195-01		Prepared & Analyzed: 04/23/15							
Mercury	0.731	0.0473	mg/kg dry	0.473	0.325	85.8	80-120	3.18	20		

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 04/27/15 15:07

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504228 - General Preparation

Duplicate (1504228-DUP1)	Source: 1504195-01		Prepared: 04/22/15		Analyzed: 04/23/15	
% Solids	89.9	%	89.4		0.558	20

Summit Scientific

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
04/27/15 15:07

Notes and Definitions

- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

May 27, 2015

Steve Hoffman

Terracon - Wheat Ridge

10625 West I-70 Frontage Road, Suite 3

Wheat Ridge, CO 80033

RE: National Western Complex

Enclosed are the results of analyses for samples received by Summit Scientific on 04/22/15 18:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Ben Shrewsbury', with a long, sweeping horizontal stroke extending to the right.

Ben Shrewsbury For Paul Shrewsbury
President



Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/27/15 13:31

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-6 (0-6")	1504204-01	Soil	04/22/15 11:30	04/22/15 18:30
MW-6 (6-24")	1504204-02	Soil	04/22/15 11:30	04/22/15 18:30
MW-6 (30')	1504204-03	Soil	04/22/15 13:45	04/22/15 18:30
MW-14 (0-6")	1504204-04	Soil	04/22/15 07:45	04/22/15 18:30
MW-14 (6-24")	1504204-05	Soil	04/22/15 07:45	04/22/15 18:30
MW-14 (33')	1504204-06	Soil	04/22/15 10:00	04/22/15 18:30

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:31

Summit Scientific

1504204

741 Corporate Circle Suite I ♦ Golden, Colorado 80401
 303-277-9310 ♦ 303-374-5933 Fax

Client: Terracon Consultants

Page 1 of 1

Address: 10625 West I-70 Frontage Road North, Suite 3
 City/State/Zip: Wheat Ridge, CO 80033
 Phone: (303) 454-5275 Fax: (303) 423-3353
 Sampler Name: Marshall Haworth

Project Manager: Steve Hoffman
 E-Mail: sbhoffman@terracon.com
 Project Name: National Western Complex
 Project Number: 25157010

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:				Special Instructions		
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	VOC's 8260B	TPH 8015	PCRA 8+Zinc			
MW-6 (0-6")	4-22-15	1130	1			X			X								
MW-6 (6-24")	4-22-15	1130	1			X			X								
MW-6 (30')	4-22-15	1345	1			X			X								
MW-14 (0-6")	4-22-15	0745	1			X			X	X							
MW-14 (6-24")	4-22-15	0745	1			X			X								
MW-14 (33')	4-22-15	1000	1			X			X	X							
Relinquished by: <i>Marshall Haworth</i> Date/Time: 4-22-15 1830				Received by: <i>[Signature]</i> Date/Time: 4-22-15 1830				Turn Around Time (Check)				Notes:					
Relinquished by: Date/Time:				Received by: Date/Time:				Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/>				Standard <input checked="" type="checkbox"/>					
Relinquished by: Date/Time:				Received in Lab by: Date/Time:				48 Hours <input type="checkbox"/>				Sample Integrity:					
								Temperature Upon Receipt: 7.3				Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:31

Sample Receipt Checklist

S2 Work Order: 1504004

Client: Terracon

Client Project ID: National Western Complex

Shipped Via: Deliverd
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)

Airbill #: _____

Matrix (check all that apply): Air Soil/Solid Water Other: _____
 (Describe)

Cooler ID					
Temp (°C)	<u>7.3</u>				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C ⁽¹⁾ ?	X			
NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.				
Were all samples received intact ⁽¹⁾ ?	X			
Was adequate sample volume provided ⁽¹⁾ ?	X			
If custody seals are present, are they intact ⁽¹⁾ ?			X	
Are short holding time analytes or samples with HTs due within 48 hours present?		X		
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	X			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	X			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	X			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	X			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			X	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?			X	
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, etc.				
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			X	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?			X	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

Paul Shrewsbury
 Custodian Printed Name

[Signature]
 Signature or Initials of Custodian

4-23-15
 Date/Time

[Signature]



Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:31

**MW-6 (0-6")
 1504204-01 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/22/15 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.23	0.108	mg/kg dry	1	1504239	04/23/15	04/23/15	EPA 6020A	
Barium	38.1	0.108	"	"	"	"	"	"	
Cadmium	0.274	0.108	"	"	"	"	"	"	
Chromium	4.06	0.541	"	"	"	"	"	"	
Lead	25.9	0.108	"	"	"	"	"	"	
Selenium	0.196	0.0541	"	"	"	"	"	"	
Silver	0.141	0.108	"	"	"	"	"	"	

Date Sampled: **04/22/15 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	28.3	10.8	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/22/15 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0541	mg/kg dry	1	1504235	04/23/15	04/23/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/22/15 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.5		%	1	1504245	04/23/15	04/24/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:31

MW-6 (6-24")
1504204-02 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/22/15 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.05	0.107	mg/kg dry	1	1504239	04/23/15	04/23/15	EPA 6020A	
Barium	31.7	0.107	"	"	"	"	"	"	
Cadmium	0.141	0.107	"	"	"	"	"	"	
Chromium	2.60	0.533	"	"	"	"	"	"	
Lead	11.3	0.107	"	"	"	"	"	"	
Selenium	ND	0.0533	"	"	"	"	"	"	
Silver	ND	0.107	"	"	"	"	"	"	

Date Sampled: **04/22/15 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	20.4	10.7	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/22/15 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0533	mg/kg dry	1	1504235	04/23/15	04/23/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/22/15 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	93.8		%	1	1504245	04/23/15	04/24/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/27/15 13:31

MW-6 (30')
1504204-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/22/15 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504241	04/23/15	04/23/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/22/15 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		128 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/22/15 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504243	04/23/15	04/24/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:31

MW-6 (30')
1504204-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample	ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504243	04/23/15	04/24/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"	"

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:31

MW-6 (30')
1504204-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504243	04/23/15	04/24/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: 04/22/15 13:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		114 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		98.8 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.1 %		21-167	"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:31

MW-14 (0-6")
1504204-04 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/22/15 07:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	5.94	0.107	mg/kg dry	1	1504239	04/23/15	04/23/15	EPA 6020A	
Barium	94.5	0.107	"	"	"	"	"	"	
Cadmium	1.59	0.107	"	"	"	"	"	"	
Chromium	6.29	0.535	"	"	"	"	"	"	
Lead	134	0.107	"	"	"	"	"	"	
Selenium	ND	0.0535	"	"	"	"	"	"	
Silver	0.444	0.107	"	"	"	"	"	"	

Date Sampled: **04/22/15 07:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	145	10.7	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/22/15 07:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.0716	0.0535	mg/kg dry	1	1504235	04/23/15	04/23/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/22/15 07:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	93.4		%	1	1504245	04/23/15	04/24/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:31

MW-14 (6-24")
1504204-05 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/22/15 07:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.82	0.112	mg/kg dry	1	1504239	04/23/15	04/23/15	EPA 6020A	
Barium	103	0.112	"	"	"	"	"	"	
Cadmium	0.694	0.112	"	"	"	"	"	"	
Chromium	9.41	0.562	"	"	"	"	"	"	
Lead	66.3	0.112	"	"	"	"	"	"	
Selenium	ND	0.0562	"	"	"	"	"	"	
Silver	0.273	0.112	"	"	"	"	"	"	

Date Sampled: **04/22/15 07:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	74.4	11.2	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/22/15 07:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0508	mg/kg dry	1	1504235	04/23/15	04/23/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/22/15 07:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	88.9		%	1	1504245	04/23/15	04/24/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:31

MW-14 (33')
1504204-06 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/22/15 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504241	04/23/15	04/23/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/22/15 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		111 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/22/15 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504243	04/23/15	04/24/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:31

MW-14 (33')
1504204-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504243	04/23/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:31

MW-14 (33')
1504204-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504243	04/23/15	04/24/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: 04/22/15 10:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		109 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		99.3 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.6 %		21-167	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:31

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1504241 - EPA 3550A

Blank (1504241-BLK1)				Prepared & Analyzed: 04/23/15							
C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
<i>Surrogate: o-Terphenyl</i>	<i>13.9</i>		<i>"</i>	<i>12.2</i>		<i>114</i>	<i>70-130</i>				
LCS (1504241-BS1)				Prepared & Analyzed: 04/23/15							
C10-C28 (DRO)	568	50	mg/kg	501		113	50-150				
<i>Surrogate: o-Terphenyl</i>	<i>14.7</i>		<i>"</i>	<i>12.2</i>		<i>120</i>	<i>70-130</i>				
Matrix Spike (1504241-MS1)				Source: 1504187-01		Prepared & Analyzed: 04/23/15					
C10-C28 (DRO)	580	50	mg/kg	478	8.52	120	50-150				
<i>Surrogate: o-Terphenyl</i>	<i>15.1</i>		<i>"</i>	<i>11.6</i>		<i>130</i>	<i>70-130</i>				
Matrix Spike Dup (1504241-MSD1)				Source: 1504187-01		Prepared & Analyzed: 04/23/15					
C10-C28 (DRO)	535	50	mg/kg	495	8.52	106	50-150	8.17	20		
<i>Surrogate: o-Terphenyl</i>	<i>13.7</i>		<i>"</i>	<i>12.1</i>		<i>113</i>	<i>70-130</i>				

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Project: National Western Complex
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Reported:
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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting		Spike Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

Batch 1504243 - EPA 5030 Soil MS

Blank (1504243-BLK1)

Prepared & Analyzed: 04/23/15

Benzene	ND	0.0020	mg/kg	
Bromobenzene	ND	0.0050	"	
Bromochloromethane	ND	0.0050	"	
Bromodichloromethane	ND	0.0050	"	
Bromoform	ND	0.0050	"	
Bromomethane	ND	0.010	"	
n-Butylbenzene	ND	0.0050	"	
sec-Butylbenzene	ND	0.0050	"	
tert-Butylbenzene	ND	0.0050	"	
Carbon tetrachloride	ND	0.0050	"	
Chlorobenzene	ND	0.0050	"	
Chloroethane	ND	0.0050	"	
Chloroform	ND	0.0050	"	
Chloromethane	ND	0.015	"	
2-Chlorotoluene	ND	0.0050	"	
4-Chlorotoluene	ND	0.0050	"	
Chlorodibromomethane	ND	0.010	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	
Dibromomethane	ND	0.0050	"	
1,2-Dichlorobenzene	ND	0.0050	"	
1,3-Dichlorobenzene	ND	0.0050	"	
1,4-Dichlorobenzene	ND	0.0050	"	
Dichlorodifluoromethane	ND	0.0050	"	
Tert-amyl methyl ether	ND	0.0050	"	
1,1-Dichloroethane	ND	0.0050	"	
1,2-Dichloroethane (EDC)	ND	0.0050	"	
Tert-butyl alcohol	ND	0.020	"	
1,1-Dichloroethene	ND	0.0050	"	
Ethyl tert-butyl ether	ND	0.010	"	
cis-1,2-Dichloroethene	ND	0.0050	"	
Di-isopropyl ether	ND	0.0050	"	
trans-1,2-Dichloroethene	ND	0.0050	"	
Methyl tert-butyl ether	ND	0.015	"	
1,2-Dichloropropane	ND	0.0050	"	
1,3-Dichloropropane	ND	0.0050	"	
2,2-Dichloropropane	ND	0.010	"	
1,1-Dichloropropene	ND	0.0050	"	

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Reported:
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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504243 - EPA 5030 Soil MS

Blank (1504243-BLK1)

Prepared & Analyzed: 04/23/15

cis-1,3-Dichloropropene	ND	0.0050	mg/kg							
trans-1,3-Dichloropropene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Hexachlorobutadiene	ND	0.0050	"							
Isopropylbenzene	ND	0.0050	"							
p-Isopropyltoluene	ND	0.010	"							
Methylene Chloride	ND	0.015	"							
Naphthalene	ND	0.010	"							
n-Propylbenzene	ND	0.0050	"							
Styrene	ND	0.010	"							
1,1,2,2-Tetrachloroethane	ND	0.0050	"							
1,1,1,2-Tetrachloroethane	ND	0.0050	"							
Tetrachloroethene	ND	0.0050	"							
Toluene	ND	0.0050	"							
1,2,3-Trichlorobenzene	ND	0.0050	"							
1,2,4-Trichlorobenzene	ND	0.0050	"							
1,1,2-Trichloroethane	ND	0.0050	"							
1,1,1-Trichloroethane	ND	0.0050	"							
Trichloroethene	ND	0.0050	"							
Trichlorofluoromethane	ND	0.0050	"							
1,2,3-Trichloropropane	ND	0.010	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
Vinyl chloride	ND	0.0050	"							
m,p-Xylene	ND	0.010	"							
o-Xylene	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0393		"	0.0396	99.3	23-173				
Surrogate: Toluene-d8	0.0391		"	0.0400	97.8	20-170				
Surrogate: 4-Bromofluorobenzene	0.0380		"	0.0400	95.0	21-167				

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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504243 - EPA 5030 Soil MS

LCS (1504243-BS1)

Prepared & Analyzed: 04/23/15

Benzene	0.131	0.0020	mg/kg	0.150		87.1	58-130			
Bromobenzene	0.132	0.0050	"	0.150		88.3	87-115			
Bromochloromethane	0.129	0.0050	"	0.150		85.9	82-122			
Bromodichloromethane	0.133	0.0050	"	0.150		88.8	84-119			
Bromoform	0.131	0.0050	"	0.150		87.6	76-119			
Bromomethane	0.138	0.010	"	0.150		92.1	39-152			
n-Butylbenzene	0.131	0.0050	"	0.150		87.6	70-131			
sec-Butylbenzene	0.127	0.0050	"	0.150		84.6	74-124			
tert-Butylbenzene	0.128	0.0050	"	0.150		85.7	77-121			
Carbon tetrachloride	0.124	0.0050	"	0.150		82.8	66-127			
Chlorobenzene	0.131	0.0050	"	0.150		87.3	82-120			
Chloroethane	0.132	0.0050	"	0.150		87.9	63-126			
Chloroform	0.128	0.0050	"	0.150		85.6	82-120			
Chloromethane	0.121	0.015	"	0.150		80.4	57-133			
2-Chlorotoluene	0.124	0.0050	"	0.150		82.4	82-117			
4-Chlorotoluene	0.127	0.0050	"	0.150		84.4	81-119			
Chlorodibromomethane	0.131	0.010	"	0.150		87.6	82-124			
1,2-Dibromo-3-chloropropane	0.141	0.015	"	0.150		94.0	62-128			
1,2-Dibromoethane (EDB)	0.134	0.0050	"	0.150		89.1	86-122			
Dibromomethane	0.130	0.0050	"	0.150		86.5	83-124			
1,2-Dichlorobenzene	0.133	0.0050	"	0.150		88.5	84-120			
1,3-Dichlorobenzene	0.132	0.0050	"	0.150		87.7	81-118			
1,4-Dichlorobenzene	0.126	0.0050	"	0.150		83.7	80-118			
Dichlorodifluoromethane	0.120	0.0050	"	0.150		80.0	25-141			
Tert-amyl methyl ether	0.128	0.0050	"	0.149		85.4	50-147			
1,1-Dichloroethane	0.128	0.0050	"	0.150		85.3	78-120			
1,2-Dichloroethane (EDC)	0.131	0.0050	"	0.150		87.1	81-125			
Tert-butyl alcohol	0.580	0.020	"	0.747		77.6	64-127			
1,1-Dichloroethene	0.125	0.0050	"	0.150		83.4	71-122			
cis-1,2-Dichloroethene	0.131	0.0050	"	0.150		87.5	84-121			
Ethyl tert-butyl ether	0.127	0.010	"	0.150		84.8	80-122			
Di-isopropyl ether	0.129	0.0050	"	0.150		85.8	78-120			
trans-1,2-Dichloroethene	0.129	0.0050	"	0.150		86.1	77-125			
Methyl tert-butyl ether	0.129	0.015	"	0.150		85.8	77-124			
1,2-Dichloropropane	0.133	0.0050	"	0.150		88.9	88-114			
1,3-Dichloropropane	0.134	0.0050	"	0.150		89.2	86-122			
2,2-Dichloropropane	0.115	0.010	"	0.150		76.7	32-150			
1,1-Dichloropropene	0.126	0.0050	"	0.150		84.2	71-123			

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Terracon - Wheat Ridge
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 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:31

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504243 - EPA 5030 Soil MS

LCS (1504243-BS1)

Prepared & Analyzed: 04/23/15

cis-1,3-Dichloropropene	0.132	0.0050	mg/kg	0.150		88.3	74-125			
trans-1,3-Dichloropropene	0.134	0.0050	"	0.150		89.1	72-126			
Ethylbenzene	0.141	0.0050	"	0.150		94.2	74-139			
Hexachlorobutadiene	0.130	0.0050	"	0.150		86.8	56-144			
Isopropylbenzene	0.129	0.0050	"	0.150		86.3	72-124			
p-Isopropyltoluene	0.127	0.010	"	0.150		84.8	72-123			
Methylene Chloride	0.126	0.015	"	0.150		84.1	10-183			
Naphthalene	0.133	0.010	"	0.150		88.4	66-138			
n-Propylbenzene	0.132	0.0050	"	0.150		88.2	76-121			
Styrene	0.134	0.010	"	0.150		89.6	76-133			
1,1,2,2-Tetrachloroethane	0.129	0.0050	"	0.150		85.9	60-137			
1,1,1,2-Tetrachloroethane	0.132	0.0050	"	0.150		87.9	86-121			
Tetrachloroethene	0.126	0.0050	"	0.150		84.1	69-131			
Toluene	0.125	0.0050	"	0.150		83.0	61-134			
1,2,3-Trichlorobenzene	0.136	0.0050	"	0.150		90.8	63-142			
1,2,4-Trichlorobenzene	0.140	0.0050	"	0.150		93.2	63-141			
1,1,2-Trichloroethane	0.140	0.0050	"	0.150		93.0	75-136			
1,1,1-Trichloroethane	0.124	0.0050	"	0.150		82.8	71-126			
Trichloroethene	0.130	0.0050	"	0.150		87.0	86-118			
Trichlorofluoromethane	0.125	0.0050	"	0.150		83.1	62-128			
1,2,3-Trichloropropane	0.125	0.010	"	0.150		83.3	80-118			
1,3,5-Trimethylbenzene	0.127	0.0050	"	0.150		84.6	72-121			
1,2,4-Trimethylbenzene	0.127	0.0050	"	0.150		84.8	78-126			
Vinyl chloride	0.124	0.0050	"	0.150		82.4	63-134			
m,p-Xylene	0.281	0.010	"	0.300		93.6	73-137			
o-Xylene	0.130	0.0050	"	0.150		86.9	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0406</i>		<i>"</i>	<i>0.0396</i>		<i>102</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0409</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0393</i>		<i>"</i>	<i>0.0400</i>		<i>98.2</i>	<i>21-167</i>			

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Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/27/15 13:31

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504243 - EPA 5030 Soil MS

Matrix Spike (1504243-MS1)	Source: 1504210-01			Prepared & Analyzed: 04/23/15						
Benzene	0.100	0.0020	mg/kg	0.150	ND	67.0	30-131			
Bromobenzene	0.0916	0.0050	"	0.150	ND	61.1	39-124			
Bromochloromethane	0.110	0.0050	"	0.150	ND	73.5	62-121			
Bromodichloromethane	0.109	0.0050	"	0.150	ND	72.6	51-120			
Bromoform	0.113	0.0050	"	0.150	ND	75.4	52-125			
Bromomethane	0.109	0.010	"	0.150	ND	72.3	10-152			
n-Butylbenzene	0.0566	0.0050	"	0.150	ND	37.8	10-144			
sec-Butylbenzene	0.0606	0.0050	"	0.150	ND	40.4	10-140			
tert-Butylbenzene	0.0689	0.0050	"	0.150	ND	45.9	16-132			
Carbon tetrachloride	0.0877	0.0050	"	0.150	ND	58.4	46-125			
Chlorobenzene	0.0952	0.0050	"	0.150	ND	63.5	42-125			
Chloroethane	0.104	0.0050	"	0.150	ND	69.3	46-125			
Chloroform	0.103	0.0050	"	0.150	ND	68.5	57-118			
Chloromethane	0.0976	0.015	"	0.150	ND	65.0	33-132			
2-Chlorotoluene	0.0778	0.0050	"	0.150	ND	51.9	30-125			
4-Chlorotoluene	0.0797	0.0050	"	0.150	ND	53.2	29-127			
Chlorodibromomethane	0.112	0.010	"	0.150	ND	74.8	54-124			
1,2-Dibromo-3-chloropropane	0.127	0.015	"	0.150	ND	84.7	10-175			
1,2-Dibromoethane (EDB)	0.115	0.0050	"	0.150	ND	76.7	65-125			
Dibromomethane	0.117	0.0050	"	0.150	ND	78.2	64-127			
1,2-Dichlorobenzene	0.0888	0.0050	"	0.150	ND	59.2	24-134			
1,3-Dichlorobenzene	0.0820	0.0050	"	0.150	ND	54.7	22-130			
1,4-Dichlorobenzene	0.0816	0.0050	"	0.150	ND	54.4	21-131			
Dichlorodifluoromethane	0.0945	0.0050	"	0.150	ND	63.0	47-117			
Tert-amyl methyl ether	0.112	0.0050	"	0.149	ND	74.8	60-124			
1,1-Dichloroethane	0.101	0.0050	"	0.150	ND	67.3	55-119			
1,2-Dichloroethane (EDC)	0.113	0.0050	"	0.150	ND	75.5	65-124			
Tert-butyl alcohol	0.614	0.020	"	0.747	ND	82.2	64-131			
1,1-Dichloroethene	0.0972	0.0050	"	0.150	ND	64.8	42-145			
cis-1,2-Dichloroethene	0.105	0.0050	"	0.150	ND	70.3	56-121			
Ethyl tert-butyl ether	0.109	0.010	"	0.150	ND	72.9	60-119			
Di-isopropyl ether	0.105	0.0050	"	0.150	ND	69.7	40-132			
trans-1,2-Dichloroethene	0.101	0.0050	"	0.150	ND	67.4	52-126			
Methyl tert-butyl ether	0.119	0.015	"	0.150	ND	79.2	64-124			
1,2-Dichloropropane	0.105	0.0050	"	0.150	ND	70.1	61-115			
1,3-Dichloropropane	0.114	0.0050	"	0.150	ND	76.3	66-123			
2,2-Dichloropropane	0.0896	0.010	"	0.150	ND	59.7	35-127			
1,1-Dichloropropene	0.0917	0.0050	"	0.150	ND	61.1	52-119			

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Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504243 - EPA 5030 Soil MS

Matrix Spike (1504243-MS1)	Source: 1504210-01			Prepared & Analyzed: 04/23/15						
cis-1,3-Dichloropropene	0.113	0.0050	mg/kg	0.150	ND	75.2	47-122			
trans-1,3-Dichloropropene	0.114	0.0050	"	0.150	ND	75.9	51-119			
Ethylbenzene	0.0960	0.0050	"	0.150	ND	64.0	22-153			
Hexachlorobutadiene	0.0320	0.0050	"	0.150	ND	21.4	10-149			
Isopropylbenzene	0.0796	0.0050	"	0.150	ND	53.0	18-135			
p-Isopropyltoluene	0.0617	0.010	"	0.150	ND	41.1	12-132			
Methylene Chloride	0.0945	0.015	"	0.150	ND	63.0	10-167			
Naphthalene	0.105	0.010	"	0.150	0.00156	69.0	10-158			
n-Propylbenzene	0.0749	0.0050	"	0.150	ND	50.0	15-134			
Styrene	0.0980	0.010	"	0.150	ND	65.4	33-135			
1,1,2,2-Tetrachloroethane	0.108	0.0050	"	0.150	ND	72.0	10-166			
1,1,1,2-Tetrachloroethane	0.100	0.0050	"	0.150	ND	66.7	49-123			
Tetrachloroethane	0.0841	0.0050	"	0.150	ND	56.1	33-134			
Toluene	0.0932	0.0050	"	0.150	0.000450	61.9	30-134			
1,2,3-Trichlorobenzene	0.0779	0.0050	"	0.150	ND	51.9	10-155			
1,2,4-Trichlorobenzene	0.0731	0.0050	"	0.150	ND	48.7	10-152			
1,1,2-Trichloroethane	0.121	0.0050	"	0.150	ND	80.6	46-139			
1,1,1-Trichloroethane	0.0941	0.0050	"	0.150	ND	62.8	51-124			
Trichloroethene	0.100	0.0050	"	0.150	ND	66.7	16-187			
Trichlorofluoromethane	0.0965	0.0050	"	0.150	ND	64.3	53-125			
1,2,3-Trichloropropane	0.155	0.010	"	0.150	ND	103	69-118			
1,3,5-Trimethylbenzene	0.0758	0.0050	"	0.150	ND	50.6	20-128			
1,2,4-Trimethylbenzene	0.0736	0.0050	"	0.150	ND	49.1	17-142			
Vinyl chloride	0.0975	0.0050	"	0.150	ND	65.0	50-134			
m,p-Xylene	0.191	0.010	"	0.300	ND	63.6	10-159			
o-Xylene	0.0912	0.0050	"	0.150	ND	60.8	31-151			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0452</i>		<i>"</i>	<i>0.0396</i>		<i>114</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0405</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0409</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>21-167</i>			

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/27/15 13:31

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504243 - EPA 5030 Soil MS

Matrix Spike Dup (1504243-MSD1)	Source: 1504210-01			Prepared & Analyzed: 04/23/15						
Benzene	0.118	0.0020	mg/kg	0.150	ND	78.8	30-131	16.3	34	
Bromobenzene	0.105	0.0050	"	0.150	ND	70.3	39-124	14.0	21	
Bromochloromethane	0.132	0.0050	"	0.150	ND	88.1	62-121	18.0	20	
Bromodichloromethane	0.127	0.0050	"	0.150	ND	84.4	51-120	15.0	22	
Bromoform	0.132	0.0050	"	0.150	ND	88.0	52-125	15.4	22	
Bromomethane	0.135	0.010	"	0.150	ND	89.9	10-152	21.7	90	
n-Butylbenzene	0.0576	0.0050	"	0.150	ND	38.4	10-144	1.73	52	
sec-Butylbenzene	0.0639	0.0050	"	0.150	ND	42.6	10-140	5.40	45	
tert-Butylbenzene	0.0739	0.0050	"	0.150	ND	49.3	16-132	7.02	33	
Carbon tetrachloride	0.105	0.0050	"	0.150	ND	69.9	46-125	17.9	22	
Chlorobenzene	0.110	0.0050	"	0.150	ND	73.4	42-125	14.5	18	
Chloroethane	0.121	0.0050	"	0.150	ND	80.9	46-125	15.4	24	
Chloroform	0.122	0.0050	"	0.150	ND	81.6	57-118	17.4	19	
Chloromethane	0.115	0.015	"	0.150	ND	76.4	33-132	16.1	18	
2-Chlorotoluene	0.0897	0.0050	"	0.150	ND	59.8	30-125	14.2	24	
4-Chlorotoluene	0.0918	0.0050	"	0.150	ND	61.2	29-127	14.0	24	
Chlorodibromomethane	0.129	0.010	"	0.150	ND	85.7	54-124	13.6	22	
1,2-Dibromo-3-chloropropane	0.157	0.015	"	0.150	ND	105	10-175	21.4	39	
1,2-Dibromoethane (EDB)	0.137	0.0050	"	0.150	ND	91.3	65-125	17.4	22	
Dibromomethane	0.137	0.0050	"	0.150	ND	91.1	64-127	15.3	19	
1,2-Dichlorobenzene	0.100	0.0050	"	0.150	ND	66.7	24-134	11.9	26	
1,3-Dichlorobenzene	0.0935	0.0050	"	0.150	ND	62.3	22-130	13.1	27	
1,4-Dichlorobenzene	0.0927	0.0050	"	0.150	ND	61.8	21-131	12.7	25	
Dichlorodifluoromethane	0.110	0.0050	"	0.150	ND	73.5	47-117	15.4	36	
Tert-amyl methyl ether	0.133	0.0050	"	0.149	ND	89.2	60-124	17.6	40	
1,1-Dichloroethane	0.119	0.0050	"	0.150	ND	79.5	55-119	16.7	22	
1,2-Dichloroethane (EDC)	0.132	0.0050	"	0.150	ND	88.0	65-124	15.3	19	
Tert-butyl alcohol	0.697	0.020	"	0.747	ND	93.4	64-131	12.7	24	
1,1-Dichloroethene	0.115	0.0050	"	0.150	ND	76.8	42-145	16.9	22	
Ethyl tert-butyl ether	0.130	0.010	"	0.150	ND	86.5	60-119	17.0	38	
cis-1,2-Dichloroethene	0.125	0.0050	"	0.150	ND	83.6	56-121	17.4	21	
Di-isopropyl ether	0.126	0.0050	"	0.150	ND	84.0	40-132	18.6	108	
trans-1,2-Dichloroethene	0.120	0.0050	"	0.150	ND	80.3	52-126	17.4	22	
Methyl tert-butyl ether	0.139	0.015	"	0.150	ND	92.9	64-124	15.8	28	
1,2-Dichloropropane	0.124	0.0050	"	0.150	ND	82.5	61-115	16.2	17	
1,3-Dichloropropane	0.133	0.0050	"	0.150	ND	88.8	66-123	15.2	24	
2,2-Dichloropropane	0.105	0.010	"	0.150	ND	69.8	35-127	15.6	29	
1,1-Dichloropropene	0.109	0.0050	"	0.150	ND	72.6	52-119	17.2	21	

Summit Scientific

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/27/15 13:31

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504243 - EPA 5030 Soil MS

Matrix Spike Dup (1504243-MSD1)	Source: 1504210-01			Prepared & Analyzed: 04/23/15						
cis-1,3-Dichloropropene	0.132	0.0050	mg/kg	0.150	ND	88.1	47-122	15.8	40	
trans-1,3-Dichloropropene	0.133	0.0050	"	0.150	ND	88.9	51-119	15.8	52	
Ethylbenzene	0.110	0.0050	"	0.150	ND	73.1	22-153	13.3	24	
Hexachlorobutadiene	0.0308	0.0050	"	0.150	ND	20.5	10-149	4.01	59	
Isopropylbenzene	0.0891	0.0050	"	0.150	ND	59.4	18-135	11.3	33	
p-Isopropyltoluene	0.0651	0.010	"	0.150	ND	43.4	12-132	5.40	38	
Methylene Chloride	0.117	0.015	"	0.150	ND	78.3	10-167	21.7	102	
Naphthalene	0.117	0.010	"	0.150	0.00156	77.3	10-158	11.2	42	
n-Propylbenzene	0.0833	0.0050	"	0.150	ND	55.5	15-134	10.5	37	
Styrene	0.112	0.010	"	0.150	ND	75.0	33-135	13.7	22	
1,1,2,2-Tetrachloroethane	0.122	0.0050	"	0.150	ND	81.4	10-166	12.2	45	
1,1,1,2-Tetrachloroethane	0.116	0.0050	"	0.150	ND	77.0	49-123	14.4	21	
Tetrachloroethene	0.0955	0.0050	"	0.150	ND	63.7	33-134	12.7	26	
Toluene	0.109	0.0050	"	0.150	0.000450	72.4	30-134	15.7	30	
1,2,3-Trichlorobenzene	0.0784	0.0050	"	0.150	ND	52.3	10-155	0.691	40	
1,2,4-Trichlorobenzene	0.0738	0.0050	"	0.150	ND	49.2	10-152	1.02	42	
1,1,2-Trichloroethane	0.143	0.0050	"	0.150	ND	95.5	46-139	16.9	34	
1,1,1-Trichloroethane	0.112	0.0050	"	0.150	ND	74.5	51-124	17.2	22	
Trichloroethene	0.120	0.0050	"	0.150	ND	79.7	16-187	17.8	19	
Trichlorofluoromethane	0.113	0.0050	"	0.150	ND	75.0	53-125	15.3	20	
1,2,3-Trichloropropane	0.153	0.010	"	0.150	ND	102	69-118	0.701	23	
1,3,5-Trimethylbenzene	0.0859	0.0050	"	0.150	ND	57.2	20-128	12.4	31	
1,2,4-Trimethylbenzene	0.0825	0.0050	"	0.150	ND	55.0	17-142	11.4	40	
Vinyl chloride	0.115	0.0050	"	0.150	ND	76.6	50-134	16.4	22	
m,p-Xylene	0.218	0.010	"	0.300	ND	72.8	10-159	13.4	68	
o-Xylene	0.104	0.0050	"	0.150	ND	69.4	31-151	13.2	38	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0466</i>		<i>"</i>	<i>0.0396</i>		<i>118</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0407</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0407</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>21-167</i>			

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:31

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504239 - EPA 3050B

Blank (1504239-BLK1)

Prepared & Analyzed: 04/23/15

Arsenic	ND	0.100	mg/kg wet							
Barium	ND	0.100	"							
Cadmium	ND	0.100	"							
Chromium	ND	0.500	"							
Lead	ND	0.100	"							
Selenium	ND	0.0500	"							
Silver	ND	0.100	"							
Zinc	ND	10.0	"							

LCS (1504239-BS1)

Prepared & Analyzed: 04/23/15

Arsenic	41.6	0.100	mg/kg wet	39.8		104	78.4-140			
Barium	116	0.100	"	124		93.3	83.2-117			
Cadmium	75.6	0.100	"	72.8		104	81.9-118			
Chromium	54.5	0.500	"	54.4		100	80.1-121			
Lead	45.8	0.100	"	46.0		99.6	81.8-119			
Selenium	65.4	0.0500	"	60.0		109	77.3-123			
Silver	15.6	0.100	"	16.2		96.6	75-125			
Zinc	62.2	10.0	"	53.2		117	80.7-132			

Duplicate (1504239-DUP1)

Source: 1504204-01

Prepared & Analyzed: 04/23/15

Arsenic	1.48	0.108	mg/kg dry		1.23			18.4	20	
Barium	48.8	0.108	"		38.1			24.7	20	QR-03
Cadmium	0.367	0.108	"		0.274			28.8	20	QR-03
Chromium	3.99	0.541	"		4.06			1.61	20	
Lead	35.6	0.108	"		25.9			31.3	20	QR-03
Selenium	0.0191	0.0541	"		0.196			164	20	QR-03
Silver	0.142	0.108	"		0.141			0.743	20	
Zinc	48.0	10.8	"		28.3			51.8	20	QR-03

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:31

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1504239 - EPA 3050B

Matrix Spike (1504239-MS1)	Source: 1504204-01			Prepared & Analyzed: 04/23/15								
Arsenic	43.5	0.108	mg/kg dry	43.2	1.23	97.8	75-125					
Barium	87.4	0.108	"	43.2	38.1	114	75-125					
Cadmium	2.49	0.108	"	2.16	0.274	102	75-125					
Chromium	46.7	0.541	"	43.2	4.06	98.6	75-125					
Lead	52.1	0.108	"	21.6	25.9	121	75-125					
Selenium	4.11	0.0541	"	4.32	0.196	90.4	75-125					
Silver	1.36	0.108	"	2.16	0.141	56.5	75-125					QM-07
Zinc	80.0	10.8	"	43.2	28.3	120	75-125					

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:31

Total Mercury by EPA Method 7471 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1504235 - EPA 7471A

Blank (1504235-BLK1)			Prepared & Analyzed: 04/23/15								
Mercury	ND	0.0500	mg/kg wet								
LCS (1504235-BS1)			Prepared & Analyzed: 04/23/15								
Mercury	0.543	0.0500	mg/kg wet	0.500		109	80-120				
Duplicate (1504235-DUP1)			Source: 1504195-01			Prepared & Analyzed: 04/23/15					
Mercury	0.265	0.0477	mg/kg dry		0.325			20.5	20		QR-03
Matrix Spike (1504235-MS1)			Source: 1504195-01			Prepared & Analyzed: 04/23/15					
Mercury	0.754	0.0559	mg/kg dry	0.525	0.325	81.8	80-120				
Matrix Spike Dup (1504235-MSD1)			Source: 1504195-01			Prepared & Analyzed: 04/23/15					
Mercury	0.731	0.0473	mg/kg dry	0.473	0.325	85.8	80-120	3.18	20		

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:31

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504245 - General Preparation

Duplicate (1504245-DUP1)	Source: 1504204-01			Prepared: 04/23/15	Analyzed: 04/24/15
% Solids	92.7		%	92.5	0.216 20

Summit Scientific

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/27/15 13:31

Notes and Definitions

- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

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Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

May 03, 2015

Steve Hoffman

Terracon - Wheat Ridge

10625 West I-70 Frontage Road, Suite 3

Wheat Ridge, CO 80033

RE: National Western Complex

Enclosed are the results of analyses for samples received by Summit Scientific on 04/24/15 18:25. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury
President



Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/03/15 14:24

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-7 (0-6")	1504249-01	Soil	04/24/15 07:35	04/24/15 18:25
MW-7 (0-6") - D	1504249-02	Soil	04/24/15 07:35	04/24/15 18:25
MW-7 (6-24")	1504249-03	Soil	04/24/15 07:35	04/24/15 18:25
MW-7 (6-24") - D	1504249-04	Soil	04/24/15 07:35	04/24/15 18:25
MW-7 (30')	1504249-05	Soil	04/24/15 08:45	04/24/15 18:25
MW-7 (30') - D	1504249-06	Soil	04/24/15 08:45	04/24/15 18:25
MW-8 (0-6")	1504249-07	Soil	04/23/15 13:30	04/24/15 18:25
MW-8 (6-24")	1504249-08	Soil	04/23/15 13:30	04/24/15 18:25
MW-8 (30')	1504249-09	Soil	04/23/15 14:50	04/24/15 18:25
MW-9 (0-6")	1504249-10	Soil	04/24/15 10:30	04/24/15 18:25
MW-9 (6-24")	1504249-11	Soil	04/24/15 10:30	04/24/15 18:25
MW-9 (28')	1504249-12	Soil	04/24/15 11:50	04/24/15 18:25

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:24

Summit Scientific

1504249.1

741 Corporate Circle Suite I ♦ Golden, Colorado 80401
 303-277-9310 ♦ 303-374-5933 Fax

Page 1 of 2

Client: Terracon Consultants

Address: 10625 West I-70 Frontage Road North, Suite 3

City/State/Zip: Wheat Ridge, CO 80033

Phone: (303) 454-5275 Fax: (303) 423-3353

Sampler Name: Marshall Haworth

Project Manager: Steve Hoffman

E-Mail: sbhoffman@terracon.com

Project Name: National Western Complex

Project Number: 25157010

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:				Special Instructions		
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	VOC's 8260B	TPH 8015	RCRA 8+Zinc			
MW-7 (0-6")	4-24-15	0735	1			X			X								
MW-7 (0-8")-D	4-24-15	0735	1			X			X								
MW-7 (6-24")	4-24-15	0735	1			X			X								
MW-7 (6-24")-D	4-24-15	0735	1			X			X								
MW-7 (30")	4-24-15	0845	1			X			X			X	X				
MW-7 (30")-D	4-24-15	0845	1			X			X			X	X				
MW-8 (0-6")	4-23-15	1330	1			X			X								
MW-8 (6-24")	4-23-15	1330	1			X			X								
MW-8 (30")	4-23-15	1450	1			X			X			X	X				
MW-9 (1-6")	4-24-15	1030	1			X			X								
Relinquished by: <i>Marshall Haworth</i>	Date/Time: 4-24-15 1825	Received by: <i>[Signature]</i>	Date/Time: 4-24 1825	Turn Around Time (Check)				Notes:									
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day	<input type="checkbox"/>	72 Hours	<input type="checkbox"/>	24 Hours	<input type="checkbox"/>	Standard	<input checked="" type="checkbox"/>	48 Hours	<input type="checkbox"/>				
Relinquished by:	Date/Time:	Received in Lab by:	Date/Time:	Sample Integrity:													
				Temperature Upon Receipt:	S.C.												
				Intact: Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>										

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:24

Sample Receipt Checklist

S2 Work Order: 1504249

Client: Terracon Client Project ID: National Western Complex

Shipped Via: _____ Airbill #: _____
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Matrix (check all that apply): Air Soil/Solid Water Other: _____
(Describe)

Cooler ID				
Temp (°C)	<u>5.5</u>			

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.				
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
If custody seals are present, are they intact ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, etc.				
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

[Signature]
 Custodian Printed Name

[Signature]
 Signature or Initials of Custodian

4-27-15
 Date/Time

[Signature]



Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:24

**MW-7 (0-6")
 1504249-01 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/24/15 07:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.88	0.113	mg/kg dry	1	1504274	04/28/15	04/29/15	EPA 6020A	
Barium	134	0.113	"	"	"	"	"	"	
Cadmium	1.19	0.113	"	"	"	"	"	"	
Chromium	11.0	0.566	"	"	"	"	"	"	
Lead	75.8	0.113	"	"	"	"	"	"	
Selenium	0.234	0.0566	"	"	"	"	"	"	
Silver	0.296	0.113	"	"	"	"	"	"	

Date Sampled: **04/24/15 07:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	80.5	11.3	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/24/15 07:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	0.0543	0.0512	mg/kg dry	1	1504273	04/28/15	04/28/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/24/15 07:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.4		%	1	1504292	04/29/15	04/30/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:24

MW-7 (0-6") - D
1504249-02 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/24/15 07:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	4.32	0.119	mg/kg dry	1	1504274	04/28/15	04/29/15	EPA 6020A	
Barium	155	0.119	"	"	"	"	"	"	
Cadmium	1.57	0.119	"	"	"	"	"	"	
Chromium	13.0	0.595	"	"	"	"	"	"	
Lead	75.7	0.119	"	"	"	"	"	"	
Selenium	0.237	0.0595	"	"	"	"	"	"	
Silver	0.318	0.119	"	"	"	"	"	"	

Date Sampled: **04/24/15 07:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	118	11.9	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/24/15 07:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0470	mg/kg dry	1	1504273	04/28/15	04/28/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/24/15 07:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	84.1		%	1	1504292	04/29/15	04/30/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:24

MW-7 (6-24")
1504249-03 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/24/15 07:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.24	0.119	mg/kg dry	1	1504274	04/28/15	04/29/15	EPA 6020A	
Barium	135	0.119	"	"	"	"	"	"	
Cadmium	0.471	0.119	"	"	"	"	"	"	
Chromium	9.23	0.595	"	"	"	"	"	"	
Lead	44.4	0.119	"	"	"	"	"	"	
Selenium	0.218	0.0595	"	"	"	"	"	"	
Silver	0.225	0.119	"	"	"	"	"	"	

Date Sampled: **04/24/15 07:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	59.2	11.9	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/24/15 07:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0595	mg/kg dry	1	1504273	04/28/15	04/28/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/24/15 07:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	84.0		%	1	1504292	04/29/15	04/30/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:24

MW-7 (6-24") - D
1504249-04 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/24/15 07:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.15	0.113	mg/kg dry	1	1504274	04/28/15	04/29/15	EPA 6020A	
Barium	114	0.113	"	"	"	"	"	"	
Cadmium	0.346	0.113	"	"	"	"	"	"	
Chromium	7.25	0.564	"	"	"	"	"	"	
Lead	38.6	0.113	"	"	"	"	"	"	
Selenium	0.357	0.0564	"	"	"	"	"	"	
Silver	0.151	0.113	"	"	"	"	"	"	

Date Sampled: **04/24/15 07:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	47.4	11.3	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/24/15 07:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0564	mg/kg dry	1	1504273	04/28/15	04/28/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/24/15 07:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	88.7		%	1	1504292	04/29/15	04/30/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:24

MW-7 (30')
1504249-05 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/24/15 08:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504279	04/28/15	04/29/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/24/15 08:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		97.1 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/24/15 08:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504315	04/30/15	05/01/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:24

MW-7 (30')
1504249-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504315	04/30/15	05/01/15 EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:24

MW-7 (30')
1504249-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504315	04/30/15	05/01/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: 04/24/15 08:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		114 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		97.6 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %		21-167	"	"	"	"	

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/03/15 14:24

MW-7 (30') - D
1504249-06 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/24/15 08:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504279	04/28/15	04/29/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/24/15 08:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		95.0 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/24/15 08:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504315	04/30/15	05/01/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:24

MW-7 (30') - D
1504249-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504315	04/30/15	05/01/15 EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:24

MW-7 (30') - D
1504249-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504315	04/30/15	05/01/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: 04/24/15 08:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		106 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		97.6 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.8 %		21-167	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:24

MW-8 (0-6")
1504249-07 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/23/15 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	9.86	0.0935	mg/kg dry	1	1504274	04/28/15	04/29/15	EPA 6020A	
Barium	125	0.0935	"	"	"	"	"	"	
Cadmium	0.292	0.0935	"	"	"	"	"	"	
Chromium	8.07	0.467	"	"	"	"	"	"	
Lead	66.5	0.0935	"	"	"	"	"	"	
Selenium	0.219	0.0467	"	"	"	"	"	"	
Silver	0.137	0.0935	"	"	"	"	"	"	

Date Sampled: **04/23/15 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	66.5	9.35	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/23/15 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	0.0766	0.0477	mg/kg dry	1	1504273	04/28/15	04/28/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/23/15 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.2		%	1	1504292	04/29/15	04/30/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:24

MW-8 (6-24")
1504249-08 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/23/15 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.78	0.111	mg/kg dry	1	1504274	04/28/15	04/29/15	EPA 6020A	
Barium	158	0.111	"	"	"	"	"	"	
Cadmium	0.137	0.111	"	"	"	"	"	"	
Chromium	13.6	0.557	"	"	"	"	"	"	
Lead	23.3	0.111	"	"	"	"	"	"	
Selenium	0.288	0.0557	"	"	"	"	"	"	
Silver	ND	0.111	"	"	"	"	"	"	

Date Sampled: **04/23/15 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	64.9	11.1	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/23/15 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0502	mg/kg dry	1	1504273	04/28/15	04/28/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/23/15 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.7		%	1	1504292	04/29/15	04/30/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:24

MW-8 (30')
1504249-09 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/23/15 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504279	04/28/15	04/29/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/23/15 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		100 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/23/15 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504315	04/30/15	05/01/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:24

MW-8 (30')
1504249-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504315	04/30/15	05/01/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"	"

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:24

**MW-8 (30')
 1504249-09 (Soil)**

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504315	04/30/15	05/01/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: **04/23/15 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		114 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		96.9 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.9 %		21-167	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:24

MW-9 (0-6")
1504249-10 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/24/15 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.06	0.0969	mg/kg dry	1	1504274	04/28/15	04/29/15	EPA 6020A	
Barium	121	0.0969	"	"	"	"	"	"	
Cadmium	0.780	0.0969	"	"	"	"	"	"	
Chromium	9.00	0.485	"	"	"	"	"	"	
Lead	21.3	0.0969	"	"	"	"	"	"	
Selenium	0.187	0.0485	"	"	"	"	"	"	
Silver	0.143	0.0969	"	"	"	"	"	"	

Date Sampled: **04/24/15 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	51.4	9.69	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/24/15 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0543	mg/kg dry	1	1504273	04/28/15	04/28/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/24/15 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	92.1		%	1	1504292	04/29/15	04/30/15	% calculation	

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Terracon - Wheat Ridge
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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:24

MW-9 (6-24")
1504249-11 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/24/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.48	0.108	mg/kg dry	1	1504274	04/28/15	04/29/15	EPA 6020A	
Barium	88.9	0.108	"	"	"	"	"	"	
Cadmium	0.136	0.108	"	"	"	"	"	"	
Chromium	7.08	0.539	"	"	"	"	"	"	
Lead	7.79	0.108	"	"	"	"	"	"	
Selenium	0.140	0.0539	"	"	"	"	"	"	
Silver	ND	0.108	"	"	"	"	"	"	

Date Sampled: **04/24/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	29.8	10.8	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/24/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0452	mg/kg dry	1	1504273	04/28/15	04/28/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/24/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.8		%	1	1504292	04/29/15	04/30/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:24

MW-9 (28')
1504249-12 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/24/15 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1504279	04/28/15	04/29/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/24/15 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		94.2 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/24/15 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504315	04/30/15	05/01/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:24

MW-9 (28')
1504249-12 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample ID	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504315	04/30/15
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"
Styrene	ND	0.010	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"
Toluene	ND	0.0050	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:24

MW-9 (28')
1504249-12 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504315	04/30/15	05/01/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: 04/24/15 11:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		97.6 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.3 %		21-167	"	"	"	"	

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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:24

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1504279 - EPA 3550A

Blank (1504279-BLK1)

Prepared: 04/28/15 Analyzed: 04/29/15

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: o-Terphenyl	12.5		"	12.2		102	70-130				

LCS (1504279-BS1)

Prepared: 04/28/15 Analyzed: 04/29/15

C10-C28 (DRO)	548	50	mg/kg	501		109	50-150				
Surrogate: o-Terphenyl	13.4		"	12.2		110	70-130				

Matrix Spike (1504279-MS1)

Source: 1504230-01

Prepared: 04/28/15 Analyzed: 04/29/15

C10-C28 (DRO)	595	50	mg/kg	499	101	98.9	50-150				
Surrogate: o-Terphenyl	12.8		"	12.2		106	70-130				

Matrix Spike Dup (1504279-MSD1)

Source: 1504230-01

Prepared: 04/28/15 Analyzed: 04/29/15

C10-C28 (DRO)	592	50	mg/kg	496	101	99.0	50-150	0.428	20		
Surrogate: o-Terphenyl	13.3		"	12.1		111	70-130				

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:24

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting		Spike Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

Batch 1504315 - EPA 5030 Soil MS

Blank (1504315-BLK1)

Prepared & Analyzed: 04/30/15

Benzene	ND	0.0020	mg/kg
Bromobenzene	ND	0.0050	"
Bromochloromethane	ND	0.0050	"
Bromodichloromethane	ND	0.0050	"
Bromoform	ND	0.0050	"
Bromomethane	ND	0.010	"
n-Butylbenzene	ND	0.0050	"
sec-Butylbenzene	ND	0.0050	"
tert-Butylbenzene	ND	0.0050	"
Carbon tetrachloride	ND	0.0050	"
Chlorobenzene	ND	0.0050	"
Chloroethane	ND	0.0050	"
Chloroform	ND	0.0050	"
Chloromethane	ND	0.015	"
2-Chlorotoluene	ND	0.0050	"
4-Chlorotoluene	ND	0.0050	"
Chlorodibromomethane	ND	0.010	"
1,2-Dibromo-3-chloropropane	ND	0.015	"
1,2-Dibromoethane (EDB)	ND	0.0050	"
Dibromomethane	ND	0.0050	"
1,2-Dichlorobenzene	ND	0.0050	"
1,3-Dichlorobenzene	ND	0.0050	"
1,4-Dichlorobenzene	ND	0.0050	"
Dichlorodifluoromethane	ND	0.0050	"
Tert-amyl methyl ether	ND	0.0050	"
1,1-Dichloroethane	ND	0.0050	"
1,2-Dichloroethane (EDC)	ND	0.0050	"
Tert-butyl alcohol	ND	0.020	"
1,1-Dichloroethene	ND	0.0050	"
Ethyl tert-butyl ether	ND	0.010	"
cis-1,2-Dichloroethene	ND	0.0050	"
Di-isopropyl ether	ND	0.0050	"
trans-1,2-Dichloroethene	ND	0.0050	"
Methyl tert-butyl ether	ND	0.015	"
1,2-Dichloropropane	ND	0.0050	"
1,3-Dichloropropane	ND	0.0050	"
2,2-Dichloropropane	ND	0.010	"
1,1-Dichloropropene	ND	0.0050	"

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:24

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504315 - EPA 5030 Soil MS

Blank (1504315-BLK1)

Prepared & Analyzed: 04/30/15

cis-1,3-Dichloropropene	ND	0.0050	mg/kg							
trans-1,3-Dichloropropene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Hexachlorobutadiene	ND	0.0050	"							
Isopropylbenzene	ND	0.0050	"							
p-Isopropyltoluene	ND	0.010	"							
Methylene Chloride	ND	0.015	"							
Naphthalene	ND	0.010	"							
n-Propylbenzene	ND	0.0050	"							
Styrene	ND	0.010	"							
1,1,2,2-Tetrachloroethane	ND	0.0050	"							
1,1,1,2-Tetrachloroethane	ND	0.0050	"							
Tetrachloroethene	ND	0.0050	"							
Toluene	ND	0.0050	"							
1,2,3-Trichlorobenzene	ND	0.0050	"							
1,2,4-Trichlorobenzene	ND	0.0050	"							
1,1,2-Trichloroethane	ND	0.0050	"							
1,1,1-Trichloroethane	ND	0.0050	"							
Trichloroethene	ND	0.0050	"							
Trichlorofluoromethane	ND	0.0050	"							
1,2,3-Trichloropropane	ND	0.010	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
Vinyl chloride	ND	0.0050	"							
m,p-Xylene	ND	0.010	"							
o-Xylene	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0384		"	0.0396	97.0	23-173				
Surrogate: Toluene-d8	0.0387		"	0.0400	96.7	20-170				
Surrogate: 4-Bromofluorobenzene	0.0391		"	0.0400	97.6	21-167				

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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504315 - EPA 5030 Soil MS

LCS (1504315-BS1)

Prepared: 04/30/15 Analyzed: 05/01/15

Benzene	0.151	0.0020	mg/kg	0.150		101	58-130			
Bromobenzene	0.150	0.0050	"	0.150		100	87-115			
Bromochloromethane	0.151	0.0050	"	0.150		101	82-122			
Bromodichloromethane	0.153	0.0050	"	0.150		102	84-119			
Bromoform	0.156	0.0050	"	0.150		104	76-119			
Bromomethane	0.161	0.010	"	0.150		107	39-152			
n-Butylbenzene	0.155	0.0050	"	0.150		103	70-131			
sec-Butylbenzene	0.149	0.0050	"	0.150		99.3	74-124			
tert-Butylbenzene	0.152	0.0050	"	0.150		101	77-121			
Carbon tetrachloride	0.143	0.0050	"	0.150		95.6	66-127			
Chlorobenzene	0.153	0.0050	"	0.150		102	82-120			
Chloroethane	0.140	0.0050	"	0.150		93.4	63-126			
Chloroform	0.149	0.0050	"	0.150		99.2	82-120			
Chloromethane	0.148	0.015	"	0.150		99.0	57-133			
2-Chlorotoluene	0.145	0.0050	"	0.150		96.9	82-117			
4-Chlorotoluene	0.151	0.0050	"	0.150		100	81-119			
Chlorodibromomethane	0.157	0.010	"	0.150		105	82-124			
1,2-Dibromo-3-chloropropane	0.132	0.015	"	0.150		88.0	62-128			
1,2-Dibromoethane (EDB)	0.158	0.0050	"	0.150		105	86-122			
Dibromomethane	0.149	0.0050	"	0.150		99.6	83-124			
1,2-Dichlorobenzene	0.155	0.0050	"	0.150		103	84-120			
1,3-Dichlorobenzene	0.155	0.0050	"	0.150		103	81-118			
1,4-Dichlorobenzene	0.151	0.0050	"	0.150		101	80-118			
Dichlorodifluoromethane	0.140	0.0050	"	0.150		93.4	25-141			
1,1-Dichloroethane	0.148	0.0050	"	0.150		98.9	78-120			
Tert-amyl methyl ether	0.149	0.0050	"	0.149		100	50-147			
1,2-Dichloroethane (EDC)	0.153	0.0050	"	0.150		102	81-125			
Tert-butyl alcohol	0.644	0.020	"	0.747		86.2	64-127			
1,1-Dichloroethene	0.142	0.0050	"	0.150		94.5	71-122			
Ethyl tert-butyl ether	0.151	0.010	"	0.150		101	80-122			
cis-1,2-Dichloroethene	0.152	0.0050	"	0.150		101	84-121			
trans-1,2-Dichloroethene	0.152	0.0050	"	0.150		101	77-125			
Di-isopropyl ether	0.151	0.0050	"	0.150		101	78-120			
1,2-Dichloropropane	0.151	0.0050	"	0.150		101	88-114			
Methyl tert-butyl ether	0.154	0.015	"	0.150		103	77-124			
1,3-Dichloropropane	0.155	0.0050	"	0.150		103	86-122			
2,2-Dichloropropane	0.138	0.010	"	0.150		92.2	32-150			
1,1-Dichloropropene	0.147	0.0050	"	0.150		98.0	71-123			

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/03/15 14:24

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504315 - EPA 5030 Soil MS

LCS (1504315-BS1)

Prepared: 04/30/15 Analyzed: 05/01/15

cis-1,3-Dichloropropene	0.152	0.0050	mg/kg	0.150		102	74-125			
trans-1,3-Dichloropropene	0.150	0.0050	"	0.150		100	72-126			
Ethylbenzene	0.156	0.0050	"	0.150		104	74-139			
Hexachlorobutadiene	0.151	0.0050	"	0.150		101	56-144			
Isopropylbenzene	0.154	0.0050	"	0.150		102	72-124			
p-Isopropyltoluene	0.150	0.010	"	0.150		100	72-123			
Methylene Chloride	0.138	0.015	"	0.150		92.0	10-183			
Naphthalene	0.159	0.010	"	0.150		106	66-138			
n-Propylbenzene	0.155	0.0050	"	0.150		103	76-121			
Styrene	0.161	0.010	"	0.150		107	76-133			
1,1,2,2-Tetrachloroethane	0.153	0.0050	"	0.150		102	60-137			
1,1,1,2-Tetrachloroethane	0.154	0.0050	"	0.150		103	86-121			
Tetrachloroethene	0.149	0.0050	"	0.150		99.5	69-131			
Toluene	0.150	0.0050	"	0.150		100	61-134			
1,2,3-Trichlorobenzene	0.160	0.0050	"	0.150		107	63-142			
1,2,4-Trichlorobenzene	0.163	0.0050	"	0.150		108	63-141			
1,1,2-Trichloroethane	0.153	0.0050	"	0.150		102	75-136			
1,1,1-Trichloroethane	0.144	0.0050	"	0.150		95.8	71-126			
Trichloroethene	0.152	0.0050	"	0.150		102	86-118			
Trichlorofluoromethane	0.141	0.0050	"	0.150		93.8	62-128			
1,2,3-Trichloropropane	0.134	0.010	"	0.150		89.6	80-118			
1,3,5-Trimethylbenzene	0.153	0.0050	"	0.150		102	72-121			
1,2,4-Trimethylbenzene	0.154	0.0050	"	0.150		103	78-126			
Vinyl chloride	0.148	0.0050	"	0.150		98.8	63-134			
m,p-Xylene	0.310	0.010	"	0.300		103	73-137			
o-Xylene	0.153	0.0050	"	0.150		102	73-141			
Surrogate: 1,2-Dichloroethane-d4	0.0396		"	0.0396		100	23-173			
Surrogate: Toluene-d8	0.0402		"	0.0400		100	20-170			
Surrogate: 4-Bromofluorobenzene	0.0401		"	0.0400		100	21-167			

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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504315 - EPA 5030 Soil MS

Matrix Spike (1504315-MS1)	Source: 1504249-05			Prepared: 04/30/15		Analyzed: 05/01/15	
Benzene	0.147	0.0020	mg/kg	0.150	ND	97.8	30-131
Bromobenzene	0.145	0.0050	"	0.150	ND	96.7	39-124
Bromochloromethane	0.156	0.0050	"	0.150	ND	104	62-121
Bromodichloromethane	0.152	0.0050	"	0.150	ND	102	51-120
Bromoform	0.160	0.0050	"	0.150	ND	106	52-125
Bromomethane	0.159	0.010	"	0.150	ND	106	10-152
n-Butylbenzene	0.136	0.0050	"	0.150	ND	90.7	10-144
sec-Butylbenzene	0.134	0.0050	"	0.150	ND	89.6	10-140
tert-Butylbenzene	0.139	0.0050	"	0.150	ND	92.7	16-132
Carbon tetrachloride	0.144	0.0050	"	0.150	ND	96.2	46-125
Chlorobenzene	0.148	0.0050	"	0.150	ND	98.4	42-125
Chloroethane	0.145	0.0050	"	0.150	ND	96.7	46-125
Chloroform	0.148	0.0050	"	0.150	ND	98.4	57-118
Chloromethane	0.152	0.015	"	0.150	ND	101	33-132
2-Chlorotoluene	0.133	0.0050	"	0.150	ND	88.8	30-125
4-Chlorotoluene	0.137	0.0050	"	0.150	ND	91.5	29-127
Chlorodibromomethane	0.157	0.010	"	0.150	ND	105	54-124
1,2-Dibromo-3-chloropropane	0.137	0.015	"	0.150	ND	91.6	10-175
1,2-Dibromoethane (EDB)	0.162	0.0050	"	0.150	ND	108	65-125
Dibromomethane	0.154	0.0050	"	0.150	ND	103	64-127
1,2-Dichlorobenzene	0.146	0.0050	"	0.150	ND	97.0	24-134
1,3-Dichlorobenzene	0.142	0.0050	"	0.150	ND	94.9	22-130
1,4-Dichlorobenzene	0.141	0.0050	"	0.150	ND	94.1	21-131
Dichlorodifluoromethane	0.154	0.0050	"	0.150	ND	103	47-117
Tert-amyl methyl ether	0.155	0.0050	"	0.149	ND	104	60-124
1,1-Dichloroethane	0.147	0.0050	"	0.150	ND	98.3	55-119
1,2-Dichloroethane (EDC)	0.155	0.0050	"	0.150	ND	103	65-124
Tert-butyl alcohol	0.720	0.020	"	0.747	ND	96.4	64-131
1,1-Dichloroethene	0.148	0.0050	"	0.150	ND	98.5	42-145
Ethyl tert-butyl ether	0.151	0.010	"	0.150	ND	101	60-119
cis-1,2-Dichloroethene	0.152	0.0050	"	0.150	ND	101	56-121
Di-isopropyl ether	0.150	0.0050	"	0.150	ND	100	40-132
trans-1,2-Dichloroethene	0.151	0.0050	"	0.150	ND	100	52-126
Methyl tert-butyl ether	0.160	0.015	"	0.150	ND	107	64-124
1,2-Dichloropropane	0.147	0.0050	"	0.150	ND	98.1	61-115
1,3-Dichloropropane	0.161	0.0050	"	0.150	ND	108	66-123
2,2-Dichloropropane	0.139	0.010	"	0.150	ND	92.4	35-127
1,1-Dichloropropene	0.152	0.0050	"	0.150	ND	101	52-119

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:24

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504315 - EPA 5030 Soil MS

Matrix Spike (1504315-MS1)	Source: 1504249-05			Prepared: 04/30/15		Analyzed: 05/01/15	
cis-1,3-Dichloropropene	0.157	0.0050	mg/kg	0.150	ND	104	47-122
trans-1,3-Dichloropropene	0.154	0.0050	"	0.150	ND	103	51-119
Ethylbenzene	0.148	0.0050	"	0.150	ND	98.9	22-153
Hexachlorobutadiene	0.101	0.0050	"	0.150	ND	67.4	10-149
Isopropylbenzene	0.146	0.0050	"	0.150	ND	97.4	18-135
p-Isopropyltoluene	0.135	0.010	"	0.150	ND	89.9	12-132
Methylene Chloride	0.144	0.015	"	0.150	ND	96.3	10-167
Naphthalene	0.158	0.010	"	0.150	ND	105	10-158
n-Propylbenzene	0.143	0.0050	"	0.150	ND	95.6	15-134
Styrene	0.154	0.010	"	0.150	ND	103	33-135
1,1,2,2-Tetrachloroethane	0.154	0.0050	"	0.150	ND	102	10-166
1,1,1,2-Tetrachloroethane	0.149	0.0050	"	0.150	ND	99.0	49-123
Tetrachloroethene	0.148	0.0050	"	0.150	ND	98.9	33-134
Toluene	0.146	0.0050	"	0.150	ND	97.3	30-134
1,2,3-Trichlorobenzene	0.143	0.0050	"	0.150	ND	95.6	10-155
1,2,4-Trichlorobenzene	0.140	0.0050	"	0.150	ND	93.6	10-152
1,1,2-Trichloroethane	0.159	0.0050	"	0.150	ND	106	46-139
1,1,1-Trichloroethane	0.151	0.0050	"	0.150	ND	100	51-124
Trichloroethene	0.151	0.0050	"	0.150	ND	101	16-187
Trichlorofluoromethane	0.153	0.0050	"	0.150	ND	102	53-125
1,2,3-Trichloropropane	0.133	0.010	"	0.150	ND	88.9	69-118
1,3,5-Trimethylbenzene	0.143	0.0050	"	0.150	ND	95.3	20-128
1,2,4-Trimethylbenzene	0.140	0.0050	"	0.150	ND	93.6	17-142
Vinyl chloride	0.157	0.0050	"	0.150	ND	104	50-134
m,p-Xylene	0.296	0.010	"	0.300	ND	98.6	10-159
o-Xylene	0.146	0.0050	"	0.150	ND	97.2	31-151
Surrogate: 1,2-Dichloroethane-d4	0.0419		"	0.0396		106	23-173
Surrogate: Toluene-d8	0.0398		"	0.0400		99.4	20-170
Surrogate: 4-Bromofluorobenzene	0.0399		"	0.0400		99.7	21-167

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Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504315 - EPA 5030 Soil MS

Matrix Spike Dup (1504315-MSD1)	Source: 1504249-05			Prepared: 04/30/15		Analyzed: 05/01/15				
Benzene	0.142	0.0020	mg/kg	0.150	ND	94.9	30-131	3.01	34	
Bromobenzene	0.133	0.0050	"	0.150	ND	88.7	39-124	8.57	21	
Bromochloromethane	0.152	0.0050	"	0.150	ND	102	62-121	2.53	20	
Bromodichloromethane	0.147	0.0050	"	0.150	ND	98.3	51-120	3.34	22	
Bromoform	0.155	0.0050	"	0.150	ND	103	52-125	3.26	22	
Bromomethane	0.122	0.010	"	0.150	ND	81.6	10-152	25.8	90	
n-Butylbenzene	0.116	0.0050	"	0.150	ND	77.0	10-144	16.4	52	
sec-Butylbenzene	0.116	0.0050	"	0.150	ND	77.4	10-140	14.6	45	
tert-Butylbenzene	0.123	0.0050	"	0.150	ND	81.7	16-132	12.6	33	
Carbon tetrachloride	0.143	0.0050	"	0.150	ND	95.2	46-125	0.982	22	
Chlorobenzene	0.142	0.0050	"	0.150	ND	94.7	42-125	3.79	18	
Chloroethane	0.139	0.0050	"	0.150	ND	92.4	46-125	4.61	24	
Chloroform	0.143	0.0050	"	0.150	ND	95.3	57-118	3.14	19	
Chloromethane	0.144	0.015	"	0.150	ND	95.8	33-132	5.42	18	
2-Chlorotoluene	0.127	0.0050	"	0.150	ND	84.6	30-125	4.87	24	
4-Chlorotoluene	0.129	0.0050	"	0.150	ND	86.1	29-127	6.06	24	
Chlorodibromomethane	0.152	0.010	"	0.150	ND	101	54-124	3.63	22	
1,2-Dibromo-3-chloropropane	0.135	0.015	"	0.150	ND	90.3	10-175	1.43	39	
1,2-Dibromoethane (EDB)	0.152	0.0050	"	0.150	ND	101	65-125	6.01	22	
Dibromomethane	0.150	0.0050	"	0.150	ND	100	64-127	2.76	19	
1,2-Dichlorobenzene	0.135	0.0050	"	0.150	ND	89.7	24-134	7.84	26	
1,3-Dichlorobenzene	0.130	0.0050	"	0.150	ND	86.7	22-130	9.03	27	
1,4-Dichlorobenzene	0.131	0.0050	"	0.150	ND	87.4	21-131	7.41	25	
Dichlorodifluoromethane	0.150	0.0050	"	0.150	ND	100	47-117	2.55	36	
Tert-amyl methyl ether	0.149	0.0050	"	0.149	ND	99.9	60-124	3.96	40	
1,1-Dichloroethane	0.143	0.0050	"	0.150	ND	95.0	55-119	3.39	22	
1,2-Dichloroethane (EDC)	0.149	0.0050	"	0.150	ND	99.2	65-124	3.88	19	
1,1-Dichloroethene	0.144	0.0050	"	0.150	ND	95.9	42-145	2.67	22	
Tert-butyl alcohol	0.683	0.020	"	0.747	ND	91.4	64-131	5.29	24	
cis-1,2-Dichloroethene	0.145	0.0050	"	0.150	ND	96.4	56-121	4.82	21	
Ethyl tert-butyl ether	0.147	0.010	"	0.150	ND	98.1	60-119	2.81	38	
Di-isopropyl ether	0.144	0.0050	"	0.150	ND	96.2	40-132	4.15	108	
trans-1,2-Dichloroethene	0.148	0.0050	"	0.150	ND	98.7	52-126	1.69	22	
Methyl tert-butyl ether	0.154	0.015	"	0.150	ND	103	64-124	3.51	28	
1,2-Dichloropropane	0.144	0.0050	"	0.150	ND	96.1	61-115	2.12	17	
1,3-Dichloropropane	0.153	0.0050	"	0.150	ND	102	66-123	5.54	24	
2,2-Dichloropropane	0.131	0.010	"	0.150	ND	87.1	35-127	5.88	29	
1,1-Dichloropropene	0.148	0.0050	"	0.150	ND	98.7	52-119	2.58	21	

Summit Scientific

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/03/15 14:24

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504315 - EPA 5030 Soil MS

Matrix Spike Dup (1504315-MSD1)	Source: 1504249-05			Prepared: 04/30/15		Analyzed: 05/01/15				
cis-1,3-Dichloropropene	0.150	0.0050	mg/kg	0.150	ND	100	47-122	4.15	40	
trans-1,3-Dichloropropene	0.148	0.0050	"	0.150	ND	98.6	51-119	4.13	52	
Ethylbenzene	0.143	0.0050	"	0.150	ND	95.2	22-153	3.83	24	
Hexachlorobutadiene	0.0789	0.0050	"	0.150	ND	52.6	10-149	24.6	59	
Isopropylbenzene	0.139	0.0050	"	0.150	ND	92.4	18-135	5.25	33	
p-Isopropyltoluene	0.118	0.010	"	0.150	ND	78.7	12-132	13.3	38	
Methylene Chloride	0.139	0.015	"	0.150	ND	92.8	10-167	3.72	102	
Naphthalene	0.148	0.010	"	0.150	ND	99.0	10-158	6.25	42	
n-Propylbenzene	0.129	0.0050	"	0.150	ND	85.9	15-134	10.7	37	
Styrene	0.149	0.010	"	0.150	ND	99.6	33-135	3.07	22	
1,1,2,2-Tetrachloroethane	0.140	0.0050	"	0.150	ND	93.4	10-166	9.19	45	
1,1,1,2-Tetrachloroethane	0.142	0.0050	"	0.150	ND	94.6	49-123	4.63	21	
Tetrachloroethene	0.142	0.0050	"	0.150	ND	95.0	33-134	4.04	26	
Toluene	0.142	0.0050	"	0.150	ND	94.5	30-134	2.90	30	
1,2,3-Trichlorobenzene	0.129	0.0050	"	0.150	ND	86.1	10-155	10.5	40	
1,2,4-Trichlorobenzene	0.125	0.0050	"	0.150	ND	83.1	10-152	11.9	42	
1,1,2-Trichloroethane	0.155	0.0050	"	0.150	ND	104	46-139	2.56	34	
1,1,1-Trichloroethane	0.145	0.0050	"	0.150	ND	96.4	51-124	4.10	22	
Trichloroethene	0.148	0.0050	"	0.150	ND	98.6	16-187	2.37	19	
Trichlorofluoromethane	0.148	0.0050	"	0.150	ND	98.5	53-125	3.29	20	
1,2,3-Trichloropropane	0.133	0.010	"	0.150	ND	88.5	69-118	0.451	23	
1,3,5-Trimethylbenzene	0.130	0.0050	"	0.150	ND	86.8	20-128	9.29	31	
1,2,4-Trimethylbenzene	0.127	0.0050	"	0.150	ND	84.8	17-142	9.80	40	
Vinyl chloride	0.151	0.0050	"	0.150	ND	101	50-134	3.65	22	
m,p-Xylene	0.283	0.010	"	0.300	ND	94.4	10-159	4.30	68	
o-Xylene	0.142	0.0050	"	0.150	ND	94.5	31-151	2.82	38	
Surrogate: 1,2-Dichloroethane-d4	0.0440		"	0.0396		111	23-173			
Surrogate: Toluene-d8	0.0405		"	0.0400		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0409		"	0.0400		102	21-167			

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:24

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch 1504274 - EPA 3050B

Blank (1504274-BLK1)

Prepared: 04/28/15 Analyzed: 04/29/15

Arsenic	ND	0.100	mg/kg wet							
Barium	ND	0.100	"							
Cadmium	ND	0.100	"							
Chromium	ND	0.500	"							
Lead	ND	0.100	"							
Selenium	ND	0.0500	"							
Silver	ND	0.100	"							
Zinc	ND	10.0	"							

LCS (1504274-BS1)

Prepared: 04/28/15 Analyzed: 04/29/15

Arsenic	112	0.250	mg/kg wet	99.4	113	78.4-140
Barium	356	0.250	"	309	115	83.2-117
Cadmium	215	0.250	"	182	118	81.9-118
Chromium	144	1.25	"	136	106	80.1-121
Lead	131	0.250	"	115	114	81.8-119
Selenium	180	0.125	"	150	120	77.3-123
Silver	48.2	0.250	"	40.3	120	75-125
Zinc	168	25.0	"	133	127	80.7-132

Duplicate (1504274-DUP1)

Source: 1504177-03

Prepared: 04/28/15 Analyzed: 04/29/15

Arsenic	14.5	0.132	mg/kg dry	15.2	4.98	20
Barium	901	0.132	"	828	8.55	20
Cadmium	3.79	0.132	"	4.09	7.52	20
Chromium	13.1	0.660	"	14.3	8.59	20
Lead	10.7	0.132	"	11.6	7.67	20
Selenium	7.94	0.0660	"	8.76	9.83	20
Silver	0.267	0.132	"	0.342	24.4	20
Zinc	114	13.2	"	125	8.74	20

QR-03

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:24

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1504274 - EPA 3050B

Matrix Spike (1504274-MS1)

Source: 1504177-03 Prepared: 04/28/15 Analyzed: 04/29/15

Arsenic	63.6	0.132	mg/kg dry	51.1	15.2	94.6	75-125				
Barium	1780	0.132	"	51.1	828	NR	75-125				QM-07
Cadmium	5.42	0.132	"	2.56	4.09	52.3	75-125				QM-07
Chromium	67.6	0.660	"	51.1	14.3	104	75-125				
Lead	38.7	0.132	"	25.6	11.6	106	75-125				
Selenium	11.2	0.0660	"	5.11	8.76	47.9	75-125				QM-07
Silver	2.07	0.132	"	2.56	0.342	67.6	75-125				QM-07
Zinc	153	13.2	"	51.1	125	55.9	75-125				QM-07

Matrix Spike Dup (1504274-MSD1)

Source: 1504177-03 Prepared: 04/28/15 Analyzed: 04/29/15

Arsenic	51.5	0.132	mg/kg dry	48.5	15.2	74.9	75-125	20.9	25		QM-07
Barium	1490	0.132	"	48.5	828	NR	75-125	17.5	25		QM-07
Cadmium	4.26	0.132	"	2.43	4.09	7.30	75-125	24.0	25		QM-07
Chromium	53.6	0.660	"	48.5	14.3	81.1	75-125	23.0	25		
Lead	31.2	0.132	"	24.3	11.6	80.8	75-125	21.5	25		
Selenium	9.23	0.0660	"	4.85	8.76	9.58	75-125	19.4	25		QM-07
Silver	1.61	0.132	"	2.43	0.342	52.1	75-125	25.2	25		QM-07
Zinc	121	13.2	"	48.5	125	NR	75-125	23.4	25		QM-07

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:24

Total Mercury by EPA Method 7471 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1504273 - EPA 7471A

Blank (1504273-BLK1)			Prepared & Analyzed: 04/28/15								
Mercury	ND	0.0500	mg/kg wet								
LCS (1504273-BS1)			Prepared & Analyzed: 04/28/15								
Mercury	0.469	0.0500	mg/kg wet	0.500		93.9	80-120				
Duplicate (1504273-DUP1)			Source: 1504177-03			Prepared & Analyzed: 04/28/15					
Mercury	0.0635	0.0660	mg/kg dry		0.0355			56.4	20		QR-03
Matrix Spike (1504273-MS1)			Source: 1504177-03			Prepared & Analyzed: 04/28/15					
Mercury	0.557	0.0574	mg/kg dry	0.574	0.0355	91.0	80-120				
Matrix Spike Dup (1504273-MSD1)			Source: 1504177-03			Prepared & Analyzed: 04/28/15					
Mercury	0.599	0.0660	mg/kg dry	0.615	0.0355	91.6	80-120	7.27	20		

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:24

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504292 - General Preparation

Duplicate (1504292-DUP1)		Source: 1504221-01		Prepared: 04/29/15 Analyzed: 04/30/15	
% Solids	77.8	%		76.5	1.69 20
Duplicate (1504292-DUP2)		Source: 1504259-01		Prepared: 04/29/15 Analyzed: 04/30/15	
% Solids	91.5	%		91.8	0.327 20

Summit Scientific

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/03/15 14:24

Notes and Definitions

- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

May 03, 2015

Steve Hoffman

Terracon - Wheat Ridge

10625 West I-70 Frontage Road, Suite 3

Wheat Ridge, CO 80033

RE: National Western Complex

Enclosed are the results of analyses for samples received by Summit Scientific on 04/27/15 16:55. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury
President



Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/03/15 14:42

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SV-3 (0-6")	1504259-01	Soil	04/27/15 14:55	04/27/15 16:55
SV-3 (6-24")	1504259-02	Soil	04/27/15 14:55	04/27/15 16:55
SV-10 (0-6")	1504259-03	Soil	04/27/15 13:55	04/27/15 16:55
SV-10 (6-24")	1504259-04	Soil	04/27/15 13:55	04/27/15 16:55
SV-11 (0-6")	1504259-05	Soil	04/27/15 08:35	04/27/15 16:55
SV-11 (6-24")	1504259-06	Soil	04/27/15 08:35	04/27/15 16:55
SV-12 (0-6")	1504259-07	Soil	04/27/15 10:15	04/27/15 16:55
SV-12 (6-24")	1504259-08	Soil	04/27/15 10:15	04/27/15 16:55
SV-13 (0-6")	1504259-09	Soil	04/27/15 12:30	04/27/15 16:55
SV-13 (6-24")	1504259-10	Soil	04/27/15 12:30	04/27/15 16:55

Summit Scientific

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S2

Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:42

Sample Receipt Checklist

S2 Work Order: 1504259

Client: Terracon Client Project ID: National Western Complex

Shipped Via: PU (UPS, FedEx, Hand Delivered, Pick-up, etc.) Airbill #: _____

Matrix (check all that apply): Air Soil/Solid Water Other: _____ (Describe)

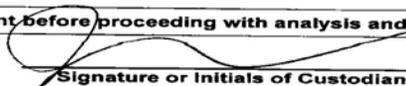
Cooler ID				
Temp (°C)	14.7			

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.				
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
If custody seals are present, are they intact ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present?			<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, etc.			<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Record the pH in Comments.			<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

Ben Shrewsbury
 Custodian Printed Name


 Signature or Initials of Custodian

4/30/15 1645
 Date/Time





Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:42

SV-3 (0-6")
1504259-01 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/27/15 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.14	0.109	mg/kg dry	1	1504274	04/28/15	04/29/15	EPA 6020A	
Barium	180	0.109	"	"	"	"	"	"	
Cadmium	0.326	0.109	"	"	"	"	"	"	
Chromium	11.8	0.545	"	"	"	"	"	"	
Lead	12.1	0.109	"	"	"	"	"	"	
Selenium	0.305	0.0545	"	"	"	"	"	"	
Silver	ND	0.109	"	"	"	"	"	"	

Date Sampled: **04/27/15 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	115	10.9	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/27/15 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	0.298	0.0545	mg/kg dry	1	1504298	04/29/15	04/30/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/27/15 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.8		%	1	1504292	04/29/15	04/30/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:42

SV-3 (6-24")
1504259-02 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/27/15 14:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.23	0.109	mg/kg dry	1	1504274	04/28/15	04/29/15	EPA 6020A	
Barium	94.8	0.109	"	"	"	"	"	"	
Cadmium	0.245	0.109	"	"	"	"	"	"	
Chromium	9.38	0.545	"	"	"	"	"	"	
Lead	27.6	0.109	"	"	"	"	"	"	
Selenium	0.249	0.0545	"	"	"	"	"	"	
Silver	0.125	0.109	"	"	"	"	"	"	

Date Sampled: **04/27/15 14:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	102	10.9	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/27/15 14:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0440	mg/kg dry	1	1504298	04/29/15	04/30/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/27/15 14:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	91.7		%	1	1504292	04/29/15	04/30/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:42

SV-10 (0-6")
1504259-03 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/27/15 13:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	8.12	0.108	mg/kg dry	1	1504274	04/28/15	04/29/15	EPA 6020A	
Barium	93.3	0.108	"	"	"	"	"	"	
Cadmium	1.06	0.108	"	"	"	"	"	"	
Chromium	8.18	0.541	"	"	"	"	"	"	
Lead	95.2	0.108	"	"	"	"	"	"	
Selenium	0.187	0.0541	"	"	"	"	"	"	
Silver	0.541	0.108	"	"	"	"	"	"	

Date Sampled: **04/27/15 13:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	52.8	10.8	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/27/15 13:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.0670	0.0483	mg/kg dry	1	1504298	04/29/15	04/30/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/27/15 13:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	92.5		%	1	1504292	04/29/15	04/30/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:42

**SV-10 (6-24")
 1504259-04 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/27/15 13:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.30	0.112	mg/kg dry	1	1504274	04/28/15	04/29/15	EPA 6020A	
Barium	149	0.112	"	"	"	"	"	"	
Cadmium	0.308	0.112	"	"	"	"	"	"	
Chromium	10.9	0.562	"	"	"	"	"	"	
Lead	32.7	0.112	"	"	"	"	"	"	
Selenium	0.197	0.0562	"	"	"	"	"	"	
Silver	0.211	0.112	"	"	"	"	"	"	

Date Sampled: **04/27/15 13:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	51.1	11.2	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/27/15 13:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0562	mg/kg dry	1	1504298	04/29/15	04/30/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/27/15 13:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	88.9		%	1	1504292	04/29/15	04/30/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:42

SV-11 (0-6")
1504259-05 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/27/15 08:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.70	0.0952	mg/kg dry	1	1504274	04/28/15	04/29/15	EPA 6020A	
Barium	72.3	0.0952	"	"	"	"	"	"	
Cadmium	0.675	0.0952	"	"	"	"	"	"	
Chromium	5.77	0.476	"	"	"	"	"	"	
Lead	14.6	0.0952	"	"	"	"	"	"	
Selenium	0.136	0.0476	"	"	"	"	"	"	
Silver	ND	0.0952	"	"	"	"	"	"	

Date Sampled: **04/27/15 08:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	34.2	9.52	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/27/15 08:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0457	mg/kg dry	1	1504298	04/29/15	04/30/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/27/15 08:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.2		%	1	1504292	04/29/15	04/30/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:42

SV-11 (6-24")
1504259-06 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/27/15 08:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.35	0.111	mg/kg dry	1	1504274	04/28/15	04/29/15	EPA 6020A	
Barium	66.4	0.111	"	"	"	"	"	"	
Cadmium	0.394	0.111	"	"	"	"	"	"	
Chromium	8.17	0.553	"	"	"	"	"	"	
Lead	11.7	0.111	"	"	"	"	"	"	
Selenium	0.128	0.0553	"	"	"	"	"	"	
Silver	ND	0.111	"	"	"	"	"	"	

Date Sampled: **04/27/15 08:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	31.4	11.1	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/27/15 08:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0469	mg/kg dry	1	1504298	04/29/15	04/30/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/27/15 08:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	90.4		%	1	1504292	04/29/15	04/30/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:42

SV-12 (0-6")
1504259-07 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/27/15 10:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.751	0.104	mg/kg dry	1	1504274	04/28/15	04/29/15	EPA 6020A	
Barium	47.4	0.104	"	"	"	"	"	"	
Cadmium	ND	0.104	"	"	"	"	"	"	
Chromium	6.24	0.518	"	"	"	"	"	"	
Lead	5.07	0.104	"	"	"	"	"	"	
Selenium	0.0834	0.0518	"	"	"	"	"	"	
Silver	ND	0.104	"	"	"	"	"	"	

Date Sampled: **04/27/15 10:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	22.4	10.4	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/27/15 10:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0518	mg/kg dry	1	1504298	04/29/15	04/30/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/27/15 10:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	96.6		%	1	1504292	04/29/15	04/30/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:42

**SV-12 (6-24")
 1504259-08 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/27/15 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.796	0.0926	mg/kg dry	1	1504274	04/28/15	04/29/15	EPA 6020A	
Barium	29.4	0.0926	"	"	"	"	"	"	
Cadmium	0.247	0.0926	"	"	"	"	"	"	
Chromium	2.95	0.463	"	"	"	"	"	"	
Lead	19.1	0.0926	"	"	"	"	"	"	
Selenium	0.0591	0.0463	"	"	"	"	"	"	
Silver	ND	0.0926	"	"	"	"	"	"	

Date Sampled: **04/27/15 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	19.3	9.26	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/27/15 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0432	mg/kg dry	1	1504298	04/29/15	04/30/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/27/15 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.4		%	1	1504292	04/29/15	04/30/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:42

**SV-13 (0-6")
 1504259-09 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/27/15 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.02	0.105	mg/kg dry	1	1504274	04/28/15	04/29/15	EPA 6020A	
Barium	47.9	0.105	"	"	"	"	"	"	
Cadmium	ND	0.105	"	"	"	"	"	"	
Chromium	4.80	0.523	"	"	"	"	"	"	
Lead	6.07	0.105	"	"	"	"	"	"	
Selenium	0.258	0.0523	"	"	"	"	"	"	
Silver	ND	0.105	"	"	"	"	"	"	

Date Sampled: **04/27/15 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	19.4	10.5	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/27/15 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0467	mg/kg dry	1	1504298	04/29/15	04/30/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/27/15 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	95.6		%	1	1504292	04/29/15	04/30/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:42

SV-13 (6-24")
1504259-10 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/27/15 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.329	0.101	mg/kg dry	1	1504274	04/28/15	04/29/15	EPA 6020A	
Barium	15.6	0.101	"	"	"	"	"	"	
Cadmium	ND	0.101	"	"	"	"	"	"	
Chromium	1.59	0.507	"	"	"	"	"	"	
Lead	2.23	0.101	"	"	"	"	"	"	
Selenium	ND	0.0507	"	"	"	"	"	"	
Silver	ND	0.101	"	"	"	"	"	"	

Date Sampled: **04/27/15 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	ND	10.1	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/27/15 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0445	mg/kg dry	1	1504298	04/29/15	04/30/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/27/15 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	98.6		%	1	1504292	04/29/15	04/30/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:42

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control

Summit Scientific

Analyte	Reporting			Spike Level	Source		%REC		RPD		Notes
	Result	Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch 1504274 - EPA 3050B

Blank (1504274-BLK1)

Prepared: 04/28/15 Analyzed: 04/29/15

Arsenic	ND	0.100	mg/kg wet							
Barium	ND	0.100	"							
Cadmium	ND	0.100	"							
Chromium	ND	0.500	"							
Lead	ND	0.100	"							
Selenium	ND	0.0500	"							
Silver	ND	0.100	"							
Zinc	ND	10.0	"							

LCS (1504274-BS1)

Prepared: 04/28/15 Analyzed: 04/29/15

Arsenic	112	0.250	mg/kg wet	99.4	113	78.4-140
Barium	356	0.250	"	309	115	83.2-117
Cadmium	215	0.250	"	182	118	81.9-118
Chromium	144	1.25	"	136	106	80.1-121
Lead	131	0.250	"	115	114	81.8-119
Selenium	180	0.125	"	150	120	77.3-123
Silver	48.2	0.250	"	40.3	120	75-125
Zinc	168	25.0	"	133	127	80.7-132

Duplicate (1504274-DUP1)

Source: 1504177-03

Prepared: 04/28/15 Analyzed: 04/29/15

Arsenic	14.5	0.132	mg/kg dry	15.2	4.98	20
Barium	901	0.132	"	828	8.55	20
Cadmium	3.79	0.132	"	4.09	7.52	20
Chromium	13.1	0.660	"	14.3	8.59	20
Lead	10.7	0.132	"	11.6	7.67	20
Selenium	7.94	0.0660	"	8.76	9.83	20
Silver	0.267	0.132	"	0.342	24.4	20
Zinc	114	13.2	"	125	8.74	20

QR-03

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:42

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1504274 - EPA 3050B

Matrix Spike (1504274-MS1)

Source: 1504177-03

Prepared: 04/28/15

Analyzed: 04/29/15

Arsenic	63.6	0.132	mg/kg dry	51.1	15.2	94.6	75-125				
Barium	1780	0.132	"	51.1	828	NR	75-125				QM-07
Cadmium	5.42	0.132	"	2.56	4.09	52.3	75-125				QM-07
Chromium	67.6	0.660	"	51.1	14.3	104	75-125				
Lead	38.7	0.132	"	25.6	11.6	106	75-125				
Selenium	11.2	0.0660	"	5.11	8.76	47.9	75-125				QM-07
Silver	2.07	0.132	"	2.56	0.342	67.6	75-125				QM-07
Zinc	153	13.2	"	51.1	125	55.9	75-125				QM-07

Matrix Spike Dup (1504274-MSD1)

Source: 1504177-03

Prepared: 04/28/15

Analyzed: 04/29/15

Arsenic	51.5	0.132	mg/kg dry	48.5	15.2	74.9	75-125	20.9	25		QM-07
Barium	1490	0.132	"	48.5	828	NR	75-125	17.5	25		QM-07
Cadmium	4.26	0.132	"	2.43	4.09	7.30	75-125	24.0	25		QM-07
Chromium	53.6	0.660	"	48.5	14.3	81.1	75-125	23.0	25		
Lead	31.2	0.132	"	24.3	11.6	80.8	75-125	21.5	25		
Selenium	9.23	0.0660	"	4.85	8.76	9.58	75-125	19.4	25		QM-07
Silver	1.61	0.132	"	2.43	0.342	52.1	75-125	25.2	25		QM-07
Zinc	121	13.2	"	48.5	125	NR	75-125	23.4	25		QM-07

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:42

Total Mercury by EPA Method 7471 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike	Source		%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1504298 - EPA 7471A

Blank (1504298-BLK1)		Prepared: 04/29/15 Analyzed: 04/30/15									
Mercury	ND	0.0500	mg/kg wet								
LCS (1504298-BS1)		Prepared: 04/29/15 Analyzed: 04/30/15									
Mercury	0.545	0.0500	mg/kg wet	0.500		109	80-120				
Duplicate (1504298-DUP1)		Source: 1504259-01		Prepared: 04/29/15 Analyzed: 04/30/15							
Mercury	0.00783	0.0495	mg/kg dry		0.298			190	20		QR-01
Matrix Spike (1504298-MS1)		Source: 1504259-01		Prepared: 04/29/15 Analyzed: 04/30/15							
Mercury	0.502	0.0470	mg/kg dry	0.470	0.298	43.4	80-120				QR-03
Matrix Spike Dup (1504298-MSD1)		Source: 1504259-01		Prepared: 04/29/15 Analyzed: 04/30/15							
Mercury	0.571	0.0545	mg/kg dry	0.534	0.298	51.2	80-120	12.9	20		QR-03

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/03/15 14:42

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504292 - General Preparation

Duplicate (1504292-DUP1)		Source: 1504221-01		Prepared: 04/29/15 Analyzed: 04/30/15	
% Solids	77.8	%		76.5	1.69 20
Duplicate (1504292-DUP2)		Source: 1504259-01		Prepared: 04/29/15 Analyzed: 04/30/15	
% Solids	91.5	%		91.8	0.327 20

Summit Scientific

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/03/15 14:42

Notes and Definitions

- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QR-01 Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

May 27, 2015

Steve Hoffman

Terracon - Wheat Ridge

10625 West I-70 Frontage Road, Suite 3

Wheat Ridge, CO 80033

RE: National Western Complex

Enclosed are the results of analyses for samples received by Summit Scientific on 04/28/15 18:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Ben Shrewsbury', with a long, sweeping horizontal line extending to the right.

Ben Shrewsbury For Paul Shrewsbury
President



Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/27/15 13:34

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SV-2 (0-6")	1504278-01	Soil	04/28/15 15:50	04/28/15 18:50
SV-2 (6-24")	1504278-02	Soil	04/28/15 15:50	04/28/15 18:50
SV-4 (0-6")	1504278-03	Soil	04/28/15 14:25	04/28/15 18:50
SV-4 (6-24")	1504278-04	Soil	04/28/15 14:25	04/28/15 18:50
SV-5 (0-6")	1504278-05	Soil	04/28/15 13:40	04/28/15 18:50
SV-5 (6-24")	1504278-06	Soil	04/28/15 13:40	04/28/15 18:50
SV-6 (0-6")	1504278-07	Soil	04/28/15 12:35	04/28/15 18:50
SV-6 (6-24")	1504278-08	Soil	04/28/15 12:35	04/28/15 18:50
SV-7 (0-6")	1504278-09	Soil	04/28/15 13:10	04/28/15 18:50
SV-7 (6-24")	1504278-10	Soil	04/28/15 13:10	04/28/15 18:50
SV-20 (0-6")	1504278-11	Soil	04/28/15 12:00	04/28/15 18:50
SV-20 (6-24")	1504278-12	Soil	04/28/15 12:00	04/28/15 18:50
MW-16 (0-6")	1504278-13	Soil	04/28/15 09:00	04/28/15 18:50
MW-16 (0-6")-D	1504278-14	Soil	04/28/15 09:00	04/28/15 18:50
MW-16 (6-24")	1504278-15	Soil	04/28/15 09:00	04/28/15 18:50
MW-16 (6-24")-D	1504278-16	Soil	04/28/15 09:00	04/28/15 18:50
MW-16 (29')	1504278-17	Soil	04/28/15 10:20	04/28/15 18:50
MW-16 (29')-D	1504278-18	Soil	04/28/15 10:20	04/28/15 18:50

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

Summit Scientific

1504278.1

741 Corporate Circle Suite 1 ♦ Golden, Colorado 80401
 303-277-9310 ♦ 303-374-5933 Fax

Page 1 of 2

Client: Terracon Consultants

Address: 10625 West I-70 Frontage Road North, Suite 3
 City/State/Zip: Wheat Ridge, CO 80033
 Phone: (303) 454-5275 Fax: (303) 423-3353
 Sampler Name: Marshall Haworth

Project Manager: Steve Hoffman
 E-Mail: sbhoffman@terracon.com
 Project Name: National Western Complex
 Project Number: 25157010

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix		Analyze For:				Special Instructions	
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	VOC's 8260B	TPH 8015		RCRA 8-Zinc
SV-2 (0-6")	4-28-15	1950	1			X									
SV-2 (6-24")	4-28-15	1530	1			X							X		
SV-4 (0-6")	4-28-15	1425	1			X							X		
SV-4 (6-24")	4-28-15	1425	1			X							X		
SV-5 (0-6")	4-28-15	1340	1			X							X		
SV-5 (6-24")	4-28-15	1340	1			X							X		
SV-6 (0-6")	4-28-15	1235	1			X							X		
SV-6 (6-24")	4-28-15	1235	1			X							X		
SV-7 (0-6")	4-28-15	1310	1			X							X		
SV-7 (6-24")	4-28-15	1310	1			X							X		
Relinquished by: <u>Marshall Haworth</u>		Date/Time: <u>4-28-15 1850</u>	Received by: <u>[Signature]</u>		Date/Time: <u>4-28-15 1850</u>	Turn Around Time (Check)		Notes:							
		Date/Time:	Received by:		Date/Time:	Same Day <input type="checkbox"/>		72 Hours <input type="checkbox"/>							
		Date/Time:	Received by:		Date/Time:	24 Hours <input type="checkbox"/>		Standard <input checked="" type="checkbox"/>							
		Date/Time:	Received in Lab by:		Date/Time:	48 Hours <input type="checkbox"/>									
		Date/Time:	Received in Lab by:		Date/Time:	Sample Integrity:									
		Date/Time:	Received in Lab by:		Date/Time:	Temperature Upon Receipt: <u>55</u>									
		Date/Time:	Received in Lab by:		Date/Time:	Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>									

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

Summit Scientific

15042782

741 Corporate Circle Suite I ♦ Golden, Colorado 80401
 303-277-9310 ♦ 303-374-5933 Fax

Page 2 of 2

Client: Terracon Consultants

Address: 10625 West I-70 Frontage Road North, Suite 3
 City/State/Zip: Wheat Ridge, CO 80033
 Phone: (303) 454-5275 Fax: (303) 423-3353
 Sampler Name: Marshall Haworth

Project Manager: Steve Hoffman

E-Mail: sbhoffman@terracon.com

Project Name: National Western Complex

Project Number: 25157010

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix		Analyze For:				Special Instructions	
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	VOC's 8260B	TPH 8015		RCRA 8+Zinc
SV-20 (0-6")	4-28-15	1200	1			X									
SV-20 (6-24")	4-28-15	1200	1			X									
MW-16 (0-6")	4-28-15	0900	1			X									
MW-16 (0-6")-D	4-28-15	0900	1			X									
MW-16 (6-24")	4-28-15	0900	1			X									
MW-16 (6-24")-D	4-28-15	0900	1			X									
MW-16 (29")	4-28-15	1020	1			X									
MW-16 (29")-D	4-28-15	1020	1			X									
Relinquished by: <u>Marshall Haworth</u> Date/Time: <u>4-28-15 1850</u>				Received by: <u>4/28/15</u> Date/Time: <u>1850</u>				Turn Around Time (Check)				Notes:			
Relinquished by:				Received by:				Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/>							
Relinquished by:				Received by:				24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/>							
Relinquished by:				Received in Lab by:				48 Hours <input type="checkbox"/>				Sample Integrity:			
Relinquished by:				Received in Lab by:				Temperature Upon Receipt: <u>SS</u>				Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

Sample Receipt Checklist

S2 Work Order: 1504278

Client: Terracon

Client Project ID: National Western Complex

Shipped Via: AD

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Airbill #: _____

Matrix (check all that apply): Air Soil/Solid Water Other: _____ (Describe)

Cooler ID					
Temp (°C)	5.5				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.	X			
Were all samples received intact ⁽¹⁾ ?	X			
Was adequate sample volume provided ⁽¹⁾ ?	X			
If custody seals are present, are they intact ⁽¹⁾ ?			X	
Are short holding time analytes or samples with HTs due within 48 hours present?			X	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	X			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	X			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	X			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	X			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			X	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, etc.			X	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.			X	
If dissolved metals are requested, were samples field filtered?			X	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

Ben Shrewsbury
 Custodian Printed Name

[Signature]
 Signature or Initials of Custodian

4/30/15 1946
 Date/Time

[Signature]



Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

**SV-2 (0-6")
 1504278-01 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/28/15 15:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	12.6	0.117	mg/kg dry	1	1504304	04/30/15	05/01/15	EPA 6020A	
Barium	688	0.117	"	"	"	"	"	"	
Cadmium	2.79	0.117	"	"	"	"	"	"	
Chromium	8.16	0.583	"	"	"	"	"	"	
Lead	282	0.117	"	"	"	"	"	"	
Selenium	0.524	0.0583	"	"	"	"	"	"	
Silver	0.441	0.117	"	"	"	"	"	"	

Date Sampled: **04/28/15 15:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	425	11.7	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/28/15 15:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	0.297	0.0502	mg/kg dry	1	1504299	04/29/15	04/30/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/28/15 15:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.8		%	1	1504311	04/30/15	05/01/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

SV-2 (6-24")
1504278-02 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/28/15 15:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	6.77	0.110	mg/kg dry	1	1504304	04/30/15	05/01/15	EPA 6020A	
Barium	175	0.110	"	"	"	"	"	"	
Cadmium	3.85	0.110	"	"	"	"	"	"	
Chromium	5.65	0.552	"	"	"	"	"	"	
Lead	98.3	0.110	"	"	"	"	"	"	
Selenium	0.212	0.0552	"	"	"	"	"	"	
Silver	0.394	0.110	"	"	"	"	"	"	

Date Sampled: **04/28/15 15:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	1370	11.0	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/28/15 15:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.102	0.0484	mg/kg dry	1	1504299	04/29/15	04/30/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/28/15 15:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	90.6		%	1	1504311	04/30/15	05/01/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

**SV-4 (0-6")
 1504278-03 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/28/15 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.15	0.0960	mg/kg dry	1	1504304	04/30/15	05/01/15	EPA 6020A	
Barium	92.4	0.0960	"	"	"	"	"	"	
Cadmium	0.263	0.0960	"	"	"	"	"	"	
Chromium	5.80	0.480	"	"	"	"	"	"	
Lead	25.2	0.0960	"	"	"	"	"	"	
Selenium	ND	0.0480	"	"	"	"	"	"	
Silver	0.164	0.0960	"	"	"	"	"	"	

Date Sampled: **04/28/15 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	62.8	9.60	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/28/15 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0473	mg/kg dry	1	1504299	04/29/15	04/30/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/28/15 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.1		%	1	1504311	04/30/15	05/01/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

SV-4 (6-24")
1504278-04 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/28/15 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.19	0.0964	mg/kg dry	1	1504304	04/30/15	05/01/15	EPA 6020A	
Barium	71.6	0.0964	"	"	"	"	"	"	
Cadmium	ND	0.0964	"	"	"	"	"	"	
Chromium	4.40	0.482	"	"	"	"	"	"	
Lead	5.58	0.0964	"	"	"	"	"	"	
Selenium	ND	0.0482	"	"	"	"	"	"	
Silver	ND	0.0964	"	"	"	"	"	"	

Date Sampled: **04/28/15 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	21.5	9.64	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/28/15 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0450	mg/kg dry	1	1504299	04/29/15	04/30/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/28/15 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.6		%	1	1504311	04/30/15	05/01/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

**SV-5 (0-6")
 1504278-05 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/28/15 13:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.33	0.110	mg/kg dry	1	1504304	04/30/15	05/01/15	EPA 6020A	
Barium	47.1	0.110	"	"	"	"	"	"	
Cadmium	ND	0.110	"	"	"	"	"	"	
Chromium	4.52	0.549	"	"	"	"	"	"	
Lead	5.61	0.110	"	"	"	"	"	"	
Selenium	ND	0.0549	"	"	"	"	"	"	
Silver	ND	0.110	"	"	"	"	"	"	

Date Sampled: **04/28/15 13:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	22.0	11.0	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/28/15 13:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0549	mg/kg dry	1	1504299	04/29/15	04/30/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/28/15 13:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	91.1		%	1	1504311	04/30/15	05/01/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

SV-5 (6-24")
1504278-06 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/28/15 13:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.34	0.108	mg/kg dry	1	1504304	04/30/15	05/01/15	EPA 6020A	
Barium	48.2	0.108	"	"	"	"	"	"	
Cadmium	ND	0.108	"	"	"	"	"	"	
Chromium	5.66	0.538	"	"	"	"	"	"	
Lead	4.72	0.108	"	"	"	"	"	"	
Selenium	ND	0.0538	"	"	"	"	"	"	
Silver	ND	0.108	"	"	"	"	"	"	

Date Sampled: **04/28/15 13:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	19.4	10.8	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/28/15 13:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0538	mg/kg dry	1	1504299	04/29/15	04/30/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/28/15 13:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	93.0		%	1	1504311	04/30/15	05/01/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

**SV-6 (0-6")
 1504278-07 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/28/15 12:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	6.67	0.0977	mg/kg dry	1	1504304	04/30/15	05/01/15	EPA 6020A	
Barium	171	0.0977	"	"	"	"	"	"	
Cadmium	2.12	0.0977	"	"	"	"	"	"	
Chromium	14.4	0.489	"	"	"	"	"	"	
Lead	192	0.0977	"	"	"	"	"	"	
Selenium	0.179	0.0489	"	"	"	"	"	"	
Silver	0.547	0.0977	"	"	"	"	"	"	

Date Sampled: **04/28/15 12:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	349	9.77	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/28/15 12:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.365	0.0459	mg/kg dry	1	1504299	04/29/15	04/30/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/28/15 12:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	90.7		%	1	1504311	04/30/15	05/01/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

SV-6 (6-24")
1504278-08 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/28/15 12:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.63	0.114	mg/kg dry	1	1504304	04/30/15	05/01/15	EPA 6020A	
Barium	128	0.114	"	"	"	"	"	"	
Cadmium	0.271	0.114	"	"	"	"	"	"	
Chromium	11.2	0.569	"	"	"	"	"	"	
Lead	16.0	0.114	"	"	"	"	"	"	
Selenium	ND	0.0569	"	"	"	"	"	"	
Silver	0.178	0.114	"	"	"	"	"	"	

Date Sampled: **04/28/15 12:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	48.1	11.4	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/28/15 12:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0474	mg/kg dry	1	1504299	04/29/15	04/30/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/28/15 12:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	87.9		%	1	1504311	04/30/15	05/01/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

**SV-7 (0-6")
 1504278-09 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/28/15 13:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.75	0.106	mg/kg dry	1	1504304	04/30/15	05/01/15	EPA 6020A	
Barium	74.0	0.106	"	"	"	"	"	"	
Cadmium	0.572	0.106	"	"	"	"	"	"	
Chromium	4.86	0.532	"	"	"	"	"	"	
Lead	62.6	0.106	"	"	"	"	"	"	
Selenium	0.0682	0.0532	"	"	"	"	"	"	
Silver	0.295	0.106	"	"	"	"	"	"	

Date Sampled: **04/28/15 13:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	55.0	10.6	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/28/15 13:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.0488	0.0429	mg/kg dry	1	1504299	04/29/15	04/30/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/28/15 13:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	93.9		%	1	1504311	04/30/15	05/01/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

SV-7 (6-24")
1504278-10 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/28/15 13:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.30	0.104	mg/kg dry	1	1504304	04/30/15	05/01/15	EPA 6020A	
Barium	45.8	0.104	"	"	"	"	"	"	
Cadmium	0.177	0.104	"	"	"	"	"	"	
Chromium	2.63	0.520	"	"	"	"	"	"	
Lead	12.4	0.104	"	"	"	"	"	"	
Selenium	ND	0.0520	"	"	"	"	"	"	
Silver	ND	0.104	"	"	"	"	"	"	

Date Sampled: **04/28/15 13:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	16.1	10.4	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/28/15 13:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0520	mg/kg dry	1	1504299	04/29/15	04/30/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/28/15 13:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	96.1		%	1	1504311	04/30/15	05/01/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

SV-20 (0-6")
1504278-11 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/28/15 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	28.1	0.117	mg/kg dry	1	1504304	04/30/15	05/01/15	EPA 6020A	
Barium	292	0.117	"	"	"	"	"	"	
Cadmium	5.90	0.117	"	"	"	"	"	"	
Chromium	12.6	0.587	"	"	"	"	"	"	
Lead	875	0.117	"	"	"	"	"	"	
Selenium	0.506	0.0587	"	"	"	"	"	"	
Silver	2.29	0.117	"	"	"	"	"	"	

Date Sampled: **04/28/15 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	405	11.7	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/28/15 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.846	0.0947	mg/kg dry	2	1504299	04/29/15	04/30/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/28/15 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	85.2		%	1	1504311	04/30/15	05/01/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

SV-20 (6-24")
1504278-12 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/28/15 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	9.62	0.116	mg/kg dry	1	1504304	04/30/15	05/01/15	EPA 6020A	
Barium	372	0.116	"	"	"	"	"	"	
Cadmium	2.01	0.116	"	"	"	"	"	"	
Chromium	17.2	0.581	"	"	"	"	"	"	
Lead	263	0.116	"	"	"	"	"	"	
Selenium	0.278	0.0581	"	"	"	"	"	"	
Silver	0.906	0.116	"	"	"	"	"	"	

Date Sampled: **04/28/15 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	137	11.6	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/28/15 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.0591	0.0581	mg/kg dry	1	1504299	04/29/15	04/30/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/28/15 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	86.1		%	1	1504311	04/30/15	05/01/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

MW-16 (0-6")
1504278-13 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/28/15 09:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.24	0.110	mg/kg dry	1	1504304	04/30/15	05/01/15	EPA 6020A	
Barium	133	0.110	"	"	"	"	"	"	
Cadmium	0.265	0.110	"	"	"	"	"	"	
Chromium	10.3	0.548	"	"	"	"	"	"	
Lead	19.6	0.110	"	"	"	"	"	"	
Selenium	ND	0.0548	"	"	"	"	"	"	
Silver	ND	0.110	"	"	"	"	"	"	

Date Sampled: **04/28/15 09:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	56.3	11.0	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/28/15 09:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0465	mg/kg dry	1	1504299	04/29/15	04/30/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/28/15 09:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	91.2		%	1	1504311	04/30/15	05/01/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

**MW-16 (0-6')-D
 1504278-14 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/28/15 09:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.99	0.110	mg/kg dry	1	1504304	04/30/15	05/01/15	EPA 6020A	
Barium	145	0.110	"	"	"	"	"	"	
Cadmium	0.480	0.110	"	"	"	"	"	"	
Chromium	12.5	0.552	"	"	"	"	"	"	
Lead	33.1	0.110	"	"	"	"	"	"	
Selenium	0.0767	0.0552	"	"	"	"	"	"	
Silver	0.197	0.110	"	"	"	"	"	"	

Date Sampled: **04/28/15 09:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	72.0	11.0	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/28/15 09:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0484	mg/kg dry	1	1504299	04/29/15	04/30/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/28/15 09:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	90.6		%	1	1504311	04/30/15	05/01/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

MW-16 (6-24")
1504278-15 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/28/15 09:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	9.65	0.108	mg/kg dry	1	1504304	04/30/15	05/01/15	EPA 6020A	
Barium	135	0.108	"	"	"	"	"	"	
Cadmium	0.961	0.108	"	"	"	"	"	"	
Chromium	12.4	0.538	"	"	"	"	"	"	
Lead	67.9	0.108	"	"	"	"	"	"	
Selenium	0.116	0.0538	"	"	"	"	"	"	
Silver	0.238	0.108	"	"	"	"	"	"	

Date Sampled: **04/28/15 09:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	101	10.8	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/28/15 09:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.0742	0.0434	mg/kg dry	1	1504299	04/29/15	04/30/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/28/15 09:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	93.0		%	1	1504311	04/30/15	05/01/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

MW-16 (6-24")-D
1504278-16 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/28/15 09:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	9.43	0.108	mg/kg dry	1	1504304	04/30/15	05/01/15	EPA 6020A	
Barium	148	0.108	"	"	"	"	"	"	
Cadmium	0.893	0.108	"	"	"	"	"	"	
Chromium	13.1	0.539	"	"	"	"	"	"	
Lead	60.4	0.108	"	"	"	"	"	"	
Selenium	0.128	0.0539	"	"	"	"	"	"	
Silver	0.261	0.108	"	"	"	"	"	"	

Date Sampled: **04/28/15 09:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	102	10.8	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/28/15 09:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.154	0.0539	mg/kg dry	1	1504299	04/29/15	04/30/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/28/15 09:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	92.7		%	1	1504311	04/30/15	05/01/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

MW-16 (29')
1504278-17 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/28/15 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1505016	05/02/15	05/02/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/28/15 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		106 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/28/15 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504315	04/30/15	05/01/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

MW-16 (29')
1504278-17 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample	Date	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504315	04/30/15	05/01/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"	"

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

MW-16 (29')
1504278-17 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504315	04/30/15	05/01/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: **04/28/15 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		112 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		97.6 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.6 %		21-167	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

MW-16 (29')-D
1504278-18 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/28/15 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1505016	05/02/15	05/02/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/28/15 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		108 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/28/15 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504315	04/30/15	05/01/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

MW-16 (29')-D
1504278-18 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample ID	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504315	04/30/15
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"
Styrene	ND	0.010	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"
Toluene	ND	0.0050	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

**MW-16 (29')-D
 1504278-18 (Soil)**

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504315	04/30/15	05/01/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: **04/28/15 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		95.9 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.6 %		21-167	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505016 - EPA 3550A

Blank (1505016-BLK1)				Prepared & Analyzed: 05/02/15						
C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
<i>Surrogate: o-Terphenyl</i>	<i>13.1</i>		<i>"</i>	<i>12.2</i>		<i>108</i>	<i>70-130</i>			
LCS (1505016-BS1)				Prepared & Analyzed: 05/02/15						
C10-C28 (DRO)	463	50	mg/kg	501	40.3	92.3	50-150			
<i>Surrogate: o-Terphenyl</i>	<i>13.1</i>		<i>"</i>	<i>12.2</i>		<i>108</i>	<i>70-130</i>			
Matrix Spike (1505016-MS1)				Source: 1505005-01		Prepared & Analyzed: 05/02/15				
C10-C28 (DRO)	450	50	mg/kg	479	40.3	85.6	50-150			
<i>Surrogate: o-Terphenyl</i>	<i>13.0</i>		<i>"</i>	<i>11.7</i>		<i>111</i>	<i>70-130</i>			
Matrix Spike Dup (1505016-MSD1)				Source: 1505005-01		Prepared & Analyzed: 05/02/15				
C10-C28 (DRO)	466	50	mg/kg	480	40.3	88.8	50-150	3.52	20	
<i>Surrogate: o-Terphenyl</i>	<i>13.3</i>		<i>"</i>	<i>11.7</i>		<i>114</i>	<i>70-130</i>			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting		Spike Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

Batch 1504315 - EPA 5030 Soil MS

Blank (1504315-BLK1)

Prepared & Analyzed: 04/30/15

Benzene	ND	0.0020	mg/kg
Bromobenzene	ND	0.0050	"
Bromochloromethane	ND	0.0050	"
Bromodichloromethane	ND	0.0050	"
Bromoform	ND	0.0050	"
Bromomethane	ND	0.010	"
n-Butylbenzene	ND	0.0050	"
sec-Butylbenzene	ND	0.0050	"
tert-Butylbenzene	ND	0.0050	"
Carbon tetrachloride	ND	0.0050	"
Chlorobenzene	ND	0.0050	"
Chloroethane	ND	0.0050	"
Chloroform	ND	0.0050	"
Chloromethane	ND	0.015	"
2-Chlorotoluene	ND	0.0050	"
4-Chlorotoluene	ND	0.0050	"
Chlorodibromomethane	ND	0.010	"
1,2-Dibromo-3-chloropropane	ND	0.015	"
1,2-Dibromoethane (EDB)	ND	0.0050	"
Dibromomethane	ND	0.0050	"
1,2-Dichlorobenzene	ND	0.0050	"
1,3-Dichlorobenzene	ND	0.0050	"
1,4-Dichlorobenzene	ND	0.0050	"
Dichlorodifluoromethane	ND	0.0050	"
Tert-amyl methyl ether	ND	0.0050	"
1,1-Dichloroethane	ND	0.0050	"
1,2-Dichloroethane (EDC)	ND	0.0050	"
Tert-butyl alcohol	ND	0.020	"
1,1-Dichloroethene	ND	0.0050	"
Ethyl tert-butyl ether	ND	0.010	"
cis-1,2-Dichloroethene	ND	0.0050	"
Di-isopropyl ether	ND	0.0050	"
trans-1,2-Dichloroethene	ND	0.0050	"
Methyl tert-butyl ether	ND	0.015	"
1,2-Dichloropropane	ND	0.0050	"
1,3-Dichloropropane	ND	0.0050	"
2,2-Dichloropropane	ND	0.010	"
1,1-Dichloropropene	ND	0.0050	"

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/27/15 13:34

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504315 - EPA 5030 Soil MS

Blank (1504315-BLK1)

Prepared & Analyzed: 04/30/15

cis-1,3-Dichloropropene	ND	0.0050	mg/kg							
trans-1,3-Dichloropropene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Hexachlorobutadiene	ND	0.0050	"							
Isopropylbenzene	ND	0.0050	"							
p-Isopropyltoluene	ND	0.010	"							
Methylene Chloride	ND	0.015	"							
Naphthalene	ND	0.010	"							
n-Propylbenzene	ND	0.0050	"							
Styrene	ND	0.010	"							
1,1,2,2-Tetrachloroethane	ND	0.0050	"							
1,1,1,2-Tetrachloroethane	ND	0.0050	"							
Tetrachloroethene	ND	0.0050	"							
Toluene	ND	0.0050	"							
1,2,3-Trichlorobenzene	ND	0.0050	"							
1,2,4-Trichlorobenzene	ND	0.0050	"							
1,1,2-Trichloroethane	ND	0.0050	"							
1,1,1-Trichloroethane	ND	0.0050	"							
Trichloroethene	ND	0.0050	"							
Trichlorofluoromethane	ND	0.0050	"							
1,2,3-Trichloropropane	ND	0.010	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
Vinyl chloride	ND	0.0050	"							
m,p-Xylene	ND	0.010	"							
o-Xylene	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0384		"	0.0396	97.0	23-173				
Surrogate: Toluene-d8	0.0387		"	0.0400	96.7	20-170				
Surrogate: 4-Bromofluorobenzene	0.0391		"	0.0400	97.6	21-167				

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 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504315 - EPA 5030 Soil MS

LCS (1504315-BS1)

Prepared: 04/30/15 Analyzed: 05/01/15

Benzene	0.151	0.0020	mg/kg	0.150		101	58-130			
Bromobenzene	0.150	0.0050	"	0.150		100	87-115			
Bromochloromethane	0.151	0.0050	"	0.150		101	82-122			
Bromodichloromethane	0.153	0.0050	"	0.150		102	84-119			
Bromoform	0.156	0.0050	"	0.150		104	76-119			
Bromomethane	0.161	0.010	"	0.150		107	39-152			
n-Butylbenzene	0.155	0.0050	"	0.150		103	70-131			
sec-Butylbenzene	0.149	0.0050	"	0.150		99.3	74-124			
tert-Butylbenzene	0.152	0.0050	"	0.150		101	77-121			
Carbon tetrachloride	0.143	0.0050	"	0.150		95.6	66-127			
Chlorobenzene	0.153	0.0050	"	0.150		102	82-120			
Chloroethane	0.140	0.0050	"	0.150		93.4	63-126			
Chloroform	0.149	0.0050	"	0.150		99.2	82-120			
Chloromethane	0.148	0.015	"	0.150		99.0	57-133			
2-Chlorotoluene	0.145	0.0050	"	0.150		96.9	82-117			
4-Chlorotoluene	0.151	0.0050	"	0.150		100	81-119			
Chlorodibromomethane	0.157	0.010	"	0.150		105	82-124			
1,2-Dibromo-3-chloropropane	0.132	0.015	"	0.150		88.0	62-128			
1,2-Dibromoethane (EDB)	0.158	0.0050	"	0.150		105	86-122			
Dibromomethane	0.149	0.0050	"	0.150		99.6	83-124			
1,2-Dichlorobenzene	0.155	0.0050	"	0.150		103	84-120			
1,3-Dichlorobenzene	0.155	0.0050	"	0.150		103	81-118			
1,4-Dichlorobenzene	0.151	0.0050	"	0.150		101	80-118			
Dichlorodifluoromethane	0.140	0.0050	"	0.150		93.4	25-141			
Tert-amyl methyl ether	0.149	0.0050	"	0.149		100	50-147			
1,1-Dichloroethane	0.148	0.0050	"	0.150		98.9	78-120			
1,2-Dichloroethane (EDC)	0.153	0.0050	"	0.150		102	81-125			
Tert-butyl alcohol	0.644	0.020	"	0.747		86.2	64-127			
1,1-Dichloroethene	0.142	0.0050	"	0.150		94.5	71-122			
Ethyl tert-butyl ether	0.151	0.010	"	0.150		101	80-122			
cis-1,2-Dichloroethene	0.152	0.0050	"	0.150		101	84-121			
Di-isopropyl ether	0.151	0.0050	"	0.150		101	78-120			
trans-1,2-Dichloroethene	0.152	0.0050	"	0.150		101	77-125			
Methyl tert-butyl ether	0.154	0.015	"	0.150		103	77-124			
1,2-Dichloropropane	0.151	0.0050	"	0.150		101	88-114			
1,3-Dichloropropane	0.155	0.0050	"	0.150		103	86-122			
2,2-Dichloropropane	0.138	0.010	"	0.150		92.2	32-150			
1,1-Dichloropropene	0.147	0.0050	"	0.150		98.0	71-123			

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504315 - EPA 5030 Soil MS

LCS (1504315-BS1)

Prepared: 04/30/15 Analyzed: 05/01/15

cis-1,3-Dichloropropene	0.152	0.0050	mg/kg	0.150		102	74-125			
trans-1,3-Dichloropropene	0.150	0.0050	"	0.150		100	72-126			
Ethylbenzene	0.156	0.0050	"	0.150		104	74-139			
Hexachlorobutadiene	0.151	0.0050	"	0.150		101	56-144			
Isopropylbenzene	0.154	0.0050	"	0.150		102	72-124			
p-Isopropyltoluene	0.150	0.010	"	0.150		100	72-123			
Methylene Chloride	0.138	0.015	"	0.150		92.0	10-183			
Naphthalene	0.159	0.010	"	0.150		106	66-138			
n-Propylbenzene	0.155	0.0050	"	0.150		103	76-121			
Styrene	0.161	0.010	"	0.150		107	76-133			
1,1,2,2-Tetrachloroethane	0.153	0.0050	"	0.150		102	60-137			
1,1,1,2-Tetrachloroethane	0.154	0.0050	"	0.150		103	86-121			
Tetrachloroethene	0.149	0.0050	"	0.150		99.5	69-131			
Toluene	0.150	0.0050	"	0.150		100	61-134			
1,2,3-Trichlorobenzene	0.160	0.0050	"	0.150		107	63-142			
1,2,4-Trichlorobenzene	0.163	0.0050	"	0.150		108	63-141			
1,1,2-Trichloroethane	0.153	0.0050	"	0.150		102	75-136			
1,1,1-Trichloroethane	0.144	0.0050	"	0.150		95.8	71-126			
Trichloroethene	0.152	0.0050	"	0.150		102	86-118			
Trichlorofluoromethane	0.141	0.0050	"	0.150		93.8	62-128			
1,2,3-Trichloropropane	0.134	0.010	"	0.150		89.6	80-118			
1,3,5-Trimethylbenzene	0.153	0.0050	"	0.150		102	72-121			
1,2,4-Trimethylbenzene	0.154	0.0050	"	0.150		103	78-126			
Vinyl chloride	0.148	0.0050	"	0.150		98.8	63-134			
m,p-Xylene	0.310	0.010	"	0.300		103	73-137			
o-Xylene	0.153	0.0050	"	0.150		102	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0396</i>		<i>"</i>	<i>0.0396</i>		<i>100</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0402</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0401</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>21-167</i>			

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/27/15 13:34

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504315 - EPA 5030 Soil MS

Matrix Spike (1504315-MS1)	Source: 1504249-05			Prepared: 04/30/15		Analyzed: 05/01/15	
Benzene	0.147	0.0020	mg/kg	0.150	ND	97.8	30-131
Bromobenzene	0.145	0.0050	"	0.150	ND	96.7	39-124
Bromochloromethane	0.156	0.0050	"	0.150	ND	104	62-121
Bromodichloromethane	0.152	0.0050	"	0.150	ND	102	51-120
Bromoform	0.160	0.0050	"	0.150	ND	106	52-125
Bromomethane	0.159	0.010	"	0.150	ND	106	10-152
n-Butylbenzene	0.136	0.0050	"	0.150	ND	90.7	10-144
sec-Butylbenzene	0.134	0.0050	"	0.150	ND	89.6	10-140
tert-Butylbenzene	0.139	0.0050	"	0.150	ND	92.7	16-132
Carbon tetrachloride	0.144	0.0050	"	0.150	ND	96.2	46-125
Chlorobenzene	0.148	0.0050	"	0.150	ND	98.4	42-125
Chloroethane	0.145	0.0050	"	0.150	ND	96.7	46-125
Chloroform	0.148	0.0050	"	0.150	ND	98.4	57-118
Chloromethane	0.152	0.015	"	0.150	ND	101	33-132
2-Chlorotoluene	0.133	0.0050	"	0.150	ND	88.8	30-125
4-Chlorotoluene	0.137	0.0050	"	0.150	ND	91.5	29-127
Chlorodibromomethane	0.157	0.010	"	0.150	ND	105	54-124
1,2-Dibromo-3-chloropropane	0.137	0.015	"	0.150	ND	91.6	10-175
1,2-Dibromoethane (EDB)	0.162	0.0050	"	0.150	ND	108	65-125
Dibromomethane	0.154	0.0050	"	0.150	ND	103	64-127
1,2-Dichlorobenzene	0.146	0.0050	"	0.150	ND	97.0	24-134
1,3-Dichlorobenzene	0.142	0.0050	"	0.150	ND	94.9	22-130
1,4-Dichlorobenzene	0.141	0.0050	"	0.150	ND	94.1	21-131
Dichlorodifluoromethane	0.154	0.0050	"	0.150	ND	103	47-117
Tert-amyl methyl ether	0.155	0.0050	"	0.149	ND	104	60-124
1,1-Dichloroethane	0.147	0.0050	"	0.150	ND	98.3	55-119
1,2-Dichloroethane (EDC)	0.155	0.0050	"	0.150	ND	103	65-124
Tert-butyl alcohol	0.720	0.020	"	0.747	ND	96.4	64-131
1,1-Dichloroethene	0.148	0.0050	"	0.150	ND	98.5	42-145
cis-1,2-Dichloroethene	0.152	0.0050	"	0.150	ND	101	56-121
Ethyl tert-butyl ether	0.151	0.010	"	0.150	ND	101	60-119
Di-isopropyl ether	0.150	0.0050	"	0.150	ND	100	40-132
trans-1,2-Dichloroethene	0.151	0.0050	"	0.150	ND	100	52-126
Methyl tert-butyl ether	0.160	0.015	"	0.150	ND	107	64-124
1,2-Dichloropropane	0.147	0.0050	"	0.150	ND	98.1	61-115
1,3-Dichloropropane	0.161	0.0050	"	0.150	ND	108	66-123
2,2-Dichloropropane	0.139	0.010	"	0.150	ND	92.4	35-127
1,1-Dichloropropene	0.152	0.0050	"	0.150	ND	101	52-119

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504315 - EPA 5030 Soil MS

Matrix Spike (1504315-MS1)	Source: 1504249-05			Prepared: 04/30/15		Analyzed: 05/01/15	
cis-1,3-Dichloropropene	0.157	0.0050	mg/kg	0.150	ND	104	47-122
trans-1,3-Dichloropropene	0.154	0.0050	"	0.150	ND	103	51-119
Ethylbenzene	0.148	0.0050	"	0.150	ND	98.9	22-153
Hexachlorobutadiene	0.101	0.0050	"	0.150	ND	67.4	10-149
Isopropylbenzene	0.146	0.0050	"	0.150	ND	97.4	18-135
p-Isopropyltoluene	0.135	0.010	"	0.150	ND	89.9	12-132
Methylene Chloride	0.144	0.015	"	0.150	ND	96.3	10-167
Naphthalene	0.158	0.010	"	0.150	ND	105	10-158
n-Propylbenzene	0.143	0.0050	"	0.150	ND	95.6	15-134
Styrene	0.154	0.010	"	0.150	ND	103	33-135
1,1,2,2-Tetrachloroethane	0.154	0.0050	"	0.150	ND	102	10-166
1,1,1,2-Tetrachloroethane	0.149	0.0050	"	0.150	ND	99.0	49-123
Tetrachloroethene	0.148	0.0050	"	0.150	ND	98.9	33-134
Toluene	0.146	0.0050	"	0.150	ND	97.3	30-134
1,2,3-Trichlorobenzene	0.143	0.0050	"	0.150	ND	95.6	10-155
1,2,4-Trichlorobenzene	0.140	0.0050	"	0.150	ND	93.6	10-152
1,1,2-Trichloroethane	0.159	0.0050	"	0.150	ND	106	46-139
1,1,1-Trichloroethane	0.151	0.0050	"	0.150	ND	100	51-124
Trichloroethene	0.151	0.0050	"	0.150	ND	101	16-187
Trichlorofluoromethane	0.153	0.0050	"	0.150	ND	102	53-125
1,2,3-Trichloropropane	0.133	0.010	"	0.150	ND	88.9	69-118
1,3,5-Trimethylbenzene	0.143	0.0050	"	0.150	ND	95.3	20-128
1,2,4-Trimethylbenzene	0.140	0.0050	"	0.150	ND	93.6	17-142
Vinyl chloride	0.157	0.0050	"	0.150	ND	104	50-134
m,p-Xylene	0.296	0.010	"	0.300	ND	98.6	10-159
o-Xylene	0.146	0.0050	"	0.150	ND	97.2	31-151
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0419</i>		<i>"</i>	<i>0.0396</i>		<i>106</i>	<i>23-173</i>
<i>Surrogate: Toluene-d8</i>	<i>0.0398</i>		<i>"</i>	<i>0.0400</i>		<i>99.4</i>	<i>20-170</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0399</i>		<i>"</i>	<i>0.0400</i>		<i>99.7</i>	<i>21-167</i>

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/27/15 13:34

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504315 - EPA 5030 Soil MS

Matrix Spike Dup (1504315-MSD1)	Source: 1504249-05			Prepared: 04/30/15		Analyzed: 05/01/15				
Benzene	0.142	0.0020	mg/kg	0.150	ND	94.9	30-131	3.01	34	
Bromobenzene	0.133	0.0050	"	0.150	ND	88.7	39-124	8.57	21	
Bromochloromethane	0.152	0.0050	"	0.150	ND	102	62-121	2.53	20	
Bromodichloromethane	0.147	0.0050	"	0.150	ND	98.3	51-120	3.34	22	
Bromoform	0.155	0.0050	"	0.150	ND	103	52-125	3.26	22	
Bromomethane	0.122	0.010	"	0.150	ND	81.6	10-152	25.8	90	
n-Butylbenzene	0.116	0.0050	"	0.150	ND	77.0	10-144	16.4	52	
sec-Butylbenzene	0.116	0.0050	"	0.150	ND	77.4	10-140	14.6	45	
tert-Butylbenzene	0.123	0.0050	"	0.150	ND	81.7	16-132	12.6	33	
Carbon tetrachloride	0.143	0.0050	"	0.150	ND	95.2	46-125	0.982	22	
Chlorobenzene	0.142	0.0050	"	0.150	ND	94.7	42-125	3.79	18	
Chloroethane	0.139	0.0050	"	0.150	ND	92.4	46-125	4.61	24	
Chloroform	0.143	0.0050	"	0.150	ND	95.3	57-118	3.14	19	
Chloromethane	0.144	0.015	"	0.150	ND	95.8	33-132	5.42	18	
2-Chlorotoluene	0.127	0.0050	"	0.150	ND	84.6	30-125	4.87	24	
4-Chlorotoluene	0.129	0.0050	"	0.150	ND	86.1	29-127	6.06	24	
Chlorodibromomethane	0.152	0.010	"	0.150	ND	101	54-124	3.63	22	
1,2-Dibromo-3-chloropropane	0.135	0.015	"	0.150	ND	90.3	10-175	1.43	39	
1,2-Dibromoethane (EDB)	0.152	0.0050	"	0.150	ND	101	65-125	6.01	22	
Dibromomethane	0.150	0.0050	"	0.150	ND	100	64-127	2.76	19	
1,2-Dichlorobenzene	0.135	0.0050	"	0.150	ND	89.7	24-134	7.84	26	
1,3-Dichlorobenzene	0.130	0.0050	"	0.150	ND	86.7	22-130	9.03	27	
1,4-Dichlorobenzene	0.131	0.0050	"	0.150	ND	87.4	21-131	7.41	25	
Dichlorodifluoromethane	0.150	0.0050	"	0.150	ND	100	47-117	2.55	36	
Tert-amyl methyl ether	0.149	0.0050	"	0.149	ND	99.9	60-124	3.96	40	
1,1-Dichloroethane	0.143	0.0050	"	0.150	ND	95.0	55-119	3.39	22	
1,2-Dichloroethane (EDC)	0.149	0.0050	"	0.150	ND	99.2	65-124	3.88	19	
Tert-butyl alcohol	0.683	0.020	"	0.747	ND	91.4	64-131	5.29	24	
1,1-Dichloroethene	0.144	0.0050	"	0.150	ND	95.9	42-145	2.67	22	
cis-1,2-Dichloroethene	0.145	0.0050	"	0.150	ND	96.4	56-121	4.82	21	
Ethyl tert-butyl ether	0.147	0.010	"	0.150	ND	98.1	60-119	2.81	38	
Di-isopropyl ether	0.144	0.0050	"	0.150	ND	96.2	40-132	4.15	108	
trans-1,2-Dichloroethene	0.148	0.0050	"	0.150	ND	98.7	52-126	1.69	22	
Methyl tert-butyl ether	0.154	0.015	"	0.150	ND	103	64-124	3.51	28	
1,2-Dichloropropane	0.144	0.0050	"	0.150	ND	96.1	61-115	2.12	17	
1,3-Dichloropropane	0.153	0.0050	"	0.150	ND	102	66-123	5.54	24	
2,2-Dichloropropane	0.131	0.010	"	0.150	ND	87.1	35-127	5.88	29	
1,1-Dichloropropene	0.148	0.0050	"	0.150	ND	98.7	52-119	2.58	21	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504315 - EPA 5030 Soil MS

Matrix Spike Dup (1504315-MSD1)	Source: 1504249-05			Prepared: 04/30/15		Analyzed: 05/01/15				
cis-1,3-Dichloropropene	0.150	0.0050	mg/kg	0.150	ND	100	47-122	4.15	40	
trans-1,3-Dichloropropene	0.148	0.0050	"	0.150	ND	98.6	51-119	4.13	52	
Ethylbenzene	0.143	0.0050	"	0.150	ND	95.2	22-153	3.83	24	
Hexachlorobutadiene	0.0789	0.0050	"	0.150	ND	52.6	10-149	24.6	59	
Isopropylbenzene	0.139	0.0050	"	0.150	ND	92.4	18-135	5.25	33	
p-Isopropyltoluene	0.118	0.010	"	0.150	ND	78.7	12-132	13.3	38	
Methylene Chloride	0.139	0.015	"	0.150	ND	92.8	10-167	3.72	102	
Naphthalene	0.148	0.010	"	0.150	ND	99.0	10-158	6.25	42	
n-Propylbenzene	0.129	0.0050	"	0.150	ND	85.9	15-134	10.7	37	
Styrene	0.149	0.010	"	0.150	ND	99.6	33-135	3.07	22	
1,1,2,2-Tetrachloroethane	0.140	0.0050	"	0.150	ND	93.4	10-166	9.19	45	
1,1,1,2-Tetrachloroethane	0.142	0.0050	"	0.150	ND	94.6	49-123	4.63	21	
Tetrachloroethene	0.142	0.0050	"	0.150	ND	95.0	33-134	4.04	26	
Toluene	0.142	0.0050	"	0.150	ND	94.5	30-134	2.90	30	
1,2,3-Trichlorobenzene	0.129	0.0050	"	0.150	ND	86.1	10-155	10.5	40	
1,2,4-Trichlorobenzene	0.125	0.0050	"	0.150	ND	83.1	10-152	11.9	42	
1,1,2-Trichloroethane	0.155	0.0050	"	0.150	ND	104	46-139	2.56	34	
1,1,1-Trichloroethane	0.145	0.0050	"	0.150	ND	96.4	51-124	4.10	22	
Trichloroethene	0.148	0.0050	"	0.150	ND	98.6	16-187	2.37	19	
Trichlorofluoromethane	0.148	0.0050	"	0.150	ND	98.5	53-125	3.29	20	
1,2,3-Trichloropropane	0.133	0.010	"	0.150	ND	88.5	69-118	0.451	23	
1,3,5-Trimethylbenzene	0.130	0.0050	"	0.150	ND	86.8	20-128	9.29	31	
1,2,4-Trimethylbenzene	0.127	0.0050	"	0.150	ND	84.8	17-142	9.80	40	
Vinyl chloride	0.151	0.0050	"	0.150	ND	101	50-134	3.65	22	
m,p-Xylene	0.283	0.010	"	0.300	ND	94.4	10-159	4.30	68	
o-Xylene	0.142	0.0050	"	0.150	ND	94.5	31-151	2.82	38	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0440</i>		<i>"</i>	<i>0.0396</i>		<i>111</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0405</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0409</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>21-167</i>			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504304 - EPA 3050B

Blank (1504304-BLK1)

Prepared & Analyzed: 04/30/15

Arsenic	ND	0.100	mg/kg wet							
Barium	ND	0.100	"							
Cadmium	ND	0.100	"							
Chromium	ND	0.500	"							
Lead	ND	0.100	"							
Selenium	ND	0.0500	"							
Silver	ND	0.100	"							
Zinc	ND	10.0	"							

LCS (1504304-BS1)

Prepared & Analyzed: 04/30/15

Arsenic	115	0.250	mg/kg wet	99.6		116	78.4-140			
Barium	323	0.250	"	310		104	83.2-117			
Cadmium	203	0.250	"	182		112	81.9-118			
Chromium	147	1.25	"	136		108	80.1-121			
Lead	125	0.250	"	115		109	81.8-119			
Selenium	176	0.125	"	150		117	77.3-123			
Silver	43.5	0.250	"	40.4		108	75-125			
Zinc	167	25.0	"	133		125	80.7-132			

Duplicate (1504304-DUP1)

Source: 1504221-01

Prepared & Analyzed: 04/30/15

Arsenic	9.17	0.131	mg/kg dry		9.31			1.59	20	
Barium	902	0.131	"		942			4.39	20	
Cadmium	1.81	0.131	"		1.79			0.860	20	
Chromium	14.5	0.654	"		15.0			3.46	20	
Lead	12.0	0.131	"		12.1			0.689	20	
Selenium	3.36	0.0654	"		3.57			6.29	20	
Silver	0.201	0.131	"		0.214			6.20	20	
Zinc	98.8	13.1	"		100			1.69	20	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1504304 - EPA 3050B

Matrix Spike (1504304-MS1)

Source: 1504221-01

Prepared & Analyzed: 04/30/15

Arsenic	82.0	0.131	mg/kg dry	48.4	9.31	150	75-125				QM-07
Barium	2020	0.131	"	48.4	942	NR	75-125				QM-07
Cadmium	7.20	0.131	"	2.42	1.79	223	75-125				QM-07
Chromium	87.2	0.654	"	48.4	15.0	149	75-125				QM-07
Lead	45.9	0.131	"	24.2	12.1	140	75-125				QM-07
Selenium	12.5	0.0654	"	4.84	3.57	184	75-125				QM-07
Silver	4.28	0.131	"	2.42	0.214	168	75-125				QM-07
Zinc	221	13.1	"	48.4	100	249	75-125				QM-07

Matrix Spike Dup (1504304-MSD1)

Source: 1504221-01

Prepared & Analyzed: 04/30/15

Arsenic	66.2	0.115	mg/kg dry	46.0	9.31	124	75-125	21.2	25		
Barium	1800	0.115	"	46.0	942	NR	75-125	11.1	25		QM-07
Cadmium	5.81	0.115	"	2.30	1.79	174	75-125	21.4	25		QM-07
Chromium	70.7	0.575	"	46.0	15.0	121	75-125	20.9	25		
Lead	36.9	0.115	"	23.0	12.1	108	75-125	21.9	25		
Selenium	11.0	0.0575	"	4.60	3.57	162	75-125	12.6	25		QM-07
Silver	3.61	0.115	"	2.30	0.214	148	75-125	17.0	25		QM-07
Zinc	176	11.5	"	46.0	100	164	75-125	22.6	25		QM-07

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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

Total Mercury by EPA Method 7471 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch 1504299 - EPA 7471A

Blank (1504299-BLK1)

Prepared: 04/29/15 Analyzed: 04/30/15

Mercury ND 0.0500 mg/kg wet

LCS (1504299-BS1)

Prepared: 04/29/15 Analyzed: 04/30/15

Mercury 0.520 0.0500 mg/kg wet 0.500 104 80-120

Duplicate (1504299-DUP1)

Source: 1504278-01

Prepared: 04/29/15 Analyzed: 04/30/15

Mercury 0.423 0.0583 mg/kg dry 0.297 35.0 20 QR-03

Matrix Spike (1504299-MS1)

Source: 1504278-01

Prepared: 04/29/15 Analyzed: 04/30/15

Mercury 1.09 0.0520 mg/kg dry 0.520 0.297 153 80-120 QM-05

Matrix Spike Dup (1504299-MSD1)

Source: 1504278-01

Prepared: 04/29/15 Analyzed: 04/30/15

Mercury 0.830 0.0463 mg/kg dry 0.463 0.297 115 80-120 27.2 20 QM-05

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:34

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504311 - General Preparation

Duplicate (1504311-DUP1)	Source: 1504278-01			Prepared: 04/30/15	Analyzed: 05/01/15
% Solids	86.5		%	85.8	0.813 20

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Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/27/15 13:34

Notes and Definitions

- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

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Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

May 06, 2015

Steve Hoffman

Terracon - Wheat Ridge

10625 West I-70 Frontage Road, Suite 3

Wheat Ridge, CO 80033

RE: National Western Complex

Enclosed are the results of analyses for samples received by Summit Scientific on 04/29/15 17:49. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury
President



Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/06/15 16:25

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SV-1 (0-6")	1504290-01	Soil	04/29/15 08:30	04/29/15 17:49
SV-1 (6-24")	1504290-02	Soil	04/29/15 08:30	04/29/15 17:49
SV-8 (0-6")	1504290-03	Soil	04/29/15 09:20	04/29/15 17:49
SV-8 (6-24")	1504290-04	Soil	04/29/15 09:20	04/29/15 17:49
SV-9 (0-6")	1504290-05	Soil	04/29/15 15:35	04/29/15 17:49
SV-9 (6-24")	1504290-06	Soil	04/29/15 15:35	04/29/15 17:49
SV-15 (0-6")	1504290-07	Soil	04/29/15 10:30	04/29/15 17:49
SV-15 (6-24")	1504290-08	Soil	04/29/15 10:30	04/29/15 17:49
SV-16 (0-6")	1504290-09	Soil	04/29/15 11:45	04/29/15 17:49
SV-16 (6-24")	1504290-10	Soil	04/29/15 11:45	04/29/15 17:49
SV-18 (0-6")	1504290-11	Soil	04/29/15 12:50	04/29/15 17:49
SV-18 (6-24")	1504290-12	Soil	04/29/15 12:50	04/29/15 17:49
MW-10 (0-6")	1504290-13	Soil	04/29/15 13:50	04/29/15 17:49
MW-10 (0-6") -D	1504290-14	Soil	04/29/15 13:50	04/29/15 17:49
MW-10 (6-24")	1504290-15	Soil	04/29/15 13:50	04/29/15 17:49
MW-10 (6-24") -D	1504290-16	Soil	04/29/15 13:50	04/29/15 17:49
MW-10 (10')	1504290-17	Soil	04/29/15 14:15	04/29/15 17:49
MW-10 (10') -D	1504290-18	Soil	04/29/15 14:15	04/29/15 17:49

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

Summit Scientific

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 303-277-9310 ♦ 303-374-5933 Fax

1504290.1

Page 1 of 2

Client: Terracon Consultants

Address: 10625 West I-70 Frontage Road North, Suite 3
 City/State/Zip: Wheat Ridge, CO 80033
 Phone: (303) 454-5275 Fax: (303) 423-3353
 Sampler Name: Marshall Haworth

Project Manager: Steve Hoffman
 E-Mail: sbhoffman@terracon.com
 Project Name: National Western Complex
 Project Number: 25157010

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:				Special Instructions		
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	VOC's B260B	TPH 8015	PCRA 8+Zinc			
SV-1 (0-6")	4-29-15	0830	1			X											
SV-1 (6-24")	4-29-15	0830	1			X			X								
SV-8 (0-6")	4-29-15	0920	1			X			X								
SV-8 (6-24")	4-29-15	0920	1			X			X								
SV-9 (0-6")	4-29-15	1535	1			X			X								
SV-9 (6-24")	4-29-15	1535	1			X			X								
SV-15 (0-6")	4-29-15	1030	1			X			X								
SV-15 (6-24")	4-29-15	1030	1			X			X								
SV-16 (0-6")	4-29-15	1145	1			X			X								
SV-16 (6-24")	4-29-15	1145	1			X			X								
Relinquished by: <i>Marshall Haworth</i>		Date/Time: 4-29-15 1949	Received by: <i>MB</i>		Date/Time: 4/29/15 1749	Turn Around Time (Check)			Notes:								
Relinquished by:		Date/Time:	Received by:		Date/Time:	Same Day	<input type="checkbox"/>	72 Hours	<input type="checkbox"/>	Standard <input checked="" type="checkbox"/> on ice							
Relinquished by:		Date/Time:	Received by:		Date/Time:	24 Hours	<input type="checkbox"/>	48 Hours	<input type="checkbox"/>								
Relinquished by:		Date/Time:	Received in Lab by:		Date/Time:	Sample Integrity:											
						Temperature Upon Receipt: 9.1°C											
						Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No											

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

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Page 2 of 2

Client: Terracon Consultants

Address: 10625 West I-70 Frontage Road North, Suite 3
 City/State/Zip: Wheat Ridge, CO 80033
 Phone: (303) 454-5275 Fax: (303) 423-3353
 Sampler Name: Marshall Haworth

Project Manager: Steve Hoffman
 E-Mail: sbhoffman@terracon.com
 Project Name: National Western Complex
 Project Number: 25157010

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:					Special Instructions		
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	VOC's 8260B	TPH 8015	RCRA 8+Zinc				
SU-18 (0-6")	4-29-15	1250	1			X			X									
SU-18 (6-24")	4-29-15	1250	1			X			X									
MW-10 (0-6")	4-29-15	1350	1			X			X									
MW-10 (0-6")-D	4-29-15	1350	1			X			X									
MW-10 (6-24")	4-29-15	1350	1			X			X									
MW-10 (6-24")-D	4-29-15	1350	1			X			X									
MW-10 (10')	4-29-15	1415	1			X			X			X	X					
MW-10 (10')-D	4-29-15	1415	1			X			X			X	X					

Relinquished by: <i>Marshall Haworth</i>	Date/Time: 4-29-15 1749	Received by: <i>MD</i>	Date/Time: 4/29/15 1749	Turn Around Time (Check)	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day <input type="checkbox"/>	72 Hours <input type="checkbox"/>
				24 Hours <input type="checkbox"/>	Standard <input checked="" type="checkbox"/>
				48 Hours <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received in Lab by:	Date/Time:	Sample Integrity:	
				Temperature Upon Receipt: 9.1°C	on ice
				Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

Sample Receipt Checklist

S2 Work Order: 1504290

Client: Terracon

Client Project ID: National Western Complex

Shipped Via: HD

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Airbill #: _____

Matrix (check all that apply): Air Soil/Solid Water Other: _____ (Describe)

Cooler ID				
Temp (°C)	9.1			

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.				
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
If custody seals are present, are they intact ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present?			<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, etc.				
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

Ben Shrewsbury
 Custodian Printed Name

[Signature]
 Signature or Initials of Custodian

4/30/15 1840
 Date/Time

[Signature]



Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

**SV-1 (0-6")
 1504290-01 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/29/15 08:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	7.41	0.109	mg/kg dry	1	1504305	04/30/15	04/30/15	EPA 6020A	
Barium	112	0.109	"	"	"	"	"	"	
Cadmium	1.82	0.109	"	"	"	"	"	"	
Chromium	7.36	0.547	"	"	"	"	"	"	
Lead	74.6	0.109	"	"	"	"	"	"	
Selenium	0.370	0.0547	"	"	"	"	"	"	
Silver	0.341	0.109	"	"	"	"	"	"	

Date Sampled: **04/29/15 08:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	160	10.9	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/29/15 08:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	0.0524	0.0490	mg/kg dry	1	1505028	05/04/15	05/04/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/29/15 08:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.4		%	1	1504309	04/30/15	05/01/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

SV-1 (6-24")
1504290-02 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/29/15 08:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	4.43	0.101	mg/kg dry	1	1504305	04/30/15	04/30/15	EPA 6020A	
Barium	269	0.101	"	"	"	"	"	"	
Cadmium	0.647	0.101	"	"	"	"	"	"	
Chromium	5.69	0.507	"	"	"	"	"	"	
Lead	97.0	0.101	"	"	"	"	"	"	
Selenium	0.338	0.0507	"	"	"	"	"	"	
Silver	1.28	0.101	"	"	"	"	"	"	

Date Sampled: **04/29/15 08:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	238	10.1	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/29/15 08:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0494	mg/kg dry	1	1505028	05/04/15	05/04/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/29/15 08:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	85.6		%	1	1504309	04/30/15	05/01/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

**SV-8 (0-6")
 1504290-03 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/29/15 09:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	6.69	0.122	mg/kg dry	1	1504305	04/30/15	04/30/15	EPA 6020A	
Barium	113	0.122	"	"	"	"	"	"	
Cadmium	1.04	0.122	"	"	"	"	"	"	
Chromium	15.4	0.608	"	"	"	"	"	"	
Lead	49.4	0.122	"	"	"	"	"	"	
Selenium	0.153	0.0608	"	"	"	"	"	"	
Silver	0.674	0.122	"	"	"	"	"	"	

Date Sampled: **04/29/15 09:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	149	12.2	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/29/15 09:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.669	0.0499	mg/kg dry	1	1505028	05/04/15	05/04/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/29/15 09:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	82.3		%	1	1504309	04/30/15	05/01/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

**SV-8 (6-24")
 1504290-04 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/29/15 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.93	0.0987	mg/kg dry	1	1504305	04/30/15	04/30/15	EPA 6020A	
Barium	272	0.0987	"	"	"	"	"	"	
Cadmium	1.00	0.0987	"	"	"	"	"	"	
Chromium	7.02	0.494	"	"	"	"	"	"	
Lead	130	0.0987	"	"	"	"	"	"	
Selenium	0.0829	0.0494	"	"	"	"	"	"	
Silver	0.124	0.0987	"	"	"	"	"	"	

Date Sampled: **04/29/15 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	288	9.87	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/29/15 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	0.217	0.0573	mg/kg dry	1	1505028	05/04/15	05/04/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/29/15 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.3		%	1	1504309	04/30/15	05/01/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

**SV-9 (0-6")
 1504290-05 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/29/15 15:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	6.33	0.122	mg/kg dry	1	1504305	04/30/15	04/30/15	EPA 6020A	
Barium	176	0.122	"	"	"	"	"	"	
Cadmium	1.15	0.122	"	"	"	"	"	"	
Chromium	12.1	0.610	"	"	"	"	"	"	
Lead	62.7	0.122	"	"	"	"	"	"	
Selenium	0.240	0.0610	"	"	"	"	"	"	
Silver	0.314	0.122	"	"	"	"	"	"	

Date Sampled: **04/29/15 15:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	66.4	12.2	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/29/15 15:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0539	mg/kg dry	1	1505028	05/04/15	05/04/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/29/15 15:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	82.0		%	1	1504309	04/30/15	05/01/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

SV-9 (6-24")
1504290-06 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/29/15 15:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.93	0.120	mg/kg dry	1	1504305	04/30/15	04/30/15	EPA 6020A	
Barium	75.3	0.120	"	"	"	"	"	"	
Cadmium	ND	0.120	"	"	"	"	"	"	
Chromium	15.3	0.599	"	"	"	"	"	"	
Lead	10.0	0.120	"	"	"	"	"	"	
Selenium	0.207	0.0599	"	"	"	"	"	"	
Silver	ND	0.120	"	"	"	"	"	"	

Date Sampled: **04/29/15 15:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	74.7	12.0	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/29/15 15:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0503	mg/kg dry	1	1505028	05/04/15	05/04/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/29/15 15:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	83.5		%	1	1504309	04/30/15	05/01/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

**SV-15 (0-6")
 1504290-07 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/29/15 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.20	0.111	mg/kg dry	1	1504305	04/30/15	04/30/15	EPA 6020A	
Barium	63.1	0.111	"	"	"	"	"	"	
Cadmium	0.957	0.111	"	"	"	"	"	"	
Chromium	4.31	0.554	"	"	"	"	"	"	
Lead	25.8	0.111	"	"	"	"	"	"	
Selenium	ND	0.0554	"	"	"	"	"	"	
Silver	ND	0.111	"	"	"	"	"	"	

Date Sampled: **04/29/15 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	60.7	11.1	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/29/15 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0457	mg/kg dry	1	1505028	05/04/15	05/04/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/29/15 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	90.2		%	1	1504309	04/30/15	05/01/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

SV-15 (6-24")
1504290-08 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/29/15 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.10	0.114	mg/kg dry	1	1504305	04/30/15	04/30/15	EPA 6020A	
Barium	81.5	0.114	"	"	"	"	"	"	
Cadmium	1.29	0.114	"	"	"	"	"	"	
Chromium	8.61	0.571	"	"	"	"	"	"	
Lead	44.0	0.114	"	"	"	"	"	"	
Selenium	0.0579	0.0571	"	"	"	"	"	"	
Silver	ND	0.114	"	"	"	"	"	"	

Date Sampled: **04/29/15 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	88.6	11.4	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/29/15 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.0820	0.0571	mg/kg dry	1	1505028	05/04/15	05/06/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/29/15 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	87.5		%	1	1504309	04/30/15	05/01/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

SV-16 (0-6")
1504290-09 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/29/15 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	14.6	0.0993	mg/kg dry	1	1504305	04/30/15	04/30/15	EPA 6020A	
Barium	540	0.0993	"	"	"	"	"	"	
Cadmium	2.52	0.0993	"	"	"	"	"	"	
Chromium	9.14	0.496	"	"	"	"	"	"	
Lead	397	0.0993	"	"	"	"	"	"	
Selenium	0.433	0.0496	"	"	"	"	"	"	
Silver	3.51	0.0993	"	"	"	"	"	"	

Date Sampled: **04/29/15 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	2670	9.93	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/29/15 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	0.189	0.0434	mg/kg dry	1	1505028	05/04/15	05/04/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/29/15 11:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.6		%	1	1504309	04/30/15	05/01/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

SV-16 (6-24")
1504290-10 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/29/15 11:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	16.9	0.122	mg/kg dry	1	1504305	04/30/15	04/30/15	EPA 6020A	
Barium	956	0.122	"	"	"	"	"	"	
Cadmium	0.978	0.122	"	"	"	"	"	"	
Chromium	12.8	0.609	"	"	"	"	"	"	
Lead	571	0.122	"	"	"	"	"	"	
Selenium	0.452	0.0609	"	"	"	"	"	"	
Silver	6.50	0.122	"	"	"	"	"	"	

Date Sampled: **04/29/15 11:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	4870	12.2	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/29/15 11:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.200	0.0525	mg/kg dry	1	1505028	05/04/15	05/04/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/29/15 11:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	82.1		%	1	1504309	04/30/15	05/01/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

**SV-18 (0-6")
 1504290-11 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/29/15 12:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	8.89	0.132	mg/kg dry	1	1504305	04/30/15	04/30/15	EPA 6020A	
Barium	86.2	0.132	"	"	"	"	"	"	
Cadmium	1.23	0.132	"	"	"	"	"	"	
Chromium	2.94	0.660	"	"	"	"	"	"	
Lead	229	0.132	"	"	"	"	"	"	
Selenium	0.283	0.0660	"	"	"	"	"	"	
Silver	1.05	0.132	"	"	"	"	"	"	

Date Sampled: **04/29/15 12:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	103	13.2	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/29/15 12:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.331	0.0660	mg/kg dry	1	1505028	05/04/15	05/04/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/29/15 12:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	75.8		%	1	1504309	04/30/15	05/01/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

SV-18 (6-24")
1504290-12 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/29/15 12:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	7.08	0.123	mg/kg dry	1	1504305	04/30/15	04/30/15	EPA 6020A	
Barium	178	0.123	"	"	"	"	"	"	
Cadmium	1.11	0.123	"	"	"	"	"	"	
Chromium	10.7	0.614	"	"	"	"	"	"	
Lead	197	0.123	"	"	"	"	"	"	
Selenium	0.539	0.0614	"	"	"	"	"	"	
Silver	0.825	0.123	"	"	"	"	"	"	

Date Sampled: **04/29/15 12:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	70.4	12.3	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/29/15 12:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.0529	0.0489	mg/kg dry	1	1505028	05/04/15	05/04/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/29/15 12:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	81.4		%	1	1504309	04/30/15	05/01/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

MW-10 (0-6")
1504290-13 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/29/15 13:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.61	0.113	mg/kg dry	1	1504305	04/30/15	04/30/15	EPA 6020A	
Barium	155	0.113	"	"	"	"	"	"	
Cadmium	0.207	0.113	"	"	"	"	"	"	
Chromium	13.1	0.564	"	"	"	"	"	"	
Lead	10.9	0.113	"	"	"	"	"	"	
Selenium	0.169	0.0564	"	"	"	"	"	"	
Silver	ND	0.113	"	"	"	"	"	"	

Date Sampled: **04/29/15 13:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	76.1	11.3	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/29/15 13:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0498	mg/kg dry	1	1505028	05/04/15	05/04/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/29/15 13:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	88.7		%	1	1504309	04/30/15	05/01/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

**MW-10 (0-6") -D
 1504290-14 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/29/15 13:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.07	0.116	mg/kg dry	1	1504305	04/30/15	04/30/15	EPA 6020A	
Barium	146	0.116	"	"	"	"	"	"	
Cadmium	0.136	0.116	"	"	"	"	"	"	
Chromium	12.7	0.578	"	"	"	"	"	"	
Lead	11.1	0.116	"	"	"	"	"	"	
Selenium	0.182	0.0578	"	"	"	"	"	"	
Silver	ND	0.116	"	"	"	"	"	"	

Date Sampled: **04/29/15 13:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	71.6	11.6	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/29/15 13:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0512	mg/kg dry	1	1505028	05/04/15	05/04/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/29/15 13:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	86.5		%	1	1504309	04/30/15	05/01/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

MW-10 (6-24")
1504290-15 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/29/15 13:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	5.09	0.109	mg/kg dry	1	1504305	04/30/15	04/30/15	EPA 6020A	
Barium	169	0.109	"	"	"	"	"	"	
Cadmium	0.380	0.109	"	"	"	"	"	"	
Chromium	13.6	0.546	"	"	"	"	"	"	
Lead	10.2	0.109	"	"	"	"	"	"	
Selenium	0.360	0.0546	"	"	"	"	"	"	
Silver	ND	0.109	"	"	"	"	"	"	

Date Sampled: **04/29/15 13:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	76.1	10.9	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/29/15 13:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0475	mg/kg dry	1	1505028	05/04/15	05/04/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/29/15 13:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	91.6		%	1	1504309	04/30/15	05/01/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

MW-10 (6-24") -D
1504290-16 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/29/15 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.98	0.131	mg/kg dry	1	1504305	04/30/15	04/30/15	EPA 6020A	
Barium	159	0.131	"	"	"	"	"	"	
Cadmium	0.182	0.131	"	"	"	"	"	"	
Chromium	13.8	0.656	"	"	"	"	"	"	
Lead	8.92	0.131	"	"	"	"	"	"	
Selenium	0.254	0.0656	"	"	"	"	"	"	
Silver	ND	0.131	"	"	"	"	"	"	

Date Sampled: **04/29/15 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	79.2	13.1	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/29/15 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0550	mg/kg dry	1	1505028	05/04/15	05/04/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/29/15 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	76.2		%	1	1504309	04/30/15	05/01/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

MW-10 (10')
1504290-17 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/29/15 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1505016	05/02/15	05/02/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/29/15 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		106 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/29/15 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504315	04/30/15	05/01/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

MW-10 (10')
1504290-17 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504315	04/30/15	05/01/15 EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

MW-10 (10')
1504290-17 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504315	04/30/15	05/01/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: 04/29/15 14:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		111 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		97.0 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.6 %		21-167	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

MW-10 (10') -D
1504290-18 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/29/15 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1505016	05/02/15	05/02/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/29/15 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		106 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/29/15 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1504315	04/30/15	05/01/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

MW-10 (10') -D
1504290-18 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1504315	04/30/15	05/01/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"	"

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Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
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**MW-10 (10') -D
 1504290-18 (Soil)**

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1504315	04/30/15	05/01/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: 04/29/15 14:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		114 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		97.9 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.7 %		21-167	"	"	"	"	

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
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Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505016 - EPA 3550A

Blank (1505016-BLK1)				Prepared & Analyzed: 05/02/15						
C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
<i>Surrogate: o-Terphenyl</i>	<i>13.1</i>		<i>"</i>	<i>12.2</i>		<i>108</i>	<i>70-130</i>			
LCS (1505016-BS1)				Prepared & Analyzed: 05/02/15						
C10-C28 (DRO)	463	50	mg/kg	501	40.3	92.3	50-150			
<i>Surrogate: o-Terphenyl</i>	<i>13.1</i>		<i>"</i>	<i>12.2</i>		<i>108</i>	<i>70-130</i>			
Matrix Spike (1505016-MS1)				Source: 1505005-01		Prepared & Analyzed: 05/02/15				
C10-C28 (DRO)	450	50	mg/kg	479	40.3	85.6	50-150			
<i>Surrogate: o-Terphenyl</i>	<i>13.0</i>		<i>"</i>	<i>11.7</i>		<i>111</i>	<i>70-130</i>			
Matrix Spike Dup (1505016-MSD1)				Source: 1505005-01		Prepared & Analyzed: 05/02/15				
C10-C28 (DRO)	466	50	mg/kg	480	40.3	88.8	50-150	3.52	20	
<i>Surrogate: o-Terphenyl</i>	<i>13.3</i>		<i>"</i>	<i>11.7</i>		<i>114</i>	<i>70-130</i>			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting		Spike Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

Batch 1504315 - EPA 5030 Soil MS

Blank (1504315-BLK1)

Prepared & Analyzed: 04/30/15

Benzene	ND	0.0020	mg/kg
Bromobenzene	ND	0.0050	"
Bromochloromethane	ND	0.0050	"
Bromodichloromethane	ND	0.0050	"
Bromoform	ND	0.0050	"
Bromomethane	ND	0.010	"
n-Butylbenzene	ND	0.0050	"
sec-Butylbenzene	ND	0.0050	"
tert-Butylbenzene	ND	0.0050	"
Carbon tetrachloride	ND	0.0050	"
Chlorobenzene	ND	0.0050	"
Chloroethane	ND	0.0050	"
Chloroform	ND	0.0050	"
Chloromethane	ND	0.015	"
2-Chlorotoluene	ND	0.0050	"
4-Chlorotoluene	ND	0.0050	"
Chlorodibromomethane	ND	0.010	"
1,2-Dibromo-3-chloropropane	ND	0.015	"
1,2-Dibromoethane (EDB)	ND	0.0050	"
Dibromomethane	ND	0.0050	"
1,2-Dichlorobenzene	ND	0.0050	"
1,3-Dichlorobenzene	ND	0.0050	"
1,4-Dichlorobenzene	ND	0.0050	"
Dichlorodifluoromethane	ND	0.0050	"
Tert-amyl methyl ether	ND	0.0050	"
1,1-Dichloroethane	ND	0.0050	"
1,2-Dichloroethane (EDC)	ND	0.0050	"
Tert-butyl alcohol	ND	0.020	"
1,1-Dichloroethene	ND	0.0050	"
Ethyl tert-butyl ether	ND	0.010	"
cis-1,2-Dichloroethene	ND	0.0050	"
Di-isopropyl ether	ND	0.0050	"
trans-1,2-Dichloroethene	ND	0.0050	"
Methyl tert-butyl ether	ND	0.015	"
1,2-Dichloropropane	ND	0.0050	"
1,3-Dichloropropane	ND	0.0050	"
2,2-Dichloropropane	ND	0.010	"
1,1-Dichloropropene	ND	0.0050	"

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504315 - EPA 5030 Soil MS

Blank (1504315-BLK1)

Prepared & Analyzed: 04/30/15

cis-1,3-Dichloropropene	ND	0.0050	mg/kg							
trans-1,3-Dichloropropene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Hexachlorobutadiene	ND	0.0050	"							
Isopropylbenzene	ND	0.0050	"							
p-Isopropyltoluene	ND	0.010	"							
Methylene Chloride	ND	0.015	"							
Naphthalene	ND	0.010	"							
n-Propylbenzene	ND	0.0050	"							
Styrene	ND	0.010	"							
1,1,2,2-Tetrachloroethane	ND	0.0050	"							
1,1,1,2-Tetrachloroethane	ND	0.0050	"							
Tetrachloroethene	ND	0.0050	"							
Toluene	ND	0.0050	"							
1,2,3-Trichlorobenzene	ND	0.0050	"							
1,2,4-Trichlorobenzene	ND	0.0050	"							
1,1,2-Trichloroethane	ND	0.0050	"							
1,1,1-Trichloroethane	ND	0.0050	"							
Trichloroethene	ND	0.0050	"							
Trichlorofluoromethane	ND	0.0050	"							
1,2,3-Trichloropropane	ND	0.010	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
Vinyl chloride	ND	0.0050	"							
m,p-Xylene	ND	0.010	"							
o-Xylene	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0384		"	0.0396	97.0	23-173				
Surrogate: Toluene-d8	0.0387		"	0.0400	96.7	20-170				
Surrogate: 4-Bromofluorobenzene	0.0391		"	0.0400	97.6	21-167				

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Wheat Ridge CO, 80033

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Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504315 - EPA 5030 Soil MS

LCS (1504315-BS1)

Prepared: 04/30/15 Analyzed: 05/01/15

Benzene	0.151	0.0020	mg/kg	0.150		101	58-130			
Bromobenzene	0.150	0.0050	"	0.150		100	87-115			
Bromochloromethane	0.151	0.0050	"	0.150		101	82-122			
Bromodichloromethane	0.153	0.0050	"	0.150		102	84-119			
Bromoform	0.156	0.0050	"	0.150		104	76-119			
Bromomethane	0.161	0.010	"	0.150		107	39-152			
n-Butylbenzene	0.155	0.0050	"	0.150		103	70-131			
sec-Butylbenzene	0.149	0.0050	"	0.150		99.3	74-124			
tert-Butylbenzene	0.152	0.0050	"	0.150		101	77-121			
Carbon tetrachloride	0.143	0.0050	"	0.150		95.6	66-127			
Chlorobenzene	0.153	0.0050	"	0.150		102	82-120			
Chloroethane	0.140	0.0050	"	0.150		93.4	63-126			
Chloroform	0.149	0.0050	"	0.150		99.2	82-120			
Chloromethane	0.148	0.015	"	0.150		99.0	57-133			
2-Chlorotoluene	0.145	0.0050	"	0.150		96.9	82-117			
4-Chlorotoluene	0.151	0.0050	"	0.150		100	81-119			
Chlorodibromomethane	0.157	0.010	"	0.150		105	82-124			
1,2-Dibromo-3-chloropropane	0.132	0.015	"	0.150		88.0	62-128			
1,2-Dibromoethane (EDB)	0.158	0.0050	"	0.150		105	86-122			
Dibromomethane	0.149	0.0050	"	0.150		99.6	83-124			
1,2-Dichlorobenzene	0.155	0.0050	"	0.150		103	84-120			
1,3-Dichlorobenzene	0.155	0.0050	"	0.150		103	81-118			
1,4-Dichlorobenzene	0.151	0.0050	"	0.150		101	80-118			
Dichlorodifluoromethane	0.140	0.0050	"	0.150		93.4	25-141			
Tert-amyl methyl ether	0.149	0.0050	"	0.149		100	50-147			
1,1-Dichloroethane	0.148	0.0050	"	0.150		98.9	78-120			
1,2-Dichloroethane (EDC)	0.153	0.0050	"	0.150		102	81-125			
Tert-butyl alcohol	0.644	0.020	"	0.747		86.2	64-127			
1,1-Dichloroethene	0.142	0.0050	"	0.150		94.5	71-122			
Ethyl tert-butyl ether	0.151	0.010	"	0.150		101	80-122			
cis-1,2-Dichloroethene	0.152	0.0050	"	0.150		101	84-121			
Di-isopropyl ether	0.151	0.0050	"	0.150		101	78-120			
trans-1,2-Dichloroethene	0.152	0.0050	"	0.150		101	77-125			
Methyl tert-butyl ether	0.154	0.015	"	0.150		103	77-124			
1,2-Dichloropropane	0.151	0.0050	"	0.150		101	88-114			
1,3-Dichloropropane	0.155	0.0050	"	0.150		103	86-122			
2,2-Dichloropropane	0.138	0.010	"	0.150		92.2	32-150			
1,1-Dichloropropene	0.147	0.0050	"	0.150		98.0	71-123			

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10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/06/15 16:25

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504315 - EPA 5030 Soil MS

LCS (1504315-BS1)

Prepared: 04/30/15 Analyzed: 05/01/15

cis-1,3-Dichloropropene	0.152	0.0050	mg/kg	0.150		102	74-125			
trans-1,3-Dichloropropene	0.150	0.0050	"	0.150		100	72-126			
Ethylbenzene	0.156	0.0050	"	0.150		104	74-139			
Hexachlorobutadiene	0.151	0.0050	"	0.150		101	56-144			
Isopropylbenzene	0.154	0.0050	"	0.150		102	72-124			
p-Isopropyltoluene	0.150	0.010	"	0.150		100	72-123			
Methylene Chloride	0.138	0.015	"	0.150		92.0	10-183			
Naphthalene	0.159	0.010	"	0.150		106	66-138			
n-Propylbenzene	0.155	0.0050	"	0.150		103	76-121			
Styrene	0.161	0.010	"	0.150		107	76-133			
1,1,2,2-Tetrachloroethane	0.153	0.0050	"	0.150		102	60-137			
1,1,1,2-Tetrachloroethane	0.154	0.0050	"	0.150		103	86-121			
Tetrachloroethene	0.149	0.0050	"	0.150		99.5	69-131			
Toluene	0.150	0.0050	"	0.150		100	61-134			
1,2,3-Trichlorobenzene	0.160	0.0050	"	0.150		107	63-142			
1,2,4-Trichlorobenzene	0.163	0.0050	"	0.150		108	63-141			
1,1,2-Trichloroethane	0.153	0.0050	"	0.150		102	75-136			
1,1,1-Trichloroethane	0.144	0.0050	"	0.150		95.8	71-126			
Trichloroethene	0.152	0.0050	"	0.150		102	86-118			
Trichlorofluoromethane	0.141	0.0050	"	0.150		93.8	62-128			
1,2,3-Trichloropropane	0.134	0.010	"	0.150		89.6	80-118			
1,3,5-Trimethylbenzene	0.153	0.0050	"	0.150		102	72-121			
1,2,4-Trimethylbenzene	0.154	0.0050	"	0.150		103	78-126			
Vinyl chloride	0.148	0.0050	"	0.150		98.8	63-134			
m,p-Xylene	0.310	0.010	"	0.300		103	73-137			
o-Xylene	0.153	0.0050	"	0.150		102	73-141			
Surrogate: 1,2-Dichloroethane-d4	0.0396		"	0.0396		100	23-173			
Surrogate: Toluene-d8	0.0402		"	0.0400		100	20-170			
Surrogate: 4-Bromofluorobenzene	0.0401		"	0.0400		100	21-167			

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Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/06/15 16:25

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504315 - EPA 5030 Soil MS

Matrix Spike (1504315-MS1)	Source: 1504249-05			Prepared: 04/30/15		Analyzed: 05/01/15	
Benzene	0.147	0.0020	mg/kg	0.150	ND	97.8	30-131
Bromobenzene	0.145	0.0050	"	0.150	ND	96.7	39-124
Bromochloromethane	0.156	0.0050	"	0.150	ND	104	62-121
Bromodichloromethane	0.152	0.0050	"	0.150	ND	102	51-120
Bromoform	0.160	0.0050	"	0.150	ND	106	52-125
Bromomethane	0.159	0.010	"	0.150	ND	106	10-152
n-Butylbenzene	0.136	0.0050	"	0.150	ND	90.7	10-144
sec-Butylbenzene	0.134	0.0050	"	0.150	ND	89.6	10-140
tert-Butylbenzene	0.139	0.0050	"	0.150	ND	92.7	16-132
Carbon tetrachloride	0.144	0.0050	"	0.150	ND	96.2	46-125
Chlorobenzene	0.148	0.0050	"	0.150	ND	98.4	42-125
Chloroethane	0.145	0.0050	"	0.150	ND	96.7	46-125
Chloroform	0.148	0.0050	"	0.150	ND	98.4	57-118
Chloromethane	0.152	0.015	"	0.150	ND	101	33-132
2-Chlorotoluene	0.133	0.0050	"	0.150	ND	88.8	30-125
4-Chlorotoluene	0.137	0.0050	"	0.150	ND	91.5	29-127
Chlorodibromomethane	0.157	0.010	"	0.150	ND	105	54-124
1,2-Dibromo-3-chloropropane	0.137	0.015	"	0.150	ND	91.6	10-175
1,2-Dibromoethane (EDB)	0.162	0.0050	"	0.150	ND	108	65-125
Dibromomethane	0.154	0.0050	"	0.150	ND	103	64-127
1,2-Dichlorobenzene	0.146	0.0050	"	0.150	ND	97.0	24-134
1,3-Dichlorobenzene	0.142	0.0050	"	0.150	ND	94.9	22-130
1,4-Dichlorobenzene	0.141	0.0050	"	0.150	ND	94.1	21-131
Dichlorodifluoromethane	0.154	0.0050	"	0.150	ND	103	47-117
Tert-amyl methyl ether	0.155	0.0050	"	0.149	ND	104	60-124
1,1-Dichloroethane	0.147	0.0050	"	0.150	ND	98.3	55-119
1,2-Dichloroethane (EDC)	0.155	0.0050	"	0.150	ND	103	65-124
Tert-butyl alcohol	0.720	0.020	"	0.747	ND	96.4	64-131
1,1-Dichloroethene	0.148	0.0050	"	0.150	ND	98.5	42-145
cis-1,2-Dichloroethene	0.152	0.0050	"	0.150	ND	101	56-121
Ethyl tert-butyl ether	0.151	0.010	"	0.150	ND	101	60-119
Di-isopropyl ether	0.150	0.0050	"	0.150	ND	100	40-132
trans-1,2-Dichloroethene	0.151	0.0050	"	0.150	ND	100	52-126
Methyl tert-butyl ether	0.160	0.015	"	0.150	ND	107	64-124
1,2-Dichloropropane	0.147	0.0050	"	0.150	ND	98.1	61-115
1,3-Dichloropropane	0.161	0.0050	"	0.150	ND	108	66-123
2,2-Dichloropropane	0.139	0.010	"	0.150	ND	92.4	35-127
1,1-Dichloropropene	0.152	0.0050	"	0.150	ND	101	52-119

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504315 - EPA 5030 Soil MS

Matrix Spike (1504315-MS1)	Source: 1504249-05			Prepared: 04/30/15		Analyzed: 05/01/15	
cis-1,3-Dichloropropene	0.157	0.0050	mg/kg	0.150	ND	104	47-122
trans-1,3-Dichloropropene	0.154	0.0050	"	0.150	ND	103	51-119
Ethylbenzene	0.148	0.0050	"	0.150	ND	98.9	22-153
Hexachlorobutadiene	0.101	0.0050	"	0.150	ND	67.4	10-149
Isopropylbenzene	0.146	0.0050	"	0.150	ND	97.4	18-135
p-Isopropyltoluene	0.135	0.010	"	0.150	ND	89.9	12-132
Methylene Chloride	0.144	0.015	"	0.150	ND	96.3	10-167
Naphthalene	0.158	0.010	"	0.150	ND	105	10-158
n-Propylbenzene	0.143	0.0050	"	0.150	ND	95.6	15-134
Styrene	0.154	0.010	"	0.150	ND	103	33-135
1,1,2,2-Tetrachloroethane	0.154	0.0050	"	0.150	ND	102	10-166
1,1,1,2-Tetrachloroethane	0.149	0.0050	"	0.150	ND	99.0	49-123
Tetrachloroethene	0.148	0.0050	"	0.150	ND	98.9	33-134
Toluene	0.146	0.0050	"	0.150	ND	97.3	30-134
1,2,3-Trichlorobenzene	0.143	0.0050	"	0.150	ND	95.6	10-155
1,2,4-Trichlorobenzene	0.140	0.0050	"	0.150	ND	93.6	10-152
1,1,2-Trichloroethane	0.159	0.0050	"	0.150	ND	106	46-139
1,1,1-Trichloroethane	0.151	0.0050	"	0.150	ND	100	51-124
Trichloroethene	0.151	0.0050	"	0.150	ND	101	16-187
Trichlorofluoromethane	0.153	0.0050	"	0.150	ND	102	53-125
1,2,3-Trichloropropane	0.133	0.010	"	0.150	ND	88.9	69-118
1,3,5-Trimethylbenzene	0.143	0.0050	"	0.150	ND	95.3	20-128
1,2,4-Trimethylbenzene	0.140	0.0050	"	0.150	ND	93.6	17-142
Vinyl chloride	0.157	0.0050	"	0.150	ND	104	50-134
m,p-Xylene	0.296	0.010	"	0.300	ND	98.6	10-159
o-Xylene	0.146	0.0050	"	0.150	ND	97.2	31-151
Surrogate: 1,2-Dichloroethane-d4	0.0419		"	0.0396		106	23-173
Surrogate: Toluene-d8	0.0398		"	0.0400		99.4	20-170
Surrogate: 4-Bromofluorobenzene	0.0399		"	0.0400		99.7	21-167

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504315 - EPA 5030 Soil MS

Matrix Spike Dup (1504315-MSD1)	Source: 1504249-05			Prepared: 04/30/15		Analyzed: 05/01/15				
Benzene	0.142	0.0020	mg/kg	0.150	ND	94.9	30-131	3.01	34	
Bromobenzene	0.133	0.0050	"	0.150	ND	88.7	39-124	8.57	21	
Bromochloromethane	0.152	0.0050	"	0.150	ND	102	62-121	2.53	20	
Bromodichloromethane	0.147	0.0050	"	0.150	ND	98.3	51-120	3.34	22	
Bromoform	0.155	0.0050	"	0.150	ND	103	52-125	3.26	22	
Bromomethane	0.122	0.010	"	0.150	ND	81.6	10-152	25.8	90	
n-Butylbenzene	0.116	0.0050	"	0.150	ND	77.0	10-144	16.4	52	
sec-Butylbenzene	0.116	0.0050	"	0.150	ND	77.4	10-140	14.6	45	
tert-Butylbenzene	0.123	0.0050	"	0.150	ND	81.7	16-132	12.6	33	
Carbon tetrachloride	0.143	0.0050	"	0.150	ND	95.2	46-125	0.982	22	
Chlorobenzene	0.142	0.0050	"	0.150	ND	94.7	42-125	3.79	18	
Chloroethane	0.139	0.0050	"	0.150	ND	92.4	46-125	4.61	24	
Chloroform	0.143	0.0050	"	0.150	ND	95.3	57-118	3.14	19	
Chloromethane	0.144	0.015	"	0.150	ND	95.8	33-132	5.42	18	
2-Chlorotoluene	0.127	0.0050	"	0.150	ND	84.6	30-125	4.87	24	
4-Chlorotoluene	0.129	0.0050	"	0.150	ND	86.1	29-127	6.06	24	
Chlorodibromomethane	0.152	0.010	"	0.150	ND	101	54-124	3.63	22	
1,2-Dibromo-3-chloropropane	0.135	0.015	"	0.150	ND	90.3	10-175	1.43	39	
1,2-Dibromoethane (EDB)	0.152	0.0050	"	0.150	ND	101	65-125	6.01	22	
Dibromomethane	0.150	0.0050	"	0.150	ND	100	64-127	2.76	19	
1,2-Dichlorobenzene	0.135	0.0050	"	0.150	ND	89.7	24-134	7.84	26	
1,3-Dichlorobenzene	0.130	0.0050	"	0.150	ND	86.7	22-130	9.03	27	
1,4-Dichlorobenzene	0.131	0.0050	"	0.150	ND	87.4	21-131	7.41	25	
Dichlorodifluoromethane	0.150	0.0050	"	0.150	ND	100	47-117	2.55	36	
Tert-amyl methyl ether	0.149	0.0050	"	0.149	ND	99.9	60-124	3.96	40	
1,1-Dichloroethane	0.143	0.0050	"	0.150	ND	95.0	55-119	3.39	22	
1,2-Dichloroethane (EDC)	0.149	0.0050	"	0.150	ND	99.2	65-124	3.88	19	
Tert-butyl alcohol	0.683	0.020	"	0.747	ND	91.4	64-131	5.29	24	
1,1-Dichloroethene	0.144	0.0050	"	0.150	ND	95.9	42-145	2.67	22	
cis-1,2-Dichloroethene	0.145	0.0050	"	0.150	ND	96.4	56-121	4.82	21	
Ethyl tert-butyl ether	0.147	0.010	"	0.150	ND	98.1	60-119	2.81	38	
Di-isopropyl ether	0.144	0.0050	"	0.150	ND	96.2	40-132	4.15	108	
trans-1,2-Dichloroethene	0.148	0.0050	"	0.150	ND	98.7	52-126	1.69	22	
Methyl tert-butyl ether	0.154	0.015	"	0.150	ND	103	64-124	3.51	28	
1,2-Dichloropropane	0.144	0.0050	"	0.150	ND	96.1	61-115	2.12	17	
1,3-Dichloropropane	0.153	0.0050	"	0.150	ND	102	66-123	5.54	24	
2,2-Dichloropropane	0.131	0.010	"	0.150	ND	87.1	35-127	5.88	29	
1,1-Dichloropropene	0.148	0.0050	"	0.150	ND	98.7	52-119	2.58	21	

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/06/15 16:25

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504315 - EPA 5030 Soil MS

Matrix Spike Dup (1504315-MSD1)	Source: 1504249-05			Prepared: 04/30/15		Analyzed: 05/01/15				
cis-1,3-Dichloropropene	0.150	0.0050	mg/kg	0.150	ND	100	47-122	4.15	40	
trans-1,3-Dichloropropene	0.148	0.0050	"	0.150	ND	98.6	51-119	4.13	52	
Ethylbenzene	0.143	0.0050	"	0.150	ND	95.2	22-153	3.83	24	
Hexachlorobutadiene	0.0789	0.0050	"	0.150	ND	52.6	10-149	24.6	59	
Isopropylbenzene	0.139	0.0050	"	0.150	ND	92.4	18-135	5.25	33	
p-Isopropyltoluene	0.118	0.010	"	0.150	ND	78.7	12-132	13.3	38	
Methylene Chloride	0.139	0.015	"	0.150	ND	92.8	10-167	3.72	102	
Naphthalene	0.148	0.010	"	0.150	ND	99.0	10-158	6.25	42	
n-Propylbenzene	0.129	0.0050	"	0.150	ND	85.9	15-134	10.7	37	
Styrene	0.149	0.010	"	0.150	ND	99.6	33-135	3.07	22	
1,1,2,2-Tetrachloroethane	0.140	0.0050	"	0.150	ND	93.4	10-166	9.19	45	
1,1,1,2-Tetrachloroethane	0.142	0.0050	"	0.150	ND	94.6	49-123	4.63	21	
Tetrachloroethene	0.142	0.0050	"	0.150	ND	95.0	33-134	4.04	26	
Toluene	0.142	0.0050	"	0.150	ND	94.5	30-134	2.90	30	
1,2,3-Trichlorobenzene	0.129	0.0050	"	0.150	ND	86.1	10-155	10.5	40	
1,2,4-Trichlorobenzene	0.125	0.0050	"	0.150	ND	83.1	10-152	11.9	42	
1,1,2-Trichloroethane	0.155	0.0050	"	0.150	ND	104	46-139	2.56	34	
1,1,1-Trichloroethane	0.145	0.0050	"	0.150	ND	96.4	51-124	4.10	22	
Trichloroethene	0.148	0.0050	"	0.150	ND	98.6	16-187	2.37	19	
Trichlorofluoromethane	0.148	0.0050	"	0.150	ND	98.5	53-125	3.29	20	
1,2,3-Trichloropropane	0.133	0.010	"	0.150	ND	88.5	69-118	0.451	23	
1,3,5-Trimethylbenzene	0.130	0.0050	"	0.150	ND	86.8	20-128	9.29	31	
1,2,4-Trimethylbenzene	0.127	0.0050	"	0.150	ND	84.8	17-142	9.80	40	
Vinyl chloride	0.151	0.0050	"	0.150	ND	101	50-134	3.65	22	
m,p-Xylene	0.283	0.010	"	0.300	ND	94.4	10-159	4.30	68	
o-Xylene	0.142	0.0050	"	0.150	ND	94.5	31-151	2.82	38	
Surrogate: 1,2-Dichloroethane-d4	0.0440		"	0.0396		111	23-173			
Surrogate: Toluene-d8	0.0405		"	0.0400		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0409		"	0.0400		102	21-167			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504305 - EPA 3050B

Blank (1504305-BLK1)

Prepared & Analyzed: 04/30/15

Arsenic	ND	0.100	mg/kg wet							
Barium	ND	0.100	"							
Cadmium	ND	0.100	"							
Chromium	ND	0.500	"							
Lead	ND	0.100	"							
Selenium	ND	0.0500	"							
Silver	ND	0.100	"							
Zinc	ND	10.0	"							

LCS (1504305-BS1)

Prepared & Analyzed: 04/30/15

Arsenic	113	0.250	mg/kg wet	99.6		113	78.4-140			
Barium	316	0.250	"	310		102	83.2-117			
Cadmium	203	0.250	"	182		112	81.9-118			
Chromium	147	1.25	"	136		108	80.1-121			
Lead	124	0.250	"	115		108	81.8-119			
Selenium	178	0.125	"	150		118	77.3-123			
Silver	44.4	0.250	"	40.4		110	75-125			
Zinc	170	25.0	"	133		127	80.7-132			

Duplicate (1504305-DUP1)

Source: 1504290-01

Prepared & Analyzed: 04/30/15

Arsenic	3.94	0.109	mg/kg dry		7.41			61.1	20	QR-03
Barium	92.3	0.109	"		112			18.9	20	
Cadmium	1.03	0.109	"		1.82			55.6	20	QR-03
Chromium	6.95	0.547	"		7.36			5.82	20	
Lead	52.8	0.109	"		74.6			34.3	20	QR-03
Selenium	0.151	0.0547	"		0.370			84.2	20	QR-03
Silver	0.191	0.109	"		0.341			56.4	20	QR-03
Zinc	116	10.9	"		160			32.1	20	QR-03

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1504305 - EPA 3050B

Matrix Spike (1504305-MS1)

Source: 1504290-01

Prepared & Analyzed: 04/30/15

Arsenic	42.1	0.0970	mg/kg dry	38.8	7.41	89.5	75-125			
Barium	161	0.0970	"	38.8	112	128	75-125			QM-07
Cadmium	3.43	0.0970	"	1.94	1.82	83.1	75-125			
Chromium	43.4	0.485	"	38.8	7.36	93.0	75-125			
Lead	1080	0.0970	"	19.4	74.6	NR	75-125			QM-07
Selenium	3.86	0.0485	"	3.88	0.370	89.9	75-125			
Silver	2.65	0.0970	"	1.94	0.341	119	75-125			
Zinc	358	9.70	"	38.8	160	511	75-125			QM-07

Matrix Spike Dup (1504305-MSD1)

Source: 1504290-01

Prepared & Analyzed: 04/30/15

Arsenic	45.4	0.109	mg/kg dry	40.8	7.41	93.1	75-125	7.49	25	
Barium	164	0.109	"	40.8	112	129	75-125	1.84	25	QM-07
Cadmium	3.61	0.109	"	2.04	1.82	87.7	75-125	5.05	25	
Chromium	48.1	0.547	"	40.8	7.36	99.9	75-125	10.3	25	
Lead	99.9	0.109	"	20.4	74.6	124	75-125	166	25	QM-07
Selenium	3.97	0.0547	"	4.08	0.370	88.2	75-125	2.87	25	
Silver	2.61	0.109	"	2.04	0.341	111	75-125	1.52	25	
Zinc	209	10.9	"	40.8	160	121	75-125	52.5	25	QM-07

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

Total Mercury by EPA Method 7471 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD		

Batch 1505028 - EPA 7471A

Blank (1505028-BLK1)			Prepared & Analyzed: 05/04/15							
Mercury	ND	0.0500	mg/kg wet							
Duplicate (1505028-DUP1)			Source: 1504290-01 Prepared & Analyzed: 05/04/15							
Mercury	0.0588	0.0547	mg/kg dry	0.0524				11.5	20	
Matrix Spike (1505028-MS1)			Source: 1504290-01 Prepared & Analyzed: 05/04/15							
Mercury	0.498	0.0464	mg/kg dry	0.464	0.0524	96.2	80-120			
Matrix Spike Dup (1505028-MSD1)			Source: 1504290-01 Prepared & Analyzed: 05/04/15							
Mercury	0.529	0.0547	mg/kg dry	0.504	0.0524	94.7	80-120	6.08	20	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 16:25

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504309 - General Preparation

Duplicate (1504309-DUP1)	Source: 1504290-01			Prepared: 04/30/15	Analyzed: 05/01/15
% Solids	88.8		%	91.4	2.89 20

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/06/15 16:25

Notes and Definitions

- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

May 27, 2015

Steve Hoffman

Terracon - Wheat Ridge

10625 West I-70 Frontage Road, Suite 3

Wheat Ridge, CO 80033

RE: National Western Complex

Enclosed are the results of analyses for samples received by Summit Scientific on 05/01/15 11:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Ben Shrewsbury', with a long, sweeping horizontal stroke extending to the right.

Ben Shrewsbury For Paul Shrewsbury
President



Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/27/15 13:35

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-15 (0-6")	1505004-01	Soil	04/30/15 16:25	05/01/15 11:30
MW-15 (6-24")	1505004-02	Soil	04/30/15 16:25	05/01/15 11:30
MW-15 (33')	1505004-03	Soil	04/30/15 17:45	05/01/15 11:30

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:35

Summit Scientific

1505004

741 Corporate Circle Suite I • Golden, Colorado 80401
 303-277-9310 • 303-374-5933 Fax

Client: Terracon Consultants

Page 1 of 1

Address: 10625 West I-70 Frontage Road North, Suite 3
 City/State/Zip: Wheat Ridge, CO 80033
 Phone: (303) 454-5275 Fax: (303) 423-3353
 Sampler Name: Marshall Haworth

Project Manager: Steve Hoffman
 E-Mail: sbhoffman@terracon.com
 Project Name: National Western Complex
 Project Number: 25157010

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix				Analyze For:				Special Instructions	
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	VOC's 8280B	TPH 8015	RCRA 8-Zinc			
MW-15 (0-6")	4-30-15	1625	2		X			X									
MW-15 (6-24")	4-30-15	1625	2		X			X									
MW-15 (33')	4-30-15	1745	2		X			X		X	X						
Relinquished by: <i>Marshall Haworth</i>		Date/Time: 4-30-15 1925		Received by: <i>McIntosh</i>		Date/Time: 5/1/15 11:30		Turn Around Time (Check)				Notes:					
								Same Day <input type="checkbox"/>				72 Hours <input type="checkbox"/>					
								24 Hours <input type="checkbox"/>				Standard <input checked="" type="checkbox"/>					
								48 Hours <input type="checkbox"/>				on ice					
Relinquished by: <i>MH</i>		Date/Time: 5/1/15 11:50		Received in Lab by: <i>Steve Hoffman</i>		Date/Time: 5/1/15 11:50		Sample Integrity:									
								Temperature Upon Receipt: 5.8°C									
								Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>									

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:35

MW-15 (0-6")
1505004-01 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/30/15 16:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.21	0.107	mg/kg dry	1	1505035	05/05/15	05/05/15	EPA 6020A	
Barium	88.4	0.107	"	"	"	"	"	"	
Cadmium	0.208	0.107	"	"	"	"	"	"	
Chromium	14.1	0.536	"	"	"	"	"	"	
Lead	13.4	0.107	"	"	"	"	"	"	
Selenium	0.403	0.0536	"	"	"	"	"	"	
Silver	0.261	0.107	"	"	"	"	"	"	

Date Sampled: **04/30/15 16:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	56.8	10.7	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/30/15 16:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0536	mg/kg dry	1	1505078	05/08/15	05/08/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/30/15 16:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.4		%	1	1505054	05/05/15	05/06/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:35

MW-15 (6-24")
1505004-02 (Soil)

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Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **04/30/15 16:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.37	0.112	mg/kg dry	1	1505035	05/05/15	05/05/15	EPA 6020A	
Barium	113	0.112	"	"	"	"	"	"	
Cadmium	0.116	0.112	"	"	"	"	"	"	
Chromium	15.9	0.562	"	"	"	"	"	"	
Lead	13.6	0.112	"	"	"	"	"	"	
Selenium	0.254	0.0562	"	"	"	"	"	"	
Silver	0.260	0.112	"	"	"	"	"	"	

Date Sampled: **04/30/15 16:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	49.0	11.2	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **04/30/15 16:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0435	mg/kg dry	1	1505078	05/08/15	05/08/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/30/15 16:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	88.9		%	1	1505054	05/05/15	05/06/15	% calculation	

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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:35

MW-15 (33')
1505004-03 (Soil)

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Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/30/15 17:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1505016	05/02/15	05/05/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/30/15 17:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		110 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/30/15 17:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.00200	mg/kg	1	1505055	05/05/15	05/06/15	EPA 8260B	
Bromobenzene	ND	0.00500	"	"	"	"	"	"	
Bromochloromethane	ND	0.00500	"	"	"	"	"	"	
Bromodichloromethane	ND	0.00500	"	"	"	"	"	"	
Bromoform	ND	0.00500	"	"	"	"	"	"	
Bromomethane	ND	0.0100	"	"	"	"	"	"	
n-Butylbenzene	ND	0.00500	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.00500	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.00500	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.00500	"	"	"	"	"	"	
Chlorobenzene	ND	0.00500	"	"	"	"	"	"	
Chloroethane	ND	0.00500	"	"	"	"	"	"	
Chloroform	ND	0.00500	"	"	"	"	"	"	
Chloromethane	ND	0.0150	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.00500	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.00500	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.0100	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.0150	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.00500	"	"	"	"	"	"	
Dibromomethane	ND	0.00500	"	"	"	"	"	"	

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Terracon - Wheat Ridge
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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:35

MW-15 (33')
1505004-03 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample	ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.00500	mg/kg	1	1505055	05/05/15	05/06/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.00500	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.00500	"	"	"	"	"	"
Dichlorodifluoromethane	ND	0.00500	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.00500	"	"	"	"	"	"
Tert-amyl methyl ether	ND	0.00500	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.00500	"	"	"	"	"	"
1,1-Dichloroethene	ND	0.00500	"	"	"	"	"	"
Tert-butyl alcohol	ND	0.0200	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.00500	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.0100	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.00500	"	"	"	"	"	"
Di-isopropyl ether	ND	0.00500	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.0150	"	"	"	"	"	"
1,2-Dichloropropane	ND	0.00500	"	"	"	"	"	"
1,3-Dichloropropane	ND	0.00500	"	"	"	"	"	"
2,2-Dichloropropane	ND	0.0100	"	"	"	"	"	"
1,1-Dichloropropene	ND	0.00500	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.00500	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.00500	"	"	"	"	"	"
Ethylbenzene	ND	0.00500	"	"	"	"	"	"
Hexachlorobutadiene	ND	0.00500	"	"	"	"	"	"
Isopropylbenzene	ND	0.00500	"	"	"	"	"	"
p-Isopropyltoluene	ND	0.0100	"	"	"	"	"	"
Methylene Chloride	ND	0.0150	"	"	"	"	"	"
Naphthalene	ND	0.0100	"	"	"	"	"	"
n-Propylbenzene	ND	0.00500	"	"	"	"	"	"
Styrene	ND	0.0100	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.00500	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.00500	"	"	"	"	"	"
Tetrachloroethene	ND	0.00500	"	"	"	"	"	"
Toluene	ND	0.00500	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.00500	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.00500	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.00500	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.00500	"	"	"	"	"	"
Trichloroethene	ND	0.00500	"	"	"	"	"	"

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Terracon - Wheat Ridge
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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:35

MW-15 (33')
1505004-03 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.00500	mg/kg	1	1505055	05/05/15	05/06/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.0100	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.00500	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.00500	"	"	"	"	"	"
Vinyl chloride	ND	0.00500	"	"	"	"	"	"
m,p-Xylene	ND	0.0100	"	"	"	"	"	"
o-Xylene	ND	0.00500	"	"	"	"	"	"

Date Sampled: **04/30/15 17:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		115 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.4 %	21-167		"	"	"	"	

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Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:35

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505016 - EPA 3550A

Blank (1505016-BLK1)				Prepared & Analyzed: 05/02/15						
C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
<i>Surrogate: o-Terphenyl</i>	<i>13.1</i>		<i>"</i>	<i>12.2</i>		<i>108</i>	<i>70-130</i>			
LCS (1505016-BS1)				Prepared & Analyzed: 05/02/15						
C10-C28 (DRO)	463	50	mg/kg	501	40.3	92.3	50-150			
<i>Surrogate: o-Terphenyl</i>	<i>13.1</i>		<i>"</i>	<i>12.2</i>		<i>108</i>	<i>70-130</i>			
Matrix Spike (1505016-MS1)				Source: 1505005-01		Prepared & Analyzed: 05/02/15				
C10-C28 (DRO)	450	50	mg/kg	479	40.3	85.6	50-150			
<i>Surrogate: o-Terphenyl</i>	<i>13.0</i>		<i>"</i>	<i>11.7</i>		<i>111</i>	<i>70-130</i>			
Matrix Spike Dup (1505016-MSD1)				Source: 1505005-01		Prepared & Analyzed: 05/02/15				
C10-C28 (DRO)	466	50	mg/kg	480	40.3	88.8	50-150	3.52	20	
<i>Surrogate: o-Terphenyl</i>	<i>13.3</i>		<i>"</i>	<i>11.7</i>		<i>114</i>	<i>70-130</i>			

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Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/27/15 13:35

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting		Spike Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

Batch 1505055 - EPA 5030 Soil MS

Blank (1505055-BLK1)

Prepared & Analyzed: 05/05/15

Benzene	ND	0.00200	mg/kg						
Bromobenzene	ND	0.00500	"						
Bromochloromethane	ND	0.00500	"						
Bromodichloromethane	ND	0.00500	"						
Bromoform	ND	0.00500	"						
Bromomethane	ND	0.0100	"						
n-Butylbenzene	ND	0.00500	"						
sec-Butylbenzene	ND	0.00500	"						
tert-Butylbenzene	ND	0.00500	"						
Carbon tetrachloride	ND	0.00500	"						
Chlorobenzene	ND	0.00500	"						
Chloroethane	ND	0.00500	"						
Chloroform	ND	0.00500	"						
Chloromethane	ND	0.0150	"						
2-Chlorotoluene	ND	0.00500	"						
4-Chlorotoluene	ND	0.00500	"						
Chlorodibromomethane	ND	0.0100	"						
1,2-Dibromo-3-chloropropane	ND	0.0150	"						
1,2-Dibromoethane (EDB)	ND	0.00500	"						
Dibromomethane	ND	0.00500	"						
1,2-Dichlorobenzene	ND	0.00500	"						
1,3-Dichlorobenzene	ND	0.00500	"						
1,4-Dichlorobenzene	ND	0.00500	"						
Dichlorodifluoromethane	ND	0.00500	"						
Tert-amyl methyl ether	ND	0.00500	"						
1,1-Dichloroethane	ND	0.00500	"						
1,2-Dichloroethane (EDC)	ND	0.00500	"						
Tert-butyl alcohol	ND	0.0200	"						
1,1-Dichloroethene	ND	0.00500	"						
Ethyl tert-butyl ether	ND	0.0100	"						
cis-1,2-Dichloroethene	ND	0.00500	"						
Di-isopropyl ether	ND	0.00500	"						
trans-1,2-Dichloroethene	ND	0.00500	"						
Methyl tert-butyl ether	ND	0.0150	"						
1,2-Dichloropropane	ND	0.00500	"						
1,3-Dichloropropane	ND	0.00500	"						
2,2-Dichloropropane	ND	0.0100	"						
1,1-Dichloropropene	ND	0.00500	"						

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 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:35

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505055 - EPA 5030 Soil MS

Blank (1505055-BLK1)

Prepared & Analyzed: 05/05/15

cis-1,3-Dichloropropene	ND	0.00500	mg/kg							
trans-1,3-Dichloropropene	ND	0.00500	"							
Ethylbenzene	ND	0.00500	"							
Hexachlorobutadiene	ND	0.00500	"							
Isopropylbenzene	ND	0.00500	"							
p-Isopropyltoluene	ND	0.0100	"							
Methylene Chloride	ND	0.0150	"							
Naphthalene	ND	0.0100	"							
n-Propylbenzene	ND	0.00500	"							
Styrene	ND	0.0100	"							
1,1,2,2-Tetrachloroethane	ND	0.00500	"							
1,1,1,2-Tetrachloroethane	ND	0.00500	"							
Tetrachloroethene	ND	0.00500	"							
Toluene	ND	0.00500	"							
1,2,3-Trichlorobenzene	ND	0.00500	"							
1,2,4-Trichlorobenzene	ND	0.00500	"							
1,1,2-Trichloroethane	ND	0.00500	"							
1,1,1-Trichloroethane	ND	0.00500	"							
Trichloroethene	ND	0.00500	"							
Trichlorofluoromethane	ND	0.00500	"							
1,2,3-Trichloropropane	ND	0.0100	"							
1,3,5-Trimethylbenzene	ND	0.00500	"							
1,2,4-Trimethylbenzene	ND	0.00500	"							
Vinyl chloride	ND	0.00500	"							
m,p-Xylene	ND	0.0100	"							
o-Xylene	ND	0.00500	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0400</i>		<i>"</i>	<i>0.0396</i>		<i>101</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0392</i>		<i>"</i>	<i>0.0400</i>		<i>98.0</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0380</i>		<i>"</i>	<i>0.0400</i>		<i>95.0</i>	<i>21-167</i>			

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Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/27/15 13:35

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505055 - EPA 5030 Soil MS

LCS (1505055-BS1)

Prepared & Analyzed: 05/05/15

Benzene	0.145	0.00200	mg/kg	0.150		96.6	58-130			
Bromobenzene	0.138	0.00500	"	0.150		92.1	80-115			
Bromochloromethane	0.144	0.00500	"	0.150		96.2	80-122			
Bromodichloromethane	0.147	0.00500	"	0.150		98.2	80-119			
Bromoform	0.149	0.00500	"	0.150		99.6	80-119			
Bromomethane	0.225	0.0100	"	0.150		150	80-152			
n-Butylbenzene	0.140	0.00500	"	0.150		93.3	80-131			
sec-Butylbenzene	0.136	0.00500	"	0.150		90.9	80-124			
tert-Butylbenzene	0.139	0.00500	"	0.150		92.6	80-121			
Carbon tetrachloride	0.142	0.00500	"	0.150		94.7	80-127			
Chlorobenzene	0.148	0.00500	"	0.150		98.3	80-120			
Chloroethane	0.133	0.00500	"	0.150		88.7	80-126			
Chloroform	0.145	0.00500	"	0.150		96.8	80-120			
Chloromethane	0.166	0.0150	"	0.150		111	80-133			
2-Chlorotoluene	0.134	0.00500	"	0.150		89.6	80-117			
4-Chlorotoluene	0.137	0.00500	"	0.150		91.3	80-119			
Chlorodibromomethane	0.151	0.0100	"	0.150		101	80-124			
1,2-Dibromo-3-chloropropane	0.135	0.0150	"	0.150		90.2	80-128			
1,2-Dibromoethane (EDB)	0.147	0.00500	"	0.150		98.0	80-122			
Dibromomethane	0.143	0.00500	"	0.150		95.1	80-124			
1,2-Dichlorobenzene	0.140	0.00500	"	0.150		93.5	80-120			
1,3-Dichlorobenzene	0.139	0.00500	"	0.150		92.4	80-118			
1,4-Dichlorobenzene	0.137	0.00500	"	0.150		91.5	80-118			
Dichlorodifluoromethane	0.167	0.00500	"	0.150		111	80-141			
1,1-Dichloroethane	0.144	0.00500	"	0.150		96.2	80-120			
Tert-amyl methyl ether	0.142	0.00500	"	0.149		95.0	80-147			
1,2-Dichloroethane (EDC)	0.149	0.00500	"	0.150		99.1	80-125			
1,1-Dichloroethene	0.142	0.00500	"	0.150		94.5	80-122			
Tert-butyl alcohol	0.615	0.0200	"	0.747		82.4	80-127			
cis-1,2-Dichloroethene	0.149	0.00500	"	0.150		99.6	80-121			
Ethyl tert-butyl ether	0.143	0.0100	"	0.150		95.2	80-122			
trans-1,2-Dichloroethene	0.151	0.00500	"	0.150		101	80-125			
Di-isopropyl ether	0.142	0.00500	"	0.150		94.8	80-120			
Methyl tert-butyl ether	0.144	0.0150	"	0.150		96.3	80-124			
1,2-Dichloropropane	0.144	0.00500	"	0.150		95.7	80-114			
1,3-Dichloropropane	0.150	0.00500	"	0.150		100	80-122			
2,2-Dichloropropane	0.135	0.0100	"	0.150		89.9	80-150			
1,1-Dichloropropene	0.143	0.00500	"	0.150		95.1	80-123			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:35

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505055 - EPA 5030 Soil MS

LCS (1505055-BS1)

Prepared & Analyzed: 05/05/15

cis-1,3-Dichloropropene	0.144	0.00500	mg/kg	0.150		96.1	80-125			
trans-1,3-Dichloropropene	0.142	0.00500	"	0.150		94.7	80-126			
Ethylbenzene	0.148	0.00500	"	0.150		98.9	80-139			
Hexachlorobutadiene	0.138	0.00500	"	0.150		92.1	80-144			
Isopropylbenzene	0.146	0.00500	"	0.150		97.2	80-124			
p-Isopropyltoluene	0.136	0.0100	"	0.150		90.8	80-123			
Methylene Chloride	0.140	0.0150	"	0.150		93.2	80-183			
Naphthalene	0.144	0.0100	"	0.150		96.0	80-138			
n-Propylbenzene	0.139	0.00500	"	0.150		92.5	80-121			
Styrene	0.154	0.0100	"	0.150		103	80-133			
1,1,2,2-Tetrachloroethane	0.128	0.00500	"	0.150		85.4	80-137			
1,1,1,2-Tetrachloroethane	0.145	0.00500	"	0.150		96.7	80-121			
Tetrachloroethene	0.146	0.00500	"	0.150		97.0	80-131			
Toluene	0.144	0.00500	"	0.150		95.8	80-134			
1,2,3-Trichlorobenzene	0.146	0.00500	"	0.150		97.5	80-142			
1,2,4-Trichlorobenzene	0.147	0.00500	"	0.150		97.8	80-141			
1,1,2-Trichloroethane	0.146	0.00500	"	0.150		97.5	80-136			
1,1,1-Trichloroethane	0.144	0.00500	"	0.150		95.8	80-126			
Trichloroethene	0.154	0.00500	"	0.150		103	80-118			
Trichlorofluoromethane	0.133	0.00500	"	0.150		88.4	80-128			
1,2,3-Trichloropropane	0.133	0.0100	"	0.150		88.9	80-118			
1,3,5-Trimethylbenzene	0.139	0.00500	"	0.150		92.6	80-121			
1,2,4-Trimethylbenzene	0.138	0.00500	"	0.150		92.3	80-126			
Vinyl chloride	0.149	0.00500	"	0.150		99.2	80-134			
m,p-Xylene	0.297	0.0100	"	0.300		98.9	80-137			
o-Xylene	0.146	0.00500	"	0.150		97.0	80-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0403</i>		<i>"</i>	<i>0.0396</i>		<i>102</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0403</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0413</i>		<i>"</i>	<i>0.0400</i>		<i>103</i>	<i>21-167</i>			

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/27/15 13:35

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505055 - EPA 5030 Soil MS

Matrix Spike (1505055-MS1)	Source: 1505004-03			Prepared & Analyzed: 05/05/15						
Benzene	0.147	0.00200	mg/kg	0.150	ND	97.7	30-131			
Bromobenzene	0.147	0.00500	"	0.150	ND	98.1	39-124			
Bromochloromethane	0.165	0.00500	"	0.150	ND	110	62-121			
Bromodichloromethane	0.157	0.00500	"	0.150	ND	104	51-120			
Bromoform	0.172	0.00500	"	0.150	ND	115	52-125			
Bromomethane	0.180	0.0100	"	0.150	ND	120	10-152			
n-Butylbenzene	0.139	0.00500	"	0.150	ND	92.7	10-144			
sec-Butylbenzene	0.137	0.00500	"	0.150	ND	91.1	10-140			
tert-Butylbenzene	0.140	0.00500	"	0.150	ND	93.1	16-132			
Carbon tetrachloride	0.142	0.00500	"	0.150	ND	94.6	46-125			
Chlorobenzene	0.147	0.00500	"	0.150	ND	98.0	42-125			
Chloroethane	0.133	0.00500	"	0.150	ND	88.6	46-125			
Chloroform	0.151	0.00500	"	0.150	ND	101	57-118			
Chloromethane	0.168	0.0150	"	0.150	ND	112	33-132			
2-Chlorotoluene	0.133	0.00500	"	0.150	ND	88.8	30-125			
4-Chlorotoluene	0.138	0.00500	"	0.150	ND	91.7	29-127			
Chlorodibromomethane	0.166	0.0100	"	0.150	ND	111	54-124			
1,2-Dibromo-3-chloropropane	0.166	0.0150	"	0.150	ND	110	10-175			
1,2-Dibromoethane (EDB)	0.170	0.00500	"	0.150	ND	113	65-125			
Dibromomethane	0.166	0.00500	"	0.150	ND	111	64-127			
1,2-Dichlorobenzene	0.150	0.00500	"	0.150	ND	99.8	24-134			
1,3-Dichlorobenzene	0.144	0.00500	"	0.150	ND	95.7	22-130			
1,4-Dichlorobenzene	0.141	0.00500	"	0.150	ND	93.8	21-131			
Dichlorodifluoromethane	0.177	0.00500	"	0.150	ND	118	47-117			QM-07
Tert-amyl methyl ether	0.162	0.00500	"	0.149	ND	108	60-124			
1,1-Dichloroethane	0.148	0.00500	"	0.150	ND	98.8	55-119			
1,2-Dichloroethane (EDC)	0.162	0.00500	"	0.150	ND	108	65-124			
Tert-butyl alcohol	0.792	0.0200	"	0.747	ND	106	64-131			
1,1-Dichloroethene	0.146	0.00500	"	0.150	ND	97.2	42-145			
Ethyl tert-butyl ether	0.157	0.0100	"	0.150	ND	104	60-119			
cis-1,2-Dichloroethene	0.154	0.00500	"	0.150	ND	103	56-121			
Di-isopropyl ether	0.150	0.00500	"	0.150	ND	100	40-132			
trans-1,2-Dichloroethene	0.152	0.00500	"	0.150	ND	101	52-126			
Methyl tert-butyl ether	0.169	0.0150	"	0.150	ND	112	64-124			
1,2-Dichloropropane	0.150	0.00500	"	0.150	ND	100	61-115			
1,3-Dichloropropane	0.165	0.00500	"	0.150	ND	110	66-123			
2,2-Dichloropropane	0.135	0.0100	"	0.150	ND	90.1	35-127			
1,1-Dichloropropene	0.147	0.00500	"	0.150	ND	98.2	52-119			

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/27/15 13:35

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505055 - EPA 5030 Soil MS

Matrix Spike (1505055-MS1)	Source: 1505004-03			Prepared & Analyzed: 05/05/15						
cis-1,3-Dichloropropene	0.164	0.00500	mg/kg	0.150	ND	109	47-122			
trans-1,3-Dichloropropene	0.162	0.00500	"	0.150	ND	108	51-119			
Ethylbenzene	0.145	0.00500	"	0.150	ND	96.6	22-153			
Hexachlorobutadiene	0.136	0.00500	"	0.150	ND	90.5	10-149			
Isopropylbenzene	0.143	0.00500	"	0.150	ND	95.4	18-135			
p-Isopropyltoluene	0.136	0.0100	"	0.150	ND	90.4	12-132			
Methylene Chloride	0.147	0.0150	"	0.150	ND	97.8	10-167			
Naphthalene	0.180	0.0100	"	0.150	ND	120	10-158			
n-Propylbenzene	0.139	0.00500	"	0.150	ND	92.9	15-134			
Styrene	0.156	0.0100	"	0.150	ND	104	33-135			
1,1,2,2-Tetrachloroethane	0.157	0.00500	"	0.150	ND	105	10-166			
1,1,1,2-Tetrachloroethane	0.152	0.00500	"	0.150	ND	101	49-123			
Tetrachloroethane	0.142	0.00500	"	0.150	ND	94.9	33-134			
Toluene	0.145	0.00500	"	0.150	ND	96.4	30-134			
1,2,3-Trichlorobenzene	0.162	0.00500	"	0.150	ND	108	10-155			
1,2,4-Trichlorobenzene	0.154	0.00500	"	0.150	ND	103	10-152			
1,1,2-Trichloroethane	0.169	0.00500	"	0.150	ND	113	46-139			
1,1,1-Trichloroethane	0.147	0.00500	"	0.150	ND	97.8	51-124			
Trichloroethene	0.152	0.00500	"	0.150	ND	102	16-187			
Trichlorofluoromethane	0.140	0.00500	"	0.150	ND	93.6	53-125			
1,2,3-Trichloropropane	0.0143	0.0100	"	0.150	ND	9.52	69-118			QM-07
1,3,5-Trimethylbenzene	0.140	0.00500	"	0.150	ND	93.2	20-128			
1,2,4-Trimethylbenzene	0.139	0.00500	"	0.150	ND	92.9	17-142			
Vinyl chloride	0.151	0.00500	"	0.150	ND	101	50-134			
m,p-Xylene	0.288	0.0100	"	0.300	ND	96.0	10-159			
o-Xylene	0.144	0.00500	"	0.150	ND	95.8	31-151			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0446</i>		<i>"</i>	<i>0.0396</i>		<i>112</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0398</i>		<i>"</i>	<i>0.0400</i>		<i>99.6</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0411</i>		<i>"</i>	<i>0.0400</i>		<i>103</i>	<i>21-167</i>			

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/27/15 13:35

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505055 - EPA 5030 Soil MS

Matrix Spike Dup (1505055-MSD1)	Source: 1505004-03			Prepared: 05/05/15		Analyzed: 05/06/15				
Benzene	0.170	0.00200	mg/kg	0.150	ND	114	30-131	15.1	34	
Bromobenzene	0.160	0.00500	"	0.150	ND	107	39-124	8.62	21	
Bromochloromethane	0.132	0.00500	"	0.150	ND	88.1	62-121	22.0	20	QR-04
Bromodichloromethane	0.155	0.00500	"	0.150	ND	103	51-120	1.27	22	
Bromoform	0.155	0.00500	"	0.150	ND	103	52-125	10.5	22	
Bromomethane	0.287	0.0100	"	0.150	ND	191	10-152	45.8	90	QR-04
n-Butylbenzene	0.183	0.00500	"	0.150	ND	122	10-144	27.3	52	
sec-Butylbenzene	0.184	0.00500	"	0.150	ND	123	10-140	29.8	45	
tert-Butylbenzene	0.188	0.00500	"	0.150	ND	126	16-132	29.8	33	
Carbon tetrachloride	0.189	0.00500	"	0.150	ND	126	46-125	28.6	22	QR-04
Chlorobenzene	0.167	0.00500	"	0.150	ND	111	42-125	12.5	18	
Chloroethane	0.157	0.00500	"	0.150	ND	105	46-125	16.7	24	
Chloroform	0.147	0.00500	"	0.150	ND	98.2	57-118	2.39	19	
Chloromethane	0.191	0.0150	"	0.150	ND	128	33-132	12.9	18	
2-Chlorotoluene	0.168	0.00500	"	0.150	ND	112	30-125	23.1	24	
4-Chlorotoluene	0.172	0.00500	"	0.150	ND	114	29-127	21.9	24	
Chlorodibromomethane	0.160	0.0100	"	0.150	ND	107	54-124	3.66	22	
1,2-Dibromo-3-chloropropane	0.145	0.0150	"	0.150	ND	96.8	10-175	13.1	39	
1,2-Dibromoethane (EDB)	0.149	0.00500	"	0.150	ND	99.6	65-125	13.0	22	
Dibromomethane	0.140	0.00500	"	0.150	ND	93.5	64-127	17.0	19	
1,2-Dichlorobenzene	0.158	0.00500	"	0.150	ND	105	24-134	5.29	26	
1,3-Dichlorobenzene	0.161	0.00500	"	0.150	ND	107	22-130	11.4	27	
1,4-Dichlorobenzene	0.154	0.00500	"	0.150	ND	103	21-131	9.27	25	
Dichlorodifluoromethane	0.218	0.00500	"	0.150	ND	145	47-117	20.9	36	QR-04
Tert-amyl methyl ether	0.129	0.00500	"	0.149	ND	86.5	60-124	22.5	40	
1,1-Dichloroethane	0.152	0.00500	"	0.150	ND	101	55-119	2.20	22	
1,2-Dichloroethane (EDC)	0.147	0.00500	"	0.150	ND	97.7	65-124	10.2	19	
1,1-Dichloroethene	0.176	0.00500	"	0.150	ND	117	42-145	18.6	22	
Tert-butyl alcohol	0.581	0.0200	"	0.747	ND	77.7	64-131	30.8	24	QR-04
cis-1,2-Dichloroethene	0.149	0.00500	"	0.150	ND	99.2	56-121	3.31	21	
Ethyl tert-butyl ether	0.132	0.0100	"	0.150	ND	87.8	60-119	17.2	38	
trans-1,2-Dichloroethene	0.148	0.00500	"	0.150	ND	98.9	52-126	2.16	22	
Di-isopropyl ether	0.135	0.00500	"	0.150	ND	90.1	40-132	10.8	108	
Methyl tert-butyl ether	0.120	0.0150	"	0.150	ND	80.0	64-124	33.8	28	QR-04
1,2-Dichloropropane	0.152	0.00500	"	0.150	ND	101	61-115	0.992	17	
1,3-Dichloropropane	0.154	0.00500	"	0.150	ND	103	66-123	6.87	24	
2,2-Dichloropropane	0.136	0.0100	"	0.150	ND	90.6	35-127	0.553	29	
1,1-Dichloropropene	0.188	0.00500	"	0.150	ND	126	52-119	24.4	21	QR-04

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/27/15 13:35

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505055 - EPA 5030 Soil MS

Matrix Spike Dup (1505055-MSD1)	Source: 1505004-03			Prepared: 05/05/15		Analyzed: 05/06/15				
cis-1,3-Dichloropropene	0.137	0.00500	mg/kg	0.150	ND	91.6	47-122	17.7	40	
trans-1,3-Dichloropropene	0.135	0.00500	"	0.150	ND	90.2	51-119	17.7	52	
Ethylbenzene	0.182	0.00500	"	0.150	ND	121	22-153	22.4	24	
Hexachlorobutadiene	0.169	0.00500	"	0.150	ND	113	10-149	21.8	59	
Isopropylbenzene	0.182	0.00500	"	0.150	ND	121	18-135	23.9	33	
p-Isopropyltoluene	0.178	0.0100	"	0.150	ND	119	12-132	26.9	38	
Methylene Chloride	0.136	0.0150	"	0.150	ND	90.4	10-167	7.89	102	
Naphthalene	0.144	0.0100	"	0.150	ND	96.3	10-158	22.1	42	
n-Propylbenzene	0.188	0.00500	"	0.150	ND	125	15-134	29.5	37	
Styrene	0.172	0.0100	"	0.150	ND	114	33-135	9.60	22	
1,1,2,2-Tetrachloroethane	0.133	0.00500	"	0.150	ND	88.9	10-166	16.5	45	
1,1,1,2-Tetrachloroethane	0.166	0.00500	"	0.150	ND	110	49-123	8.56	21	
Tetrachloroethene	0.194	0.00500	"	0.150	ND	130	33-134	30.9	26	QR-04
Toluene	0.166	0.00500	"	0.150	ND	111	30-134	13.9	30	
1,2,3-Trichlorobenzene	0.146	0.00500	"	0.150	ND	97.1	10-155	10.6	40	
1,2,4-Trichlorobenzene	0.144	0.00500	"	0.150	ND	95.9	10-152	6.89	42	
1,1,2-Trichloroethane	0.141	0.00500	"	0.150	ND	94.1	46-139	18.0	34	
1,1,1-Trichloroethane	0.168	0.00500	"	0.150	ND	112	51-124	13.6	22	
Trichloroethene	0.194	0.00500	"	0.150	ND	129	16-187	24.1	19	QR-04
Trichlorofluoromethane	0.169	0.00500	"	0.150	ND	112	53-125	18.2	20	
1,2,3-Trichloropropane	0.0154	0.0100	"	0.150	ND	10.3	69-118	7.68	23	QR-04
1,3,5-Trimethylbenzene	0.189	0.00500	"	0.150	ND	126	20-128	29.9	31	
1,2,4-Trimethylbenzene	0.177	0.00500	"	0.150	ND	118	17-142	23.6	40	
Vinyl chloride	0.187	0.00500	"	0.150	ND	124	50-134	20.9	22	
m,p-Xylene	0.356	0.0100	"	0.300	ND	119	10-159	21.2	68	
o-Xylene	0.168	0.00500	"	0.150	ND	112	31-151	15.7	38	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0381</i>		<i>"</i>	<i>0.0396</i>		<i>96.3</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0398</i>		<i>"</i>	<i>0.0400</i>		<i>99.4</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0388</i>		<i>"</i>	<i>0.0400</i>		<i>97.0</i>	<i>21-167</i>			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:35

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	

Batch 1505035 - EPA 3050B

Blank (1505035-BLK1)

Prepared & Analyzed: 05/05/15

Arsenic	ND	0.100	mg/kg wet						
Barium	ND	0.100	"						
Cadmium	ND	0.100	"						
Chromium	ND	0.500	"						
Lead	ND	0.100	"						
Selenium	ND	0.0500	"						
Silver	ND	0.100	"						
Zinc	ND	10.0	"						

LCS (1505035-BS1)

Prepared & Analyzed: 05/05/15

Arsenic	114	0.235	mg/kg wet	93.6	121	78.4-140
Barium	319	0.235	"	291	110	83.2-117
Cadmium	191	0.235	"	171	112	81.9-118
Chromium	151	1.17	"	128	118	80.1-121
Lead	117	0.235	"	108	109	81.8-119
Selenium	146	0.117	"	141	104	77.3-123
Silver	39.5	0.235	"	38.0	104	75-125
Zinc	154	23.5	"	125	123	80.7-132

Duplicate (1505035-DUP1)

Source: 1505004-01

Prepared & Analyzed: 05/05/15

Arsenic	2.40	0.107	mg/kg dry	2.21	8.30	20
Barium	100	0.107	"	88.4	12.7	20
Cadmium	0.235	0.107	"	0.208	12.5	20
Chromium	15.9	0.536	"	14.1	12.4	20
Lead	15.0	0.107	"	13.4	11.9	20
Selenium	0.291	0.0536	"	0.403	32.4	20
Silver	0.237	0.107	"	0.261	9.73	20
Zinc	64.5	10.7	"	56.8	12.6	20

QR-03

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:35

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1505035 - EPA 3050B

Matrix Spike (1505035-MS1)	Source: 1505004-01			Prepared & Analyzed: 05/05/15								
Arsenic	48.4	0.107	mg/kg dry	41.8	2.21	110	75-125					
Barium	138	0.107	"	41.8	88.4	118	75-125					
Cadmium	2.69	0.107	"	2.09	0.208	119	75-125					
Chromium	63.8	0.536	"	41.8	14.1	119	75-125					
Lead	38.4	0.107	"	20.9	13.4	120	75-125					
Selenium	5.09	0.0536	"	4.18	0.403	112	75-125					
Silver	2.91	0.107	"	2.09	0.261	127	75-125					QM-07
Zinc	110	10.7	"	41.8	56.8	127	75-125					QM-07

Matrix Spike Dup (1505035-MSD1)	Source: 1505004-01			Prepared & Analyzed: 05/05/15								
Arsenic	49.9	0.107	mg/kg dry	42.8	2.21	111	75-125	3.09	25			
Barium	144	0.107	"	42.8	88.4	130	75-125	4.72	25			QM-07
Cadmium	2.86	0.107	"	2.14	0.208	124	75-125	5.83	25			
Chromium	65.9	0.536	"	42.8	14.1	121	75-125	3.35	25			
Lead	40.0	0.107	"	21.4	13.4	125	75-125	4.18	25			
Selenium	5.06	0.0536	"	4.28	0.403	109	75-125	0.589	25			
Silver	3.12	0.107	"	2.14	0.261	134	75-125	7.10	25			QM-07
Zinc	114	10.7	"	42.8	56.8	133	75-125	3.46	25			QM-07

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:35

Total Mercury by EPA Method 7471 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1505078 - EPA 7471A

Blank (1505078-BLK1)

Prepared & Analyzed: 05/08/15

Mercury ND 0.0500 mg/kg wet

LCS (1505078-BS1)

Prepared & Analyzed: 05/08/15

Mercury 0.501 0.0500 mg/kg wet 0.500 100 80-120

Duplicate (1505078-DUP1)

Source: 1505004-01

Prepared & Analyzed: 05/08/15

Mercury 0.0184 0.0472 mg/kg dry 0.0424 78.7 20 QR-03

Matrix Spike (1505078-MS1)

Source: 1505004-01

Prepared & Analyzed: 05/08/15

Mercury 0.558 0.0536 mg/kg dry 0.511 0.0424 101 80-120

Matrix Spike Dup (1505078-MSD1)

Source: 1505004-01

Prepared & Analyzed: 05/08/15

Mercury 0.457 0.0448 mg/kg dry 0.448 0.0424 92.7 80-120 19.7 20

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:35

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505054 - General Preparation

Duplicate (1505054-DUP1)		Source: 1505004-01		Prepared: 05/05/15 Analyzed: 05/06/15	
% Solids	94.3		%	93.4	1.04 20
Duplicate (1505054-DUP2)		Source: 1505015-01		Prepared: 05/05/15 Analyzed: 05/06/15	
% Solids	76.3		%	76.7	0.633 20

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/27/15 13:35

Notes and Definitions

- QR-04 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

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Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

May 27, 2015

Steve Hoffman

Terracon - Wheat Ridge

10625 West I-70 Frontage Road, Suite 3

Wheat Ridge, CO 80033

RE: National Western Complex

Enclosed are the results of analyses for samples received by Summit Scientific on 05/01/15 15:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'Ben Shrewsbury', with a long, sweeping horizontal stroke extending to the right.

Ben Shrewsbury For Paul Shrewsbury
President



Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/27/15 13:37

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-12 (0-6")	1505008-01	Soil	05/01/15 09:15	05/01/15 15:35
MW-12 (6-24")	1505008-02	Soil	05/01/15 09:15	05/01/15 15:35
MW-12 (9')	1505008-03	Soil	05/01/15 09:50	05/01/15 15:35
SV-14 (0-6")	1505008-04	Soil	05/01/15 12:45	05/01/15 15:35
SV-14 (6-24")	1505008-05	Soil	05/01/15 12:45	05/01/15 15:35
SV-17 (0-6")	1505008-06	Soil	05/01/15 11:30	05/01/15 15:35
SV-17 (6-24")	1505008-07	Soil	05/01/15 11:30	05/01/15 15:35
SV-19 (0-6")	1505008-08	Soil	05/01/15 00:00	05/01/15 15:35
SV-19 (6-24")	1505008-09	Soil	05/01/15 00:00	05/01/15 15:35

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:37

Summit Scientific

1505008

741 Corporate Circle Suite I ♦ Golden, Colorado 80401
 303-277-9310 ♦ 303-374-5933 Fax

Client: Terracon Consultants

Page 1 of 1

Address: 10625 West I-70 Frontage Road North, Suite 3
 City/State/Zip: Wheat Ridge, CO 80033
 Phone: (303) 454-5275 Fax: (303) 423-3353
 Sampler Name: Marshall Haworth

Project Manager: Steve Hoffman
 E-Mail: sbhoffman@terracon.com
 Project Name: National Western Complex
 Project Number: 25157010

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:				Special Instructions		
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	VOC's 8260B	TPH 8015	RCRA 8+Zinc			
MW-12 (0-6")	5-1-15	0915	2		X			X									
MW-12 (6-24")	5-1-15	0915	2		X			X						X			
MW-12 (9")	5-1-15	0950	2		X			X						X			
SV-14 (0-6")	5-1-15	1245	2		X			X			X	X					
SV-14 (6-24")	5-1-15	1245	2		X			X					X				
SV-17 (0-6")	5-1-15	1130	2		X			X					X				
SV-17 (6-24")	5-1-15	1130	2		X			X					X				
SV-19 (0-6")	5-1-15		2		X			X					X				
SV-19 (6-24")	5-1-15		2		X			X					X				

Relinquished by: <u>Marshall Haworth</u>	Date/Time: <u>5-1-15 15:35</u>	Received by:	Date/Time:	Turn Around Time (Check)	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	48 Hours <input type="checkbox"/>	
				Sample Integrity:	
				Temperature Upon Receipt: <u>11.6</u>	
				Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

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S₂

Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:37

Sample Receipt Checklist

S2 Work Order: 1505008

Client: Terracon

Client Project ID: Nat. West. Complex

Shipped Via: pu
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)

Airbill #: _____

Matrix (check all that apply): Air Soil/Solid Water Other: _____ (Describe)

Cooler ID				
Temp (°C)	<u>11.6</u>			

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C ⁽¹⁾ ?	X			
NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.				
Were all samples received intact ⁽¹⁾ ?	X			
Was adequate sample volume provided ⁽¹⁾ ?	X			
If custody seals are present, are they intact ⁽¹⁾ ?			X	
Are short holding time analytes or samples with HTs due within 48 hours present?		X		
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	X			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	X			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	X			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	X			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			X	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?			X	
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, etc.				
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			X	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?			X	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

Paul Shrewsbury
 Custodian Printed Name

[Signature]
 Signature or Initials of Custodian

5-2-15
 Date/Time

[Signature]



Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:37

MW-12 (0-6")
1505008-01 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: 05/01/15 09:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	13.3	0.105	mg/kg dry	1	1505035	05/05/15	05/05/15	EPA 6020A	
Barium	141	0.105	"	"	"	"	"	"	
Cadmium	1.23	0.105	"	"	"	"	"	"	
Chromium	8.98	0.523	"	"	"	"	"	"	
Lead	403	0.105	"	"	"	"	"	"	
Selenium	0.316	0.0523	"	"	"	"	"	"	
Silver	1.86	0.105	"	"	"	"	"	"	

Date Sampled: 05/01/15 09:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	122	10.5	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: 05/01/15 09:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	0.114	0.0513	mg/kg dry	1	1505049	05/05/15	05/05/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 05/01/15 09:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.5		%	1	1505054	05/05/15	05/06/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:37

MW-12 (6-24")
1505008-02 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **05/01/15 09:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	4.61	0.109	mg/kg dry	1	1505035	05/05/15	05/05/15	EPA 6020A	
Barium	163	0.109	"	"	"	"	"	"	
Cadmium	0.291	0.109	"	"	"	"	"	"	
Chromium	17.7	0.545	"	"	"	"	"	"	
Lead	25.0	0.109	"	"	"	"	"	"	
Selenium	0.334	0.0545	"	"	"	"	"	"	
Silver	0.176	0.109	"	"	"	"	"	"	

Date Sampled: **05/01/15 09:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	79.7	10.9	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **05/01/15 09:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0479	mg/kg dry	1	1505049	05/05/15	05/05/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/01/15 09:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	91.8		%	1	1505054	05/05/15	05/06/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:37

MW-12 (9')
1505008-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/01/15 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1505025	05/02/15	05/05/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/01/15 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		104 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/01/15 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1505055	05/05/15	05/06/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:37

MW-12 (9')
1505008-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample	ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1505055	05/05/15	05/06/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"	"

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:37

MW-12 (9')
1505008-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1505055	05/05/15	05/06/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: 05/01/15 09:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		97.7 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.9 %		21-167	"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:37

SV-14 (0-6")
1505008-04 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **05/01/15 12:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	4.95	0.121	mg/kg dry	1	1505035	05/05/15	05/05/15	EPA 6020A	
Barium	133	0.121	"	"	"	"	"	"	
Cadmium	1.27	0.121	"	"	"	"	"	"	
Chromium	12.0	0.603	"	"	"	"	"	"	
Lead	108	0.121	"	"	"	"	"	"	
Selenium	0.276	0.0603	"	"	"	"	"	"	
Silver	0.585	0.121	"	"	"	"	"	"	

Date Sampled: **05/01/15 12:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	65.5	12.1	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **05/01/15 12:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0506	mg/kg dry	1	1505049	05/05/15	05/05/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/01/15 12:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	83.0		%	1	1505054	05/05/15	05/06/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:37

SV-14 (6-24")
1505008-05 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **05/01/15 12:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	4.16	0.109	mg/kg dry	1	1505035	05/05/15	05/05/15	EPA 6020A	
Barium	114	0.109	"	"	"	"	"	"	
Cadmium	1.03	0.109	"	"	"	"	"	"	
Chromium	9.87	0.544	"	"	"	"	"	"	
Lead	90.7	0.109	"	"	"	"	"	"	
Selenium	0.236	0.0544	"	"	"	"	"	"	
Silver	0.491	0.109	"	"	"	"	"	"	

Date Sampled: **05/01/15 12:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	53.0	10.9	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **05/01/15 12:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0544	mg/kg dry	1	1505049	05/05/15	05/05/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/01/15 12:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	92.0		%	1	1505054	05/05/15	05/06/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:37

**SV-17 (0-6")
 1505008-06 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **05/01/15 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	11.8	0.117	mg/kg dry	1	1505035	05/05/15	05/06/15	EPA 6020A	
Barium	170	0.117	"	"	"	"	"	"	
Cadmium	0.607	0.117	"	"	"	"	"	"	
Chromium	17.6	0.586	"	"	"	"	"	"	
Lead	88.3	0.117	"	"	"	"	"	"	
Selenium	0.465	0.0586	"	"	"	"	"	"	
Silver	0.451	0.117	"	"	"	"	"	"	

Date Sampled: **05/01/15 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	94.1	11.7	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **05/01/15 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0586	mg/kg dry	1	1505049	05/05/15	05/05/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/01/15 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	85.3		%	1	1505054	05/05/15	05/06/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:37

**SV-17 (6-24")
 1505008-07 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **05/01/15 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.58	0.119	mg/kg dry	1	1505035	05/05/15	05/06/15	EPA 6020A	
Barium	137	0.119	"	"	"	"	"	"	
Cadmium	0.133	0.119	"	"	"	"	"	"	
Chromium	13.3	0.595	"	"	"	"	"	"	
Lead	8.59	0.119	"	"	"	"	"	"	
Selenium	0.173	0.0595	"	"	"	"	"	"	
Silver	ND	0.119	"	"	"	"	"	"	

Date Sampled: **05/01/15 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	55.1	11.9	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **05/01/15 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0461	mg/kg dry	1	1505049	05/05/15	05/05/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/01/15 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	84.1		%	1	1505054	05/05/15	05/06/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:37

**SV-19 (0-6")
 1505008-08 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **05/01/15 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	10.0	0.0969	mg/kg dry	1	1505035	05/05/15	05/06/15	EPA 6020A	
Barium	144	0.0969	"	"	"	"	"	"	
Cadmium	1.49	0.0969	"	"	"	"	"	"	
Chromium	6.43	0.484	"	"	"	"	"	"	
Lead	265	0.0969	"	"	"	"	"	"	
Selenium	0.300	0.0484	"	"	"	"	"	"	
Silver	0.857	0.0969	"	"	"	"	"	"	

Date Sampled: **05/01/15 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	198	9.69	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **05/01/15 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	0.145	0.0554	mg/kg dry	1	1505049	05/05/15	05/05/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/01/15 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.2		%	1	1505054	05/05/15	05/06/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:37

**SV-19 (6-24")
 1505008-09 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **05/01/15 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.48	0.109	mg/kg dry	1	1505035	05/05/15	05/06/15	EPA 6020A	
Barium	71.4	0.109	"	"	"	"	"	"	
Cadmium	0.274	0.109	"	"	"	"	"	"	
Chromium	6.42	0.545	"	"	"	"	"	"	
Lead	27.4	0.109	"	"	"	"	"	"	
Selenium	0.134	0.0545	"	"	"	"	"	"	
Silver	0.225	0.109	"	"	"	"	"	"	

Date Sampled: **05/01/15 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	30.4	10.9	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **05/01/15 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0545	mg/kg dry	1	1505049	05/05/15	05/05/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/01/15 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	91.7		%	1	1505054	05/05/15	05/06/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:37

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505025 - EPA 3550A

Blank (1505025-BLK1)

Prepared: 05/02/15 Analyzed: 05/05/15

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
<i>Surrogate: o-Terphenyl</i>	12.5		"	12.2		102	70-130			

LCS (1505025-BS1)

Prepared: 05/02/15 Analyzed: 05/05/15

C10-C28 (DRO)	512	50	mg/kg	501		102	50-150			
<i>Surrogate: o-Terphenyl</i>	13.6		"	12.2		111	70-130			

Matrix Spike (1505025-MS1)

Source: 1505008-03

Prepared: 05/02/15 Analyzed: 05/05/15

C10-C28 (DRO)	500	50	mg/kg	477	16.0	101	50-150			
<i>Surrogate: o-Terphenyl</i>	12.9		"	11.6		111	70-130			

Matrix Spike Dup (1505025-MSD1)

Source: 1505008-03

Prepared: 05/02/15 Analyzed: 05/05/15

C10-C28 (DRO)	484	50	mg/kg	485	16.0	96.6	50-150	3.13	20	
<i>Surrogate: o-Terphenyl</i>	12.4		"	11.8		105	70-130			

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:37

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting		Spike Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

Batch 1505055 - EPA 5030 Soil MS

Blank (1505055-BLK1)

Prepared & Analyzed: 05/05/15

Benzene	ND	0.0020	mg/kg						
Bromobenzene	ND	0.0050	"						
Bromochloromethane	ND	0.0050	"						
Bromodichloromethane	ND	0.0050	"						
Bromoform	ND	0.0050	"						
Bromomethane	ND	0.010	"						
n-Butylbenzene	ND	0.0050	"						
sec-Butylbenzene	ND	0.0050	"						
tert-Butylbenzene	ND	0.0050	"						
Carbon tetrachloride	ND	0.0050	"						
Chlorobenzene	ND	0.0050	"						
Chloroethane	ND	0.0050	"						
Chloroform	ND	0.0050	"						
Chloromethane	ND	0.015	"						
2-Chlorotoluene	ND	0.0050	"						
4-Chlorotoluene	ND	0.0050	"						
Chlorodibromomethane	ND	0.010	"						
1,2-Dibromo-3-chloropropane	ND	0.015	"						
1,2-Dibromoethane (EDB)	ND	0.0050	"						
Dibromomethane	ND	0.0050	"						
1,2-Dichlorobenzene	ND	0.0050	"						
1,3-Dichlorobenzene	ND	0.0050	"						
1,4-Dichlorobenzene	ND	0.0050	"						
Dichlorodifluoromethane	ND	0.0050	"						
Tert-amyl methyl ether	ND	0.0050	"						
1,1-Dichloroethane	ND	0.0050	"						
1,2-Dichloroethane (EDC)	ND	0.0050	"						
Tert-butyl alcohol	ND	0.020	"						
1,1-Dichloroethene	ND	0.0050	"						
Ethyl tert-butyl ether	ND	0.010	"						
cis-1,2-Dichloroethene	ND	0.0050	"						
Di-isopropyl ether	ND	0.0050	"						
trans-1,2-Dichloroethene	ND	0.0050	"						
Methyl tert-butyl ether	ND	0.015	"						
1,2-Dichloropropane	ND	0.0050	"						
1,3-Dichloropropane	ND	0.0050	"						
2,2-Dichloropropane	ND	0.010	"						
1,1-Dichloropropene	ND	0.0050	"						

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:37

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505055 - EPA 5030 Soil MS

Blank (1505055-BLK1)

Prepared & Analyzed: 05/05/15

cis-1,3-Dichloropropene	ND	0.0050	mg/kg							
trans-1,3-Dichloropropene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Hexachlorobutadiene	ND	0.0050	"							
Isopropylbenzene	ND	0.0050	"							
p-Isopropyltoluene	ND	0.010	"							
Methylene Chloride	ND	0.015	"							
Naphthalene	ND	0.010	"							
n-Propylbenzene	ND	0.0050	"							
Styrene	ND	0.010	"							
1,1,2,2-Tetrachloroethane	ND	0.0050	"							
1,1,1,2-Tetrachloroethane	ND	0.0050	"							
Tetrachloroethene	ND	0.0050	"							
Toluene	ND	0.0050	"							
1,2,3-Trichlorobenzene	ND	0.0050	"							
1,2,4-Trichlorobenzene	ND	0.0050	"							
1,1,2-Trichloroethane	ND	0.0050	"							
1,1,1-Trichloroethane	ND	0.0050	"							
Trichloroethene	ND	0.0050	"							
Trichlorofluoromethane	ND	0.0050	"							
1,2,3-Trichloropropane	ND	0.010	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
Vinyl chloride	ND	0.0050	"							
m,p-Xylene	ND	0.010	"							
o-Xylene	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0400</i>		<i>"</i>	<i>0.0396</i>	<i>101</i>	<i>23-173</i>				
<i>Surrogate: Toluene-d8</i>	<i>0.0392</i>		<i>"</i>	<i>0.0400</i>	<i>98.0</i>	<i>20-170</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0380</i>		<i>"</i>	<i>0.0400</i>	<i>95.0</i>	<i>21-167</i>				

Summit Scientific

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/27/15 13:37

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505055 - EPA 5030 Soil MS

LCS (1505055-BS1)

Prepared & Analyzed: 05/05/15

Benzene	0.145	0.0020	mg/kg	0.150		96.6	58-130			
Bromobenzene	0.138	0.0050	"	0.150		92.1	87-115			
Bromochloromethane	0.144	0.0050	"	0.150		96.2	82-122			
Bromodichloromethane	0.147	0.0050	"	0.150		98.2	84-119			
Bromoform	0.149	0.0050	"	0.150		99.6	76-119			
Bromomethane	0.225	0.010	"	0.150		150	39-152			
n-Butylbenzene	0.140	0.0050	"	0.150		93.3	70-131			
sec-Butylbenzene	0.136	0.0050	"	0.150		90.9	74-124			
tert-Butylbenzene	0.139	0.0050	"	0.150		92.6	77-121			
Carbon tetrachloride	0.142	0.0050	"	0.150		94.7	66-127			
Chlorobenzene	0.148	0.0050	"	0.150		98.3	82-120			
Chloroethane	0.133	0.0050	"	0.150		88.7	63-126			
Chloroform	0.145	0.0050	"	0.150		96.8	82-120			
Chloromethane	0.166	0.015	"	0.150		111	57-133			
2-Chlorotoluene	0.134	0.0050	"	0.150		89.6	82-117			
4-Chlorotoluene	0.137	0.0050	"	0.150		91.3	81-119			
Chlorodibromomethane	0.151	0.010	"	0.150		101	82-124			
1,2-Dibromo-3-chloropropane	0.135	0.015	"	0.150		90.2	62-128			
1,2-Dibromoethane (EDB)	0.147	0.0050	"	0.150		98.0	86-122			
Dibromomethane	0.143	0.0050	"	0.150		95.1	83-124			
1,2-Dichlorobenzene	0.140	0.0050	"	0.150		93.5	84-120			
1,3-Dichlorobenzene	0.139	0.0050	"	0.150		92.4	81-118			
1,4-Dichlorobenzene	0.137	0.0050	"	0.150		91.5	80-118			
Dichlorodifluoromethane	0.167	0.0050	"	0.150		111	25-141			
Tert-amyl methyl ether	0.142	0.0050	"	0.149		95.0	50-147			
1,1-Dichloroethane	0.144	0.0050	"	0.150		96.2	78-120			
1,2-Dichloroethane (EDC)	0.149	0.0050	"	0.150		99.1	81-125			
Tert-butyl alcohol	0.615	0.020	"	0.747		82.4	64-127			
1,1-Dichloroethene	0.142	0.0050	"	0.150		94.5	71-122			
Ethyl tert-butyl ether	0.143	0.010	"	0.150		95.2	80-122			
cis-1,2-Dichloroethene	0.149	0.0050	"	0.150		99.6	84-121			
Di-isopropyl ether	0.142	0.0050	"	0.150		94.8	78-120			
trans-1,2-Dichloroethene	0.151	0.0050	"	0.150		101	77-125			
Methyl tert-butyl ether	0.144	0.015	"	0.150		96.3	77-124			
1,2-Dichloropropane	0.144	0.0050	"	0.150		95.7	88-114			
1,3-Dichloropropane	0.150	0.0050	"	0.150		100	86-122			
2,2-Dichloropropane	0.135	0.010	"	0.150		89.9	32-150			
1,1-Dichloropropene	0.143	0.0050	"	0.150		95.1	71-123			

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/27/15 13:37

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505055 - EPA 5030 Soil MS

LCS (1505055-BS1)

Prepared & Analyzed: 05/05/15

cis-1,3-Dichloropropene	0.144	0.0050	mg/kg	0.150		96.1	74-125			
trans-1,3-Dichloropropene	0.142	0.0050	"	0.150		94.7	72-126			
Ethylbenzene	0.148	0.0050	"	0.150		98.9	74-139			
Hexachlorobutadiene	0.138	0.0050	"	0.150		92.1	56-144			
Isopropylbenzene	0.146	0.0050	"	0.150		97.2	72-124			
p-Isopropyltoluene	0.136	0.010	"	0.150		90.8	72-123			
Methylene Chloride	0.140	0.015	"	0.150		93.2	10-183			
Naphthalene	0.144	0.010	"	0.150		96.0	66-138			
n-Propylbenzene	0.139	0.0050	"	0.150		92.5	76-121			
Styrene	0.154	0.010	"	0.150		103	76-133			
1,1,2,2-Tetrachloroethane	0.128	0.0050	"	0.150		85.4	60-137			
1,1,1,2-Tetrachloroethane	0.145	0.0050	"	0.150		96.7	86-121			
Tetrachloroethene	0.146	0.0050	"	0.150		97.0	69-131			
Toluene	0.144	0.0050	"	0.150		95.8	61-134			
1,2,3-Trichlorobenzene	0.146	0.0050	"	0.150		97.5	63-142			
1,2,4-Trichlorobenzene	0.147	0.0050	"	0.150		97.8	63-141			
1,1,2-Trichloroethane	0.146	0.0050	"	0.150		97.5	75-136			
1,1,1-Trichloroethane	0.144	0.0050	"	0.150		95.8	71-126			
Trichloroethene	0.154	0.0050	"	0.150		103	86-118			
Trichlorofluoromethane	0.133	0.0050	"	0.150		88.4	62-128			
1,2,3-Trichloropropane	0.133	0.010	"	0.150		88.9	80-118			
1,3,5-Trimethylbenzene	0.139	0.0050	"	0.150		92.6	72-121			
1,2,4-Trimethylbenzene	0.138	0.0050	"	0.150		92.3	78-126			
Vinyl chloride	0.149	0.0050	"	0.150		99.2	63-134			
m,p-Xylene	0.297	0.010	"	0.300		98.9	73-137			
o-Xylene	0.146	0.0050	"	0.150		97.0	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0403</i>		<i>"</i>	<i>0.0396</i>		<i>102</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0403</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0413</i>		<i>"</i>	<i>0.0400</i>		<i>103</i>	<i>21-167</i>			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:37

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505055 - EPA 5030 Soil MS

Matrix Spike (1505055-MS1)	Source: 1505004-03			Prepared & Analyzed: 05/05/15						
Benzene	0.147	0.0020	mg/kg	0.150	ND	97.7	30-131			
Bromobenzene	0.147	0.0050	"	0.150	ND	98.1	39-124			
Bromochloromethane	0.165	0.0050	"	0.150	ND	110	62-121			
Bromodichloromethane	0.157	0.0050	"	0.150	ND	104	51-120			
Bromoform	0.172	0.0050	"	0.150	ND	115	52-125			
Bromomethane	0.180	0.010	"	0.150	ND	120	10-152			
n-Butylbenzene	0.139	0.0050	"	0.150	ND	92.7	10-144			
sec-Butylbenzene	0.137	0.0050	"	0.150	ND	91.1	10-140			
tert-Butylbenzene	0.140	0.0050	"	0.150	ND	93.1	16-132			
Carbon tetrachloride	0.142	0.0050	"	0.150	ND	94.6	46-125			
Chlorobenzene	0.147	0.0050	"	0.150	ND	98.0	42-125			
Chloroethane	0.133	0.0050	"	0.150	ND	88.6	46-125			
Chloroform	0.151	0.0050	"	0.150	ND	101	57-118			
Chloromethane	0.168	0.015	"	0.150	ND	112	33-132			
2-Chlorotoluene	0.133	0.0050	"	0.150	ND	88.8	30-125			
4-Chlorotoluene	0.138	0.0050	"	0.150	ND	91.7	29-127			
Chlorodibromomethane	0.166	0.010	"	0.150	ND	111	54-124			
1,2-Dibromo-3-chloropropane	0.166	0.015	"	0.150	ND	110	10-175			
1,2-Dibromoethane (EDB)	0.170	0.0050	"	0.150	ND	113	65-125			
Dibromomethane	0.166	0.0050	"	0.150	ND	111	64-127			
1,2-Dichlorobenzene	0.150	0.0050	"	0.150	ND	99.8	24-134			
1,3-Dichlorobenzene	0.144	0.0050	"	0.150	ND	95.7	22-130			
1,4-Dichlorobenzene	0.141	0.0050	"	0.150	ND	93.8	21-131			
Dichlorodifluoromethane	0.177	0.0050	"	0.150	ND	118	47-117			QM-07
Tert-amyl methyl ether	0.162	0.0050	"	0.149	ND	108	60-124			
1,1-Dichloroethane	0.148	0.0050	"	0.150	ND	98.8	55-119			
1,2-Dichloroethane (EDC)	0.162	0.0050	"	0.150	ND	108	65-124			
Tert-butyl alcohol	0.792	0.020	"	0.747	ND	106	64-131			
1,1-Dichloroethene	0.146	0.0050	"	0.150	ND	97.2	42-145			
cis-1,2-Dichloroethene	0.154	0.0050	"	0.150	ND	103	56-121			
Ethyl tert-butyl ether	0.157	0.010	"	0.150	ND	104	60-119			
Di-isopropyl ether	0.150	0.0050	"	0.150	ND	100	40-132			
trans-1,2-Dichloroethene	0.152	0.0050	"	0.150	ND	101	52-126			
Methyl tert-butyl ether	0.169	0.015	"	0.150	ND	112	64-124			
1,2-Dichloropropane	0.150	0.0050	"	0.150	ND	100	61-115			
1,3-Dichloropropane	0.165	0.0050	"	0.150	ND	110	66-123			
2,2-Dichloropropane	0.135	0.010	"	0.150	ND	90.1	35-127			
1,1-Dichloropropene	0.147	0.0050	"	0.150	ND	98.2	52-119			

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/27/15 13:37

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505055 - EPA 5030 Soil MS

Matrix Spike (1505055-MS1)	Source: 1505004-03			Prepared & Analyzed: 05/05/15						
cis-1,3-Dichloropropene	0.164	0.0050	mg/kg	0.150	ND	109	47-122			
trans-1,3-Dichloropropene	0.162	0.0050	"	0.150	ND	108	51-119			
Ethylbenzene	0.145	0.0050	"	0.150	ND	96.6	22-153			
Hexachlorobutadiene	0.136	0.0050	"	0.150	ND	90.5	10-149			
Isopropylbenzene	0.143	0.0050	"	0.150	ND	95.4	18-135			
p-Isopropyltoluene	0.136	0.010	"	0.150	ND	90.4	12-132			
Methylene Chloride	0.147	0.015	"	0.150	ND	97.8	10-167			
Naphthalene	0.180	0.010	"	0.150	ND	120	10-158			
n-Propylbenzene	0.139	0.0050	"	0.150	ND	92.9	15-134			
Styrene	0.156	0.010	"	0.150	ND	104	33-135			
1,1,2,2-Tetrachloroethane	0.157	0.0050	"	0.150	ND	105	10-166			
1,1,1,2-Tetrachloroethane	0.152	0.0050	"	0.150	ND	101	49-123			
Tetrachloroethene	0.142	0.0050	"	0.150	ND	94.9	33-134			
Toluene	0.145	0.0050	"	0.150	ND	96.4	30-134			
1,2,3-Trichlorobenzene	0.162	0.0050	"	0.150	ND	108	10-155			
1,2,4-Trichlorobenzene	0.154	0.0050	"	0.150	ND	103	10-152			
1,1,2-Trichloroethane	0.169	0.0050	"	0.150	ND	113	46-139			
1,1,1-Trichloroethane	0.147	0.0050	"	0.150	ND	97.8	51-124			
Trichloroethene	0.152	0.0050	"	0.150	ND	102	16-187			
Trichlorofluoromethane	0.140	0.0050	"	0.150	ND	93.6	53-125			
1,2,3-Trichloropropane	0.134	0.010	"	0.150	ND	89.5	69-118			
1,3,5-Trimethylbenzene	0.140	0.0050	"	0.150	ND	93.2	20-128			
1,2,4-Trimethylbenzene	0.139	0.0050	"	0.150	ND	92.9	17-142			
Vinyl chloride	0.151	0.0050	"	0.150	ND	101	50-134			
m,p-Xylene	0.288	0.010	"	0.300	ND	96.0	10-159			
o-Xylene	0.144	0.0050	"	0.150	ND	95.8	31-151			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0446</i>		<i>"</i>	<i>0.0396</i>		<i>112</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0398</i>		<i>"</i>	<i>0.0400</i>		<i>99.6</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0411</i>		<i>"</i>	<i>0.0400</i>		<i>103</i>	<i>21-167</i>			

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/27/15 13:37

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505055 - EPA 5030 Soil MS

Matrix Spike Dup (1505055-MSD1)	Source: 1505004-03			Prepared: 05/05/15		Analyzed: 05/06/15				
Benzene	0.170	0.0020	mg/kg	0.150	ND	114	30-131	15.1	34	
Bromobenzene	0.160	0.0050	"	0.150	ND	107	39-124	8.62	21	
Bromochloromethane	0.132	0.0050	"	0.150	ND	88.1	62-121	22.0	20	QR-04
Bromodichloromethane	0.155	0.0050	"	0.150	ND	103	51-120	1.27	22	
Bromoform	0.155	0.0050	"	0.150	ND	103	52-125	10.5	22	
Bromomethane	0.287	0.010	"	0.150	ND	191	10-152	45.8	90	QR-04
n-Butylbenzene	0.183	0.0050	"	0.150	ND	122	10-144	27.3	52	
sec-Butylbenzene	0.184	0.0050	"	0.150	ND	123	10-140	29.8	45	
tert-Butylbenzene	0.188	0.0050	"	0.150	ND	126	16-132	29.8	33	
Carbon tetrachloride	0.189	0.0050	"	0.150	ND	126	46-125	28.6	22	QR-04
Chlorobenzene	0.167	0.0050	"	0.150	ND	111	42-125	12.5	18	
Chloroethane	0.157	0.0050	"	0.150	ND	105	46-125	16.7	24	
Chloroform	0.147	0.0050	"	0.150	ND	98.2	57-118	2.39	19	
Chloromethane	0.191	0.015	"	0.150	ND	128	33-132	12.9	18	
2-Chlorotoluene	0.168	0.0050	"	0.150	ND	112	30-125	23.1	24	
4-Chlorotoluene	0.172	0.0050	"	0.150	ND	114	29-127	21.9	24	
Chlorodibromomethane	0.160	0.010	"	0.150	ND	107	54-124	3.66	22	
1,2-Dibromo-3-chloropropane	0.145	0.015	"	0.150	ND	96.8	10-175	13.1	39	
1,2-Dibromoethane (EDB)	0.149	0.0050	"	0.150	ND	99.6	65-125	13.0	22	
Dibromomethane	0.140	0.0050	"	0.150	ND	93.5	64-127	17.0	19	
1,2-Dichlorobenzene	0.158	0.0050	"	0.150	ND	105	24-134	5.29	26	
1,3-Dichlorobenzene	0.161	0.0050	"	0.150	ND	107	22-130	11.4	27	
1,4-Dichlorobenzene	0.154	0.0050	"	0.150	ND	103	21-131	9.27	25	
Dichlorodifluoromethane	0.218	0.0050	"	0.150	ND	145	47-117	20.9	36	QR-04
Tert-amyl methyl ether	0.129	0.0050	"	0.149	ND	86.5	60-124	22.5	40	
1,1-Dichloroethane	0.152	0.0050	"	0.150	ND	101	55-119	2.20	22	
1,2-Dichloroethane (EDC)	0.147	0.0050	"	0.150	ND	97.7	65-124	10.2	19	
Tert-butyl alcohol	0.581	0.020	"	0.747	ND	77.7	64-131	30.8	24	QR-04
1,1-Dichloroethene	0.176	0.0050	"	0.150	ND	117	42-145	18.6	22	
cis-1,2-Dichloroethene	0.149	0.0050	"	0.150	ND	99.2	56-121	3.31	21	
Ethyl tert-butyl ether	0.132	0.010	"	0.150	ND	87.8	60-119	17.2	38	
Di-isopropyl ether	0.135	0.0050	"	0.150	ND	90.1	40-132	10.8	108	
trans-1,2-Dichloroethene	0.148	0.0050	"	0.150	ND	98.9	52-126	2.16	22	
Methyl tert-butyl ether	0.120	0.015	"	0.150	ND	80.0	64-124	33.8	28	QR-04
1,2-Dichloropropane	0.152	0.0050	"	0.150	ND	101	61-115	0.992	17	
1,3-Dichloropropane	0.154	0.0050	"	0.150	ND	103	66-123	6.87	24	
2,2-Dichloropropane	0.136	0.010	"	0.150	ND	90.6	35-127	0.553	29	
1,1-Dichloropropene	0.188	0.0050	"	0.150	ND	126	52-119	24.4	21	QR-04

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/27/15 13:37

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505055 - EPA 5030 Soil MS

Matrix Spike Dup (1505055-MSD1)	Source: 1505004-03			Prepared: 05/05/15		Analyzed: 05/06/15				
cis-1,3-Dichloropropene	0.137	0.0050	mg/kg	0.150	ND	91.6	47-122	17.7	40	
trans-1,3-Dichloropropene	0.135	0.0050	"	0.150	ND	90.2	51-119	17.7	52	
Ethylbenzene	0.182	0.0050	"	0.150	ND	121	22-153	22.4	24	
Hexachlorobutadiene	0.169	0.0050	"	0.150	ND	113	10-149	21.8	59	
Isopropylbenzene	0.182	0.0050	"	0.150	ND	121	18-135	23.9	33	
p-Isopropyltoluene	0.178	0.010	"	0.150	ND	119	12-132	26.9	38	
Methylene Chloride	0.136	0.015	"	0.150	ND	90.4	10-167	7.89	102	
Naphthalene	0.144	0.010	"	0.150	ND	96.3	10-158	22.1	42	
n-Propylbenzene	0.188	0.0050	"	0.150	ND	125	15-134	29.5	37	
Styrene	0.172	0.010	"	0.150	ND	114	33-135	9.60	22	
1,1,2,2-Tetrachloroethane	0.133	0.0050	"	0.150	ND	88.9	10-166	16.5	45	
1,1,1,2-Tetrachloroethane	0.166	0.0050	"	0.150	ND	110	49-123	8.56	21	
Tetrachloroethene	0.194	0.0050	"	0.150	ND	130	33-134	30.9	26	QR-04
Toluene	0.166	0.0050	"	0.150	ND	111	30-134	13.9	30	
1,2,3-Trichlorobenzene	0.146	0.0050	"	0.150	ND	97.1	10-155	10.6	40	
1,2,4-Trichlorobenzene	0.144	0.0050	"	0.150	ND	95.9	10-152	6.89	42	
1,1,2-Trichloroethane	0.141	0.0050	"	0.150	ND	94.1	46-139	18.0	34	
1,1,1-Trichloroethane	0.168	0.0050	"	0.150	ND	112	51-124	13.6	22	
Trichloroethene	0.194	0.0050	"	0.150	ND	129	16-187	24.1	19	QR-04
Trichlorofluoromethane	0.169	0.0050	"	0.150	ND	112	53-125	18.2	20	
1,2,3-Trichloropropane	0.135	0.010	"	0.150	ND	90.3	69-118	0.845	23	
1,3,5-Trimethylbenzene	0.189	0.0050	"	0.150	ND	126	20-128	29.9	31	
1,2,4-Trimethylbenzene	0.177	0.0050	"	0.150	ND	118	17-142	23.6	40	
Vinyl chloride	0.187	0.0050	"	0.150	ND	124	50-134	20.9	22	
m,p-Xylene	0.356	0.010	"	0.300	ND	119	10-159	21.2	68	
o-Xylene	0.168	0.0050	"	0.150	ND	112	31-151	15.7	38	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0381</i>		<i>"</i>	<i>0.0396</i>		<i>96.3</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0398</i>		<i>"</i>	<i>0.0400</i>		<i>99.4</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0388</i>		<i>"</i>	<i>0.0400</i>		<i>97.0</i>	<i>21-167</i>			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:37

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505035 - EPA 3050B

Blank (1505035-BLK1)

Prepared & Analyzed: 05/05/15

Arsenic	ND	0.100	mg/kg wet							
Barium	ND	0.100	"							
Cadmium	ND	0.100	"							
Chromium	ND	0.500	"							
Lead	ND	0.100	"							
Selenium	ND	0.0500	"							
Silver	ND	0.100	"							
Zinc	ND	10.0	"							

LCS (1505035-BS1)

Prepared & Analyzed: 05/05/15

Arsenic	114	0.235	mg/kg wet	93.6	121	78.4-140
Barium	319	0.235	"	291	110	83.2-117
Cadmium	191	0.235	"	171	112	81.9-118
Chromium	151	1.17	"	128	118	80.1-121
Lead	117	0.235	"	108	109	81.8-119
Selenium	146	0.117	"	141	104	77.3-123
Silver	39.5	0.235	"	38.0	104	75-125
Zinc	154	23.5	"	125	123	80.7-132

Duplicate (1505035-DUP1)

Source: 1505004-01

Prepared & Analyzed: 05/05/15

Arsenic	2.40	0.107	mg/kg dry	2.21	8.30	20
Barium	100	0.107	"	88.4	12.7	20
Cadmium	0.235	0.107	"	0.208	12.5	20
Chromium	15.9	0.536	"	14.1	12.4	20
Lead	15.0	0.107	"	13.4	11.9	20
Selenium	0.291	0.0536	"	0.403	32.4	20
Silver	0.237	0.107	"	0.261	9.73	20
Zinc	64.5	10.7	"	56.8	12.6	20

QR-03

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:37

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1505035 - EPA 3050B

Matrix Spike (1505035-MS1)	Source: 1505004-01			Prepared & Analyzed: 05/05/15								
Arsenic	48.4	0.107	mg/kg dry	41.8	2.21	110	75-125					
Barium	138	0.107	"	41.8	88.4	118	75-125					
Cadmium	2.69	0.107	"	2.09	0.208	119	75-125					
Chromium	63.8	0.536	"	41.8	14.1	119	75-125					
Lead	38.4	0.107	"	20.9	13.4	120	75-125					
Selenium	5.09	0.0536	"	4.18	0.403	112	75-125					
Silver	2.91	0.107	"	2.09	0.261	127	75-125					QM-07
Zinc	110	10.7	"	41.8	56.8	127	75-125					QM-07

Matrix Spike Dup (1505035-MSD1)	Source: 1505004-01			Prepared & Analyzed: 05/05/15								
Arsenic	49.9	0.107	mg/kg dry	42.8	2.21	111	75-125	3.09	25			
Barium	144	0.107	"	42.8	88.4	130	75-125	4.72	25			QM-07
Cadmium	2.86	0.107	"	2.14	0.208	124	75-125	5.83	25			
Chromium	65.9	0.536	"	42.8	14.1	121	75-125	3.35	25			
Lead	40.0	0.107	"	21.4	13.4	125	75-125	4.18	25			
Selenium	5.06	0.0536	"	4.28	0.403	109	75-125	0.589	25			
Silver	3.12	0.107	"	2.14	0.261	134	75-125	7.10	25			QM-07
Zinc	114	10.7	"	42.8	56.8	133	75-125	3.46	25			QM-07

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:37

Total Mercury by EPA Method 7471 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505049 - EPA 7471A

LCS (1505049-BS1)				Prepared & Analyzed: 05/05/15						
Mercury	0.502	0.0500	mg/kg wet	0.500		100	80-120			
Duplicate (1505049-DUP1)				Source: 1504295-01 Prepared & Analyzed: 05/05/15						
Mercury	ND	0.0473	mg/kg dry		0.00373				20	
Matrix Spike (1505049-MS1)				Source: 1504295-01 Prepared & Analyzed: 05/05/15						
Mercury	0.460	0.0488	mg/kg dry	0.488	0.00373	93.6	80-120			
Matrix Spike Dup (1505049-MSD1)				Source: 1504295-01 Prepared & Analyzed: 05/05/15						
Mercury	0.438	0.0460	mg/kg dry	0.460	0.00373	94.5	80-120	4.99	20	

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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:37

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505054 - General Preparation

Duplicate (1505054-DUP1)		Source: 1505004-01			Prepared: 05/05/15		Analyzed: 05/06/15	
% Solids	94.3		%		93.4		1.04	20
Duplicate (1505054-DUP2)		Source: 1505015-01			Prepared: 05/05/15		Analyzed: 05/06/15	
% Solids	76.3		%		76.7		0.633	20

Summit Scientific

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/27/15 13:37

Notes and Definitions

- QR-04 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

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Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

May 18, 2015

Steve Hoffman

Terracon - Wheat Ridge

10625 West I-70 Frontage Road, Suite 3

Wheat Ridge, CO 80033

RE: National Western Complex

Enclosed are the results of analyses for samples received by Summit Scientific on 05/08/15 10:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to be 'Ben Shrewsbury', with a long, sweeping horizontal stroke extending to the right.

Ben Shrewsbury For Paul Shrewsbury
President



Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/18/15 13:20

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TP-1 (0-2')	1505079-01	Soil	05/07/15 13:25	05/08/15 10:50
TP-2 (0-2')	1505079-02	Soil	05/07/15 14:25	05/08/15 10:50
TP-3 (0-2')	1505079-03	Soil	05/07/15 16:00	05/08/15 10:50
TP-3 (10')	1505079-04	Soil	05/07/15 16:00	05/08/15 10:50

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/18/15 13:20

Summit Scientific

1504079

741 Corporate Circle Suite I ♦ Golden, Colorado 80401
 303-277-9310 ♦ 303-374-5933 Fax

Page 1 of 1

Client: Terracon Consultants

Address: 10625 West I-70 Frontage Road North, Suite 3

City/State/Zip: Wheat Ridge, CO 80033

Phone: (303) 454-5275

Fax: (303) 423-3353

Sampler Name: Marshall Haworth

Project Manager: Steve Hoffman

E-Mail: sbhoffman@terracon.com

Project Name: National Western Complex

Project Number: 25157010

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:				Special Instructions	
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	VOC's 8260B	TPH 8015	PCRA B+Zinc		SUDC 8270
TP-1 (0-2)	5-7-15	1325	1			X										
TP-2 (0-2)	5-7-15	1425	1			X										
TP-3 (0-2)	5-7-15	1600	1			X										
TP-3 (0-2)	5-7-15	1600	1			X						X	X	X	X	
Relinquished by: <i>Marshall Haworth</i> Date/Time: 5-8-15				Received by: <i>Ante Ulek</i> Date/Time: 5/8/15				Turn Around Time (Check)				Notes:				
								Same Day <input type="checkbox"/>				72 Hours <input type="checkbox"/>				
								24 Hours <input type="checkbox"/>				Standard <input checked="" type="checkbox"/>				
								48 Hours <input type="checkbox"/>				on ice				
Relinquished by:				Received in Lab by:				Sample Integrity:				Temperature Upon Receipt: 17.3				
								Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>								

www.s2scientific.com

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/18/15 13:20

Sample Receipt Checklist

S2 Work Order: 1504079

Client: Terracon

Client Project ID: National Western Complex

Shipped Via: PU

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Airbill #: _____

Matrix (check all that apply): Air Soil/Solid Water Other: _____
 (Describe)

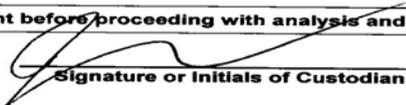
Cooler ID					
Temp (°C)	<u>17.3</u>				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C ⁽¹⁾ ?				
NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>			
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
If custody seals are present, are they intact ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present?			<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, etc.			<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Record the pH in Comments.			<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

Ben Shrawsbury
 Custodian Printed Name


 Signature or Initials of Custodian

5/18/15 1230
 Date/Time





Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/18/15 13:20

**TP-1 (0-2')
 1505079-01 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **05/07/15 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.59	0.107	mg/kg dry	1	1505082	05/08/15	05/09/15	EPA 6020A	
Barium	119	0.107	"	"	"	"	"	"	
Cadmium	0.216	0.107	"	"	"	"	"	"	
Chromium	5.45	0.537	"	"	"	"	"	"	
Lead	43.6	0.107	"	"	"	"	"	"	
Selenium	0.110	0.0537	"	"	"	"	"	"	
Silver	0.156	0.107	"	"	"	"	"	"	

Date Sampled: **05/07/15 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	107	10.7	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **05/07/15 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	0.135	0.0537	mg/kg dry	1	1505104	05/12/15	05/12/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/07/15 13:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.1		%	1	1505087	05/08/15	05/11/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/18/15 13:20

**TP-2 (0-2')
 1505079-02 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **05/07/15 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	4.23	0.0909	mg/kg dry	1	1505082	05/08/15	05/09/15	EPA 6020A	
Barium	188	0.0909	"	"	"	"	"	"	
Cadmium	0.303	0.0909	"	"	"	"	"	"	
Chromium	6.79	0.455	"	"	"	"	"	"	
Lead	44.9	0.0909	"	"	"	"	"	"	
Selenium	0.136	0.0455	"	"	"	"	"	"	
Silver	0.462	0.0909	"	"	"	"	"	"	

Date Sampled: **05/07/15 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	299	9.09	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **05/07/15 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0527	mg/kg dry	1	1505104	05/12/15	05/12/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/07/15 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.8		%	1	1505087	05/08/15	05/11/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/18/15 13:20

TP-3 (0-2')
1505079-03 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **05/07/15 16:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	4.17	0.106	mg/kg dry	1	1505082	05/08/15	05/09/15	EPA 6020A	
Barium	76.8	0.106	"	"	"	"	"	"	
Cadmium	1.71	0.106	"	"	"	"	"	"	
Chromium	5.17	0.529	"	"	"	"	"	"	
Lead	20.6	0.106	"	"	"	"	"	"	
Selenium	0.138	0.0529	"	"	"	"	"	"	
Silver	ND	0.106	"	"	"	"	"	"	

Date Sampled: **05/07/15 16:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	61.5	10.6	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **05/07/15 16:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0529	mg/kg dry	1	1505104	05/12/15	05/12/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/07/15 16:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.5		%	1	1505087	05/08/15	05/11/15	% calculation	

Summit Scientific

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Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/18/15 13:20

TP-3 (10')
1505079-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/07/15 16:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1505091	05/08/15	05/09/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/07/15 16:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		106 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/07/15 16:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1505108	05/12/15	05/13/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/18/15 13:20

TP-3 (10')
1505079-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample	Lab	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1505108	05/12/15	05/13/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"	"

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/18/15 13:20

TP-3 (10')
1505079-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1505108	05/12/15	05/13/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: 05/07/15 16:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.4 %	21-167		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270D

Date Sampled: 05/07/15 16:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	4400	3300	ug/kg	10	1505124	05/14/15	05/16/15	EPA 8270D	
Acenaphthylene	ND	330	"	1	"	"	"	"	
Anthracene	8300	3300	"	10	"	"	"	"	
Benzo (a) anthracene	14000	3300	"	"	"	"	"	"	
Benzo (b) fluoranthene	26000	3300	"	"	"	"	"	"	
Benzo (k) fluoranthene	28000	3300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	330	"	1	"	"	"	"	
Benzo (a) pyrene	13000	3300	"	10	"	"	"	"	
Benzyl alcohol	ND	330	"	1	"	"	"	"	
Pyridine	ND	330	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	330	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	330	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	330	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	330	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	330	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	330	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/18/15 13:20

TP-3 (10')
1505079-04 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D

Compound	Result	Method	Unit	Sample ID	Date	Date	Method
Butyl benzyl phthalate	ND	330	ug/kg	1	1505124	05/14/15	EPA 8270D
4-Chloroaniline	ND	330	"	"	"	"	"
4-Chloro-3-methylphenol	ND	330	"	"	"	"	"
2-Chloronaphthalene	ND	330	"	"	"	"	"
2-Chlorophenol	ND	330	"	"	"	"	"
4-Chlorophenyl phenyl ether	ND	330	"	"	"	"	"
Chrysene	15000	3300	"	10	"	"	"
Dibenz (a,h) anthracene	ND	330	"	1	"	"	"
Dibenzofuran	2100	330	"	"	"	"	"
Di-n-butyl phthalate	ND	330	"	"	"	"	"
1,2-Dichlorobenzene	ND	330	"	"	"	"	"
1,3-Dichlorobenzene	ND	330	"	"	"	"	"
1,4-Dichlorobenzene	ND	330	"	"	"	"	"
2,4-Dichlorophenol	ND	330	"	"	"	"	"
Diethyl phthalate	ND	330	"	"	"	"	"
2,4-Dimethylphenol	ND	330	"	"	"	"	"
Carbazole	1700	330	"	"	"	"	"
Dimethyl phthalate	ND	330	"	"	"	"	"
4,6-Dinitro-2-methylphenol	ND	330	"	"	"	"	"
2,4-Dinitrophenol	ND	330	"	"	"	"	"
Azobenzene	ND	330	"	"	"	"	"
2,4-Dinitrotoluene	ND	330	"	"	"	"	"
2,6-Dinitrotoluene	ND	330	"	"	"	"	"
Di-n-octyl phthalate	ND	330	"	"	"	"	"
Fluoranthene	27000	3300	"	10	"	"	"
Fluorene	3500	3300	"	"	"	"	"
Hexachlorobenzene	ND	330	"	1	"	"	"
Hexachlorobutadiene	ND	330	"	"	"	"	"
Hexachlorocyclopentadiene	ND	330	"	"	"	"	"
Hexachloroethane	ND	330	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	330	"	"	"	"	"
Isophorone	ND	330	"	"	"	"	"
2-Methylnaphthalene	660	330	"	"	"	"	"
2-Methylphenol	ND	330	"	"	"	"	"
4-Methylphenol	ND	330	"	"	"	"	"
Naphthalene	1300	330	"	"	"	"	"
1,4-Dinitrobenzene	ND	330	"	"	"	"	"

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/18/15 13:20

TP-3 (10')
1505079-04 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
2-Nitroaniline	ND	330	ug/kg	1	1505124	05/14/15	05/16/15	EPA 8270D
1,3-Dinitrobenzene	ND	330	"	"	"	"	"	"
3-Nitroaniline	ND	330	"	"	"	"	"	"
1,2-Dinitrobenzene	ND	330	"	"	"	"	"	"
4-Nitroaniline	ND	330	"	"	"	"	"	"
Nitrobenzene	ND	330	"	"	"	"	"	"
2-Nitrophenol	ND	330	"	"	"	"	"	"
4-Nitrophenol	ND	330	"	"	"	"	"	"
2,3,4,6-Tetrachlorophenol	ND	330	"	"	"	"	"	"
N-Nitrosodi-n-propylamine	ND	330	"	"	"	"	"	"
Pentachlorophenol	ND	330	"	"	"	"	"	"
Phenanthrene	29000	3300	"	10	"	"	"	"
Phenol	ND	330	"	1	"	"	"	"
Aniline	ND	330	"	"	"	"	"	"
Pyrene	48000	33000	"	100	"	"	"	"
1,2,4-Trichlorobenzene	ND	330	"	1	"	"	"	"
2,4,5-Trichlorophenol	ND	330	"	"	"	"	"	"
2,4,6-Trichlorophenol	ND	330	"	"	"	"	"	"

Date Sampled: **05/07/15 16:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Fluorophenol		61.2 %		30-200	"	"	"	"	
Surrogate: Phenol-d6		68.8 %		30-200	"	"	"	"	
Surrogate: Nitrobenzene-d5		83.2 %		30-200	"	"	"	"	
Surrogate: 2-Fluorobiphenyl		78.2 %		30-200	"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		117 %		30-200	"	"	"	"	
Surrogate: Terphenyl-d14		272 %		30-300	"	"	"	"	

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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/18/15 13:20

TP-3 (10')
1505079-04 (Soil)

Summit Scientific

Oil and Grease by EPA 9071B (Solids)

Date Sampled: **05/07/15 16:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Oil & Grease (HEM)	320	10.0	mg/kg	1	1505106	05/12/15	05/12/15	EPA 9071B	

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Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/18/15 13:20

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch 1505091 - EPA 3550A

Blank (1505091-BLK1)				Prepared & Analyzed: 05/08/15							
C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
<i>Surrogate: o-Terphenyl</i>	<i>13.1</i>		<i>"</i>	<i>12.2</i>	<i>107</i>	<i>70-130</i>					
LCS (1505091-BS1)				Prepared & Analyzed: 05/08/15							
C10-C28 (DRO)	475	50	mg/kg	501	94.9	50-150					
<i>Surrogate: o-Terphenyl</i>	<i>12.9</i>		<i>"</i>	<i>12.2</i>	<i>106</i>	<i>70-130</i>					
Matrix Spike (1505091-MS1)				Source: 1505081-01		Prepared & Analyzed: 05/08/15					
C10-C28 (DRO)	429	50	mg/kg	471	8.62	89.3	50-150				
<i>Surrogate: o-Terphenyl</i>	<i>11.9</i>		<i>"</i>	<i>11.5</i>	<i>104</i>	<i>70-130</i>					
Matrix Spike Dup (1505091-MSD1)				Source: 1505081-01		Prepared & Analyzed: 05/08/15					
C10-C28 (DRO)	433	50	mg/kg	471	8.62	90.0	50-150	0.827	20		
<i>Surrogate: o-Terphenyl</i>	<i>12.1</i>		<i>"</i>	<i>11.5</i>	<i>105</i>	<i>70-130</i>					

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/18/15 13:20

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting		Spike Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

Batch 1505108 - EPA 5030 Soil MS

Blank (1505108-BLK1)

Prepared: 05/12/15 Analyzed: 05/13/15

Benzene	ND	0.0020	mg/kg						
Bromobenzene	ND	0.0050	"						
Bromochloromethane	ND	0.0050	"						
Bromodichloromethane	ND	0.0050	"						
Bromoform	ND	0.0050	"						
Bromomethane	ND	0.010	"						
n-Butylbenzene	ND	0.0050	"						
sec-Butylbenzene	ND	0.0050	"						
tert-Butylbenzene	ND	0.0050	"						
Carbon tetrachloride	ND	0.0050	"						
Chlorobenzene	ND	0.0050	"						
Chloroethane	ND	0.0050	"						
Chloroform	ND	0.0050	"						
Chloromethane	ND	0.015	"						
2-Chlorotoluene	ND	0.0050	"						
4-Chlorotoluene	ND	0.0050	"						
Chlorodibromomethane	ND	0.010	"						
1,2-Dibromo-3-chloropropane	ND	0.015	"						
1,2-Dibromoethane (EDB)	ND	0.0050	"						
Dibromomethane	ND	0.0050	"						
1,2-Dichlorobenzene	ND	0.0050	"						
1,3-Dichlorobenzene	ND	0.0050	"						
1,4-Dichlorobenzene	ND	0.0050	"						
Dichlorodifluoromethane	ND	0.0050	"						
Tert-amyl methyl ether	ND	0.0050	"						
1,1-Dichloroethane	ND	0.0050	"						
1,2-Dichloroethane (EDC)	ND	0.0050	"						
Tert-butyl alcohol	ND	0.020	"						
1,1-Dichloroethene	ND	0.0050	"						
Ethyl tert-butyl ether	ND	0.010	"						
cis-1,2-Dichloroethene	ND	0.0050	"						
Di-isopropyl ether	ND	0.0050	"						
trans-1,2-Dichloroethene	ND	0.0050	"						
Methyl tert-butyl ether	ND	0.015	"						
1,2-Dichloropropane	ND	0.0050	"						
1,3-Dichloropropane	ND	0.0050	"						
2,2-Dichloropropane	ND	0.010	"						
1,1-Dichloropropene	ND	0.0050	"						

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10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/18/15 13:20

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505108 - EPA 5030 Soil MS

Blank (1505108-BLK1)

Prepared: 05/12/15 Analyzed: 05/13/15

cis-1,3-Dichloropropene	ND	0.0050	mg/kg							
trans-1,3-Dichloropropene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Hexachlorobutadiene	ND	0.0050	"							
Isopropylbenzene	ND	0.0050	"							
p-Isopropyltoluene	ND	0.010	"							
Methylene Chloride	ND	0.015	"							
Naphthalene	ND	0.010	"							
n-Propylbenzene	ND	0.0050	"							
Styrene	ND	0.010	"							
1,1,2,2-Tetrachloroethane	ND	0.0050	"							
1,1,1,2-Tetrachloroethane	ND	0.0050	"							
Tetrachloroethene	ND	0.0050	"							
Toluene	ND	0.0050	"							
1,2,3-Trichlorobenzene	ND	0.0050	"							
1,2,4-Trichlorobenzene	ND	0.0050	"							
1,1,2-Trichloroethane	ND	0.0050	"							
1,1,1-Trichloroethane	ND	0.0050	"							
Trichloroethene	ND	0.0050	"							
Trichlorofluoromethane	ND	0.0050	"							
1,2,3-Trichloropropane	ND	0.010	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
Vinyl chloride	ND	0.0050	"							
m,p-Xylene	ND	0.010	"							
o-Xylene	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0400</i>		<i>"</i>	<i>0.0396</i>	<i>101</i>	<i>23-173</i>				
<i>Surrogate: Toluene-d8</i>	<i>0.0392</i>		<i>"</i>	<i>0.0400</i>	<i>98.1</i>	<i>20-170</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0392</i>		<i>"</i>	<i>0.0400</i>	<i>98.0</i>	<i>21-167</i>				

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Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/18/15 13:20

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505108 - EPA 5030 Soil MS

LCS (1505108-BS1)

Prepared: 05/12/15 Analyzed: 05/13/15

Benzene	0.149	0.0020	mg/kg	0.150		99.6	58-130			
Bromobenzene	0.144	0.0050	"	0.150		96.0	87-115			
Bromochloromethane	0.149	0.0050	"	0.150		99.0	82-122			
Bromodichloromethane	0.150	0.0050	"	0.150		100	84-119			
Bromoform	0.152	0.0050	"	0.150		102	76-119			
Bromomethane	0.158	0.010	"	0.150		106	39-152			
n-Butylbenzene	0.146	0.0050	"	0.150		97.4	70-131			
sec-Butylbenzene	0.144	0.0050	"	0.150		95.8	74-124			
tert-Butylbenzene	0.147	0.0050	"	0.150		97.8	77-121			
Carbon tetrachloride	0.139	0.0050	"	0.150		92.6	66-127			
Chlorobenzene	0.155	0.0050	"	0.150		103	82-120			
Chloroethane	0.163	0.0050	"	0.150		109	63-126			
Chloroform	0.154	0.0050	"	0.150		102	82-120			
Chloromethane	0.147	0.015	"	0.150		97.8	57-133			
2-Chlorotoluene	0.143	0.0050	"	0.150		95.3	82-117			
4-Chlorotoluene	0.143	0.0050	"	0.150		95.6	81-119			
Chlorodibromomethane	0.153	0.010	"	0.150		102	82-124			
1,2-Dibromo-3-chloropropane	0.136	0.015	"	0.150		90.5	62-128			
1,2-Dibromoethane (EDB)	0.154	0.0050	"	0.150		103	86-122			
Dibromomethane	0.147	0.0050	"	0.150		98.1	83-124			
1,2-Dichlorobenzene	0.146	0.0050	"	0.150		97.4	84-120			
1,3-Dichlorobenzene	0.145	0.0050	"	0.150		96.9	81-118			
1,4-Dichlorobenzene	0.143	0.0050	"	0.150		95.4	80-118			
Dichlorodifluoromethane	0.141	0.0050	"	0.150		93.8	25-141			
Tert-amyl methyl ether	0.152	0.0050	"	0.149		101	50-147			
1,1-Dichloroethane	0.153	0.0050	"	0.150		102	78-120			
1,2-Dichloroethane (EDC)	0.148	0.0050	"	0.150		98.5	81-125			
Tert-butyl alcohol	0.722	0.020	"	0.747		96.7	64-127			
1,1-Dichloroethene	0.148	0.0050	"	0.150		98.9	71-122			
Ethyl tert-butyl ether	0.151	0.010	"	0.150		101	80-122			
cis-1,2-Dichloroethene	0.157	0.0050	"	0.150		105	84-121			
Di-isopropyl ether	0.153	0.0050	"	0.150		102	78-120			
trans-1,2-Dichloroethene	0.157	0.0050	"	0.150		105	77-125			
Methyl tert-butyl ether	0.154	0.015	"	0.150		102	77-124			
1,2-Dichloropropane	0.148	0.0050	"	0.150		98.6	88-114			
1,3-Dichloropropane	0.156	0.0050	"	0.150		104	86-122			
2,2-Dichloropropane	0.131	0.010	"	0.150		87.6	32-150			
1,1-Dichloropropene	0.144	0.0050	"	0.150		96.1	71-123			

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Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/18/15 13:20

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505108 - EPA 5030 Soil MS

LCS (1505108-BS1)

Prepared: 05/12/15 Analyzed: 05/13/15

cis-1,3-Dichloropropene	0.148	0.0050	mg/kg	0.150		98.7	74-125			
trans-1,3-Dichloropropene	0.150	0.0050	"	0.150		100	72-126			
Ethylbenzene	0.156	0.0050	"	0.150		104	74-139			
Hexachlorobutadiene	0.142	0.0050	"	0.150		94.8	56-144			
Isopropylbenzene	0.155	0.0050	"	0.150		103	72-124			
p-Isopropyltoluene	0.142	0.010	"	0.150		94.9	72-123			
Methylene Chloride	0.154	0.015	"	0.150		103	10-183			
Naphthalene	0.144	0.010	"	0.150		95.7	66-138			
n-Propylbenzene	0.147	0.0050	"	0.150		97.7	76-121			
Styrene	0.160	0.010	"	0.150		107	76-133			
1,1,2,2-Tetrachloroethane	0.123	0.0050	"	0.150		81.9	60-137			
1,1,1,2-Tetrachloroethane	0.156	0.0050	"	0.150		104	86-121			
Tetrachloroethene	0.155	0.0050	"	0.150		103	69-131			
Toluene	0.146	0.0050	"	0.150		97.0	61-134			
1,2,3-Trichlorobenzene	0.143	0.0050	"	0.150		95.5	63-142			
1,2,4-Trichlorobenzene	0.146	0.0050	"	0.150		97.2	63-141			
1,1,2-Trichloroethane	0.156	0.0050	"	0.150		104	75-136			
1,1,1-Trichloroethane	0.150	0.0050	"	0.150		99.8	71-126			
Trichloroethene	0.165	0.0050	"	0.150		110	86-118			
Trichlorofluoromethane	0.145	0.0050	"	0.150		96.4	62-128			
1,2,3-Trichloropropane	0.140	0.010	"	0.150		93.2	80-118			
1,3,5-Trimethylbenzene	0.146	0.0050	"	0.150		97.4	72-121			
1,2,4-Trimethylbenzene	0.147	0.0050	"	0.150		98.3	78-126			
Vinyl chloride	0.146	0.0050	"	0.150		97.5	63-134			
m,p-Xylene	0.307	0.010	"	0.300		102	73-137			
o-Xylene	0.155	0.0050	"	0.150		103	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0400</i>		<i>"</i>	<i>0.0396</i>		<i>101</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0396</i>		<i>"</i>	<i>0.0400</i>		<i>99.1</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0401</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>21-167</i>			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/18/15 13:20

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505108 - EPA 5030 Soil MS

Matrix Spike (1505108-MS1)

Source: 1505079-04

Prepared: 05/12/15 Analyzed: 05/13/15

Analyte	Result	Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Notes
Benzene	0.121	0.0020	mg/kg	0.150	ND	80.3	30-131			
Bromobenzene	0.102	0.0050	"	0.150	ND	67.9	39-124			
Bromochloromethane	0.139	0.0050	"	0.150	ND	92.6	62-121			
Bromodichloromethane	0.125	0.0050	"	0.150	ND	83.4	51-120			
Bromoform	0.119	0.0050	"	0.150	ND	79.4	52-125			
Bromomethane	0.102	0.010	"	0.150	ND	67.7	10-152			
n-Butylbenzene	0.0693	0.0050	"	0.150	ND	46.2	10-144			
sec-Butylbenzene	0.0810	0.0050	"	0.150	ND	54.0	10-140			
tert-Butylbenzene	0.0936	0.0050	"	0.150	ND	62.4	16-132			
Carbon tetrachloride	0.108	0.0050	"	0.150	ND	71.8	46-125			
Chlorobenzene	0.105	0.0050	"	0.150	ND	70.0	42-125			
Chloroethane	0.143	0.0050	"	0.150	ND	95.2	46-125			
Chloroform	0.133	0.0050	"	0.150	ND	88.7	57-118			
Chloromethane	0.134	0.015	"	0.150	ND	89.3	33-132			
2-Chlorotoluene	0.0931	0.0050	"	0.150	ND	62.1	30-125			
4-Chlorotoluene	0.0935	0.0050	"	0.150	ND	62.3	29-127			
Chlorodibromomethane	0.122	0.010	"	0.150	ND	81.4	54-124			
1,2-Dibromo-3-chloropropane	0.124	0.015	"	0.150	ND	82.5	10-175			
1,2-Dibromoethane (EDB)	0.135	0.0050	"	0.150	ND	89.7	65-125			
Dibromomethane	0.136	0.0050	"	0.150	ND	90.7	64-127			
1,2-Dichlorobenzene	0.0908	0.0050	"	0.150	ND	60.6	24-134			
1,3-Dichlorobenzene	0.0854	0.0050	"	0.150	ND	56.9	22-130			
1,4-Dichlorobenzene	0.0840	0.0050	"	0.150	ND	56.0	21-131			
Dichlorodifluoromethane	0.133	0.0050	"	0.150	ND	88.8	47-117			
Tert-amyl methyl ether	0.148	0.0050	"	0.149	ND	99.4	60-124			
1,1-Dichloroethane	0.133	0.0050	"	0.150	ND	88.7	55-119			
1,2-Dichloroethane (EDC)	0.136	0.0050	"	0.150	ND	90.8	65-124			
Tert-butyl alcohol	0.834	0.020	"	0.747	ND	112	64-131			
1,1-Dichloroethene	0.125	0.0050	"	0.150	ND	83.1	42-145			
Ethyl tert-butyl ether	0.146	0.010	"	0.150	ND	97.0	60-119			
cis-1,2-Dichloroethene	0.129	0.0050	"	0.150	ND	86.2	56-121			
Di-isopropyl ether	0.143	0.0050	"	0.150	ND	95.0	40-132			
trans-1,2-Dichloroethene	0.123	0.0050	"	0.150	ND	82.3	52-126			
Methyl tert-butyl ether	0.157	0.015	"	0.150	ND	105	64-124			
1,2-Dichloropropane	0.129	0.0050	"	0.150	ND	86.2	61-115			
1,3-Dichloropropane	0.135	0.0050	"	0.150	ND	89.8	66-123			
2,2-Dichloropropane	0.115	0.010	"	0.150	ND	77.0	35-127			
1,1-Dichloropropene	0.111	0.0050	"	0.150	ND	74.1	52-119			

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
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Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505108 - EPA 5030 Soil MS

Matrix Spike (1505108-MS1)	Source: 1505079-04			Prepared: 05/12/15		Analyzed: 05/13/15	
cis-1,3-Dichloropropene	0.119	0.0050	mg/kg	0.150	ND	79.2	47-122
trans-1,3-Dichloropropene	0.121	0.0050	"	0.150	ND	80.4	51-119
Ethylbenzene	0.108	0.0050	"	0.150	ND	72.1	22-153
Hexachlorobutadiene	0.0353	0.0050	"	0.150	ND	23.5	10-149
Isopropylbenzene	0.101	0.0050	"	0.150	ND	67.6	18-135
p-Isopropyltoluene	0.0819	0.010	"	0.150	ND	54.6	12-132
Methylene Chloride	0.136	0.015	"	0.150	ND	90.5	10-167
Naphthalene	0.0809	0.010	"	0.150	ND	53.9	10-158
n-Propylbenzene	0.0934	0.0050	"	0.150	ND	62.3	15-134
Styrene	0.101	0.010	"	0.150	ND	67.7	33-135
1,1,2,2-Tetrachloroethane	0.139	0.0050	"	0.150	ND	92.5	10-166
1,1,1,2-Tetrachloroethane	0.120	0.0050	"	0.150	ND	79.9	49-123
Tetrachloroethene	0.101	0.0050	"	0.150	ND	67.6	33-134
Toluene	0.112	0.0050	"	0.150	ND	74.5	30-134
1,2,3-Trichlorobenzene	0.0615	0.0050	"	0.150	ND	41.0	10-155
1,2,4-Trichlorobenzene	0.0597	0.0050	"	0.150	ND	39.8	10-152
1,1,2-Trichloroethane	0.144	0.0050	"	0.150	ND	95.8	46-139
1,1,1-Trichloroethane	0.126	0.0050	"	0.150	ND	84.2	51-124
Trichloroethene	0.112	0.0050	"	0.150	ND	74.7	16-187
Trichlorofluoromethane	0.126	0.0050	"	0.150	ND	84.2	53-125
1,2,3-Trichloropropane	0.135	0.010	"	0.150	ND	89.8	69-118
1,3,5-Trimethylbenzene	0.102	0.0050	"	0.150	ND	67.8	20-128
1,2,4-Trimethylbenzene	0.0964	0.0050	"	0.150	ND	64.3	17-142
Vinyl chloride	0.126	0.0050	"	0.150	ND	84.1	50-134
m,p-Xylene	0.209	0.010	"	0.300	ND	69.6	10-159
o-Xylene	0.108	0.0050	"	0.150	ND	71.8	31-151
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0425</i>		<i>"</i>	<i>0.0396</i>		<i>107</i>	<i>23-173</i>
<i>Surrogate: Toluene-d8</i>	<i>0.0397</i>		<i>"</i>	<i>0.0400</i>		<i>99.2</i>	<i>20-170</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0395</i>		<i>"</i>	<i>0.0400</i>		<i>98.8</i>	<i>21-167</i>

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Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505108 - EPA 5030 Soil MS

Matrix Spike Dup (1505108-MSD1)	Source: 1505079-04			Prepared: 05/12/15		Analyzed: 05/13/15				
Benzene	0.115	0.0020	mg/kg	0.150	ND	76.4	30-131	5.03	34	
Bromobenzene	0.0832	0.0050	"	0.150	ND	55.5	39-124	20.2	21	
Bromochloromethane	0.129	0.0050	"	0.150	ND	85.8	62-121	7.62	20	
Bromodichloromethane	0.121	0.0050	"	0.150	ND	80.5	51-120	3.59	22	
Bromoform	0.111	0.0050	"	0.150	ND	73.9	52-125	7.10	22	
Bromomethane	0.0793	0.010	"	0.150	ND	52.8	10-152	24.7	90	
n-Butylbenzene	0.0490	0.0050	"	0.150	ND	32.7	10-144	34.4	52	
sec-Butylbenzene	0.0615	0.0050	"	0.150	ND	41.0	10-140	27.4	45	
tert-Butylbenzene	0.0735	0.0050	"	0.150	ND	49.0	16-132	24.1	33	
Carbon tetrachloride	0.0999	0.0050	"	0.150	ND	66.6	46-125	7.46	22	
Chlorobenzene	0.0917	0.0050	"	0.150	ND	61.2	42-125	13.5	18	
Chloroethane	0.135	0.0050	"	0.150	ND	90.1	46-125	5.59	24	
Chloroform	0.123	0.0050	"	0.150	ND	82.3	57-118	7.49	19	
Chloromethane	0.127	0.015	"	0.150	ND	84.3	33-132	5.74	18	
2-Chlorotoluene	0.0747	0.0050	"	0.150	ND	49.8	30-125	21.9	24	
4-Chlorotoluene	0.0742	0.0050	"	0.150	ND	49.5	29-127	23.0	24	
Chlorodibromomethane	0.115	0.010	"	0.150	ND	76.7	54-124	5.94	22	
1,2-Dibromo-3-chloropropane	0.112	0.015	"	0.150	ND	74.7	10-175	10.0	39	
1,2-Dibromoethane (EDB)	0.120	0.0050	"	0.150	ND	79.8	65-125	11.7	22	
Dibromomethane	0.130	0.0050	"	0.150	ND	87.0	64-127	4.16	19	
1,2-Dichlorobenzene	0.0703	0.0050	"	0.150	ND	46.9	24-134	25.5	26	
1,3-Dichlorobenzene	0.0648	0.0050	"	0.150	ND	43.2	22-130	27.4	27	QM-07
1,4-Dichlorobenzene	0.0649	0.0050	"	0.150	ND	43.2	21-131	25.8	25	QM-07
Dichlorodifluoromethane	0.124	0.0050	"	0.150	ND	82.8	47-117	6.94	36	
Tert-amyl methyl ether	0.139	0.0050	"	0.149	ND	93.2	60-124	6.38	40	
1,1-Dichloroethane	0.125	0.0050	"	0.150	ND	83.5	55-119	6.06	22	
1,2-Dichloroethane (EDC)	0.130	0.0050	"	0.150	ND	86.7	65-124	4.69	19	
Tert-butyl alcohol	0.769	0.020	"	0.747	ND	103	64-131	8.12	24	
1,1-Dichloroethene	0.116	0.0050	"	0.150	ND	77.6	42-145	6.84	22	
cis-1,2-Dichloroethene	0.122	0.0050	"	0.150	ND	81.2	56-121	6.05	21	
Ethyl tert-butyl ether	0.137	0.010	"	0.150	ND	91.6	60-119	5.79	38	
Di-isopropyl ether	0.135	0.0050	"	0.150	ND	89.9	40-132	5.49	108	
trans-1,2-Dichloroethene	0.115	0.0050	"	0.150	ND	76.4	52-126	7.44	22	
Methyl tert-butyl ether	0.149	0.015	"	0.150	ND	99.5	64-124	4.94	28	
1,2-Dichloropropane	0.122	0.0050	"	0.150	ND	81.5	61-115	5.58	17	
1,3-Dichloropropane	0.128	0.0050	"	0.150	ND	85.4	66-123	4.98	24	
2,2-Dichloropropane	0.105	0.010	"	0.150	ND	70.0	35-127	9.53	29	
1,1-Dichloropropene	0.102	0.0050	"	0.150	ND	67.9	52-119	8.85	21	

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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505108 - EPA 5030 Soil MS

Matrix Spike Dup (1505108-MSD1)	Source: 1505079-04			Prepared: 05/12/15		Analyzed: 05/13/15				
cis-1,3-Dichloropropene	0.107	0.0050	mg/kg	0.150	ND	71.6	47-122	10.1	40	
trans-1,3-Dichloropropene	0.109	0.0050	"	0.150	ND	72.7	51-119	10.1	52	
Ethylbenzene	0.0957	0.0050	"	0.150	ND	63.8	22-153	12.2	24	
Hexachlorobutadiene	0.0228	0.0050	"	0.150	ND	15.2	10-149	43.1	59	
Isopropylbenzene	0.0864	0.0050	"	0.150	ND	57.6	18-135	16.0	33	
p-Isopropyltoluene	0.0622	0.010	"	0.150	ND	41.5	12-132	27.3	38	
Methylene Chloride	0.131	0.015	"	0.150	ND	87.5	10-167	3.33	102	
Naphthalene	0.0566	0.010	"	0.150	ND	37.7	10-158	35.4	42	
n-Propylbenzene	0.0742	0.0050	"	0.150	ND	49.4	15-134	23.0	37	
Styrene	0.0857	0.010	"	0.150	ND	57.1	33-135	16.9	22	
1,1,2,2-Tetrachloroethane	0.125	0.0050	"	0.150	ND	83.6	10-166	10.0	45	
1,1,1,2-Tetrachloroethane	0.112	0.0050	"	0.150	ND	74.4	49-123	7.23	21	
Tetrachloroethane	0.0895	0.0050	"	0.150	ND	59.6	33-134	12.5	26	
Toluene	0.102	0.0050	"	0.150	ND	67.8	30-134	9.36	30	
1,2,3-Trichlorobenzene	0.0408	0.0050	"	0.150	ND	27.2	10-155	40.4	40	QM-07
1,2,4-Trichlorobenzene	0.0399	0.0050	"	0.150	ND	26.6	10-152	39.7	42	
1,1,2-Trichloroethane	0.133	0.0050	"	0.150	ND	88.9	46-139	7.54	34	
1,1,1-Trichloroethane	0.117	0.0050	"	0.150	ND	78.1	51-124	7.57	22	
Trichloroethene	0.103	0.0050	"	0.150	ND	68.7	16-187	8.42	19	
Trichlorofluoromethane	0.119	0.0050	"	0.150	ND	79.2	53-125	6.12	20	
1,2,3-Trichloropropane	0.122	0.010	"	0.150	ND	81.0	69-118	10.3	23	
1,3,5-Trimethylbenzene	0.0840	0.0050	"	0.150	ND	56.0	20-128	19.1	31	
1,2,4-Trimethylbenzene	0.0771	0.0050	"	0.150	ND	51.4	17-142	22.2	40	
Vinyl chloride	0.120	0.0050	"	0.150	ND	80.3	50-134	4.62	22	
m,p-Xylene	0.182	0.010	"	0.300	ND	60.6	10-159	13.9	68	
o-Xylene	0.0949	0.0050	"	0.150	ND	63.2	31-151	12.7	38	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0440</i>		<i>"</i>	<i>0.0396</i>		<i>111</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0406</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0396</i>		<i>"</i>	<i>0.0400</i>		<i>98.9</i>	<i>21-167</i>			

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Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/18/15 13:20

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505124 - EPA 5030 Soil MS

Blank (1505124-BLK1)

Prepared: 05/14/15 Analyzed: 05/15/15

Acenaphthene	ND	330	ug/kg
Acenaphthylene	ND	330	"
Anthracene	ND	330	"
Benzo (a) anthracene	ND	330	"
Benzo (b) fluoranthene	ND	330	"
Benzo (k) fluoranthene	ND	330	"
Benzo (g,h,i) perylene	ND	330	"
Benzo (a) pyrene	ND	330	"
Benzyl alcohol	ND	330	"
Pyridine	ND	330	"
Bis(2-chloroethoxy)methane	ND	330	"
N-Nitrosodimethylamine	ND	330	"
Bis(2-chloroethyl)ether	ND	330	"
Bis(2-chloroisopropyl)ether	ND	330	"
Bis(2-ethylhexyl)phthalate	ND	330	"
4-Bromophenyl phenyl ether	ND	330	"
Butyl benzyl phthalate	ND	330	"
4-Chloroaniline	ND	330	"
4-Chloro-3-methylphenol	ND	330	"
2-Chloronaphthalene	ND	330	"
2-Chlorophenol	ND	330	"
4-Chlorophenyl phenyl ether	ND	330	"
Chrysene	ND	330	"
Dibenz (a,h) anthracene	ND	330	"
Dibenzofuran	ND	330	"
Di-n-butyl phthalate	ND	330	"
1,2-Dichlorobenzene	ND	330	"
1,3-Dichlorobenzene	ND	330	"
1,4-Dichlorobenzene	ND	330	"
2,4-Dichlorophenol	ND	330	"
Diethyl phthalate	ND	330	"
2,4-Dimethylphenol	ND	330	"
Carbazole	ND	330	"
Dimethyl phthalate	ND	330	"
4,6-Dinitro-2-methylphenol	ND	330	"
2,4-Dinitrophenol	ND	330	"
Azobenzene	ND	330	"
2,4-Dinitrotoluene	ND	330	"

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Semivolatile Organic Compounds by EPA Method 8270D - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505124 - EPA 5030 Soil MS

Blank (1505124-BLK1)

Prepared: 05/14/15 Analyzed: 05/15/15

2,6-Dinitrotoluene	ND	330	ug/kg							
Di-n-octyl phthalate	ND	330	"							
Fluoranthene	ND	330	"							
Fluorene	ND	330	"							
Hexachlorobenzene	ND	330	"							
Hexachlorobutadiene	ND	330	"							
Hexachlorocyclopentadiene	ND	330	"							
Hexachloroethane	ND	330	"							
Indeno (1,2,3-cd) pyrene	ND	330	"							
Isophorone	ND	330	"							
2-Methylnaphthalene	ND	330	"							
2-Methylphenol	ND	330	"							
4-Methylphenol	ND	330	"							
Naphthalene	ND	330	"							
1,4-Dinitrobenzene	ND	330	"							
2-Nitroaniline	ND	330	"							
1,3-Dinitrobenzene	ND	330	"							
3-Nitroaniline	ND	330	"							
1,2-Dinitrobenzene	ND	330	"							
4-Nitroaniline	ND	330	"							
Nitrobenzene	ND	330	"							
2-Nitrophenol	ND	330	"							
4-Nitrophenol	ND	330	"							
2,3,4,6-Tetrachlorophenol	ND	330	"							
N-Nitrosodi-n-propylamine	ND	330	"							
Pentachlorophenol	ND	330	"							
Phenanthrene	ND	330	"							
Phenol	ND	330	"							
Aniline	ND	330	"							
Pyrene	ND	330	"							
1,2,4-Trichlorobenzene	ND	330	"							
2,4,5-Trichlorophenol	ND	330	"							
2,4,6-Trichlorophenol	ND	330	"							
Surrogate: 2-Fluorophenol	1290		"	1660		77.6	30-200			
Surrogate: Phenol-d6	1520		"	1640		92.8	30-200			
Surrogate: Nitrobenzene-d5	1780		"	1650		107	30-200			
Surrogate: 2-Fluorobiphenyl	1430		"	1660		85.9	30-200			
Surrogate: 2,4,6-Tribromophenol	784		"	1660		47.2	30-200			

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Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/18/15 13:20

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505124 - EPA 5030 Soil MS

Blank (1505124-BLK1)

Prepared: 05/14/15 Analyzed: 05/15/15

Surrogate: Terphenyl-d14 2000 ug/kg 1660 120 30-300

LCS (1505124-BS1)

Prepared: 05/14/15 Analyzed: 05/15/15

Acenaphthene	1340	330	ug/kg	1650	81.0	45-139
Acenaphthylene	ND	330	"			68-113
Anthracene	ND	330	"			63-119
Benzo (a) anthracene	ND	330	"			18-181
Benzo (b) fluoranthene	ND	330	"			10-169
Benzo (k) fluoranthene	ND	330	"			10-184
Benzo (g,h,i) perylene	ND	330	"			10-176
Benzo (a) pyrene	ND	330	"			14-178
4-Chloro-3-methylphenol	2560	330	"	3300	77.5	64-122
2-Chlorophenol	2520	330	"	3300	76.4	64-121
Chrysene	ND	330	"			10-184
Dibenz (a,h) anthracene	ND	330	"			10-171
1,4-Dichlorobenzene	1300	330	"	1650	78.6	64-118
2,4-Dinitrotoluene	1230	330	"	1650	74.7	64-118
Fluoranthene	ND	330	"			58-127
Fluorene	ND	330	"			67-113
Indeno (1,2,3-cd) pyrene	ND	330	"			11-175
2-Methylnaphthalene	ND	330	"			5-5
Naphthalene	ND	330	"			62-118
4-Nitrophenol	2090	330	"	3300	63.4	29-112
N-Nitrosodi-n-propylamine	1490	330	"	1640	90.8	75-112
Phenol	2550	330	"	3300	77.1	57-106
Pyrene	1650	330	"	1630	101	22-174
1,2,4-Trichlorobenzene	1300	330	"	1640	79.2	68-120
Surrogate: 2-Fluorophenol	1140		"	1650	69.0	30-200
Surrogate: Phenol-d6	1310		"	1630	80.1	30-200
Surrogate: Nitrobenzene-d5	1530		"	1640	93.3	30-200
Surrogate: 2-Fluorobiphenyl	1230		"	1650	74.5	30-200
Surrogate: 2,4,6-Tribromophenol	769		"	1650	46.6	30-200
Surrogate: Terphenyl-d14	1690		"	1650	102	30-300

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/18/15 13:20

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505124 - EPA 5030 Soil MS

Duplicate (1505124-DUP1)	Source: 1505088-04			Prepared: 05/14/15	Analyzed: 05/15/15
Acenaphthene	ND	330	ug/kg	356	200
Acenaphthylene	ND	330	"	ND	200
Anthracene	728	330	"	3580	132 200
Benzo (a) anthracene	3440	330	"	ND	200
Benzo (b) fluoranthene	ND	330	"	ND	200
Benzo (k) fluoranthene	ND	330	"	ND	200
Benzo (g,h,i) perylene	ND	330	"	ND	200
Benzo (a) pyrene	ND	330	"	ND	200
4-Chloro-3-methylphenol	ND	330	"	ND	200
2-Chlorophenol	ND	330	"	ND	200
Chrysene	3670	330	"	ND	200
Dibenz (a,h) anthracene	ND	330	"	ND	200
1,4-Dichlorobenzene	ND	330	"	ND	200
2,4-Dinitrotoluene	ND	330	"	ND	200
Fluoranthene	2370	330	"	1120	71.9 200
Fluorene	228	330	"	502	74.9 200
Indeno (1,2,3-cd) pyrene	ND	330	"	ND	200
2-Methylnaphthalene	ND	330	"	168	200
Naphthalene	409	330	"	340	18.6 200
4-Nitrophenol	ND	330	"	ND	200
N-Nitrosodi-n-propylamine	ND	330	"	ND	200
Pentachlorophenol	ND	330	"	0.00	200
Phenol	ND	330	"	ND	200
Pyrene	20400	330	"	12300	49.6 200
1,2,4-Trichlorobenzene	ND	330	"	ND	200
Surrogate: 2-Fluorophenol	980		"	1670	58.8 30-200
Surrogate: Phenol-d6	1340		"	1650	81.4 30-200
Surrogate: Nitrobenzene-d5	1600		"	1660	96.2 30-200
Surrogate: 2-Fluorobiphenyl	1310		"	1670	78.7 30-200
Surrogate: 2,4,6-Tribromophenol	1720		"	1670	103 30-200
Surrogate: Terphenyl-d14	5650		"	1670	339 30-300

S-02

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/18/15 13:20

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1505124 - EPA 5030 Soil MS

Matrix Spike (1505124-MS1)	Source: 1505088-03			Prepared: 05/14/15	Analyzed: 05/15/15						
Acenaphthene	1500	330	ug/kg	1670	ND	90.3	32-136				
Acenaphthylene	ND	330	"		ND		45-114				
Anthracene	474	330	"		590		38-121				
Benzo (a) anthracene	ND	330	"		ND		28-135				
Benzo (b) fluoranthene	ND	330	"		ND		10-161				
Benzo (k) fluoranthene	ND	330	"		ND		10-172				
Benzo (g,h,i) perylene	ND	330	"		ND		10-149				
Benzo (a) pyrene	ND	330	"		ND		11-148				
4-Chloro-3-methylphenol	2620	330	"	3330	ND	78.7	38-126				
2-Chlorophenol	2750	330	"	3330	ND	82.5	49-113				
Chrysene	ND	330	"		ND		10-142				
Dibenz (a,h) anthracene	ND	330	"		ND		10-129				
1,4-Dichlorobenzene	1350	330	"	1670	ND	80.7	46-113				
2,4-Dinitrotoluene	1550	330	"	1670	ND	93.0	19-131				
Fluoranthene	273	330	"		211		40-141				
Fluorene	ND	330	"		ND		45-118				
Indeno (1,2,3-cd) pyrene	ND	330	"		ND		10-150				
2-Methylnaphthalene	616	330	"		592		5-150				
Naphthalene	347	330	"		367		51-111				
4-Nitrophenol	3690	330	"	3330	ND	111	21-110				QM-07
N-Nitrosodi-n-propylamine	1770	330	"	1660	ND	107	51-110				
Phenol	2710	330	"	3330	ND	81.4	41-104				
Pyrene	4620	330	"	1650	1780	173	10-150				QM-07
1,2,4-Trichlorobenzene	1320	330	"	1650	ND	79.9	49-115				
Surrogate: 2-Fluorophenol	1200		"	1670		72.3	30-200				
Surrogate: Phenol-d6	1300		"	1650		79.2	30-200				
Surrogate: Nitrobenzene-d5	1720		"	1660		104	30-200				
Surrogate: 2-Fluorobiphenyl	1290		"	1670		77.4	30-200				
Surrogate: 2,4,6-Tribromophenol	1500		"	1670		90.1	30-200				
Surrogate: Terphenyl-d14	3640		"	1670		219	30-300				

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/18/15 13:20

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505082 - EPA 3050B

Blank (1505082-BLK1)

Prepared & Analyzed: 05/08/15

Arsenic	ND	0.100	mg/kg wet							
Barium	ND	0.100	"							
Cadmium	ND	0.100	"							
Chromium	ND	0.500	"							
Lead	ND	0.100	"							
Selenium	ND	0.0500	"							
Silver	ND	0.100	"							
Zinc	ND	10.0	"							

LCS (1505082-BS1)

Prepared & Analyzed: 05/08/15

Arsenic	102	0.250	mg/kg wet	99.6		103	78.4-140			
Barium	304	0.250	"	310		97.9	83.2-117			
Cadmium	174	0.250	"	182		95.4	81.9-118			
Chromium	136	1.25	"	136		99.7	80.1-121			
Lead	106	0.250	"	115		92.1	81.8-119			
Selenium	163	0.125	"	150		109	77.3-123			
Silver	38.8	0.250	"	40.4		96.0	75-125			
Zinc	151	25.0	"	133		113	80.7-132			

Duplicate (1505082-DUP1)

Source: 1505048-01

Prepared & Analyzed: 05/08/15

Arsenic	7.69	0.141	mg/kg dry		7.71		0.276	20		
Barium	2470	0.141	"		1920		25.3	20		QR-03
Cadmium	0.685	0.141	"		0.652		4.97	20		
Chromium	9.31	0.707	"		9.32		0.0437	20		
Lead	10.9	0.141	"		11.5		5.38	20		
Selenium	1.72	0.0707	"		1.60		7.68	20		
Silver	0.115	0.141	"		0.113		1.28	20		
Zinc	49.8	14.1	"		48.4		2.83	20		

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/18/15 13:20

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1505082 - EPA 3050B

Matrix Spike (1505082-MS1)	Source: 1505048-01			Prepared & Analyzed: 05/08/15								
Arsenic	61.8	0.141	mg/kg dry	54.4	7.71	99.4	75-125					
Barium	2720	0.141	"	54.4	1920	NR	75-125					QM-02
Cadmium	3.43	0.141	"	2.72	0.652	102	75-125					
Chromium	61.7	0.707	"	54.4	9.32	96.2	75-125					
Lead	32.0	0.141	"	27.2	11.5	75.4	75-125					
Selenium	7.46	0.0707	"	5.44	1.60	108	75-125					
Silver	3.04	0.141	"	2.72	0.113	107	75-125					
Zinc	103	14.1	"	54.4	48.4	99.4	75-125					

Matrix Spike Dup (1505082-MSD1)	Source: 1505048-01			Prepared & Analyzed: 05/08/15								
Arsenic	58.0	0.125	mg/kg dry	49.8	7.71	101	75-125	6.34	25			
Barium	2570	0.125	"	49.8	1920	NR	75-125	5.82	25			
Cadmium	2.94	0.125	"	2.49	0.652	92.0	75-125	15.3	25			
Chromium	59.9	0.623	"	49.8	9.32	102	75-125	2.95	25			
Lead	31.8	0.125	"	24.9	11.5	81.5	75-125	0.722	25			
Selenium	6.84	0.0623	"	4.98	1.60	105	75-125	8.63	25			
Silver	2.91	0.125	"	2.49	0.113	112	75-125	4.39	25			
Zinc	96.3	12.5	"	49.8	48.4	96.1	75-125	6.22	25			

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/18/15 13:20

Total Mercury by EPA Method 7471 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1505104 - EPA 7471A

Blank (1505104-BLK1)

Prepared & Analyzed: 05/12/15

Mercury ND 0.0500 mg/kg wet

LCS (1505104-BS1)

Prepared & Analyzed: 05/12/15

Mercury 0.595 0.0500 mg/kg wet 0.500 119 80-120

Duplicate (1505104-DUP1)

Source: 1505088-01

Prepared & Analyzed: 05/12/15

Mercury 0.0293 0.0551 mg/kg dry 0.0850 97.4 20 QR-01

Matrix Spike (1505104-MS1)

Source: 1505088-01

Prepared & Analyzed: 05/12/15

Mercury 0.656 0.0551 mg/kg dry 0.531 0.0850 108 80-120

Matrix Spike Dup (1505104-MSD1)

Source: 1505088-01

Prepared & Analyzed: 05/12/15

Mercury 0.644 0.0551 mg/kg dry 0.533 0.0850 105 80-120 1.92 20

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/18/15 13:20

Oil and Grease by EPA 9071B (Solids) - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike	Source	%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505106 - General Preparation

Blank (1505106-BLK1)				Prepared & Analyzed: 05/12/15						
Oil & Grease (HEM)	ND	10.0	mg/kg							
LCS (1505106-BS1)				Prepared & Analyzed: 05/12/15						
Oil & Grease (HEM)	38100	10.0	mg/kg	40000		95.3	80.1-112			
LCS Dup (1505106-BSD1)				Prepared & Analyzed: 05/12/15						
Oil & Grease (HEM)	38700	10.0	mg/kg	40000		96.7	80.1-112	1.46	20	
Duplicate (1505106-DUP1)				Prepared & Analyzed: 05/12/15						
Oil & Grease (HEM)	310	10.0	mg/kg		320			3.17	200	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/18/15 13:20

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505087 - General Preparation

Duplicate (1505087-DUP1)	Source: 1505079-01			Prepared: 05/08/15	Analyzed: 05/11/15
% Solids	94.4		%	93.1	1.39 20

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/18/15 13:20

Notes and Definitions

- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QR-01 Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- QM-02 The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

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Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

May 19, 2015

Steve Hoffman

Terracon - Wheat Ridge

10625 West I-70 Frontage Road, Suite 3

Wheat Ridge, CO 80033

RE: National Western Complex

Enclosed are the results of analyses for samples received by Summit Scientific on 05/11/15 17:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'Ben Shrewsbury', with a long, sweeping horizontal stroke extending to the right.

Ben Shrewsbury For Paul Shrewsbury
President



Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/19/15 11:02

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TP-4 (2')	1505088-01	Soil	05/08/15 00:00	05/11/15 17:40
TP-6 (2')	1505088-02	Soil	05/08/15 00:00	05/11/15 17:40
TP-6 (6')	1505088-03	Soil	05/08/15 00:00	05/11/15 17:40
TP-6 (8')	1505088-04	Soil	05/08/15 00:00	05/11/15 17:40
TP-7 (2')	1505088-05	Soil	05/08/15 00:00	05/11/15 17:40
TP-7 (7')	1505088-06	Soil	05/08/15 00:00	05/11/15 17:40
TP-8 (2')	1505088-07	Soil	05/08/15 00:00	05/11/15 17:40
TP-8 (6')	1505088-08	Soil	05/08/15 00:00	05/11/15 17:40
TP-10 (2')	1505088-09	Soil	05/08/15 00:00	05/11/15 17:40

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/19/15 11:02

Summit Scientific

1505088

741 Corporate Circle Suite I ♦ Golden, Colorado 80401
 303-277-9310 ♦ 303-374-5933 Fax

Page 1 of 1

Client: Terracon Consultants

Address: 10625 West I-70 Frontage Road North, Suite 3

City/State/Zip: Wheat Ridge, CO 80033

Phone: (303) 454-5275 Fax: (303) 423-3353

Sampler Name: Marshall Haworth

Project Manager: Steve Hoffman

E-Mail: sbhoffman@terracon.com

Project Name: National Western Complex

Project Number: 25157010

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:					Special Instructions	
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	VOC's 8260B	TPH 8015	RCRA 8+Zinc	SVOC		
TP-4 (2')	5-8-15					X											
TP-6 (2')	5-8-15					X											
TP-6 (6')	5-8-15					X											
TP-6 (8')	5-8-15					X											
TP-7 (2')	5-8-15					X											
TP-7 (7')	5-8-15					X											
TP-8 (2')	5-8-15					X											
TP-8 (6')	5-8-15					X											
TP-10 (2')	5-8-15					X											

Relinquished by: <i>Marshall Haworth</i>	Date/Time: 5-14-15 1740	Received by: <i>[Signature]</i>	Date/Time: 5-11-15 1400	Turn Around Time (Check)	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day <input type="checkbox"/>	72 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/>
Relinquished by:	Date/Time:	Received in Lab by:	Date/Time:	24 Hours <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received in Lab by:	Date/Time:	48 Hours <input type="checkbox"/>	
				Sample Integrity:	
				Temperature Upon Receipt: 7.2	
				Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

www.s2scientific.com

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

S₂

Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/19/15 11:02

Sample Receipt Checklist

S2 Work Order: 1508089

Client: Terracon

Client Project ID: National Western Complex

Shipped Via: HD

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Airbill #: _____

Matrix (check all that apply): Air Soil/Solid Water Other: _____
(Describe)

Cooler ID					
Temp (°C)	7.2				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.	X			
Were all samples received intact ⁽¹⁾ ?	X			
Was adequate sample volume provided ⁽¹⁾ ?	X			
If custody seals are present, are they intact ⁽¹⁾ ?			X	
Are short holding time analytes or samples with HTs due within 48 hours present?			X	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	X			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	X			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	X			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	X			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			X	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, etc.			X	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.			X	
If dissolved metals are requested, were samples field filtered?			X	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

Ben Shrawsbury
Custodian Printed Name

[Signature]
Signature or Initials of Custodian

5/19/15 1144
Date/Time

[Signature]



Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/19/15 11:02

**TP-4 (2')
 1505088-01 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	5.59	0.110	mg/kg dry	1	1505103	05/12/15	05/13/15	EPA 6020A	
Barium	425	0.110	"	"	"	"	"	"	
Cadmium	0.898	0.110	"	"	"	"	"	"	
Chromium	8.22	0.551	"	"	"	"	"	"	
Lead	143	0.110	"	"	"	"	"	"	
Selenium	0.613	0.0551	"	"	"	"	"	"	
Silver	0.594	0.110	"	"	"	"	"	"	

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	359	11.0	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	0.0850	0.0551	mg/kg dry	1	1505104	05/12/15	05/12/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.8		%	1	1505116	05/13/15	05/14/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/19/15 11:02

TP-6 (2')
1505088-02 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.62	0.107	mg/kg dry	1	1505103	05/12/15	05/13/15	EPA 6020A	
Barium	230	0.107	"	"	"	"	"	"	
Cadmium	1.99	0.107	"	"	"	"	"	"	
Chromium	9.61	0.536	"	"	"	"	"	"	
Lead	536	0.107	"	"	"	"	"	"	
Selenium	0.166	0.0536	"	"	"	"	"	"	
Silver	1.20	0.107	"	"	"	"	"	"	

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	430	10.7	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.162	0.0536	mg/kg dry	1	1505104	05/12/15	05/12/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	93.2		%	1	1505116	05/13/15	05/14/15	% calculation	

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Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/19/15 11:02

TP-6 (6')
1505088-03 (Soil)

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Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	240	50	mg/kg	1	1505109	05/12/15	05/12/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		109 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1505108	05/12/15	05/13/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

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Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/19/15 11:02

TP-6 (6')
1505088-03 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample	ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1505108	05/12/15	05/13/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"	"
Naphthalene	0.084	0.010	"	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"	"

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 Wheat Ridge CO, 80033

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 Project Manager: Steve Hoffman

Reported:
 05/19/15 11:02

TP-6 (6')
1505088-03 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1505108	05/12/15	05/13/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	0.012	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	2.3	0.50	"	"	"	"	"	"

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.4 %	21-167		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270D

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	330	ug/kg	1	1505124	05/14/15	05/16/15	EPA 8270D	
Acenaphthylene	ND	330	"	"	"	"	"	"	
Anthracene	590	330	"	"	"	"	"	"	
Benzo (a) anthracene	ND	330	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	330	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	330	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	330	"	"	"	"	"	"	
Benzo (a) pyrene	ND	330	"	"	"	"	"	"	
Benzyl alcohol	ND	330	"	"	"	"	"	"	
Pyridine	ND	330	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	330	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	330	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	330	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	330	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	330	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	330	"	"	"	"	"	"	

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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/19/15 11:02

TP-6 (6')
1505088-03 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D

Compound	Result	Limit	Unit	Sample ID	Date	Date	Method
Butyl benzyl phthalate	ND	330	ug/kg	1	1505124	05/14/15	05/16/15 EPA 8270D
4-Chloroaniline	ND	330	"	"	"	"	"
4-Chloro-3-methylphenol	ND	330	"	"	"	"	"
2-Chloronaphthalene	ND	330	"	"	"	"	"
2-Chlorophenol	ND	330	"	"	"	"	"
4-Chlorophenyl phenyl ether	ND	330	"	"	"	"	"
Chrysene	ND	330	"	"	"	"	"
Dibenz (a,h) anthracene	ND	330	"	"	"	"	"
Dibenzofuran	ND	330	"	"	"	"	"
Di-n-butyl phthalate	ND	330	"	"	"	"	"
1,2-Dichlorobenzene	ND	330	"	"	"	"	"
1,3-Dichlorobenzene	ND	330	"	"	"	"	"
1,4-Dichlorobenzene	ND	330	"	"	"	"	"
2,4-Dichlorophenol	ND	330	"	"	"	"	"
Diethyl phthalate	ND	330	"	"	"	"	"
2,4-Dimethylphenol	ND	330	"	"	"	"	"
Carbazole	ND	330	"	"	"	"	"
Dimethyl phthalate	ND	330	"	"	"	"	"
4,6-Dinitro-2-methylphenol	ND	330	"	"	"	"	"
2,4-Dinitrophenol	ND	330	"	"	"	"	"
Azobenzene	ND	330	"	"	"	"	"
2,4-Dinitrotoluene	ND	330	"	"	"	"	"
2,6-Dinitrotoluene	ND	330	"	"	"	"	"
Di-n-octyl phthalate	ND	330	"	"	"	"	"
Fluoranthene	210	330	"	"	"	"	"
Fluorene	ND	330	"	"	"	"	"
Hexachlorobenzene	ND	330	"	"	"	"	"
Hexachlorobutadiene	ND	330	"	"	"	"	"
Hexachlorocyclopentadiene	ND	330	"	"	"	"	"
Hexachloroethane	ND	330	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	330	"	"	"	"	"
Isophorone	ND	330	"	"	"	"	"
2-Methylnaphthalene	590	330	"	"	"	"	"
2-Methylphenol	ND	330	"	"	"	"	"
4-Methylphenol	ND	330	"	"	"	"	"
Naphthalene	370	330	"	"	"	"	"
1,4-Dinitrobenzene	ND	330	"	"	"	"	"

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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/19/15 11:02

TP-6 (6')
1505088-03 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
2-Nitroaniline	ND	330	ug/kg	1	1505124	05/14/15	05/16/15	EPA 8270D
1,3-Dinitrobenzene	ND	330	"	"	"	"	"	"
3-Nitroaniline	ND	330	"	"	"	"	"	"
1,2-Dinitrobenzene	ND	330	"	"	"	"	"	"
4-Nitroaniline	ND	330	"	"	"	"	"	"
Nitrobenzene	ND	330	"	"	"	"	"	"
2-Nitrophenol	ND	330	"	"	"	"	"	"
4-Nitrophenol	ND	330	"	"	"	"	"	"
2,3,4,6-Tetrachlorophenol	ND	330	"	"	"	"	"	"
N-Nitrosodi-n-propylamine	ND	330	"	"	"	"	"	"
Pentachlorophenol	ND	330	"	"	"	"	"	"
Phenanthrene	610	330	"	"	"	"	"	"
Phenol	ND	330	"	"	"	"	"	"
Aniline	ND	330	"	"	"	"	"	"
Pyrene	1800	330	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	330	"	"	"	"	"	"
2,4,5-Trichlorophenol	ND	330	"	"	"	"	"	"
2,4,6-Trichlorophenol	ND	330	"	"	"	"	"	"

Date Sampled: 05/08/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Fluorophenol		46.7 %		30-200		"	"	"	"
Surrogate: Phenol-d6		87.8 %		30-200		"	"	"	"
Surrogate: Nitrobenzene-d5		117 %		30-200		"	"	"	"
Surrogate: 2-Fluorobiphenyl		85.6 %		30-200		"	"	"	"
Surrogate: 2,4,6-Tribromophenol		98.3 %		30-200		"	"	"	"
Surrogate: Terphenyl-d14		300 %		30-300		"	"	"	"

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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/19/15 11:02

TP-6 (8')
1505088-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	180	50	mg/kg	1	1505109	05/12/15	05/12/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		110 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1505108	05/12/15	05/13/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/19/15 11:02

TP-6 (8')
1505088-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1505108	05/12/15	05/13/15 EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"
Naphthalene	0.030	0.010	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"

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Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

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TP-6 (8')
1505088-04 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1505108	05/12/15	05/13/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	0.72	0.50	"	"	"	"	"	"

Date Sampled: 05/08/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.0 %	21-167		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270D

Date Sampled: 05/08/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	360	330	ug/kg	1	1505124	05/14/15	05/16/15	EPA 8270D	
Acenaphthylene	ND	330	"	"	"	"	"	"	
Anthracene	3600	3300	"	10	"	"	"	"	
Benzo (a) anthracene	ND	330	"	1	"	"	"	"	
Benzo (b) fluoranthene	ND	330	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	330	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	330	"	"	"	"	"	"	
Benzo (a) pyrene	ND	330	"	"	"	"	"	"	
Benzyl alcohol	ND	330	"	"	"	"	"	"	
Pyridine	ND	330	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	330	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	330	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	330	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	330	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	330	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	330	"	"	"	"	"	"	

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 Wheat Ridge CO, 80033

Project: National Western Complex

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 Project Manager: Steve Hoffman

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TP-6 (8')
1505088-04 (Soil)

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Semivolatile Organic Compounds by EPA Method 8270D

Compound	Result	330	ug/kg	1	1505124	05/14/15	05/16/15	EPA 8270D
Butyl benzyl phthalate	ND	330	ug/kg	1	1505124	05/14/15	05/16/15	EPA 8270D
4-Chloroaniline	ND	330	"	"	"	"	"	"
4-Chloro-3-methylphenol	ND	330	"	"	"	"	"	"
2-Chloronaphthalene	ND	330	"	"	"	"	"	"
2-Chlorophenol	ND	330	"	"	"	"	"	"
4-Chlorophenyl phenyl ether	ND	330	"	"	"	"	"	"
Chrysene	ND	330	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	330	"	"	"	"	"	"
Dibenzofuran	320	330	"	"	"	"	"	"
Di-n-butyl phthalate	ND	330	"	"	"	"	"	"
1,2-Dichlorobenzene	ND	330	"	"	"	"	"	"
1,3-Dichlorobenzene	ND	330	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	330	"	"	"	"	"	"
2,4-Dichlorophenol	ND	330	"	"	"	"	"	"
Diethyl phthalate	ND	330	"	"	"	"	"	"
2,4-Dimethylphenol	ND	330	"	"	"	"	"	"
Carbazole	300	330	"	"	"	"	"	"
Dimethyl phthalate	ND	330	"	"	"	"	"	"
4,6-Dinitro-2-methylphenol	ND	330	"	"	"	"	"	"
2,4-Dinitrophenol	ND	330	"	"	"	"	"	"
Azobenzene	ND	330	"	"	"	"	"	"
2,4-Dinitrotoluene	ND	330	"	"	"	"	"	"
2,6-Dinitrotoluene	ND	330	"	"	"	"	"	"
Di-n-octyl phthalate	ND	330	"	"	"	"	"	"
Fluoranthene	1100	330	"	"	"	"	"	"
Fluorene	500	330	"	"	"	"	"	"
Hexachlorobenzene	ND	330	"	"	"	"	"	"
Hexachlorobutadiene	ND	330	"	"	"	"	"	"
Hexachlorocyclopentadiene	ND	330	"	"	"	"	"	"
Hexachloroethane	ND	330	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	330	"	"	"	"	"	"
Isophorone	ND	330	"	"	"	"	"	"
2-Methylnaphthalene	170	330	"	"	"	"	"	"
2-Methylphenol	ND	330	"	"	"	"	"	"
4-Methylphenol	ND	330	"	"	"	"	"	"
Naphthalene	340	330	"	"	"	"	"	"
1,4-Dinitrobenzene	ND	330	"	"	"	"	"	"

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TP-6 (8')
1505088-04 (Soil)

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Semivolatile Organic Compounds by EPA Method 8270D

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
2-Nitroaniline	ND	330	ug/kg	1	1505124	05/14/15	05/16/15	EPA 8270D
1,3-Dinitrobenzene	ND	330	"	"	"	"	"	"
3-Nitroaniline	ND	330	"	"	"	"	"	"
1,2-Dinitrobenzene	ND	330	"	"	"	"	"	"
4-Nitroaniline	ND	330	"	"	"	"	"	"
Nitrobenzene	ND	330	"	"	"	"	"	"
2-Nitrophenol	ND	330	"	"	"	"	"	"
4-Nitrophenol	ND	330	"	"	"	"	"	"
2,3,4,6-Tetrachlorophenol	ND	330	"	"	"	"	"	"
N-Nitrosodi-n-propylamine	ND	330	"	"	"	"	"	"
Pentachlorophenol	ND	330	"	"	"	"	"	"
Phenanthrene	3700	3300	"	10	"	"	"	"
Phenol	ND	330	"	1	"	"	"	"
Aniline	ND	330	"	"	"	"	"	"
Pyrene	12000	3300	"	10	"	"	"	"
1,2,4-Trichlorobenzene	ND	330	"	1	"	"	"	"
2,4,5-Trichlorophenol	ND	330	"	"	"	"	"	"
2,4,6-Trichlorophenol	ND	330	"	"	"	"	"	"

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Fluorophenol		41.6 %		30-200	"	"	"	"	
Surrogate: Phenol-d6		91.1 %		30-200	"	"	"	"	
Surrogate: Nitrobenzene-d5		83.0 %		30-200	"	"	"	"	
Surrogate: 2-Fluorobiphenyl		85.7 %		30-200	"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		127 %		30-200	"	"	"	"	
Surrogate: Terphenyl-d14		384 %		30-200	"	"	"	"	S-02

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**TP-7 (2')
 1505088-05 (Soil)**

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	6.49	0.112	mg/kg dry	1	1505103	05/12/15	05/13/15	EPA 6020A	
Barium	175	0.112	"	"	"	"	"	"	
Cadmium	0.735	0.112	"	"	"	"	"	"	
Chromium	18.7	0.560	"	"	"	"	"	"	
Lead	69.8	0.112	"	"	"	"	"	"	
Selenium	0.247	0.0560	"	"	"	"	"	"	
Silver	0.659	0.112	"	"	"	"	"	"	

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	152	11.2	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.999	0.0560	mg/kg dry	1	1505104	05/12/15	05/12/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	89.3		%	1	1505116	05/13/15	05/14/15	% calculation	

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Project: National Western Complex

Project Number: 25157010
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TP-7 (7')
1505088-06 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	500	50	mg/kg	1	1505109	05/12/15	05/12/15	8015M	
C28-C36 (ORO)	220	50	"	"	"	"	"	"	

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		108 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1505108	05/12/15	05/13/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

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Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

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TP-7 (7')
1505088-06 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1505108	05/12/15	05/13/15 EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"

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Project: National Western Complex

Project Number: 25157010
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TP-7 (7')
1505088-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1505108	05/12/15	05/13/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: 05/08/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		116 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.9 %	21-167		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270D

Date Sampled: 05/08/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	330	ug/kg	1	1505124	05/14/15	05/16/15	EPA 8270D	
Acenaphthylene	ND	330	"	"	"	"	"	"	
Anthracene	ND	330	"	"	"	"	"	"	
Benzo (a) anthracene	ND	330	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	330	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	330	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	330	"	"	"	"	"	"	
Benzo (a) pyrene	ND	330	"	"	"	"	"	"	
Benzyl alcohol	ND	330	"	"	"	"	"	"	
Pyridine	ND	330	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	330	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	330	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	330	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	330	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	330	"	"	"	"	"	"	

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TP-7 (7')
1505088-06 (Soil)

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Semivolatile Organic Compounds by EPA Method 8270D

Compound Name	Result	Limit	Unit	Sample ID	Date	Date	Method
4-Bromophenyl phenyl ether	ND	330	ug/kg	1	1505124	05/14/15	05/16/15 EPA 8270D
Butyl benzyl phthalate	ND	330	"	"	"	"	"
4-Chloroaniline	ND	330	"	"	"	"	"
4-Chloro-3-methylphenol	ND	330	"	"	"	"	"
2-Chloronaphthalene	ND	330	"	"	"	"	"
2-Chlorophenol	ND	330	"	"	"	"	"
4-Chlorophenyl phenyl ether	ND	330	"	"	"	"	"
Chrysene	ND	330	"	"	"	"	"
Dibenz (a,h) anthracene	ND	330	"	"	"	"	"
Dibenzofuran	ND	330	"	"	"	"	"
Di-n-butyl phthalate	ND	330	"	"	"	"	"
1,2-Dichlorobenzene	ND	330	"	"	"	"	"
1,3-Dichlorobenzene	ND	330	"	"	"	"	"
1,4-Dichlorobenzene	ND	330	"	"	"	"	"
2,4-Dichlorophenol	ND	330	"	"	"	"	"
Diethyl phthalate	ND	330	"	"	"	"	"
2,4-Dimethylphenol	ND	330	"	"	"	"	"
Carbazole	ND	330	"	"	"	"	"
Dimethyl phthalate	ND	330	"	"	"	"	"
4,6-Dinitro-2-methylphenol	ND	330	"	"	"	"	"
2,4-Dinitrophenol	ND	330	"	"	"	"	"
Azobenzene	ND	330	"	"	"	"	"
2,4-Dinitrotoluene	ND	330	"	"	"	"	"
2,6-Dinitrotoluene	ND	330	"	"	"	"	"
Di-n-octyl phthalate	ND	330	"	"	"	"	"
Fluoranthene	ND	330	"	"	"	"	"
Fluorene	ND	330	"	"	"	"	"
Hexachlorobenzene	ND	330	"	"	"	"	"
Hexachlorobutadiene	ND	330	"	"	"	"	"
Hexachlorocyclopentadiene	ND	330	"	"	"	"	"
Hexachloroethane	ND	330	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	330	"	"	"	"	"
Isophorone	ND	330	"	"	"	"	"
2-Methylnaphthalene	ND	330	"	"	"	"	"
2-Methylphenol	ND	330	"	"	"	"	"
4-Methylphenol	ND	330	"	"	"	"	"
Naphthalene	ND	330	"	"	"	"	"

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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
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TP-7 (7')
1505088-06 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
1,4-Dinitrobenzene	ND	330	ug/kg	1	1505124	05/14/15	05/16/15	EPA 8270D
2-Nitroaniline	ND	330	"	"	"	"	"	"
1,3-Dinitrobenzene	ND	330	"	"	"	"	"	"
3-Nitroaniline	ND	330	"	"	"	"	"	"
1,2-Dinitrobenzene	ND	330	"	"	"	"	"	"
4-Nitroaniline	ND	330	"	"	"	"	"	"
Nitrobenzene	ND	330	"	"	"	"	"	"
2-Nitrophenol	ND	330	"	"	"	"	"	"
4-Nitrophenol	ND	330	"	"	"	"	"	"
2,3,4,6-Tetrachlorophenol	ND	330	"	"	"	"	"	"
N-Nitrosodi-n-propylamine	ND	330	"	"	"	"	"	"
Pentachlorophenol	ND	330	"	"	"	"	"	"
Phenanthrene	ND	330	"	"	"	"	"	"
Phenol	ND	330	"	"	"	"	"	"
Aniline	ND	330	"	"	"	"	"	"
Pyrene	ND	330	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	330	"	"	"	"	"	"
2,4,5-Trichlorophenol	ND	330	"	"	"	"	"	"
2,4,6-Trichlorophenol	ND	330	"	"	"	"	"	"

Date Sampled: 05/08/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Fluorophenol		16.8 %	30-200		"	"	"	"	S-02
Surrogate: Phenol-d6		39.1 %	30-200		"	"	"	"	
Surrogate: Nitrobenzene-d5		75.9 %	30-200		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		73.0 %	30-200		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		61.5 %	30-200		"	"	"	"	
Surrogate: Terphenyl-d14		259 %	30-300		"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/19/15 11:02

TP-8 (2')
1505088-07 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	4.30	0.113	mg/kg dry	1	1505103	05/12/15	05/13/15	EPA 6020A	
Barium	422	0.113	"	"	"	"	"	"	
Cadmium	0.842	0.113	"	"	"	"	"	"	
Chromium	8.82	0.563	"	"	"	"	"	"	
Lead	528	0.113	"	"	"	"	"	"	
Selenium	0.403	0.0563	"	"	"	"	"	"	
Silver	0.301	0.113	"	"	"	"	"	"	

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	233	11.3	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.564	0.0563	mg/kg dry	1	1505104	05/12/15	05/12/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	88.8		%	1	1505116	05/13/15	05/14/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/19/15 11:02

TP-8 (6')
1505088-08 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1505109	05/12/15	05/12/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		107 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1505108	05/12/15	05/13/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/19/15 11:02

TP-8 (6')
1505088-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1505108	05/12/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"

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10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/19/15 11:02

TP-8 (6')
1505088-08 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1505108	05/12/15	05/13/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: 05/08/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		115 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.7 %	21-167		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270D

Date Sampled: 05/08/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	330	ug/kg	1	1505124	05/14/15	05/16/15	EPA 8270D	
Acenaphthylene	ND	330	"	"	"	"	"	"	
Anthracene	ND	330	"	"	"	"	"	"	
Benzo (a) anthracene	ND	330	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	330	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	330	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	330	"	"	"	"	"	"	
Benzo (a) pyrene	ND	330	"	"	"	"	"	"	
Benzyl alcohol	ND	330	"	"	"	"	"	"	
Pyridine	ND	330	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	330	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	330	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	330	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	330	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	330	"	"	"	"	"	"	

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/19/15 11:02

TP-8 (6')
1505088-08 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D

4-Bromophenyl phenyl ether	ND	330	ug/kg	1	1505124	05/14/15	05/16/15	EPA 8270D
Butyl benzyl phthalate	ND	330	"	"	"	"	"	"
4-Chloroaniline	ND	330	"	"	"	"	"	"
4-Chloro-3-methylphenol	ND	330	"	"	"	"	"	"
2-Chloronaphthalene	ND	330	"	"	"	"	"	"
2-Chlorophenol	ND	330	"	"	"	"	"	"
4-Chlorophenyl phenyl ether	ND	330	"	"	"	"	"	"
Chrysene	ND	330	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	330	"	"	"	"	"	"
Dibenzofuran	ND	330	"	"	"	"	"	"
Di-n-butyl phthalate	ND	330	"	"	"	"	"	"
1,2-Dichlorobenzene	ND	330	"	"	"	"	"	"
1,3-Dichlorobenzene	ND	330	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	330	"	"	"	"	"	"
2,4-Dichlorophenol	ND	330	"	"	"	"	"	"
Diethyl phthalate	ND	330	"	"	"	"	"	"
2,4-Dimethylphenol	ND	330	"	"	"	"	"	"
Carbazole	ND	330	"	"	"	"	"	"
Dimethyl phthalate	ND	330	"	"	"	"	"	"
4,6-Dinitro-2-methylphenol	ND	330	"	"	"	"	"	"
2,4-Dinitrophenol	ND	330	"	"	"	"	"	"
Azobenzene	ND	330	"	"	"	"	"	"
2,4-Dinitrotoluene	ND	330	"	"	"	"	"	"
2,6-Dinitrotoluene	ND	330	"	"	"	"	"	"
Di-n-octyl phthalate	ND	330	"	"	"	"	"	"
Fluoranthene	200	330	"	"	"	"	"	"
Fluorene	ND	330	"	"	"	"	"	"
Hexachlorobenzene	ND	330	"	"	"	"	"	"
Hexachlorobutadiene	ND	330	"	"	"	"	"	"
Hexachlorocyclopentadiene	ND	330	"	"	"	"	"	"
Hexachloroethane	ND	330	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	330	"	"	"	"	"	"
Isophorone	ND	330	"	"	"	"	"	"
2-Methylnaphthalene	ND	330	"	"	"	"	"	"
2-Methylphenol	ND	330	"	"	"	"	"	"
4-Methylphenol	ND	330	"	"	"	"	"	"
Naphthalene	ND	330	"	"	"	"	"	"

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/19/15 11:02

TP-8 (6')
1505088-08 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
1,4-Dinitrobenzene	ND	330	ug/kg	1	1505124	05/14/15	05/16/15	EPA 8270D
2-Nitroaniline	ND	330	"	"	"	"	"	"
1,3-Dinitrobenzene	ND	330	"	"	"	"	"	"
3-Nitroaniline	ND	330	"	"	"	"	"	"
1,2-Dinitrobenzene	ND	330	"	"	"	"	"	"
4-Nitroaniline	ND	330	"	"	"	"	"	"
Nitrobenzene	ND	330	"	"	"	"	"	"
2-Nitrophenol	ND	330	"	"	"	"	"	"
4-Nitrophenol	ND	330	"	"	"	"	"	"
2,3,4,6-Tetrachlorophenol	ND	330	"	"	"	"	"	"
N-Nitrosodi-n-propylamine	ND	330	"	"	"	"	"	"
Pentachlorophenol	ND	330	"	"	"	"	"	"
Phenanthrene	ND	330	"	"	"	"	"	"
Phenol	ND	330	"	"	"	"	"	"
Aniline	ND	330	"	"	"	"	"	"
Pyrene	1800	330	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	330	"	"	"	"	"	"
2,4,5-Trichlorophenol	ND	330	"	"	"	"	"	"
2,4,6-Trichlorophenol	ND	330	"	"	"	"	"	"

Date Sampled: 05/08/15 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Fluorophenol		57.6 %	30-200		"	"	"	"	
Surrogate: Phenol-d6		67.2 %	30-200		"	"	"	"	
Surrogate: Nitrobenzene-d5		94.4 %	30-200		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		81.5 %	30-200		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		53.6 %	30-200		"	"	"	"	
Surrogate: Terphenyl-d14		412 %	30-300		"	"	"	"	S-02

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/19/15 11:02

TP-10 (2')
1505088-09 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.47	0.107	mg/kg dry	1	1505103	05/12/15	05/13/15	EPA 6020A	
Barium	114	0.107	"	"	"	"	"	"	
Cadmium	0.264	0.107	"	"	"	"	"	"	
Chromium	6.93	0.537	"	"	"	"	"	"	
Lead	22.1	0.107	"	"	"	"	"	"	
Selenium	0.147	0.0537	"	"	"	"	"	"	
Silver	ND	0.107	"	"	"	"	"	"	

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	45.6	10.7	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	ND	0.0537	mg/kg dry	1	1505104	05/12/15	05/12/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/08/15 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	93.1		%	1	1505116	05/13/15	05/14/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/19/15 11:02

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1505109 - EPA 3550A

Blank (1505109-BLK1)				Prepared & Analyzed: 05/12/15							
C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: o-Terphenyl	12.5		"	12.2		103	70-130				
LCS (1505109-BS1)				Prepared & Analyzed: 05/12/15							
C10-C28 (DRO)	485	50	mg/kg	501		96.8	50-150				
Surrogate: o-Terphenyl	13.2		"	12.2		108	70-130				
Matrix Spike (1505109-MS1)				Source: 1505095-02		Prepared & Analyzed: 05/12/15					
C10-C28 (DRO)	537	50	mg/kg	501	78.9	91.4	50-150				
Surrogate: o-Terphenyl	12.7		"	12.2		104	70-130				
Matrix Spike Dup (1505109-MSD1)				Source: 1505095-02		Prepared & Analyzed: 05/12/15					
C10-C28 (DRO)	544	50	mg/kg	501	78.9	92.9	50-150	1.37		20	
Surrogate: o-Terphenyl	13.0		"	12.2		106	70-130				

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/19/15 11:02

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting		Spike Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

Batch 1505108 - EPA 5030 Soil MS

Blank (1505108-BLK1)

Prepared: 05/12/15 Analyzed: 05/13/15

Benzene	ND	0.0020	mg/kg						
Bromobenzene	ND	0.0050	"						
Bromochloromethane	ND	0.0050	"						
Bromodichloromethane	ND	0.0050	"						
Bromoform	ND	0.0050	"						
Bromomethane	ND	0.010	"						
n-Butylbenzene	ND	0.0050	"						
sec-Butylbenzene	ND	0.0050	"						
tert-Butylbenzene	ND	0.0050	"						
Carbon tetrachloride	ND	0.0050	"						
Chlorobenzene	ND	0.0050	"						
Chloroethane	ND	0.0050	"						
Chloroform	ND	0.0050	"						
Chloromethane	ND	0.015	"						
2-Chlorotoluene	ND	0.0050	"						
4-Chlorotoluene	ND	0.0050	"						
Chlorodibromomethane	ND	0.010	"						
1,2-Dibromo-3-chloropropane	ND	0.015	"						
1,2-Dibromoethane (EDB)	ND	0.0050	"						
Dibromomethane	ND	0.0050	"						
1,2-Dichlorobenzene	ND	0.0050	"						
1,3-Dichlorobenzene	ND	0.0050	"						
1,4-Dichlorobenzene	ND	0.0050	"						
Dichlorodifluoromethane	ND	0.0050	"						
Tert-amyl methyl ether	ND	0.0050	"						
1,1-Dichloroethane	ND	0.0050	"						
1,2-Dichloroethane (EDC)	ND	0.0050	"						
Tert-butyl alcohol	ND	0.020	"						
1,1-Dichloroethene	ND	0.0050	"						
Ethyl tert-butyl ether	ND	0.010	"						
cis-1,2-Dichloroethene	ND	0.0050	"						
Di-isopropyl ether	ND	0.0050	"						
trans-1,2-Dichloroethene	ND	0.0050	"						
Methyl tert-butyl ether	ND	0.015	"						
1,2-Dichloropropane	ND	0.0050	"						
1,3-Dichloropropane	ND	0.0050	"						
2,2-Dichloropropane	ND	0.010	"						
1,1-Dichloropropene	ND	0.0050	"						

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/19/15 11:02

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505108 - EPA 5030 Soil MS

Blank (1505108-BLK1)

Prepared: 05/12/15 Analyzed: 05/13/15

cis-1,3-Dichloropropene	ND	0.0050	mg/kg							
trans-1,3-Dichloropropene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Hexachlorobutadiene	ND	0.0050	"							
Isopropylbenzene	ND	0.0050	"							
p-Isopropyltoluene	ND	0.010	"							
Methylene Chloride	ND	0.015	"							
Naphthalene	ND	0.010	"							
n-Propylbenzene	ND	0.0050	"							
Styrene	ND	0.010	"							
1,1,2,2-Tetrachloroethane	ND	0.0050	"							
1,1,1,2-Tetrachloroethane	ND	0.0050	"							
Tetrachloroethene	ND	0.0050	"							
Toluene	ND	0.0050	"							
1,2,3-Trichlorobenzene	ND	0.0050	"							
1,2,4-Trichlorobenzene	ND	0.0050	"							
1,1,2-Trichloroethane	ND	0.0050	"							
1,1,1-Trichloroethane	ND	0.0050	"							
Trichloroethene	ND	0.0050	"							
Trichlorofluoromethane	ND	0.0050	"							
1,2,3-Trichloropropane	ND	0.010	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
Vinyl chloride	ND	0.0050	"							
m,p-Xylene	ND	0.010	"							
o-Xylene	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0400</i>		<i>"</i>	<i>0.0396</i>	<i>101</i>	<i>23-173</i>				
<i>Surrogate: Toluene-d8</i>	<i>0.0392</i>		<i>"</i>	<i>0.0400</i>	<i>98.1</i>	<i>20-170</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0392</i>		<i>"</i>	<i>0.0400</i>	<i>98.0</i>	<i>21-167</i>				

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10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/19/15 11:02

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505108 - EPA 5030 Soil MS

LCS (1505108-BS1)

Prepared: 05/12/15 Analyzed: 05/13/15

Benzene	0.149	0.0020	mg/kg	0.150		99.6	58-130			
Bromobenzene	0.144	0.0050	"	0.150		96.0	87-115			
Bromochloromethane	0.149	0.0050	"	0.150		99.0	82-122			
Bromodichloromethane	0.150	0.0050	"	0.150		100	84-119			
Bromoform	0.152	0.0050	"	0.150		102	76-119			
Bromomethane	0.158	0.010	"	0.150		106	39-152			
n-Butylbenzene	0.146	0.0050	"	0.150		97.4	70-131			
sec-Butylbenzene	0.144	0.0050	"	0.150		95.8	74-124			
tert-Butylbenzene	0.147	0.0050	"	0.150		97.8	77-121			
Carbon tetrachloride	0.139	0.0050	"	0.150		92.6	66-127			
Chlorobenzene	0.155	0.0050	"	0.150		103	82-120			
Chloroethane	0.163	0.0050	"	0.150		109	63-126			
Chloroform	0.154	0.0050	"	0.150		102	82-120			
Chloromethane	0.147	0.015	"	0.150		97.8	57-133			
2-Chlorotoluene	0.143	0.0050	"	0.150		95.3	82-117			
4-Chlorotoluene	0.143	0.0050	"	0.150		95.6	81-119			
Chlorodibromomethane	0.153	0.010	"	0.150		102	82-124			
1,2-Dibromo-3-chloropropane	0.136	0.015	"	0.150		90.5	62-128			
1,2-Dibromoethane (EDB)	0.154	0.0050	"	0.150		103	86-122			
Dibromomethane	0.147	0.0050	"	0.150		98.1	83-124			
1,2-Dichlorobenzene	0.146	0.0050	"	0.150		97.4	84-120			
1,3-Dichlorobenzene	0.145	0.0050	"	0.150		96.9	81-118			
1,4-Dichlorobenzene	0.143	0.0050	"	0.150		95.4	80-118			
Dichlorodifluoromethane	0.141	0.0050	"	0.150		93.8	25-141			
Tert-amyl methyl ether	0.152	0.0050	"	0.149		101	50-147			
1,1-Dichloroethane	0.153	0.0050	"	0.150		102	78-120			
1,2-Dichloroethane (EDC)	0.148	0.0050	"	0.150		98.5	81-125			
Tert-butyl alcohol	0.722	0.020	"	0.747		96.7	64-127			
1,1-Dichloroethene	0.148	0.0050	"	0.150		98.9	71-122			
Ethyl tert-butyl ether	0.151	0.010	"	0.150		101	80-122			
cis-1,2-Dichloroethene	0.157	0.0050	"	0.150		105	84-121			
Di-isopropyl ether	0.153	0.0050	"	0.150		102	78-120			
trans-1,2-Dichloroethene	0.157	0.0050	"	0.150		105	77-125			
Methyl tert-butyl ether	0.154	0.015	"	0.150		102	77-124			
1,2-Dichloropropane	0.148	0.0050	"	0.150		98.6	88-114			
1,3-Dichloropropane	0.156	0.0050	"	0.150		104	86-122			
2,2-Dichloropropane	0.131	0.010	"	0.150		87.6	32-150			
1,1-Dichloropropene	0.144	0.0050	"	0.150		96.1	71-123			

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/19/15 11:02

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505108 - EPA 5030 Soil MS

LCS (1505108-BS1)

Prepared: 05/12/15 Analyzed: 05/13/15

cis-1,3-Dichloropropene	0.148	0.0050	mg/kg	0.150		98.7	74-125			
trans-1,3-Dichloropropene	0.150	0.0050	"	0.150		100	72-126			
Ethylbenzene	0.156	0.0050	"	0.150		104	74-139			
Hexachlorobutadiene	0.142	0.0050	"	0.150		94.8	56-144			
Isopropylbenzene	0.155	0.0050	"	0.150		103	72-124			
p-Isopropyltoluene	0.142	0.010	"	0.150		94.9	72-123			
Methylene Chloride	0.154	0.015	"	0.150		103	10-183			
Naphthalene	0.144	0.010	"	0.150		95.7	66-138			
n-Propylbenzene	0.147	0.0050	"	0.150		97.7	76-121			
Styrene	0.160	0.010	"	0.150		107	76-133			
1,1,2,2-Tetrachloroethane	0.123	0.0050	"	0.150		81.9	60-137			
1,1,1,2-Tetrachloroethane	0.156	0.0050	"	0.150		104	86-121			
Tetrachloroethene	0.155	0.0050	"	0.150		103	69-131			
Toluene	0.146	0.0050	"	0.150		97.0	61-134			
1,2,3-Trichlorobenzene	0.143	0.0050	"	0.150		95.5	63-142			
1,2,4-Trichlorobenzene	0.146	0.0050	"	0.150		97.2	63-141			
1,1,2-Trichloroethane	0.156	0.0050	"	0.150		104	75-136			
1,1,1-Trichloroethane	0.150	0.0050	"	0.150		99.8	71-126			
Trichloroethene	0.165	0.0050	"	0.150		110	86-118			
Trichlorofluoromethane	0.145	0.0050	"	0.150		96.4	62-128			
1,2,3-Trichloropropane	0.140	0.010	"	0.150		93.2	80-118			
1,3,5-Trimethylbenzene	0.146	0.0050	"	0.150		97.4	72-121			
1,2,4-Trimethylbenzene	0.147	0.0050	"	0.150		98.3	78-126			
Vinyl chloride	0.146	0.0050	"	0.150		97.5	63-134			
m,p-Xylene	0.307	0.010	"	0.300		102	73-137			
o-Xylene	0.155	0.0050	"	0.150		103	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0400</i>		<i>"</i>	<i>0.0396</i>		<i>101</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0396</i>		<i>"</i>	<i>0.0400</i>		<i>99.1</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0401</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>21-167</i>			

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/19/15 11:02

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505108 - EPA 5030 Soil MS

Matrix Spike (1505108-MS1)	Source: 1505079-04			Prepared: 05/12/15		Analyzed: 05/13/15	
Benzene	0.121	0.0020	mg/kg	0.150	ND	80.3	30-131
Bromobenzene	0.102	0.0050	"	0.150	ND	67.9	39-124
Bromochloromethane	0.139	0.0050	"	0.150	ND	92.6	62-121
Bromodichloromethane	0.125	0.0050	"	0.150	ND	83.4	51-120
Bromoform	0.119	0.0050	"	0.150	ND	79.4	52-125
Bromomethane	0.102	0.010	"	0.150	ND	67.7	10-152
n-Butylbenzene	0.0693	0.0050	"	0.150	ND	46.2	10-144
sec-Butylbenzene	0.0810	0.0050	"	0.150	ND	54.0	10-140
tert-Butylbenzene	0.0936	0.0050	"	0.150	ND	62.4	16-132
Carbon tetrachloride	0.108	0.0050	"	0.150	ND	71.8	46-125
Chlorobenzene	0.105	0.0050	"	0.150	ND	70.0	42-125
Chloroethane	0.143	0.0050	"	0.150	ND	95.2	46-125
Chloroform	0.133	0.0050	"	0.150	ND	88.7	57-118
Chloromethane	0.134	0.015	"	0.150	ND	89.3	33-132
2-Chlorotoluene	0.0931	0.0050	"	0.150	ND	62.1	30-125
4-Chlorotoluene	0.0935	0.0050	"	0.150	ND	62.3	29-127
Chlorodibromomethane	0.122	0.010	"	0.150	ND	81.4	54-124
1,2-Dibromo-3-chloropropane	0.124	0.015	"	0.150	ND	82.5	10-175
1,2-Dibromoethane (EDB)	0.135	0.0050	"	0.150	ND	89.7	65-125
Dibromomethane	0.136	0.0050	"	0.150	ND	90.7	64-127
1,2-Dichlorobenzene	0.0908	0.0050	"	0.150	ND	60.6	24-134
1,3-Dichlorobenzene	0.0854	0.0050	"	0.150	ND	56.9	22-130
1,4-Dichlorobenzene	0.0840	0.0050	"	0.150	ND	56.0	21-131
Dichlorodifluoromethane	0.133	0.0050	"	0.150	ND	88.8	47-117
1,1-Dichloroethane	0.133	0.0050	"	0.150	ND	88.7	55-119
Tert-amyl methyl ether	0.148	0.0050	"	0.149	ND	99.4	60-124
1,2-Dichloroethane (EDC)	0.136	0.0050	"	0.150	ND	90.8	65-124
1,1-Dichloroethene	0.125	0.0050	"	0.150	ND	83.1	42-145
Tert-butyl alcohol	0.834	0.020	"	0.747	ND	112	64-131
cis-1,2-Dichloroethene	0.129	0.0050	"	0.150	ND	86.2	56-121
Ethyl tert-butyl ether	0.146	0.010	"	0.150	ND	97.0	60-119
Di-isopropyl ether	0.143	0.0050	"	0.150	ND	95.0	40-132
trans-1,2-Dichloroethene	0.123	0.0050	"	0.150	ND	82.3	52-126
Methyl tert-butyl ether	0.157	0.015	"	0.150	ND	105	64-124
1,2-Dichloropropane	0.129	0.0050	"	0.150	ND	86.2	61-115
1,3-Dichloropropane	0.135	0.0050	"	0.150	ND	89.8	66-123
2,2-Dichloropropane	0.115	0.010	"	0.150	ND	77.0	35-127
1,1-Dichloropropene	0.111	0.0050	"	0.150	ND	74.1	52-119

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/19/15 11:02

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505108 - EPA 5030 Soil MS

Matrix Spike (1505108-MS1)	Source: 1505079-04			Prepared: 05/12/15		Analyzed: 05/13/15	
cis-1,3-Dichloropropene	0.119	0.0050	mg/kg	0.150	ND	79.2	47-122
trans-1,3-Dichloropropene	0.121	0.0050	"	0.150	ND	80.4	51-119
Ethylbenzene	0.108	0.0050	"	0.150	ND	72.1	22-153
Hexachlorobutadiene	0.0353	0.0050	"	0.150	ND	23.5	10-149
Isopropylbenzene	0.101	0.0050	"	0.150	ND	67.6	18-135
p-Isopropyltoluene	0.0819	0.010	"	0.150	ND	54.6	12-132
Methylene Chloride	0.136	0.015	"	0.150	ND	90.5	10-167
Naphthalene	0.0809	0.010	"	0.150	ND	53.9	10-158
n-Propylbenzene	0.0934	0.0050	"	0.150	ND	62.3	15-134
Styrene	0.101	0.010	"	0.150	ND	67.7	33-135
1,1,2,2-Tetrachloroethane	0.139	0.0050	"	0.150	ND	92.5	10-166
1,1,1,2-Tetrachloroethane	0.120	0.0050	"	0.150	ND	79.9	49-123
Tetrachloroethane	0.101	0.0050	"	0.150	ND	67.6	33-134
Toluene	0.112	0.0050	"	0.150	ND	74.5	30-134
1,2,3-Trichlorobenzene	0.0615	0.0050	"	0.150	ND	41.0	10-155
1,2,4-Trichlorobenzene	0.0597	0.0050	"	0.150	ND	39.8	10-152
1,1,2-Trichloroethane	0.144	0.0050	"	0.150	ND	95.8	46-139
1,1,1-Trichloroethane	0.126	0.0050	"	0.150	ND	84.2	51-124
Trichloroethene	0.112	0.0050	"	0.150	ND	74.7	16-187
Trichlorofluoromethane	0.126	0.0050	"	0.150	ND	84.2	53-125
1,2,3-Trichloropropane	0.135	0.010	"	0.150	ND	89.8	69-118
1,3,5-Trimethylbenzene	0.102	0.0050	"	0.150	ND	67.8	20-128
1,2,4-Trimethylbenzene	0.0964	0.0050	"	0.150	ND	64.3	17-142
Vinyl chloride	0.126	0.0050	"	0.150	ND	84.1	50-134
m,p-Xylene	0.209	0.010	"	0.300	ND	69.6	10-159
o-Xylene	0.108	0.0050	"	0.150	ND	71.8	31-151
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0425</i>		<i>"</i>	<i>0.0396</i>		<i>107</i>	<i>23-173</i>
<i>Surrogate: Toluene-d8</i>	<i>0.0397</i>		<i>"</i>	<i>0.0400</i>		<i>99.2</i>	<i>20-170</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0395</i>		<i>"</i>	<i>0.0400</i>		<i>98.8</i>	<i>21-167</i>

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10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/19/15 11:02

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505108 - EPA 5030 Soil MS

Matrix Spike Dup (1505108-MSD1)	Source: 1505079-04			Prepared: 05/12/15		Analyzed: 05/13/15				
Benzene	0.115	0.0020	mg/kg	0.150	ND	76.4	30-131	5.03	34	
Bromobenzene	0.0832	0.0050	"	0.150	ND	55.5	39-124	20.2	21	
Bromochloromethane	0.129	0.0050	"	0.150	ND	85.8	62-121	7.62	20	
Bromodichloromethane	0.121	0.0050	"	0.150	ND	80.5	51-120	3.59	22	
Bromoform	0.111	0.0050	"	0.150	ND	73.9	52-125	7.10	22	
Bromomethane	0.0793	0.010	"	0.150	ND	52.8	10-152	24.7	90	
n-Butylbenzene	0.0490	0.0050	"	0.150	ND	32.7	10-144	34.4	52	
sec-Butylbenzene	0.0615	0.0050	"	0.150	ND	41.0	10-140	27.4	45	
tert-Butylbenzene	0.0735	0.0050	"	0.150	ND	49.0	16-132	24.1	33	
Carbon tetrachloride	0.0999	0.0050	"	0.150	ND	66.6	46-125	7.46	22	
Chlorobenzene	0.0917	0.0050	"	0.150	ND	61.2	42-125	13.5	18	
Chloroethane	0.135	0.0050	"	0.150	ND	90.1	46-125	5.59	24	
Chloroform	0.123	0.0050	"	0.150	ND	82.3	57-118	7.49	19	
Chloromethane	0.127	0.015	"	0.150	ND	84.3	33-132	5.74	18	
2-Chlorotoluene	0.0747	0.0050	"	0.150	ND	49.8	30-125	21.9	24	
4-Chlorotoluene	0.0742	0.0050	"	0.150	ND	49.5	29-127	23.0	24	
Chlorodibromomethane	0.115	0.010	"	0.150	ND	76.7	54-124	5.94	22	
1,2-Dibromo-3-chloropropane	0.112	0.015	"	0.150	ND	74.7	10-175	10.0	39	
1,2-Dibromoethane (EDB)	0.120	0.0050	"	0.150	ND	79.8	65-125	11.7	22	
Dibromomethane	0.130	0.0050	"	0.150	ND	87.0	64-127	4.16	19	
1,2-Dichlorobenzene	0.0703	0.0050	"	0.150	ND	46.9	24-134	25.5	26	
1,3-Dichlorobenzene	0.0648	0.0050	"	0.150	ND	43.2	22-130	27.4	27	QM-07
1,4-Dichlorobenzene	0.0649	0.0050	"	0.150	ND	43.2	21-131	25.8	25	QM-07
Dichlorodifluoromethane	0.124	0.0050	"	0.150	ND	82.8	47-117	6.94	36	
Tert-amyl methyl ether	0.139	0.0050	"	0.149	ND	93.2	60-124	6.38	40	
1,1-Dichloroethane	0.125	0.0050	"	0.150	ND	83.5	55-119	6.06	22	
1,2-Dichloroethane (EDC)	0.130	0.0050	"	0.150	ND	86.7	65-124	4.69	19	
Tert-butyl alcohol	0.769	0.020	"	0.747	ND	103	64-131	8.12	24	
1,1-Dichloroethene	0.116	0.0050	"	0.150	ND	77.6	42-145	6.84	22	
Ethyl tert-butyl ether	0.137	0.010	"	0.150	ND	91.6	60-119	5.79	38	
cis-1,2-Dichloroethene	0.122	0.0050	"	0.150	ND	81.2	56-121	6.05	21	
Di-isopropyl ether	0.135	0.0050	"	0.150	ND	89.9	40-132	5.49	108	
trans-1,2-Dichloroethene	0.115	0.0050	"	0.150	ND	76.4	52-126	7.44	22	
Methyl tert-butyl ether	0.149	0.015	"	0.150	ND	99.5	64-124	4.94	28	
1,2-Dichloropropane	0.122	0.0050	"	0.150	ND	81.5	61-115	5.58	17	
1,3-Dichloropropane	0.128	0.0050	"	0.150	ND	85.4	66-123	4.98	24	
2,2-Dichloropropane	0.105	0.010	"	0.150	ND	70.0	35-127	9.53	29	
1,1-Dichloropropene	0.102	0.0050	"	0.150	ND	67.9	52-119	8.85	21	

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/19/15 11:02

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505108 - EPA 5030 Soil MS

Matrix Spike Dup (1505108-MSD1)	Source: 1505079-04			Prepared: 05/12/15		Analyzed: 05/13/15				
cis-1,3-Dichloropropene	0.107	0.0050	mg/kg	0.150	ND	71.6	47-122	10.1	40	
trans-1,3-Dichloropropene	0.109	0.0050	"	0.150	ND	72.7	51-119	10.1	52	
Ethylbenzene	0.0957	0.0050	"	0.150	ND	63.8	22-153	12.2	24	
Hexachlorobutadiene	0.0228	0.0050	"	0.150	ND	15.2	10-149	43.1	59	
Isopropylbenzene	0.0864	0.0050	"	0.150	ND	57.6	18-135	16.0	33	
p-Isopropyltoluene	0.0622	0.010	"	0.150	ND	41.5	12-132	27.3	38	
Methylene Chloride	0.131	0.015	"	0.150	ND	87.5	10-167	3.33	102	
Naphthalene	0.0566	0.010	"	0.150	ND	37.7	10-158	35.4	42	
n-Propylbenzene	0.0742	0.0050	"	0.150	ND	49.4	15-134	23.0	37	
Styrene	0.0857	0.010	"	0.150	ND	57.1	33-135	16.9	22	
1,1,2,2-Tetrachloroethane	0.125	0.0050	"	0.150	ND	83.6	10-166	10.0	45	
1,1,1,2-Tetrachloroethane	0.112	0.0050	"	0.150	ND	74.4	49-123	7.23	21	
Tetrachloroethane	0.0895	0.0050	"	0.150	ND	59.6	33-134	12.5	26	
Toluene	0.102	0.0050	"	0.150	ND	67.8	30-134	9.36	30	
1,2,3-Trichlorobenzene	0.0408	0.0050	"	0.150	ND	27.2	10-155	40.4	40	QM-07
1,2,4-Trichlorobenzene	0.0399	0.0050	"	0.150	ND	26.6	10-152	39.7	42	
1,1,2-Trichloroethane	0.133	0.0050	"	0.150	ND	88.9	46-139	7.54	34	
1,1,1-Trichloroethane	0.117	0.0050	"	0.150	ND	78.1	51-124	7.57	22	
Trichloroethene	0.103	0.0050	"	0.150	ND	68.7	16-187	8.42	19	
Trichlorofluoromethane	0.119	0.0050	"	0.150	ND	79.2	53-125	6.12	20	
1,2,3-Trichloropropane	0.122	0.010	"	0.150	ND	81.0	69-118	10.3	23	
1,3,5-Trimethylbenzene	0.0840	0.0050	"	0.150	ND	56.0	20-128	19.1	31	
1,2,4-Trimethylbenzene	0.0771	0.0050	"	0.150	ND	51.4	17-142	22.2	40	
Vinyl chloride	0.120	0.0050	"	0.150	ND	80.3	50-134	4.62	22	
m,p-Xylene	0.182	0.010	"	0.300	ND	60.6	10-159	13.9	68	
o-Xylene	0.0949	0.0050	"	0.150	ND	63.2	31-151	12.7	38	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0440</i>		<i>"</i>	<i>0.0396</i>		<i>111</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0406</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0396</i>		<i>"</i>	<i>0.0400</i>		<i>98.9</i>	<i>21-167</i>			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/19/15 11:02

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike	Source	%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505124 - EPA 5030 Soil MS

Blank (1505124-BLK1)

Prepared: 05/14/15 Analyzed: 05/15/15

Acenaphthene	ND	330	ug/kg
Acenaphthylene	ND	330	"
Anthracene	ND	330	"
Benzo (a) anthracene	ND	330	"
Benzo (b) fluoranthene	ND	330	"
Benzo (k) fluoranthene	ND	330	"
Benzo (g,h,i) perylene	ND	330	"
Benzo (a) pyrene	ND	330	"
Benzyl alcohol	ND	330	"
Pyridine	ND	330	"
Bis(2-chloroethoxy)methane	ND	330	"
N-Nitrosodimethylamine	ND	330	"
Bis(2-chloroethyl)ether	ND	330	"
Bis(2-chloroisopropyl)ether	ND	330	"
Bis(2-ethylhexyl)phthalate	ND	330	"
4-Bromophenyl phenyl ether	ND	330	"
Butyl benzyl phthalate	ND	330	"
4-Chloroaniline	ND	330	"
4-Chloro-3-methylphenol	ND	330	"
2-Chloronaphthalene	ND	330	"
2-Chlorophenol	ND	330	"
4-Chlorophenyl phenyl ether	ND	330	"
Chrysene	ND	330	"
Dibenz (a,h) anthracene	ND	330	"
Dibenzofuran	ND	330	"
Di-n-butyl phthalate	ND	330	"
1,2-Dichlorobenzene	ND	330	"
1,3-Dichlorobenzene	ND	330	"
1,4-Dichlorobenzene	ND	330	"
2,4-Dichlorophenol	ND	330	"
Diethyl phthalate	ND	330	"
2,4-Dimethylphenol	ND	330	"
Carbazole	ND	330	"
Dimethyl phthalate	ND	330	"
4,6-Dinitro-2-methylphenol	ND	330	"
2,4-Dinitrophenol	ND	330	"
Azobenzene	ND	330	"
2,4-Dinitrotoluene	ND	330	"

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Reported:
05/19/15 11:02

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505124 - EPA 5030 Soil MS

Blank (1505124-BLK1)

Prepared: 05/14/15 Analyzed: 05/15/15

2,6-Dinitrotoluene	ND	330	ug/kg							
Di-n-octyl phthalate	ND	330	"							
Fluoranthene	ND	330	"							
Fluorene	ND	330	"							
Hexachlorobenzene	ND	330	"							
Hexachlorobutadiene	ND	330	"							
Hexachlorocyclopentadiene	ND	330	"							
Hexachloroethane	ND	330	"							
Indeno (1,2,3-cd) pyrene	ND	330	"							
Isophorone	ND	330	"							
2-Methylnaphthalene	ND	330	"							
2-Methylphenol	ND	330	"							
4-Methylphenol	ND	330	"							
Naphthalene	ND	330	"							
1,4-Dinitrobenzene	ND	330	"							
2-Nitroaniline	ND	330	"							
1,3-Dinitrobenzene	ND	330	"							
3-Nitroaniline	ND	330	"							
1,2-Dinitrobenzene	ND	330	"							
4-Nitroaniline	ND	330	"							
Nitrobenzene	ND	330	"							
2-Nitrophenol	ND	330	"							
4-Nitrophenol	ND	330	"							
2,3,4,6-Tetrachlorophenol	ND	330	"							
N-Nitrosodi-n-propylamine	ND	330	"							
Pentachlorophenol	ND	330	"							
Phenanthrene	ND	330	"							
Phenol	ND	330	"							
Aniline	ND	330	"							
Pyrene	ND	330	"							
1,2,4-Trichlorobenzene	ND	330	"							
2,4,5-Trichlorophenol	ND	330	"							
2,4,6-Trichlorophenol	ND	330	"							
Surrogate: 2-Fluorophenol	1290		"	1660		77.6	30-200			
Surrogate: Phenol-d6	1520		"	1640		92.8	30-200			
Surrogate: Nitrobenzene-d5	1780		"	1650		107	30-200			
Surrogate: 2-Fluorobiphenyl	1430		"	1660		85.9	30-200			
Surrogate: 2,4,6-Tribromophenol	784		"	1660		47.2	30-200			

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 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/19/15 11:02

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505124 - EPA 5030 Soil MS

Blank (1505124-BLK1)

Prepared: 05/14/15 Analyzed: 05/15/15

Surrogate: Terphenyl-d14 2000 ug/kg 1660 120 30-300

LCS (1505124-BS1)

Prepared: 05/14/15 Analyzed: 05/15/15

Acenaphthene	1340	330	ug/kg	1650	81.0	45-139
Acenaphthylene	ND	330	"			68-113
Anthracene	ND	330	"			63-119
Benzo (a) anthracene	ND	330	"			18-181
Benzo (b) fluoranthene	ND	330	"			10-169
Benzo (k) fluoranthene	ND	330	"			10-184
Benzo (g,h,i) perylene	ND	330	"			10-176
Benzo (a) pyrene	ND	330	"			14-178
4-Chloro-3-methylphenol	2560	330	"	3300	77.5	64-122
2-Chlorophenol	2520	330	"	3300	76.4	64-121
Chrysene	ND	330	"			10-184
Dibenz (a,h) anthracene	ND	330	"			10-171
1,4-Dichlorobenzene	1300	330	"	1650	78.6	64-118
2,4-Dinitrotoluene	1230	330	"	1650	74.7	64-118
Fluoranthene	ND	330	"			58-127
Fluorene	ND	330	"			67-113
Indeno (1,2,3-cd) pyrene	ND	330	"			11-175
2-Methylnaphthalene	ND	330	"			5-5
Naphthalene	ND	330	"			62-118
4-Nitrophenol	2090	330	"	3300	63.4	29-112
N-Nitrosodi-n-propylamine	1490	330	"	1640	90.8	75-112
Phenol	2550	330	"	3300	77.1	57-106
Pyrene	1650	330	"	1630	101	22-174
1,2,4-Trichlorobenzene	1300	330	"	1640	79.2	68-120
Surrogate: 2-Fluorophenol	1140		"	1650	69.0	30-200
Surrogate: Phenol-d6	1310		"	1630	80.1	30-200
Surrogate: Nitrobenzene-d5	1530		"	1640	93.3	30-200
Surrogate: 2-Fluorobiphenyl	1230		"	1650	74.5	30-200
Surrogate: 2,4,6-Tribromophenol	769		"	1650	46.6	30-200
Surrogate: Terphenyl-d14	1690		"	1650	102	30-300

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/19/15 11:02

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505124 - EPA 5030 Soil MS

Duplicate (1505124-DUP1)	Source: 1505088-04			Prepared: 05/14/15	Analyzed: 05/15/15
Acenaphthene	ND	330	ug/kg	356	200
Acenaphthylene	ND	330	"	ND	200
Anthracene	728	330	"	3580	132 200
Benzo (a) anthracene	3440	330	"	ND	200
Benzo (b) fluoranthene	ND	330	"	ND	200
Benzo (k) fluoranthene	ND	330	"	ND	200
Benzo (g,h,i) perylene	ND	330	"	ND	200
Benzo (a) pyrene	ND	330	"	ND	200
4-Chloro-3-methylphenol	ND	330	"	ND	200
2-Chlorophenol	ND	330	"	ND	200
Chrysene	3670	330	"	ND	200
Dibenz (a,h) anthracene	ND	330	"	ND	200
1,4-Dichlorobenzene	ND	330	"	ND	200
2,4-Dinitrotoluene	ND	330	"	ND	200
Fluoranthene	2370	330	"	1120	71.9 200
Fluorene	228	330	"	502	74.9 200
Indeno (1,2,3-cd) pyrene	ND	330	"	ND	200
2-Methylnaphthalene	ND	330	"	168	200
Naphthalene	409	330	"	340	18.6 200
4-Nitrophenol	ND	330	"	ND	200
N-Nitrosodi-n-propylamine	ND	330	"	ND	200
Pentachlorophenol	ND	330	"	0.00	200
Phenol	ND	330	"	ND	200
Pyrene	20400	330	"	12300	49.6 200
1,2,4-Trichlorobenzene	ND	330	"	ND	200
Surrogate: 2-Fluorophenol	980		"	1670	58.8 30-200
Surrogate: Phenol-d6	1340		"	1650	81.4 30-200
Surrogate: Nitrobenzene-d5	1600		"	1660	96.2 30-200
Surrogate: 2-Fluorobiphenyl	1310		"	1670	78.7 30-200
Surrogate: 2,4,6-Tribromophenol	1720		"	1670	103 30-200
Surrogate: Terphenyl-d14	5650		"	1670	339 30-300

S-02

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Terracon - Wheat Ridge
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Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/19/15 11:02

Semivolatile Organic Compounds by EPA Method 8270D - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1505124 - EPA 5030 Soil MS

Matrix Spike (1505124-MS1)	Source: 1505088-03			Prepared: 05/14/15		Analyzed: 05/15/15					
Acenaphthene	1500	330	ug/kg	1670	ND	90.3	32-136				
Acenaphthylene	ND	330	"		ND		45-114				
Anthracene	474	330	"		590		38-121				
Benzo (a) anthracene	ND	330	"		ND		28-135				
Benzo (b) fluoranthene	ND	330	"		ND		10-161				
Benzo (k) fluoranthene	ND	330	"		ND		10-172				
Benzo (g,h,i) perylene	ND	330	"		ND		10-149				
Benzo (a) pyrene	ND	330	"		ND		11-148				
4-Chloro-3-methylphenol	2620	330	"	3330	ND	78.7	38-126				
2-Chlorophenol	2750	330	"	3330	ND	82.5	49-113				
Chrysene	ND	330	"		ND		10-142				
Dibenz (a,h) anthracene	ND	330	"		ND		10-129				
1,4-Dichlorobenzene	1350	330	"	1670	ND	80.7	46-113				
2,4-Dinitrotoluene	1550	330	"	1670	ND	93.0	19-131				
Fluoranthene	273	330	"		211		40-141				
Fluorene	ND	330	"		ND		45-118				
Indeno (1,2,3-cd) pyrene	ND	330	"		ND		10-150				
2-Methylnaphthalene	616	330	"		592		5-150				
Naphthalene	347	330	"		367		51-111				
4-Nitrophenol	3690	330	"	3330	ND	111	21-110				QM-07
N-Nitrosodi-n-propylamine	1770	330	"	1660	ND	107	51-110				
Phenol	2710	330	"	3330	ND	81.4	41-104				
Pyrene	4620	330	"	1650	1780	173	10-150				QM-07
1,2,4-Trichlorobenzene	1320	330	"	1650	ND	79.9	49-115				
<i>Surrogate: 2-Fluorophenol</i>	<i>1200</i>		<i>"</i>	<i>1670</i>		<i>72.3</i>	<i>30-200</i>				
<i>Surrogate: Phenol-d6</i>	<i>1300</i>		<i>"</i>	<i>1650</i>		<i>79.2</i>	<i>30-200</i>				
<i>Surrogate: Nitrobenzene-d5</i>	<i>1720</i>		<i>"</i>	<i>1660</i>		<i>104</i>	<i>30-200</i>				
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>1290</i>		<i>"</i>	<i>1670</i>		<i>77.4</i>	<i>30-200</i>				
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>1500</i>		<i>"</i>	<i>1670</i>		<i>90.1</i>	<i>30-200</i>				
<i>Surrogate: Terphenyl-d14</i>	<i>3640</i>		<i>"</i>	<i>1670</i>		<i>219</i>	<i>30-300</i>				

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/19/15 11:02

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike	Source	%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505103 - EPA 3050B

Blank (1505103-BLK1)

Prepared: 05/12/15 Analyzed: 05/13/15

Arsenic	ND	0.100	mg/kg wet							
Barium	ND	0.100	"							
Cadmium	ND	0.100	"							
Chromium	ND	0.500	"							
Lead	ND	0.100	"							
Selenium	ND	0.0500	"							
Silver	ND	0.100	"							
Zinc	ND	10.0	"							

LCS (1505103-BS1)

Prepared: 05/12/15 Analyzed: 05/13/15

Arsenic	110	0.249	mg/kg wet	99.0		111	78.4-140			
Barium	314	0.249	"	308		102	83.2-117			
Cadmium	196	0.249	"	181		108	81.9-118			
Chromium	143	1.24	"	135		106	80.1-121			
Lead	121	0.249	"	114		106	81.8-119			
Selenium	166	0.124	"	149		111	77.3-123			
Silver	44.8	0.249	"	40.2		111	75-125			
Zinc	166	24.9	"	132		125	80.7-132			

Duplicate (1505103-DUP1)

Source: 1505088-01

Prepared: 05/12/15 Analyzed: 05/13/15

Arsenic	6.02	0.110	mg/kg dry		5.59			7.46	20	
Barium	382	0.110	"		425			10.8	20	
Cadmium	0.788	0.110	"		0.898			13.0	20	
Chromium	9.46	0.551	"		8.22			14.0	20	
Lead	130	0.110	"		143			9.91	20	
Selenium	0.501	0.0551	"		0.613			20.0	20	
Silver	0.511	0.110	"		0.594			15.0	20	
Zinc	401	11.0	"		359			11.0	20	

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/19/15 11:02

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1505103 - EPA 3050B

Matrix Spike (1505103-MS1)	Source: 1505088-01			Prepared: 05/12/15		Analyzed: 05/13/15					
Arsenic	49.9	0.110	mg/kg dry	40.8	5.59	109	75-125				
Barium	246	0.110	"	40.8	425	NR	75-125				QM-07
Cadmium	3.28	0.110	"	2.04	0.898	117	75-125				
Chromium	52.2	0.551	"	40.8	8.22	108	75-125				
Lead	141	0.110	"	20.4	143	NR	75-125				QM-07
Selenium	4.21	0.0551	"	4.08	0.613	88.1	75-125				
Silver	3.56	0.110	"	2.04	0.594	145	75-125				QM-07
Zinc	337	11.0	"	40.8	359	NR	75-125				QM-07

Matrix Spike Dup (1505103-MSD1)	Source: 1505088-01			Prepared: 05/12/15		Analyzed: 05/13/15					
Arsenic	54.8	0.0983	mg/kg dry	39.3	5.59	125	75-125	9.34	25		
Barium	302	0.0983	"	39.3	425	NR	75-125	20.3	25		QM-07
Cadmium	3.81	0.0983	"	1.97	0.898	148	75-125	15.0	25		QM-07
Chromium	51.7	0.492	"	39.3	8.22	111	75-125	1.03	25		
Lead	223	0.0983	"	19.7	143	407	75-125	45.5	25		QM-07
Selenium	4.99	0.0492	"	3.93	0.613	111	75-125	17.1	25		
Silver	3.15	0.0983	"	1.97	0.594	130	75-125	12.4	25		QM-07
Zinc	437	9.83	"	39.3	359	198	75-125	25.8	25		QM-07

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/19/15 11:02

Total Mercury by EPA Method 7471 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1505104 - EPA 7471A

Blank (1505104-BLK1)

Prepared & Analyzed: 05/12/15

Mercury ND 0.0500 mg/kg wet

LCS (1505104-BS1)

Prepared & Analyzed: 05/12/15

Mercury 0.595 0.0500 mg/kg wet 0.500 119 80-120

Duplicate (1505104-DUP1)

Source: 1505088-01

Prepared & Analyzed: 05/12/15

Mercury 0.0293 0.0551 mg/kg dry 0.0850 97.4 20 QR-01

Matrix Spike (1505104-MS1)

Source: 1505088-01

Prepared & Analyzed: 05/12/15

Mercury 0.656 0.0551 mg/kg dry 0.531 0.0850 108 80-120

Matrix Spike Dup (1505104-MSD1)

Source: 1505088-01

Prepared & Analyzed: 05/12/15

Mercury 0.644 0.0551 mg/kg dry 0.533 0.0850 105 80-120 1.92 20

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/19/15 11:02

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505116 - General Preparation

Duplicate (1505116-DUP1)	Source: 1505044-01			Prepared: 05/13/15	Analyzed: 05/14/15
% Solids	74.4		%	74.5	0.134 20

Summit Scientific

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/19/15 11:02

Notes and Definitions

- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
- QR-01 Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

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Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

June 02, 2015

Steve Hoffman

Terracon - Wheat Ridge

10625 West I-70 Frontage Road, Suite 3

Wheat Ridge, CO 80033

RE: National Western Complex

Enclosed are the results of analyses for samples received by Summit Scientific on 05/28/15 17:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to be 'Ben Shrewsbury', with a long, sweeping horizontal stroke extending to the right.

Ben Shrewsbury For Paul Shrewsbury
President



Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
06/02/15 00:44

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-13 (0-6")	1505275-01	Soil	05/28/15 09:20	05/28/15 17:40
MW-13 (6-24")	1505275-02	Soil	05/28/15 09:20	05/28/15 17:40
MW-13 (5')	1505275-03	Soil	05/28/15 09:50	05/28/15 17:40

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/02/15 00:44

Summit Scientific 1505275

741 Corporate Circle Suite I ♦ Golden, Colorado 80401
 303-277-9310 ♦ 303-374-5933 Fax

Page 1 of 1

Client: Terracon Consultants

Address: 10625 West I-70 Frontage Road North, Suite 3
 City/State/Zip: Wheat Ridge, CO 80033
 Phone: (303) 454-5275 Fax: (303) 423-3353
 Sampler Name: Marshall Haworth

Project Manager: Steve Hoffman

E-Mail: sbhoffman@terracon.com

Project Name: National Western Complex

Project Number: 25157010

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix		Analyze For:				Special Instructions	
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	VOC's 8260B	TPH 8015		RCRA 8+Zinc
MW-13 (0-6")	5-28-15	0920	1		X			X							
MW-13 (6-24")	5-28-15	0920	1		X			X					X		
MW-13 (5')	5-28-15	0950	1		X			X			X	X			
Relinquished by: <i>Marshall Haworth</i>	Date/Time: 5-28-15	Received by: <i>Marshall Haworth</i>	Date/Time: 5/28/15 1740	Turn Around Time (Check)				Notes:							
				Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/>				on ice							
				24 Hours <input type="checkbox"/> Standard <input type="checkbox"/>											
				48 Hours <input checked="" type="checkbox"/>											
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:											
				Temperature Upon Receipt: 11.6°C											
				Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>											

www.s2scientific.com

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

S₂

Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/02/15 00:44

Sample Receipt Checklist

S2 Work Order: 1505275

Client: Terracon Client Project ID: National Western Complex

Shipped Via: HD (UPS, FedEx, Hand Delivered, Pick-up, etc.) Airbill #: _____

Matrix (check all that apply): Air Soil/Solid Water Other: _____ (Describe)

Cooler ID					
Temp (°C)	<u>11.6</u>				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.				
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
If custody seals are present, are they intact ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present?			<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Note the type of preservative in the Comments column – HCl, H ₂ SO ₄ , NaOH, etc.				
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

Ben Shrawsbury
 Custodian Printed Name

[Signature]
 Signature or Initials of Custodian

5/29/15 1820
 Date/Time

[Signature]



Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/02/15 00:44

MW-13 (0-6")
1505275-01 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **05/28/15 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.39	0.127	mg/kg dry	1	1506007	06/01/15	06/01/15	EPA 6020A	
Barium	97.0	0.127	"	"	"	"	"	"	
Cadmium	2.12	0.127	"	"	"	"	"	"	
Chromium	9.00	0.635	"	"	"	"	"	"	
Lead	69.8	0.127	"	"	"	"	"	"	
Selenium	0.806	0.0635	"	"	"	"	"	"	
Silver	0.408	0.127	"	"	"	"	"	"	

Date Sampled: **05/28/15 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	119	12.7	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **05/28/15 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	0.0868	0.0417	mg/kg dry	1	1506008	06/01/15	06/01/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/28/15 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	78.8		%	1	1505259	05/29/15	06/01/15	% calculation	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/02/15 00:44

MW-13 (6-24")
1505275-02 (Soil)

Summit Scientific

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **05/28/15 09:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.12	0.120	mg/kg dry	1	1506007	06/01/15	06/01/15	EPA 6020A	
Barium	123	0.120	"	"	"	"	"	"	
Cadmium	2.24	0.120	"	"	"	"	"	"	
Chromium	8.48	0.600	"	"	"	"	"	"	
Lead	52.4	0.120	"	"	"	"	"	"	
Selenium	0.735	0.0600	"	"	"	"	"	"	
Silver	0.231	0.120	"	"	"	"	"	"	

Date Sampled: **05/28/15 09:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Zinc	124	12.0	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: **05/28/15 09:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Mercury	0.0992	0.0526	mg/kg dry	1	1506008	06/01/15	06/01/15	EPA 7471	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/28/15 09:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	83.4		%	1	1505259	05/29/15	06/01/15	% calculation	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/02/15 00:44

MW-13 (5')
1505275-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/28/15 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1505271	05/29/15	05/30/15	8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/28/15 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		96.7 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/28/15 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1505265	05/29/15	05/30/15	EPA 8260B	
Bromobenzene	ND	0.0050	"	"	"	"	"	"	
Bromochloromethane	ND	0.0050	"	"	"	"	"	"	
Bromodichloromethane	ND	0.0050	"	"	"	"	"	"	
Bromoform	ND	0.0050	"	"	"	"	"	"	
Bromomethane	ND	0.010	"	"	"	"	"	"	
n-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.0050	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.0050	"	"	"	"	"	"	
Chlorobenzene	ND	0.0050	"	"	"	"	"	"	
Chloroethane	ND	0.0050	"	"	"	"	"	"	
Chloroform	ND	0.0050	"	"	"	"	"	"	
Chloromethane	ND	0.015	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.0050	"	"	"	"	"	"	
Chlorodibromomethane	ND	0.010	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.015	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
Dibromomethane	ND	0.0050	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/02/15 00:44

MW-13 (5')
1505275-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Concentration	Unit	Sample	ID	Date	Date	Method
1,2-Dichlorobenzene	ND	0.0050	mg/kg	1	1505265	05/29/15	05/30/15	EPA 8260B
1,3-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	0.0050	"	"	"	"	"	"
Dichlorodifluoromethane	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethane	ND	0.0050	"	"	"	"	"	"
Tert-amyl methyl ether	ND	0.0050	"	"	"	"	"	"
1,2-Dichloroethane (EDC)	ND	0.0050	"	"	"	"	"	"
1,1-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Tert-butyl alcohol	ND	0.020	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	0.010	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	0.0050	"	"	"	"	"	"
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"
1,2-Dichloropropane	ND	0.0050	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.015	"	"	"	"	"	"
1,3-Dichloropropane	ND	0.0050	"	"	"	"	"	"
2,2-Dichloropropane	ND	0.010	"	"	"	"	"	"
1,1-Dichloropropene	ND	0.0050	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	0.0050	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"
Hexachlorobutadiene	ND	0.0050	"	"	"	"	"	"
Isopropylbenzene	ND	0.0050	"	"	"	"	"	"
p-Isopropyltoluene	ND	0.010	"	"	"	"	"	"
Methylene Chloride	ND	0.015	"	"	"	"	"	"
Naphthalene	ND	0.010	"	"	"	"	"	"
n-Propylbenzene	ND	0.0050	"	"	"	"	"	"
Styrene	ND	0.010	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	0.0050	"	"	"	"	"	"
Tetrachloroethene	ND	0.0050	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	0.0050	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	0.0050	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	0.0050	"	"	"	"	"	"
Trichloroethene	ND	0.0050	"	"	"	"	"	"

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/02/15 00:44

MW-13 (5')
1505275-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Trichlorofluoromethane	ND	0.0050	mg/kg	1	1505265	05/29/15	05/30/15	EPA 8260B
1,2,3-Trichloropropane	ND	0.010	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"
Vinyl chloride	ND	0.0050	"	"	"	"	"	"
m,p-Xylene	ND	0.010	"	"	"	"	"	"
o-Xylene	ND	0.0050	"	"	"	"	"	"
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"

Date Sampled: 05/28/15 09:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %		23-173	"	"	"	"	
Surrogate: Toluene-d8		99.5 %		20-170	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.3 %		21-167	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/02/15 00:44

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch 1505271 - EPA 3550A

Blank (1505271-BLK1)

Prepared: 05/29/15 Analyzed: 05/30/15

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: o-Terphenyl	11.8		"	12.2		97.0	70-130				

LCS (1505271-BS1)

Prepared: 05/29/15 Analyzed: 05/30/15

C10-C28 (DRO)	470	50	mg/kg	501		93.8	50-150				
Surrogate: o-Terphenyl	12.2		"	12.2		99.9	70-130				

Matrix Spike (1505271-MS1)

Source: 1505272-01

Prepared: 05/29/15 Analyzed: 05/30/15

C10-C28 (DRO)	470	50	mg/kg	501	13.7	91.0	50-150				
Surrogate: o-Terphenyl	12.1		"	12.2		98.9	70-130				

Matrix Spike Dup (1505271-MSD1)

Source: 1505272-01

Prepared: 05/29/15 Analyzed: 05/30/15

C10-C28 (DRO)	472	50	mg/kg	501	13.7	91.5	50-150	0.542	20		
Surrogate: o-Terphenyl	11.8		"	12.2		96.7	70-130				

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/02/15 00:44

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting		Spike Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

Batch 1505265 - EPA 5030 Soil MS

Blank (1505265-BLK1)

Prepared: 05/29/15 Analyzed: 05/30/15

Benzene	ND	0.0020	mg/kg
Bromobenzene	ND	0.0050	"
Bromochloromethane	ND	0.0050	"
Bromodichloromethane	ND	0.0050	"
Bromoform	ND	0.0050	"
Bromomethane	ND	0.010	"
n-Butylbenzene	ND	0.0050	"
sec-Butylbenzene	ND	0.0050	"
tert-Butylbenzene	ND	0.0050	"
Carbon tetrachloride	ND	0.0050	"
Chlorobenzene	ND	0.0050	"
Chloroethane	ND	0.0050	"
Chloroform	ND	0.0050	"
Chloromethane	ND	0.015	"
2-Chlorotoluene	ND	0.0050	"
4-Chlorotoluene	ND	0.0050	"
Chlorodibromomethane	ND	0.010	"
1,2-Dibromo-3-chloropropane	ND	0.015	"
1,2-Dibromoethane (EDB)	ND	0.0050	"
Dibromomethane	ND	0.0050	"
1,2-Dichlorobenzene	ND	0.0050	"
1,3-Dichlorobenzene	ND	0.0050	"
1,4-Dichlorobenzene	ND	0.0050	"
Dichlorodifluoromethane	ND	0.0050	"
Tert-amyl methyl ether	ND	0.0050	"
1,1-Dichloroethane	ND	0.0050	"
1,2-Dichloroethane (EDC)	ND	0.0050	"
Tert-butyl alcohol	ND	0.020	"
1,1-Dichloroethene	ND	0.0050	"
cis-1,2-Dichloroethene	ND	0.0050	"
Ethyl tert-butyl ether	ND	0.010	"
Di-isopropyl ether	ND	0.0050	"
trans-1,2-Dichloroethene	ND	0.0050	"
Methyl tert-butyl ether	ND	0.015	"
1,2-Dichloropropane	ND	0.0050	"
1,3-Dichloropropane	ND	0.0050	"
2,2-Dichloropropane	ND	0.010	"
1,1-Dichloropropene	ND	0.0050	"

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/02/15 00:44

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505265 - EPA 5030 Soil MS

Blank (1505265-BLK1)

Prepared: 05/29/15 Analyzed: 05/30/15

cis-1,3-Dichloropropene	ND	0.0050	mg/kg							
trans-1,3-Dichloropropene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Hexachlorobutadiene	ND	0.0050	"							
Isopropylbenzene	ND	0.0050	"							
p-Isopropyltoluene	ND	0.010	"							
Methylene Chloride	ND	0.015	"							
Naphthalene	ND	0.010	"							
n-Propylbenzene	ND	0.0050	"							
Styrene	ND	0.010	"							
1,1,2,2-Tetrachloroethane	ND	0.0050	"							
1,1,1,2-Tetrachloroethane	ND	0.0050	"							
Tetrachloroethene	ND	0.0050	"							
Toluene	ND	0.0050	"							
1,2,3-Trichlorobenzene	ND	0.0050	"							
1,2,4-Trichlorobenzene	ND	0.0050	"							
1,1,2-Trichloroethane	ND	0.0050	"							
1,1,1-Trichloroethane	ND	0.0050	"							
Trichloroethene	ND	0.0050	"							
Trichlorofluoromethane	ND	0.0050	"							
1,2,3-Trichloropropane	ND	0.010	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
Vinyl chloride	ND	0.0050	"							
m,p-Xylene	ND	0.010	"							
o-Xylene	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0419		"	0.0396	106	23-173				
Surrogate: Toluene-d8	0.0397		"	0.0400	99.3	20-170				
Surrogate: 4-Bromofluorobenzene	0.0407		"	0.0400	102	21-167				

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/02/15 00:44

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505265 - EPA 5030 Soil MS

LCS (1505265-BS1)

Prepared: 05/29/15 Analyzed: 05/30/15

Benzene	0.150	0.0020	mg/kg	0.150		99.8	58-130			
Bromobenzene	0.150	0.0050	"	0.150		100	87-115			
Bromochloromethane	0.162	0.0050	"	0.150		108	82-122			
Bromodichloromethane	0.158	0.0050	"	0.150		106	84-119			
Bromoform	0.155	0.0050	"	0.150		103	76-119			
Bromomethane	0.137	0.010	"	0.150		91.5	39-152			
n-Butylbenzene	0.138	0.0050	"	0.150		92.0	70-131			
sec-Butylbenzene	0.139	0.0050	"	0.150		92.8	74-124			
tert-Butylbenzene	0.143	0.0050	"	0.150		95.2	77-121			
Carbon tetrachloride	0.129	0.0050	"	0.150		86.0	66-127			
Chlorobenzene	0.151	0.0050	"	0.150		100	82-120			
Chloroethane	0.141	0.0050	"	0.150		93.9	63-126			
Chloroform	0.154	0.0050	"	0.150		103	82-120			
Chloromethane	0.147	0.015	"	0.150		97.9	57-133			
2-Chlorotoluene	0.147	0.0050	"	0.150		98.0	82-117			
4-Chlorotoluene	0.148	0.0050	"	0.150		98.4	81-119			
Chlorodibromomethane	0.155	0.010	"	0.150		103	82-124			
1,2-Dibromo-3-chloropropane	0.160	0.015	"	0.150		107	62-128			
1,2-Dibromoethane (EDB)	0.161	0.0050	"	0.150		107	86-122			
Dibromomethane	0.163	0.0050	"	0.150		109	83-124			
1,2-Dichlorobenzene	0.156	0.0050	"	0.150		104	84-120			
1,3-Dichlorobenzene	0.151	0.0050	"	0.150		101	81-118			
1,4-Dichlorobenzene	0.150	0.0050	"	0.150		100	80-118			
Dichlorodifluoromethane	0.116	0.0050	"	0.150		77.3	25-141			
1,1-Dichloroethane	0.150	0.0050	"	0.150		100	78-120			
Tert-amyl methyl ether	0.158	0.0050	"	0.149		106	50-147			
1,2-Dichloroethane (EDC)	0.156	0.0050	"	0.150		104	81-125			
1,1-Dichloroethene	0.132	0.0050	"	0.150		88.1	71-122			
Tert-butyl alcohol	0.732	0.020	"	0.747		97.9	64-127			
Ethyl tert-butyl ether	0.160	0.010	"	0.150		106	80-122			
cis-1,2-Dichloroethene	0.155	0.0050	"	0.150		103	84-121			
trans-1,2-Dichloroethene	0.149	0.0050	"	0.150		99.0	77-125			
Di-isopropyl ether	0.158	0.0050	"	0.150		105	78-120			
1,2-Dichloropropane	0.156	0.0050	"	0.150		104	88-114			
Methyl tert-butyl ether	0.159	0.015	"	0.150		106	77-124			
1,3-Dichloropropane	0.156	0.0050	"	0.150		104	86-122			
2,2-Dichloropropane	0.103	0.010	"	0.150		68.8	32-150			
1,1-Dichloropropene	0.138	0.0050	"	0.150		92.0	71-123			

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/02/15 00:44

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505265 - EPA 5030 Soil MS

LCS (1505265-BS1)

Prepared: 05/29/15 Analyzed: 05/30/15

cis-1,3-Dichloropropene	0.129	0.0050	mg/kg	0.150		86.1	74-125			
trans-1,3-Dichloropropene	0.151	0.0050	"	0.150		101	72-126			
Ethylbenzene	0.140	0.0050	"	0.150		93.3	74-139			
Hexachlorobutadiene	0.141	0.0050	"	0.150		94.1	56-144			
Isopropylbenzene	0.145	0.0050	"	0.150		96.7	72-124			
p-Isopropyltoluene	0.139	0.010	"	0.150		92.9	72-123			
Methylene Chloride	0.138	0.015	"	0.150		91.8	10-183			
Naphthalene	0.155	0.010	"	0.150		104	66-138			
n-Propylbenzene	0.143	0.0050	"	0.150		95.3	76-121			
Styrene	0.153	0.010	"	0.150		102	76-133			
1,1,2,2-Tetrachloroethane	0.157	0.0050	"	0.150		104	60-137			
1,1,1,2-Tetrachloroethane	0.154	0.0050	"	0.150		103	86-121			
Tetrachloroethene	0.139	0.0050	"	0.150		92.5	69-131			
Toluene	0.148	0.0050	"	0.150		98.4	61-134			
1,2,3-Trichlorobenzene	0.162	0.0050	"	0.150		108	63-142			
1,2,4-Trichlorobenzene	0.158	0.0050	"	0.150		105	63-141			
1,1,2-Trichloroethane	0.160	0.0050	"	0.150		107	75-136			
1,1,1-Trichloroethane	0.140	0.0050	"	0.150		93.5	71-126			
Trichloroethene	0.146	0.0050	"	0.150		97.5	86-118			
Trichlorofluoromethane	0.128	0.0050	"	0.150		85.4	62-128			
1,2,3-Trichloropropane	0.156	0.010	"	0.150		104	80-118			
1,3,5-Trimethylbenzene	0.146	0.0050	"	0.150		97.2	72-121			
1,2,4-Trimethylbenzene	0.146	0.0050	"	0.150		97.1	78-126			
Vinyl chloride	0.134	0.0050	"	0.150		89.3	63-134			
m,p-Xylene	0.282	0.010	"	0.300		94.1	73-137			
o-Xylene	0.147	0.0050	"	0.150		98.0	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0410</i>		<i>"</i>	<i>0.0396</i>		<i>103</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0412</i>		<i>"</i>	<i>0.0400</i>		<i>103</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0392</i>		<i>"</i>	<i>0.0400</i>		<i>98.1</i>	<i>21-167</i>			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/02/15 00:44

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1506007 - EPA 3050B

Blank (1506007-BLK1)

Prepared & Analyzed: 06/01/15

Arsenic	ND	0.100	mg/kg wet							
Barium	ND	0.100	"							
Cadmium	ND	0.100	"							
Chromium	ND	0.500	"							
Lead	ND	0.100	"							
Selenium	ND	0.0500	"							
Silver	ND	0.100	"							
Zinc	ND	10.0	"							

LCS (1506007-BS1)

Prepared & Analyzed: 06/01/15

Arsenic	109	0.250	mg/kg wet	99.6		110	78.4-140			
Barium	309	0.250	"	310		99.8	83.2-117			
Cadmium	193	0.250	"	182		106	81.9-118			
Chromium	142	1.25	"	136		104	80.1-121			
Lead	119	0.250	"	115		104	81.8-119			
Selenium	184	0.125	"	150		123	77.3-123			
Silver	44.4	0.250	"	40.4		110	75-125			
Zinc	164	25.0	"	133		124	80.7-132			

Duplicate (1506007-DUP1)

Source: 1505275-01

Prepared & Analyzed: 06/01/15

Zinc	88.8	12.7	mg/kg dry		119			29.0	20	QR-03
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Matrix Spike (1506007-MS1)

Source: 1505275-01

Prepared & Analyzed: 06/01/15

Arsenic	42.1	0.106	mg/kg dry	42.3	3.39	91.5	75-125			
Barium	162	0.106	"	42.3	97.0	154	75-125			QM-07
Cadmium	4.48	0.106	"	2.12	2.12	112	75-125			
Chromium	46.5	0.529	"	42.3	9.00	88.7	75-125			
Lead	64.0	0.106	"	21.2	69.8	NR	75-125			QM-07
Selenium	4.98	0.0529	"	4.23	0.806	98.7	75-125			
Silver	2.50	0.106	"	2.12	0.408	99.1	75-125			
Zinc	172	10.6	"	42.3	119	126	75-125			QM-07

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/02/15 00:44

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1506007 - EPA 3050B

Matrix Spike Dup (1506007-MSD1)	Source: 1505275-01			Prepared & Analyzed: 06/01/15							
Arsenic	41.4	0.107	mg/kg dry	42.9	3.39	88.8	75-125	1.52	25		
Barium	101	0.107	"	42.9	97.0	10.3	75-125	46.2	25	QM-07, QR-03	
Cadmium	3.74	0.107	"	2.14	2.12	75.7	75-125	18.1	25		
Chromium	46.2	0.536	"	42.9	9.00	86.8	75-125	0.606	25		
Lead	64.2	0.107	"	21.4	69.8	NR	75-125	0.196	25	QM-07	
Selenium	4.76	0.0536	"	4.29	0.806	92.3	75-125	4.42	25		
Silver	2.60	0.107	"	2.14	0.408	102	75-125	3.69	25		
Zinc	139	10.7	"	42.9	119	47.2	75-125	21.2	25	QM-07	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/02/15 00:44

Total Mercury by EPA Method 7471 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1506008 - EPA 7471A

Blank (1506008-BLK1)			Prepared & Analyzed: 06/01/15								
Mercury	ND	0.0500	mg/kg wet								
LCS (1506008-BS1)			Prepared & Analyzed: 06/01/15								
Mercury	0.270	0.0500	mg/kg wet	0.250		108	80-120				
Duplicate (1506008-DUP1)			Source: 1505275-01		Prepared & Analyzed: 06/01/15						
Mercury	0.0852	0.0429	mg/kg dry		0.0868			1.86	20		
Matrix Spike (1506008-MS1)			Source: 1505275-01		Prepared & Analyzed: 06/01/15						
Mercury	0.442	0.0635	mg/kg dry	0.305	0.0868	116	80-120				
Matrix Spike Dup (1506008-MSD1)			Source: 1505275-01		Prepared & Analyzed: 06/01/15						
Mercury	0.453	0.0567	mg/kg dry	0.283	0.0868	129	80-120	2.57	20		QM-07

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/02/15 00:44

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1505259 - General Preparation

Duplicate (1505259-DUP1)		Source: 1505255-01		Prepared: 05/29/15		Analyzed: 06/01/15	
% Solids	72.8	%		72.0		1.10	20

Summit Scientific

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
06/02/15 00:44

Notes and Definitions

- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

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G2

**Summit Scientific Laboratory Reports for
Groundwater Samples**

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

May 06, 2015

Steve Hoffman

Terracon - Wheat Ridge

10625 West I-70 Frontage Road, Suite 3

Wheat Ridge, CO 80033

RE: National Western Complex

Enclosed are the results of analyses for samples received by Summit Scientific on 04/29/15 17:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury
President



Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/06/15 13:47

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-01	1504291-01	Water	04/29/15 09:25	04/29/15 17:40
MW-05	1504291-02	Water	04/29/15 10:30	04/29/15 17:40
MW-11	1504291-03	Water	04/29/15 11:20	04/29/15 17:40
MW-09	1504291-04	Water	04/29/15 12:55	04/29/15 17:40
MW-02	1504291-05	Water	04/29/15 14:45	04/29/15 17:40

Summit Scientific

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S₂

Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 13:47

Summit Scientific

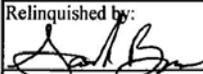
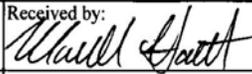
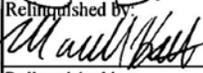
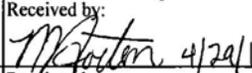
S₂

1504291

741 Corporate Circle, Suite J&K ♦ Golden, Colorado 80401
 303-277-9310 ♦ 303-374-5933

Page 1 of 1

Client: Terracon Project Manager: Steve Hoffman
 Address: 10625 W I-70 Frontage Rd E-Mail: SBHoffman@Terracon.com
 City/State/Zip: Wheat Ridge CO 80033
 Phone: 303-423-3300 Fax: Project Name: National Western Stock Show
 Sampler Name: Sarah Burns Project Number: 25157010

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested				Special Instructions
					HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	VOCs	PCBs	Metals	
1	MW-01	4/29/15	925	4	3	1			X							
2	MW-05	4/29/15	1030	4	3	1			X							
3	MW-11	4/29/15	1120	4	3	1			X							
4	MW-09	4/29/15	1255	4	3	1			X							
5	MW-02	4/29/15	1445	4	3	1			X							
6																
7																
8																
9																
10																
Relinquished by: 		Date/Time: 4/29/15 1451	Received by: 		Date/Time: 4-29-15 1451	Turn Around Time (Check)		Notes:								
Relinquished by: 		Date/Time: 4-29-15 1740	Received by: 		Date/Time: 4/29/15 1740	Same Day _____ 72 hours _____		on ice								
Relinquished by:		Date/Time:	Received by:		Date/Time:	24 hours _____ Standard <input checked="" type="checkbox"/>										
Relinquished by:		Date/Time:	Received by:		Date/Time:	48 hours _____										
						Sample Integrity:										
						Temperature Upon Receipt: 13.1°C										
						Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No										

www.s2scientific.com



S₂

Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 13:47

Sample Receipt Checklist

S2 Work Order: 1504291

Client: Terracon

Client Project ID: National Western Stock Show

Shipped Via: HD

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Airbill #: _____

Matrix (check all that apply): Air Soil/Solid Water Other: _____ (Describe)

Cooler ID				
Temp (°C)	<u>13.1</u>			

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.				
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
If custody seals are present, are they intact ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present?			<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.		<input checked="" type="checkbox"/>		
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?	<input checked="" type="checkbox"/>			<u>HCl</u>
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, etc.				
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

Ben Shrewsbury
 Custodian Printed Name

[Signature]
 Signature or Initials of Custodian

4/30/15
 Date/Time

[Signature]



Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 13:47

MW-01
1504291-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 04/29/15 09:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.00	ug/l	1	1504318	04/30/15	05/01/15	EPA 8260B	
Bromobenzene	ND	1.00	"	"	"	"	"	"	
Bromochloromethane	ND	5.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	1.00	"	"	"	"	"	"	
Bromomethane	ND	1.00	"	"	"	"	"	"	
n-Butylbenzene	ND	1.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.00	"	"	"	"	"	"	
Chlorobenzene	ND	1.00	"	"	"	"	"	"	
Chloroethane	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	5.00	"	"	"	"	"	"	
Chloromethane	ND	1.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	1.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.00	"	"	"	"	"	"	
Dibromomethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.00	"	"	"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 13:47

MW-01
1504291-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
cis-1,3-Dichloropropene	ND	1.00	ug/l	1	1504318	04/30/15	05/01/15	EPA 8260B
trans-1,3-Dichloropropene	ND	1.00	"	"	"	"	"	"
Ethylbenzene	ND	1.00	"	"	"	"	"	"
Hexachlorobutadiene	ND	1.00	"	"	"	"	"	"
Tert-amyl methyl ether	ND	1.00	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	10.0	"	"	"	"	"	"
Tert-butyl alcohol	ND	20.0	"	"	"	"	"	"
Isopropylbenzene	ND	1.00	"	"	"	"	"	"
Di-isopropyl ether	ND	5.00	"	"	"	"	"	"
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"
Methylene Chloride	ND	5.00	"	"	"	"	"	"
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"
Naphthalene	ND	1.00	"	"	"	"	"	"
n-Propylbenzene	ND	1.00	"	"	"	"	"	"
Styrene	ND	1.00	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
Tetrachloroethene	ND	1.00	"	"	"	"	"	"
Toluene	ND	1.00	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	1.00	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"
Trichloroethene	ND	1.00	"	"	"	"	"	"
Trichlorofluoromethane	ND	1.00	"	"	"	"	"	"
1,2,3-Trichloropropane	ND	1.00	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
Vinyl chloride	ND	1.00	"	"	"	"	"	"
m,p-Xylene	ND	2.00	"	"	"	"	"	"
o-Xylene	ND	1.00	"	"	"	"	"	"

Date Sampled: 04/29/15 09:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		99.5 %	45-149		"	"	"	"	

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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 13:47

MW-01
1504291-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Surrogate: 4-Bromofluorobenzene 96.7 % 45-146 1504318 04/30/15 05/01/15 EPA 8260B

Dissolved Mercury by EPA Method 245.1

Date Sampled: **04/29/15 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.000200	mg/L	1	1505048	05/05/15	05/05/15	EPA 245.1	

Dissolved Metals by EPA Method 200.8

Date Sampled: **04/29/15 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.00227	0.000600	mg/L	1	1505032	05/04/15	05/04/15	EPA 200.8	
Barium	0.215	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.0000500	"	"	"	"	"	"	
Chromium	ND	0.00100	"	"	"	"	"	"	
Lead	ND	0.00100	"	"	"	"	"	"	
Selenium	ND	0.00100	"	"	"	"	"	"	
Silver	0.000221	0.0000500	"	"	"	"	"	"	

Date Sampled: **04/29/15 09:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	0.00827	0.00300	"	"	"	"	"	"	

Summit Scientific

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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 13:47

MW-05
1504291-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/29/15 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.00		ug/l	1	1504318	04/30/15	05/01/15	EPA 8260B	
Bromobenzene	ND	1.00		"	"	"	"	"	"	
Bromochloromethane	ND	5.00		"	"	"	"	"	"	
Bromodichloromethane	ND	2.00		"	"	"	"	"	"	
Bromoform	ND	1.00		"	"	"	"	"	"	
Bromomethane	ND	1.00		"	"	"	"	"	"	
n-Butylbenzene	ND	1.00		"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00		"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00		"	"	"	"	"	"	
Carbon tetrachloride	ND	1.00		"	"	"	"	"	"	
Chlorobenzene	ND	1.00		"	"	"	"	"	"	
Chloroethane	ND	1.00		"	"	"	"	"	"	
Chloroform	ND	5.00		"	"	"	"	"	"	
Chloromethane	ND	1.00		"	"	"	"	"	"	
Chlorodibromomethane	ND	1.00		"	"	"	"	"	"	
2-Chlorotoluene	ND	1.00		"	"	"	"	"	"	
4-Chlorotoluene	ND	1.00		"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.00		"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.00		"	"	"	"	"	"	
Dibromomethane	ND	1.00		"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.00		"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.00		"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.00		"	"	"	"	"	"	
Dichlorodifluoromethane	ND	1.00		"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.00		"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.00		"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.00		"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.00		"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.00		"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.00		"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.00		"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.00		"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.00		"	"	"	"	"	"	

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Project: National Western Complex

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Reported:
 05/06/15 13:47

MW-05
1504291-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
cis-1,3-Dichloropropene	ND	1.00	ug/l	1	1504318	04/30/15	05/01/15	EPA 8260B
trans-1,3-Dichloropropene	ND	1.00	"	"	"	"	"	"
Ethylbenzene	ND	1.00	"	"	"	"	"	"
Hexachlorobutadiene	ND	1.00	"	"	"	"	"	"
Tert-amyl methyl ether	ND	1.00	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	10.0	"	"	"	"	"	"
Tert-butyl alcohol	ND	20.0	"	"	"	"	"	"
Isopropylbenzene	ND	1.00	"	"	"	"	"	"
Di-isopropyl ether	ND	5.00	"	"	"	"	"	"
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"
Methylene Chloride	ND	5.00	"	"	"	"	"	"
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"
Naphthalene	ND	1.00	"	"	"	"	"	"
n-Propylbenzene	ND	1.00	"	"	"	"	"	"
Styrene	ND	1.00	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
Tetrachloroethene	1.26	1.00	"	"	"	"	"	"
Toluene	ND	1.00	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	1.00	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"
Trichloroethene	ND	1.00	"	"	"	"	"	"
Trichlorofluoromethane	ND	1.00	"	"	"	"	"	"
1,2,3-Trichloropropane	ND	1.00	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
Vinyl chloride	ND	1.00	"	"	"	"	"	"
m,p-Xylene	ND	2.00	"	"	"	"	"	"
o-Xylene	ND	1.00	"	"	"	"	"	"

Date Sampled: **04/29/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		99.2 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		96.9 %	45-149		"	"	"	"	

Summit Scientific

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 13:47

MW-05
1504291-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Surrogate: 4-Bromofluorobenzene 95.6 % 45-146 1504318 04/30/15 05/01/15 EPA 8260B

Dissolved Mercury by EPA Method 245.1

Date Sampled: **04/29/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.000200	mg/L	1	1505048	05/05/15	05/05/15	EPA 245.1	

Dissolved Metals by EPA Method 200.8

Date Sampled: **04/29/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.00694	0.000600	mg/L	1	1505032	05/04/15	05/04/15	EPA 200.8	
Barium	0.110	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.0000500	"	"	"	"	"	"	
Chromium	ND	0.00100	"	"	"	"	"	"	
Lead	0.00172	0.00100	"	"	"	"	"	"	
Selenium	0.00364	0.00100	"	"	"	"	"	"	
Silver	0.00112	0.0000500	"	"	"	"	"	"	

Date Sampled: **04/29/15 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	0.00536	0.00300	"	"	"	"	"	"	

Summit Scientific

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Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 13:47

MW-11
1504291-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/29/15 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.00	ug/l	1	1504318	04/30/15	05/01/15	EPA 8260B	
Bromobenzene	ND	1.00	"	"	"	"	"	"	
Bromochloromethane	ND	5.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	1.00	"	"	"	"	"	"	
Bromomethane	ND	1.00	"	"	"	"	"	"	
n-Butylbenzene	ND	1.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.00	"	"	"	"	"	"	
Chlorobenzene	ND	1.00	"	"	"	"	"	"	
Chloroethane	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	5.00	"	"	"	"	"	"	
Chloromethane	ND	1.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	1.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.00	"	"	"	"	"	"	
Dibromomethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.00	"	"	"	"	"	"	

Summit Scientific

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Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 13:47

MW-11
1504291-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
cis-1,3-Dichloropropene	ND	1.00	ug/l	1	1504318	04/30/15	05/01/15	EPA 8260B
trans-1,3-Dichloropropene	ND	1.00	"	"	"	"	"	"
Ethylbenzene	ND	1.00	"	"	"	"	"	"
Hexachlorobutadiene	ND	1.00	"	"	"	"	"	"
Tert-amyl methyl ether	ND	1.00	"	"	"	"	"	"
Tert-butyl alcohol	ND	20.0	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	10.0	"	"	"	"	"	"
Isopropylbenzene	ND	1.00	"	"	"	"	"	"
Di-isopropyl ether	ND	5.00	"	"	"	"	"	"
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"
Methylene Chloride	ND	5.00	"	"	"	"	"	"
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"
Naphthalene	ND	1.00	"	"	"	"	"	"
n-Propylbenzene	ND	1.00	"	"	"	"	"	"
Styrene	ND	1.00	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
Tetrachloroethene	3.24	1.00	"	"	"	"	"	"
Toluene	ND	1.00	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	1.00	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"
Trichloroethene	ND	1.00	"	"	"	"	"	"
Trichlorofluoromethane	ND	1.00	"	"	"	"	"	"
1,2,3-Trichloropropane	ND	1.00	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
Vinyl chloride	ND	1.00	"	"	"	"	"	"
m,p-Xylene	ND	2.00	"	"	"	"	"	"
o-Xylene	ND	1.00	"	"	"	"	"	"

Date Sampled: **04/29/15 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		96.8 %	45-149		"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 13:47

MW-11
1504291-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Surrogate: 4-Bromofluorobenzene 95.8 % 45-146 1504318 04/30/15 05/01/15 EPA 8260B

Dissolved Mercury by EPA Method 245.1

Date Sampled: **04/29/15 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.000200	mg/L	1	1505048	05/05/15	05/05/15	EPA 245.1	

Dissolved Metals by EPA Method 200.8

Date Sampled: **04/29/15 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.000976	0.000600	mg/L	1	1505032	05/04/15	05/04/15	EPA 200.8	
Barium	0.0882	0.00100	"	"	"	"	"	"	
Cadmium	0.000202	0.0000500	"	"	"	"	"	"	
Chromium	ND	0.00100	"	"	"	"	"	"	
Lead	ND	0.00100	"	"	"	"	"	"	
Selenium	0.00194	0.00100	"	"	"	"	"	"	
Silver	0.000603	0.0000500	"	"	"	"	"	"	

Date Sampled: **04/29/15 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	0.00854	0.00300	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 13:47

MW-09
1504291-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/29/15 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.00	ug/l	1	1504318	04/30/15	05/01/15	EPA 8260B	
Bromobenzene	ND	1.00	"	"	"	"	"	"	
Bromochloromethane	ND	5.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	1.00	"	"	"	"	"	"	
Bromomethane	ND	1.00	"	"	"	"	"	"	
n-Butylbenzene	ND	1.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.00	"	"	"	"	"	"	
Chlorobenzene	ND	1.00	"	"	"	"	"	"	
Chloroethane	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	5.00	"	"	"	"	"	"	
Chloromethane	ND	1.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	1.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.00	"	"	"	"	"	"	
Dibromomethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.00	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 13:47

MW-09
1504291-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
cis-1,3-Dichloropropene	ND	1.00	ug/l	1	1504318	04/30/15	05/01/15	EPA 8260B
trans-1,3-Dichloropropene	ND	1.00	"	"	"	"	"	"
Ethylbenzene	ND	1.00	"	"	"	"	"	"
Hexachlorobutadiene	ND	1.00	"	"	"	"	"	"
Tert-amyl methyl ether	ND	1.00	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	10.0	"	"	"	"	"	"
Tert-butyl alcohol	ND	20.0	"	"	"	"	"	"
Di-isopropyl ether	ND	5.00	"	"	"	"	"	"
Isopropylbenzene	ND	1.00	"	"	"	"	"	"
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"
Methylene Chloride	ND	5.00	"	"	"	"	"	"
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"
Naphthalene	ND	1.00	"	"	"	"	"	"
n-Propylbenzene	ND	1.00	"	"	"	"	"	"
Styrene	ND	1.00	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
Tetrachloroethene	1.14	1.00	"	"	"	"	"	"
Toluene	ND	1.00	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	1.00	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"
Trichloroethene	ND	1.00	"	"	"	"	"	"
Trichlorofluoromethane	ND	1.00	"	"	"	"	"	"
1,2,3-Trichloropropane	ND	1.00	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
Vinyl chloride	ND	1.00	"	"	"	"	"	"
m,p-Xylene	ND	2.00	"	"	"	"	"	"
o-Xylene	ND	1.00	"	"	"	"	"	"

Date Sampled: **04/29/15 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		99.8 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		97.1 %	45-149		"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 13:47

MW-09
1504291-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Surrogate: 4-Bromofluorobenzene 96.8 % 45-146 1504318 04/30/15 05/01/15 EPA 8260B

Dissolved Mercury by EPA Method 245.1

Date Sampled: **04/29/15 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.000200	mg/L	1	1505048	05/05/15	05/05/15	EPA 245.1	

Dissolved Metals by EPA Method 200.8

Date Sampled: **04/29/15 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.000639	0.000600	mg/L	1	1505032	05/04/15	05/04/15	EPA 200.8	
Barium	0.0713	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.0000500	"	"	"	"	"	"	
Chromium	ND	0.00100	"	"	"	"	"	"	
Lead	ND	0.00100	"	"	"	"	"	"	
Selenium	0.00308	0.00100	"	"	"	"	"	"	
Silver	0.000388	0.0000500	"	"	"	"	"	"	

Date Sampled: **04/29/15 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	ND	0.00300	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 13:47

MW-02
1504291-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/29/15 14:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.00		ug/l	1	1504318	04/30/15	05/01/15	EPA 8260B	
Bromobenzene	ND	1.00		"	"	"	"	"	"	
Bromochloromethane	ND	5.00		"	"	"	"	"	"	
Bromodichloromethane	ND	2.00		"	"	"	"	"	"	
Bromoform	ND	1.00		"	"	"	"	"	"	
Bromomethane	ND	1.00		"	"	"	"	"	"	
n-Butylbenzene	ND	1.00		"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00		"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00		"	"	"	"	"	"	
Carbon tetrachloride	ND	1.00		"	"	"	"	"	"	
Chlorobenzene	ND	1.00		"	"	"	"	"	"	
Chloroethane	ND	1.00		"	"	"	"	"	"	
Chloroform	ND	5.00		"	"	"	"	"	"	
Chloromethane	ND	1.00		"	"	"	"	"	"	
Chlorodibromomethane	ND	1.00		"	"	"	"	"	"	
2-Chlorotoluene	ND	1.00		"	"	"	"	"	"	
4-Chlorotoluene	ND	1.00		"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.00		"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.00		"	"	"	"	"	"	
Dibromomethane	ND	1.00		"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.00		"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.00		"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.00		"	"	"	"	"	"	
Dichlorodifluoromethane	ND	1.00		"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.00		"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.00		"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.00		"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.00		"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.00		"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.00		"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.00		"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.00		"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.00		"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 13:47

MW-02
1504291-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
cis-1,3-Dichloropropene	ND	1.00	ug/l	1	1504318	04/30/15	05/01/15	EPA 8260B
trans-1,3-Dichloropropene	ND	1.00	"	"	"	"	"	"
Ethylbenzene	ND	1.00	"	"	"	"	"	"
Hexachlorobutadiene	ND	1.00	"	"	"	"	"	"
Tert-amyl methyl ether	ND	1.00	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	10.0	"	"	"	"	"	"
Tert-butyl alcohol	ND	20.0	"	"	"	"	"	"
Isopropylbenzene	ND	1.00	"	"	"	"	"	"
Di-isopropyl ether	ND	5.00	"	"	"	"	"	"
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"
Methylene Chloride	ND	5.00	"	"	"	"	"	"
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"
Naphthalene	ND	1.00	"	"	"	"	"	"
n-Propylbenzene	ND	1.00	"	"	"	"	"	"
Styrene	ND	1.00	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
Tetrachloroethene	ND	1.00	"	"	"	"	"	"
Toluene	ND	1.00	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	1.00	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"
Trichloroethene	ND	1.00	"	"	"	"	"	"
Trichlorofluoromethane	ND	1.00	"	"	"	"	"	"
1,2,3-Trichloropropane	ND	1.00	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
Vinyl chloride	ND	1.00	"	"	"	"	"	"
m,p-Xylene	ND	2.00	"	"	"	"	"	"
o-Xylene	ND	1.00	"	"	"	"	"	"

Date Sampled: 04/29/15 14:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		97.4 %	45-149		"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 13:47

MW-02
1504291-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Surrogate: 4-Bromofluorobenzene 98.7 % 45-146 1504318 04/30/15 05/01/15 EPA 8260B

Dissolved Mercury by EPA Method 245.1

Date Sampled: **04/29/15 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.000200	mg/L	1	1505048	05/05/15	05/05/15	EPA 245.1	

Dissolved Metals by EPA Method 200.8

Date Sampled: **04/29/15 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	ND	0.000600	mg/L	1	1505032	05/04/15	05/04/15	EPA 200.8	
Barium	0.0829	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.0000500	"	"	"	"	"	"	
Chromium	0.00114	0.00100	"	"	"	"	"	"	
Lead	ND	0.00100	"	"	"	"	"	"	
Selenium	0.00203	0.00100	"	"	"	"	"	"	
Silver	0.000261	0.0000500	"	"	"	"	"	"	

Date Sampled: **04/29/15 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	ND	0.00300	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 13:47

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504318 - EPA 5030 Water MS

Blank (1504318-BLK1)

Prepared & Analyzed: 05/01/15

Benzene	ND	1.00	ug/l
Bromobenzene	ND	1.00	"
Bromochloromethane	ND	5.00	"
Bromodichloromethane	ND	2.00	"
Bromoform	ND	1.00	"
Bromomethane	ND	1.00	"
n-Butylbenzene	ND	1.00	"
sec-Butylbenzene	ND	1.00	"
tert-Butylbenzene	ND	1.00	"
Carbon tetrachloride	ND	1.00	"
Chlorobenzene	ND	1.00	"
Chloroethane	ND	1.00	"
Chloroform	ND	5.00	"
Chloromethane	ND	1.00	"
Chlorodibromomethane	ND	1.00	"
2-Chlorotoluene	ND	1.00	"
4-Chlorotoluene	ND	1.00	"
1,2-Dibromo-3-chloropropane	ND	1.00	"
1,2-Dibromoethane (EDB)	ND	1.00	"
Dibromomethane	ND	1.00	"
1,2-Dichlorobenzene	ND	1.00	"
1,3-Dichlorobenzene	ND	1.00	"
1,4-Dichlorobenzene	ND	1.00	"
Dichlorodifluoromethane	ND	1.00	"
1,1-Dichloroethane	ND	1.00	"
1,2-Dichloroethane (EDC)	ND	1.00	"
1,1-Dichloroethene	ND	1.00	"
cis-1,2-Dichloroethene	ND	1.00	"
trans-1,2-Dichloroethene	ND	1.00	"
1,2-Dichloropropane	ND	1.00	"
1,3-Dichloropropane	ND	1.00	"
2,2-Dichloropropane	ND	1.00	"
1,1-Dichloropropene	ND	1.00	"
cis-1,3-Dichloropropene	ND	1.00	"
trans-1,3-Dichloropropene	ND	1.00	"
Ethylbenzene	ND	1.00	"
Hexachlorobutadiene	ND	1.00	"
Tert-amyl methyl ether	ND	1.00	"

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 13:47

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting		Spike Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

Batch 1504318 - EPA 5030 Water MS

Blank (1504318-BLK1)

Prepared & Analyzed: 05/01/15

Ethyl tert-butyl ether	ND	10.0	ug/l						
Tert-butyl alcohol	ND	20.0	"						
Isopropylbenzene	ND	1.00	"						
Di-isopropyl ether	ND	5.00	"						
p-Isopropyltoluene	ND	1.00	"						
Methylene Chloride	ND	5.00	"						
Methyl tert-butyl ether	ND	5.00	"						
Naphthalene	ND	1.00	"						
n-Propylbenzene	ND	1.00	"						
Styrene	ND	1.00	"						
1,1,2,2-Tetrachloroethane	ND	1.00	"						
1,1,1,2-Tetrachloroethane	ND	1.00	"						
Tetrachloroethene	ND	1.00	"						
Toluene	ND	1.00	"						
1,2,3-Trichlorobenzene	ND	1.00	"						
1,2,4-Trichlorobenzene	ND	1.00	"						
1,1,2-Trichloroethane	ND	1.00	"						
1,1,1-Trichloroethane	ND	1.00	"						
Trichloroethene	ND	1.00	"						
Trichlorofluoromethane	ND	1.00	"						
1,2,3-Trichloropropane	ND	1.00	"						
1,3,5-Trimethylbenzene	ND	1.00	"						
1,2,4-Trimethylbenzene	ND	1.00	"						
Vinyl chloride	ND	1.00	"						
m,p-Xylene	ND	2.00	"						
o-Xylene	ND	1.00	"						
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.7</i>		<i>"</i>	<i>13.2</i>	<i>104</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.1</i>		<i>"</i>	<i>13.3</i>	<i>98.6</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>12.2</i>		<i>"</i>	<i>13.3</i>	<i>91.9</i>	<i>45-146</i>			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 13:47

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504318 - EPA 5030 Water MS

LCS (1504318-BS1)

Prepared & Analyzed: 05/01/15

Benzene	50.4	1.00	ug/l	50.0	101	51-132
Bromobenzene	50.1	1.00	"	50.0	100	90-110
Bromochloromethane	50.3	5.00	"	50.0	101	83-120
Bromodichloromethane	51.1	2.00	"	50.0	102	82-117
Bromoform	52.0	1.00	"	50.0	104	76-112
Bromomethane	53.6	1.00	"	50.0	107	60-144
n-Butylbenzene	51.5	1.00	"	50.0	103	81-118
sec-Butylbenzene	49.6	1.00	"	50.0	99.3	84-113
tert-Butylbenzene	50.7	1.00	"	50.0	101	87-112
Carbon tetrachloride	47.8	1.00	"	50.0	95.6	68-118
Chlorobenzene	51.1	1.00	"	50.0	102	87-113
Chloroethane	46.7	1.00	"	50.0	93.4	48-147
Chloroform	49.6	5.00	"	50.0	99.2	85-116
Chloromethane	49.5	1.00	"	50.0	99.0	60-133
Chlorodibromomethane	52.3	1.00	"	50.0	105	80-117
2-Chlorotoluene	48.4	1.00	"	50.0	96.9	84-117
4-Chlorotoluene	50.2	1.00	"	50.0	100	86-114
1,2-Dibromo-3-chloropropane	44.0	1.00	"	50.0	88.0	62-126
1,2-Dibromoethane (EDB)	52.7	1.00	"	50.0	105	84-119
Dibromomethane	49.8	1.00	"	50.0	99.6	83-118
1,2-Dichlorobenzene	51.6	1.00	"	50.0	103	90-110
1,3-Dichlorobenzene	51.6	1.00	"	50.0	103	90-110
1,4-Dichlorobenzene	50.4	1.00	"	50.0	101	87-110
Dichlorodifluoromethane	46.7	1.00	"	50.0	93.4	60-115
1,1-Dichloroethane	49.4	1.00	"	50.0	98.9	71-131
1,2-Dichloroethane (EDC)	51.0	1.00	"	50.0	102	84-117
1,1-Dichloroethene	47.3	1.00	"	50.0	94.5	69-129
cis-1,2-Dichloroethene	50.5	1.00	"	50.0	101	81-124
trans-1,2-Dichloroethene	50.7	1.00	"	50.0	101	66-140
1,2-Dichloropropane	50.4	1.00	"	50.0	101	86-114
1,3-Dichloropropane	51.6	1.00	"	50.0	103	83-122
2,2-Dichloropropane	46.1	1.00	"	50.0	92.2	42-130
1,1-Dichloropropene	49.0	1.00	"	50.0	98.0	75-117
cis-1,3-Dichloropropene	50.8	1.00	"	50.0	102	72-125
trans-1,3-Dichloropropene	50.0	1.00	"	50.0	100	73-120
Ethylbenzene	51.8	1.00	"	50.0	104	58-146
Hexachlorobutadiene	50.3	1.00	"	50.0	101	78-118
Tert-amyl methyl ether	49.8	1.00	"	49.8	100	72-128

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Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504318 - EPA 5030 Water MS

LCS (1504318-BS1)

Prepared & Analyzed: 05/01/15

Ethyl tert-butyl ether	50.4	10.0	ug/l	50.0	101	74-131				
Tert-butyl alcohol	215	20.0	"	249	86.2	66-115				
Isopropylbenzene	51.2	1.00	"	50.0	102	77-115				
Di-isopropyl ether	50.5	5.00	"	50.0	101	77-119				
p-Isopropyltoluene	50.1	1.00	"	50.0	100	84-110				
Methylene Chloride	46.0	5.00	"	50.0	92.0	36-156				
Methyl tert-butyl ether	51.5	5.00	"	50.0	103	71-130				
Naphthalene	53.1	1.00	"	50.0	106	76-128				
n-Propylbenzene	51.6	1.00	"	50.0	103	82-117				
Styrene	53.7	1.00	"	50.0	107	82-123				
1,1,2,2-Tetrachloroethane	51.0	1.00	"	50.0	102	66-126				
1,1,1,2-Tetrachloroethane	51.4	1.00	"	50.0	103	86-116				
Tetrachloroethene	49.7	1.00	"	50.0	99.5	74-121				
Toluene	50.1	1.00	"	50.0	100	51-138				
1,2,3-Trichlorobenzene	53.5	1.00	"	50.0	107	81-122				
1,2,4-Trichlorobenzene	54.2	1.00	"	50.0	108	87-115				
1,1,2-Trichloroethane	51.0	1.00	"	50.0	102	77-129				
1,1,1-Trichloroethane	47.9	1.00	"	50.0	95.8	75-120				
Trichloroethene	50.8	1.00	"	50.0	102	88-114				
Trichlorofluoromethane	46.9	1.00	"	50.0	93.8	65-129				
1,2,3-Trichloropropane	44.8	1.00	"	50.0	89.6	72-128				
1,3,5-Trimethylbenzene	51.0	1.00	"	50.0	102	86-110				
1,2,4-Trimethylbenzene	51.3	1.00	"	50.0	103	85-117				
Vinyl chloride	49.4	1.00	"	50.0	98.8	65-133				
m,p-Xylene	103	2.00	"	100	103	57-144				
o-Xylene	51.2	1.00	"	50.0	102	53-146				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.2</i>		<i>"</i>	<i>13.2</i>	<i>100</i>	<i>37-154</i>				
<i>Surrogate: Toluene-d8</i>	<i>13.4</i>		<i>"</i>	<i>13.3</i>	<i>100</i>	<i>45-149</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.4</i>		<i>"</i>	<i>13.3</i>	<i>100</i>	<i>45-146</i>				

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 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504318 - EPA 5030 Water MS

Matrix Spike (1504318-MS1)	Source: 1504291-01			Prepared & Analyzed: 05/01/15						
Benzene	52.4	1.00	ug/l	50.0	ND	105	34-141			
Bromobenzene	51.2	1.00	"	50.0	ND	102	66-131			
Bromochloromethane	52.2	5.00	"	50.0	ND	104	74-125			
Bromodichloromethane	53.7	2.00	"	50.0	ND	107	64-131			
Bromoform	54.6	1.00	"	50.0	ND	109	63-122			
Bromomethane	58.3	1.00	"	50.0	ND	117	46-155			
n-Butylbenzene	52.6	1.00	"	50.0	ND	105	47-142			
sec-Butylbenzene	50.9	1.00	"	50.0	ND	102	52-135			
tert-Butylbenzene	51.8	1.00	"	50.0	ND	104	53-137			
Carbon tetrachloride	51.9	1.00	"	50.0	ND	104	62-121			
Chlorobenzene	53.6	1.00	"	50.0	ND	107	64-131			
Chloroethane	50.0	1.00	"	50.0	ND	100	60-130			
Chloroform	54.9	5.00	"	50.0	ND	110	70-130			
Chloromethane	52.7	1.00	"	50.0	ND	105	62-130			
Chlorodibromomethane	55.1	1.00	"	50.0	ND	110	60-134			
2-Chlorotoluene	48.6	1.00	"	50.0	ND	97.1	58-138			
4-Chlorotoluene	50.7	1.00	"	50.0	ND	101	62-131			
1,2-Dibromo-3-chloropropane	50.6	1.00	"	50.0	ND	101	63-125			
1,2-Dibromoethane (EDB)	54.2	1.00	"	50.0	ND	108	66-131			
Dibromomethane	52.6	1.00	"	50.0	ND	105	70-127			
1,2-Dichlorobenzene	52.4	1.00	"	50.0	ND	105	62-134			
1,3-Dichlorobenzene	51.5	1.00	"	50.0	ND	103	60-133			
1,4-Dichlorobenzene	51.0	1.00	"	50.0	ND	102	63-127			
Dichlorodifluoromethane	49.9	1.00	"	50.0	ND	99.8	24-136			
1,1-Dichloroethane	51.3	1.00	"	50.0	ND	103	73-124			
1,2-Dichloroethane (EDC)	53.1	1.00	"	50.0	ND	106	75-122			
1,1-Dichloroethene	50.4	1.00	"	50.0	ND	101	70-123			
cis-1,2-Dichloroethene	53.4	1.00	"	50.0	ND	107	72-129			
trans-1,2-Dichloroethene	53.0	1.00	"	50.0	ND	106	76-126			
1,2-Dichloropropane	52.6	1.00	"	50.0	ND	105	68-129			
1,3-Dichloropropane	54.6	1.00	"	50.0	ND	109	69-130			
2,2-Dichloropropane	43.7	1.00	"	50.0	ND	87.4	37-126			
1,1-Dichloropropene	52.5	1.00	"	50.0	ND	105	61-125			
cis-1,3-Dichloropropene	52.4	1.00	"	50.0	ND	105	59-127			
trans-1,3-Dichloropropene	51.7	1.00	"	50.0	ND	103	59-126			
Ethylbenzene	54.0	1.00	"	50.0	ND	108	29-160			
Hexachlorobutadiene	50.7	1.00	"	50.0	ND	101	41-141			
Tert-amyl methyl ether	51.9	1.00	"	49.8	ND	104	61-132			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 13:47

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504318 - EPA 5030 Water MS

Matrix Spike (1504318-MS1)	Source: 1504291-01			Prepared & Analyzed: 05/01/15						
Tert-butyl alcohol	237	20.0	ug/l	249	ND	95.2	60-130			
Ethyl tert-butyl ether	52.1	10.0	"	50.0	ND	104	65-130			
Isopropylbenzene	54.1	1.00	"	50.0	ND	108	44-143			
Di-isopropyl ether	52.1	5.00	"	50.0	ND	104	73-128			
p-Isopropyltoluene	50.6	1.00	"	50.0	ND	101	47-137			
Methylene Chloride	46.0	5.00	"	50.0	ND	92.0	42-129			
Methyl tert-butyl ether	53.2	5.00	"	50.0	ND	106	70-124			
Naphthalene	58.7	1.00	"	50.0	ND	117	73-132			
n-Propylbenzene	52.3	1.00	"	50.0	ND	105	61-129			
Styrene	55.0	1.00	"	50.0	ND	110	36-146			
1,1,2,2-Tetrachloroethane	52.5	1.00	"	50.0	ND	105	71-140			
1,1,1,2-Tetrachloroethane	53.8	1.00	"	50.0	ND	108	59-137			
Tetrachloroethane	54.0	1.00	"	50.0	ND	108	49-137			
Toluene	52.7	1.00	"	50.0	ND	105	27-151			
1,2,3-Trichlorobenzene	56.5	1.00	"	50.0	ND	113	61-137			
1,2,4-Trichlorobenzene	55.8	1.00	"	50.0	ND	112	55-141			
1,1,2-Trichloroethane	53.8	1.00	"	50.0	ND	108	67-134			
1,1,1-Trichloroethane	51.4	1.00	"	50.0	ND	103	66-128			
Trichloroethene	52.6	1.00	"	50.0	ND	105	65-119			
Trichlorofluoromethane	51.3	1.00	"	50.0	ND	103	65-121			
1,2,3-Trichloropropane	44.7	1.00	"	50.0	ND	89.4	69-125			
1,3,5-Trimethylbenzene	52.0	1.00	"	50.0	ND	104	50-138			
1,2,4-Trimethylbenzene	51.2	1.00	"	50.0	ND	102	54-137			
Vinyl chloride	52.4	1.00	"	50.0	ND	105	71-124			
m,p-Xylene	108	2.00	"	100	ND	108	20-166			
o-Xylene	53.7	1.00	"	50.0	ND	107	33-159			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.6</i>		<i>"</i>	<i>13.2</i>		<i>103</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.4</i>		<i>"</i>	<i>13.3</i>		<i>101</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.5</i>		<i>"</i>	<i>13.3</i>		<i>101</i>	<i>45-146</i>			

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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD		

Batch 1504318 - EPA 5030 Water MS

Matrix Spike Dup (1504318-MSD1)	Source: 1504291-01			Prepared & Analyzed: 05/01/15						
Benzene	52.8	1.00	ug/l	50.0	ND	106	34-141	0.665	32	
Bromobenzene	51.6	1.00	"	50.0	ND	103	66-131	0.740	30	
Bromochloromethane	51.6	5.00	"	50.0	ND	103	74-125	1.04	30	
Bromodichloromethane	53.5	2.00	"	50.0	ND	107	64-131	0.429	30	
Bromoform	53.1	1.00	"	50.0	ND	106	63-122	2.90	27	
Bromomethane	64.2	1.00	"	50.0	ND	128	46-155	9.73	95	
n-Butylbenzene	54.0	1.00	"	50.0	ND	108	47-142	2.53	33	
sec-Butylbenzene	52.4	1.00	"	50.0	ND	105	52-135	2.92	33	
tert-Butylbenzene	53.1	1.00	"	50.0	ND	106	53-137	2.50	38	
Carbon tetrachloride	52.7	1.00	"	50.0	ND	105	62-121	1.57	21	
Chlorobenzene	53.7	1.00	"	50.0	ND	107	64-131	0.130	30	
Chloroethane	51.8	1.00	"	50.0	ND	104	60-130	3.67	29	
Chloroform	56.2	5.00	"	50.0	ND	112	70-130	2.39	32	
Chloromethane	52.6	1.00	"	50.0	ND	105	62-130	0.266	24	
Chlorodibromomethane	53.7	1.00	"	50.0	ND	107	60-134	2.52	30	
2-Chlorotoluene	50.2	1.00	"	50.0	ND	100	58-138	3.36	34	
4-Chlorotoluene	51.7	1.00	"	50.0	ND	103	62-131	2.09	29	
1,2-Dibromo-3-chloropropane	46.2	1.00	"	50.0	ND	92.3	63-125	9.22	34	
1,2-Dibromoethane (EDB)	53.0	1.00	"	50.0	ND	106	66-131	2.14	31	
Dibromomethane	51.0	1.00	"	50.0	ND	102	70-127	3.07	28	
1,2-Dichlorobenzene	52.8	1.00	"	50.0	ND	106	62-134	0.875	29	
1,3-Dichlorobenzene	52.5	1.00	"	50.0	ND	105	60-133	1.96	30	
1,4-Dichlorobenzene	51.7	1.00	"	50.0	ND	103	63-127	1.46	31	
Dichlorodifluoromethane	52.0	1.00	"	50.0	ND	104	24-136	4.04	31	
1,1-Dichloroethane	53.0	1.00	"	50.0	ND	106	73-124	3.28	33	
1,2-Dichloroethane (EDC)	51.6	1.00	"	50.0	ND	103	75-122	2.92	19	
1,1-Dichloroethene	51.5	1.00	"	50.0	ND	103	70-123	2.00	32	
cis-1,2-Dichloroethene	53.9	1.00	"	50.0	ND	108	72-129	0.951	31	
trans-1,2-Dichloroethene	53.8	1.00	"	50.0	ND	108	76-126	1.52	31	
1,2-Dichloropropane	52.4	1.00	"	50.0	ND	105	68-129	0.267	29	
1,3-Dichloropropane	53.1	1.00	"	50.0	ND	106	69-130	2.81	31	
2,2-Dichloropropane	44.8	1.00	"	50.0	ND	89.7	37-126	2.58	33	
1,1-Dichloropropene	52.8	1.00	"	50.0	ND	106	61-125	0.456	28	
cis-1,3-Dichloropropene	52.1	1.00	"	50.0	ND	104	59-127	0.708	28	
trans-1,3-Dichloropropene	51.3	1.00	"	50.0	ND	103	59-126	0.719	28	
Ethylbenzene	54.5	1.00	"	50.0	ND	109	29-160	0.811	50	
Hexachlorobutadiene	51.5	1.00	"	50.0	ND	103	41-141	1.68	35	
Tert-amyl methyl ether	51.6	1.00	"	49.8	ND	104	61-132	0.561	34	

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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1504318 - EPA 5030 Water MS

Matrix Spike Dup (1504318-MSD1)	Source: 1504291-01			Prepared & Analyzed: 05/01/15						
Ethyl tert-butyl ether	51.8	10.0	ug/l	50.0	ND	104	65-130	0.539	38	
Tert-butyl alcohol	217	20.0	"	249	ND	87.1	60-130	8.97	31	
Isopropylbenzene	54.2	1.00	"	50.0	ND	108	44-143	0.129	35	
Di-isopropyl ether	51.8	5.00	"	50.0	ND	104	73-128	0.674	25	
p-Isopropyltoluene	52.2	1.00	"	50.0	ND	104	47-137	3.21	38	
Methylene Chloride	46.1	5.00	"	50.0	ND	92.1	42-129	0.109	31	
Methyl tert-butyl ether	52.3	5.00	"	50.0	ND	105	70-124	1.65	35	
Naphthalene	53.8	1.00	"	50.0	ND	108	73-132	8.64	23	
n-Propylbenzene	53.3	1.00	"	50.0	ND	107	61-129	1.76	35	
Styrene	54.2	1.00	"	50.0	ND	108	36-146	1.47	33	
1,1,2,2-Tetrachloroethane	51.3	1.00	"	50.0	ND	103	71-140	2.33	32	
1,1,1,2-Tetrachloroethane	52.8	1.00	"	50.0	ND	106	59-137	1.91	32	
Tetrachloroethane	54.5	1.00	"	50.0	ND	109	49-137	0.867	32	
Toluene	52.9	1.00	"	50.0	ND	106	27-151	0.378	25	
1,2,3-Trichlorobenzene	52.9	1.00	"	50.0	ND	106	61-137	6.55	27	
1,2,4-Trichlorobenzene	53.6	1.00	"	50.0	ND	107	55-141	4.02	28	
1,1,2-Trichloroethane	52.3	1.00	"	50.0	ND	105	67-134	2.96	29	
1,1,1-Trichloroethane	52.4	1.00	"	50.0	ND	105	66-128	1.81	31	
Trichloroethene	53.5	1.00	"	50.0	ND	107	65-119	1.73	30	
Trichlorofluoromethane	53.2	1.00	"	50.0	ND	106	65-121	3.79	30	
1,2,3-Trichloropropane	45.0	1.00	"	50.0	ND	90.0	69-125	0.669	33	
1,3,5-Trimethylbenzene	53.2	1.00	"	50.0	ND	106	50-138	2.22	34	
1,2,4-Trimethylbenzene	52.7	1.00	"	50.0	ND	105	54-137	2.83	34	
Vinyl chloride	52.9	1.00	"	50.0	ND	106	71-124	0.988	26	
m,p-Xylene	109	2.00	"	100	ND	109	20-166	1.10	36	
o-Xylene	53.2	1.00	"	50.0	ND	106	33-159	0.786	26	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.2</i>		<i>"</i>	<i>13.2</i>		<i>100</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.5</i>		<i>"</i>	<i>13.3</i>		<i>101</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.5</i>		<i>"</i>	<i>13.3</i>		<i>101</i>	<i>45-146</i>			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 13:47

Dissolved Mercury by EPA Method 245.1 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1505048 - EPA 7470A

Blank (1505048-BLK1)

Prepared & Analyzed: 05/05/15

Mercury ND 0.000200 mg/L

LCS (1505048-BS1)

Prepared & Analyzed: 05/05/15

Mercury 0.00273 0.000200 mg/L 0.00250 109 85-115

Duplicate (1505048-DUP1)

Source: 1504291-01

Prepared & Analyzed: 05/05/15

Mercury 0.0000149 0.000200 mg/L ND 200 20 QR-01

Matrix Spike (1505048-MS1)

Source: 1504291-01

Prepared & Analyzed: 05/05/15

Mercury 0.00304 0.000200 mg/L 0.00250 ND 122 70-130

Matrix Spike Dup (1505048-MSD1)

Source: 1504291-01

Prepared & Analyzed: 05/05/15

Mercury 0.00307 0.000200 mg/L 0.00250 ND 123 70-130 0.851 20

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 13:47

Dissolved Metals by EPA Method 200.8 - Quality Control
Summit Scientific

Analyte	Reporting		Spike Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

Batch 1505032 - EPA 200.8

Blank (1505032-BLK1)

Prepared & Analyzed: 05/04/15

Arsenic	ND	0.000600	mg/L						
Barium	ND	0.00100	"						
Cadmium	ND	0.0000500	"						
Chromium	ND	0.00100	"						
Lead	ND	0.00100	"						
Selenium	ND	0.00100	"						
Silver	ND	0.0000500	"						
Zinc	ND	0.00300	"						

LCS (1505032-BS1)

Prepared & Analyzed: 05/04/15

Arsenic	0.507	0.000600	mg/L	0.500	101	85-115			
Barium	0.450	0.00100	"	0.500	90.0	85-115			
Cadmium	0.0226	0.0000500	"	0.0250	90.3	85-115			
Chromium	0.496	0.00100	"	0.500	99.3	85-115			
Lead	0.248	0.00100	"	0.250	99.3	85-115			
Selenium	0.0507	0.00100	"	0.0500	101	85-115			
Silver	0.0225	0.0000500	"	0.0250	90.1	85-115			
Zinc	0.498	0.00300	"	0.500	99.5	85-115			

Duplicate (1505032-DUP1)

Source: 1504291-01

Prepared & Analyzed: 05/04/15

Arsenic	0.00234	0.000600	mg/L	0.00227	3.07	20			
Barium	0.218	0.00100	"	0.215	1.24	20			
Cadmium	ND	0.0000500	"	ND		20			
Chromium	0.0000813	0.00100	"	0.000237	97.9	20			QR-01
Lead	0.000122	0.00100	"	0.000565	129	20			QR-01
Selenium	ND	0.00100	"	ND		20			
Silver	0.000139	0.0000500	"	0.000221	45.4	20			QR-03
Zinc	0.00234	0.00300	"	0.00827	112	20			QR-01

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/06/15 13:47

Dissolved Metals by EPA Method 200.8 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1505032 - EPA 200.8

Matrix Spike (1505032-MS1)

Source: 1504291-01

Prepared & Analyzed: 05/04/15

Arsenic	0.491	0.000600	mg/L	0.500	0.00227	97.7	75-125			
Barium	0.688	0.00100	"	0.500	0.215	94.5	75-125			
Cadmium	0.0235	0.0000500	"	0.0250	ND	94.1	75-125			
Chromium	0.473	0.00100	"	0.500	0.000237	94.5	75-125			
Lead	0.220	0.00100	"	0.250	0.000565	87.6	75-125			
Selenium	0.0493	0.00100	"	0.0500	ND	98.5	75-125			
Silver	0.0234	0.0000500	"	0.0250	0.000221	92.9	75-125			
Zinc	0.473	0.00300	"	0.500	0.00827	92.9	75-125			

Matrix Spike Dup (1505032-MSD1)

Source: 1504291-01

Prepared & Analyzed: 05/04/15

Arsenic	0.477	0.000600	mg/L	0.500	0.00227	94.9	75-125	2.86	25
Barium	0.654	0.00100	"	0.500	0.215	87.9	75-125	4.96	25
Cadmium	0.0221	0.0000500	"	0.0250	ND	88.3	75-125	6.31	25
Chromium	0.458	0.00100	"	0.500	0.000237	91.5	75-125	3.23	25
Lead	0.208	0.00100	"	0.250	0.000565	83.1	75-125	5.32	25
Selenium	0.0488	0.00100	"	0.0500	ND	97.7	75-125	0.852	25
Silver	0.0223	0.0000500	"	0.0250	0.000221	88.3	75-125	5.02	25
Zinc	0.455	0.00300	"	0.500	0.00827	89.4	75-125	3.76	25

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/06/15 13:47

Notes and Definitions

- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QR-01 Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

May 07, 2015

Steve Hoffman

Terracon - Wheat Ridge

10625 West I-70 Frontage Road, Suite 3

Wheat Ridge, CO 80033

RE: National Western Complex

Enclosed are the results of analyses for samples received by Summit Scientific on 04/30/15 16:18. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury
President



Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/07/15 18:00

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-04	1504296-01	Water	04/30/15 10:08	04/30/15 16:18
MW-03	1504296-02	Water	04/30/15 11:36	04/30/15 16:18
MW-06	1504296-03	Water	04/30/15 13:00	04/30/15 16:18
MW-07	1504296-04	Water	04/30/15 14:18	04/30/15 16:18
MW-07D	1504296-05	Water	04/30/15 14:29	04/30/15 16:18
MW-10	1504296-06	Water	04/30/15 15:19	04/30/15 16:18

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/07/15 18:00

Summit Scientific

1504296

S₂

741 Corporate Circle, Suite J&K ♦ Golden, Colorado 80401
 303-277-9310 ♦ 303-374-5933

Page 1 of 1

Client: Terracon Project Manager: Steve Hoffman
 Address: 10625 W I-70 Frontage Rd E-Mail: SBHOFFMAN@TERRACON.COM
 City/State/Zip: Wheat Ridge, CO 80033 Project Name: National Western Stock Show
 Phone: 303-423-3300 Fax: Project Number: 25157010
 Sampler Name: Scarb Bains

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested				Special Instructions	
					HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	VOCs	PCBs	PEHAP		LEAC
1	MW-01	4/30/15	1008	4	3		1										
2	MW-03		1136	4	3		1										
3	MW-06		1300	4	3		1										
4	MW-07		1428	4	3		1										
5	MW-01D		1429	4	3		1										
6	MW-10	4/30/15	1519	4	3		1										
7																	
8																	
9																	
10																	

Relinquished by:	Date/Time: 4/30/15 16:18	Received by:	Date/Time: 4-30-15 16:18	Turn Around Time (Check)	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day <input type="checkbox"/> 72 hours <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	48 hours <input type="checkbox"/>	
				Sample Integrity:	
				Temperature Upon Receipt: 15.1°C	
				Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

www.s2scientific.com



Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/07/15 18:00

MW-04
1504296-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/30/15 10:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.00	ug/l	1	1505039	05/05/15	05/06/15	EPA 8260B	
Bromobenzene	ND	1.00	"	"	"	"	"	"	
Bromochloromethane	ND	5.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	1.00	"	"	"	"	"	"	
Bromomethane	ND	1.00	"	"	"	"	"	"	
n-Butylbenzene	ND	1.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.00	"	"	"	"	"	"	
Chlorobenzene	ND	1.00	"	"	"	"	"	"	
Chloroethane	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	5.00	"	"	"	"	"	"	
Chloromethane	ND	1.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	1.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.00	"	"	"	"	"	"	
Dibromomethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.00	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/07/15 18:00

MW-04
1504296-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
cis-1,3-Dichloropropene	ND	1.00	ug/l	1	1505039	05/05/15	05/06/15	EPA 8260B
trans-1,3-Dichloropropene	ND	1.00	"	"	"	"	"	"
Ethylbenzene	ND	1.00	"	"	"	"	"	"
Hexachlorobutadiene	ND	1.00	"	"	"	"	"	"
Tert-amyl methyl ether	ND	1.00	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	10.0	"	"	"	"	"	"
Tert-butyl alcohol	ND	20.0	"	"	"	"	"	"
Isopropylbenzene	ND	1.00	"	"	"	"	"	"
Di-isopropyl ether	ND	5.00	"	"	"	"	"	"
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"
Methylene Chloride	ND	5.00	"	"	"	"	"	"
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"
Naphthalene	ND	1.00	"	"	"	"	"	"
n-Propylbenzene	ND	1.00	"	"	"	"	"	"
Styrene	ND	1.00	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
Tetrachloroethene	1.17	1.00	"	"	"	"	"	"
Toluene	ND	1.00	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	1.00	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"
Trichloroethene	ND	1.00	"	"	"	"	"	"
Trichlorofluoromethane	ND	1.00	"	"	"	"	"	"
1,2,3-Trichloropropane	ND	1.00	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
Vinyl chloride	ND	1.00	"	"	"	"	"	"
m,p-Xylene	ND	2.00	"	"	"	"	"	"
o-Xylene	ND	1.00	"	"	"	"	"	"

Date Sampled: **04/30/15 10:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		106 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		97.6 %	45-149		"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/07/15 18:00

MW-04
1504296-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Surrogate: 4-Bromofluorobenzene 94.0 % 45-146 1505039 05/05/15 05/06/15 EPA 8260B

Dissolved Mercury by EPA Method 245.1

Date Sampled: **04/30/15 10:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.000200	mg/L	1	1505048	05/05/15	05/05/15	EPA 245.1	

Dissolved Metals by EPA Method 200.8

Date Sampled: **04/30/15 10:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.00620	0.000600	mg/L	1	1505032	05/04/15	05/04/15	EPA 200.8	
Barium	0.870	0.00100	"	"	"	"	"	"	
Cadmium	0.00104	0.0000500	"	"	"	"	"	"	
Chromium	0.00270	0.00100	"	"	"	"	"	"	
Lead	ND	0.00100	"	"	"	"	"	"	
Selenium	0.00104	0.00100	"	"	"	"	"	"	
Silver	0.000194	0.0000500	"	"	"	"	"	"	

Date Sampled: **04/30/15 10:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	0.0477	0.00300	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/07/15 18:00

MW-03
1504296-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/30/15 11:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.00	ug/l	1	1505039	05/05/15	05/06/15	EPA 8260B	
Bromobenzene	ND	1.00	"	"	"	"	"	"	
Bromochloromethane	ND	5.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	1.00	"	"	"	"	"	"	
Bromomethane	ND	1.00	"	"	"	"	"	"	
n-Butylbenzene	ND	1.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.00	"	"	"	"	"	"	
Chlorobenzene	ND	1.00	"	"	"	"	"	"	
Chloroethane	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	5.00	"	"	"	"	"	"	
Chloromethane	ND	1.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	1.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.00	"	"	"	"	"	"	
Dibromomethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.00	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/07/15 18:00

MW-03
1504296-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
cis-1,3-Dichloropropene	ND	1.00	ug/l	1	1505039	05/05/15	05/06/15	EPA 8260B
trans-1,3-Dichloropropene	ND	1.00	"	"	"	"	"	"
Ethylbenzene	ND	1.00	"	"	"	"	"	"
Hexachlorobutadiene	ND	1.00	"	"	"	"	"	"
Tert-amyl methyl ether	ND	1.00	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	10.0	"	"	"	"	"	"
Tert-butyl alcohol	ND	20.0	"	"	"	"	"	"
Isopropylbenzene	ND	1.00	"	"	"	"	"	"
Di-isopropyl ether	ND	5.00	"	"	"	"	"	"
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"
Methylene Chloride	ND	5.00	"	"	"	"	"	"
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"
Naphthalene	ND	1.00	"	"	"	"	"	"
n-Propylbenzene	ND	1.00	"	"	"	"	"	"
Styrene	ND	1.00	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
Tetrachloroethene	31.4	1.00	"	"	"	"	"	"
Toluene	ND	1.00	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	1.00	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"
Trichloroethene	ND	1.00	"	"	"	"	"	"
Trichlorofluoromethane	ND	1.00	"	"	"	"	"	"
1,2,3-Trichloropropane	ND	1.00	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
Vinyl chloride	ND	1.00	"	"	"	"	"	"
m,p-Xylene	ND	2.00	"	"	"	"	"	"
o-Xylene	ND	1.00	"	"	"	"	"	"

Date Sampled: **04/30/15 11:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		100 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		97.5 %	45-149		"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/07/15 18:00

MW-03
1504296-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Surrogate: 4-Bromofluorobenzene 95.4 % 45-146 1505039 05/05/15 05/06/15 EPA 8260B

Dissolved Mercury by EPA Method 245.1

Date Sampled: **04/30/15 11:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.000200	mg/L	1	1505048	05/05/15	05/05/15	EPA 245.1	

Dissolved Metals by EPA Method 200.8

Date Sampled: **04/30/15 11:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.0127	0.000600	mg/L	1	1505032	05/04/15	05/04/15	EPA 200.8	
Barium	0.536	0.00100	"	"	"	"	"	"	
Cadmium	0.000777	0.0000500	"	"	"	"	"	"	
Chromium	0.00156	0.00100	"	"	"	"	"	"	
Lead	0.00304	0.00100	"	"	"	"	"	"	
Selenium	0.00241	0.00100	"	"	"	"	"	"	
Silver	0.000171	0.0000500	"	"	"	"	"	"	

Date Sampled: **04/30/15 11:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	0.0568	0.00300	"	"	"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/07/15 18:00

MW-06
1504296-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/30/15 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.00		ug/l	1	1505039	05/05/15	05/06/15	EPA 8260B	
Bromobenzene	ND	1.00		"	"	"	"	"	"	
Bromochloromethane	ND	5.00		"	"	"	"	"	"	
Bromodichloromethane	ND	2.00		"	"	"	"	"	"	
Bromoform	ND	1.00		"	"	"	"	"	"	
Bromomethane	ND	1.00		"	"	"	"	"	"	
n-Butylbenzene	ND	1.00		"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00		"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00		"	"	"	"	"	"	
Carbon tetrachloride	ND	1.00		"	"	"	"	"	"	
Chlorobenzene	ND	1.00		"	"	"	"	"	"	
Chloroethane	ND	1.00		"	"	"	"	"	"	
Chloroform	ND	5.00		"	"	"	"	"	"	
Chloromethane	ND	1.00		"	"	"	"	"	"	
Chlorodibromomethane	ND	1.00		"	"	"	"	"	"	
2-Chlorotoluene	ND	1.00		"	"	"	"	"	"	
4-Chlorotoluene	ND	1.00		"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.00		"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.00		"	"	"	"	"	"	
Dibromomethane	ND	1.00		"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.00		"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.00		"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.00		"	"	"	"	"	"	
Dichlorodifluoromethane	ND	1.00		"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.00		"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.00		"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.00		"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.00		"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.00		"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.00		"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.00		"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.00		"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.00		"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/07/15 18:00

MW-06
1504296-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
cis-1,3-Dichloropropene	ND	1.00	ug/l	1	1505039	05/05/15	05/06/15	EPA 8260B
trans-1,3-Dichloropropene	ND	1.00	"	"	"	"	"	"
Ethylbenzene	ND	1.00	"	"	"	"	"	"
Hexachlorobutadiene	ND	1.00	"	"	"	"	"	"
Tert-amyl methyl ether	ND	1.00	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	10.0	"	"	"	"	"	"
Tert-butyl alcohol	ND	20.0	"	"	"	"	"	"
Di-isopropyl ether	ND	5.00	"	"	"	"	"	"
Isopropylbenzene	ND	1.00	"	"	"	"	"	"
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"
Methylene Chloride	ND	5.00	"	"	"	"	"	"
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"
Naphthalene	ND	1.00	"	"	"	"	"	"
n-Propylbenzene	ND	1.00	"	"	"	"	"	"
Styrene	ND	1.00	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
Tetrachloroethene	55.3	1.00	"	"	"	"	"	"
Toluene	ND	1.00	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	1.00	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"
Trichloroethene	1.29	1.00	"	"	"	"	"	"
Trichlorofluoromethane	ND	1.00	"	"	"	"	"	"
1,2,3-Trichloropropane	ND	1.00	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
Vinyl chloride	ND	1.00	"	"	"	"	"	"
m,p-Xylene	ND	2.00	"	"	"	"	"	"
o-Xylene	ND	1.00	"	"	"	"	"	"

Date Sampled: 04/30/15 13:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %		37-154	"	"	"	"	
Surrogate: Toluene-d8		97.7 %		45-149	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/07/15 18:00

MW-06
1504296-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Surrogate: 4-Bromofluorobenzene 95.2 % 45-146 1505039 05/05/15 05/06/15 EPA 8260B

Dissolved Mercury by EPA Method 245.1

Date Sampled: **04/30/15 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.000200	mg/L	1	1505048	05/05/15	05/05/15	EPA 245.1	

Dissolved Metals by EPA Method 200.8

Date Sampled: **04/30/15 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.00736	0.000600	mg/L	1	1505032	05/04/15	05/04/15	EPA 200.8	
Barium	0.559	0.00100	"	"	"	"	"	"	
Cadmium	0.000706	0.0000500	"	"	"	"	"	"	
Chromium	0.00137	0.00100	"	"	"	"	"	"	
Lead	0.00221	0.00100	"	"	"	"	"	"	
Selenium	0.00192	0.00100	"	"	"	"	"	"	
Silver	0.000195	0.0000500	"	"	"	"	"	"	

Date Sampled: **04/30/15 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	0.0729	0.00300	"	"	"	"	"	"	

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Terracon - Wheat Ridge
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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/07/15 18:00

MW-07
1504296-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/30/15 14:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.00	ug/l	1	1505039	05/05/15	05/06/15	EPA 8260B	
Bromobenzene	ND	1.00	"	"	"	"	"	"	
Bromochloromethane	ND	5.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	1.00	"	"	"	"	"	"	
Bromomethane	ND	1.00	"	"	"	"	"	"	
n-Butylbenzene	ND	1.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.00	"	"	"	"	"	"	
Chlorobenzene	ND	1.00	"	"	"	"	"	"	
Chloroethane	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	5.00	"	"	"	"	"	"	
Chloromethane	ND	1.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	1.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.00	"	"	"	"	"	"	
Dibromomethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.00	"	"	"	"	"	"	

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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/07/15 18:00

MW-07
1504296-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
cis-1,3-Dichloropropene	ND	1.00	ug/l	1	1505039	05/05/15	05/06/15	EPA 8260B
trans-1,3-Dichloropropene	ND	1.00	"	"	"	"	"	"
Ethylbenzene	ND	1.00	"	"	"	"	"	"
Hexachlorobutadiene	ND	1.00	"	"	"	"	"	"
Tert-amyl methyl ether	ND	1.00	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	10.0	"	"	"	"	"	"
Tert-butyl alcohol	ND	20.0	"	"	"	"	"	"
Isopropylbenzene	ND	1.00	"	"	"	"	"	"
Di-isopropyl ether	ND	5.00	"	"	"	"	"	"
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"
Methylene Chloride	ND	5.00	"	"	"	"	"	"
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"
Naphthalene	ND	1.00	"	"	"	"	"	"
n-Propylbenzene	ND	1.00	"	"	"	"	"	"
Styrene	ND	1.00	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
Tetrachloroethene	1.45	1.00	"	"	"	"	"	"
Toluene	ND	1.00	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	1.00	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"
Trichloroethene	ND	1.00	"	"	"	"	"	"
Trichlorofluoromethane	ND	1.00	"	"	"	"	"	"
1,2,3-Trichloropropane	ND	1.00	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
Vinyl chloride	ND	1.00	"	"	"	"	"	"
m,p-Xylene	ND	2.00	"	"	"	"	"	"
o-Xylene	ND	1.00	"	"	"	"	"	"

Date Sampled: **04/30/15 14:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		106 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		98.0 %	45-149		"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/07/15 18:00

MW-07
1504296-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Surrogate: 4-Bromofluorobenzene 92.9 % 45-146 1505039 05/05/15 05/06/15 EPA 8260B

Dissolved Mercury by EPA Method 245.1

Date Sampled: **04/30/15 14:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.000200	mg/L	1	1505048	05/05/15	05/05/15	EPA 245.1	

Dissolved Metals by EPA Method 200.8

Date Sampled: **04/30/15 14:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.0192	0.000600	mg/L	1	1505032	05/04/15	05/04/15	EPA 200.8	
Barium	1.43	0.00100	"	"	"	"	"	"	
Cadmium	0.00355	0.0000500	"	"	"	"	"	"	
Chromium	0.00347	0.00100	"	"	"	"	"	"	
Lead	ND	0.00100	"	"	"	"	"	"	
Selenium	0.00334	0.00100	"	"	"	"	"	"	
Silver	0.000166	0.0000500	"	"	"	"	"	"	

Date Sampled: **04/30/15 14:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	0.150	0.00300	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/07/15 18:00

MW-07D
1504296-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/30/15 14:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.00	ug/l	1	1505039	05/05/15	05/06/15	EPA 8260B	
Bromobenzene	ND	1.00	"	"	"	"	"	"	
Bromochloromethane	ND	5.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	1.00	"	"	"	"	"	"	
Bromomethane	ND	1.00	"	"	"	"	"	"	
n-Butylbenzene	ND	1.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.00	"	"	"	"	"	"	
Chlorobenzene	ND	1.00	"	"	"	"	"	"	
Chloroethane	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	5.00	"	"	"	"	"	"	
Chloromethane	ND	1.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	1.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.00	"	"	"	"	"	"	
Dibromomethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.00	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/07/15 18:00

MW-07D
1504296-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
cis-1,3-Dichloropropene	ND	1.00	ug/l	1	1505039	05/05/15	05/06/15	EPA 8260B
trans-1,3-Dichloropropene	ND	1.00	"	"	"	"	"	"
Ethylbenzene	ND	1.00	"	"	"	"	"	"
Hexachlorobutadiene	ND	1.00	"	"	"	"	"	"
Tert-amyl methyl ether	ND	1.00	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	10.0	"	"	"	"	"	"
Tert-butyl alcohol	ND	20.0	"	"	"	"	"	"
Isopropylbenzene	ND	1.00	"	"	"	"	"	"
Di-isopropyl ether	ND	5.00	"	"	"	"	"	"
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"
Methylene Chloride	ND	5.00	"	"	"	"	"	"
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"
Naphthalene	ND	1.00	"	"	"	"	"	"
n-Propylbenzene	ND	1.00	"	"	"	"	"	"
Styrene	ND	1.00	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
Tetrachloroethene	1.61	1.00	"	"	"	"	"	"
Toluene	ND	1.00	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	1.00	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"
Trichloroethene	ND	1.00	"	"	"	"	"	"
Trichlorofluoromethane	ND	1.00	"	"	"	"	"	"
1,2,3-Trichloropropane	ND	1.00	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
Vinyl chloride	ND	1.00	"	"	"	"	"	"
m,p-Xylene	ND	2.00	"	"	"	"	"	"
o-Xylene	ND	1.00	"	"	"	"	"	"

Date Sampled: **04/30/15 14:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		96.5 %	45-149		"	"	"	"	

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/07/15 18:00

MW-07D
1504296-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Surrogate: 4-Bromofluorobenzene 93.3 % 45-146 1505039 05/05/15 05/06/15 EPA 8260B

Dissolved Mercury by EPA Method 245.1

Date Sampled: **04/30/15 14:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.000200	mg/L	1	1505048	05/05/15	05/05/15	EPA 245.1	

Dissolved Metals by EPA Method 200.8

Date Sampled: **04/30/15 14:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.0216	0.000600	mg/L	1	1505032	05/04/15	05/04/15	EPA 200.8	
Barium	1.73	0.00100	"	"	"	"	"	"	
Cadmium	0.00376	0.0000500	"	"	"	"	"	"	
Chromium	0.00364	0.00100	"	"	"	"	"	"	
Lead	ND	0.00100	"	"	"	"	"	"	
Selenium	0.00370	0.00100	"	"	"	"	"	"	
Silver	0.000162	0.0000500	"	"	"	"	"	"	

Date Sampled: **04/30/15 14:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	0.174	0.00300	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/07/15 18:00

MW-10
1504296-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/30/15 15:19**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.00		ug/l	1	1505039	05/05/15	05/06/15	EPA 8260B	
Bromobenzene	ND	1.00		"	"	"	"	"	"	
Bromochloromethane	ND	5.00		"	"	"	"	"	"	
Bromodichloromethane	ND	2.00		"	"	"	"	"	"	
Bromoform	ND	1.00		"	"	"	"	"	"	
Bromomethane	ND	1.00		"	"	"	"	"	"	
n-Butylbenzene	ND	1.00		"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00		"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00		"	"	"	"	"	"	
Carbon tetrachloride	ND	1.00		"	"	"	"	"	"	
Chlorobenzene	ND	1.00		"	"	"	"	"	"	
Chloroethane	ND	1.00		"	"	"	"	"	"	
Chloroform	ND	5.00		"	"	"	"	"	"	
Chloromethane	ND	1.00		"	"	"	"	"	"	
Chlorodibromomethane	ND	1.00		"	"	"	"	"	"	
2-Chlorotoluene	ND	1.00		"	"	"	"	"	"	
4-Chlorotoluene	ND	1.00		"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.00		"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.00		"	"	"	"	"	"	
Dibromomethane	ND	1.00		"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.00		"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.00		"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.00		"	"	"	"	"	"	
Dichlorodifluoromethane	ND	1.00		"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.00		"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.00		"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.00		"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.00		"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.00		"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.00		"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.00		"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.00		"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.00		"	"	"	"	"	"	

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/07/15 18:00

MW-10
1504296-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
cis-1,3-Dichloropropene	ND	1.00	ug/l	1	1505039	05/05/15	05/06/15	EPA 8260B
trans-1,3-Dichloropropene	ND	1.00	"	"	"	"	"	"
Ethylbenzene	ND	1.00	"	"	"	"	"	"
Hexachlorobutadiene	ND	1.00	"	"	"	"	"	"
Tert-amyl methyl ether	ND	1.00	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	10.0	"	"	"	"	"	"
Tert-butyl alcohol	ND	20.0	"	"	"	"	"	"
Di-isopropyl ether	ND	5.00	"	"	"	"	"	"
Isopropylbenzene	ND	1.00	"	"	"	"	"	"
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"
Methylene Chloride	ND	5.00	"	"	"	"	"	"
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"
Naphthalene	ND	1.00	"	"	"	"	"	"
n-Propylbenzene	ND	1.00	"	"	"	"	"	"
Styrene	ND	1.00	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
Tetrachloroethene	30.7	1.00	"	"	"	"	"	"
Toluene	ND	1.00	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	1.00	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"
Trichloroethene	ND	1.00	"	"	"	"	"	"
Trichlorofluoromethane	ND	1.00	"	"	"	"	"	"
1,2,3-Trichloropropane	ND	1.00	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
Vinyl chloride	ND	1.00	"	"	"	"	"	"
m,p-Xylene	ND	2.00	"	"	"	"	"	"
o-Xylene	ND	1.00	"	"	"	"	"	"

Date Sampled: **04/30/15 15:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		97.1 %	45-149		"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/07/15 18:00

MW-10
1504296-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Surrogate: 4-Bromofluorobenzene 95.9 % 45-146 1505039 05/05/15 05/06/15 EPA 8260B

Dissolved Mercury by EPA Method 245.1

Date Sampled: **04/30/15 15:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.000200	mg/L	1	1505048	05/05/15	05/05/15	EPA 245.1	

Dissolved Metals by EPA Method 200.8

Date Sampled: **04/30/15 15:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.00354	0.000600	mg/L	1	1505032	05/04/15	05/04/15	EPA 200.8	
Barium	0.0898	0.00100	"	"	"	"	"	"	
Cadmium	0.000108	0.0000500	"	"	"	"	"	"	
Chromium	ND	0.00100	"	"	"	"	"	"	
Lead	0.00175	0.00100	"	"	"	"	"	"	
Selenium	0.00366	0.00100	"	"	"	"	"	"	
Silver	0.000137	0.0000500	"	"	"	"	"	"	

Date Sampled: **04/30/15 15:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	0.00683	0.00300	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/07/15 18:00

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505039 - EPA 5030 Water MS

Blank (1505039-BLK1)

Prepared & Analyzed: 05/05/15

Benzene	ND	1.00	ug/l
Bromobenzene	ND	1.00	"
Bromochloromethane	ND	5.00	"
Bromodichloromethane	ND	2.00	"
Bromoform	ND	1.00	"
Bromomethane	ND	1.00	"
n-Butylbenzene	ND	1.00	"
sec-Butylbenzene	ND	1.00	"
tert-Butylbenzene	ND	1.00	"
Carbon tetrachloride	ND	1.00	"
Chlorobenzene	ND	1.00	"
Chloroethane	ND	1.00	"
Chloroform	ND	5.00	"
Chloromethane	ND	1.00	"
Chlorodibromomethane	ND	1.00	"
2-Chlorotoluene	ND	1.00	"
4-Chlorotoluene	ND	1.00	"
1,2-Dibromo-3-chloropropane	ND	1.00	"
1,2-Dibromoethane (EDB)	ND	1.00	"
Dibromomethane	ND	1.00	"
1,2-Dichlorobenzene	ND	1.00	"
1,3-Dichlorobenzene	ND	1.00	"
1,4-Dichlorobenzene	ND	1.00	"
Dichlorodifluoromethane	ND	1.00	"
1,1-Dichloroethane	ND	1.00	"
1,2-Dichloroethane (EDC)	ND	1.00	"
1,1-Dichloroethene	ND	1.00	"
cis-1,2-Dichloroethene	ND	1.00	"
trans-1,2-Dichloroethene	ND	1.00	"
1,2-Dichloropropane	ND	1.00	"
1,3-Dichloropropane	ND	1.00	"
2,2-Dichloropropane	ND	1.00	"
1,1-Dichloropropene	ND	1.00	"
cis-1,3-Dichloropropene	ND	1.00	"
trans-1,3-Dichloropropene	ND	1.00	"
Ethylbenzene	ND	1.00	"
Hexachlorobutadiene	ND	1.00	"
Tert-amyl methyl ether	ND	1.00	"

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/07/15 18:00

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting		Spike Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

Batch 1505039 - EPA 5030 Water MS

Blank (1505039-BLK1)

Prepared & Analyzed: 05/05/15

Ethyl tert-butyl ether	ND	10.0	ug/l						
Tert-butyl alcohol	ND	20.0	"						
Isopropylbenzene	ND	1.00	"						
Di-isopropyl ether	ND	5.00	"						
p-Isopropyltoluene	ND	1.00	"						
Methylene Chloride	ND	5.00	"						
Methyl tert-butyl ether	ND	5.00	"						
Naphthalene	ND	1.00	"						
n-Propylbenzene	ND	1.00	"						
Styrene	ND	1.00	"						
1,1,2,2-Tetrachloroethane	ND	1.00	"						
1,1,1,2-Tetrachloroethane	ND	1.00	"						
Tetrachloroethene	ND	1.00	"						
Toluene	ND	1.00	"						
1,2,3-Trichlorobenzene	ND	1.00	"						
1,2,4-Trichlorobenzene	ND	1.00	"						
1,1,2-Trichloroethane	ND	1.00	"						
1,1,1-Trichloroethane	ND	1.00	"						
Trichloroethene	ND	1.00	"						
Trichlorofluoromethane	ND	1.00	"						
1,2,3-Trichloropropane	ND	1.00	"						
1,3,5-Trimethylbenzene	ND	1.00	"						
1,2,4-Trimethylbenzene	ND	1.00	"						
Vinyl chloride	ND	1.00	"						
m,p-Xylene	ND	2.00	"						
o-Xylene	ND	1.00	"						
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.2</i>	<i>"</i>	<i>"</i>	<i>13.2</i>	<i>100</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>12.9</i>	<i>"</i>	<i>"</i>	<i>13.3</i>	<i>97.0</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>12.7</i>	<i>"</i>	<i>"</i>	<i>13.3</i>	<i>95.1</i>	<i>45-146</i>			

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10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/07/15 18:00

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505039 - EPA 5030 Water MS

LCS (1505039-BS1)

Prepared & Analyzed: 05/05/15

Analyte	Result	Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Notes
Benzene	52.8	1.00	ug/l	50.0		106	51-132			
Bromobenzene	51.5	1.00	"	50.0		103	90-110			
Bromochloromethane	52.9	5.00	"	50.0		106	83-120			
Bromodichloromethane	54.2	2.00	"	50.0		108	82-117			
Bromoform	56.0	1.00	"	50.0		112	76-112			
Bromomethane	64.1	1.00	"	50.0		128	60-144			
n-Butylbenzene	52.0	1.00	"	50.0		104	81-118			
sec-Butylbenzene	50.9	1.00	"	50.0		102	84-113			
tert-Butylbenzene	51.4	1.00	"	50.0		103	87-112			
Carbon tetrachloride	53.4	1.00	"	50.0		107	68-118			
Chlorobenzene	53.3	1.00	"	50.0		107	87-113			
Chloroethane	48.3	1.00	"	50.0		96.6	48-147			
Chloroform	53.3	5.00	"	50.0		107	85-116			
Chloromethane	60.8	1.00	"	50.0		122	60-133			
Chlorodibromomethane	55.5	1.00	"	50.0		111	80-117			
2-Chlorotoluene	48.6	1.00	"	50.0		97.3	84-117			
4-Chlorotoluene	49.9	1.00	"	50.0		99.8	86-114			
1,2-Dibromo-3-chloropropane	48.5	1.00	"	50.0		97.0	62-126			
1,2-Dibromoethane (EDB)	56.3	1.00	"	50.0		113	84-119			
Dibromomethane	53.6	1.00	"	50.0		107	83-118			
1,2-Dichlorobenzene	52.7	1.00	"	50.0		105	90-110			
1,3-Dichlorobenzene	52.1	1.00	"	50.0		104	90-110			
1,4-Dichlorobenzene	50.3	1.00	"	50.0		101	87-110			
Dichlorodifluoromethane	59.8	1.00	"	50.0		120	60-122			
1,1-Dichloroethane	52.4	1.00	"	50.0		105	71-131			
1,2-Dichloroethane (EDC)	53.8	1.00	"	50.0		108	84-117			
1,1-Dichloroethene	52.3	1.00	"	50.0		105	69-129			
cis-1,2-Dichloroethene	54.0	1.00	"	50.0		108	81-124			
trans-1,2-Dichloroethene	54.6	1.00	"	50.0		109	66-140			
1,2-Dichloropropane	52.7	1.00	"	50.0		105	86-114			
1,3-Dichloropropane	55.0	1.00	"	50.0		110	83-122			
2,2-Dichloropropane	51.9	1.00	"	50.0		104	42-130			
1,1-Dichloropropene	53.6	1.00	"	50.0		107	75-117			
cis-1,3-Dichloropropene	54.9	1.00	"	50.0		110	72-125			
trans-1,3-Dichloropropene	54.1	1.00	"	50.0		108	73-120			
Ethylbenzene	53.6	1.00	"	50.0		107	58-146			
Hexachlorobutadiene	52.4	1.00	"	50.0		105	78-118			
Tert-amyl methyl ether	51.7	1.00	"	49.8		104	72-128			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/07/15 18:00

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505039 - EPA 5030 Water MS

LCS (1505039-BS1)

Prepared & Analyzed: 05/05/15

Ethyl tert-butyl ether	51.7	10.0	ug/l	50.0		103	74-131			
Tert-butyl alcohol	226	20.0	"	249		90.9	66-115			
Isopropylbenzene	53.6	1.00	"	50.0		107	77-115			
Di-isopropyl ether	51.4	5.00	"	50.0		103	77-119			
p-Isopropyltoluene	50.9	1.00	"	50.0		102	84-110			
Methylene Chloride	47.5	5.00	"	50.0		95.0	36-156			
Methyl tert-butyl ether	52.7	5.00	"	50.0		105	71-130			
Naphthalene	56.2	1.00	"	50.0		112	76-128			
n-Propylbenzene	51.8	1.00	"	50.0		104	82-117			
Styrene	56.7	1.00	"	50.0		113	82-123			
1,1,2,2-Tetrachloroethane	49.8	1.00	"	50.0		99.6	66-126			
1,1,1,2-Tetrachloroethane	53.5	1.00	"	50.0		107	86-116			
Tetrachloroethene	53.4	1.00	"	50.0		107	74-121			
Toluene	53.1	1.00	"	50.0		106	51-138			
1,2,3-Trichlorobenzene	55.0	1.00	"	50.0		110	81-122			
1,2,4-Trichlorobenzene	54.9	1.00	"	50.0		110	87-115			
1,1,2-Trichloroethane	54.6	1.00	"	50.0		109	77-129			
1,1,1-Trichloroethane	52.8	1.00	"	50.0		106	75-120			
Trichloroethene	56.9	1.00	"	50.0		114	88-114			
Trichlorofluoromethane	49.2	1.00	"	50.0		98.4	65-129			
1,2,3-Trichloropropane	45.0	1.00	"	50.0		89.9	72-128			
1,3,5-Trimethylbenzene	51.4	1.00	"	50.0		103	86-110			
1,2,4-Trimethylbenzene	51.1	1.00	"	50.0		102	85-117			
Vinyl chloride	54.1	1.00	"	50.0		108	65-133			
m,p-Xylene	108	2.00	"	100		108	57-144			
o-Xylene	53.3	1.00	"	50.0		107	53-146			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.8</i>		<i>"</i>	<i>13.2</i>		<i>105</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.5</i>		<i>"</i>	<i>13.3</i>		<i>101</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.6</i>		<i>"</i>	<i>13.3</i>		<i>102</i>	<i>45-146</i>			

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/07/15 18:00

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505039 - EPA 5030 Water MS

Matrix Spike (1505039-MS1)	Source: 1505002-01			Prepared & Analyzed: 05/05/15						
Benzene	51.4	1.00	ug/l	50.0	ND	103	34-141			
Bromobenzene	50.4	1.00	"	50.0	ND	101	66-131			
Bromochloromethane	53.3	5.00	"	50.0	ND	107	74-125			
Bromodichloromethane	53.2	2.00	"	50.0	ND	106	64-131			
Bromoform	52.1	1.00	"	50.0	ND	104	63-122			
Bromomethane	59.4	1.00	"	50.0	ND	119	46-155			
n-Butylbenzene	50.6	1.00	"	50.0	ND	101	47-142			
sec-Butylbenzene	49.1	1.00	"	50.0	ND	98.2	52-135			
tert-Butylbenzene	49.8	1.00	"	50.0	ND	99.7	53-137			
Carbon tetrachloride	51.4	1.00	"	50.0	ND	103	62-121			
Chlorobenzene	50.4	1.00	"	50.0	ND	101	64-131			
Chloroethane	48.5	1.00	"	50.0	ND	97.1	60-130			
Chloroform	53.1	5.00	"	50.0	ND	106	70-130			
Chloromethane	59.6	1.00	"	50.0	ND	119	62-130			
Chlorodibromomethane	52.7	1.00	"	50.0	ND	105	60-134			
2-Chlorotoluene	47.4	1.00	"	50.0	ND	94.7	58-138			
4-Chlorotoluene	48.6	1.00	"	50.0	ND	97.2	62-131			
1,2-Dibromo-3-chloropropane	48.9	1.00	"	50.0	ND	97.7	63-125			
1,2-Dibromoethane (EDB)	53.2	1.00	"	50.0	ND	106	66-131			
Dibromomethane	52.1	1.00	"	50.0	ND	104	70-127			
1,2-Dichlorobenzene	50.7	1.00	"	50.0	ND	101	62-134			
1,3-Dichlorobenzene	49.7	1.00	"	50.0	ND	99.4	60-133			
1,4-Dichlorobenzene	48.6	1.00	"	50.0	ND	97.1	63-127			
Dichlorodifluoromethane	63.0	1.00	"	50.0	ND	126	24-136			
1,1-Dichloroethane	52.5	1.00	"	50.0	ND	105	73-124			
1,2-Dichloroethane (EDC)	53.7	1.00	"	50.0	ND	107	75-122			
1,1-Dichloroethene	52.3	1.00	"	50.0	ND	105	70-123			
cis-1,2-Dichloroethene	53.3	1.00	"	50.0	ND	107	72-129			
trans-1,2-Dichloroethene	53.6	1.00	"	50.0	ND	107	76-126			
1,2-Dichloropropane	50.7	1.00	"	50.0	ND	101	68-129			
1,3-Dichloropropane	52.8	1.00	"	50.0	ND	106	69-130			
2,2-Dichloropropane	50.9	1.00	"	50.0	ND	102	37-126			
1,1-Dichloropropene	52.1	1.00	"	50.0	ND	104	61-125			
cis-1,3-Dichloropropene	53.4	1.00	"	50.0	ND	107	59-127			
trans-1,3-Dichloropropene	52.6	1.00	"	50.0	ND	105	59-126			
Ethylbenzene	50.7	1.00	"	50.0	ND	101	29-160			
Hexachlorobutadiene	49.7	1.00	"	50.0	ND	99.4	41-141			
Tert-amyl methyl ether	52.4	1.00	"	49.8	ND	105	61-132			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/07/15 18:00

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505039 - EPA 5030 Water MS

Matrix Spike (1505039-MS1)

Source: 1505002-01

Prepared & Analyzed: 05/05/15

Ethyl tert-butyl ether	52.0	10.0	ug/l	50.0	ND	104	65-130			
Tert-butyl alcohol	226	20.0	"	249	ND	91.0	60-130			
Isopropylbenzene	50.6	1.00	"	50.0	ND	101	44-143			
Di-isopropyl ether	51.0	5.00	"	50.0	ND	102	73-128			
p-Isopropyltoluene	48.9	1.00	"	50.0	ND	97.8	47-137			
Methylene Chloride	45.6	5.00	"	50.0	ND	91.2	42-129			
Methyl tert-butyl ether	53.9	5.00	"	50.0	ND	108	70-124			
Naphthalene	55.4	1.00	"	50.0	ND	111	73-132			
n-Propylbenzene	50.1	1.00	"	50.0	ND	100	61-129			
Styrene	51.7	1.00	"	50.0	ND	103	36-146			
1,1,2,2-Tetrachloroethane	50.7	1.00	"	50.0	ND	101	71-140			
1,1,1,2-Tetrachloroethane	51.2	1.00	"	50.0	ND	102	59-137			
Tetrachloroethane	53.8	1.00	"	50.0	3.60	100	49-137			
Toluene	51.0	1.00	"	50.0	ND	102	27-151			
1,2,3-Trichlorobenzene	53.7	1.00	"	50.0	ND	107	61-137			
1,2,4-Trichlorobenzene	53.7	1.00	"	50.0	ND	107	55-141			
1,1,2-Trichloroethane	52.5	1.00	"	50.0	ND	105	67-134			
1,1,1-Trichloroethane	52.3	1.00	"	50.0	ND	105	66-128			
Trichloroethene	52.9	1.00	"	50.0	ND	106	65-119			
Trichlorofluoromethane	49.7	1.00	"	50.0	ND	99.4	65-121			
1,2,3-Trichloropropane	45.0	1.00	"	50.0	ND	90.0	69-125			
1,3,5-Trimethylbenzene	49.9	1.00	"	50.0	ND	99.8	50-138			
1,2,4-Trimethylbenzene	49.3	1.00	"	50.0	ND	98.6	54-137			
Vinyl chloride	53.9	1.00	"	50.0	ND	108	71-124			
m,p-Xylene	103	2.00	"	100	ND	103	20-166			
o-Xylene	50.4	1.00	"	50.0	ND	101	33-159			
Surrogate: 1,2-Dichloroethane-d4	13.8		"	13.2		104	37-154			
Surrogate: Toluene-d8	13.3		"	13.3		99.7	45-149			
Surrogate: 4-Bromofluorobenzene	13.1		"	13.3		98.5	45-146			

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10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/07/15 18:00

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505039 - EPA 5030 Water MS

Matrix Spike Dup (1505039-MSD1)	Source: 1505002-01			Prepared & Analyzed: 05/05/15						
Benzene	57.6	1.00	ug/l	50.0	ND	115	34-141	11.3	32	
Bromobenzene	56.8	1.00	"	50.0	ND	114	66-131	12.0	30	
Bromochloromethane	56.4	5.00	"	50.0	ND	113	74-125	5.54	30	
Bromodichloromethane	60.0	2.00	"	50.0	ND	120	64-131	12.0	30	
Bromoform	60.8	1.00	"	50.0	ND	122	63-122	15.4	27	
Bromomethane	119	1.00	"	50.0	ND	239	46-155	67.1	95	QM-07
n-Butylbenzene	56.4	1.00	"	50.0	ND	113	47-142	10.8	33	
sec-Butylbenzene	55.4	1.00	"	50.0	ND	111	52-135	12.1	33	
tert-Butylbenzene	56.0	1.00	"	50.0	ND	112	53-137	11.6	38	
Carbon tetrachloride	57.3	1.00	"	50.0	ND	115	62-121	11.0	21	
Chlorobenzene	57.5	1.00	"	50.0	ND	115	64-131	13.1	30	
Chloroethane	63.5	1.00	"	50.0	ND	127	60-130	26.7	29	
Chloroform	58.6	5.00	"	50.0	ND	117	70-130	9.71	32	
Chloromethane	67.1	1.00	"	50.0	ND	134	62-130	11.7	24	QM-07
Chlorodibromomethane	60.5	1.00	"	50.0	ND	121	60-134	13.8	30	
2-Chlorotoluene	54.3	1.00	"	50.0	ND	109	58-138	13.7	34	
4-Chlorotoluene	56.0	1.00	"	50.0	ND	112	62-131	14.1	29	
1,2-Dibromo-3-chloropropane	54.7	1.00	"	50.0	ND	109	63-125	11.3	34	
1,2-Dibromoethane (EDB)	59.8	1.00	"	50.0	ND	120	66-131	11.6	31	
Dibromomethane	58.6	1.00	"	50.0	ND	117	70-127	11.7	28	
1,2-Dichlorobenzene	57.8	1.00	"	50.0	ND	116	62-134	13.2	29	
1,3-Dichlorobenzene	56.7	1.00	"	50.0	ND	113	60-133	13.3	30	
1,4-Dichlorobenzene	55.6	1.00	"	50.0	ND	111	63-127	13.6	31	
Dichlorodifluoromethane	70.4	1.00	"	50.0	ND	141	24-136	11.0	31	QM-07
1,1-Dichloroethane	57.5	1.00	"	50.0	ND	115	73-124	8.98	33	
1,2-Dichloroethane (EDC)	59.0	1.00	"	50.0	ND	118	75-122	9.48	19	
1,1-Dichloroethene	66.6	1.00	"	50.0	ND	133	70-123	24.1	32	QM-07
cis-1,2-Dichloroethene	58.4	1.00	"	50.0	ND	117	72-129	9.22	31	
trans-1,2-Dichloroethene	58.5	1.00	"	50.0	ND	117	76-126	8.72	31	
1,2-Dichloropropane	57.2	1.00	"	50.0	ND	114	68-129	12.0	29	
1,3-Dichloropropane	59.7	1.00	"	50.0	ND	119	69-130	12.3	31	
2,2-Dichloropropane	57.5	1.00	"	50.0	ND	115	37-126	12.2	33	
1,1-Dichloropropene	57.4	1.00	"	50.0	ND	115	61-125	9.79	28	
cis-1,3-Dichloropropene	61.6	1.00	"	50.0	ND	123	59-127	14.3	28	
trans-1,3-Dichloropropene	60.7	1.00	"	50.0	ND	121	59-126	14.3	28	
Ethylbenzene	57.6	1.00	"	50.0	ND	115	29-160	12.8	50	
Hexachlorobutadiene	56.9	1.00	"	50.0	ND	114	41-141	13.5	35	
Tert-amyl methyl ether	58.7	1.00	"	49.8	ND	118	61-132	11.3	34	

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/07/15 18:00

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505039 - EPA 5030 Water MS

Matrix Spike Dup (1505039-MSD1)	Source: 1505002-01			Prepared & Analyzed: 05/05/15						
Ethyl tert-butyl ether	58.0	10.0	ug/l	50.0	ND	116	65-130	10.9	38	
Tert-butyl alcohol	277	20.0	"	249	ND	111	60-130	20.1	31	
Isopropylbenzene	57.4	1.00	"	50.0	ND	115	44-143	12.7	35	
Di-isopropyl ether	57.0	5.00	"	50.0	ND	114	73-128	11.0	25	
p-Isopropyltoluene	55.3	1.00	"	50.0	ND	111	47-137	12.2	38	
Methylene Chloride	61.4	5.00	"	50.0	ND	123	42-129	29.5	31	
Methyl tert-butyl ether	60.0	5.00	"	50.0	ND	120	70-124	10.7	35	
Naphthalene	49.4	1.00	"	50.0	ND	98.8	73-132	11.4	23	
n-Propylbenzene	56.5	1.00	"	50.0	ND	113	61-129	12.0	35	
Styrene	58.8	1.00	"	50.0	ND	118	36-146	12.7	33	
1,1,2,2-Tetrachloroethane	56.8	1.00	"	50.0	ND	114	71-140	11.3	32	
1,1,1,2-Tetrachloroethane	58.9	1.00	"	50.0	ND	118	59-137	14.0	32	
Tetrachloroethane	60.0	1.00	"	50.0	3.60	113	49-137	10.9	32	
Toluene	57.9	1.00	"	50.0	ND	116	27-151	12.6	25	
1,2,3-Trichlorobenzene	52.6	1.00	"	50.0	ND	105	61-137	2.22	27	
1,2,4-Trichlorobenzene	54.1	1.00	"	50.0	ND	108	55-141	0.779	28	
1,1,2-Trichloroethane	61.7	1.00	"	50.0	ND	123	67-134	16.2	29	
1,1,1-Trichloroethane	58.4	1.00	"	50.0	ND	117	66-128	11.2	31	
Trichloroethene	59.0	1.00	"	50.0	ND	118	65-119	10.8	30	
Trichlorofluoromethane	51.9	1.00	"	50.0	ND	104	65-121	4.31	30	
1,2,3-Trichloropropane	45.2	1.00	"	50.0	ND	90.5	69-125	0.487	33	
1,3,5-Trimethylbenzene	56.3	1.00	"	50.0	ND	113	50-138	12.1	34	
1,2,4-Trimethylbenzene	55.8	1.00	"	50.0	ND	112	54-137	12.3	34	
Vinyl chloride	60.3	1.00	"	50.0	ND	121	71-124	11.2	26	
m,p-Xylene	115	2.00	"	100	ND	115	20-166	11.2	36	
o-Xylene	57.4	1.00	"	50.0	ND	115	33-159	13.0	26	
Surrogate: 1,2-Dichloroethane-d4	13.7		"	13.2		103	37-154			
Surrogate: Toluene-d8	13.6		"	13.3		102	45-149			
Surrogate: 4-Bromofluorobenzene	13.5		"	13.3		101	45-146			

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/07/15 18:00

Dissolved Mercury by EPA Method 245.1 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1505048 - EPA 7470A

Blank (1505048-BLK1)				Prepared & Analyzed: 05/05/15							
Mercury	ND	0.000200	mg/L								
LCS (1505048-BS1)				Prepared & Analyzed: 05/05/15							
Mercury	0.00273	0.000200	mg/L	0.00250	109	85-115					
Duplicate (1505048-DUP1)				Source: 1504291-01		Prepared & Analyzed: 05/05/15					
Mercury	0.0000149	0.000200	mg/L		ND			200	20		QR-01
Matrix Spike (1505048-MS1)				Source: 1504291-01		Prepared & Analyzed: 05/05/15					
Mercury	0.00304	0.000200	mg/L	0.00250	ND	122	70-130				
Matrix Spike Dup (1505048-MSD1)				Source: 1504291-01		Prepared & Analyzed: 05/05/15					
Mercury	0.00307	0.000200	mg/L	0.00250	ND	123	70-130	0.851	20		

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 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/07/15 18:00

Dissolved Metals by EPA Method 200.8 - Quality Control
Summit Scientific

Analyte	Reporting		Spike Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

Batch 1505032 - EPA 200.8

Blank (1505032-BLK1)

Prepared & Analyzed: 05/04/15

Arsenic	ND	0.000600	mg/L						
Barium	ND	0.00100	"						
Cadmium	ND	0.0000500	"						
Chromium	ND	0.00100	"						
Lead	ND	0.00100	"						
Selenium	ND	0.00100	"						
Silver	ND	0.0000500	"						
Zinc	ND	0.00300	"						

LCS (1505032-BS1)

Prepared & Analyzed: 05/04/15

Arsenic	0.507	0.000600	mg/L	0.500	101	85-115			
Barium	0.450	0.00100	"	0.500	90.0	85-115			
Cadmium	0.0226	0.0000500	"	0.0250	90.3	85-115			
Chromium	0.496	0.00100	"	0.500	99.3	85-115			
Lead	0.248	0.00100	"	0.250	99.3	85-115			
Selenium	0.0507	0.00100	"	0.0500	101	85-115			
Silver	0.0225	0.0000500	"	0.0250	90.1	85-115			
Zinc	0.498	0.00300	"	0.500	99.5	85-115			

Duplicate (1505032-DUP1)

Source: 1504291-01

Prepared & Analyzed: 05/04/15

Arsenic	0.00234	0.000600	mg/L	0.00227	3.07	20			
Barium	0.218	0.00100	"	0.215	1.24	20			
Cadmium	ND	0.0000500	"	ND		20			
Chromium	0.0000813	0.00100	"	0.000237	97.9	20			QR-01
Lead	0.000122	0.00100	"	0.000565	129	20			QR-01
Selenium	ND	0.00100	"	ND		20			
Silver	0.000139	0.0000500	"	0.000221	45.4	20			QR-03
Zinc	0.00234	0.00300	"	0.00827	112	20			QR-01

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/07/15 18:00

Dissolved Metals by EPA Method 200.8 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1505032 - EPA 200.8

Matrix Spike (1505032-MS1)

Source: 1504291-01

Prepared & Analyzed: 05/04/15

Arsenic	0.491	0.000600	mg/L	0.500	0.00227	97.7	75-125			
Barium	0.688	0.00100	"	0.500	0.215	94.5	75-125			
Cadmium	0.0235	0.0000500	"	0.0250	ND	94.1	75-125			
Chromium	0.473	0.00100	"	0.500	0.000237	94.5	75-125			
Lead	0.220	0.00100	"	0.250	0.000565	87.6	75-125			
Selenium	0.0493	0.00100	"	0.0500	ND	98.5	75-125			
Silver	0.0234	0.0000500	"	0.0250	0.000221	92.9	75-125			
Zinc	0.473	0.00300	"	0.500	0.00827	92.9	75-125			

Matrix Spike Dup (1505032-MSD1)

Source: 1504291-01

Prepared & Analyzed: 05/04/15

Arsenic	0.477	0.000600	mg/L	0.500	0.00227	94.9	75-125	2.86	25
Barium	0.654	0.00100	"	0.500	0.215	87.9	75-125	4.96	25
Cadmium	0.0221	0.0000500	"	0.0250	ND	88.3	75-125	6.31	25
Chromium	0.458	0.00100	"	0.500	0.000237	91.5	75-125	3.23	25
Lead	0.208	0.00100	"	0.250	0.000565	83.1	75-125	5.32	25
Selenium	0.0488	0.00100	"	0.0500	ND	97.7	75-125	0.852	25
Silver	0.0223	0.0000500	"	0.0250	0.000221	88.3	75-125	5.02	25
Zinc	0.455	0.00300	"	0.500	0.00827	89.4	75-125	3.76	25

Summit Scientific

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/07/15 18:00

Notes and Definitions

- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QR-01 Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

May 27, 2015

Steve Hoffman

Terracon - Wheat Ridge

10625 West I-70 Frontage Road, Suite 3

Wheat Ridge, CO 80033

RE: National Western Complex

Enclosed are the results of analyses for samples received by Summit Scientific on 05/01/15 15:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'Ben Shrewsbury', with a long, sweeping horizontal stroke extending to the right.

Ben Shrewsbury For Paul Shrewsbury
President



Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/27/15 13:40

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-16	1505009-01	Water	05/01/15 09:38	05/01/15 15:35
NWSS Rinsate	1505009-02	Water	05/01/15 09:55	05/01/15 15:35
MW-8	1505009-03	Water	05/01/15 12:12	05/01/15 15:35

Summit Scientific

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S₂

Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:40

Summit Scientific

1505009

S₂

741 Corporate Circle, Suite J&K ♦ Golden, Colorado 80401
 303-277-9310 ♦ 303-374-5933

Page 1 of 1

Client: Terracon Project Manager: Steve Hoffman
 Address: 10625 W I-70 Frontage Rd E-Mail: SBHOFFMAN@Terracon.com
 City/State/Zip: Wheat Ridge, Co 80033
 Phone: 303-423-3300 Fax: _____ Project Name: National Western Stock Show
 Sampler Name: Sarah Baums Project Number: 25157010

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested				Special Instructions
					HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	VOCs	Distilled Water	8 mg/L in 2 mL		
1	MW-16	5/1/15	938	4	3		1		α					α	α		
2	NWSS Pinate	5/1/15	955	3	3				α					α	α		
3	MW-8	5/1/15	122	4	3		1		α					α	α		
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Relinquished by: <u>Dah B</u>	Date/Time: <u>5/1/15 1305</u>	Received by: <u>[Signature]</u>	Date/Time: <u>5-1-15 1705</u>	Turn Around Time (Check)	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day <input type="checkbox"/>	72 hours <input type="checkbox"/>
				24 hours <input type="checkbox"/>	Standard <input checked="" type="checkbox"/>
				48 hours <input type="checkbox"/>	
Relinquished by: <u>[Signature]</u>	Date/Time: <u>5-1-15 1535</u>	Received by: <u>[Signature]</u>	Date/Time: <u>5-1-15 1535</u>	Sample Integrity:	
				Temperature Upon Receipt: <u>4.1</u>	
				Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

www.s2scientific.com



Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:40

Sample Receipt Checklist

S2 Work Order: LS05009

Client: Terracon

Client Project ID: Nat W. Stockshew

Shipped Via: 1A

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Airbill #: _____

Matrix (check all that apply): Air Soil/Solid Water Other: _____ (Describe)

Cooler ID				
Temp (°C)	<u>4.7</u>			

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C ^{(1)?} NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.	X			
Were all samples received intact ^{(1)?}	X			
Was adequate sample volume provided ^{(1)?}	X			
If custody seals are present, are they intact ^{(1)?}			X	
Are short holding time analytes or samples with HTs due within 48 hours present?		X		
Is a chain-of-custody (COC) form present and filled out completely ^{(1)?}	X			
Does the COC agree with the number and type of sample bottles received ^{(1)?}	X			
Do the sample IDs on the bottle labels match the COC ^{(1)?}	X			
Is the COC properly relinquished by the client w/ date and time recorded ^{(1)?}	X			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.		X		
Are samples preserved that require preservation (excluding cooling) ^{(1)?} Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, etc.	X			HCL
If samples are acid preserved for metals, is the pH ≤ 2 ^{(1)?} Record the pH in Comments.			X	
If dissolved metals are requested, were samples field filtered?		X		
Additional Comments (if any):				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

Paul Strausky
 Custodian Printed Name

[Signature]
 Signature or Initials of Custodian

5-2-15
 Date/Time

[Signature]



Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:40

MW-16
1505009-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 05/01/15 09:38

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.00	ug/l	1	1505039	05/05/15	05/06/15	EPA 8260B	
Bromobenzene	ND	1.00	"	"	"	"	"	"	
Bromochloromethane	ND	5.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	1.00	"	"	"	"	"	"	
Bromomethane	ND	1.00	"	"	"	"	"	"	
n-Butylbenzene	ND	1.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.00	"	"	"	"	"	"	
Chlorobenzene	ND	1.00	"	"	"	"	"	"	
Chloroethane	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	5.00	"	"	"	"	"	"	
Chloromethane	ND	1.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	1.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.00	"	"	"	"	"	"	
Dibromomethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.00	"	"	"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:40

MW-16
1505009-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
cis-1,3-Dichloropropene	ND	1.00	ug/l	1	1505039	05/05/15	05/06/15	EPA 8260B
trans-1,3-Dichloropropene	ND	1.00	"	"	"	"	"	"
Ethylbenzene	ND	1.00	"	"	"	"	"	"
Hexachlorobutadiene	ND	1.00	"	"	"	"	"	"
Tert-amyl methyl ether	ND	1.00	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	10.0	"	"	"	"	"	"
Tert-butyl alcohol	ND	20.0	"	"	"	"	"	"
Isopropylbenzene	ND	1.00	"	"	"	"	"	"
Di-isopropyl ether	ND	5.00	"	"	"	"	"	"
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"
Methylene Chloride	ND	5.00	"	"	"	"	"	"
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"
Naphthalene	ND	1.00	"	"	"	"	"	"
n-Propylbenzene	ND	1.00	"	"	"	"	"	"
Styrene	ND	1.00	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
Tetrachloroethene	55.9	1.00	"	"	"	"	"	"
Toluene	ND	1.00	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	1.00	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"
Trichloroethene	ND	1.00	"	"	"	"	"	"
Trichlorofluoromethane	ND	1.00	"	"	"	"	"	"
1,2,3-Trichloropropane	ND	1.00	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
Vinyl chloride	ND	1.00	"	"	"	"	"	"
m,p-Xylene	ND	2.00	"	"	"	"	"	"
o-Xylene	ND	1.00	"	"	"	"	"	"

Date Sampled: **05/01/15 09:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		106 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		98.8 %	45-149		"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:40

MW-16
1505009-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Surrogate: 4-Bromofluorobenzene 94.6 % 45-146 1505039 05/05/15 05/06/15 EPA 8260B

Dissolved Mercury by EPA Method 245.1

Date Sampled: **05/01/15 09:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.000200	mg/L	1	1505048	05/05/15	05/05/15	EPA 245.1	

Dissolved Metals by EPA Method 200.8

Date Sampled: **05/01/15 09:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	ND	0.000600	mg/L	1	1505032	05/04/15	05/04/15	EPA 200.8	
Barium	0.0732	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.0000500	"	"	"	"	"	"	
Chromium	0.0181	0.00100	"	"	"	"	"	"	
Lead	ND	0.00100	"	"	"	"	"	"	
Selenium	0.00331	0.00100	"	"	"	"	"	"	
Silver	0.000145	0.0000500	"	"	"	"	"	"	

Date Sampled: **05/01/15 09:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	0.0203	0.00300	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:40

NWSS Rinsate
1505009-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 05/01/15 09:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.00	ug/l	1	1505039	05/05/15	05/06/15	EPA 8260B	
Bromobenzene	ND	1.00	"	"	"	"	"	"	
Bromochloromethane	ND	5.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	1.00	"	"	"	"	"	"	
Bromomethane	ND	1.00	"	"	"	"	"	"	
n-Butylbenzene	ND	1.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.00	"	"	"	"	"	"	
Chlorobenzene	ND	1.00	"	"	"	"	"	"	
Chloroethane	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	5.00	"	"	"	"	"	"	
Chloromethane	ND	1.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	1.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.00	"	"	"	"	"	"	
Dibromomethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.00	"	"	"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:40

NWSS Rinsate
1505009-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Compound	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
cis-1,3-Dichloropropene	ND	1.00	ug/l	1	1505039	05/05/15	05/06/15	EPA 8260B
trans-1,3-Dichloropropene	ND	1.00	"	"	"	"	"	"
Ethylbenzene	ND	1.00	"	"	"	"	"	"
Hexachlorobutadiene	ND	1.00	"	"	"	"	"	"
Tert-amyl methyl ether	ND	1.00	"	"	"	"	"	"
Tert-butyl alcohol	ND	20.0	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	10.0	"	"	"	"	"	"
Di-isopropyl ether	ND	5.00	"	"	"	"	"	"
Isopropylbenzene	ND	1.00	"	"	"	"	"	"
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"
Methylene Chloride	ND	5.00	"	"	"	"	"	"
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"
Naphthalene	ND	1.00	"	"	"	"	"	"
n-Propylbenzene	ND	1.00	"	"	"	"	"	"
Styrene	ND	1.00	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
Tetrachloroethene	ND	1.00	"	"	"	"	"	"
Toluene	ND	1.00	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	1.00	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"
Trichloroethene	ND	1.00	"	"	"	"	"	"
Trichlorofluoromethane	ND	1.00	"	"	"	"	"	"
1,2,3-Trichloropropane	ND	1.00	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
Vinyl chloride	ND	1.00	"	"	"	"	"	"
m,p-Xylene	ND	2.00	"	"	"	"	"	"
o-Xylene	ND	1.00	"	"	"	"	"	"

Date Sampled: 05/01/15 09:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		97.1 %	45-149		"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/27/15 13:40

NWSS Rinsate
1505009-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

<i>Surrogate: 4-Bromofluorobenzene</i>	<i>101 %</i>	<i>45-146</i>	<i>1505039</i>	<i>05/05/15</i>	<i>05/06/15</i>	<i>EPA 8260B</i>
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Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:40

MW-8
1505009-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 05/01/15 12:12

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.00	ug/l	1	1505039	05/05/15	05/06/15	EPA 8260B	
Bromobenzene	ND	1.00	"	"	"	"	"	"	
Bromochloromethane	ND	5.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	1.00	"	"	"	"	"	"	
Bromomethane	ND	1.00	"	"	"	"	"	"	
n-Butylbenzene	ND	1.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.00	"	"	"	"	"	"	
Chlorobenzene	ND	1.00	"	"	"	"	"	"	
Chloroethane	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	5.00	"	"	"	"	"	"	
Chloromethane	ND	1.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	1.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.00	"	"	"	"	"	"	
Dibromomethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.00	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:40

MW-8
1505009-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
cis-1,3-Dichloropropene	ND	1.00	ug/l	1	1505039	05/05/15	05/06/15	EPA 8260B
trans-1,3-Dichloropropene	ND	1.00	"	"	"	"	"	"
Ethylbenzene	ND	1.00	"	"	"	"	"	"
Hexachlorobutadiene	ND	1.00	"	"	"	"	"	"
Tert-amyl methyl ether	ND	1.00	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	10.0	"	"	"	"	"	"
Tert-butyl alcohol	ND	20.0	"	"	"	"	"	"
Di-isopropyl ether	ND	5.00	"	"	"	"	"	"
Isopropylbenzene	ND	1.00	"	"	"	"	"	"
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"
Methylene Chloride	ND	5.00	"	"	"	"	"	"
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"
Naphthalene	ND	1.00	"	"	"	"	"	"
n-Propylbenzene	ND	1.00	"	"	"	"	"	"
Styrene	ND	1.00	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
Tetrachloroethene	57.0	1.00	"	"	"	"	"	"
Toluene	ND	1.00	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	1.00	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"
Trichloroethene	1.43	1.00	"	"	"	"	"	"
Trichlorofluoromethane	ND	1.00	"	"	"	"	"	"
1,2,3-Trichloropropane	ND	1.00	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
Vinyl chloride	ND	1.00	"	"	"	"	"	"
m,p-Xylene	ND	2.00	"	"	"	"	"	"
o-Xylene	ND	1.00	"	"	"	"	"	"

Date Sampled: 05/01/15 12:12

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		99.4 %	45-149		"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:40

MW-8
1505009-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Surrogate: 4-Bromofluorobenzene 96.0 % 45-146 1505039 05/05/15 05/06/15 EPA 8260B

Dissolved Mercury by EPA Method 245.1

Date Sampled: **05/01/15 12:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.000200	mg/L	1	1505048	05/05/15	05/05/15	EPA 245.1	

Dissolved Metals by EPA Method 200.8

Date Sampled: **05/01/15 12:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	ND	0.000600	mg/L	1	1505032	05/04/15	05/04/15	EPA 200.8	
Barium	0.0786	0.00100	"	"	"	"	"	"	
Cadmium	0.0000592	0.0000500	"	"	"	"	"	"	
Chromium	0.00743	0.00100	"	"	"	"	"	"	
Lead	ND	0.00100	"	"	"	"	"	"	
Selenium	0.00294	0.00100	"	"	"	"	"	"	
Silver	0.000151	0.0000500	"	"	"	"	"	"	

Date Sampled: **05/01/15 12:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	0.00535	0.00300	"	"	"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:40

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505039 - EPA 5030 Water MS

Blank (1505039-BLK1)

Prepared & Analyzed: 05/05/15

Benzene	ND	1.00	ug/l
Bromobenzene	ND	1.00	"
Bromochloromethane	ND	5.00	"
Bromodichloromethane	ND	2.00	"
Bromoform	ND	1.00	"
Bromomethane	ND	1.00	"
n-Butylbenzene	ND	1.00	"
sec-Butylbenzene	ND	1.00	"
tert-Butylbenzene	ND	1.00	"
Carbon tetrachloride	ND	1.00	"
Chlorobenzene	ND	1.00	"
Chloroethane	ND	1.00	"
Chloroform	ND	5.00	"
Chloromethane	ND	1.00	"
Chlorodibromomethane	ND	1.00	"
2-Chlorotoluene	ND	1.00	"
4-Chlorotoluene	ND	1.00	"
1,2-Dibromo-3-chloropropane	ND	1.00	"
1,2-Dibromoethane (EDB)	ND	1.00	"
Dibromomethane	ND	1.00	"
1,2-Dichlorobenzene	ND	1.00	"
1,3-Dichlorobenzene	ND	1.00	"
1,4-Dichlorobenzene	ND	1.00	"
Dichlorodifluoromethane	ND	1.00	"
1,1-Dichloroethane	ND	1.00	"
1,2-Dichloroethane (EDC)	ND	1.00	"
1,1-Dichloroethene	ND	1.00	"
cis-1,2-Dichloroethene	ND	1.00	"
trans-1,2-Dichloroethene	ND	1.00	"
1,2-Dichloropropane	ND	1.00	"
1,3-Dichloropropane	ND	1.00	"
2,2-Dichloropropane	ND	1.00	"
1,1-Dichloropropene	ND	1.00	"
cis-1,3-Dichloropropene	ND	1.00	"
trans-1,3-Dichloropropene	ND	1.00	"
Ethylbenzene	ND	1.00	"
Hexachlorobutadiene	ND	1.00	"
Tert-amyl methyl ether	ND	1.00	"

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:40

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505039 - EPA 5030 Water MS

Blank (1505039-BLK1)

Prepared & Analyzed: 05/05/15

Ethyl tert-butyl ether	ND	10.0	ug/l							
Tert-butyl alcohol	ND	20.0	"							
Isopropylbenzene	ND	1.00	"							
Di-isopropyl ether	ND	5.00	"							
p-Isopropyltoluene	ND	1.00	"							
Methylene Chloride	ND	5.00	"							
Methyl tert-butyl ether	ND	5.00	"							
Naphthalene	ND	1.00	"							
n-Propylbenzene	ND	1.00	"							
Styrene	ND	1.00	"							
1,1,2,2-Tetrachloroethane	ND	1.00	"							
1,1,1,2-Tetrachloroethane	ND	1.00	"							
Tetrachloroethene	ND	1.00	"							
Toluene	ND	1.00	"							
1,2,3-Trichlorobenzene	ND	1.00	"							
1,2,4-Trichlorobenzene	ND	1.00	"							
1,1,2-Trichloroethane	ND	1.00	"							
1,1,1-Trichloroethane	ND	1.00	"							
Trichloroethene	ND	1.00	"							
Trichlorofluoromethane	ND	1.00	"							
1,2,3-Trichloropropane	ND	1.00	"							
1,3,5-Trimethylbenzene	ND	1.00	"							
1,2,4-Trimethylbenzene	ND	1.00	"							
Vinyl chloride	ND	1.00	"							
m,p-Xylene	ND	2.00	"							
o-Xylene	ND	1.00	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.2</i>		<i>"</i>	<i>13.2</i>		<i>100</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>12.9</i>		<i>"</i>	<i>13.3</i>		<i>97.0</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>12.7</i>		<i>"</i>	<i>13.3</i>		<i>95.1</i>	<i>45-146</i>			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:40

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505039 - EPA 5030 Water MS

LCS (1505039-BS1)

Prepared & Analyzed: 05/05/15

Benzene	52.8	1.00	ug/l	50.0		106	51-132			
Bromobenzene	51.5	1.00	"	50.0		103	90-110			
Bromochloromethane	52.9	5.00	"	50.0		106	83-120			
Bromodichloromethane	54.2	2.00	"	50.0		108	82-117			
Bromoform	56.0	1.00	"	50.0		112	76-112			
Bromomethane	64.1	1.00	"	50.0		128	60-144			
n-Butylbenzene	52.0	1.00	"	50.0		104	81-118			
sec-Butylbenzene	50.9	1.00	"	50.0		102	84-113			
tert-Butylbenzene	51.4	1.00	"	50.0		103	87-112			
Carbon tetrachloride	53.4	1.00	"	50.0		107	68-118			
Chlorobenzene	53.3	1.00	"	50.0		107	87-113			
Chloroethane	48.3	1.00	"	50.0		96.6	48-147			
Chloroform	53.3	5.00	"	50.0		107	85-116			
Chloromethane	60.8	1.00	"	50.0		122	60-133			
Chlorodibromomethane	55.5	1.00	"	50.0		111	80-117			
2-Chlorotoluene	48.6	1.00	"	50.0		97.3	84-117			
4-Chlorotoluene	49.9	1.00	"	50.0		99.8	86-114			
1,2-Dibromo-3-chloropropane	48.5	1.00	"	50.0		97.0	62-126			
1,2-Dibromoethane (EDB)	56.3	1.00	"	50.0		113	84-119			
Dibromomethane	53.6	1.00	"	50.0		107	83-118			
1,2-Dichlorobenzene	52.7	1.00	"	50.0		105	90-110			
1,3-Dichlorobenzene	52.1	1.00	"	50.0		104	90-110			
1,4-Dichlorobenzene	50.3	1.00	"	50.0		101	87-110			
Dichlorodifluoromethane	59.8	1.00	"	50.0		120	60-122			
1,1-Dichloroethane	52.4	1.00	"	50.0		105	71-131			
1,2-Dichloroethane (EDC)	53.8	1.00	"	50.0		108	84-117			
1,1-Dichloroethene	52.3	1.00	"	50.0		105	69-129			
cis-1,2-Dichloroethene	54.0	1.00	"	50.0		108	81-124			
trans-1,2-Dichloroethene	54.6	1.00	"	50.0		109	66-140			
1,2-Dichloropropane	52.7	1.00	"	50.0		105	86-114			
1,3-Dichloropropane	55.0	1.00	"	50.0		110	83-122			
2,2-Dichloropropane	51.9	1.00	"	50.0		104	42-130			
1,1-Dichloropropene	53.6	1.00	"	50.0		107	75-117			
cis-1,3-Dichloropropene	54.9	1.00	"	50.0		110	72-125			
trans-1,3-Dichloropropene	54.1	1.00	"	50.0		108	73-120			
Ethylbenzene	53.6	1.00	"	50.0		107	58-146			
Hexachlorobutadiene	52.4	1.00	"	50.0		105	78-118			
Tert-amyl methyl ether	51.7	1.00	"	49.8		104	72-128			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:40

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505039 - EPA 5030 Water MS

LCS (1505039-BS1)

Prepared & Analyzed: 05/05/15

Ethyl tert-butyl ether	51.7	10.0	ug/l	50.0		103	74-131			
Tert-butyl alcohol	226	20.0	"	249		90.9	66-115			
Isopropylbenzene	53.6	1.00	"	50.0		107	77-115			
Di-isopropyl ether	51.4	5.00	"	50.0		103	77-119			
p-Isopropyltoluene	50.9	1.00	"	50.0		102	84-110			
Methylene Chloride	47.5	5.00	"	50.0		95.0	36-156			
Methyl tert-butyl ether	52.7	5.00	"	50.0		105	71-130			
Naphthalene	56.2	1.00	"	50.0		112	76-128			
n-Propylbenzene	51.8	1.00	"	50.0		104	82-117			
Styrene	56.7	1.00	"	50.0		113	82-123			
1,1,2,2-Tetrachloroethane	49.8	1.00	"	50.0		99.6	66-126			
1,1,1,2-Tetrachloroethane	53.5	1.00	"	50.0		107	86-116			
Tetrachloroethene	53.4	1.00	"	50.0		107	74-121			
Toluene	53.1	1.00	"	50.0		106	51-138			
1,2,3-Trichlorobenzene	55.0	1.00	"	50.0		110	81-122			
1,2,4-Trichlorobenzene	54.9	1.00	"	50.0		110	87-115			
1,1,2-Trichloroethane	54.6	1.00	"	50.0		109	77-129			
1,1,1-Trichloroethane	52.8	1.00	"	50.0		106	75-120			
Trichloroethene	56.9	1.00	"	50.0		114	88-114			
Trichlorofluoromethane	49.2	1.00	"	50.0		98.4	65-129			
1,2,3-Trichloropropane	45.0	1.00	"	50.0		89.9	72-128			
1,3,5-Trimethylbenzene	51.4	1.00	"	50.0		103	86-110			
1,2,4-Trimethylbenzene	51.1	1.00	"	50.0		102	85-117			
Vinyl chloride	54.1	1.00	"	50.0		108	65-133			
m,p-Xylene	108	2.00	"	100		108	57-144			
o-Xylene	53.3	1.00	"	50.0		107	53-146			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.8</i>		<i>"</i>	<i>13.2</i>		<i>105</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.5</i>		<i>"</i>	<i>13.3</i>		<i>101</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.6</i>		<i>"</i>	<i>13.3</i>		<i>102</i>	<i>45-146</i>			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:40

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1505039 - EPA 5030 Water MS

Matrix Spike (1505039-MS1)	Source: 1505002-01			Prepared & Analyzed: 05/05/15						
Benzene	51.4	1.00	ug/l	50.0	ND	103	34-141			
Bromobenzene	50.4	1.00	"	50.0	ND	101	66-131			
Bromochloromethane	53.3	5.00	"	50.0	ND	107	74-125			
Bromodichloromethane	53.2	2.00	"	50.0	ND	106	64-131			
Bromoform	52.1	1.00	"	50.0	ND	104	63-122			
Bromomethane	59.4	1.00	"	50.0	ND	119	46-155			
n-Butylbenzene	50.6	1.00	"	50.0	ND	101	47-142			
sec-Butylbenzene	49.1	1.00	"	50.0	ND	98.2	52-135			
tert-Butylbenzene	49.8	1.00	"	50.0	ND	99.7	53-137			
Carbon tetrachloride	51.4	1.00	"	50.0	ND	103	62-121			
Chlorobenzene	50.4	1.00	"	50.0	ND	101	64-131			
Chloroethane	48.5	1.00	"	50.0	ND	97.1	60-130			
Chloroform	53.1	5.00	"	50.0	ND	106	70-130			
Chloromethane	59.6	1.00	"	50.0	ND	119	62-130			
Chlorodibromomethane	52.7	1.00	"	50.0	ND	105	60-134			
2-Chlorotoluene	47.4	1.00	"	50.0	ND	94.7	58-138			
4-Chlorotoluene	48.6	1.00	"	50.0	ND	97.2	62-131			
1,2-Dibromo-3-chloropropane	48.9	1.00	"	50.0	ND	97.7	63-125			
1,2-Dibromoethane (EDB)	53.2	1.00	"	50.0	ND	106	66-131			
Dibromomethane	52.1	1.00	"	50.0	ND	104	70-127			
1,2-Dichlorobenzene	50.7	1.00	"	50.0	ND	101	62-134			
1,3-Dichlorobenzene	49.7	1.00	"	50.0	ND	99.4	60-133			
1,4-Dichlorobenzene	48.6	1.00	"	50.0	ND	97.1	63-127			
Dichlorodifluoromethane	63.0	1.00	"	50.0	ND	126	24-136			
1,1-Dichloroethane	52.5	1.00	"	50.0	ND	105	73-124			
1,2-Dichloroethane (EDC)	53.7	1.00	"	50.0	ND	107	75-122			
1,1-Dichloroethene	52.3	1.00	"	50.0	ND	105	70-123			
cis-1,2-Dichloroethene	53.3	1.00	"	50.0	ND	107	72-129			
trans-1,2-Dichloroethene	53.6	1.00	"	50.0	ND	107	76-126			
1,2-Dichloropropane	50.7	1.00	"	50.0	ND	101	68-129			
1,3-Dichloropropane	52.8	1.00	"	50.0	ND	106	69-130			
2,2-Dichloropropane	50.9	1.00	"	50.0	ND	102	37-126			
1,1-Dichloropropene	52.1	1.00	"	50.0	ND	104	61-125			
cis-1,3-Dichloropropene	53.4	1.00	"	50.0	ND	107	59-127			
trans-1,3-Dichloropropene	52.6	1.00	"	50.0	ND	105	59-126			
Ethylbenzene	50.7	1.00	"	50.0	ND	101	29-160			
Hexachlorobutadiene	49.7	1.00	"	50.0	ND	99.4	41-141			
Tert-amyl methyl ether	52.4	1.00	"	49.8	ND	105	61-132			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:40

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505039 - EPA 5030 Water MS

Matrix Spike (1505039-MS1)	Source: 1505002-01			Prepared & Analyzed: 05/05/15						
Ethyl tert-butyl ether	52.0	10.0	ug/l	50.0	ND	104	65-130			
Tert-butyl alcohol	226	20.0	"	249	ND	91.0	60-130			
Isopropylbenzene	50.6	1.00	"	50.0	ND	101	44-143			
Di-isopropyl ether	51.0	5.00	"	50.0	ND	102	73-128			
p-Isopropyltoluene	48.9	1.00	"	50.0	ND	97.8	47-137			
Methylene Chloride	45.6	5.00	"	50.0	ND	91.2	42-129			
Methyl tert-butyl ether	53.9	5.00	"	50.0	ND	108	70-124			
Naphthalene	55.4	1.00	"	50.0	ND	111	73-132			
n-Propylbenzene	50.1	1.00	"	50.0	ND	100	61-129			
Styrene	51.7	1.00	"	50.0	ND	103	36-146			
1,1,2,2-Tetrachloroethane	50.7	1.00	"	50.0	ND	101	71-140			
1,1,1,2-Tetrachloroethane	51.2	1.00	"	50.0	ND	102	59-137			
Tetrachloroethane	53.8	1.00	"	50.0	3.60	100	49-137			
Toluene	51.0	1.00	"	50.0	ND	102	27-151			
1,2,3-Trichlorobenzene	53.7	1.00	"	50.0	ND	107	61-137			
1,2,4-Trichlorobenzene	53.7	1.00	"	50.0	ND	107	55-141			
1,1,2-Trichloroethane	52.5	1.00	"	50.0	ND	105	67-134			
1,1,1-Trichloroethane	52.3	1.00	"	50.0	ND	105	66-128			
Trichloroethene	52.9	1.00	"	50.0	ND	106	65-119			
Trichlorofluoromethane	49.7	1.00	"	50.0	ND	99.4	65-121			
1,2,3-Trichloropropane	45.0	1.00	"	50.0	ND	90.0	69-125			
1,3,5-Trimethylbenzene	49.9	1.00	"	50.0	ND	99.8	50-138			
1,2,4-Trimethylbenzene	49.3	1.00	"	50.0	ND	98.6	54-137			
Vinyl chloride	53.9	1.00	"	50.0	ND	108	71-124			
m,p-Xylene	103	2.00	"	100	ND	103	20-166			
o-Xylene	50.4	1.00	"	50.0	ND	101	33-159			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.8</i>		<i>"</i>	<i>13.2</i>		<i>104</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.3</i>		<i>"</i>	<i>13.3</i>		<i>99.7</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.1</i>		<i>"</i>	<i>13.3</i>		<i>98.5</i>	<i>45-146</i>			

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/27/15 13:40

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505039 - EPA 5030 Water MS

Matrix Spike Dup (1505039-MSD1)	Source: 1505002-01			Prepared & Analyzed: 05/05/15						
Benzene	57.6	1.00	ug/l	50.0	ND	115	34-141	11.3	32	
Bromobenzene	56.8	1.00	"	50.0	ND	114	66-131	12.0	30	
Bromochloromethane	56.4	5.00	"	50.0	ND	113	74-125	5.54	30	
Bromodichloromethane	60.0	2.00	"	50.0	ND	120	64-131	12.0	30	
Bromoform	60.8	1.00	"	50.0	ND	122	63-122	15.4	27	
Bromomethane	119	1.00	"	50.0	ND	239	46-155	67.1	95	QM-07
n-Butylbenzene	56.4	1.00	"	50.0	ND	113	47-142	10.8	33	
sec-Butylbenzene	55.4	1.00	"	50.0	ND	111	52-135	12.1	33	
tert-Butylbenzene	56.0	1.00	"	50.0	ND	112	53-137	11.6	38	
Carbon tetrachloride	57.3	1.00	"	50.0	ND	115	62-121	11.0	21	
Chlorobenzene	57.5	1.00	"	50.0	ND	115	64-131	13.1	30	
Chloroethane	63.5	1.00	"	50.0	ND	127	60-130	26.7	29	
Chloroform	58.6	5.00	"	50.0	ND	117	70-130	9.71	32	
Chloromethane	67.1	1.00	"	50.0	ND	134	62-130	11.7	24	QM-07
Chlorodibromomethane	60.5	1.00	"	50.0	ND	121	60-134	13.8	30	
2-Chlorotoluene	54.3	1.00	"	50.0	ND	109	58-138	13.7	34	
4-Chlorotoluene	56.0	1.00	"	50.0	ND	112	62-131	14.1	29	
1,2-Dibromo-3-chloropropane	54.7	1.00	"	50.0	ND	109	63-125	11.3	34	
1,2-Dibromoethane (EDB)	59.8	1.00	"	50.0	ND	120	66-131	11.6	31	
Dibromomethane	58.6	1.00	"	50.0	ND	117	70-127	11.7	28	
1,2-Dichlorobenzene	57.8	1.00	"	50.0	ND	116	62-134	13.2	29	
1,3-Dichlorobenzene	56.7	1.00	"	50.0	ND	113	60-133	13.3	30	
1,4-Dichlorobenzene	55.6	1.00	"	50.0	ND	111	63-127	13.6	31	
Dichlorodifluoromethane	70.4	1.00	"	50.0	ND	141	24-136	11.0	31	QM-07
1,1-Dichloroethane	57.5	1.00	"	50.0	ND	115	73-124	8.98	33	
1,2-Dichloroethane (EDC)	59.0	1.00	"	50.0	ND	118	75-122	9.48	19	
1,1-Dichloroethene	66.6	1.00	"	50.0	ND	133	70-123	24.1	32	QM-07
cis-1,2-Dichloroethene	58.4	1.00	"	50.0	ND	117	72-129	9.22	31	
trans-1,2-Dichloroethene	58.5	1.00	"	50.0	ND	117	76-126	8.72	31	
1,2-Dichloropropane	57.2	1.00	"	50.0	ND	114	68-129	12.0	29	
1,3-Dichloropropane	59.7	1.00	"	50.0	ND	119	69-130	12.3	31	
2,2-Dichloropropane	57.5	1.00	"	50.0	ND	115	37-126	12.2	33	
1,1-Dichloropropene	57.4	1.00	"	50.0	ND	115	61-125	9.79	28	
cis-1,3-Dichloropropene	61.6	1.00	"	50.0	ND	123	59-127	14.3	28	
trans-1,3-Dichloropropene	60.7	1.00	"	50.0	ND	121	59-126	14.3	28	
Ethylbenzene	57.6	1.00	"	50.0	ND	115	29-160	12.8	50	
Hexachlorobutadiene	56.9	1.00	"	50.0	ND	114	41-141	13.5	35	
Tert-amyl methyl ether	58.7	1.00	"	49.8	ND	118	61-132	11.3	34	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:40

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505039 - EPA 5030 Water MS

Matrix Spike Dup (1505039-MSD1)	Source: 1505002-01			Prepared & Analyzed: 05/05/15						
Ethyl tert-butyl ether	58.0	10.0	ug/l	50.0	ND	116	65-130	10.9	38	
Tert-butyl alcohol	277	20.0	"	249	ND	111	60-130	20.1	31	
Isopropylbenzene	57.4	1.00	"	50.0	ND	115	44-143	12.7	35	
Di-isopropyl ether	57.0	5.00	"	50.0	ND	114	73-128	11.0	25	
p-Isopropyltoluene	55.3	1.00	"	50.0	ND	111	47-137	12.2	38	
Methylene Chloride	61.4	5.00	"	50.0	ND	123	42-129	29.5	31	
Methyl tert-butyl ether	60.0	5.00	"	50.0	ND	120	70-124	10.7	35	
Naphthalene	49.4	1.00	"	50.0	ND	98.8	73-132	11.4	23	
n-Propylbenzene	56.5	1.00	"	50.0	ND	113	61-129	12.0	35	
Styrene	58.8	1.00	"	50.0	ND	118	36-146	12.7	33	
1,1,2,2-Tetrachloroethane	56.8	1.00	"	50.0	ND	114	71-140	11.3	32	
1,1,1,2-Tetrachloroethane	58.9	1.00	"	50.0	ND	118	59-137	14.0	32	
Tetrachloroethane	60.0	1.00	"	50.0	3.60	113	49-137	10.9	32	
Toluene	57.9	1.00	"	50.0	ND	116	27-151	12.6	25	
1,2,3-Trichlorobenzene	52.6	1.00	"	50.0	ND	105	61-137	2.22	27	
1,2,4-Trichlorobenzene	54.1	1.00	"	50.0	ND	108	55-141	0.779	28	
1,1,2-Trichloroethane	61.7	1.00	"	50.0	ND	123	67-134	16.2	29	
1,1,1-Trichloroethane	58.4	1.00	"	50.0	ND	117	66-128	11.2	31	
Trichloroethene	59.0	1.00	"	50.0	ND	118	65-119	10.8	30	
Trichlorofluoromethane	51.9	1.00	"	50.0	ND	104	65-121	4.31	30	
1,2,3-Trichloropropane	45.2	1.00	"	50.0	ND	90.5	69-125	0.487	33	
1,3,5-Trimethylbenzene	56.3	1.00	"	50.0	ND	113	50-138	12.1	34	
1,2,4-Trimethylbenzene	55.8	1.00	"	50.0	ND	112	54-137	12.3	34	
Vinyl chloride	60.3	1.00	"	50.0	ND	121	71-124	11.2	26	
m,p-Xylene	115	2.00	"	100	ND	115	20-166	11.2	36	
o-Xylene	57.4	1.00	"	50.0	ND	115	33-159	13.0	26	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.7</i>		<i>"</i>	<i>13.2</i>		<i>103</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.6</i>		<i>"</i>	<i>13.3</i>		<i>102</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.5</i>		<i>"</i>	<i>13.3</i>		<i>101</i>	<i>45-146</i>			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:40

Dissolved Mercury by EPA Method 245.1 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505048 - EPA 7470A

Blank (1505048-BLK1)				Prepared & Analyzed: 05/05/15						
Mercury	ND	0.000200	mg/L							
LCS (1505048-BS1)				Prepared & Analyzed: 05/05/15						
Mercury	0.00273	0.000200	mg/L	0.00250		109	85-115			
Duplicate (1505048-DUP1)				Source: 1504291-01		Prepared & Analyzed: 05/05/15				
Mercury	0.0000149	0.000200	mg/L		ND			200	20	QR-01
Matrix Spike (1505048-MS1)				Source: 1504291-01		Prepared & Analyzed: 05/05/15				
Mercury	0.00304	0.000200	mg/L	0.00250	ND	122	70-130			
Matrix Spike Dup (1505048-MSD1)				Source: 1504291-01		Prepared & Analyzed: 05/05/15				
Mercury	0.00307	0.000200	mg/L	0.00250	ND	123	70-130	0.851	20	

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Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/27/15 13:40

Dissolved Metals by EPA Method 200.8 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505032 - EPA 200.8

Blank (1505032-BLK1)

Prepared & Analyzed: 05/04/15

Arsenic	ND	0.000600	mg/L							
Barium	ND	0.00100	"							
Cadmium	ND	0.0000500	"							
Chromium	ND	0.00100	"							
Lead	ND	0.00100	"							
Selenium	ND	0.00100	"							
Silver	ND	0.0000500	"							
Zinc	ND	0.00300	"							

LCS (1505032-BS1)

Prepared & Analyzed: 05/04/15

Arsenic	0.507	0.000600	mg/L	0.500	101	85-115				
Barium	0.450	0.00100	"	0.500	90.0	85-115				
Cadmium	0.0226	0.0000500	"	0.0250	90.3	85-115				
Chromium	0.496	0.00100	"	0.500	99.3	85-115				
Lead	0.248	0.00100	"	0.250	99.3	85-115				
Selenium	0.0507	0.00100	"	0.0500	101	85-115				
Silver	0.0225	0.0000500	"	0.0250	90.1	85-115				
Zinc	0.498	0.00300	"	0.500	99.5	85-115				

Duplicate (1505032-DUP1)

Source: 1504291-01

Prepared & Analyzed: 05/04/15

Arsenic	0.00234	0.000600	mg/L	0.00227	3.07	20				
Barium	0.218	0.00100	"	0.215	1.24	20				
Cadmium	ND	0.0000500	"	ND		20				
Chromium	0.0000813	0.00100	"	0.000237	97.9	20				QR-01
Lead	0.000122	0.00100	"	0.000565	129	20				QR-01
Selenium	ND	0.00100	"	ND		20				
Silver	0.000139	0.0000500	"	0.000221	45.4	20				QR-03
Zinc	0.00234	0.00300	"	0.00827	112	20				QR-01

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Dissolved Metals by EPA Method 200.8 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505032 - EPA 200.8

Matrix Spike (1505032-MS1)

Source: 1504291-01

Prepared & Analyzed: 05/04/15

Arsenic	0.491	0.000600	mg/L	0.500	0.00227	97.7	75-125			
Barium	0.688	0.00100	"	0.500	0.215	94.5	75-125			
Cadmium	0.0235	0.0000500	"	0.0250	ND	94.1	75-125			
Chromium	0.473	0.00100	"	0.500	0.000237	94.5	75-125			
Lead	0.220	0.00100	"	0.250	0.000565	87.6	75-125			
Selenium	0.0493	0.00100	"	0.0500	ND	98.5	75-125			
Silver	0.0234	0.0000500	"	0.0250	0.000221	92.9	75-125			
Zinc	0.473	0.00300	"	0.500	0.00827	92.9	75-125			

Matrix Spike Dup (1505032-MSD1)

Source: 1504291-01

Prepared & Analyzed: 05/04/15

Arsenic	0.477	0.000600	mg/L	0.500	0.00227	94.9	75-125	2.86	25	
Barium	0.654	0.00100	"	0.500	0.215	87.9	75-125	4.96	25	
Cadmium	0.0221	0.0000500	"	0.0250	ND	88.3	75-125	6.31	25	
Chromium	0.458	0.00100	"	0.500	0.000237	91.5	75-125	3.23	25	
Lead	0.208	0.00100	"	0.250	0.000565	83.1	75-125	5.32	25	
Selenium	0.0488	0.00100	"	0.0500	ND	97.7	75-125	0.852	25	
Silver	0.0223	0.0000500	"	0.0250	0.000221	88.3	75-125	5.02	25	
Zinc	0.455	0.00300	"	0.500	0.00827	89.4	75-125	3.76	25	

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Project: National Western Complex

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Project Manager: Steve Hoffman

Reported:
05/27/15 13:40

Notes and Definitions

- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QR-01 Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

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May 11, 2015

Steve Hoffman

Terracon - Wheat Ridge

10625 West I-70 Frontage Road, Suite 3

Wheat Ridge, CO 80033

RE: National Western Complex

Enclosed are the results of analyses for samples received by Summit Scientific on 05/04/15 17:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'Ben Shrewsbury', with a long, sweeping horizontal stroke extending to the right.

Ben Shrewsbury For Paul Shrewsbury
President



Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/11/15 10:53

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-12	1505053-01	Water	05/04/15 14:30	05/04/15 17:20
MW-12	1505053-02	Water	05/04/15 14:30	05/04/15 17:20
MW-12 D	1505053-03	Water	05/04/15 14:30	05/04/15 17:20
MW-12 D	1505053-04	Water	05/04/15 14:30	05/04/15 17:20

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/11/15 10:53

Summit Scientific

1505053

741 Corporate Circle Suite I • Golden, Colorado 80401
 303-277-9310 • 303-374-5933 Fax

Client: Terracon Consultants

Page 1 of 1

Address: 10625 West I-70 Frontage Road North, Suite 3
 City/State/Zip: Wheat Ridge, CO 80033
 Phone: (303) 454-5275 Fax: (303) 423-3353
 Sampler Name: Marshall Haworth

Project Manager: Steve Hoffman
 E-Mail: sbhoffman@terracon.com
 Project Name: National Western Complex
 Project Number: 25157010

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:				Special Instructions		
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	VOC's 8260B	TPH 8015	RCRA 8+Zinc - D5534W			
MW-12	5-4-15	1430	3	X		X		X									
MW-12	5-4-15	1430	1		X			X				X					
MW-12D	5-4-15	1430	3	X				X				X					
MW-12D	5-4-15	1430	1		X			X					X				
Relinquished by:		Date/Time:		Received by:		Date/Time:		Turn Around Time (Check)				Notes:					
<i>Marshall Haworth</i>		5-4-15		<i>Kevin Ferguson</i>		5-4-15		Same Day	<input type="checkbox"/>	72 Hours	<input type="checkbox"/>	ON ice					
Relinquished by:		Date/Time:		Received by:		Date/Time:		24 Hours	<input type="checkbox"/>	Standard	<input checked="" type="checkbox"/>						
Relinquished by:		Date/Time:		Received in Lab by:		Date/Time:		48 Hours	<input type="checkbox"/>								
								Sample Integrity:									
								Temperature Upon Receipt: 15.6°C									
								Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>									

www.s2scientific.com

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S2

Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/11/15 10:53

Sample Receipt Checklist

S2 Work Order: 1505053

Client: Terracon

Client Project ID: National Western Complex

Shipped Via: H.D.
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Airbill #: _____

Matrix (check all that apply): Air Soil/Solid Water Other: _____
(Describe)

Cooler ID					
Temp (°C)	<u>15.6</u>				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C ⁽¹⁾ ?				
NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.	X			
Were all samples received intact ⁽¹⁾ ?		Y		
Was adequate sample volume provided ⁽¹⁾ ?	Y			
If custody seals are present, are they intact ⁽¹⁾ ?	Y			
Are short holding time analytes or samples with HTs due within 48 hours present?		X		
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	X			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	Y			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	Y			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	Y			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.		Y		
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?	X			HCL
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, etc.				
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			X	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?		X		
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

Paul Shrewsby
Custodian Printed Name

[Signature]
Signature or Initials of Custodian

5-2-15
Date/Time

[Signature]



Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/11/15 10:53

MW-12
1505053-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 05/04/15 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.00	ug/l	1	1505039	05/05/15	05/07/15	EPA 8260B	
Bromobenzene	ND	1.00	"	"	"	"	"	"	
Bromochloromethane	ND	5.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	1.00	"	"	"	"	"	"	
Bromomethane	ND	1.00	"	"	"	"	"	"	
n-Butylbenzene	ND	1.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.00	"	"	"	"	"	"	
Chlorobenzene	ND	1.00	"	"	"	"	"	"	
Chloroethane	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	5.00	"	"	"	"	"	"	
Chloromethane	ND	1.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	1.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.00	"	"	"	"	"	"	
Dibromomethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.00	"	"	"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/11/15 10:53

MW-12
1505053-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
cis-1,3-Dichloropropene	ND	1.00	ug/l	1	1505039	05/05/15	05/07/15	EPA 8260B
trans-1,3-Dichloropropene	ND	1.00	"	"	"	"	"	"
Ethylbenzene	ND	1.00	"	"	"	"	"	"
Hexachlorobutadiene	ND	1.00	"	"	"	"	"	"
Tert-amyl methyl ether	ND	1.00	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	10.0	"	"	"	"	"	"
Tert-butyl alcohol	ND	20.0	"	"	"	"	"	"
Isopropylbenzene	ND	1.00	"	"	"	"	"	"
Di-isopropyl ether	ND	5.00	"	"	"	"	"	"
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"
Methylene Chloride	ND	5.00	"	"	"	"	"	"
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"
Naphthalene	ND	1.00	"	"	"	"	"	"
n-Propylbenzene	ND	1.00	"	"	"	"	"	"
Styrene	ND	1.00	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
Tetrachloroethene	38.9	1.00	"	"	"	"	"	"
Toluene	ND	1.00	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	1.00	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"
Trichloroethene	1.15	1.00	"	"	"	"	"	"
Trichlorofluoromethane	ND	1.00	"	"	"	"	"	"
1,2,3-Trichloropropane	ND	1.00	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
Vinyl chloride	ND	1.00	"	"	"	"	"	"
m,p-Xylene	ND	2.00	"	"	"	"	"	"
o-Xylene	ND	1.00	"	"	"	"	"	"

Date Sampled: 05/04/15 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		97.7 %	45-149		"	"	"	"	

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Terracon - Wheat Ridge
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Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/11/15 10:53

MW-12
1505053-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

<i>Surrogate: 4-Bromofluorobenzene</i>	97.0 %	45-146	1505039	05/05/15	05/07/15	EPA 8260B
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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/11/15 10:53

MW-12
1505053-02 (Water)

Summit Scientific

Dissolved Mercury by EPA Method 245.1

Date Sampled: **05/04/15 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.000200	mg/L	1	1505048	05/05/15	05/05/15	EPA 245.1	

Dissolved Metals by EPA Method 200.8

Date Sampled: **05/04/15 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.00149	0.000600	mg/L	1	1505052	05/05/15	05/05/15	EPA 200.8	
Barium	0.0582	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.0000500	"	"	"	"	"	"	
Chromium	ND	0.00100	"	"	"	"	"	"	
Lead	ND	0.00100	"	"	"	"	"	"	
Selenium	0.00376	0.00100	"	"	"	"	"	"	
Silver	0.000552	0.0000500	"	"	"	"	"	"	

Date Sampled: **05/04/15 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	ND	0.00300	"	"	"	"	"	"	

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Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/11/15 10:53

MW-12 D
1505053-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/04/15 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.00	ug/l	1	1505039	05/05/15	05/07/15	EPA 8260B	
Bromobenzene	ND	1.00	"	"	"	"	"	"	
Bromochloromethane	ND	5.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	1.00	"	"	"	"	"	"	
Bromomethane	ND	1.00	"	"	"	"	"	"	
n-Butylbenzene	ND	1.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.00	"	"	"	"	"	"	
Chlorobenzene	ND	1.00	"	"	"	"	"	"	
Chloroethane	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	5.00	"	"	"	"	"	"	
Chloromethane	ND	1.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	1.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.00	"	"	"	"	"	"	
Dibromomethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.00	"	"	"	"	"	"	

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Terracon - Wheat Ridge
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 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/11/15 10:53

MW-12 D
1505053-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
cis-1,3-Dichloropropene	ND	1.00	ug/l	1	1505039	05/05/15	05/07/15	EPA 8260B
trans-1,3-Dichloropropene	ND	1.00	"	"	"	"	"	"
Ethylbenzene	ND	1.00	"	"	"	"	"	"
Hexachlorobutadiene	ND	1.00	"	"	"	"	"	"
Tert-amyl methyl ether	ND	1.00	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	10.0	"	"	"	"	"	"
Tert-butyl alcohol	ND	20.0	"	"	"	"	"	"
Isopropylbenzene	ND	1.00	"	"	"	"	"	"
Di-isopropyl ether	ND	5.00	"	"	"	"	"	"
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"
Methylene Chloride	ND	5.00	"	"	"	"	"	"
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"
Naphthalene	ND	1.00	"	"	"	"	"	"
n-Propylbenzene	ND	1.00	"	"	"	"	"	"
Styrene	ND	1.00	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
Tetrachloroethene	43.5	1.00	"	"	"	"	"	"
Toluene	ND	1.00	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	1.00	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"
Trichloroethene	ND	1.00	"	"	"	"	"	"
Trichlorofluoromethane	ND	1.00	"	"	"	"	"	"
1,2,3-Trichloropropane	ND	1.00	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
Vinyl chloride	ND	1.00	"	"	"	"	"	"
m,p-Xylene	ND	2.00	"	"	"	"	"	"
o-Xylene	ND	1.00	"	"	"	"	"	"

Date Sampled: 05/04/15 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		112 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		98.9 %	45-149		"	"	"	"	

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/11/15 10:53

MW-12 D
1505053-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

<i>Surrogate: 4-Bromofluorobenzene</i>	94.4 %	45-146	1505039	05/05/15	05/07/15	EPA 8260B
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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/11/15 10:53

MW-12 D
1505053-04 (Water)

Summit Scientific

Dissolved Mercury by EPA Method 245.1

Date Sampled: **05/04/15 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.000200	mg/L	1	1505048	05/05/15	05/05/15	EPA 245.1	

Dissolved Metals by EPA Method 200.8

Date Sampled: **05/04/15 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.00155	0.000600	mg/L	1	1505052	05/05/15	05/05/15	EPA 200.8	
Barium	0.0549	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.0000500	"	"	"	"	"	"	
Chromium	ND	0.00100	"	"	"	"	"	"	
Lead	ND	0.00100	"	"	"	"	"	"	
Selenium	0.00356	0.00100	"	"	"	"	"	"	
Silver	0.000505	0.0000500	"	"	"	"	"	"	

Date Sampled: **05/04/15 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	ND	0.00300	"	"	"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
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Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/11/15 10:53

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505039 - EPA 5030 Water MS

Blank (1505039-BLK1)

Prepared & Analyzed: 05/05/15

Benzene	ND	1.00	ug/l
Bromobenzene	ND	1.00	"
Bromochloromethane	ND	5.00	"
Bromodichloromethane	ND	2.00	"
Bromoform	ND	1.00	"
Bromomethane	ND	1.00	"
n-Butylbenzene	ND	1.00	"
sec-Butylbenzene	ND	1.00	"
tert-Butylbenzene	ND	1.00	"
Carbon tetrachloride	ND	1.00	"
Chlorobenzene	ND	1.00	"
Chloroethane	ND	1.00	"
Chloroform	ND	5.00	"
Chloromethane	ND	1.00	"
Chlorodibromomethane	ND	1.00	"
2-Chlorotoluene	ND	1.00	"
4-Chlorotoluene	ND	1.00	"
1,2-Dibromo-3-chloropropane	ND	1.00	"
1,2-Dibromoethane (EDB)	ND	1.00	"
Dibromomethane	ND	1.00	"
1,2-Dichlorobenzene	ND	1.00	"
1,3-Dichlorobenzene	ND	1.00	"
1,4-Dichlorobenzene	ND	1.00	"
Dichlorodifluoromethane	ND	1.00	"
1,1-Dichloroethane	ND	1.00	"
1,2-Dichloroethane (EDC)	ND	1.00	"
1,1-Dichloroethene	ND	1.00	"
cis-1,2-Dichloroethene	ND	1.00	"
trans-1,2-Dichloroethene	ND	1.00	"
1,2-Dichloropropane	ND	1.00	"
1,3-Dichloropropane	ND	1.00	"
2,2-Dichloropropane	ND	1.00	"
1,1-Dichloropropene	ND	1.00	"
cis-1,3-Dichloropropene	ND	1.00	"
trans-1,3-Dichloropropene	ND	1.00	"
Ethylbenzene	ND	1.00	"
Hexachlorobutadiene	ND	1.00	"
Tert-amyl methyl ether	ND	1.00	"

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/11/15 10:53

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting		Spike Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

Batch 1505039 - EPA 5030 Water MS

Blank (1505039-BLK1)

Prepared & Analyzed: 05/05/15

Ethyl tert-butyl ether	ND	10.0	ug/l						
Tert-butyl alcohol	ND	20.0	"						
Isopropylbenzene	ND	1.00	"						
Di-isopropyl ether	ND	5.00	"						
p-Isopropyltoluene	ND	1.00	"						
Methylene Chloride	ND	5.00	"						
Methyl tert-butyl ether	ND	5.00	"						
Naphthalene	ND	1.00	"						
n-Propylbenzene	ND	1.00	"						
Styrene	ND	1.00	"						
1,1,2,2-Tetrachloroethane	ND	1.00	"						
1,1,1,2-Tetrachloroethane	ND	1.00	"						
Tetrachloroethene	ND	1.00	"						
Toluene	ND	1.00	"						
1,2,3-Trichlorobenzene	ND	1.00	"						
1,2,4-Trichlorobenzene	ND	1.00	"						
1,1,2-Trichloroethane	ND	1.00	"						
1,1,1-Trichloroethane	ND	1.00	"						
Trichloroethene	ND	1.00	"						
Trichlorofluoromethane	ND	1.00	"						
1,2,3-Trichloropropane	ND	1.00	"						
1,3,5-Trimethylbenzene	ND	1.00	"						
1,2,4-Trimethylbenzene	ND	1.00	"						
Vinyl chloride	ND	1.00	"						
m,p-Xylene	ND	2.00	"						
o-Xylene	ND	1.00	"						
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.2</i>	<i>"</i>	<i>"</i>	<i>13.2</i>	<i>100</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>12.9</i>	<i>"</i>	<i>"</i>	<i>13.3</i>	<i>97.0</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>12.7</i>	<i>"</i>	<i>"</i>	<i>13.3</i>	<i>95.1</i>	<i>45-146</i>			

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 Wheat Ridge CO, 80033

Project: National Western Complex

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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505039 - EPA 5030 Water MS

LCS (1505039-BS1)

Prepared & Analyzed: 05/05/15

Benzene	52.8	1.00	ug/l	50.0		106	51-132			
Bromobenzene	51.5	1.00	"	50.0		103	90-110			
Bromochloromethane	52.9	5.00	"	50.0		106	83-120			
Bromodichloromethane	54.2	2.00	"	50.0		108	82-117			
Bromoform	56.0	1.00	"	50.0		112	76-112			
Bromomethane	64.1	1.00	"	50.0		128	60-144			
n-Butylbenzene	52.0	1.00	"	50.0		104	81-118			
sec-Butylbenzene	50.9	1.00	"	50.0		102	84-113			
tert-Butylbenzene	51.4	1.00	"	50.0		103	87-112			
Carbon tetrachloride	53.4	1.00	"	50.0		107	68-118			
Chlorobenzene	53.3	1.00	"	50.0		107	87-113			
Chloroethane	48.3	1.00	"	50.0		96.6	48-147			
Chloroform	53.3	5.00	"	50.0		107	85-116			
Chloromethane	60.8	1.00	"	50.0		122	60-133			
Chlorodibromomethane	55.5	1.00	"	50.0		111	80-117			
2-Chlorotoluene	48.6	1.00	"	50.0		97.3	84-117			
4-Chlorotoluene	49.9	1.00	"	50.0		99.8	86-114			
1,2-Dibromo-3-chloropropane	48.5	1.00	"	50.0		97.0	62-126			
1,2-Dibromoethane (EDB)	56.3	1.00	"	50.0		113	84-119			
Dibromomethane	53.6	1.00	"	50.0		107	83-118			
1,2-Dichlorobenzene	52.7	1.00	"	50.0		105	90-110			
1,3-Dichlorobenzene	52.1	1.00	"	50.0		104	90-110			
1,4-Dichlorobenzene	50.3	1.00	"	50.0		101	87-110			
Dichlorodifluoromethane	59.8	1.00	"	50.0		120	60-122			
1,1-Dichloroethane	52.4	1.00	"	50.0		105	71-131			
1,2-Dichloroethane (EDC)	53.8	1.00	"	50.0		108	84-117			
1,1-Dichloroethene	52.3	1.00	"	50.0		105	69-129			
cis-1,2-Dichloroethene	54.0	1.00	"	50.0		108	81-124			
trans-1,2-Dichloroethene	54.6	1.00	"	50.0		109	66-140			
1,2-Dichloropropane	52.7	1.00	"	50.0		105	86-114			
1,3-Dichloropropane	55.0	1.00	"	50.0		110	83-122			
2,2-Dichloropropane	51.9	1.00	"	50.0		104	42-130			
1,1-Dichloropropene	53.6	1.00	"	50.0		107	75-117			
cis-1,3-Dichloropropene	54.9	1.00	"	50.0		110	72-125			
trans-1,3-Dichloropropene	54.1	1.00	"	50.0		108	73-120			
Ethylbenzene	53.6	1.00	"	50.0		107	58-146			
Hexachlorobutadiene	52.4	1.00	"	50.0		105	78-118			
Tert-amyl methyl ether	51.7	1.00	"	49.8		104	72-128			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/11/15 10:53

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505039 - EPA 5030 Water MS

LCS (1505039-BS1)

Prepared & Analyzed: 05/05/15

Ethyl tert-butyl ether	51.7	10.0	ug/l	50.0	103	74-131				
Tert-butyl alcohol	226	20.0	"	249	90.9	66-115				
Isopropylbenzene	53.6	1.00	"	50.0	107	77-115				
Di-isopropyl ether	51.4	5.00	"	50.0	103	77-119				
p-Isopropyltoluene	50.9	1.00	"	50.0	102	84-110				
Methylene Chloride	47.5	5.00	"	50.0	95.0	36-156				
Methyl tert-butyl ether	52.7	5.00	"	50.0	105	71-130				
Naphthalene	56.2	1.00	"	50.0	112	76-128				
n-Propylbenzene	51.8	1.00	"	50.0	104	82-117				
Styrene	56.7	1.00	"	50.0	113	82-123				
1,1,2,2-Tetrachloroethane	49.8	1.00	"	50.0	99.6	66-126				
1,1,1,2-Tetrachloroethane	53.5	1.00	"	50.0	107	86-116				
Tetrachloroethane	53.4	1.00	"	50.0	107	74-121				
Toluene	53.1	1.00	"	50.0	106	51-138				
1,2,3-Trichlorobenzene	55.0	1.00	"	50.0	110	81-122				
1,2,4-Trichlorobenzene	54.9	1.00	"	50.0	110	87-115				
1,1,2-Trichloroethane	54.6	1.00	"	50.0	109	77-129				
1,1,1-Trichloroethane	52.8	1.00	"	50.0	106	75-120				
Trichloroethene	56.9	1.00	"	50.0	114	88-114				
Trichlorofluoromethane	49.2	1.00	"	50.0	98.4	65-129				
1,2,3-Trichloropropane	45.0	1.00	"	50.0	89.9	72-128				
1,3,5-Trimethylbenzene	51.4	1.00	"	50.0	103	86-110				
1,2,4-Trimethylbenzene	51.1	1.00	"	50.0	102	85-117				
Vinyl chloride	54.1	1.00	"	50.0	108	65-133				
m,p-Xylene	108	2.00	"	100	108	57-144				
o-Xylene	53.3	1.00	"	50.0	107	53-146				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.8</i>		<i>"</i>	<i>13.2</i>	<i>105</i>	<i>37-154</i>				
<i>Surrogate: Toluene-d8</i>	<i>13.5</i>		<i>"</i>	<i>13.3</i>	<i>101</i>	<i>45-149</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.6</i>		<i>"</i>	<i>13.3</i>	<i>102</i>	<i>45-146</i>				

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 10625 West I-70 Frontage Road, Suite 3
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Project: National Western Complex
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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505039 - EPA 5030 Water MS

Matrix Spike (1505039-MS1)	Source: 1505002-01			Prepared & Analyzed: 05/05/15						
Benzene	51.4	1.00	ug/l	50.0	ND	103	34-141			
Bromobenzene	50.4	1.00	"	50.0	ND	101	66-131			
Bromochloromethane	53.3	5.00	"	50.0	ND	107	74-125			
Bromodichloromethane	53.2	2.00	"	50.0	ND	106	64-131			
Bromoform	52.1	1.00	"	50.0	ND	104	63-122			
Bromomethane	59.4	1.00	"	50.0	ND	119	46-155			
n-Butylbenzene	50.6	1.00	"	50.0	ND	101	47-142			
sec-Butylbenzene	49.1	1.00	"	50.0	ND	98.2	52-135			
tert-Butylbenzene	49.8	1.00	"	50.0	ND	99.7	53-137			
Carbon tetrachloride	51.4	1.00	"	50.0	ND	103	62-121			
Chlorobenzene	50.4	1.00	"	50.0	ND	101	64-131			
Chloroethane	48.5	1.00	"	50.0	ND	97.1	60-130			
Chloroform	53.1	5.00	"	50.0	ND	106	70-130			
Chloromethane	59.6	1.00	"	50.0	ND	119	62-130			
Chlorodibromomethane	52.7	1.00	"	50.0	ND	105	60-134			
2-Chlorotoluene	47.4	1.00	"	50.0	ND	94.7	58-138			
4-Chlorotoluene	48.6	1.00	"	50.0	ND	97.2	62-131			
1,2-Dibromo-3-chloropropane	48.9	1.00	"	50.0	ND	97.7	63-125			
1,2-Dibromoethane (EDB)	53.2	1.00	"	50.0	ND	106	66-131			
Dibromomethane	52.1	1.00	"	50.0	ND	104	70-127			
1,2-Dichlorobenzene	50.7	1.00	"	50.0	ND	101	62-134			
1,3-Dichlorobenzene	49.7	1.00	"	50.0	ND	99.4	60-133			
1,4-Dichlorobenzene	48.6	1.00	"	50.0	ND	97.1	63-127			
Dichlorodifluoromethane	63.0	1.00	"	50.0	ND	126	24-136			
1,1-Dichloroethane	52.5	1.00	"	50.0	ND	105	73-124			
1,2-Dichloroethane (EDC)	53.7	1.00	"	50.0	ND	107	75-122			
1,1-Dichloroethene	52.3	1.00	"	50.0	ND	105	70-123			
cis-1,2-Dichloroethene	53.3	1.00	"	50.0	ND	107	72-129			
trans-1,2-Dichloroethene	53.6	1.00	"	50.0	ND	107	76-126			
1,2-Dichloropropane	50.7	1.00	"	50.0	ND	101	68-129			
1,3-Dichloropropane	52.8	1.00	"	50.0	ND	106	69-130			
2,2-Dichloropropane	50.9	1.00	"	50.0	ND	102	37-126			
1,1-Dichloropropene	52.1	1.00	"	50.0	ND	104	61-125			
cis-1,3-Dichloropropene	53.4	1.00	"	50.0	ND	107	59-127			
trans-1,3-Dichloropropene	52.6	1.00	"	50.0	ND	105	59-126			
Ethylbenzene	50.7	1.00	"	50.0	ND	101	29-160			
Hexachlorobutadiene	49.7	1.00	"	50.0	ND	99.4	41-141			
Tert-amyl methyl ether	52.4	1.00	"	49.8	ND	105	61-132			

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/11/15 10:53

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505039 - EPA 5030 Water MS

Matrix Spike (1505039-MS1)	Source: 1505002-01			Prepared & Analyzed: 05/05/15						
Tert-butyl alcohol	226	20.0	ug/l	249	ND	91.0	60-130			
Ethyl tert-butyl ether	52.0	10.0	"	50.0	ND	104	65-130			
Isopropylbenzene	50.6	1.00	"	50.0	ND	101	44-143			
Di-isopropyl ether	51.0	5.00	"	50.0	ND	102	73-128			
p-Isopropyltoluene	48.9	1.00	"	50.0	ND	97.8	47-137			
Methylene Chloride	45.6	5.00	"	50.0	ND	91.2	42-129			
Methyl tert-butyl ether	53.9	5.00	"	50.0	ND	108	70-124			
Naphthalene	55.4	1.00	"	50.0	ND	111	73-132			
n-Propylbenzene	50.1	1.00	"	50.0	ND	100	61-129			
Styrene	51.7	1.00	"	50.0	ND	103	36-146			
1,1,2,2-Tetrachloroethane	50.7	1.00	"	50.0	ND	101	71-140			
1,1,1,2-Tetrachloroethane	51.2	1.00	"	50.0	ND	102	59-137			
Tetrachloroethane	53.8	1.00	"	50.0	3.60	100	49-137			
Toluene	51.0	1.00	"	50.0	ND	102	27-151			
1,2,3-Trichlorobenzene	53.7	1.00	"	50.0	ND	107	61-137			
1,2,4-Trichlorobenzene	53.7	1.00	"	50.0	ND	107	55-141			
1,1,2-Trichloroethane	52.5	1.00	"	50.0	ND	105	67-134			
1,1,1-Trichloroethane	52.3	1.00	"	50.0	ND	105	66-128			
Trichloroethene	52.9	1.00	"	50.0	ND	106	65-119			
Trichlorofluoromethane	49.7	1.00	"	50.0	ND	99.4	65-121			
1,2,3-Trichloropropane	45.0	1.00	"	50.0	ND	90.0	69-125			
1,3,5-Trimethylbenzene	49.9	1.00	"	50.0	ND	99.8	50-138			
1,2,4-Trimethylbenzene	49.3	1.00	"	50.0	ND	98.6	54-137			
Vinyl chloride	53.9	1.00	"	50.0	ND	108	71-124			
m,p-Xylene	103	2.00	"	100	ND	103	20-166			
o-Xylene	50.4	1.00	"	50.0	ND	101	33-159			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.8</i>		<i>"</i>	<i>13.2</i>		<i>104</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.3</i>		<i>"</i>	<i>13.3</i>		<i>99.7</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.1</i>		<i>"</i>	<i>13.3</i>		<i>98.5</i>	<i>45-146</i>			

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Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
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Reported:
05/11/15 10:53

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505039 - EPA 5030 Water MS

Matrix Spike Dup (1505039-MSD1)	Source: 1505002-01			Prepared & Analyzed: 05/05/15						
Benzene	57.6	1.00	ug/l	50.0	ND	115	34-141	11.3	32	
Bromobenzene	56.8	1.00	"	50.0	ND	114	66-131	12.0	30	
Bromochloromethane	56.4	5.00	"	50.0	ND	113	74-125	5.54	30	
Bromodichloromethane	60.0	2.00	"	50.0	ND	120	64-131	12.0	30	
Bromoform	60.8	1.00	"	50.0	ND	122	63-122	15.4	27	
Bromomethane	119	1.00	"	50.0	ND	239	46-155	67.1	95	QM-07
n-Butylbenzene	56.4	1.00	"	50.0	ND	113	47-142	10.8	33	
sec-Butylbenzene	55.4	1.00	"	50.0	ND	111	52-135	12.1	33	
tert-Butylbenzene	56.0	1.00	"	50.0	ND	112	53-137	11.6	38	
Carbon tetrachloride	57.3	1.00	"	50.0	ND	115	62-121	11.0	21	
Chlorobenzene	57.5	1.00	"	50.0	ND	115	64-131	13.1	30	
Chloroethane	63.5	1.00	"	50.0	ND	127	60-130	26.7	29	
Chloroform	58.6	5.00	"	50.0	ND	117	70-130	9.71	32	
Chloromethane	67.1	1.00	"	50.0	ND	134	62-130	11.7	24	QM-07
Chlorodibromomethane	60.5	1.00	"	50.0	ND	121	60-134	13.8	30	
2-Chlorotoluene	54.3	1.00	"	50.0	ND	109	58-138	13.7	34	
4-Chlorotoluene	56.0	1.00	"	50.0	ND	112	62-131	14.1	29	
1,2-Dibromo-3-chloropropane	54.7	1.00	"	50.0	ND	109	63-125	11.3	34	
1,2-Dibromoethane (EDB)	59.8	1.00	"	50.0	ND	120	66-131	11.6	31	
Dibromomethane	58.6	1.00	"	50.0	ND	117	70-127	11.7	28	
1,2-Dichlorobenzene	57.8	1.00	"	50.0	ND	116	62-134	13.2	29	
1,3-Dichlorobenzene	56.7	1.00	"	50.0	ND	113	60-133	13.3	30	
1,4-Dichlorobenzene	55.6	1.00	"	50.0	ND	111	63-127	13.6	31	
Dichlorodifluoromethane	70.4	1.00	"	50.0	ND	141	24-136	11.0	31	QM-07
1,1-Dichloroethane	57.5	1.00	"	50.0	ND	115	73-124	8.98	33	
1,2-Dichloroethane (EDC)	59.0	1.00	"	50.0	ND	118	75-122	9.48	19	
1,1-Dichloroethene	66.6	1.00	"	50.0	ND	133	70-123	24.1	32	QM-07
cis-1,2-Dichloroethene	58.4	1.00	"	50.0	ND	117	72-129	9.22	31	
trans-1,2-Dichloroethene	58.5	1.00	"	50.0	ND	117	76-126	8.72	31	
1,2-Dichloropropane	57.2	1.00	"	50.0	ND	114	68-129	12.0	29	
1,3-Dichloropropane	59.7	1.00	"	50.0	ND	119	69-130	12.3	31	
2,2-Dichloropropane	57.5	1.00	"	50.0	ND	115	37-126	12.2	33	
1,1-Dichloropropene	57.4	1.00	"	50.0	ND	115	61-125	9.79	28	
cis-1,3-Dichloropropene	61.6	1.00	"	50.0	ND	123	59-127	14.3	28	
trans-1,3-Dichloropropene	60.7	1.00	"	50.0	ND	121	59-126	14.3	28	
Ethylbenzene	57.6	1.00	"	50.0	ND	115	29-160	12.8	50	
Hexachlorobutadiene	56.9	1.00	"	50.0	ND	114	41-141	13.5	35	
Tert-amyl methyl ether	58.7	1.00	"	49.8	ND	118	61-132	11.3	34	

Summit Scientific

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/11/15 10:53

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505039 - EPA 5030 Water MS

Matrix Spike Dup (1505039-MSD1)	Source: 1505002-01			Prepared & Analyzed: 05/05/15						
Ethyl tert-butyl ether	58.0	10.0	ug/l	50.0	ND	116	65-130	10.9	38	
Tert-butyl alcohol	277	20.0	"	249	ND	111	60-130	20.1	31	
Isopropylbenzene	57.4	1.00	"	50.0	ND	115	44-143	12.7	35	
Di-isopropyl ether	57.0	5.00	"	50.0	ND	114	73-128	11.0	25	
p-Isopropyltoluene	55.3	1.00	"	50.0	ND	111	47-137	12.2	38	
Methylene Chloride	61.4	5.00	"	50.0	ND	123	42-129	29.5	31	
Methyl tert-butyl ether	60.0	5.00	"	50.0	ND	120	70-124	10.7	35	
Naphthalene	49.4	1.00	"	50.0	ND	98.8	73-132	11.4	23	
n-Propylbenzene	56.5	1.00	"	50.0	ND	113	61-129	12.0	35	
Styrene	58.8	1.00	"	50.0	ND	118	36-146	12.7	33	
1,1,2,2-Tetrachloroethane	56.8	1.00	"	50.0	ND	114	71-140	11.3	32	
1,1,1,2-Tetrachloroethane	58.9	1.00	"	50.0	ND	118	59-137	14.0	32	
Tetrachloroethane	60.0	1.00	"	50.0	3.60	113	49-137	10.9	32	
Toluene	57.9	1.00	"	50.0	ND	116	27-151	12.6	25	
1,2,3-Trichlorobenzene	52.6	1.00	"	50.0	ND	105	61-137	2.22	27	
1,2,4-Trichlorobenzene	54.1	1.00	"	50.0	ND	108	55-141	0.779	28	
1,1,2-Trichloroethane	61.7	1.00	"	50.0	ND	123	67-134	16.2	29	
1,1,1-Trichloroethane	58.4	1.00	"	50.0	ND	117	66-128	11.2	31	
Trichloroethene	59.0	1.00	"	50.0	ND	118	65-119	10.8	30	
Trichlorofluoromethane	51.9	1.00	"	50.0	ND	104	65-121	4.31	30	
1,2,3-Trichloropropane	45.2	1.00	"	50.0	ND	90.5	69-125	0.487	33	
1,3,5-Trimethylbenzene	56.3	1.00	"	50.0	ND	113	50-138	12.1	34	
1,2,4-Trimethylbenzene	55.8	1.00	"	50.0	ND	112	54-137	12.3	34	
Vinyl chloride	60.3	1.00	"	50.0	ND	121	71-124	11.2	26	
m,p-Xylene	115	2.00	"	100	ND	115	20-166	11.2	36	
o-Xylene	57.4	1.00	"	50.0	ND	115	33-159	13.0	26	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.7</i>		<i>"</i>	<i>13.2</i>		<i>103</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.6</i>		<i>"</i>	<i>13.3</i>		<i>102</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.5</i>		<i>"</i>	<i>13.3</i>		<i>101</i>	<i>45-146</i>			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/11/15 10:53

Dissolved Mercury by EPA Method 245.1 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505048 - EPA 7470A

Blank (1505048-BLK1)				Prepared & Analyzed: 05/05/15						
Mercury	ND	0.000200	mg/L							
LCS (1505048-BS1)				Prepared & Analyzed: 05/05/15						
Mercury	0.00273	0.000200	mg/L	0.00250		109	85-115			
Duplicate (1505048-DUP1)				Source: 1504291-01		Prepared & Analyzed: 05/05/15				
Mercury	0.0000149	0.000200	mg/L		ND			200	20	QR-01
Matrix Spike (1505048-MS1)				Source: 1504291-01		Prepared & Analyzed: 05/05/15				
Mercury	0.00304	0.000200	mg/L	0.00250	ND	122	70-130			
Matrix Spike Dup (1505048-MSD1)				Source: 1504291-01		Prepared & Analyzed: 05/05/15				
Mercury	0.00307	0.000200	mg/L	0.00250	ND	123	70-130	0.851	20	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/11/15 10:53

Dissolved Metals by EPA Method 200.8 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505052 - EPA 200.8

Blank (1505052-BLK1)

Prepared & Analyzed: 05/05/15

Arsenic	ND	0.000600	mg/L							
Barium	ND	0.00100	"							
Cadmium	ND	0.0000500	"							
Chromium	ND	0.00100	"							
Lead	ND	0.00100	"							
Selenium	ND	0.00100	"							
Silver	ND	0.0000500	"							
Zinc	ND	0.00300	"							

LCS (1505052-BS1)

Prepared & Analyzed: 05/05/15

Arsenic	0.484	0.000600	mg/L	0.500	96.8	85-115				
Barium	0.467	0.00100	"	0.500	93.5	85-115				
Cadmium	0.0240	0.0000500	"	0.0250	96.0	85-115				
Chromium	0.487	0.00100	"	0.500	97.4	85-115				
Lead	0.240	0.00100	"	0.250	96.1	85-115				
Selenium	0.0495	0.00100	"	0.0500	99.0	85-115				
Silver	0.0238	0.0000500	"	0.0250	95.2	85-115				
Zinc	0.476	0.00300	"	0.500	95.2	85-115				

Duplicate (1505052-DUP1)

Source: 1505053-02

Prepared & Analyzed: 05/05/15

Arsenic	0.00136	0.000600	mg/L	0.00149	8.51	20				
Barium	0.0580	0.00100	"	0.0582	0.370	20				
Cadmium	ND	0.0000500	"	0.0000220		20				
Chromium	0.000587	0.00100	"	0.000631	7.09	20				
Lead	0.000127	0.00100	"	0.000193	41.1	20				QR-01
Selenium	0.00349	0.00100	"	0.00376	7.67	20				
Silver	0.000479	0.0000500	"	0.000552	14.2	20				
Zinc	ND	0.00300	"	ND		20				

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/11/15 10:53

Dissolved Metals by EPA Method 200.8 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1505052 - EPA 200.8

Matrix Spike (1505052-MS1)

Source: 1505053-02

Prepared & Analyzed: 05/05/15

Arsenic	0.463	0.000600	mg/L	0.500	0.00149	92.3	75-125			
Barium	0.467	0.00100	"	0.500	0.0582	81.8	75-125			
Cadmium	0.0228	0.0000500	"	0.0250	0.0000220	91.1	75-125			
Chromium	0.455	0.00100	"	0.500	0.000631	90.9	75-125			
Lead	0.223	0.00100	"	0.250	0.000193	89.0	75-125			
Selenium	0.0513	0.00100	"	0.0500	0.00376	95.2	75-125			
Silver	0.0206	0.0000500	"	0.0250	0.000552	80.3	75-125			
Zinc	0.453	0.00300	"	0.500	ND	90.6	75-125			

Matrix Spike Dup (1505052-MSD1)

Source: 1505053-02

Prepared & Analyzed: 05/05/15

Arsenic	0.471	0.000600	mg/L	0.500	0.00149	94.0	75-125	1.77	25
Barium	0.481	0.00100	"	0.500	0.0582	84.5	75-125	2.83	25
Cadmium	0.0227	0.0000500	"	0.0250	0.0000220	90.8	75-125	0.410	25
Chromium	0.467	0.00100	"	0.500	0.000631	93.3	75-125	2.57	25
Lead	0.225	0.00100	"	0.250	0.000193	89.8	75-125	0.898	25
Selenium	0.0526	0.00100	"	0.0500	0.00376	97.7	75-125	2.44	25
Silver	0.0210	0.0000500	"	0.0250	0.000552	81.6	75-125	1.58	25
Zinc	0.463	0.00300	"	0.500	ND	92.7	75-125	2.21	25

Summit Scientific

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/11/15 10:53

Notes and Definitions

- QR-01 Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

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Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

May 14, 2015

Steve Hoffman

Terracon - Wheat Ridge

10625 West I-70 Frontage Road, Suite 3

Wheat Ridge, CO 80033

RE: National Western Complex

Enclosed are the results of analyses for samples received by Summit Scientific on 05/06/15 16:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Ben Shrewsbury', with a long, sweeping horizontal stroke extending to the right.

Ben Shrewsbury For Paul Shrewsbury
President



Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/14/15 16:55

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-15	1505067-01	Water	05/06/15 12:20	05/06/15 16:40
MW-15	1505067-02	Water	05/06/15 12:20	05/06/15 16:40

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/14/15 16:55

Summit Scientific

1505067

741 Corporate Circle Suite I • Golden, Colorado 80401
 303-277-9310 • 303-374-5933 Fax

Client: Terracon Consultants

Page 1 of 1

Address: 10625 West I-70 Frontage Road North, Suite 3
 City/State/Zip: Wheat Ridge, CO 80033
 Phone: (303) 454-5275 Fax: (303) 423-3353
 Sampler Name: Marshall Haworth

Project Manager: Steve Hoffman
 E-Mail: sbhoffman@terracon.com
 Project Name: National Western Complex
 Project Number: 25157010

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:				Special Instructions
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	VOC's 8260B	TPH 8015	RCRA 8+Zinc	
MW-15	5-6-15	1220	1			X									
MW-15	5-6-15	1220	3	X				X				X			
Relinquished by: <i>Marshall Haworth</i>		Date/Time: 5-6-15 1640		Received by: <i>[Signature]</i>		Date/Time: 5-6-15 1640		Turn Around Time (Check)				Notes:			
Relinquished by:		Date/Time:		Received by:		Date/Time:		Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/>				Standard <input checked="" type="checkbox"/>			
Relinquished by:		Date/Time:		Received in Lab by:		Date/Time:		Sample Integrity:				Temperature Upon Receipt: 10.5			
Relinquished by:		Date/Time:		Received in Lab by:		Date/Time:		Intact: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>							

www.s2scientific.com

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/14/15 16:55

MW-15
1505067-01 (Water)

Summit Scientific

Dissolved Mercury by EPA Method 245.1

Date Sampled: **05/06/15 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.000200	mg/L	1	1505093	05/11/15	05/11/15	EPA 245.1	

Dissolved Metals by EPA Method 200.8

Date Sampled: **05/06/15 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.00184	0.000600	mg/L	1	1505085	05/08/15	05/08/15	EPA 200.8	
Barium	0.0734	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.0000500	"	"	"	"	"	"	
Chromium	0.00112	0.00100	"	"	"	"	"	"	
Lead	ND	0.00100	"	"	"	"	"	"	
Selenium	0.00398	0.00100	"	"	"	"	"	"	
Silver	ND	0.0000500	"	"	"	"	"	"	

Date Sampled: **05/06/15 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	0.0140	0.00300	"	"	"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/14/15 16:55

MW-15
1505067-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 05/06/15 12:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.00	ug/l	1	1505107	05/12/15	05/13/15	EPA 8260B	
Bromobenzene	ND	1.00	"	"	"	"	"	"	
Bromochloromethane	ND	5.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	1.00	"	"	"	"	"	"	
Bromomethane	ND	1.00	"	"	"	"	"	"	
n-Butylbenzene	ND	1.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.00	"	"	"	"	"	"	
Chlorobenzene	ND	1.00	"	"	"	"	"	"	
Chloroethane	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	5.00	"	"	"	"	"	"	
Chloromethane	ND	1.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	1.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.00	"	"	"	"	"	"	
Dibromomethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.00	"	"	"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/14/15 16:55

MW-15
1505067-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
cis-1,3-Dichloropropene	ND	1.00	ug/l	1	1505107	05/12/15	05/13/15	EPA 8260B
trans-1,3-Dichloropropene	ND	1.00	"	"	"	"	"	"
Ethylbenzene	ND	1.00	"	"	"	"	"	"
Hexachlorobutadiene	ND	1.00	"	"	"	"	"	"
Tert-amyl methyl ether	ND	1.00	"	"	"	"	"	"
Tert-butyl alcohol	ND	20.0	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	10.0	"	"	"	"	"	"
Di-isopropyl ether	ND	5.00	"	"	"	"	"	"
Isopropylbenzene	ND	1.00	"	"	"	"	"	"
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"
Methylene Chloride	ND	5.00	"	"	"	"	"	"
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"
Naphthalene	ND	1.00	"	"	"	"	"	"
n-Propylbenzene	ND	1.00	"	"	"	"	"	"
Styrene	ND	1.00	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
Tetrachloroethene	44.4	1.00	"	"	"	"	"	"
Toluene	ND	1.00	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	1.00	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"
Trichloroethene	ND	1.00	"	"	"	"	"	"
Trichlorofluoromethane	ND	1.00	"	"	"	"	"	"
1,2,3-Trichloropropane	ND	1.00	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
Vinyl chloride	ND	1.00	"	"	"	"	"	"
m,p-Xylene	ND	2.00	"	"	"	"	"	"
o-Xylene	ND	1.00	"	"	"	"	"	"

Date Sampled: 05/06/15 12:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		97.1 %	45-149		"	"	"	"	

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/14/15 16:55

MW-15
1505067-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

<i>Surrogate: 4-Bromofluorobenzene</i>	96.2 %	45-146	1505107	05/12/15	05/13/15	EPA 8260B
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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/14/15 16:55

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505107 - EPA 5030 Water MS

Blank (1505107-BLK1)

Prepared: 05/12/15 Analyzed: 05/13/15

Benzene	ND	1.00	ug/l
Bromobenzene	ND	1.00	"
Bromochloromethane	ND	5.00	"
Bromodichloromethane	ND	2.00	"
Bromoform	ND	1.00	"
Bromomethane	ND	1.00	"
n-Butylbenzene	ND	1.00	"
sec-Butylbenzene	ND	1.00	"
tert-Butylbenzene	ND	1.00	"
Carbon tetrachloride	ND	1.00	"
Chlorobenzene	ND	1.00	"
Chloroethane	ND	1.00	"
Chloroform	ND	5.00	"
Chloromethane	ND	1.00	"
Chlorodibromomethane	ND	1.00	"
2-Chlorotoluene	ND	1.00	"
4-Chlorotoluene	ND	1.00	"
1,2-Dibromo-3-chloropropane	ND	1.00	"
1,2-Dibromoethane (EDB)	ND	1.00	"
Dibromomethane	ND	1.00	"
1,2-Dichlorobenzene	ND	1.00	"
1,3-Dichlorobenzene	ND	1.00	"
1,4-Dichlorobenzene	ND	1.00	"
Dichlorodifluoromethane	ND	1.00	"
1,1-Dichloroethane	ND	1.00	"
1,2-Dichloroethane (EDC)	ND	1.00	"
1,1-Dichloroethene	ND	1.00	"
cis-1,2-Dichloroethene	ND	1.00	"
trans-1,2-Dichloroethene	ND	1.00	"
1,2-Dichloropropane	ND	1.00	"
1,3-Dichloropropane	ND	1.00	"
2,2-Dichloropropane	ND	1.00	"
1,1-Dichloropropene	ND	1.00	"
cis-1,3-Dichloropropene	ND	1.00	"
trans-1,3-Dichloropropene	ND	1.00	"
Ethylbenzene	ND	1.00	"
Hexachlorobutadiene	ND	1.00	"
Tert-amyl methyl ether	ND	1.00	"

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting		Spike Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

Batch 1505107 - EPA 5030 Water MS

Blank (1505107-BLK1)

Prepared: 05/12/15 Analyzed: 05/13/15

Ethyl tert-butyl ether	ND	10.0	ug/l						
Tert-butyl alcohol	ND	20.0	"						
Di-isopropyl ether	ND	5.00	"						
Isopropylbenzene	ND	1.00	"						
p-Isopropyltoluene	ND	1.00	"						
Methylene Chloride	ND	5.00	"						
Methyl tert-butyl ether	ND	5.00	"						
Naphthalene	ND	1.00	"						
n-Propylbenzene	ND	1.00	"						
Styrene	ND	1.00	"						
1,1,2,2-Tetrachloroethane	ND	1.00	"						
1,1,1,2-Tetrachloroethane	ND	1.00	"						
Tetrachloroethene	ND	1.00	"						
Toluene	ND	1.00	"						
1,2,3-Trichlorobenzene	ND	1.00	"						
1,2,4-Trichlorobenzene	ND	1.00	"						
1,1,2-Trichloroethane	ND	1.00	"						
1,1,1-Trichloroethane	ND	1.00	"						
Trichloroethene	ND	1.00	"						
Trichlorofluoromethane	ND	1.00	"						
1,2,3-Trichloropropane	ND	1.00	"						
1,3,5-Trimethylbenzene	ND	1.00	"						
1,2,4-Trimethylbenzene	ND	1.00	"						
Vinyl chloride	ND	1.00	"						
m,p-Xylene	ND	2.00	"						
o-Xylene	ND	1.00	"						
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.4</i>	<i>"</i>	<i>"</i>	<i>13.2</i>	<i>101</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.0</i>	<i>"</i>	<i>"</i>	<i>13.3</i>	<i>97.5</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>12.8</i>	<i>"</i>	<i>"</i>	<i>13.3</i>	<i>96.2</i>	<i>45-146</i>			

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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505107 - EPA 5030 Water MS

LCS (1505107-BS1)

Prepared: 05/12/15 Analyzed: 05/13/15

Benzene	51.3	1.00	ug/l	50.0	103	51-132			
Bromobenzene	51.8	1.00	"	50.0	104	90-110			
Bromochloromethane	50.5	5.00	"	50.0	101	83-120			
Bromodichloromethane	52.5	2.00	"	50.0	105	82-117			
Bromoform	51.6	1.00	"	50.0	103	76-112			
Bromomethane	51.1	1.00	"	50.0	102	60-144			
n-Butylbenzene	51.7	1.00	"	50.0	103	81-118			
sec-Butylbenzene	50.6	1.00	"	50.0	101	84-113			
tert-Butylbenzene	50.8	1.00	"	50.0	102	87-112			
Carbon tetrachloride	48.2	1.00	"	50.0	96.4	68-118			
Chlorobenzene	52.3	1.00	"	50.0	105	87-113			
Chloroethane	51.2	1.00	"	50.0	102	48-147			
Chloroform	50.8	5.00	"	50.0	102	85-116			
Chloromethane	48.3	1.00	"	50.0	96.5	60-133			
Chlorodibromomethane	51.9	1.00	"	50.0	104	80-117			
2-Chlorotoluene	50.1	1.00	"	50.0	100	84-117			
4-Chlorotoluene	50.0	1.00	"	50.0	100	86-114			
1,2-Dibromo-3-chloropropane	45.9	1.00	"	50.0	91.8	62-126			
1,2-Dibromoethane (EDB)	53.8	1.00	"	50.0	108	84-119			
Dibromomethane	52.9	1.00	"	50.0	106	83-118			
1,2-Dichlorobenzene	51.7	1.00	"	50.0	103	90-110			
1,3-Dichlorobenzene	51.5	1.00	"	50.0	103	90-110			
1,4-Dichlorobenzene	49.8	1.00	"	50.0	99.7	87-110			
Dichlorodifluoromethane	48.4	1.00	"	50.0	96.7	60-115			
1,1-Dichloroethane	50.9	1.00	"	50.0	102	71-131			
1,2-Dichloroethane (EDC)	50.4	1.00	"	50.0	101	84-117			
1,1-Dichloroethene	49.6	1.00	"	50.0	99.2	69-129			
cis-1,2-Dichloroethene	52.2	1.00	"	50.0	104	81-124			
trans-1,2-Dichloroethene	51.7	1.00	"	50.0	103	66-140			
1,2-Dichloropropane	51.5	1.00	"	50.0	103	86-114			
1,3-Dichloropropane	53.3	1.00	"	50.0	107	83-122			
2,2-Dichloropropane	46.7	1.00	"	50.0	93.4	42-130			
1,1-Dichloropropene	49.9	1.00	"	50.0	99.8	75-117			
cis-1,3-Dichloropropene	52.9	1.00	"	50.0	106	72-125			
trans-1,3-Dichloropropene	53.7	1.00	"	50.0	107	73-120			
Ethylbenzene	52.3	1.00	"	50.0	105	58-146			
Hexachlorobutadiene	51.1	1.00	"	50.0	102	78-118			
Tert-amyl methyl ether	51.7	1.00	"	49.8	104	72-128			

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Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505107 - EPA 5030 Water MS

LCS (1505107-BS1)

Prepared: 05/12/15 Analyzed: 05/13/15

Tert-butyl alcohol	259	20.0	ug/l	249	104	66-115				
Ethyl tert-butyl ether	51.4	10.0	"	50.0	103	74-131				
Di-isopropyl ether	51.5	5.00	"	50.0	103	77-119				
Isopropylbenzene	52.0	1.00	"	50.0	104	77-115				
p-Isopropyltoluene	50.4	1.00	"	50.0	101	84-110				
Methylene Chloride	49.9	5.00	"	50.0	99.9	36-156				
Methyl tert-butyl ether	53.1	5.00	"	50.0	106	71-130				
Naphthalene	52.4	1.00	"	50.0	105	76-128				
n-Propylbenzene	51.4	1.00	"	50.0	103	82-117				
Styrene	53.5	1.00	"	50.0	107	82-123				
1,1,2,2-Tetrachloroethane	47.4	1.00	"	50.0	94.9	66-126				
1,1,1,2-Tetrachloroethane	53.0	1.00	"	50.0	106	86-116				
Tetrachloroethene	52.4	1.00	"	50.0	105	74-121				
Toluene	50.2	1.00	"	50.0	100	51-138				
1,2,3-Trichlorobenzene	51.8	1.00	"	50.0	104	81-122				
1,2,4-Trichlorobenzene	52.6	1.00	"	50.0	105	87-115				
1,1,2-Trichloroethane	54.1	1.00	"	50.0	108	77-129				
1,1,1-Trichloroethane	50.2	1.00	"	50.0	100	75-120				
Trichloroethene	55.1	1.00	"	50.0	110	88-114				
Trichlorofluoromethane	47.8	1.00	"	50.0	95.6	65-129				
1,2,3-Trichloropropane	50.4	1.00	"	50.0	101	72-128				
1,3,5-Trimethylbenzene	51.0	1.00	"	50.0	102	86-110				
1,2,4-Trimethylbenzene	51.1	1.00	"	50.0	102	85-117				
Vinyl chloride	48.4	1.00	"	50.0	96.9	65-133				
m,p-Xylene	104	2.00	"	100	104	57-144				
o-Xylene	51.6	1.00	"	50.0	103	53-146				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.6</i>		<i>"</i>	<i>13.2</i>	<i>103</i>	<i>37-154</i>				
<i>Surrogate: Toluene-d8</i>	<i>13.3</i>		<i>"</i>	<i>13.3</i>	<i>99.7</i>	<i>45-149</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.3</i>		<i>"</i>	<i>13.3</i>	<i>100</i>	<i>45-146</i>				

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Volatile Organic Compounds by EPA Method 8260B - Quality Control
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Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1505107 - EPA 5030 Water MS

Matrix Spike (1505107-MS1)	Source: 1505067-02			Prepared: 05/12/15		Analyzed: 05/13/15	
Benzene	52.4	1.00	ug/l	50.0	ND	105	34-141
Bromobenzene	52.8	1.00	"	50.0	ND	106	66-131
Bromochloromethane	52.2	5.00	"	50.0	ND	104	74-125
Bromodichloromethane	54.0	2.00	"	50.0	ND	108	64-131
Bromoform	53.4	1.00	"	50.0	ND	107	63-122
Bromomethane	56.8	1.00	"	50.0	ND	114	46-155
n-Butylbenzene	53.7	1.00	"	50.0	ND	107	47-142
sec-Butylbenzene	51.2	1.00	"	50.0	ND	102	52-135
tert-Butylbenzene	52.3	1.00	"	50.0	ND	105	53-137
Carbon tetrachloride	50.4	1.00	"	50.0	ND	101	62-121
Chlorobenzene	52.9	1.00	"	50.0	ND	106	64-131
Chloroethane	55.7	1.00	"	50.0	ND	111	60-130
Chloroform	53.9	5.00	"	50.0	ND	108	70-130
Chloromethane	50.7	1.00	"	50.0	ND	101	62-130
Chlorodibromomethane	52.7	1.00	"	50.0	ND	105	60-134
2-Chlorotoluene	51.3	1.00	"	50.0	ND	103	58-138
4-Chlorotoluene	50.6	1.00	"	50.0	ND	101	62-131
1,2-Dibromo-3-chloropropane	51.8	1.00	"	50.0	ND	104	63-125
1,2-Dibromoethane (EDB)	54.3	1.00	"	50.0	ND	109	66-131
Dibromomethane	51.2	1.00	"	50.0	ND	102	70-127
1,2-Dichlorobenzene	53.3	1.00	"	50.0	ND	107	62-134
1,3-Dichlorobenzene	53.4	1.00	"	50.0	ND	107	60-133
1,4-Dichlorobenzene	52.0	1.00	"	50.0	ND	104	63-127
Dichlorodifluoromethane	51.2	1.00	"	50.0	ND	102	24-136
1,1-Dichloroethane	52.3	1.00	"	50.0	ND	105	73-124
1,2-Dichloroethane (EDC)	51.1	1.00	"	50.0	ND	102	75-122
1,1-Dichloroethene	50.3	1.00	"	50.0	ND	101	70-123
cis-1,2-Dichloroethene	53.8	1.00	"	50.0	ND	108	72-129
trans-1,2-Dichloroethene	53.1	1.00	"	50.0	ND	106	76-126
1,2-Dichloropropane	52.3	1.00	"	50.0	ND	105	68-129
1,3-Dichloropropane	53.9	1.00	"	50.0	ND	108	69-130
2,2-Dichloropropane	48.3	1.00	"	50.0	ND	96.7	37-126
1,1-Dichloropropene	51.0	1.00	"	50.0	ND	102	61-125
cis-1,3-Dichloropropene	54.5	1.00	"	50.0	ND	109	59-127
trans-1,3-Dichloropropene	55.3	1.00	"	50.0	ND	111	59-126
Ethylbenzene	52.4	1.00	"	50.0	ND	105	29-160
Hexachlorobutadiene	53.1	1.00	"	50.0	ND	106	41-141
Tert-amyl methyl ether	53.1	1.00	"	49.8	ND	107	61-132

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 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1505107 - EPA 5030 Water MS

Matrix Spike (1505107-MS1)	Source: 1505067-02			Prepared: 05/12/15		Analyzed: 05/13/15	
Ethyl tert-butyl ether	53.6	10.0	ug/l	50.0	ND	107	65-130
Tert-butyl alcohol	283	20.0	"	249	ND	114	60-130
Isopropylbenzene	52.4	1.00	"	50.0	ND	105	44-143
Di-isopropyl ether	53.8	5.00	"	50.0	ND	108	73-128
p-Isopropyltoluene	51.6	1.00	"	50.0	ND	103	47-137
Methylene Chloride	47.4	5.00	"	50.0	ND	94.9	42-129
Methyl tert-butyl ether	55.6	5.00	"	50.0	ND	111	70-124
Naphthalene	57.4	1.00	"	50.0	ND	115	73-132
n-Propylbenzene	52.0	1.00	"	50.0	ND	104	61-129
Styrene	52.3	1.00	"	50.0	ND	105	36-146
1,1,2,2-Tetrachloroethane	56.6	1.00	"	50.0	ND	113	71-140
1,1,1,2-Tetrachloroethane	53.4	1.00	"	50.0	ND	107	59-137
Tetrachloroethane	86.6	1.00	"	50.0	44.4	84.5	49-137
Toluene	51.0	1.00	"	50.0	ND	102	27-151
1,2,3-Trichlorobenzene	56.2	1.00	"	50.0	ND	112	61-137
1,2,4-Trichlorobenzene	56.4	1.00	"	50.0	ND	113	55-141
1,1,2-Trichloroethane	55.1	1.00	"	50.0	ND	110	67-134
1,1,1-Trichloroethane	52.5	1.00	"	50.0	ND	105	66-128
Trichloroethene	50.7	1.00	"	50.0	ND	101	65-119
Trichlorofluoromethane	50.5	1.00	"	50.0	ND	101	65-121
1,2,3-Trichloropropane	51.4	1.00	"	50.0	ND	103	69-125
1,3,5-Trimethylbenzene	51.8	1.00	"	50.0	ND	104	50-138
1,2,4-Trimethylbenzene	51.7	1.00	"	50.0	ND	103	54-137
Vinyl chloride	50.9	1.00	"	50.0	ND	102	71-124
m,p-Xylene	103	2.00	"	100	ND	103	20-166
o-Xylene	52.4	1.00	"	50.0	ND	105	33-159
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.5</i>		<i>"</i>	<i>13.2</i>		<i>102</i>	<i>37-154</i>
<i>Surrogate: Toluene-d8</i>	<i>13.3</i>		<i>"</i>	<i>13.3</i>		<i>99.6</i>	<i>45-149</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.3</i>		<i>"</i>	<i>13.3</i>		<i>99.6</i>	<i>45-146</i>

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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505107 - EPA 5030 Water MS

Matrix Spike Dup (1505107-MSD1)	Source: 1505067-02			Prepared: 05/12/15 Analyzed: 05/13/15						
Benzene	53.4	1.00	ug/l	50.0	ND	107	34-141	1.87	32	
Bromobenzene	52.8	1.00	"	50.0	ND	106	66-131	0.0379	30	
Bromochloromethane	53.8	5.00	"	50.0	ND	108	74-125	2.98	30	
Bromodichloromethane	54.6	2.00	"	50.0	ND	109	64-131	1.14	30	
Bromoform	54.5	1.00	"	50.0	ND	109	63-122	1.91	27	
Bromomethane	54.7	1.00	"	50.0	ND	109	46-155	3.77	95	
n-Butylbenzene	53.2	1.00	"	50.0	ND	106	47-142	0.973	33	
sec-Butylbenzene	51.2	1.00	"	50.0	ND	102	52-135	0.137	33	
tert-Butylbenzene	51.8	1.00	"	50.0	ND	104	53-137	0.941	38	
Carbon tetrachloride	51.4	1.00	"	50.0	ND	103	62-121	1.85	21	
Chlorobenzene	54.2	1.00	"	50.0	ND	108	64-131	2.43	30	
Chloroethane	58.4	1.00	"	50.0	ND	117	60-130	4.65	29	
Chloroform	54.9	5.00	"	50.0	ND	110	70-130	1.77	32	
Chloromethane	52.4	1.00	"	50.0	ND	105	62-130	3.41	24	
Chlorodibromomethane	54.3	1.00	"	50.0	ND	109	60-134	2.97	30	
2-Chlorotoluene	50.6	1.00	"	50.0	ND	101	58-138	1.29	34	
4-Chlorotoluene	50.4	1.00	"	50.0	ND	101	62-131	0.554	29	
1,2-Dibromo-3-chloropropane	50.8	1.00	"	50.0	ND	102	63-125	1.77	34	
1,2-Dibromoethane (EDB)	56.3	1.00	"	50.0	ND	113	66-131	3.61	31	
Dibromomethane	53.7	1.00	"	50.0	ND	107	70-127	4.79	28	
1,2-Dichlorobenzene	53.3	1.00	"	50.0	ND	107	62-134	0.0375	29	
1,3-Dichlorobenzene	53.1	1.00	"	50.0	ND	106	60-133	0.695	30	
1,4-Dichlorobenzene	51.5	1.00	"	50.0	ND	103	63-127	0.967	31	
Dichlorodifluoromethane	51.5	1.00	"	50.0	ND	103	24-136	0.584	31	
1,1-Dichloroethane	53.9	1.00	"	50.0	ND	108	73-124	3.09	33	
1,2-Dichloroethane (EDC)	53.5	1.00	"	50.0	ND	107	75-122	4.61	19	
1,1-Dichloroethene	51.9	1.00	"	50.0	ND	104	70-123	3.21	32	
cis-1,2-Dichloroethene	55.2	1.00	"	50.0	ND	110	72-129	2.61	31	
trans-1,2-Dichloroethene	54.9	1.00	"	50.0	ND	110	76-126	3.33	31	
1,2-Dichloropropane	53.4	1.00	"	50.0	ND	107	68-129	2.02	29	
1,3-Dichloropropane	55.4	1.00	"	50.0	ND	111	69-130	2.60	31	
2,2-Dichloropropane	47.5	1.00	"	50.0	ND	95.1	37-126	1.67	33	
1,1-Dichloropropene	51.9	1.00	"	50.0	ND	104	61-125	1.67	28	
cis-1,3-Dichloropropene	55.5	1.00	"	50.0	ND	111	59-127	1.91	28	
trans-1,3-Dichloropropene	56.4	1.00	"	50.0	ND	113	59-126	1.92	28	
Ethylbenzene	53.6	1.00	"	50.0	ND	107	29-160	2.26	50	
Hexachlorobutadiene	52.0	1.00	"	50.0	ND	104	41-141	2.04	35	
Tert-amyl methyl ether	55.4	1.00	"	49.8	ND	111	61-132	4.21	34	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/14/15 16:55

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505107 - EPA 5030 Water MS

Matrix Spike Dup (1505107-MSD1)

Source: 1505067-02

Prepared: 05/12/15 Analyzed: 05/13/15

Ethyl tert-butyl ether	54.9	10.0	ug/l	50.0	ND	110	65-130	2.30	38	
Tert-butyl alcohol	285	20.0	"	249	ND	114	60-130	0.563	31	
Isopropylbenzene	54.0	1.00	"	50.0	ND	108	44-143	3.12	35	
Di-isopropyl ether	55.7	5.00	"	50.0	ND	111	73-128	3.49	25	
p-Isopropyltoluene	51.0	1.00	"	50.0	ND	102	47-137	1.07	38	
Methylene Chloride	50.5	5.00	"	50.0	ND	101	42-129	6.21	31	
Methyl tert-butyl ether	56.7	5.00	"	50.0	ND	113	70-124	2.07	35	
Naphthalene	57.9	1.00	"	50.0	ND	116	73-132	0.833	23	
n-Propylbenzene	52.2	1.00	"	50.0	ND	104	61-129	0.365	35	
Styrene	53.4	1.00	"	50.0	ND	107	36-146	2.23	33	
1,1,2,2-Tetrachloroethane	56.6	1.00	"	50.0	ND	113	71-140	0.0707	32	
1,1,1,2-Tetrachloroethane	54.9	1.00	"	50.0	ND	110	59-137	2.90	32	
Tetrachloroethane	85.9	1.00	"	50.0	44.4	83.1	49-137	0.858	32	
Toluene	52.0	1.00	"	50.0	ND	104	27-151	1.84	25	
1,2,3-Trichlorobenzene	56.3	1.00	"	50.0	ND	113	61-137	0.142	27	
1,2,4-Trichlorobenzene	55.7	1.00	"	50.0	ND	111	55-141	1.37	28	
1,1,2-Trichloroethane	57.5	1.00	"	50.0	ND	115	67-134	4.18	29	
1,1,1-Trichloroethane	52.7	1.00	"	50.0	ND	105	66-128	0.399	31	
Trichloroethene	51.8	1.00	"	50.0	ND	104	65-119	2.03	30	
Trichlorofluoromethane	52.6	1.00	"	50.0	ND	105	65-121	4.07	30	
1,2,3-Trichloropropane	52.3	1.00	"	50.0	ND	105	69-125	1.60	33	
1,3,5-Trimethylbenzene	52.0	1.00	"	50.0	ND	104	50-138	0.424	34	
1,2,4-Trimethylbenzene	51.6	1.00	"	50.0	ND	103	54-137	0.0774	34	
Vinyl chloride	51.1	1.00	"	50.0	ND	102	71-124	0.392	26	
m,p-Xylene	106	2.00	"	100	ND	106	20-166	2.02	36	
o-Xylene	54.0	1.00	"	50.0	ND	108	33-159	3.03	26	
Surrogate: 1,2-Dichloroethane-d4	13.9		"	13.2		105	37-154			
Surrogate: Toluene-d8	13.3		"	13.3		99.9	45-149			
Surrogate: 4-Bromofluorobenzene	13.2		"	13.3		99.2	45-146			

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/14/15 16:55

Dissolved Mercury by EPA Method 245.1 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505093 - EPA 7470A

Blank (1505093-BLK1)				Prepared & Analyzed: 05/11/15						
Mercury	ND	0.000200	mg/L							
LCS (1505093-BS1)				Prepared & Analyzed: 05/11/15						
Mercury	0.00216	0.000200	mg/L	0.00250		86.2	85-115			
Duplicate (1505093-DUP1)				Source: 1505058-01		Prepared & Analyzed: 05/11/15				
Mercury	0.00000310	0.000200	mg/L	0.000000100				188	20	QR-01
Matrix Spike (1505093-MS1)				Source: 1505058-01		Prepared & Analyzed: 05/11/15				
Mercury	0.00206	0.000200	mg/L	0.00250	0.000000100	82.3	70-130			
Matrix Spike Dup (1505093-MSD1)				Source: 1505058-01		Prepared & Analyzed: 05/11/15				
Mercury	0.00219	0.000200	mg/L	0.00250	0.000000100	87.4	70-130	6.08	20	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/14/15 16:55

Dissolved Metals by EPA Method 200.8 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike	Source		%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1505085 - EPA 200.8

Blank (1505085-BLK1)

Prepared & Analyzed: 05/08/15

Arsenic	ND	0.000600	mg/L							
Barium	ND	0.00100	"							
Cadmium	ND	0.0000500	"							
Chromium	ND	0.00100	"							
Lead	ND	0.00100	"							
Selenium	ND	0.00100	"							
Silver	ND	0.0000500	"							
Zinc	ND	0.00300	"							

LCS (1505085-BS1)

Prepared & Analyzed: 05/08/15

Arsenic	0.474	0.000600	mg/L	0.500	94.8	85-115
Barium	0.452	0.00100	"	0.500	90.4	85-115
Cadmium	0.0223	0.0000500	"	0.0250	89.3	85-115
Chromium	0.455	0.00100	"	0.500	90.9	85-115
Lead	0.241	0.00100	"	0.250	96.5	85-115
Selenium	0.0513	0.00100	"	0.0500	103	85-115
Silver	0.0223	0.0000500	"	0.0250	89.4	85-115
Zinc	0.449	0.00300	"	0.500	89.7	85-115

Duplicate (1505085-DUP1)

Source: 1505058-01

Prepared & Analyzed: 05/08/15

Arsenic	0.00252	0.000600	mg/L	0.00316	22.7	20	QM-01
Barium	0.181	0.00100	"	0.196	7.74	20	
Cadmium	0.0000108	0.0000500	"	0.0000138	24.2	20	QM-01
Chromium	0.000923	0.00100	"	0.000948	2.66	20	
Lead	0.00268	0.00100	"	0.00293	8.77	20	
Selenium	0.00317	0.00100	"	0.00332	4.82	20	
Silver	ND	0.0000500	"	ND		20	
Zinc	0.0140	0.00300	"	0.0190	30.5	20	QM-01

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 05/14/15 16:55

Dissolved Metals by EPA Method 200.8 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1505085 - EPA 200.8

Matrix Spike (1505085-MS1)

Source: 1505058-01

Prepared & Analyzed: 05/08/15

Arsenic	0.496	0.000600	mg/L	0.500	0.00316	98.5	75-125			
Barium	0.652	0.00100	"	0.500	0.196	91.1	75-125			
Cadmium	0.0227	0.0000500	"	0.0250	0.0000138	90.6	75-125			
Chromium	0.456	0.00100	"	0.500	0.000948	91.1	75-125			
Lead	0.208	0.00100	"	0.250	0.00293	81.9	75-125			
Selenium	0.0580	0.00100	"	0.0500	0.00332	109	75-125			
Silver	0.0221	0.0000500	"	0.0250	ND	88.4	75-125			
Zinc	0.469	0.00300	"	0.500	0.0190	90.0	75-125			

Matrix Spike Dup (1505085-MSD1)

Source: 1505058-01

Prepared & Analyzed: 05/08/15

Arsenic	0.486	0.000600	mg/L	0.500	0.00316	96.5	75-125	1.99	25
Barium	0.643	0.00100	"	0.500	0.196	89.3	75-125	1.43	25
Cadmium	0.0227	0.0000500	"	0.0250	0.0000138	90.9	75-125	0.262	25
Chromium	0.457	0.00100	"	0.500	0.000948	91.3	75-125	0.239	25
Lead	0.213	0.00100	"	0.250	0.00293	84.0	75-125	2.49	25
Selenium	0.0570	0.00100	"	0.0500	0.00332	107	75-125	1.68	25
Silver	0.0220	0.0000500	"	0.0250	ND	87.9	75-125	0.531	25
Zinc	0.471	0.00300	"	0.500	0.0190	90.3	75-125	0.320	25

Summit Scientific

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Complex

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
05/14/15 16:55

Notes and Definitions

- QR-01 Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
- QM-01 The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

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Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

June 01, 2015

Steve Hoffman

Terracon - Wheat Ridge

10625 West I-70 Frontage Road, Suite 3

Wheat Ridge, CO 80033

RE: National Western Stock Show

Enclosed are the results of analyses for samples received by Summit Scientific on 05/29/15 10:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'Ben Shrewsbury', with a long, sweeping horizontal stroke extending to the right.

Ben Shrewsbury For Paul Shrewsbury
President



Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Stock Show

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
06/01/15 15:44

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-13	1505287-01	Water	05/29/15 08:45	05/29/15 10:20

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Stock Show

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/01/15 15:44

Summit Scientific

S₂

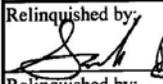
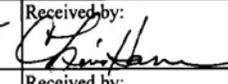
1505287

741 Corporate Circle, Suite J&K ♦ Golden, Colorado 80401
 303-277-9310 ♦ 303-374-5933

Page 1 of 1

Client: Terracon Project Manager: Steve Hoffman
 Address: 10625 W. I-70 Frontage rd E-Mail: SBHOFFMAN@Terracon.com
 City/State/Zip: Wheat Ridge, CO 80033 Project Name: National Western Stock Show
 Phone: 303-423-3300 Fax: Project Number: 25157010
 Sampler Name: SB

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested				Special Instructions	
					HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	VOCs	Dispersed	PCAT B	+2MIC		
1	MW-13	5/29/15	845	4	3		1											
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Relinquished by: 	Date/Time: 5/29/15 1016	Received by: 	Date/Time: 5-29-15 10:20 am	Turn Around Time (Check)	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day <input type="checkbox"/>	72 hours <input type="checkbox"/>
				24 hours <input checked="" type="checkbox"/>	Standard <input type="checkbox"/>
				48 hours <input type="checkbox"/>	
				Sample Integrity:	
				Temperature Upon Receipt: 7.2°C	
				Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	

www.s2scientific.com

Summit Scientific

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S₂

Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Stock Show

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
06/01/15 15:44

Sample Receipt Checklist

S2 Work Order: 1505287

Client: Terracon Client Project ID: National Western Stock Show

Shipped Via: AD (UPS, FedEx, Hand Delivered, Pick-up, etc.) Airbill #: _____

Matrix (check all that apply): Air Soil/Solid Water Other: _____ (Describe)

Cooler ID					
Temp (°C)	<u>7.2</u>				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.				
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
If custody seals are present, are they intact ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present?	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.		<input checked="" type="checkbox"/>		
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?	<input checked="" type="checkbox"/>			HCl
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, etc.				
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

Ben Shrawsbury
Custodian Printed Name

[Signature]
Signature or Initials of Custodian

5/29/15 17:30
Date/Time

[Signature]



Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Stock Show

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/01/15 15:44

MW-13
1505287-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 05/29/15 08:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.00	ug/l	1	1505266	05/29/15	05/30/15	EPA 8260B	
Bromobenzene	ND	1.00	"	"	"	"	"	"	
Bromochloromethane	ND	5.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	1.00	"	"	"	"	"	"	
Bromomethane	ND	1.00	"	"	"	"	"	"	
n-Butylbenzene	ND	1.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.00	"	"	"	"	"	"	
Chlorobenzene	ND	1.00	"	"	"	"	"	"	
Chloroethane	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	5.00	"	"	"	"	"	"	
Chloromethane	ND	1.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	1.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.00	"	"	"	"	"	"	
Dibromomethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	9.86	1.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.00	"	"	"	"	"	"	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Stock Show

Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/01/15 15:44

MW-13
1505287-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
cis-1,3-Dichloropropene	ND	1.00	ug/l	1	1505266	05/29/15	05/30/15	EPA 8260B
trans-1,3-Dichloropropene	ND	1.00	"	"	"	"	"	"
Ethylbenzene	ND	1.00	"	"	"	"	"	"
Hexachlorobutadiene	ND	1.00	"	"	"	"	"	"
Tert-amyl methyl ether	ND	1.00	"	"	"	"	"	"
Tert-butyl alcohol	ND	20.0	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	10.0	"	"	"	"	"	"
Di-isopropyl ether	ND	5.00	"	"	"	"	"	"
Isopropylbenzene	ND	1.00	"	"	"	"	"	"
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"
Methylene Chloride	ND	5.00	"	"	"	"	"	"
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"
Naphthalene	ND	1.00	"	"	"	"	"	"
n-Propylbenzene	ND	1.00	"	"	"	"	"	"
Styrene	ND	1.00	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"
Tetrachloroethene	2.37	1.00	"	"	"	"	"	"
Toluene	ND	1.00	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	1.00	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	1.00	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"
Trichloroethene	1.08	1.00	"	"	"	"	"	"
Trichlorofluoromethane	ND	1.00	"	"	"	"	"	"
1,2,3-Trichloropropane	ND	1.00	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"
Vinyl chloride	ND	1.00	"	"	"	"	"	"
m,p-Xylene	ND	2.00	"	"	"	"	"	"
o-Xylene	ND	1.00	"	"	"	"	"	"

Date Sampled: 05/29/15 08:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		98.7 %	45-149		"	"	"	"	

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Stock Show
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/01/15 15:44

MW-13
1505287-01 (Water)

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Volatile Organic Compounds by EPA Method 8260B

Surrogate: 4-Bromofluorobenzene 100 % 45-146 1505266 05/29/15 05/30/15 EPA 8260B

Dissolved Mercury by EPA Method 245.1

Date Sampled: **05/29/15 08:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.000200	mg/L	1	1506001	06/01/15	06/01/15	EPA 245.1	

Dissolved Metals by EPA Method 200.8

Date Sampled: **05/29/15 08:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.00305	0.000600	mg/L	1	1505264	05/29/15	05/29/15	EPA 200.8	
Barium	0.130	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.0000500	"	"	"	"	"	"	
Chromium	ND	0.00100	"	"	"	"	"	"	
Lead	ND	0.00100	"	"	"	"	"	"	
Selenium	ND	0.00100	"	"	"	"	"	"	
Silver	ND	0.0000500	"	"	"	"	"	"	

Date Sampled: **05/29/15 08:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Zinc	ND	0.00300	"	"	"	"	"	"	

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Project: National Western Stock Show
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/01/15 15:44

Volatile Organic Compounds by EPA Method 8260B - Quality Control

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Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505266 - EPA 5030 Water MS

Blank (1505266-BLK1)

Prepared: 05/29/15 Analyzed: 05/30/15

Benzene	ND	1.00	ug/l
Bromobenzene	ND	1.00	"
Bromochloromethane	ND	5.00	"
Bromodichloromethane	ND	2.00	"
Bromoform	ND	1.00	"
Bromomethane	ND	1.00	"
n-Butylbenzene	ND	1.00	"
sec-Butylbenzene	ND	1.00	"
tert-Butylbenzene	ND	1.00	"
Carbon tetrachloride	ND	1.00	"
Chlorobenzene	ND	1.00	"
Chloroethane	ND	1.00	"
Chloroform	ND	5.00	"
Chloromethane	ND	1.00	"
Chlorodibromomethane	ND	1.00	"
2-Chlorotoluene	ND	1.00	"
4-Chlorotoluene	ND	1.00	"
1,2-Dibromo-3-chloropropane	ND	1.00	"
1,2-Dibromoethane (EDB)	ND	1.00	"
Dibromomethane	ND	1.00	"
1,2-Dichlorobenzene	ND	1.00	"
1,3-Dichlorobenzene	ND	1.00	"
1,4-Dichlorobenzene	ND	1.00	"
Dichlorodifluoromethane	ND	1.00	"
1,1-Dichloroethane	ND	1.00	"
1,2-Dichloroethane (EDC)	ND	1.00	"
1,1-Dichloroethene	ND	1.00	"
cis-1,2-Dichloroethene	ND	1.00	"
trans-1,2-Dichloroethene	ND	1.00	"
1,2-Dichloropropane	ND	1.00	"
1,3-Dichloropropane	ND	1.00	"
2,2-Dichloropropane	ND	1.00	"
1,1-Dichloropropene	ND	1.00	"
cis-1,3-Dichloropropene	ND	1.00	"
trans-1,3-Dichloropropene	ND	1.00	"
Ethylbenzene	ND	1.00	"
Hexachlorobutadiene	ND	1.00	"
Tert-amyl methyl ether	ND	1.00	"

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Terracon - Wheat Ridge
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 Wheat Ridge CO, 80033

Project: National Western Stock Show
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/01/15 15:44

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting		Spike Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

Batch 1505266 - EPA 5030 Water MS

Blank (1505266-BLK1)

Prepared: 05/29/15 Analyzed: 05/30/15

Ethyl tert-butyl ether	ND	10.0	ug/l						
Tert-butyl alcohol	ND	20.0	"						
Isopropylbenzene	ND	1.00	"						
Di-isopropyl ether	ND	5.00	"						
p-Isopropyltoluene	ND	1.00	"						
Methylene Chloride	ND	5.00	"						
Methyl tert-butyl ether	ND	5.00	"						
Naphthalene	ND	1.00	"						
n-Propylbenzene	ND	1.00	"						
Styrene	ND	1.00	"						
1,1,2,2-Tetrachloroethane	ND	1.00	"						
1,1,1,2-Tetrachloroethane	ND	1.00	"						
Tetrachloroethene	ND	1.00	"						
Toluene	ND	1.00	"						
1,2,3-Trichlorobenzene	ND	1.00	"						
1,2,4-Trichlorobenzene	ND	1.00	"						
1,1,2-Trichloroethane	ND	1.00	"						
1,1,1-Trichloroethane	ND	1.00	"						
Trichloroethene	ND	1.00	"						
Trichlorofluoromethane	ND	1.00	"						
1,2,3-Trichloropropane	ND	1.00	"						
1,3,5-Trimethylbenzene	ND	1.00	"						
1,2,4-Trimethylbenzene	ND	1.00	"						
Vinyl chloride	ND	1.00	"						
m,p-Xylene	ND	2.00	"						
o-Xylene	ND	1.00	"						
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.4</i>	<i>"</i>	<i>"</i>	<i>13.2</i>	<i>101</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.1</i>	<i>"</i>	<i>"</i>	<i>13.3</i>	<i>98.6</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.5</i>	<i>"</i>	<i>"</i>	<i>13.3</i>	<i>101</i>	<i>45-146</i>			

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Stock Show
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/01/15 15:44

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505266 - EPA 5030 Water MS

LCS (1505266-BS1)

Prepared: 05/29/15 Analyzed: 05/30/15

Benzene	46.0	1.00	ug/l	50.0		92.0	51-132			
Bromobenzene	45.7	1.00	"	50.0		91.5	90-110			
Bromochloromethane	48.6	5.00	"	50.0		97.3	83-120			
Bromodichloromethane	48.0	2.00	"	50.0		96.1	82-117			
Bromoform	46.0	1.00	"	50.0		92.1	76-112			
Bromomethane	43.8	1.00	"	50.0		87.7	60-144			
n-Butylbenzene	42.5	1.00	"	50.0		85.0	81-118			
sec-Butylbenzene	43.2	1.00	"	50.0		86.3	84-113			
tert-Butylbenzene	44.4	1.00	"	50.0		88.8	87-112			
Carbon tetrachloride	40.7	1.00	"	50.0		81.4	68-118			
Chlorobenzene	46.6	1.00	"	50.0		93.1	87-113			
Chloroethane	43.0	1.00	"	50.0		86.1	48-147			
Chloroform	47.0	5.00	"	50.0		94.0	85-116			
Chloromethane	44.5	1.00	"	50.0		89.0	60-133			
Chlorodibromomethane	47.2	1.00	"	50.0		94.4	80-117			
2-Chlorotoluene	44.5	1.00	"	50.0		89.0	84-117			
4-Chlorotoluene	44.2	1.00	"	50.0		88.5	86-114			
1,2-Dibromo-3-chloropropane	46.9	1.00	"	50.0		93.7	62-126			
1,2-Dibromoethane (EDB)	50.0	1.00	"	50.0		100	84-119			
Dibromomethane	48.4	1.00	"	50.0		96.7	83-118			
1,2-Dichlorobenzene	47.2	1.00	"	50.0		94.5	90-110			
1,3-Dichlorobenzene	46.1	1.00	"	50.0		92.3	90-110			
1,4-Dichlorobenzene	45.2	1.00	"	50.0		90.4	87-110			
Dichlorodifluoromethane	37.2	1.00	"	50.0		74.3	60-115			
1,1-Dichloroethane	46.2	1.00	"	50.0		92.4	71-131			
1,2-Dichloroethane (EDC)	48.2	1.00	"	50.0		96.5	84-117			
1,1-Dichloroethene	40.7	1.00	"	50.0		81.4	69-129			
cis-1,2-Dichloroethene	47.4	1.00	"	50.0		94.9	81-124			
trans-1,2-Dichloroethene	45.4	1.00	"	50.0		90.7	66-140			
1,2-Dichloropropane	47.4	1.00	"	50.0		94.8	86-114			
1,3-Dichloropropane	48.0	1.00	"	50.0		96.0	83-122			
2,2-Dichloropropane	31.6	1.00	"	50.0		63.3	42-130			
1,1-Dichloropropene	43.0	1.00	"	50.0		85.9	75-117			
cis-1,3-Dichloropropene	38.9	1.00	"	50.0		77.8	72-125			
trans-1,3-Dichloropropene	45.1	1.00	"	50.0		90.3	73-120			
Ethylbenzene	44.5	1.00	"	50.0		88.9	58-146			
Hexachlorobutadiene	42.4	1.00	"	50.0		84.8	78-118			
Tert-amyl methyl ether	48.0	1.00	"	49.8		96.4	72-128			

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Stock Show
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/01/15 15:44

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505266 - EPA 5030 Water MS

LCS (1505266-BS1)

Prepared: 05/29/15 Analyzed: 05/30/15

Ethyl tert-butyl ether	48.3	10.0	ug/l	50.0		96.6	74-131			
Tert-butyl alcohol	224	20.0	"	249		90.1	66-115			
Isopropylbenzene	45.9	1.00	"	50.0		91.8	77-115			
Di-isopropyl ether	47.6	5.00	"	50.0		95.2	77-119			
p-Isopropyltoluene	42.8	1.00	"	50.0		85.5	84-110			
Methylene Chloride	43.5	5.00	"	50.0		87.1	36-156			
Methyl tert-butyl ether	48.0	5.00	"	50.0		96.1	71-130			
Naphthalene	46.0	1.00	"	50.0		92.0	76-128			
n-Propylbenzene	43.8	1.00	"	50.0		87.6	82-117			
Styrene	47.6	1.00	"	50.0		95.2	82-123			
1,1,2,2-Tetrachloroethane	46.6	1.00	"	50.0		93.1	66-126			
1,1,1,2-Tetrachloroethane	47.6	1.00	"	50.0		95.3	86-116			
Tetrachloroethene	44.6	1.00	"	50.0		89.1	74-121			
Toluene	45.1	1.00	"	50.0		90.3	51-138			
1,2,3-Trichlorobenzene	48.2	1.00	"	50.0		96.3	81-122			
1,2,4-Trichlorobenzene	47.1	1.00	"	50.0		94.2	87-115			
1,1,2-Trichloroethane	47.9	1.00	"	50.0		95.8	77-129			
1,1,1-Trichloroethane	43.8	1.00	"	50.0		87.7	75-120			
Trichloroethene	45.5	1.00	"	50.0		91.0	88-114			
Trichlorofluoromethane	40.1	1.00	"	50.0		80.1	65-129			
1,2,3-Trichloropropane	47.1	1.00	"	50.0		94.2	72-128			
1,3,5-Trimethylbenzene	45.1	1.00	"	50.0		90.3	86-110			
1,2,4-Trimethylbenzene	44.8	1.00	"	50.0		89.6	85-117			
Vinyl chloride	41.5	1.00	"	50.0		82.9	65-133			
m,p-Xylene	88.3	2.00	"	100		88.3	57-144			
o-Xylene	45.8	1.00	"	50.0		91.5	53-146			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.2</i>		<i>"</i>	<i>13.2</i>		<i>100</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.5</i>		<i>"</i>	<i>13.3</i>		<i>102</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.2</i>		<i>"</i>	<i>13.3</i>		<i>99.2</i>	<i>45-146</i>			

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 Wheat Ridge CO, 80033

Project: National Western Stock Show
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/01/15 15:44

Volatile Organic Compounds by EPA Method 8260B - Quality Control
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Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505266 - EPA 5030 Water MS

Matrix Spike (1505266-MS1)	Source: 1505287-01			Prepared: 05/29/15	Analyzed: 05/30/15		
Benzene	51.8	1.00	ug/l	50.0	ND	104	34-141
Bromobenzene	52.2	1.00	"	50.0	ND	104	66-131
Bromochloromethane	55.6	5.00	"	50.0	ND	111	74-125
Bromodichloromethane	55.2	2.00	"	50.0	ND	110	64-131
Bromoform	51.6	1.00	"	50.0	ND	103	63-122
Bromomethane	50.7	1.00	"	50.0	ND	101	46-155
n-Butylbenzene	49.1	1.00	"	50.0	ND	98.2	47-142
sec-Butylbenzene	49.8	1.00	"	50.0	ND	99.6	52-135
tert-Butylbenzene	51.2	1.00	"	50.0	ND	102	53-137
Carbon tetrachloride	48.1	1.00	"	50.0	ND	96.3	62-121
Chlorobenzene	51.3	1.00	"	50.0	ND	103	64-131
Chloroethane	47.7	1.00	"	50.0	ND	95.4	60-130
Chloroform	53.4	5.00	"	50.0	ND	107	70-130
Chloromethane	50.4	1.00	"	50.0	ND	101	62-130
Chlorodibromomethane	53.1	1.00	"	50.0	ND	106	60-134
2-Chlorotoluene	50.7	1.00	"	50.0	ND	101	58-138
4-Chlorotoluene	50.0	1.00	"	50.0	ND	100	62-131
1,2-Dibromo-3-chloropropane	56.6	1.00	"	50.0	ND	113	63-125
1,2-Dibromoethane (EDB)	55.3	1.00	"	50.0	ND	111	66-131
Dibromomethane	56.4	1.00	"	50.0	ND	113	70-127
1,2-Dichlorobenzene	54.3	1.00	"	50.0	ND	109	62-134
1,3-Dichlorobenzene	52.6	1.00	"	50.0	ND	105	60-133
1,4-Dichlorobenzene	51.6	1.00	"	50.0	ND	103	63-127
Dichlorodifluoromethane	44.5	1.00	"	50.0	ND	88.9	24-136
1,1-Dichloroethane	51.8	1.00	"	50.0	ND	104	73-124
1,2-Dichloroethane (EDC)	55.5	1.00	"	50.0	ND	111	75-122
1,1-Dichloroethene	47.6	1.00	"	50.0	ND	95.1	70-123
cis-1,2-Dichloroethene	61.2	1.00	"	50.0	9.86	103	72-129
trans-1,2-Dichloroethene	51.2	1.00	"	50.0	ND	102	76-126
1,2-Dichloropropane	54.3	1.00	"	50.0	ND	109	68-129
1,3-Dichloropropane	53.2	1.00	"	50.0	ND	106	69-130
2,2-Dichloropropane	28.3	1.00	"	50.0	ND	56.5	37-126
1,1-Dichloropropene	49.4	1.00	"	50.0	ND	98.9	61-125
cis-1,3-Dichloropropene	42.4	1.00	"	50.0	ND	84.9	59-127
trans-1,3-Dichloropropene	49.4	1.00	"	50.0	ND	98.8	59-126
Ethylbenzene	48.7	1.00	"	50.0	ND	97.4	29-160
Hexachlorobutadiene	50.1	1.00	"	50.0	ND	100	41-141
Tert-amyl methyl ether	52.9	1.00	"	49.8	ND	106	61-132

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 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Stock Show
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/01/15 15:44

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505266 - EPA 5030 Water MS

Matrix Spike (1505266-MS1)	Source: 1505287-01			Prepared: 05/29/15		Analyzed: 05/30/15	
Ethyl tert-butyl ether	54.2	10.0	ug/l	50.0	ND	108	65-130
Tert-butyl alcohol	264	20.0	"	249	ND	106	60-130
Isopropylbenzene	50.6	1.00	"	50.0	ND	101	44-143
Di-isopropyl ether	54.1	5.00	"	50.0	ND	108	73-128
p-Isopropyltoluene	48.9	1.00	"	50.0	ND	97.8	47-137
Methylene Chloride	47.2	5.00	"	50.0	ND	94.4	42-129
Methyl tert-butyl ether	53.5	5.00	"	50.0	ND	107	70-124
Naphthalene	53.4	1.00	"	50.0	ND	107	73-132
n-Propylbenzene	49.9	1.00	"	50.0	ND	99.9	61-129
Styrene	49.6	1.00	"	50.0	ND	99.3	36-146
1,1,2,2-Tetrachloroethane	54.3	1.00	"	50.0	ND	109	71-140
1,1,1,2-Tetrachloroethane	53.3	1.00	"	50.0	ND	107	59-137
Tetrachloroethane	51.3	1.00	"	50.0	2.37	97.9	49-137
Toluene	51.7	1.00	"	50.0	ND	103	27-151
1,2,3-Trichlorobenzene	55.0	1.00	"	50.0	ND	110	61-137
1,2,4-Trichlorobenzene	53.9	1.00	"	50.0	ND	108	55-141
1,1,2-Trichloroethane	55.0	1.00	"	50.0	ND	110	67-134
1,1,1-Trichloroethane	49.5	1.00	"	50.0	ND	99.0	66-128
Trichloroethene	52.3	1.00	"	50.0	1.08	102	65-119
Trichlorofluoromethane	47.5	1.00	"	50.0	ND	95.0	65-121
1,2,3-Trichloropropane	53.2	1.00	"	50.0	ND	106	69-125
1,3,5-Trimethylbenzene	51.5	1.00	"	50.0	ND	103	50-138
1,2,4-Trimethylbenzene	50.8	1.00	"	50.0	ND	102	54-137
Vinyl chloride	47.4	1.00	"	50.0	ND	94.9	71-124
m,p-Xylene	97.1	2.00	"	100	ND	97.1	20-166
o-Xylene	50.4	1.00	"	50.0	ND	101	33-159
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.6</i>		<i>"</i>	<i>13.2</i>		<i>103</i>	<i>37-154</i>
<i>Surrogate: Toluene-d8</i>	<i>13.7</i>		<i>"</i>	<i>13.3</i>		<i>103</i>	<i>45-149</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>12.9</i>		<i>"</i>	<i>13.3</i>		<i>96.8</i>	<i>45-146</i>

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 Wheat Ridge CO, 80033

Project: National Western Stock Show
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/01/15 15:44

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505266 - EPA 5030 Water MS

Matrix Spike Dup (1505266-MSD1)	Source: 1505287-01			Prepared: 05/29/15		Analyzed: 05/30/15				
Benzene	50.5	1.00	ug/l	50.0	ND	101	34-141	2.62	32	
Bromobenzene	51.4	1.00	"	50.0	ND	103	66-131	1.70	30	
Bromochloromethane	56.0	5.00	"	50.0	ND	112	74-125	0.771	30	
Bromodichloromethane	53.5	2.00	"	50.0	ND	107	64-131	3.16	30	
Bromoform	51.0	1.00	"	50.0	ND	102	63-122	1.27	27	
Bromomethane	53.9	1.00	"	50.0	ND	108	46-155	6.27	95	
n-Butylbenzene	47.2	1.00	"	50.0	ND	94.4	47-142	3.94	33	
sec-Butylbenzene	47.4	1.00	"	50.0	ND	94.8	52-135	4.96	33	
tert-Butylbenzene	49.5	1.00	"	50.0	ND	99.0	53-137	3.36	38	
Carbon tetrachloride	44.0	1.00	"	50.0	ND	88.1	62-121	8.92	21	
Chlorobenzene	51.7	1.00	"	50.0	ND	103	64-131	0.758	30	
Chloroethane	49.3	1.00	"	50.0	ND	98.6	60-130	3.28	29	
Chloroform	53.8	5.00	"	50.0	ND	108	70-130	0.820	32	
Chloromethane	51.0	1.00	"	50.0	ND	102	62-130	1.20	24	
Chlorodibromomethane	52.3	1.00	"	50.0	ND	105	60-134	1.46	30	
2-Chlorotoluene	49.3	1.00	"	50.0	ND	98.6	58-138	2.80	34	
4-Chlorotoluene	49.6	1.00	"	50.0	ND	99.3	62-131	0.683	29	
1,2-Dibromo-3-chloropropane	51.9	1.00	"	50.0	ND	104	63-125	8.54	34	
1,2-Dibromoethane (EDB)	55.1	1.00	"	50.0	ND	110	66-131	0.398	31	
Dibromomethane	53.1	1.00	"	50.0	ND	106	70-127	6.08	28	
1,2-Dichlorobenzene	52.8	1.00	"	50.0	ND	106	62-134	2.67	29	
1,3-Dichlorobenzene	51.5	1.00	"	50.0	ND	103	60-133	2.00	30	
1,4-Dichlorobenzene	50.6	1.00	"	50.0	ND	101	63-127	1.92	31	
Dichlorodifluoromethane	42.0	1.00	"	50.0	ND	84.0	24-136	5.76	31	
1,1-Dichloroethane	52.5	1.00	"	50.0	ND	105	73-124	1.27	33	
1,2-Dichloroethane (EDC)	52.6	1.00	"	50.0	ND	105	75-122	5.33	19	
1,1-Dichloroethene	46.2	1.00	"	50.0	ND	92.5	70-123	2.79	32	
cis-1,2-Dichloroethene	63.2	1.00	"	50.0	9.86	107	72-129	3.15	31	
trans-1,2-Dichloroethene	51.2	1.00	"	50.0	ND	102	76-126	0.117	31	
1,2-Dichloropropane	53.5	1.00	"	50.0	ND	107	68-129	1.50	29	
1,3-Dichloropropane	52.6	1.00	"	50.0	ND	105	69-130	1.10	31	
2,2-Dichloropropane	28.2	1.00	"	50.0	ND	56.3	37-126	0.390	33	
1,1-Dichloropropene	46.4	1.00	"	50.0	ND	92.8	61-125	6.41	28	
cis-1,3-Dichloropropene	41.7	1.00	"	50.0	ND	83.5	59-127	1.66	28	
trans-1,3-Dichloropropene	48.5	1.00	"	50.0	ND	97.0	59-126	1.76	28	
Ethylbenzene	48.1	1.00	"	50.0	ND	96.3	29-160	1.20	50	
Hexachlorobutadiene	48.5	1.00	"	50.0	ND	97.1	41-141	3.20	35	
Tert-amyl methyl ether	54.0	1.00	"	49.8	ND	108	61-132	2.00	34	

Summit Scientific

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Stock Show
Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
06/01/15 15:44

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1505266 - EPA 5030 Water MS

Matrix Spike Dup (1505266-MSD1)

Source: 1505287-01

Prepared: 05/29/15 Analyzed: 05/30/15

Ethyl tert-butyl ether	55.0	10.0	ug/l	50.0	ND	110	65-130	1.45	38
Tert-butyl alcohol	250	20.0	"	249	ND	101	60-130	5.17	31
Isopropylbenzene	49.8	1.00	"	50.0	ND	99.7	44-143	1.41	35
Di-isopropyl ether	55.2	5.00	"	50.0	ND	110	73-128	1.96	25
p-Isopropyltoluene	47.3	1.00	"	50.0	ND	94.6	47-137	3.24	38
Methylene Chloride	50.1	5.00	"	50.0	ND	100	42-129	5.88	31
Methyl tert-butyl ether	54.5	5.00	"	50.0	ND	109	70-124	1.76	35
Naphthalene	52.2	1.00	"	50.0	ND	104	73-132	2.23	23
n-Propylbenzene	48.3	1.00	"	50.0	ND	96.6	61-129	3.32	35
Styrene	49.8	1.00	"	50.0	ND	99.6	36-146	0.342	33
1,1,2,2-Tetrachloroethane	52.2	1.00	"	50.0	ND	104	71-140	3.95	32
1,1,1,2-Tetrachloroethane	52.8	1.00	"	50.0	ND	106	59-137	0.961	32
Tetrachloroethane	49.6	1.00	"	50.0	2.37	94.4	49-137	3.43	32
Toluene	49.8	1.00	"	50.0	ND	99.7	27-151	3.70	25
1,2,3-Trichlorobenzene	54.3	1.00	"	50.0	ND	109	61-137	1.17	27
1,2,4-Trichlorobenzene	53.0	1.00	"	50.0	ND	106	55-141	1.55	28
1,1,2-Trichloroethane	53.4	1.00	"	50.0	ND	107	67-134	2.88	29
1,1,1-Trichloroethane	48.9	1.00	"	50.0	ND	97.8	66-128	1.22	31
Trichloroethene	50.9	1.00	"	50.0	1.08	99.6	65-119	2.77	30
Trichlorofluoromethane	46.4	1.00	"	50.0	ND	92.7	65-121	2.41	30
1,2,3-Trichloropropane	50.3	1.00	"	50.0	ND	101	69-125	5.54	33
1,3,5-Trimethylbenzene	49.3	1.00	"	50.0	ND	98.7	50-138	4.38	34
1,2,4-Trimethylbenzene	49.1	1.00	"	50.0	ND	98.2	54-137	3.38	34
Vinyl chloride	47.5	1.00	"	50.0	ND	95.0	71-124	0.126	26
m,p-Xylene	97.4	2.00	"	100	ND	97.4	20-166	0.226	36
o-Xylene	49.8	1.00	"	50.0	ND	99.7	33-159	1.22	26
Surrogate: 1,2-Dichloroethane-d4	13.2		"	13.2		99.9	37-154		
Surrogate: Toluene-d8	13.3		"	13.3		99.8	45-149		
Surrogate: 4-Bromofluorobenzene	13.1		"	13.3		98.6	45-146		

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Stock Show
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/01/15 15:44

Dissolved Mercury by EPA Method 245.1 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1506001 - EPA 7470A

Blank (1506001-BLK1)				Prepared & Analyzed: 06/01/15						
Mercury	ND	0.000200	mg/L							
LCS (1506001-BS1)				Prepared & Analyzed: 06/01/15						
Mercury	0.00206	0.000200	mg/L	0.00217		95.0	85-115			
Duplicate (1506001-DUP1)				Source: 1505287-01		Prepared & Analyzed: 06/01/15				
Mercury	0.0000107	0.000200	mg/L		0.00000810			27.7	20	QR-01
Matrix Spike (1506001-MS1)				Source: 1505287-01		Prepared & Analyzed: 06/01/15				
Mercury	0.00203	0.000200	mg/L	0.00217	0.00000810	93.1	70-130			
Matrix Spike Dup (1506001-MSD1)				Source: 1505287-01		Prepared & Analyzed: 06/01/15				
Mercury	0.00201	0.000200	mg/L	0.00217	0.00000810	92.3	70-130	0.892	20	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Stock Show
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/01/15 15:44

Dissolved Metals by EPA Method 200.8 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike	Source		%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1505264 - EPA 200.8

Blank (1505264-BLK1)

Prepared & Analyzed: 05/29/15

Arsenic	ND	0.000600	mg/L							
Barium	ND	0.00100	"							
Cadmium	ND	0.0000500	"							
Chromium	ND	0.00100	"							
Lead	ND	0.00100	"							
Selenium	ND	0.00100	"							
Silver	ND	0.0000500	"							
Zinc	ND	0.00300	"							

LCS (1505264-BS1)

Prepared & Analyzed: 05/29/15

Arsenic	0.506	0.000600	mg/L	0.500	101	85-115		
Barium	0.495	0.00100	"	0.500	98.9	85-115		
Cadmium	0.0259	0.0000500	"	0.0250	104	85-115		
Chromium	0.510	0.00100	"	0.500	102	85-115		
Lead	0.269	0.00100	"	0.250	107	85-115		
Selenium	0.0482	0.00100	"	0.0500	96.3	85-115		
Silver	0.0248	0.0000500	"	0.0250	99.1	85-115		
Zinc	0.506	0.00300	"	0.500	101	85-115		

Duplicate (1505264-DUP1)

Source: 1505287-01

Prepared & Analyzed: 05/29/15

Arsenic	0.00193	0.000600	mg/L	0.00305	45.1	20	QR-01
Barium	0.122	0.00100	"	0.130	6.12	20	
Cadmium	0.0000213	0.0000500	"	0.0000297	32.9	20	QR-01
Chromium	ND	0.00100	"	0.0000487		20	
Lead	0.000286	0.00100	"	0.000381	28.6	20	QR-01
Selenium	ND	0.00100	"	ND		20	
Silver	ND	0.0000500	"	ND		20	
Zinc	ND	0.00300	"	0.00196		20	

Summit Scientific

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Terracon - Wheat Ridge
 10625 West I-70 Frontage Road, Suite 3
 Wheat Ridge CO, 80033

Project: National Western Stock Show
 Project Number: 25157010
 Project Manager: Steve Hoffman

Reported:
 06/01/15 15:44

Dissolved Metals by EPA Method 200.8 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch 1505264 - EPA 200.8

Matrix Spike (1505264-MS1)

Source: 1505287-01

Prepared & Analyzed: 05/29/15

Arsenic	0.505	0.000600	mg/L	0.500	0.00305	100	75-125			
Barium	0.579	0.00100	"	0.500	0.130	89.7	75-125			
Cadmium	0.0249	0.0000500	"	0.0250	0.0000297	99.3	75-125			
Chromium	0.493	0.00100	"	0.500	0.0000487	98.5	75-125			
Lead	0.242	0.00100	"	0.250	0.000381	96.8	75-125			
Selenium	0.0523	0.00100	"	0.0500	ND	105	75-125			
Silver	0.0211	0.0000500	"	0.0250	ND	84.4	75-125			
Zinc	0.495	0.00300	"	0.500	0.00196	98.7	75-125			

Matrix Spike Dup (1505264-MSD1)

Source: 1505287-01

Prepared & Analyzed: 05/29/15

Arsenic	0.504	0.000600	mg/L	0.500	0.00305	100	75-125	0.123	25
Barium	0.558	0.00100	"	0.500	0.130	85.6	75-125	3.65	25
Cadmium	0.0239	0.0000500	"	0.0250	0.0000297	95.3	75-125	4.15	25
Chromium	0.490	0.00100	"	0.500	0.0000487	97.9	75-125	0.596	25
Lead	0.236	0.00100	"	0.250	0.000381	94.1	75-125	2.83	25
Selenium	0.0523	0.00100	"	0.0500	ND	105	75-125	0.121	25
Silver	0.0196	0.0000500	"	0.0250	ND	78.6	75-125	7.15	25
Zinc	0.489	0.00300	"	0.500	0.00196	97.5	75-125	1.21	25

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Terracon - Wheat Ridge
10625 West I-70 Frontage Road, Suite 3
Wheat Ridge CO, 80033

Project: National Western Stock Show

Project Number: 25157010
Project Manager: Steve Hoffman

Reported:
06/01/15 15:44

Notes and Definitions

- QR-01 Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

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G3

**Colorado Analytical Laboratories Reports for
Groundwater Samples (Nitrogen)**

Analytical Results

TASK NO: 150430045

Report To: Steve Hoffman

Company: Terracon, Inc. - Wheat Ridge
10625 W. I-70 Frontage Road
Wheat Ridge CO 80033

Bill To: Accounts Payable

Company: Terracon, Inc. - Lenexa
13910 W. 96th Terrace
Lenexa KS 66215

Task No.: 150430045
Client PO:
Client Project: National Western 25157010

Date Received: 4/30/15
Date Reported: 5/6/15
Matrix: Water - Ground

Customer Sample ID: MW-07

Sample Date/Time: 4/30/15 2:18 PM

Lab Number: 150430045-01

Test	Result	Method	ML	Date Analyzed	Analyzed By
Nitrate Nitrogen	7.30 mg/L	EPA 300.0	0.05 mg/L	5/1/15	LJG
Nitrate/ Nitrite Nitrogen	7.30 mg/L	Calculation	0.05 mg/L	5/1/15	LJG
Nitrite Nitrogen	< 0.03 mg/L	EPA 300.0	0.03 mg/L	5/1/15	LJG
Total Kjeldahl Nitrogen	5.1 mg/L	SM 4500-Norg-B	0.1 mg/L	5/5/15	MBN
Total Nitrogen	12.4 mg/L	Calculation	0.1 mg/L	5/6/15	LJG

Abbreviations/ References:

ML = Minimum Level = LRL = RL
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 ml = Most Probable Number Index/ 100 ml
Date Analyzed = Date Test Completed



DATA APPROVED FOR RELEASE BY

240 South Main Street / Brighton, CO 80601-0507 / 303-659-2313
Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507 / Fax: 303-659-2315

150430045
1/3

Analytical Results

TASK NO: 150430045

Report To: Steve Hoffman

Company: Terracon, Inc. - Wheat Ridge
10625 W. I-70 Frontage Road
Wheat Ridge CO 80033

Bill To: Accounts Payable

Company: Terracon, Inc. - Lenexa
13910 W. 96th Terrace
Lenexa KS 66215

Task No.: 150430045
Client PO:
Client Project: National Western 25157010

Date Received: 4/30/15
Date Reported: 5/6/15
Matrix: Water - Ground

Customer Sample ID MW-07D
Sample Date/Time: 4/30/15 2:29 PM
Lab Number: 150430045-02

Test	Result	Method	ML	Date Analyzed	Analyzed By
Nitrate Nitrogen	7.38 mg/L	EPA 300.0	0.05 mg/L	5/1/15	LJG
Nitrate/ Nitrite Nitrogen	7.38 mg/L	Calculation	0.05 mg/L	5/1/15	LJG
Nitrite Nitrogen	< 0.03 mg/L	EPA 300.0	0.03 mg/L	5/1/15	LJG
Total Kjeldahl Nitrogen	5.6 mg/L	SM 4500-Norg-B	0.1 mg/L	5/5/15	MBN
Total Nitrogen	12.9 mg/L	Calculation	0.1 mg/L	5/6/15	LJG

Abbreviations/ References:

ML = Minimum Level = LRL = RL
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed



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Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507 / Fax: 303-659-2315

150430045
2/3

Analytical Results

TASK NO: 150430045

Report To: Steve Hoffman

Company: Terracon, Inc. - Wheat Ridge
10625 W. I-70 Frontage Road
Wheat Ridge CO 80033

Bill To: Accounts Payable

Company: Terracon, Inc. - Lenexa
13910 W. 96th Terrace
Lenexa KS 66215

Task No.: 150430045
Client PO:
Client Project: National Western 25157010

Date Received: 4/30/15
Date Reported: 5/6/15
Matrix: Water - Ground

Customer Sample ID: MW-10
Sample Date/Time: 4/30/15 3:19 PM
Lab Number: 150430045-03

Test	Result	Method	ML	Date Analyzed	Analyzed By
Nitrate Nitrogen	9.75 mg/L	EPA 300.0	0.05 mg/L	5/1/15	LJG
Nitrate/ Nitrite Nitrogen	9.75 mg/L	Calculation	0.05 mg/L	5/1/15	LJG
Nitrite Nitrogen	< 0.03 mg/L	EPA 300.0	0.03 mg/L	5/1/15	LJG
Total Kjeldahl Nitrogen	1.3 mg/L	SM 4500-Norg-B	0.1 mg/L	5/5/15	MBN
Total Nitrogen	11.1 mg/L	Calculation	0.1 mg/L	5/6/15	LJG

Abbreviations/ References:

ML = Minimum Level = LRL = RL
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 ml = Most Probable Number Index/ 100 ml
Date Analyzed = Date Test Completed



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Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507 / Fax: 303-659-2315

150430045
3/3

Analytical Results

TASK NO: 150504065

Report To: Steve Hoffman

Company: Terracon, Inc. - Wheat Ridge
10625 W. I-70 Frontage Road
Wheat Ridge CO 80033

Bill To: Accounts Payable

Company: Terracon, Inc. - Lenexa
13910 W. 96th Terrace
Lenexa KS 66215

Task No.: 150504065	Date Received: 5/4/15
Client PO:	Date Reported: 5/8/15
Client Project: National Western 25157010	Matrix: Water - Ground

Customer Sample ID MW-12
Sample Date/Time: 5/4/15 2:30 PM
Lab Number: 150504065-01

Test	Result	Method	ML	Date Analyzed	Analyzed By
Nitrate Nitrogen	10.16 mg/L	EPA 300.0	0.05 mg/L	5/5/15	LJG
Nitrate/ Nitrite Nitrogen	10.16 mg/L	Calculation	0.05 mg/L	5/5/15	LJG
Nitrite Nitrogen	< 0.03 mg/L	EPA 300.0	0.03 mg/L	5/5/15	LJG
Total Kjeldahl Nitrogen	7.2 mg/L	SM 4500-Norg-B	0.1 mg/L	5/7/15	MBN
Total Nitrogen	17.4 mg/L	Calculation	0.1 mg/L	5/8/15	LJG

Abbreviations/ References:

ML = Minimum Level = LRL = RL
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpr/100 mis = Most Probable Number index/ 100 mis
Date Analyzed = Date Test Completed



DATA APPROVED FOR RELEASE BY

240 South Main Street / Brighton, CO 80601-0507 / 303-659-2313
Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507 / Fax: 303-659-2315

150504065
1/2

Analytical Results

TASK NO: 150504065

Report To: Steve Hoffman

Company: Terracon, Inc. - Wheat Ridge
10625 W. I-70 Frontage Road
Wheat Ridge CO 80033

Bill To: Accounts Payable

Company: Terracon, Inc. - Lenexa
13910 W. 96th Terrace
Lenexa KS 66215

Task No.: 150504065
Client PO:
Client Project: National Western 25157010

Date Received: 5/4/15
Date Reported: 5/8/15
Matrix: Water - Ground

Customer Sample ID MW-12D
Sample Date/Time: 5/4/15 2:30 PM
Lab Number: 150504065-02

Test	Result	Method	ML	Date Analyzed	Analyzed By
Nitrate Nitrogen	10.27 mg/L	EPA 300.0	0.05 mg/L	5/5/15	LJG
Nitrate/ Nitrite Nitrogen	10.27 mg/L	Calculation	0.05 mg/L	5/5/15	LJG
Nitrite Nitrogen	< 0.03 mg/L	EPA 300.0	0.03 mg/L	5/5/15	LJG
Total Kjeldahl Nitrogen	6.3 mg/L	SM 4500-Norg-B	0.1 mg/L	5/7/15	MBN
Total Nitrogen	16.6 mg/L	Calculation	0.1 mg/L	5/8/15	LJG

Abbreviations/ References:

ML = Minimum Level = LRL = RL
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed



DATA APPROVED FOR RELEASE BY

240 South Main Street / Brighton, CO 80601-0507 / 303-659-2313
Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507 / Fax: 303-659-2315

150504065
2/2

Analytical Results

TASK NO: 150506093

Report To: Steve Hoffman

Company: Terracon, Inc. - Wheat Ridge
10625 W. I-70 Frontage Road
Wheat Ridge CO 80033

Bill To: Accounts Payable

Company: Terracon, Inc. - Lenexa
13910 W. 96th Terrace
Lenexa KS 66215

Task No.: 150506093
Client PO:
Client Project: National Western 25157010

Date Received: 5/6/15
Date Reported: 5/13/15
Matrix: Water - Ground

Customer Sample ID: MW-15
Sample Date/Time: 5/6/15 12:20 PM
Lab Number: 150506093-01

Test	Result	Method	ML	Date Analyzed	Analyzed By
Nitrate Nitrogen	11.09 mg/L	EPA 300.0	0.05 mg/L	5/7/15	DJV
Nitrate/ Nitrite Nitrogen	11.09 mg/L	Calculation	0.05 mg/L	5/7/15	DJV
Nitrite Nitrogen	< 0.03 mg/L	EPA 300.0	0.03 mg/L	5/7/15	DJV
Total Kjeldahl Nitrogen	5.6 mg/L	SM 4500-Norg-B	0.1 mg/L	5/12/15	MBN
Total Nitrogen	16.7 mg/L	Calculation	0.1 mg/L	5/13/15	LJG

Abbreviations/ References:

ML = Minimum Level = LRL = RL
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 ml = Most Probable Number Index/ 100 ml
Date Analyzed = Date Test Completed



DATA APPROVED FOR RELEASE BY

240 South Main Street / Brighton, CO 80601-0507 / 303-659-2313
Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507 / Fax: 303-659-2315

150506093
1/1

Analytical Results

TASK NO: 150429065

Report To: Steve Hoffman

Company: Terracon, Inc. - Wheat Ridge
10625 W. I-70 Frontage Road
Wheat Ridge CO 80033

Bill To: Accounts Payable

Company: Terracon, Inc. - Lenexa
13910 W. 96th Terrace
Lenexa KS 66215

Task No.: 150429065
Client PO:
Client Project: National Western 25157010

Date Received: 4/29/15
Date Reported: 5/6/15
Matrix: Water - Ground

Customer Sample ID: MW-01
Sample Date/Time: 4/29/15 9:25 AM
Lab Number: 150429065-01

Test	Result	Method	ML	Date Analyzed	Analyzed By
Nitrate Nitrogen	< 0.05 mg/L	EPA 300.0	0.05 mg/L	4/30/15	LJG
Nitrate/ Nitrite Nitrogen	< 0.05 mg/L	Calculation	0.05 mg/L	4/30/15	LJG
Nitrite Nitrogen	< 0.03 mg/L	EPA 300.0	0.03 mg/L	4/30/15	LJG
Total Kjeldahl Nitrogen	15.7 mg/L	SM 4500-Norg-B	0.1 mg/L	5/5/15	MBN
Total Nitrogen	15.7 mg/L	Calculation	0.1 mg/L	5/6/15	LJG

Abbreviations/ References:

ML = Minimum Level = LRL = RL
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed



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Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507 / Fax: 303-659-2315

150429065
1/4

Analytical Results

TASK NO: 150429065

Report To: Steve Hoffman
Company: Terracon, Inc. - Wheat Ridge
10625 W. I-70 Frontage Road
Wheat Ridge CO 80033

Bill To: Accounts Payable
Company: Terracon, Inc. - Lenexa
13910 W. 96th Terrace
Lenexa KS 66215

Task No.: 150429065
Client PO:
Client Project: National Western 25157010

Date Received: 4/29/15
Date Reported: 5/6/15
Matrix: Water - Ground

Customer Sample ID: MW-05
Sample Date/Time: 4/29/15 10:30 AM
Lab Number: 150429065-02

Test	Result	Method	ML	Date Analyzed	Analyzed By
Nitrate Nitrogen	14.00 mg/L	EPA 300.0	0.05 mg/L	4/30/15	LJG
Nitrate/ Nitrite Nitrogen	14.00 mg/L	Calculation	0.05 mg/L	4/30/15	LJG
Nitrite Nitrogen	< 0.03 mg/L	EPA 300.0	0.03 mg/L	4/30/15	LJG
Total Kjeldahl Nitrogen	2.6 mg/L	SM 4500-Norg-B	0.1 mg/L	5/5/15	MBN
Total Nitrogen	16.6 mg/L	Calculation	0.1 mg/L	5/6/15	LJG

Abbreviations/ References:

ML = Minimum Level = LRL = RL
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpr/100 m/s = Most Probable Number Index/ 100 m/s
Date Analyzed = Date Test Completed



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Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507 / Fax: 303-659-2315

150429065
2/4

Analytical Results

TASK NO: 150429065

Report To: Steve Hoffman

Company: Terracon, Inc. - Wheat Ridge
10625 W. I-70 Frontage Road
Wheat Ridge CO 80033

Bill To: Accounts Payable

Company: Terracon, Inc. - Lenexa
13910 W. 96th Terrace
Lenexa KS 66215

Task No.: 150429065
Client PO:
Client Project: National Western 25157010

Date Received: 4/29/15
Date Reported: 5/6/15
Matrix: Water - Ground

Customer Sample ID: MW-11
Sample Date/Time: 4/29/15 11:20 AM
Lab Number: 150429065-03

Test	Result	Method	ML	Date Analyzed	Analyzed By
Nitrate Nitrogen	3.08 mg/L	EPA 300.0	0.05 mg/L	4/30/15	LJG
Nitrate/ Nitrite Nitrogen	3.08 mg/L	Calculation	0.05 mg/L	4/30/15	LJG
Nitrite Nitrogen	< 0.03 mg/L	EPA 300.0	0.03 mg/L	4/30/15	LJG
Total Kjeldahl Nitrogen	8.4 mg/L	SM 4500-Norg-B	0.1 mg/L	5/5/15	MBN
Total Nitrogen	11.5 mg/L	Calculation	0.1 mg/L	5/6/15	LJG

Abbreviations/ References:

ML = Minimum Level = LRL = RL
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 ml = Most Probable Number Index/ 100 ml
Date Analyzed = Date Test Completed



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150429065
3/4

Analytical Results

TASK NO: 150529013

Report To: Steve Hoffman

Company: Terracon, Inc. - Wheat Ridge
10625 W. I-70 Frontage Road
Wheat Ridge CO 80033

Bill To: Accounts Payable

Company: Terracon, Inc. - Lenexa
13910 W. 96th Terrace
Lenexa KS 66215

Task No.: 150529013
Client PO:
Client Project: National Western 25157010

Date Received: 5/29/15
Date Reported: 6/2/15
Matrix: Water - Ground

Customer Sample ID: MW-13
Sample Date/Time: 5/29/15 8:45 AM
Lab Number: 150529013-01

Test	Result	Method	ML	Date Analyzed	Analyzed By
Nitrate Nitrogen	0.99 mg/L	EPA 300.0	0.05 mg/L	5/29/15	DJV
Nitrate/ Nitrite Nitrogen	0.99 mg/L	Calculation	0.05 mg/L	5/29/15	DJV
Nitrite Nitrogen	< 0.03 mg/L	EPA 300.0	0.03 mg/L	5/29/15	DJV
Total Kjeldahl Nitrogen	18.9 mg/L	SM 4500-Norg-B	0.1 mg/L	6/2/15	MBN
Total Nitrogen	19.9 mg/L	Calculation	0.1 mg/L	6/2/15	LJG

Abbreviations/ References:

ML = Minimum Level = LRL = RL
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 ml = Most Probable Number Index/ 100 ml
Date Analyzed = Date Test Completed



DATA APPROVED FOR RELEASE BY

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Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507 / Fax: 303-659-2315

150529013
1/1

Chain of Custody Form

Report To Information Company Name: <u>Terracon Consultants</u> Contact Name: <u>Steve Hoffman</u> Address: <u>10625 West I-70 Frontage Road North</u> <u>Suite 3</u> City: <u>Wheat Ridge</u> State: <u>CO</u> Zip: <u>80003</u> Phone: <u>303-454-5222</u> Fax: <u>303-423-3353</u> Email: <u>sboffman@terracon.com</u>	Bill To Information (If different from report to) Company Name: _____ Contact Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Fax: _____ Email: _____ PO No.: _____
Project Name <u>National Western</u> <u>25157010</u> Task Number (Lab Use Only) <p align="center">150529013</p> ARF Disposal Date (Lab Use Only)	


Colorado Analytical Laboratories, Inc.
Brighton Lab
 240 South Main Street
 Brighton, CO 80601
Lakewood Lab
 12860 W. Cedar Dr, Suite 100A
 Lakewood CO 80228
 Phone: 303-659-2313
 Fax: 303-659-2315
www.coloradolab.com

Date		Time	Sample Matrix (Select One Only)	Plant Tissue	No. of Containers	Grab or (Check One Only) Composite	TKN	Nitrates	Nitrites	Total N	Seals Present Yes <input type="checkbox"/> No <input type="checkbox"/>	
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**eAnalytical Laboratories Reports for Soil Vapor
Samples**

Certificate of Analysis

eANALYTICS
LABORATORY

May 19th 2015

Terracon
10625 W I-70 Frontage Road N., Suite 3
Wheatridge, CO 80033

Project: National Western Complex (Lab Work Order - 3307)

On May 15th of 2015, eAnalytics Laboratory received 4 samples for the project named National Western Complex. As stated on the chain of custody, the requested analyses were for the following:

Analysis	Samples
Full List (EPA TO-14)	1-4

All quality control analyses associated with the requested tests were satisfactorily passed before the samples were run. Thank you for allowing eAnalytics Laboratory to provide laboratory services for you. If you have any questions please give us a call, we are happy to help.

Sincerely,



Christopher Dieken
Quality Assurance Manager



Todd Rhea
Laboratory Manager

eAnalytics Laboratory
(970) 667-6975
info@eAnalyticsLab.com



Certificate of Analysis

Chain of Custody Form

eANALYTICS LABORATORY																				
1767 Rocky Mountain Avenue Loveland CO 80538			Phone: (970) 667-6975			Fax: (970) 669-0941			www.eAnalyticsLab.com											
CLIENT INFORMATION <small>(*New Clients please fill out completely)</small>			ANALYSIS INFORMATION <small>(Select analysis by checking box on corresponding sample line)</small>																	
Company: <u>Terracon consultants</u>			Number of Containers	Matrix (S) Soil (W) Water (V) Vapor (O) Other	TD-14 (Full Lst)															
Project: <u>Natural western Complex</u>																				
Project Manager: <u>Steve Hoffmann</u>																				
Sampler: <u>Marshall Haggorth</u>																				
Phone/Email: <u>(803) 484-5222 / Steve.Hoffmann@terracon.com</u>																				
Address: <u>10625 W I-70 Frontage Rd N. Suite 3 Wheat Ridge, CO 80033</u>			Other Instructions																	
Lab ID	Sample Name	Sampling Date/Time																		
1	SV-02	5-14-15 1140 AM	1	✓	X															
2	SV-08	5-14-15 1205 AM	1	✓	X															
3	SV-17	5-14-15 1510 AM	1	✓	X															
4	SV-19	5-14-15 1420 AM	1	✓	X															
Comments:																				
Turnaround Time (Business Days) <small>TAT begins when sample is received by eANALYTICS</small> <input checked="" type="radio"/> Normal (5-10 Days) <input type="radio"/> 3 Day (25%) <input type="radio"/> 2 Day (50%) <input type="radio"/> 1 Day (100%) <input type="radio"/> Same Day (300%) Rush analysis requires an extra charge. If possible please inform eANALYTICS in advance for rush analysis.			Record of Custody Relinquished by: <u>Maull Haggorth</u> Date: <u>5-15-15</u> Company: <u>Terracon Consultants</u> Time: <u>0930 AM</u> Received by: <u>Paul M. Cox</u> Date: <u>5/15/15</u> Company: <u>Executive courses</u> Time: <u>0930 AM</u> Relinquished by: <u>Paul M. Cox</u> Date: <u>5/15/15</u> Company: <u>EKC</u> Time: <u>1120 AM</u> Received by: <u>Steve Hoffmann</u> Date: <u>5/15/15</u> Company: <u>eANALYTICS</u> Time: <u>1120 AM</u>																	
Colorado OPS Project: Yes / No For eANALYTICS Use Samples Received Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No Received Within Temperature Range (2-6°C): Yes / No Sample Preservative: Ice Acid Other																				

WO # 3307

eANALYTICS: Environmental testing made Easy

Page 1 of 1

Certificate of Analysis

Sample Information

Client:	Terracon 10625 W I-70 Frontage Road N., Suite 3 Wheatridge, CO 80033	Sample Name:	SV-02S
Project:	National Western Complex	Lab ID:	3307-1
		Date Sampled:	5/14/15
		Date Received:	5/15/15
		Date Analyzed:	5/15/15

Vapor Sample Analysis - EPA Method TO-14

Surrogate Recoveries

Surrogate	Acceptance	% Recovery	Surrogate	Acceptance	% Recovery
Dibromofluoromethane	(70-130%)	99	Toluene-D8	(70-130%)	101
1,2-Dichloroethane-D4	(70-130%)	97	4-Bromofluorobenzene	(70-130%)	99

Compound	CAS #	Concentration (µg/m3)	Compound	CAS #	Concentration (µg/m3)
1,1,1-Trichloroethane	71-55-6	< 10.0	Chlorobenzene	108-90-7	< 10.0
1,1,2,2-Tetrachloroethane	79-34-5	< 10.0	Chloroform	67-66-3	< 10.0
1,1,2-Trichloroethane	79-00-5	< 10.0	cis-1,2-Dichloroethene	156-59-2	< 10.0
1,1-Dichloroethane	75-34-3	< 10.0	Ethylbenzene	100-41-4	< 10.0
1,1-Dichloroethene	75-35-4	< 10.0	Methylene chloride	75-09-2	< 10.0
1,2-Dichlorobenzene	95-50-1	< 10.0	Styrene	100-42-5	< 10.0
1,2-Dichloroethane	107-06-2	< 10.0	Tetrachloroethene	127-18-4	< 10.0
1,2-Dichloropropane	78-87-5	< 10.0	Toluene	108-88-3	< 10.0
1,3-Dichlorobenzene	541-73-1	< 10.0	Total Xylenes	1330-20-7	< 10.0
1,4-Dichlorobenzene	106-46-7	< 10.0	trans-1,2-Dichloroethene	156-60-5	< 10.0
Benzene	71-43-2	< 10.0	Trichloroethene	79-01-6	< 10.0
Carbon tetrachloride	56-23-5	< 10.0	Vinyl chloride	75-01-4	< 10.0
TVPH		< 1.0 mg/m3			

Certificate of Analysis

Sample Information

Client:	Terracon 10625 W I-70 Frontage Road N., Suite 3 Wheatridge, CO 80033	Sample Name:	SV-08S
Project:	National Western Complex	Lab ID:	3307-2
		Date Sampled:	5/14/15
		Date Received:	5/15/15
		Date Analyzed:	5/15/15

Vapor Sample Analysis - EPA Method TO-14

Surrogate Recoveries

Surrogate	Acceptance	% Recovery	Surrogate	Acceptance	% Recovery
Dibromofluoromethane	(70-130%)	93	Toluene-D8	(70-130%)	92
1,2-Dichloroethane-D4	(70-130%)	99	4-Bromofluorobenzene	(70-130%)	99

Compound	CAS #	Concentration (µg/m ³)	Compound	CAS #	Concentration (µg/m ³)
1,1,1-Trichloroethane	71-55-6	< 10.0	Chlorobenzene	108-90-7	< 10.0
1,1,2,2-Tetrachloroethane	79-34-5	< 10.0	Chloroform	67-66-3	< 10.0
1,1,2-Trichloroethane	79-00-5	< 10.0	cis-1,2-Dichloroethene	156-59-2	< 10.0
1,1-Dichloroethane	75-34-3	< 10.0	Ethylbenzene	100-41-4	< 10.0
1,1-Dichloroethene	75-35-4	< 10.0	Methylene chloride	75-09-2	< 10.0
1,2-Dichlorobenzene	95-50-1	< 10.0	Styrene	100-42-5	< 10.0
1,2-Dichloroethane	107-06-2	< 10.0	Tetrachloroethene	127-18-4	161
1,2-Dichloropropane	78-87-5	< 10.0	Toluene	108-88-3	< 10.0
1,3-Dichlorobenzene	541-73-1	< 10.0	Total Xylenes	1330-20-7	< 10.0
1,4-Dichlorobenzene	106-46-7	< 10.0	trans-1,2-Dichloroethene	156-60-5	< 10.0
Benzene	71-43-2	< 10.0	Trichloroethene	79-01-6	< 10.0
Carbon tetrachloride	56-23-5	< 10.0	Vinyl chloride	75-01-4	< 10.0
TVPH		< 1.0 mg/m ³			

Certificate of Analysis

Sample Information

Client:	Terracon 10625 W I-70 Frontage Road N., Suite 3 Wheatridge, CO 80033	Sample Name:	SV-17S
Project:	National Western Complex	Lab ID:	3307-3
		Date Sampled:	5/14/15
		Date Received:	5/15/15
		Date Analyzed:	5/15/15

Vapor Sample Analysis - EPA Method TO-14

Surrogate Recoveries

Surrogate	Acceptance	% Recovery	Surrogate	Acceptance	% Recovery
Dibromofluoromethane	(70-130%)	93	Toluene-D8	(70-130%)	91
1,2-Dichloroethane-D4	(70-130%)	99	4-Bromofluorobenzene	(70-130%)	96

Compound	CAS #	Concentration (µg/m ³)	Compound	CAS #	Concentration (µg/m ³)
1,1,1-Trichloroethane	71-55-6	< 10.0	Chlorobenzene	108-90-7	< 10.0
1,1,2,2-Tetrachloroethane	79-34-5	< 10.0	Chloroform	67-66-3	< 10.0
1,1,2-Trichloroethane	79-00-5	< 10.0	cis-1,2-Dichloroethene	156-59-2	< 10.0
1,1-Dichloroethane	75-34-3	< 10.0	Ethylbenzene	100-41-4	< 10.0
1,1-Dichloroethene	75-35-4	< 10.0	Methylene chloride	75-09-2	< 10.0
1,2-Dichlorobenzene	95-50-1	< 10.0	Styrene	100-42-5	< 10.0
1,2-Dichloroethane	107-06-2	< 10.0	Tetrachloroethene	127-18-4	3146
1,2-Dichloropropane	78-87-5	< 10.0	Toluene	108-88-3	< 10.0
1,3-Dichlorobenzene	541-73-1	< 10.0	Total Xylenes	1330-20-7	< 10.0
1,4-Dichlorobenzene	106-46-7	< 10.0	trans-1,2-Dichloroethene	156-60-5	< 10.0
Benzene	71-43-2	< 10.0	Trichloroethene	79-01-6	< 10.0
Carbon tetrachloride	56-23-5	< 10.0	Vinyl chloride	75-01-4	< 10.0
TVPH		3.15 mg/m ³			

Certificate of Analysis

Sample Information

Client:	Terracon 10625 W I-70 Frontage Road N., Suite 3 Wheatridge, CO 80033	Sample Name:	SV-19D
Project:	National Western Complex	Lab ID:	3307-4
		Date Sampled:	5/14/15
		Date Received:	5/15/15
		Date Analyzed:	5/15/15

Vapor Sample Analysis - EPA Method TO-14

Surrogate Recoveries

Surrogate	Acceptance	% Recovery	Surrogate	Acceptance	% Recovery
Dibromofluoromethane	(70-130%)	90	Toluene-D8	(70-130%)	89
1,2-Dichloroethane-D4	(70-130%)	101	4-Bromofluorobenzene	(70-130%)	90

Compound	CAS #	Concentration (µg/m ³)	Compound	CAS #	Concentration (µg/m ³)
1,1,1-Trichloroethane	71-55-6	< 10.0	Chlorobenzene	108-90-7	< 10.0
1,1,2,2-Tetrachloroethane	79-34-5	< 10.0	Chloroform	67-66-3	< 10.0
1,1,2-Trichloroethane	79-00-5	< 10.0	cis-1,2-Dichloroethene	156-59-2	< 10.0
1,1-Dichloroethane	75-34-3	< 10.0	Ethylbenzene	100-41-4	< 10.0
1,1-Dichloroethene	75-35-4	< 10.0	Methylene chloride	75-09-2	< 10.0
1,2-Dichlorobenzene	95-50-1	< 10.0	Styrene	100-42-5	< 10.0
1,2-Dichloroethane	107-06-2	< 10.0	Tetrachloroethene	127-18-4	835
1,2-Dichloropropane	78-87-5	< 10.0	Toluene	108-88-3	< 10.0
1,3-Dichlorobenzene	541-73-1	< 10.0	Total Xylenes	1330-20-7	< 10.0
1,4-Dichlorobenzene	106-46-7	< 10.0	trans-1,2-Dichloroethene	156-60-5	< 10.0
Benzene	71-43-2	< 10.0	Trichloroethene	79-01-6	< 10.0
Carbon tetrachloride	56-23-5	< 10.0	Vinyl chloride	75-01-4	< 10.0
TVPH		< 1.0 mg/m ³			

Certificate of Analysis

QA/QC Results

Client:	Terracon 10625 W I-70 Frontage Road N., Suite 3 Wheatridge, CO 80033	Sample Name:	Method Blank
Project:	National Western Complex	Lab ID:	MB5-15
		Date Sampled:	
		Date Received:	
		Date Analyzed:	5/15/15

Vapor Sample Analysis - EPA Method TO-14

Surrogate Recoveries

Surrogate	Acceptance	% Recovery	Surrogate	Acceptance	% Recovery
Dibromofluoromethane	(70-130%)	89	Toluene-D8	(70-130%)	102
1,2-Dichloroethane-D4	(70-130%)	92	4-Bromofluorobenzene	(70-130%)	100

Compound	CAS #	Concentration (µg/m ³)	Compound	CAS #	Concentration (µg/m ³)
1,1,1-Trichloroethane	71-55-6	< 10.0	Chlorobenzene	108-90-7	< 10.0
1,1,2,2-Tetrachloroethane	79-34-5	< 10.0	Chloroform	67-66-3	< 10.0
1,1,2-Trichloroethane	79-00-5	< 10.0	cis-1,2-Dichloroethene	156-59-2	< 10.0
1,1-Dichloroethane	75-34-3	< 10.0	Ethylbenzene	100-41-4	< 10.0
1,1-Dichloroethene	75-35-4	< 10.0	Methylene chloride	75-09-2	< 10.0
1,2-Dichlorobenzene	95-50-1	< 10.0	Styrene	100-42-5	< 10.0
1,2-Dichloroethane	107-06-2	< 10.0	Tetrachloroethene	127-18-4	< 10.0
1,2-Dichloropropane	78-87-5	< 10.0	Toluene	108-88-3	< 10.0
1,3-Dichlorobenzene	541-73-1	< 10.0	Total Xylenes	1330-20-7	< 10.0
1,4-Dichlorobenzene	106-46-7	< 10.0	trans-1,2-Dichloroethene	156-60-5	< 10.0
Benzene	71-43-2	< 10.0	Trichloroethene	79-01-6	< 10.0
Carbon tetrachloride	56-23-5	< 10.0	Vinyl chloride	75-01-4	< 10.0
TVPH		< 1.0 mg/m ³			

Certificate of Analysis

Laboratory Control Sample

Client:	Terracon 10625 W I-70 Frontage Road N., Suite 3 Wheatridge, CO 80033	Sample Name:	Laboratory Control Sample (LCS)
Project:	National Western Complex	Lab ID:	LCS5-15
		Date Sampled:	
		Date Received:	
		Date Analyzed:	5/15/15

Vapor Sample Analysis - EPA Method TO-14

Surrogate Recoveries

Surrogate	Acceptance	% Recovery	Surrogate	Acceptance	% Recovery
Dibromofluoromethane	(70-130%)	93	Toluene-D8	(70-130%)	97
1,2-Dichloroethane-D4	(70-130%)	90	4-Bromofluorobenzene	(70-130%)	104

Compound	CAS #	% Recovery (80-120)	Compound	CAS #	% Recovery (80-120)
Vinyl chloride	75-01-4	95	Trichloroethene	79-01-6	100
1,1-Dichloroethene	75-35-4	90	1,1,2-Trichloroethane	79-00-5	93
Methylene chloride	75-09-2	87	Toluene	108-88-3	92
trans-1,2-Dichloroethene	156-60-5	97	Tetrachloroethene	127-18-4	99
1,1-Dichloroethane	75-34-3	90	Chlorobenzene	108-90-7	88
cis-1,2-Dichloroethene	156-59-2	88	Ethylbenzene	100-41-4	97
Chloroform	67-66-3	98	Total Xylenes	1330-20-7	90
1,2-Dichloroethane	107-06-2	93	Styrene	100-42-5	103
1,1,1-Trichloroethane	71-55-6	99	1,1,2,2-Tetrachloroethane	79-34-5	99
Carbon tetrachloride	56-23-5	104	1,3-Dichlorobenzene	541-73-1	103
Benzene	71-43-2	96	1,4-Dichlorobenzene	106-46-7	98
1,2-Dichloropropane	78-87-5	86	1,2-Dichlorobenzene	95-50-1	101
TVPH		91			

Certificate of Analysis

eANALYTICS
LABORATORY

May 28th 2015

Terracon
10625 W I-70 Frontage Road N., Suite 3
Wheatridge, CO 80033

Project: National Western Complex (Lab Work Order - 3356)

On May 23rd of 2015, eAnalytics Laboratory received 4 samples for the project named National Western Complex. As stated on the chain of custody, the requested analyses were for the following:

Analysis	Samples
Full List (EPA TO-14)	1-4

All quality control analyses associated with the requested tests were satisfactorily passed before the samples were run. Thank you for allowing eAnalytics Laboratory to provide laboratory services for you. If you have any questions please give us a call, we are happy to help.

Sincerely,



Christopher Dieken
Quality Assurance Manager



Todd Rhea
Laboratory Manager

eAnalytics Laboratory
(970) 667-6975
info@eAnalyticsLab.com



<h1 style="margin: 0;">eANALYTICS</h1> <h2 style="margin: 0;">LABORATORY</h2>																	
1767 Rocky Mountain Avenue Loveland CO 80538				Phone: (970) 667-6975				Fax: (970) 669-0941				www.eAnalyticsLab.com					
CLIENT INFORMATION <small>(*New Clients please fill out completely)</small>						ANALYSIS INFORMATION <small>(Select analysis by checking box on corresponding sample line)</small>						Other Instructions					
Company: Terracon Consultants						Number of Containers Matrix: (S) Soil (W) Water (V) Vapor (O) Other TO-14											
Project: National Western Complex																	
Project Manager: Steve Hoffmann																	
Sampler: Marshall Haccarath																	
Phone/Email: (970) 215-5303 / Steve.Hoffmann@terracon.com																	
Address: 10625 W. I-70 Frontage Rd N Suite 3 Wheat Ridge CO 80033																	
Lab ID	Sample Name	Sampling Date/Time	Matrix		Analysis												
1	SV-06	5/22/15 1230 AM	1	V	X												
2	SV-12	5/21/15 1400 AM	1	V	X												
3	SV-13	5/22/15 1330 AM	1	V	X												
4	MW-06	5/21/15 1100 AM	1	V	X												
		AM / PM															
		AM / PM															
		AM / PM															
		AM / PM															
		AM / PM															
		AM / PM															
		AM / PM															
		AM / PM															
		AM / PM															
		AM / PM															
Comments:																	
Turnaround Time (Business Days) TAT begins when sample is received by eANALYTICS <input checked="" type="radio"/> Normal (5-10 Days) <input type="radio"/> 3 Day (25%) Rush analysis requires an extra charge. <input type="radio"/> 2 Day (50%) If possible please inform eANALYTICS in <input type="radio"/> 1 Day (100%) advance for rush analysis. <input type="radio"/> Same Day (300%)									Record of Custody Relinquished by: <i>Marshall Haccarath</i> Date: 5/23/15 Company: Terracon Consultants Time: 0745 Received by: <i>Ronald M. Cook</i> Date: 5/23/15 Company: Executive Court Time: 0745 Relinquished by: <i>Ronald M. Cook</i> Date: 5/23/15 Company: Time: 0900 Received by: <i>[Signature]</i> Date: 5/23/15 Company: eANALYTICS Time: 9:00								
Colorado OPS Project : Yes / No For eANALYTICS Use Samples Received Intact: <input checked="" type="checkbox"/> / No Received Within Temperature Range (2-6°C) Yes / No Sample Preservative: Ice Acid Other																	

WO # 3356

eANALYTICS: Environmental testing made Easy

Page 1 of 1

Certificate of Analysis

Sample Information

Client:	Terracon 10625 W I-70 Frontage Road N., Suite 3 Wheatridge, CO 80033	Sample Name:	SV-06S
Project:	National Western Complex	Lab ID:	3356-1
		Date Sampled:	5/22/15
		Date Received:	5/23/15
		Date Analyzed:	5/23/15

Vapor Sample Analysis - EPA Method TO-14

Surrogate Recoveries

Surrogate	Acceptance	% Recovery	Surrogate	Acceptance	% Recovery
Dibromofluoromethane	(70-130%)	91	Toluene-D8	(70-130%)	97
1,2-Dichloroethane-D4	(70-130%)	99	4-Bromofluorobenzene	(70-130%)	96

Compound	CAS #	Concentration (µg/m ³)	Compound	CAS #	Concentration (µg/m ³)
1,1,1-Trichloroethane	71-55-6	< 10.0	Chlorobenzene	108-90-7	< 10.0
1,1,2,2-Tetrachloroethane	79-34-5	< 10.0	Chloroform	67-66-3	< 10.0
1,1,2-Trichloroethane	79-00-5	< 10.0	cis-1,2-Dichloroethene	156-59-2	< 10.0
1,1-Dichloroethane	75-34-3	< 10.0	Ethylbenzene	100-41-4	< 10.0
1,1-Dichloroethene	75-35-4	< 10.0	Methylene chloride	75-09-2	< 10.0
1,2-Dichlorobenzene	95-50-1	< 10.0	Styrene	100-42-5	< 10.0
1,2-Dichloroethane	107-06-2	< 10.0	Tetrachloroethene	127-18-4	180
1,2-Dichloropropane	78-87-5	< 10.0	Toluene	108-88-3	< 10.0
1,3-Dichlorobenzene	541-73-1	< 10.0	Total Xylenes	1330-20-7	< 10.0
1,4-Dichlorobenzene	106-46-7	< 10.0	trans-1,2-Dichloroethene	156-60-5	< 10.0
Benzene	71-43-2	< 10.0	Trichloroethene	79-01-6	< 10.0
Carbon tetrachloride	56-23-5	< 10.0	Vinyl chloride	75-01-4	< 10.0
TVPH		< 1.0 mg/m ³			

Certificate of Analysis

Sample Information

Client:	Terracon 10625 W I-70 Frontage Road N., Suite 3 Wheatridge, CO 80033	Sample Name:	SV-12S
Project:	National Western Complex	Lab ID:	3356-2
		Date Sampled:	5/21/15
		Date Received:	5/23/15
		Date Analyzed:	5/23/15

Vapor Sample Analysis - EPA Method TO-14

Surrogate Recoveries

Surrogate	Acceptance	% Recovery	Surrogate	Acceptance	% Recovery
Dibromofluoromethane	(70-130%)	98	Toluene-D8	(70-130%)	98
1,2-Dichloroethane-D4	(70-130%)	98	4-Bromofluorobenzene	(70-130%)	93

Compound	CAS #	Concentration (µg/m ³)	Compound	CAS #	Concentration (µg/m ³)
1,1,1-Trichloroethane	71-55-6	< 10.0	Chlorobenzene	108-90-7	< 10.0
1,1,2,2-Tetrachloroethane	79-34-5	< 10.0	Chloroform	67-66-3	< 10.0
1,1,2-Trichloroethane	79-00-5	< 10.0	cis-1,2-Dichloroethene	156-59-2	< 10.0
1,1-Dichloroethane	75-34-3	< 10.0	Ethylbenzene	100-41-4	26.6
1,1-Dichloroethene	75-35-4	< 10.0	Methylene chloride	75-09-2	< 10.0
1,2-Dichlorobenzene	95-50-1	< 10.0	Styrene	100-42-5	< 10.0
1,2-Dichloroethane	107-06-2	< 10.0	Tetrachloroethene	127-18-4	20.2
1,2-Dichloropropane	78-87-5	< 10.0	Toluene	108-88-3	55.2
1,3-Dichlorobenzene	541-73-1	< 10.0	Total Xylenes	1330-20-7	637
1,4-Dichlorobenzene	106-46-7	< 10.0	trans-1,2-Dichloroethene	156-60-5	< 10.0
Benzene	71-43-2	29.2	Trichloroethene	79-01-6	< 10.0
Carbon tetrachloride	56-23-5	< 10.0	Vinyl chloride	75-01-4	< 10.0
TVPH		190 mg/m ³			

Certificate of Analysis

Sample Information

Client:	Terracon 10625 W I-70 Frontage Road N., Suite 3 Wheatridge, CO 80033	Sample Name:	SV-13S
Project:	National Western Complex	Lab ID:	3356-3
		Date Sampled:	5/22/15
		Date Received:	5/23/15
		Date Analyzed:	5/23/15

Vapor Sample Analysis - EPA Method TO-14

Surrogate Recoveries

Surrogate	Acceptance	% Recovery	Surrogate	Acceptance	% Recovery
Dibromofluoromethane	(70-130%)	93	Toluene-D8	(70-130%)	100
1,2-Dichloroethane-D4	(70-130%)	101	4-Bromofluorobenzene	(70-130%)	99

Compound	CAS #	Concentration (µg/m ³)	Compound	CAS #	Concentration (µg/m ³)
1,1,1-Trichloroethane	71-55-6	< 10.0	Chlorobenzene	108-90-7	< 10.0
1,1,2,2-Tetrachloroethane	79-34-5	< 10.0	Chloroform	67-66-3	< 10.0
1,1,2-Trichloroethane	79-00-5	< 10.0	cis-1,2-Dichloroethene	156-59-2	< 10.0
1,1-Dichloroethane	75-34-3	< 10.0	Ethylbenzene	100-41-4	< 10.0
1,1-Dichloroethene	75-35-4	< 10.0	Methylene chloride	75-09-2	< 10.0
1,2-Dichlorobenzene	95-50-1	< 10.0	Styrene	100-42-5	< 10.0
1,2-Dichloroethane	107-06-2	< 10.0	Tetrachloroethene	127-18-4	42.2
1,2-Dichloropropane	78-87-5	< 10.0	Toluene	108-88-3	< 10.0
1,3-Dichlorobenzene	541-73-1	< 10.0	Total Xylenes	1330-20-7	< 10.0
1,4-Dichlorobenzene	106-46-7	< 10.0	trans-1,2-Dichloroethene	156-60-5	< 10.0
Benzene	71-43-2	< 10.0	Trichloroethene	79-01-6	< 10.0
Carbon tetrachloride	56-23-5	< 10.0	Vinyl chloride	75-01-4	< 10.0
TVPH		< 1.0 mg/m ³			

Certificate of Analysis

Sample Information

Client:	Terracon 10625 W I-70 Frontage Road N., Suite 3 Wheatridge, CO 80033	Sample Name:	MW-06
Project:	National Western Complex	Lab ID:	3356-4
		Date Sampled:	5/21/15
		Date Received:	5/23/15
		Date Analyzed:	5/23/15

Vapor Sample Analysis - EPA Method TO-14

Surrogate Recoveries

Surrogate	Acceptance	% Recovery	Surrogate	Acceptance	% Recovery
Dibromofluoromethane	(70-130%)	98	Toluene-D8	(70-130%)	100
1,2-Dichloroethane-D4	(70-130%)	97	4-Bromofluorobenzene	(70-130%)	100

Compound	CAS #	Concentration (µg/m ³)	Compound	CAS #	Concentration (µg/m ³)
1,1,1-Trichloroethane	71-55-6	< 10.0	Chlorobenzene	108-90-7	< 10.0
1,1,2,2-Tetrachloroethane	79-34-5	< 10.0	Chloroform	67-66-3	< 10.0
1,1,2-Trichloroethane	79-00-5	< 10.0	cis-1,2-Dichloroethene	156-59-2	< 10.0
1,1-Dichloroethane	75-34-3	< 10.0	Ethylbenzene	100-41-4	< 10.0
1,1-Dichloroethene	75-35-4	< 10.0	Methylene chloride	75-09-2	< 10.0
1,2-Dichlorobenzene	95-50-1	< 10.0	Styrene	100-42-5	< 10.0
1,2-Dichloroethane	107-06-2	< 10.0	Tetrachloroethene	127-18-4	54.8
1,2-Dichloropropane	78-87-5	< 10.0	Toluene	108-88-3	< 10.0
1,3-Dichlorobenzene	541-73-1	< 10.0	Total Xylenes	1330-20-7	< 10.0
1,4-Dichlorobenzene	106-46-7	< 10.0	trans-1,2-Dichloroethene	156-60-5	< 10.0
Benzene	71-43-2	< 10.0	Trichloroethene	79-01-6	< 10.0
Carbon tetrachloride	56-23-5	< 10.0	Vinyl chloride	75-01-4	< 10.0
TVPH		81.9 mg/m ³			

Certificate of Analysis

QA/QC Results

Client:	Terracon 10625 W I-70 Frontage Road N., Suite 3 Wheatridge, CO 80033	Sample Name:	Method Blank
Project:	National Western Complex	Lab ID:	MB5-23
		Date Sampled:	
		Date Received:	
		Date Analyzed:	5/23/15

Vapor Sample Analysis - EPA Method TO-14

Surrogate Recoveries

Surrogate	Acceptance	% Recovery	Surrogate	Acceptance	% Recovery
Dibromofluoromethane	(70-130%)	88	Toluene-D8	(70-130%)	94
1,2-Dichloroethane-D4	(70-130%)	101	4-Bromofluorobenzene	(70-130%)	92

Compound	CAS #	Concentration (µg/m ³)	Compound	CAS #	Concentration (µg/m ³)
1,1,1-Trichloroethane	71-55-6	< 10.0	Chlorobenzene	108-90-7	< 10.0
1,1,2,2-Tetrachloroethane	79-34-5	< 10.0	Chloroform	67-66-3	< 10.0
1,1,2-Trichloroethane	79-00-5	< 10.0	cis-1,2-Dichloroethene	156-59-2	< 10.0
1,1-Dichloroethane	75-34-3	< 10.0	Ethylbenzene	100-41-4	< 10.0
1,1-Dichloroethene	75-35-4	< 10.0	Methylene chloride	75-09-2	< 10.0
1,2-Dichlorobenzene	95-50-1	< 10.0	Styrene	100-42-5	< 10.0
1,2-Dichloroethane	107-06-2	< 10.0	Tetrachloroethene	127-18-4	< 10.0
1,2-Dichloropropane	78-87-5	< 10.0	Toluene	108-88-3	< 10.0
1,3-Dichlorobenzene	541-73-1	< 10.0	Total Xylenes	1330-20-7	< 10.0
1,4-Dichlorobenzene	106-46-7	< 10.0	trans-1,2-Dichloroethene	156-60-5	< 10.0
Benzene	71-43-2	< 10.0	Trichloroethene	79-01-6	< 10.0
Carbon tetrachloride	56-23-5	< 10.0	Vinyl chloride	75-01-4	< 10.0
TVPH		< 1.0 mg/m ³			

Certificate of Analysis

Laboratory Control Sample

Client:	Terracon 10625 W I-70 Frontage Road N., Suite 3 Wheatridge, CO 80033	Sample Name:	Laboratory Control Sample (LCS)
Project:	National Western Complex	Lab ID:	LCS5-23
		Date Sampled:	
		Date Received:	
		Date Analyzed:	5/23/15

Vapor Sample Analysis - EPA Method TO-14

Surrogate Recoveries

Surrogate	Acceptance	% Recovery	Surrogate	Acceptance	% Recovery
Dibromofluoromethane	(70-130%)	92	Toluene-D8	(70-130%)	99
1,2-Dichloroethane-D4	(70-130%)	103	4-Bromofluorobenzene	(70-130%)	90

Compound	CAS #	% Recovery (80-120)	Compound	CAS #	% Recovery (80-120)
Vinyl chloride	75-01-4	88	Trichloroethene	79-01-6	101
1,1-Dichloroethene	75-35-4	93	1,1,2-Trichloroethane	79-00-5	98
Methylene chloride	75-09-2	91	Toluene	108-88-3	97
trans-1,2-Dichloroethene	156-60-5	101	Tetrachloroethene	127-18-4	101
1,1-Dichloroethane	75-34-3	93	Chlorobenzene	108-90-7	96
cis-1,2-Dichloroethene	156-59-2	85	Ethylbenzene	100-41-4	90
Chloroform	67-66-3	98	Total Xylenes	1330-20-7	91
1,2-Dichloroethane	107-06-2	96	Styrene	100-42-5	87
1,1,1-Trichloroethane	71-55-6	100	1,1,2,2-Tetrachloroethane	79-34-5	88
Carbon tetrachloride	56-23-5	95	1,3-Dichlorobenzene	541-73-1	96
Benzene	71-43-2	89	1,4-Dichlorobenzene	106-46-7	100
1,2-Dichloropropane	78-87-5	87	1,2-Dichlorobenzene	95-50-1	93
TVPH		86			

Test Report

eANALYTICS LABORATORY

May 29, 2015

Client: Terracon Consultants
Project: National Western Complex
Lab ID: 3307 & 3356
Date Samples Received: 5/15/15 & 5/23/2015
Number of Samples: 8
Sample Condition: Samples arrived intact and in appropriate sample containers

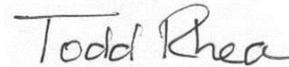
The quality control procedures associated with the requested analyses were satisfactorily passed before the samples were run.

Thank you for allowing eAnalytics Laboratory to provide laboratory services for you.

Sincerely,



Christopher Dieken
Quality Assurance Manager



Todd Rhea
Laboratory Manager

eAnalytics Laboratory

4130 Clydesdale Parkway Loveland CO 80538

Chain of Custody

eANALYTICS

LABORATORY

Chain of Custody Form

eANALYTICS LABORATORY			eANALYTICS LABORATORY																	
1767 Rocky Mountain Avenue Loveland CO 80538 Phone: (970) 667-6975 Fax: (970) 669-0941 www.eAnalyticsLab.com			1767 Rocky Mountain Avenue Loveland CO 80538 Phone: (970) 667-6975 Fax: (970) 669-0941 www.eAnalyticsLab.com																	
CLIENT INFORMATION <small>(*New Clients please fill out completely)</small>			ANALYSIS INFORMATION <small>(Select analysis by checking box on corresponding sample line)</small>																	
Company: <u>Terracon Consultants</u>			Number of Containers	Matrix (S) Soil (W) Water (V) Vapor (O) Other	TO-14	Other Instructions <u>Methane, Ethane, Propane added 5/21/15 per Marshall Hazzard T.R.</u>														
Project: <u>National Western complex</u>																				
Project Manager: <u>Steve Hoffmann</u>																				
Sampler: <u>Marshall Hazzard</u>																				
Phone/Email: <u>(970) 215-5303 / steve.hoffmann@terracon.com</u>																				
Address: <u>10625 W. I-70 Frontage Rd N Suite 3 Wheat Ridge CO 80033</u>																				
Lab ID	Sample Name	Sampling Date/Time																		
1	SV-06	5/22/15 1230 AM	1	V	X															
2	SV-12	5/21/15 1400 AM	1	V	X															
3	SV-13	5/22/15 1330 AM	1	V	X															
4	M.W-06	5/21/15 1100 AM	1	V	X															
		AM / PM																		
		AM / PM																		
		AM / PM																		
		AM / PM																		
		AM / PM																		
		AM / PM																		
		AM / PM																		
		AM / PM																		
		AM / PM																		
Comments:																				
Turnaround Time (Business Days) <small>TAT begins when sample is received by eANALYTICS</small> <input checked="" type="radio"/> Normal (5-10 Days) <input type="radio"/> 3 Day (25%) <input type="radio"/> 2 Day (50%) <input type="radio"/> 1 Day (100%) <input type="radio"/> Same Day (300%) Rush analysis requires an extra charge. If possible please inform eANALYTICS in advance for rush analysis.			Record of Custody Relinquished by: <u>Marshall Hazzard</u> Date: <u>5/23/15</u> Company: <u>Terracon Consultants</u> Time: <u>0745 PM</u> Received by: <u>Ronald M. Erben</u> Date: <u>5/23/15</u> Company: <u>Executive Courer</u> Time: <u>0745 PM</u> Relinquished by: <u>Ronald M. Erben</u> Date: <u>5/23/15</u> Company: <u>eANALYTICS</u> Time: <u>0900 PM</u> Received by: <u>[Signature]</u> Date: <u>5/23/15</u> Company: <u>eANALYTICS</u> Time: <u>900 PM</u>																	
Colorado OPS Project: Yes / No For eANALYTICS Use Samples Received Intact: <u>Yes</u> / No Received Within Temperature Range (2-6°C): Yes / No Sample Preservative: Ice / Acid / Other																				

WO # 3356

eANALYTICS: Environmental testing made Easy

Page 1 of 1

Test Report

eANALYTICS LABORATORY

June 4, 2015

Client: Terracon Consultants
Project: National Western Complex
Lab ID: 3307 & 3356
Date Samples Received: 5/15/15 & 5/23/2015
Number of Samples: 8
Sample Condition: Samples arrived intact and in appropriate sample containers

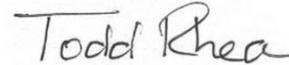
The quality control procedures associated with the requested analyses were satisfactorily passed before the samples were run.

Thank you for allowing eAnalytics Laboratory to provide laboratory services for you.

Sincerely,



Christopher Dieken
Quality Assurance Manager



Todd Rhea
Laboratory Manager

eAnalytics Laboratory

4130 Clydesdale Parkway Loveland CO 80538

Chain of Custody

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Chain of Custody Form

eANALYTICS LABORATORY			1767 Rocky Mountain Avenue Loveland CO 80538 Phone: (970) 667-6975 Fax: (970) 669-0941 www.eAnalyticsLab.com		
CLIENT INFORMATION <small>(*New Clients please fill out completely)</small>			ANALYSIS INFORMATION <small>(Select analysis by checking box on corresponding sample line)</small>		
Company: <u>Terracon Consultants</u> Project: <u>National Western complex</u> Project Manager: <u>Steve Hoffmann</u> Sampler: <u>Marshall Hazzard</u> Phone/Email: <u>(970) 215-5303 / Steve.Hoffmann@terracon.com</u> Address: <u>10625 W. I-70 Frontage Rd N Suite 3</u> <u>Wheat Ridge CO 80033</u>			Number of Containers Matrix: (S) Soil (W) Water (V) Vapor (O) Other <u>TD-14</u>		
			Other Instructions <u>Methane, Ethane, Propane added 5/21/15 per Marshall Hazzard T.R.</u>		
Lab ID	Sample Name	Sampling Date/Time			
1	SV-06	5/22/15 1230 AM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	SV-12	5/21/15 1400 AM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	SV-13	5/22/15 1330 AM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	MW-06	5/21/15 1100 AM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		AM / PM			
		AM / PM			
		AM / PM			
		AM / PM			
		AM / PM			
		AM / PM			
		AM / PM			
		AM / PM			
		AM / PM			
		AM / PM			
		AM / PM			
Comments:					
Turnaround Time (Business Days) <small>TAT begins when sample is received by eANALYTICS</small> <input checked="" type="radio"/> Normal (5-10 Days) <input type="radio"/> 3 Day (25%) <small>Rush analysis requires an extra charge.</small> <input type="radio"/> 2 Day (50%) <small>If possible please inform eANALYTICS in advance for rush analysis.</small> <input type="radio"/> 1 Day (100%) <input type="radio"/> Same Day (300%)			Record of Custody Relinquished by: <u>Marshall Hazzard</u> Date: <u>5/23/15</u> Company: <u>Terracon Consultants</u> Time: <u>0745 AM</u> Received by: <u>Ronald M. Cook</u> Date: <u>5/23/15</u> Company: <u>Executive Course</u> Time: <u>0745 AM</u> Relinquished by: <u>Ronald M. Cook</u> Date: <u>5/23/15</u> Company: <u>eANALYTICS</u> Time: <u>0900 AM</u> Received by: <u>[Signature]</u> Date: <u>5/23/15</u> Company: <u>eANALYTICS</u> Time: <u>900 AM</u>		
Colorado OPS Project: Yes / No For eANALYTICS Use Samples Received Intact: <u>Yes</u> / No Received Within Temperature Range (2-6°C): Yes / No Sample Preservative: Ice / Acid / Other					

WO # 3356

eANALYTICS: Environmental testing made Easy

Page 1 of 1

Test Report

eANALYTICS LABORATORY

May 29, 2015

Client: Terracon Consultants
Project: National Western Complex
Lab ID: 3307 & 3356
Date Samples Received: 5/15/15 & 5/23/2015
Number of Samples: 8
Sample Condition: Samples arrived intact and in appropriate sample containers

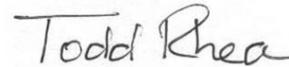
The quality control procedures associated with the requested analyses were satisfactorily passed before the samples were run.

Thank you for allowing eAnalytics Laboratory to provide laboratory services for you.

Sincerely,



Christopher Dieken
Quality Assurance Manager



Todd Rhea
Laboratory Manager

eAnalytics Laboratory

4130 Clydesdale Parkway Loveland CO 80538

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eANALYTICS LABORATORY			1767 Rocky Mountain Avenue Loveland CO 80538 Phone: (970) 667-6975 Fax: (970) 669-0941 www.eAnalyticsLab.com																		
CLIENT INFORMATION <small>(*New Clients please fill out completely)</small>			ANALYSIS INFORMATION <small>(Select analysis by checking box on corresponding sample line)</small>																		
Company: Terracon Consultants			Number of Containers	Matrix (S) Soil (W) Water (V) Vapor (O) Other	TO-14	Other Instructions															
Project: National Western complex						Methane, Ethane, Propane added 5/21/15 per Marshall Blawie T.R.															
Project Manager: Steve Hoffman																					
Sampler: Marshall Hazzard																					
Phone/Email: (970) 215-5303 / Steve.Hoffman@terracon.com																					
Address: 10625 W. I-70 Frontage Rd N Suite 3 Wheat Ridge CO 80033																					
Lab ID	Sample Name	Sampling Date/Time																			
1	SV-06	5/22/15 1230 AM EST	1	V	X																
2	SV-12 SV-12S	5/21/15 1400 AM EST	1	V	X																
3	SV-13 per Steve Hoffman 11/4/15 det.	5/22/15 1330 AM EST	1	V	X																
4	MW-06	5/21/15 1100 AM EST	1	V	X																
		AM / PM																			
		AM / PM																			
		AM / PM																			
		AM / PM																			
		AM / PM																			
		AM / PM																			
		AM / PM																			
		AM / PM																			
Comments:																					
Turnaround Time (Business Days) <small>TAT begins when sample is received by eANALYTICS</small> <input checked="" type="radio"/> Normal (5-10 Days) <input type="radio"/> 3 Day (25%) <input type="radio"/> 2 Day (50%) <input type="radio"/> 1 Day (100%) <input type="radio"/> Same Day (300%) Rush analysis requires an extra charge. If possible please inform eANALYTICS in advance for rush analysis.			Record of Custody Relinquished by: <u>Marshall Hazzard</u> Date: <u>5/23/15</u> Company: <u>Terracon Consultants</u> Time: <u>0745</u> Received by: <u>Russell M. Cook</u> Date: <u>5/23/15</u> Company: <u>Executive Course</u> Time: <u>0745</u> Relinquished by: <u>Russell M. Cook</u> Date: <u>5/23/15</u> Company: <u>eANALYTICS</u> Time: <u>0900</u> Received by: <u>[Signature]</u> Date: <u>5/23/15</u> Company: <u>eANALYTICS</u> Time: <u>9:00</u>																		
Colorado OPS Project: Yes / No For eANALYTICS Use Samples Received Intact: <u>Yes</u> / No Received Within Temperature Range (2-6°C): Yes / No Sample Preservative: Ice / Acid / Other / None																					

WO # 3356

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Page 1 of 1

G5

Reservoir Environmental Reports for Asbestos



April 14, 2015

Subcontract Number: NA
Laboratory Report: RES 317340-1
Project # / P.O. # None Given
Project Description: None Given

Marshall Haworth
Terracon, Inc. (Wheat Ridge)
10625 W. I-70 Frontage Rd. N., Ste 3
Wheat Ridge CO 80033

Dear Customer,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA), Lab ID 101533 - Accreditation Certificate #480 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Reservoirs Environmental, Inc. has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 317340-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,

Steven Mari for

Jeanne Spencer
President

RESERVOIRS ENVIRONMENTAL INC.

NVLAP Lab Code 101896-0

TABLE: PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number: **RES 317340-1**
 Client: **Terracon, Inc. (Wheat Ridge)**
 Client Project Number / P.O.: **None Given**
 Client Project Description: **None Given**
 Date Samples Received: **April 13, 2015**
 Method: **EPA 600/R-93/116 - Short Report, Bulk**
 Turnaround: **24 Hour**
 Date Samples Analyzed: **April 14, 2015**

ND=None Detected
 TR=Trace, <1% Visual Estimate
 Trem-Act=Tremolite-Actinolite

Client Sample Number	Lab ID Number	L A Y E R	Physical Description	Sub Part (%)	Asbestos Content		Non Asbestos Fibrous Components (%)	Non-Fibrous Components (%)
					Mineral	Visual Estimate (%)		
DB01-SB17-47-01	EM 1384934	A	Black fibrous tar w/ black tar	100		ND	40	60
DB01-SB17-47-02	EM 1384935	A	Black fibrous tar w/ black tar	100		ND	40	60
DB01-SB17-47-03	EM 1384936	A	Black fibrous tar w/ black tar	100	Chrysotile	TR	40	60

TEM Analysis recommended for organically bound material (i.e. floor tile) if PLM results are <1%.

Paul D. LoScalzo
Paul D. LoScalzo

Analyst / Data QA



May 18, 2015

Subcontract Number: NA
Laboratory Report: RES 319869-1
Project # / P.O. # 25157010
Project Description: National Western Complex

Brian Ramsell
Terracon, Inc. (Wheat Ridge)
10625 W. I-70 Frontage Rd. N., Ste 3
Wheat Ridge CO 80033

Dear Customer,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA), Lab ID 101533 - Accreditation Certificate #480 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Reservoirs Environmental, Inc. has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 319869-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,

A handwritten signature in blue ink that reads "Elisa Mari". Below the signature, the text "Elisa Mari for" is printed in a smaller, blue, sans-serif font.

Jeanne Spencer
President

RESERVOIRS ENVIRONMENTAL INC.

NVLAP Lab Code 101896-0

TABLE: PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES Job Number: **RES 319869-1**
 Client: **Terracon, Inc. (Wheat Ridge)**
 Client Project Number / P.O.: **25157010**
 Client Project Description: **National Western Complex**
 Date Samples Received: **May 11, 2015**
 Method: **EPA 600/R-93/116 - Short Report, Bulk**
 Turnaround: **3-5 Day**
 Date Samples Analyzed: **May 18, 2015**

ND=None Detected
 TR=Trace, <1% Visual Estimate
 Trem/Act=Tremolite/Actinolite

Client Sample Number	Lab ID Number	L A Y E R	Physical Description	Sub Part (%)	Asbestos Content		Non Asbestos Fibrous Components (%)	Non-Fibrous Components (%)
					Mineral	Visual Estimate (%)		
DB2-TP1-4-01	EM 1402859	A	Black fibrous tar w/ black tar	100		ND	20	80
DB2-TP1-4-02	EM 1402860	A	Black fibrous tar w/ black tar	100		ND	20	80
DB2-TP1-4-03	EM 1402861	A	Black fibrous tar w/ black tar	100		ND	20	80
DB2-TP7-4-04	EM 1402862	A	Black fibrous tar w/ black tar	100		ND	20	80
DB2-TP7-4-05	EM 1402863	A	Brown fibrous material	5		ND	80	20
		B	Brown rock fragments	30		ND	0	100
		C	Black fibrous tar w/ black tar	65		ND	20	80
DB2-TP7-4-06	EM 1402864	A	Brown fibrous material	2		ND	80	20
		B	Tan/brown granular material	18		ND	0	100
		C	Black fibrous tar w/ black tar	80		ND	20	80
DB3-TP2-5-01	EM 1402865	A	Tan ceramic material	100		ND	0	100
DB3-TP2-5-02	EM 1402866	A	Tan ceramic material	100		ND	0	100
DB3-TP2-5-03	EM 1402867	A	Tan ceramic material	100		ND	0	100

TEM Analysis recommended for organically bound material (i.e. floor tile) if PLM results are <1%.


Liu Wenlong

Analyst / Data QA

Due Date: 5-14-18
 Due Time: 5:25pm



Reservoirs Environmental, Inc.

RES 319869

5801 Logan St. Denver, CO 80216 • Ph: 303 364-1996 • Fax 303-477-4275 • Toll Free: 866 RES-ENV
 Pager: 303-608-2088

INVOICE TO: (IF DIFFERENT)

CONTACT INFORMATION:

Company: Terracon Consultants Contact: Marshall Hawthorth
 Address: 1625 West I-70 Frontage Rd N. Phone: 970-240-1636
Wheat Ridge, CO 80033 Fax: Cell/pager:
 Project Number and/or P.O.#: 25157010 First Data Deliverable Email Address: Marshall.Haworth@terracon.com
 Project Description/Location: National Western Complex

ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm
 PLM / PCM / TEM RUSH (Same Day) PRIORITY (Next Day) STANDARD
 (Rush PCM = 2hr, TEM = 6hr.)
CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 5pm
 Metals / Dust RUSH 24 hr. 3-5 Day
 RCRA 8 / Metals & Welding RUSH 5 day 10 day
 Fume Scan / TCLP RUSH 24 hr. 3 day 5 Day
 Organics 24 hr. 3 day 5 Day
MICROBIOLOGY LABORATORY HOURS: Weekdays: 8am - 6pm
 E.coli O157:H7, Coliforms, S.aureus 24 hr. 2 Day 3-5 Day
 Salmonella, Listeria, E.coli, APC, Y & M 48 Hr. 3-5 Day
 Mold RUSH 24 Hr. 48 Hr. 3 Day 5 Day
 Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for afterhours, weekends and holidays.
 Special Instructions: Stop DB2 after first positive

Client sample ID number	(Sample ID's must be unique)	PLM - Short report, Long report, Point Count	TEM - AHERA Level II, 7402, ISO, +/-, Quant	Semi-quant, Micro-vac, ISO indirect Preps	PCM - 7400A, 7400B, OSHA	DUST - Total, Respirable	METALS - Analyte(s)	RCRA 8, TCLP, Welding Fume, Metals Scan	ORGANICS - METH	Salmonella: +/-	E.coli O157:H7: +/-	Listeria: +/-	Aerobic Plate Count: +/- or Quantification	Coliforms: +/- or Quantification	B.aureus: +/- or Quantification	Y & M: +/- or Quantification	Mold: +/-, Identification, Quantification	SAMPLER'S INITIALS OR OTHER NOTES	Sample Volume (L) / Area	Matrix Code	# Containers	Date Collected (m/d/yyyy)	Time Collected (hr:min:ap)	EM Number (Laboratory Use Only)	
1	DB2-TP1-4-01	X																				5-7-15		1402859	
2	DB2-TP1-4-02	X																					5-7-15		60
3	DB2-TP1-4-03	X																					5-7-15		2MJ
4	DB2-TP7-4-04	X																					5-8-15		5
5	DB2-TP7-4-05	X																					5-8-15		5
6	DB2-TP7-4-06	X																					5-8-15		5
7	DB3-TP2-5-01	X																					5-8-15		5
8	DB3-TP2-5-02	X																					5-8-15		5
9	DB3-TP2-5-03	X																					5-8-15		5
10																									

Number of samples received: 9 (Additional samples shall be listed on attached long form.)
 NOTE: REI will analyze incoming samples based upon information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain of Custody shall constitute an analytical services agreement with payment terms of NET 30 days, failure to comply with payment terms may result in a 1.5% monthly interest surcharge.

Relinquished By: [Signature] Date/Time: 05/11/15 9:25
 Laboratory Use Only Carrier: Nand
 Received By: [Signature] Date/Time: 5-11-15 5:25
 Results: Contact: Phone Email Fax Date Time Initials Contact: Phone Email Fax Date Time Initials

APPENDIX H

SUBSURFACE INVESTIGATION PINYON ENVIRONMENTAL, NOVEMBER 5, 2015

November 5, 2015

Subsurface Investigation

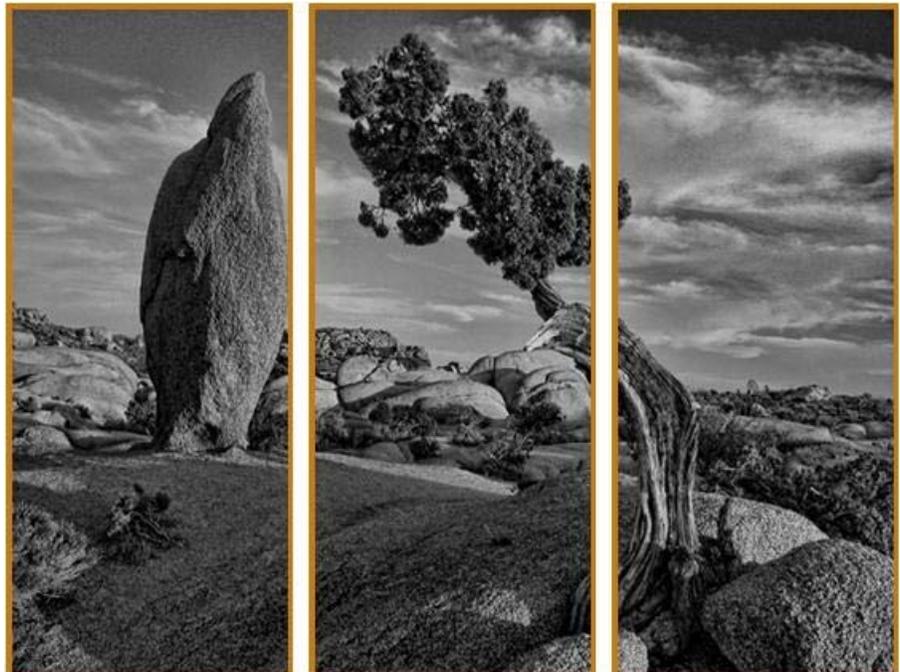
National Western Center Redevelopment
Brighton Boulevard and Interstate 70
Denver, Colorado

Prepared For:

City and County of Denver
Department of Environmental Health
300 West 14th Avenue, Department 310
Denver, Colorado 80204

Pinyon Project No.:

I/15-007-10.2002





Corporate Headquarters
9100 West Jewell Avenue, Suite 200 Lakewood, CO 80232
TEL 303 980 5200 FAX 303 980 0089
www.pinyon-env.com

November 5, 2015

Subsurface Investigation

National Western Center Redevelopment
Brighton Boulevard and Interstate 70
Denver, Colorado

Prepared For:

City and County of Denver
Department of Environmental Health
300 West 14th Avenue, Department 310
Denver, Colorado 80204

Pinyon Project No.:

I/15-007-10.2002

Prepared by:

A handwritten signature in blue ink, appearing to read "Timothy R. Grenier".

Timothy R. Grenier, E.I.T.
Environmental Engineer

Reviewed by:

A handwritten signature in blue ink, appearing to read "Russ Cirillo".

Russ Cirillo, P.E.
Environmental Engineer

Reviewed by:

A handwritten signature in blue ink, appearing to read "Brian R. Partington".

Brian Partington
Manager – Water Resources

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I. Introduction and Purpose

Pinyon Environmental, Inc. (Pinyon), has completed a subsurface investigation for the National Western Center Redevelopment Project (National Western Complex) in Denver, Colorado (Figure 1). The investigation focused on two geographic areas; one to the north and east of the National Western Complex where potential methane migration required further evaluation; and a second area to the east of the of the National Western Complex along Brighton Boulevard where chlorinated solvents in groundwater required further delineation. The aforementioned areas were investigated to evaluate:

- Potential for methane migration from the Denver Public Schools (DPS) property (former urban fill location) towards the recreation center located north of East 48th Street and the residential areas located south of East 48th Street.
- Potential for chlorinated solvent impacted groundwater to migrate onto the National Western Complex from areas southeast of the National Western Complex.
- Potential for vapor intrusion impacts due to chlorinated solvent partitioning from groundwater in the residential areas east of Brighton Boulevard.

The subsurface investigation addresses environmental conditions that could potentially impact future construction activities, identifies needs for worker protection during construction, and to evaluate potential indoor air hazards for occupants and residents of current and future structures.

I.1 General Site Information

Address: Brighton Boulevard and Interstate 70 (I-70)

City, State: Denver, Colorado

County: Denver

Intersection(s): Brighton Boulevard and East 46th Avenue; High; High Street and East 48th Avenue

Other Roads: Between Brighton Boulevard and Race Street along East 48th Avenue; Between the east-bound onramp for I-70 and East 47th Avenue along Brighton Boulevard

I.2 Site History

A *Limited Phase II Environmental Site Assessment (ESA) Report* (Terracon, 2015) was recently conducted by Terracon Consulting Engineers and Scientists (Terracon) in areas of the National Western Complex. Two areas of concern were identified during the Phase II ESA. A location on the west side of Brighton Boulevard, described as SV-12 in the Phase II ESA, had elevated levels of methane (approximately 16 percent), presumably emanating from the former urban fill site owned by DPS. Historically, methane has been identified at the urban fill site in concentrations as high as 50% combined with 45% carbon dioxide and the balance of other gases at 5%. Tetrachloroethylene (PCE) was identified in the groundwater located in the southeastern, central, and northern areas of the National Western Complex. The previous investigation did not confirm whether off-site chlorinated solvents were migrating into the National Western Complex.

2. Methods

Soil vapor and groundwater monitoring well installation work was completed by Vista GeoScience (Vista) of Golden, Colorado, using a direct-push system.

Methane Migration Evaluation

Pinyon evaluated for potential methane migration by implementing the following investigation program:

- Prior to the start of field activities, a notice of intent to construct monitoring holes was provided to the Office of the State Engineer. For work in the street, a traffic control plan was prepared (and subsequently implemented) and a street-cut permit was obtained from the City; a permit was obtained from the Denver Parks and Recreation Department (Parks) for work completed on Parks-owned property.
- Prior to borehole advancement, Pinyon arranged for underground public utility locates through the Utility Notification Center of Colorado (UNCC). Additionally, a private utility locator was contracted to check utilities within the project limits.
- Soil screening samples collected during boring advancement were field screened for non-specific VOCs using a photoionization detector (PID) in accordance with Pinyon Standard Operating Procedures (SOPs). Field screening measurements were documented on a boring log (Appendix A). Because none of these locations were suspected of shallow soil contamination, and field screening results did not suggest otherwise, soil samples were not submitted for laboratory analysis.
- Pinyon installed four soil vapor borings with nested soil vapor points at five and 10 foot depths in each boring (eight total soil vapor points) at the site (Figure 2). The borings were advanced using direct-push techniques with soil gas implants and Teflon tubing; 10/20 sand used to fill the annular space surrounding the probes. The nested probe depths were isolated using a hydrated bentonite seal to prevent vertical leakage within the borehole. The borehole locations were positioned to evaluate soil gas concentrations between the urban fill and residential housing and recreation center. Each new soil vapor point, as well as two existing soil vapor points, were screened using a Landtec GEM 5000. A third existing soil vapor point, SV-13, was planned to be screened, but could not be found in the area located on the historical map.
- Field screening data was evaluated, and seven soil vapor points were selected and sampled for methane, ethane, and propane using modified ASTM Method D-1945. Soil vapor points with elevated methane concentrations and/or close proximity to the recreation center or residences were given the highest priority for sampling. Analytical services were provided by Eurofins Air Toxics in Folsom, CA.

Chlorinated Solvent Migration Evaluation

Through discussions with the City and County of Denver (CCOD), the primary delineation efforts for this project are focused on locations hydraulically upgradient of the corner of Franklin Street and East 47th Street. The delineation was completed as follows:

- Prior to the start of field activities, a notice of intent to construct monitoring holes was provided to the Office of the State Engineer; utility clearance and permitting was completed as previously described.
- Soil samples collected during boring advancement were field screened for non-specific VOCs using a PID in accordance with Pinyon SOPs. Field screening measurements were documented on a soil boring log (Appendix A). Because none of these locations were suspected of shallow soil contamination and field screening results did not suggest otherwise, soil samples were not submitted for laboratory analysis.

- Pinyon installed and collected groundwater samples from two groundwater monitoring wells and collected one groundwater sample from an existing monitoring well (Figure 2).
- Monitoring well MW200 was constructed with one-inch diameter polyvinyl chloride (PVC) well materials, with ten feet of 0.01-inch slotted well screen placed in the bottom of the boring with blank casing threaded to the ground surface. The annular space was filled with 10/20 silica sand up to approximately one foot above the top of the screened interval; the remaining annulus was sealed with hydrated bentonite. The well was completed with a traffic-rated well vault and steel cover, and the well vault apron was completed with concrete. The construction of MW201 was the same as MW200 with the exception that two-inch PVC was used instead of one-inch.
- Prior to sampling, the depth to water was measured with a water level indicator, and the wells were developed according to Pinyon's SOP. The samples were collected using disposable bailers, were containerized in bottles provided by the analytical laboratory, labeled, and placed on ice in a cooler. These locations were originally planned for low-flow sampling, but groundwater was too deep to withdraw water from the well using these techniques. The samples were submitted to Origins Laboratory, Inc. (Origins), for dry cleaner-specific compound analysis using Environmental Protection Agency (EPA) Method 8260C.
- The locations of new well casings were surveyed using a hand-held global position system (GPS) instrument with sub-meter accuracy. The elevations of the tops of well casings and ground surfaces were correlated to a nearby well, MW-06, with known absolute elevation to allow tie-in to the existing survey network. The monitoring well elevation data, along with the depth to groundwater data, were utilized to evaluate groundwater-flow direction.
- At the completion of this report, the need to maintain the wells had not been decided. Once the wells are no longer needed, the well casings will be removed or cut below ground surface and abandoned. The borings will be backfilled with hydrated bentonite, and the surface finishes will be returned to original condition.
- Pinyon advanced two soil vapor borings adjacent to the new groundwater monitoring wells with two nested soil vapor points in each boring. Soil vapor points were nested at five and 10 feet below ground surface (bgs) with soil gas implants and Teflon tubing with 10/20 sand used to fill the annular space surrounding the probes. The four soil vapor points were sampled for VOCs using individually certified summa canisters and analyzed for select chlorinated VOCs using EPA Method TO-15 Selective Ion Method (SIM). Analytical services were provided by Eurofins Air Toxics in Folsom, CA.

Waste Management

Minimal amounts of Investigation Derived Waste (IDW) soil cuttings were produced during drilling activities and was thin-spread at each boring location.

Liquid IDW generated from decontamination, well development, and sampling activities were collected and stored at the Department of Environmental Health (DEH) Central Platte Campus Regulated Waste Management Facility. The waste is planned for disposal at the CSI Bennett facility.

3. Results

3.1 Site Geology

In general, soils encountered at the Site were silty/clayey sands with gravel. Boring Logs are presented in Appendix A.

3.2 Site Hydrology

Depth to groundwater measurements were collected on August 17, 2015; groundwater was encountered between 29.87 and 32.19 feet bgs in the wells evaluated (Table 3-1). Based on the topographic conditions of the Site, ground surface maps, historical data, and groundwater depths that were measured, the groundwater direction at the Site is towards the northwest and the South Platte River.

Table 3-1 Depth to Water Data

Monitoring Well	Ground Surface Elevation (feet)	Approximate Depth to Water (feet from ground surface)	Groundwater Elevation (feet)
MW-200	5184.05	32.19	5151.86
MW-201	5183.82	29.87	5153.95
MW-06 ¹	5183.30	30.75	5152.55

¹ - Existing well and data extracted from Terracon's Phase II ESA

3.3 Soil Discussion

3.3.1 Methane Migration Evaluation

Staining and/or odors were not observed in the four soil vapor borings. Soil samples collected during boring advancement were field screened for non-specific VOCs using a PID and the headspace technique. PID responses greater than 25 parts per million (ppm) were not encountered; therefore, soil samples were not submitted for laboratory analysis.

3.3.2 Chlorinated Solvent Migration Evaluation

Staining and/or odors were not observed in the two soil vapor borings or two groundwater monitoring well boring locations. Soil samples collected during boring advancement were field screened for non-specific VOCs using a PID and the headspace technique. PID responses greater than 25 ppm were not encountered; therefore, soil samples were not submitted for laboratory analysis.

3.4 Groundwater Discussion

3.4.1 Methane Migration Evaluation

Groundwater monitoring wells were not installed as part of the methane migration evaluation portion of this investigation.

3.4.2 Chlorinated Solvent Migration Evaluation

Two new groundwater monitoring wells were installed to depths of 38.30 and 38.93 feet bgs (MW-200 and MW-201, respectively) on the east side of Brighton Boulevard between East 46th and 47th Avenues. Pinyon also collected a groundwater sample from a previously installed monitoring well (CDOT Well) located south

of Interstate 70. The samples were analyzed for dry cleaner-specific compounds using EPA Method 8260C. The previously installed CDOT well was constructed to a total depth of 89.11 as part of a geotechnical investigation, for which a boring log or well construction report was not available. The well is assumed to be penetrated through the bedrock into a potentially semi-confined subsurface interval. The groundwater depth was measured, but the groundwater elevation from the CDOT Well was not surveyed because deep groundwater elevations are not necessarily comparable to shallow groundwater elevations and there was not a sufficient sample size to establish whether elevations are comparable. Although groundwater elevation data for this specific project is not sufficient to confirm the potentiometric surface, historical data suggests that groundwater flows from southeast towards to the northwest. The presence of PCE in the CDOT Well, regardless of depth, suggests that there is likely a hydraulically upgradient source of PCE that probably impacts groundwater concentrations in the National Western Complex.

The concentrations of target analytes were compared to the Colorado Department of Public Health and Environment (CDPHE) Water Quality Control Commission (WQCC) Regulation Number 41, *The Basic Standards for Ground Water*. PCE was detected at concentrations of 3.0, 22, and 53 micrograms per liter ($\mu\text{g/L}$) in groundwater samples MW200, MW201, and CDOT Well, respectively (Appendix B, Table B-1). Samples MW201 and CDOT Well exceed the groundwater standard of 5.0 $\mu\text{g/L}$. For the purposes of this report, the 5.0 $\mu\text{g/L}$ standard was used because construction dewatering permits utilize that standard to establish discharge limits. There are certain situations where a less restrictive limit might be appropriate and those scenarios would likely be evaluated on a case by case basis. Methylene chloride was detected in samples MW200 and MW201 at concentrations of 5.6 and 7.6 $\mu\text{g/L}$ respectively, which are equal to or exceed the groundwater standard of 5.6 $\mu\text{g/L}$. Methylene chloride was not found in the laboratory method blank and this constituent are assumed to be present in the groundwater. No other compounds were detected above the laboratory detection limit.

3.5 Soil Vapor Discussion

3.5.1 Methane Migration Evaluation

Methane concentrations ranging from 0 to 15.5% were measured during field screening at the soil vapor points adjacent to the residential area along East 48th Avenue. Field screening indicated substantially elevated concentrations in the range of 30.5 to 31.9% in the SV-12, which is located in the National Western Complex parking lot. There was no indication of methane adjacent to the recreation center at five feet bgs. Seven soil vapor samples were collected in certified clean six-liter summa canisters and analyzed by modified ASTM Method D-1945 for methane, ethane, and propane from the National Western Complex parking area west of the Brighton Boulevard and East 48th Avenue intersection, along East 48th Avenue between Brighton Boulevard and Race Street, and at Elyria Park (Figure 2). Samples were collected from five feet bgs at wells SV100 and SV101, at five and 10 feet bgs at wells SV102 and SV103, and from 10 feet bgs from SV-12 (SV-12 is labeled as EMWRED on the analytical laboratory report).

The concentration of target compounds were compared to the lower explosive limits (LELs) and upper explosive limits (UELs) presented in the *Gas Data Book, 7th Edition, by Matheson Gas Products (Yaws, 2001)*. The EPA recommends using chemical-specific LELs, for petroleum hydrocarbons, to identify potential explosion hazards. Whenever a gas sample exceeds one-tenth of the LEL for any chemical, a hazard is indicated that generally warrants prompt action (EPA, 2015). Ethane and propane were not detected above the laboratory detection limit. Methane (LEL of 5%) was detected at 32%, 0.0064%, 4.1%, 10%, and 10% by volume for samples SV-12, SV102(5'), SV102(10'), SV103(5'), and SV103(10'), respectively (Appendix B, Table B-2). Samples SV-12, SV102(10'), SV103(5'), and SV103(10') exceed the EPA recommended action level for methane of 0.5% (one tenth of the LEL) by volume.

The EPA document *Guidance for Evaluating Landfill Gas Emissions from Closed or Abandoned Facilities (EPA, 2005)*, states that if methane concentrations exceed the LEL at the property boundary, the owner of the landfill must

abide by the requirements set forth in 40 CFR 258.23 (EPA, 2005). Concentrations in samples SV-12, SV103(5'), and SV103(10') exceed the LEL for methane (5%).

3.5.2 Chlorinated Solvent Migration Evaluation

Four soil vapor samples were collected in certified clean six-liter summa canisters from wells that were installed east of Brighton Boulevard between East 46th and 47th Avenues (Figure 2). The samples were collected from five and 10 feet bgs from wells SV200 and SV201. The samples were analyzed by modified EPA Method TO-15 GC/MS SIM.

Soil vapor samples were analyzed for dry cleaner related chlorinated solvents, specifically vinyl chloride (VC), cis-1,2-dichloroethylene (cis-1,2-DCE), trichloroethylene (TCE), PCE, and trans-1,2-dichloroethylene (trans-1,2-DCE). After applying an attenuation factor of 0.03 (see discussion that follows), none of the target compounds exceeded either the Residential or Worker Remediation Goals listed in the CDPHE *Dry Cleaner Remediation Guidance Document (CDPHE, 2006)* (Appendix B, Table B-3). The concentrations of target analytes were compared to the Residential and Worker Remediation Goals presented in the CDPHE, Hazardous Materials and Waste Management Division, *Air Screening Concentration Table*. The *Air Screening Concentration Table* provides action levels and remediation goals for both residential and worker protection. Because the CDPHE standards are based on direct measurement of indoor air, application of the EPA attenuation factors is necessary for comparison with the measured concentrations on this project. Concentrations of target analytes in soil vapor are greater than they would be in indoor air due to concrete floor slabs acting as a barrier. Based on statistical analysis, the EPA (EPA, 2015) has determined that an attenuation factor of 0.03 is appropriate when calculating indoor air concentrations from soil vapor concentrations when a slab is present due to the attenuation effects that are known to occur as vapor intrudes into the occupied space. Therefore, soil vapor concentrations have been adjusted as shown in Appendix B soil vapor data table to account for the presence of buildings and the likely presence of floor slabs to inhibit soil vapor migration.

4. Conclusions and Recommendations

4.1 Conclusions

4.1.1 Methane Migration Evaluation

A total of seven soil vapor samples were collected from the National Western Complex parking area west of the Brighton Boulevard and East 48th Avenue intersection, along East 48th Avenue between Brighton Boulevard and Race Street, and at Elyria Park (Figure 2).

Methane concentrations exceeding the LEL were identified in the City right-of-way (ROW) and National Western property subsurface soils. The DPS property appears to be the source of the methane generation in the project area. A Phase II ESA completed by URS Operating Services, Inc. (URS), in 2004, noted that the DPS property generates on-site subsurface methane in excess of 5% volume in air, which according to the *Gas Data Book, 7th Edition, by Matheson Gas Products (Yaws, 2001)* is greater than the LEL. The field investigation of this report focused on City ROW and City-owned property adjacent to the DPS site and did not investigate or determine if nearby homes are being impacted by off-site methane gas migration, but this would be an obvious concern. There is potential for methane migration through utility trenches and methane accumulation in subsurface utility pipes, e.g. stormwater and sanitary sewer lines, which could pose a risk to workers and possibly others. Any future construction or maintenance activities in the area should be completed with the understanding that explosive limits, oxygen, carbon monoxide and other applicable parameters will require monitoring during these activities.

There are at least two regulatory guidance documents where comparable exposure scenarios to City ROW impacts can be inferred. The EPA *Guidance for Evaluating Landfill Gas Emissions for Closed or Abandoned Facilities* (Landfill Gas Guidance) (EPA, 2005) and the EPA *OSWER Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air* (Vapor Intrusion Guide) (EPA, 2015) documents were used for comparison of similar exposure scenarios. The Landfill Gas Guidance is applicable to RCRA MSLF facilities. Since the DPS property was closed prior to RCRA enactment, this guidance may not directly apply under the regulatory authority, but otherwise is applicable to the situation posed by the property. The Landfill Gas Guidance states that the MSWLF owner/operator must comply with the standards set forth in 40 CFR 258.23 – Explosive Gases Control. 40 CFR 258.23 requires installation of a gas collection system if methane concentrations in the subsurface at the property boundary exceed the LEL, among other requirements. As there are no other known sources of methane gas in the area, it is reasonable to infer that methane concentrations exceeding the LEL in ROW subsurface would be directly attributable to concentrations that exceed the LEL at the landfill boundary.

The Vapor Intrusion Guide addresses methane and explosive gases migrating to indoor air in buildings and non-occupied structures (e.g. confined spaces including sewers). However, indoor air was not investigated as part of this report. Typically, comparison of non-indoor monitoring to indoor air allows application of an attenuation factor to account for concrete floor slabs or other relatively impermeable barriers, and the effects of conditioned spaces. However, the Vapor Intrusion Guide does not recommend the application of an attenuation factor for methane originating from landfills as there may be sufficient advective transport in the vadose zone to negate the effectiveness of prospective barriers. Section 7.5.1 recommends an action level of 10% LEL in buildings, and confined or semi-confined spaces, which includes underground utilities. Although samples were not collected from within buildings, the concentrations detected in the City ROW indicate the possibility of methane concentrations above 10% LEL within buildings and confined spaces in the area. Although indoor air was not sampled as part of this project, this guidance document provides an authoritative and creditable standard of practice and reasonable care where a prescriptive standard is lacking.

4.1.2 Chlorinated Solvent Migration Evaluation

Staining, odors, or PID responses greater than 25 ppm were not observed in soils screened during the installation of the groundwater monitoring wells; therefore, soil samples were not submitted for analytical testing.

PCE was detected at concentrations of 3.0, 22, and 53 µg/L in groundwater samples MW200, MW201, and CDOT Well, respectively (Appendix B, Table B-1). Samples MW201 and CDOT Well exceed the groundwater standard of 5.0 µg/L. Groundwater in this area flows to the northwest. The CDOT Well had the highest PCE concentration and is located hydraulically upgradient of the other two wells which indicates that the PCE is likely originating from an off-site source.

Methylene chloride was detected in samples MW200 and MW201 at concentrations meeting or exceeding the groundwater standard. The furthest upgradient sample, CDOT Well, did not have a detectable amount of methylene chloride; therefore, it is likely that there is an on-site source of this compound.

Because the CDPHE standards are based on direct measurement of indoor air, application of the EPA attenuation factors is necessary for comparison with the measured concentrations on this project. When an attenuation factor of 0.03 is applied to the soil vapor sample results, none of the target compounds exceeded either the CDPHE Residential or Worker Remediation Goals. Based on the EPA guidance for application of attenuation factors, indoor air concentrations in buildings with competent slabs are not likely to exceed the state's target indoor air concentrations. Application of the 0.03 attenuation factor was considered appropriate because:

- A member of the CDPHE staff, Rob Beierle, informed Pinyon that application of the EPA *OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air* attenuation factor of 0.03 would be appropriate for the project area.
- A member of the CDPHE staff, Rob Beierle, indicated that he would not typically require soil vapor investigation for a groundwater concentration of 22 µg/L which is the concentration in the groundwater monitoring well (MW-200) next to the soil vapor point (SV-200) with the highest VOC concentration.
- The plume appears to be migrating northwest and residences in question are cross-gradient and near the presumptive edge of the plume towards the north and east. Thus, groundwater concentrations and corresponding soil gas concentrations resulting from VOC partitioning are likely to decrease closer to the residences.
- Residences are likely to have slabs or some other kind of attenuating barrier, and it would be overly conservative to assume that no attenuation would occur between the point of measurement in soil and the living space in adjacent houses.
- The evaluation is made more conservative by utilizing the 10^{-6} cancer risk values.

4.2 Recommendations

4.2.1 Methane Migration Recommendations

The findings of this report, as well as the findings of the URS report (URS, 2004) and Terracon report (Terracon, 2015), support the conclusion that DPS property management should be notified that potentially explosive levels of methane are migrating off their property onto City ROW and towards adjacent residences. Evaluation of guidance documents for similar exposure scenarios suggests that methane gas control should be implemented at the DPS property to reduce the concentrations migrating from the property boundary.

4.2.2 Chlorinated Solvent Migration Recommendations

If subsurface work is planned as part of the redevelopment project, workers may need to monitor air concentrations periodically to ensure that PCE and methylene chloride concentrations are within acceptable levels. Construction dewatering project in the areas of the National Western Complex will likely require a Remediation Activities Construction Dewatering Permit.

5. Limitations

This report was prepared by Pinyon Environmental, Inc., at the request of and for the sole benefit of the City and County of Denver, or any entity controlling, controlled by, or under common control with the City and County of Denver. The conclusions and recommendations offered in this report are based on the data obtained from prior investigations completed by a different consultant and from field screening methods. Soil vapor and groundwater conditions typically vary even over short distances. Thus, the nature and extent of variations outside the subsurface investigation may not become evident except through further investigation.

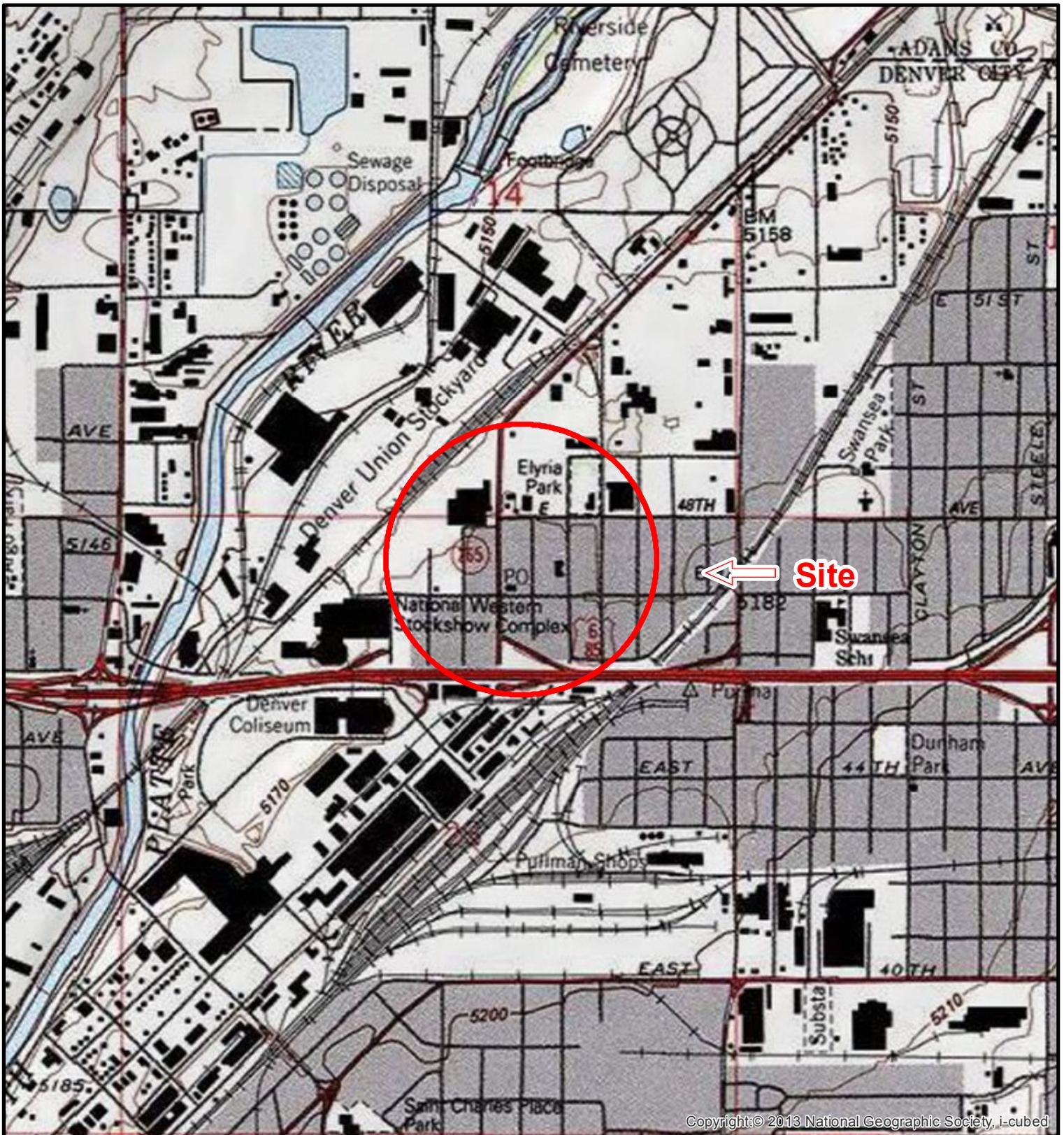
This report is the exclusive and present use of the City and County of Denver, or any entity controlling, controlled by, or under common control with the City and County of Denver. Laboratory analysis has been performed for specific constituents during the course of this investigation, as described in the text. This study makes no attempt to assess constituents not searched for in the laboratory analysis.

Conclusions stated herein refer only to the specific site at the time of the investigation.

6. References

- CDPHE, 2006. "Dry Cleaner Remediation Guidance Document," Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division, March 2006.
- CDPHE, 2014. "Groundwater Protection Values Soil Cleanup Table," Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division, March 2014.
- EPA, 2005. "Guidance for Evaluating Landfill Gas Emissions for Closed or Abandoned Facilities," Environmental Protection Agency, September 2005.
- EPA, 2015. "OSWER Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air," Environmental Protection Agency, June 2015.
- Terracon, 2015. "Limited Phase II Environmental Site Assessment Report, Revision I," Terracon, July 27, 2015
- URS, 2004. "Phase II Environmental Site Assessment, DPS Bus Terminal TBA, City and County of Denver, Colorado," URS Operating Services, Inc., February 2004.
- Yaws, 2001. Yaws, Carl L. *Matheson Gas Data Book, Seventh Edition*. McGraw-Hill. June 25, 2001.

Figures



LEGEND

 **Site**

USGS 7.5' Topographic Map
Commerce City, Colorado 1965 (revised 1994)

0 750 1,500
 Feet



SITE LOCATION

*National Western Stock Show
Denver, Colorado*

Site Location: Sections 14 & 23, T 3S, R 68W, 6th Principal Meridian

Pinyon Project Number: 1/15-007-10.2002

Drawn By: JAF

Reviewed By: JRC

Figure: 1

Date: 9/11/2015

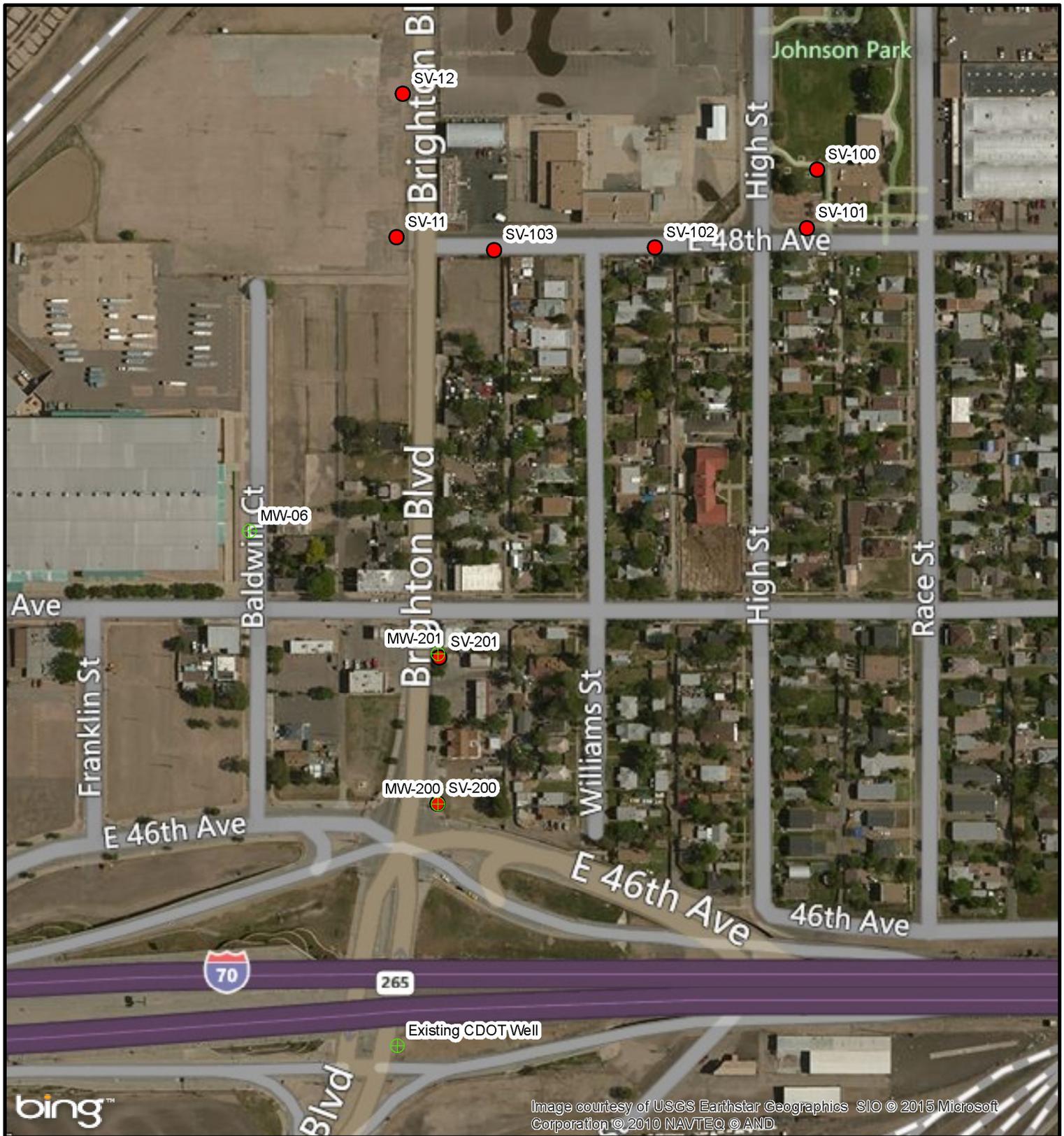


Image courtesy of USGS Earthstar Geographics SIO © 2015 Microsoft Corporation © 2010 NAVTEQ © AND

<p>N</p> <p>Legend</p> <ul style="list-style-type: none"> ⊕ Monitoring Well Locations ● Soil Vapor Locations 	<p>0 150 300 Feet</p>		<p>MONITORING LOCATIONS</p> <p><i>National Western Stock Show Denver, Colorado</i></p>
	<p>Site Location: Sections 14 & 23, T 3S, R 68W, 6th Principal Meridian</p> <p>Pinyon Project Number: 1/15-007-10.2002</p>		

Appendices

Appendix A Boring Logs

BORING: MW-200

DATE: 8/13/15

PROJECT: National Western

PROJECT NUMBER: 1/15-007-10

PROJECT ADDRESS: National Western

CLIENT: City and County of Denver



DRILLING METHOD: Direct Push

FIELD GEOLOGIST: Rachel Tometich

SAMPLING METHOD: Continuous

DEPTH (feet)	USCS	Lithology	Lithologic Description	Depth to Water (ft)	Recovery (ft)	PID (ppm)			PID	Lab Samples	Well Construction
						4.5	7	9.5			
0			Sandy silt: Brown medium dense well graded silty sand with angular gravel, low plasticity.								
1	ML				3.0				2.20		
2											
3											
4	SW		Well graded sands: Mottled loose sandy angular gravel well graded, low plasticity		1.0				2.30		
5											
6	ML		Silt with sand: Dark brown silty sand, low plasticity		2.0				8.80		
7											
8	ML		Sandy silt: Light brown well graded silty sand with angular gravel, low plasticity		3.0				3.90		
9											
10											
11	SW		Well graded sand with gravel: Loose mottled well graded sand with angular gravel, low plasticity		3.0				4.40		
12											
13	ML		Silt with sand: Loose silty clay with some angular gravel, low plasticity		2.0				3.90		
14											
15											
16	SW		Well graded sands with gravel: Light brown loose, well graded sands with angular gravel, low plasticity		4.0				5.10		
17											
18											
19											
20											
21											
22											
23											
24											
25											
26	SW		Well graded sands with gravel: Light brown loose well graded silty sands with angular gravel, low plasticity		4.0				5.20		
27											
28											
29											
30											
31											
32					2.0				5.60		
33											
34	CH		Fat clay: medium dense clayey silt, high plasticity		2.0				7.20		
35											
36	SW		Well graded sand with gravel: Loose mottled sand well graded, low plasticity		3.0				6.10		
37											
38											
39											
40					1.0				10.70		

BORING: MW-201

DATE: 8/12/15

PROJECT: National Western

PROJECT NUMBER: 1/15-007-10

PROJECT ADDRESS: National Western

CLIENT: City and County of Denver



DRILLING METHOD: Direct Push

FIELD GEOLOGIST: Rachel Tometich

SAMPLING METHOD: Continuous

DEPTH (feet)	USCS	Lithology	Lithologic Description	Depth to Water (ft)	Recovery (ft)	PID (ppm)			PID	Lab Samples	Well Construction
						1.6	3.6	5.6			
0											
1											
2											
3											
4	ML		Silt: Loose coppery brown silt with some fine sands and small angular gravel, low plasticity.		4.0				2.10		
5											
6											
7											
8	SM		Silty sand with gravel: Loose mottled sands with angular gravel, low plasticity		3.0				4.30		
9											
10											
11	CL		Lean clay: Brown dense silty clay, medium plasticity		5.0				3.40		
12											
13											
14	SM		Silty sand with gravel: Loose mottled sands with angular gravel, low plasticity		2.0				6.00		
15											
16											
17	SM		Silty sand with gravel: Loose mottled sands with angular gravel, low plasticity		4.5				3.80		
18											
19											
20											
21											
22	SM		Silty sand with gravel: Loose mottled sands with large gravel, some angular, some smooth, low plasticity.		3.0				2.80		
23											
24											
25											
26											
27	SM		Silty sand with gravel: Loose mottled sands with large gravel, some angular, some smooth, low plasticity.		3.5				5.40		
28											
29											
30	SM		Silty sand with gravel: Loose mottled sands with large gravel, some angular, some smooth, low plasticity.		2.0				2.80		
31											
32	CH		Fat clay: Dark brown dense fat clay		2.0				2.20		
33											
34											
35											
36											
37	SM		Silty sand: Loose mottled sands with medium angular gravel		3.0				1.70		
38											
39											
40											

BORING: SV-100 **DATE:** 8/12/15

PROJECT: National Western

PROJECT NUMBER: 1/15-007-10

PROJECT ADDRESS: National Western

CLIENT: City and County of Denver



DRILLING METHOD: Direct Push

FIELD GEOLOGIST: Rachel Tometich

SAMPLING METHOD: None

DEPTH (feet)	USCS	Lithology	Lithologic Description	Depth to Water (ft)	Recovery (ft)	PID (ppm)				PID	Lab Samples	Well Construction
						2.2	3.2	4.2	5.2			
0												
1												
2												
3	ML		Sandy silt: Coppery brown silty sands, loose, poorly graded, low plasticity		5.0					5.40		
4												
5												
6												
7	ML		Sandy silt: Coppery brown silty sands with some gravel, low plasticity		2.0					5.00		
8												
9	CL		Sandy lean clay: Brown, medium dense clayey sands with coppery streaks, medium plasticity		0.5					2.30		
9.5	SW		Well graded sand: Loose mottled sands, well graded with silt, low plasticity		1.5					5.10		
10												

BORING: SV-101

DATE: 8/12/15

PROJECT: National Western

PROJECT NUMBER: 1/15-007-10

PROJECT ADDRESS: National Western

CLIENT: City and County of Denver



DRILLING METHOD: Direct Push

FIELD GEOLOGIST: Rachel Tometich

SAMPLING METHOD: None

DEPTH (feet)	USCS	Lithology	Lithologic Description	Depth to Water (ft)	Recovery (ft)	PID (ppm)	PID	Lab Samples	Well Construction
0									
1									
2									
3	ML		Sandy silt: Light brown loose silty sands, low plasticity		4.0		9.30		
4									
5									
6	ML		Sandy silt: Brown medium dense silty clayey sands, low plasticity		0.5		7.10		
7									
8	SM		Silty sand with gravel: Mottled sands loose with gravel, low plasticity		3.0		3.90		
9									
10									

BORING: SV-102 **DATE:** 8/12/15

PROJECT: National Western

PROJECT NUMBER: 1/15-007-10

PROJECT ADDRESS: National Western

CLIENT: City and County of Denver



DRILLING METHOD: Direct Push

FIELD GEOLOGIST: Rachel Tometich

SAMPLING METHOD: None

DEPTH (feet)	USCS	Lithology	Lithologic Description	Depth to Water (ft)	Recovery (ft)	PID (ppm)				PID	Lab Samples	Well Construction
						5.2	7.2	9.2	11.2			
0												
1	ML		Silt with sand: Dark brown silty sand with some gravel, low plasticity		2.0					10.10		
2												
3												
4												
5	ML		Silt: Brown silty sand with some small/ fine sands, low plasticity		4.0					11.00		
6												
7												
8												
9	SM		Silty sand with gravel: Loose mottled sands with gravel, low plasticity		2.0					5.50		
10												

BORING: SV-103 **DATE:** 8/12/15

PROJECT: National Western

PROJECT NUMBER: 1/15-007-10

PROJECT ADDRESS: National Western

CLIENT: City and County of Denver



DRILLING METHOD: Direct Push

FIELD GEOLOGIST: Rachel Tometich

SAMPLING METHOD: None

DEPTH (feet)	USCS	Lithology	Lithologic Description	Depth to Water (ft)	Recovery (ft)	PID (ppm)			PID	Lab Samples	Well Construction
						7.2	8.2	9.2			
0	SW		Well graded sand: Mottled sands, very loose with medium angular gravel, well graded, low plasticity.		3.0			7.30			
1											
2											
3											
4											
5	SW		Well graded sand: Medium brown loose fine sands, with angular grave, well graded, low plasticity.		4.0			9.80			
6											
7											
8											
9											
10											

Appendix B Laboratory Analytical Tables and Reports

Table B-1 Groundwater Analytical Results

Analyte		Groundwater Standards (µg/L) ¹	Sample ID/Sample Date		
			CDOT Well 8/27/15	MW- 200 8/27/15	MW- 201 8/27/15
VOCs (µg/L)	Cis-1,2-Dichloroethene	70	<1.0	<1.0	<1.0
	Tetrachloroethylene	5	53	22	3.0
	Trans-1,2-Dichloroethene	140	<1.0	<1.0	<1.0
	Trichloroethylene	5	<1.0	<1.0	<1.0
	Vinyl Chloride	2	<1.0	<1.0	<1.0
	Methylene Chloride	5.6	<5.0	5.6	7.6

Notes:

µg/L - micrograms per liter

< - Analyte not detected above the laboratory reporting limit

VOCs - Volatile Organic Compounds

Bold - Result exceeds Groundwater Standards

¹ - Based on CDPHE Water Quality Control Commission Regulation No. 41 - The Basic Standards for Ground Water (CDPHE, 2014)

Table B-2 Soil Vapor Analytical Results (Methane Migration Evaluation)

Compound	Explosive Limits (Volume % in air) α	OSWER VI Guidance (10% of LEL) β	EPA Landfill Gas Action Level (25% of LEL) \dagger	Sample ID/Sample Date/Depth of Sample						
				SV-12* 9/2/15 10 feet bgs	SV100(5') 8/27/15 Five feet bgs	SV101(5') 8/27/15 Five feet bgs	SV102(5') 8/27/15 Five feet bgs	SV102(10') 8/27/15 10 feet bgs	SV103(5') 8/27/15 Five feet bgs	SV103(10') 8/27/15 10 feet bgs
Methane (% volume of sample)	5-15	0.5	1.25	32	<0.00026	<0.00023	0.0064	4.1	10	10
Ethane (% volume of sample)	3.0-12.5	0.3	0.75	<0.0022	<0.0026	<0.0023	<0.0025	<0.0022	<0.0019	<0.0022
Propane (% volume of sample)	2.1-9.5	0.21	0.525	<0.0022	<0.0026	<0.0023	<0.0025	<0.0022	<0.0019	<0.0022

Notes:

< - Analyte not detected above the laboratory reporting limit

bgs - below ground surface

Bold - Result exceeds screening levels

* - Sample is listed on the laboratory report as EMWRED

α - Value is from the Gas Data Book, 7th edition (Yaws, 2001).

β - Value is from the OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air (EPA, 2015).

\dagger - Value is from EPA Guidance for Evaluating Landfill Gas Emissions from Closed or Abandoned Facilities (EPA, 2005). This value is for on-site indoor air concentrations and does not directly apply to the samples that were collected, but can be used as a applicable or relevant and appropriate requirement (ARAR)

Table B-3 Soil Vapor Analytical Results (Chlorinated Solvent Migration Evaluation)

Analyte	Residential Remediation Goal ($\mu\text{g}/\text{m}^3$) α^*	Worker Remediation Goal ($\mu\text{g}/\text{m}^3$) α^*	Sample ID/Sample Date/Depth of Sample							
			SV200 (5') 9/14/15 Five feet bgs	SV200 (5') 9/14/15 Five feet bgs	SV200 (10') 9/14/15 10 feet bgs	SV200 (10') 9/14/15 10 feet bgs	SV201 (5') 9/14/15 Five feet bgs	SV201 (5') 9/14/15 Five feet bgs	SV201 (10') 9/14/15 10 feet bgs	SV201 (10') 9/14/15 10 feet bgs
			Unadjusted Soil Vapor Result	Attenuation Factor = 0.03 ^{β}	Unadjusted Soil Vapor Result	Attenuation Factor = 0.03 ^{β}	Unadjusted Soil Vapor Result	Attenuation Factor = 0.03 ^{β}	Unadjusted Soil Vapor Result	Attenuation Factor = 0.03 ^{β}
VC ($\mu\text{g}/\text{m}^3$)	0.16	2.8	0.091	0.00273	0.11	0.0033	<0.085	<0.00255	<0.077	<0.00231
cis-1,2-DCE ($\mu\text{g}/\text{m}^3$)	NV	NV	<0.26	<0.0078	<0.24	<0.0072	<0.26	<0.0078	<0.24	<0.0072
TCE ($\mu\text{g}/\text{m}^3$)	0.43	3.0	1.8	0.054	0.41	0.0123	<0.36	<0.0108	<0.32	<0.0096
PCE ($\mu\text{g}/\text{m}^3$)	9.36	47.2	220	6.6	9.2	0.276	25	0.75	49	1.47
trans-1,2-DCE ($\mu\text{g}/\text{m}^3$)	NV	NV	<1.3	<0.039	<1.2	0.036	<1.3	<0.039	<1.2	<0.036

Notes:

< - Analyte not detected above the laboratory reporting limit

NV - Does not have a screening value

VC - Vinyl Chloride

$\mu\text{g}/\text{m}^3$ - microgram per liter cubed

α - Value is from the Colorado Department of Public Health and Environment (CDPHE), Hazardous Materials and Waste Management Division, Air Screening Concentration Table

* - Values use a Risk Range of 1×10^{-6} because there are currently no remediation activities taking place.

β - Because gases get trapped under concrete/asphalt surfaces, the concentration below the slab is greater than would be expected for ambient or indoor air, the attenuation factor takes this into account and gives an statistically significant ambient or indoor air concentration based on soil vapor samples. The attenuation factor is from the EPA's Vapor Intrusion Database: Evaluation and Characterization of Attenuation Factors for Chlorinated Volatile Organic Compounds and Residential Buildings.

PCE – Tetrachloroethylene

DCE – Dichloroethylene

TCE - Trichloroethylene

bgs - below ground surface

9/18/2015
Mr. Russ Cirillo
Pinyon Environmental
9100 West Jewell Avenue

Lakewood CO 80232

Project Name: NATIONAL WESTERN
Project #: 11500710
Workorder #: 1509069R1

Dear Mr. Russ Cirillo

The following report includes the data for the above referenced project for sample(s) received on 9/3/2015 at Air Toxics Ltd.

The data and associated QC analyzed by Modified ASTM D-1945 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free the Project Manager: Brian Whittaker at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Brian Whittaker
Project Manager

WORK ORDER #: 1509069R1

Work Order Summary

CLIENT: Mr. Russ Cirillo
 Pinyon Environmental
 9100 West Jewell Avenue
 Lakewood, CO 80232

BILL TO: Mr. Russ Cirillo
 Pinyon Environmental
 9100 West Jewell Avenue
 Lakewood, CO 80232

PHONE: 303-980-5200
FAX: 303-980-0089
DATE RECEIVED: 09/03/2015
DATE COMPLETED: 09/10/2015
DATE REISSUED: 09/18/2015

P.O. #
PROJECT # 11500710 NATIONAL WESTERN
CONTACT: Brian Whittaker

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	SV200(10')	Modified ASTM D-1945	12.8 "Hg	5.1 psi
02A	SV200(5')	Modified ASTM D-1945	12.8 "Hg	5.1 psi
03A	SV201(10')	Modified ASTM D-1945	12 "Hg	5.2 psi
04A	SV201(5')	Modified ASTM D-1945	12.4 "Hg	5 psi
05A	SV103(5')	Modified ASTM D-1945	8.4 "Hg	5.4 psi
06A	SV103(10')	Modified ASTM D-1945	11.2 "Hg	5.3 psi
07A	SV102(10')	Modified ASTM D-1945	11.8 "Hg	5 psi
08A	SV102(5')	Modified ASTM D-1945	13.9 "Hg	5 psi
09A	SV101(5')	Modified ASTM D-1945	12.4 "Hg	5.1 psi
10A	SV100(5')	Modified ASTM D-1945	14.7 "Hg	4.9 psi
11A	EWMRED	Modified ASTM D-1945	11.8 "Hg	5.2 psi
12A	Lab Blank	Modified ASTM D-1945	NA	NA
13A	LCS	Modified ASTM D-1945	NA	NA
13AA	LCSD	Modified ASTM D-1945	NA	NA

CERTIFIED BY: 

 Technical Director

DATE: 09/18/15 _____

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
 TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
 Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.

Eurofins Air Toxics Inc. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified ASTM D-1945
Pinyon Environmental
Workorder# 1509069R1

Four 6 Liter Summa Canister (SIM Certified) and seven 6 Liter Summa Canister samples were received on September 03, 2015. The laboratory performed analysis via modified ASTM Method D-1945 for Methane and fixed gases in natural gas using GC/FID. The method involves direct injection of 1.0 mL of sample.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

<i>Requirement</i>	<i>ASTM D-1945</i>	<i>ATL Modifications</i>
Normalization	Sum of original values should not differ from 100.0% by more than 1.0%.	Sum of original values may range between 85-115%. Normalization of data not performed.
Sample analysis	Equilibrate samples to 20-50° F. above source temperature at field sampling	No heating of samples is performed.
Sample calculation	Response factor is calculated using peak height for C5 and lighter compounds.	Peak areas are used for all target analytes to quantitate concentrations.
Reference Standard	Concentration should not be < half of nor differ by more than 2 X the concentration of the sample. Run 2 consecutive checks; must agree within 1%.	A minimum of 5-point calibration curve is performed. Quantitation is based on average Response Factor with an acceptance criterion of %RSD <= 15%. All target analytes must be within the linear range of calibration (with the exception of O2, N2, and C6+)
Sample Injection Volume	0.50 mL to achieve Methane linearity.	1.0 mL.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

The workorder was reissued on 09/18/2015 to report results in ug/m3 per client's request.

Definition of Data Qualifying Flags

Six qualifiers may have been used on the data analysis sheets and indicate as follows:

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

Summary of Detected Compounds

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

Client Sample ID: SV200(10')

Lab ID#: 1509069R1-01A
No Detections Were Found.

Client Sample ID: SV200(5')

Lab ID#: 1509069R1-02A
No Detections Were Found.

Client Sample ID: SV201(10')

Lab ID#: 1509069R1-03A
No Detections Were Found.

Client Sample ID: SV201(5')

Lab ID#: 1509069R1-04A
No Detections Were Found.

Client Sample ID: SV103(5')

Lab ID#: 1509069R1-05A

Compound	Rpt. Limit (%)	Rpt. Limit (ug/m3)	Amount (%)	Amount (ug/m3)
Methane	0.00019	1200	10	66000000

Client Sample ID: SV103(10')

Lab ID#: 1509069R1-06A

Compound	Rpt. Limit (%)	Rpt. Limit (ug/m3)	Amount (%)	Amount (ug/m3)
Methane	0.00022	1400	10	66000000

Client Sample ID: SV102(10')

Lab ID#: 1509069R1-07A

Compound	Rpt. Limit (%)	Rpt. Limit (ug/m3)	Amount (%)	Amount (ug/m3)
Methane	0.00022	1400	4.1	27000000

Summary of Detected Compounds
NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

Client Sample ID: SV102(5')

Lab ID#: 1509069R1-08A

Compound	Rpt. Limit (%)	Rpt. Limit (ug/m3)	Amount (%)	Amount (ug/m3)
Methane	0.00025	1600	0.0064	42000

Client Sample ID: SV101(5')

Lab ID#: 1509069R1-09A

No Detections Were Found.

Client Sample ID: SV100(5')

Lab ID#: 1509069R1-10A

No Detections Were Found.

Client Sample ID: EWMRED

Lab ID#: 1509069R1-11A

Compound	Rpt. Limit (%)	Rpt. Limit (ug/m3)	Amount (%)	Amount (ug/m3)
Methane	0.00022	1400	32	210000000



Air Toxics

Client Sample ID: SV200(10')

Lab ID#: 1509069R1-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	10090806	Date of Extraction: N/A	Date of Collection: 8/27/15 8:57:00 AM
Dil. Factor:	2.36	Date of Analysis: 9/8/15 11:14 AM	

Compound	Rpt. Limit (%)	Rpt. Limit (ug/m3)	Amount (%)	Amount (ug/m3)
Methane	0.00024	1600	Not Detected	Not Detected
Ethane	0.0024	30000	Not Detected	Not Detected
Propane	0.0024	43000	Not Detected	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)



Air Toxics

Client Sample ID: SV200(5')

Lab ID#: 1509069R1-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	10090807	Date of Extraction: N/A	Date of Collection: 8/27/15 8:57:00 AM
Dil. Factor:	2.36	Date of Analysis: 9/8/15 11:47 AM	

Compound	Rpt. Limit (%)	Rpt. Limit (ug/m3)	Amount (%)	Amount (ug/m3)
Methane	0.00024	1600	Not Detected	Not Detected
Ethane	0.0024	30000	Not Detected	Not Detected
Propane	0.0024	43000	Not Detected	Not Detected

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: SV201(10')

Lab ID#: 1509069R1-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	10090808	Date of Extraction: N/A	Date of Collection: 8/27/15 10:11:00 AM
Dil. Factor:	2.26	Date of Analysis: 9/8/15 12:10 PM	

Compound	Rpt. Limit (%)	Rpt. Limit (ug/m3)	Amount (%)	Amount (ug/m3)
Methane	0.00023	1500	Not Detected	Not Detected
Ethane	0.0023	28000	Not Detected	Not Detected
Propane	0.0023	41000	Not Detected	Not Detected

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: SV201(5')

Lab ID#: 1509069R1-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	10090809	Date of Extraction: N/A	Date of Collection: 8/27/15 10:11:00 AM
Dil. Factor:	2.29	Date of Analysis: 9/8/15 12:36 PM	

Compound	Rpt. Limit (%)	Rpt. Limit (ug/m3)	Amount (%)	Amount (ug/m3)
Methane	0.00023	1500	Not Detected	Not Detected
Ethane	0.0023	28000	Not Detected	Not Detected
Propane	0.0023	41000	Not Detected	Not Detected

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: SV103(5')

Lab ID#: 1509069R1-05A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	10090810	Date of Extraction: N/A	Date of Collection: 8/27/15 1:23:00 PM
Dil. Factor:	1.90	Date of Analysis: 9/8/15 01:03 PM	

Compound	Rpt. Limit (%)	Rpt. Limit (ug/m3)	Amount (%)	Amount (ug/m3)
Methane	0.00019	1200	10	66000000
Ethane	0.0019	23000	Not Detected	Not Detected
Propane	0.0019	34000	Not Detected	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)



Air Toxics

Client Sample ID: SV103(10')

Lab ID#: 1509069R1-06A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	10090811	Date of Extraction: N/A	Date of Collection: 8/27/15 1:23:00 PM
Dil. Factor:	2.17	Date of Analysis: 9/8/15 01:53 PM	

Compound	Rpt. Limit (%)	Rpt. Limit (ug/m3)	Amount (%)	Amount (ug/m3)
Methane	0.00022	1400	10	66000000
Ethane	0.0022	27000	Not Detected	Not Detected
Propane	0.0022	40000	Not Detected	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)



Air Toxics

Client Sample ID: SV102(10')

Lab ID#: 1509069R1-07A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	10090812	Date of Extraction: N/A	Date of Collection: 8/27/15 2:07:00 PM
Dil. Factor:	2.21	Date of Analysis: 9/8/15 02:18 PM	

Compound	Rpt. Limit (%)	Rpt. Limit (ug/m3)	Amount (%)	Amount (ug/m3)
Methane	0.00022	1400	4.1	27000000
Ethane	0.0022	27000	Not Detected	Not Detected
Propane	0.0022	40000	Not Detected	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)



Air Toxics

Client Sample ID: SV102(5')

Lab ID#: 1509069R1-08A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	10090813	Date of Extraction: N/A	Date of Collection: 8/27/15 2:09:00 PM
Dil. Factor:	2.49	Date of Analysis: 9/8/15 02:51 PM	

Compound	Rpt. Limit (%)	Rpt. Limit (ug/m3)	Amount (%)	Amount (ug/m3)
Methane	0.00025	1600	0.0064	42000
Ethane	0.0025	31000	Not Detected	Not Detected
Propane	0.0025	45000	Not Detected	Not Detected

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: SV101(5')

Lab ID#: 1509069R1-09A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	10090814	Date of Extraction: N/A	Date of Collection: 8/27/15 2:52:00 PM
Dil. Factor:	2.30	Date of Analysis: 9/8/15 03:28 PM	

Compound	Rpt. Limit (%)	Rpt. Limit (ug/m3)	Amount (%)	Amount (ug/m3)
Methane	0.00023	1500	Not Detected	Not Detected
Ethane	0.0023	28000	Not Detected	Not Detected
Propane	0.0023	41000	Not Detected	Not Detected

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: SV100(5')

Lab ID#: 1509069R1-10A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	10090815	Date of Extraction: N/A	Date of Collection: 8/27/15 3:04:00 PM
Dil. Factor:	2.61	Date of Analysis: 9/8/15 03:57 PM	

Compound	Rpt. Limit (%)	Rpt. Limit (ug/m3)	Amount (%)	Amount (ug/m3)
Methane	0.00026	1700	Not Detected	Not Detected
Ethane	0.0026	32000	Not Detected	Not Detected
Propane	0.0026	47000	Not Detected	Not Detected

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: EWMRED

Lab ID#: 1509069R1-11A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	10090816	Date of Extraction: N/A	Date of Collection: 9/2/15 11:40:00 AM
Dil. Factor:	2.24	Date of Analysis: 9/8/15 04:27 PM	

Compound	Rpt. Limit (%)	Rpt. Limit (ug/m3)	Amount (%)	Amount (ug/m3)
Methane	0.00022	1400	32	210000000
Ethane	0.0022	27000	Not Detected	Not Detected
Propane	0.0022	40000	Not Detected	Not Detected

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1509069R1-12A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	10090805	Date of Extraction: NA	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/8/15 10:49 AM	

Compound	Rpt. Limit (%)	Rpt. Limit (ug/m3)	Amount (%)	Amount (ug/m3)
Methane	0.00010	660	Not Detected	Not Detected
Ethane	0.0010	12000	Not Detected	Not Detected
Propane	0.0010	18000	Not Detected	Not Detected

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCS

Lab ID#: 1509069R1-13A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	10090802	Date of Extraction: NA	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/8/15 08:40 AM	

Compound	%Recovery	Method Limits
Methane	106	85-115
Ethane	105	85-115
Propane	107	85-115

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1509069R1-13AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	10090820	Date of Extraction: NA	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/8/15 08:49 PM	

Compound	%Recovery	Method Limits
Methane	105	85-115
Ethane	103	85-115
Propane	105	85-115

Container Type: NA - Not Applicable

September 03, 2015

Pinyon

Russ Cirillo

9100 West Jewell Avenue, Suite 200

Lakewood CO 80232

Project Name - 11500710

Project Number - [none]

Attached are your analytical results for 11500710 received by Origins Laboratory, Inc. August 28, 2015. This project is associated with Origins project number X508344-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



Pinyon
9100 West Jewell Avenue, Suite 200
Lakewood CO 80232

Russ Cirillo
Project Number: [none]
Project: 11500710

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW 200	X508344-01	Water	August 27, 2015 9:18	08/28/2015 07:55
MW 201	X508344-02	Water	August 27, 2015 10:50	08/28/2015 07:55
CDOT Well	X508344-03	Water	August 27, 2015 12:15	08/28/2015 07:55

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jen Pellegrini For Noelle Doyle Mathis, President

Pinyon
 9100 West Jewell Avenue, Suite 200
 Lakewood CO 80232

Russ Cirillo
 Project Number: [none]
 Project: 11500710

www.originslaboratory.com

1508344

ORIGINS
 LABORATORY, INC

page 1 of 1

Client: PINYON Project Manager/Send Report To: Russ Cirillo
 Address: 9100 W JEWELL AVE Email Address: rcirillo@pinyon-env.com, gpriener@pinyon-env.com
LAKWOOD, CO 80232 Project Name/Number: 11500710
 Telephone Number: 303.960.5200 Samples Collected By: TIM GIBENTEC

1725 Elk Place | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis/Method	Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa #			Other
MW200	8/17/15	918	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							1
MW201		1050	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							2
CDOT WELL		1215	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							3
													4
													5
													6
													7
													8
													9
													10
Relinquished By: <u>[Signature]</u>	Date: <u>8/20/15</u>	Time: <u>755</u>	Received By: <u>[Signature]</u>	Date: <u>8/28/15</u>	Time: <u>0755</u>	Turnaround Time: <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input checked="" type="checkbox"/> Standard							
Relinquished By: <u>[Signature]</u>	Date: <u>8/20/15</u>	Time: <u>755</u>	Received By: <u>[Signature]</u>	Date: <u>8/28/15</u>	Time: <u>0755</u>	Standard <u>23°C</u>							

Comments: Data Results Attached

Origins Laboratory, Inc.

Jefe Pellegrini

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Pinyon
 9100 West Jewell Avenue, Suite 200
 Lakewood CO 80232

Russ Cirillo
 Project Number: [none]
 Project: 11500710

Origins Laboratory

F-012207-01-R1
 Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: X508344

Client: Pinyon

Client Project ID: 11500710

Checklist Completed by: Jef Smim

Shipped Via: HTD
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 8/28/15

Airbill #: N/A

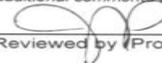
Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____

Cooler Number/Temperature: 1 12.3 °C 1 °C 1 °C (Describe) °C

Thermometer ID: T003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	X			
Is there ice present (document if blue ice is used)	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		X		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		X		
Were all samples received intact ⁽¹⁾ ?	X			
Was adequate sample volume provided ⁽¹⁾ ?	X			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		X		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	X			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	X			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	X			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	X			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.		X		
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity) / (pH < 2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH > 10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)	X			HCL
Additional Comments (if any):				

⁽¹⁾If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.


 Reviewed by (Project Manager)

8/31/15
 Date/Time Reviewed

Origins Laboratory, Inc.



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Pinyon
 9100 West Jewell Avenue, Suite 200
 Lakewood CO 80232

Russ Cirillo
 Project Number: [none]
 Project: 11500710

MW 200
8/27/2015 9:18:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X508344-01 (Water)

VOC by EPA 8260C

1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	5H28009	08/28/2015	08/31/2015	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	

Origins Laboratory, Inc.



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Pinyon
 9100 West Jewell Avenue, Suite 200
 Lakewood CO 80232

Russ Cirillo
 Project Number: [none]
 Project: 11500710

MW 200

8/27/2015 9:18:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X508344-01 (Water)

VOC by EPA 8260C

1,4-Dichlorobenzene	ND	1.0	ug/L	1	5H28009	08/28/2015	08/31/2015	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	
2-Butanone	ND	5.0	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	
2-Hexanone	ND	5.0	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	
4-Isopropyltoluene	ND	1.0	"	"	"	"	"	
4-Methyl-2-pentanone	ND	5.0	"	"	"	"	"	
Acetone	ND	8.0	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	
Carbon disulfide	ND	5.0	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	

Origins Laboratory, Inc.



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Pinyon
 9100 West Jewell Avenue, Suite 200
 Lakewood CO 80232

Russ Cirillo
 Project Number: [none]
 Project: 11500710

MW 200
8/27/2015 9:18:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X508344-01 (Water)

VOC by EPA 8260C

Chloroform	ND	1.0	ug/L	1	5H28009	08/28/2015	08/31/2015	
Chloromethane	ND	1.0	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	
Dibromomethane	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	
Iodomethane	ND	10	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	
m,p-Xylene	ND	2.0	"	"	"	"	"	
Methylene Chloride	5.6	5.0	"	"	"	"	"	
Methyl tert-Butyl Ether	ND	1.0	"	"	"	"	"	
Naphthalene	ND	4.0	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	
o-Xylene	ND	1.0	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	

Origins Laboratory, Inc.



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Pinyon
 9100 West Jewell Avenue, Suite 200
 Lakewood CO 80232

Russ Cirillo
 Project Number: [none]
 Project: 11500710

MW 200
8/27/2015 9:18:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X508344-01 (Water)

VOC by EPA 8260C

tert-Butylbenzene	ND	1.0	ug/L	1	5H28009	08/28/2015	08/31/2015	
Tetrachloroethene	22	1.0	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	
<hr/>								
Surrogate: 1,2-Dichloroethane-d4	108 %	84-121			"	"	"	
Surrogate: Toluene-d8	99.0 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	102 %	84-114			"	"	"	

Origins Laboratory, Inc.



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Pinyon
 9100 West Jewell Avenue, Suite 200
 Lakewood CO 80232

Russ Cirillo
 Project Number: [none]
 Project: 11500710

MW 201
8/27/2015 10:50:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X508344-02 (Water)

VOC by EPA 8260C

1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	5H28009	08/28/2015	08/31/2015	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	

Origins Laboratory, Inc.



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Pinyon
 9100 West Jewell Avenue, Suite 200
 Lakewood CO 80232

Russ Cirillo
 Project Number: [none]
 Project: 11500710

MW 201
8/27/2015 10:50:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X508344-02 (Water)

VOC by EPA 8260C

1,4-Dichlorobenzene	ND	1.0	ug/L	1	5H28009	08/28/2015	08/31/2015	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	
2-Butanone	ND	5.0	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	
2-Hexanone	ND	5.0	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	
4-Isopropyltoluene	ND	1.0	"	"	"	"	"	
4-Methyl-2-pentanone	ND	5.0	"	"	"	"	"	
Acetone	ND	8.0	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	
Carbon disulfide	ND	5.0	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	

Origins Laboratory, Inc.



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Pinyon
 9100 West Jewell Avenue, Suite 200
 Lakewood CO 80232

Russ Cirillo
 Project Number: [none]
 Project: 11500710

MW 201
8/27/2015 10:50:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X508344-02 (Water)

VOC by EPA 8260C

Chloroform	ND	1.0	ug/L	1	5H28009	08/28/2015	08/31/2015	
Chloromethane	ND	1.0	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	
Dibromomethane	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	
Iodomethane	ND	10	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	
m,p-Xylene	ND	2.0	"	"	"	"	"	
Methylene Chloride	7.6	5.0	"	"	"	"	"	
Methyl tert-Butyl Ether	ND	1.0	"	"	"	"	"	
Naphthalene	ND	4.0	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	
o-Xylene	ND	1.0	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	

Origins Laboratory, Inc.



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Pinyon
 9100 West Jewell Avenue, Suite 200
 Lakewood CO 80232

Russ Cirillo
 Project Number: [none]
 Project: 11500710

MW 201
8/27/2015 10:50:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X508344-02 (Water)

VOC by EPA 8260C

tert-Butylbenzene	ND	1.0	ug/L	1	5H28009	08/28/2015	08/31/2015	
Tetrachloroethene	3.0	1.0	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	
<hr/>								
Surrogate: 1,2-Dichloroethane-d4	107 %	84-121			"	"	"	
Surrogate: Toluene-d8	99.3 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	102 %	84-114			"	"	"	

Origins Laboratory, Inc.



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Pinyon
 9100 West Jewell Avenue, Suite 200
 Lakewood CO 80232

Russ Cirillo
 Project Number: [none]
 Project: 11500710

CDOT Well
8/27/2015 12:15:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X508344-03 (Water)

VOC by EPA 8260C

1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	5H28009	08/28/2015	08/31/2015	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	

Origins Laboratory, Inc.



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Pinyon
 9100 West Jewell Avenue, Suite 200
 Lakewood CO 80232

Russ Cirillo
 Project Number: [none]
 Project: 11500710

CDOT Well
8/27/2015 12:15:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X508344-03 (Water)

VOC by EPA 8260C

1,4-Dichlorobenzene	ND	1.0	ug/L	1	5H28009	08/28/2015	08/31/2015	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	
2-Butanone	ND	5.0	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	
2-Hexanone	ND	5.0	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	
4-Isopropyltoluene	ND	1.0	"	"	"	"	"	
4-Methyl-2-pentanone	ND	5.0	"	"	"	"	"	
Acetone	ND	8.0	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	
Carbon disulfide	ND	5.0	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	

Origins Laboratory, Inc.



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Pinyon
 9100 West Jewell Avenue, Suite 200
 Lakewood CO 80232

Russ Cirillo
 Project Number: [none]
 Project: 11500710

CDOT Well
8/27/2015 12:15:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X508344-03 (Water)

VOC by EPA 8260C

Chloroform	ND	1.0	ug/L	1	5H28009	08/28/2015	08/31/2015	
Chloromethane	ND	1.0	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	
Dibromomethane	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	
Iodomethane	ND	10	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	
m,p-Xylene	ND	2.0	"	"	"	"	"	
Methylene Chloride	ND	5.0	"	"	"	"	"	
Methyl tert-Butyl Ether	ND	1.0	"	"	"	"	"	
Naphthalene	ND	4.0	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	
o-Xylene	ND	1.0	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	

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Pinyon
9100 West Jewell Avenue, Suite 200
Lakewood CO 80232

Russ Cirillo
Project Number: [none]
Project: 11500710

CDOT Well

8/27/2015 12:15:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X508344-03 (Water)

VOC by EPA 8260C

tert-Butylbenzene	ND	1.0	ug/L	1	5H28009	08/28/2015	08/31/2015	
Tetrachloroethene	53	1.0	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	108 %	84-121			"	"	"	
Surrogate: Toluene-d8	98.4 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	102 %	84-114			"	"	"	

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 Project: 11500710

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5H28009 - EPA 5030B (Water)

Blank (5H28009-BLK1)

Prepared: 08/28/2015 Analyzed: 08/28/2015

1,1,1,2-Tetrachloroethane	ND	1.0	ug/L							
1,1,1-Trichloroethane	ND	1.0	"							
1,1,2,2-Tetrachloroethane	ND	1.0	"							
1,1,2-Trichloroethane	ND	1.0	"							
1,1-Dichloroethane	ND	1.0	"							
1,1-Dichloroethene	ND	1.0	"							
1,1-Dichloropropene	ND	1.0	"							
1,2,3-Trichlorobenzene	ND	5.0	"							
1,2,3-Trichloropropane	ND	5.0	"							
1,2,4-Trichlorobenzene	ND	5.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
1,2-Dibromo-3-chloropropane	ND	5.0	"							
1,2-Dibromoethane (EDB)	ND	1.0	"							
1,2-Dichlorobenzene	ND	1.0	"							
1,2-Dichloroethane	ND	1.0	"							
1,2-Dichloropropane	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
1,3-Dichlorobenzene	ND	1.0	"							
1,3-Dichloropropane	ND	1.0	"							
1,4-Dichlorobenzene	ND	1.0	"							
2,2-Dichloropropane	ND	1.0	"							
2-Butanone	ND	5.0	"							
2-Chlorotoluene	ND	1.0	"							
2-Hexanone	ND	5.0	"							
4-Chlorotoluene	ND	1.0	"							
4-Isopropyltoluene	ND	1.0	"							

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5H28009 - EPA 5030B (Water)

Blank (5H28009-BLK1)

Prepared: 08/28/2015 Analyzed: 08/28/2015

4-Methyl-2-pentanone	ND	5.0	ug/L							
Acetone	ND	8.0	"							
Benzene	ND	1.0	"							
Bromobenzene	ND	1.0	"							
Bromochloromethane	ND	1.0	"							
Bromodichloromethane	ND	1.0	"							
Bromoform	ND	1.0	"							
Bromomethane	ND	1.0	"							
Carbon disulfide	ND	5.0	"							
Carbon tetrachloride	ND	1.0	"							
Chlorobenzene	ND	1.0	"							
Chloroethane	ND	1.0	"							
Chloroform	ND	1.0	"							
Chloromethane	ND	1.0	"							
cis-1,2-Dichloroethene	ND	1.0	"							
cis-1,3-Dichloropropene	ND	1.0	"							
Dibromochloromethane	ND	1.0	"							
Dibromomethane	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Hexachlorobutadiene	ND	5.0	"							
Iodomethane	ND	10	"							
Isopropylbenzene	ND	1.0	"							
m,p-Xylene	ND	2.0	"							
Methylene Chloride	ND	5.0	"							
Methyl tert-Butyl Ether	ND	1.0	"							
Naphthalene	ND	4.0	"							

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 Project Number: [none]
 Project: 11500710

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5H28009 - EPA 5030B (Water)

Blank (5H28009-BLK1)

Prepared: 08/28/2015 Analyzed: 08/28/2015

n-Butylbenzene	ND	1.0	ug/L							
n-Propylbenzene	ND	1.0	"							
o-Xylene	ND	1.0	"							
sec-Butylbenzene	ND	1.0	"							
Styrene	ND	1.0	"							
tert-Butylbenzene	ND	1.0	"							
Tetrachloroethene	ND	1.0	"							
Toluene	ND	1.0	"							
trans-1,2-Dichloroethene	ND	1.0	"							
trans-1,3-Dichloropropene	ND	1.0	"							
Trichloroethene	ND	1.0	"							
Trichlorofluoromethane	ND	1.0	"							
Vinyl chloride	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5		102	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	84-114			

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 Project: 11500710

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5H28009 - EPA 5030B (Water)

LCS (5H28009-BS1)

Prepared: 08/28/2015 Analyzed: 08/28/2015

1,1,1,2-Tetrachloroethane	56	1.0	ug/L	50.0		112	78.8-128			
1,1,1-Trichloroethane	53	1.0	"	50.0		105	82.3-118			
1,1,2,2-Tetrachloroethane	51	1.0	"	50.0		103	67.9-119			
1,1,2-Trichloroethane	51	1.0	"	50.0		101	75.4-116			
1,1-Dichloroethane	52	1.0	"	50.0		104	81.1-113			
1,1-Dichloroethene	53	1.0	"	50.0		107	79.4-118			
1,1-Dichloropropene	53	1.0	"	50.0		106	78-120			
1,2,3-Trichlorobenzene	48	5.0	"	50.0		96.8	63.8-134			
1,2,3-Trichloropropane	57	5.0	"	50.0		114	63.3-121			
1,2,4-Trichlorobenzene	54	5.0	"	50.0		108	70.4-125			
1,2,4-Trimethylbenzene	54	1.0	"	50.0		109	73.3-123			
1,2-Dibromo-3-chloropropane	43	5.0	"	50.0		86.0	71.6-114			
1,2-Dibromoethane (EDB)	50	1.0	"	50.0		101	74.7-127			
1,2-Dichlorobenzene	55	1.0	"	50.0		111	81.3-116			
1,2-Dichloroethane	50	1.0	"	50.0		100	71.1-120			
1,2-Dichloropropane	50	1.0	"	50.0		101	77.4-115			
1,3,5-Trimethylbenzene	55	1.0	"	50.0		111	71.9-128			
1,3-Dichlorobenzene	50	1.0	"	50.0		99.8	82.1-117			
1,3-Dichloropropane	50	1.0	"	50.0		101	75.1-123			
1,4-Dichlorobenzene	57	1.0	"	50.0		113	76.8-119			
2,2-Dichloropropane	55	1.0	"	50.0		110	84-120			
2-Butanone	230	5.0	"	250		92.6	64.9-123			
2-Chlorotoluene	53	1.0	"	50.0		105	66-133			
2-Hexanone	230	5.0	"	250		91.8	70.9-116			
4-Chlorotoluene	54	1.0	"	50.0		108	73.2-119			
4-Isopropyltoluene	54	1.0	"	50.0		109	79.8-120			

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Pinyon
 9100 West Jewell Avenue, Suite 200
 Lakewood CO 80232

Russ Cirillo
 Project Number: [none]
 Project: 11500710

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5H28009 - EPA 5030B (Water)

LCS (5H28009-BS1)

Prepared: 08/28/2015 Analyzed: 08/28/2015

4-Methyl-2-pentanone	240	5.0	ug/L	250		97.9	58.5-122			
Acetone	230	8.0	"	250		93.2	65.4-125			
Benzene	50	1.0	"	50.0		100	75.5-116			
Bromobenzene	53	1.0	"	50.0		105	70-130			
Bromochloromethane	49	1.0	"	50.0		98.8	79-115			
Bromodichloromethane	51	1.0	"	50.0		103	73-123			
Bromoform	52	1.0	"	50.0		103	75-128			
Bromomethane	48	1.0	"	50.0		95.7	72-138			
Carbon disulfide	52	5.0	"	50.0		105	69-129			
Carbon tetrachloride	55	1.0	"	50.0		109	80-124			
Chlorobenzene	51	1.0	"	50.0		101	78-121			
Chloroethane	55	1.0	"	50.0		111	77-138			
Chloroform	51	1.0	"	50.0		102	75-117			
Chloromethane	54	1.0	"	50.0		107	72-130			
cis-1,2-Dichloroethene	52	1.0	"	50.0		104	78-118			
cis-1,3-Dichloropropene	54	1.0	"	50.0		109	73-122			
Dibromochloromethane	51	1.0	"	50.0		102	78-119			
Dibromomethane	48	1.0	"	50.0		95.6	79-116			
Ethylbenzene	56	1.0	"	50.0		112	78-130			
Hexachlorobutadiene	52	5.0	"	50.0		105	72-129			
Iodomethane	50	10	"	50.0		100	74-121			
Isopropylbenzene	56	1.0	"	50.0		111	75-128			
m,p-Xylene	110	2.0	"	100		112	75-134			
Methylene Chloride	53	5.0	"	50.0		105	84-122			
Methyl tert-Butyl Ether	46	1.0	"	50.0		91.1	72-125			
Naphthalene	48	4.0	"	50.0		96.5	65-128			

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Pinyon
 9100 West Jewell Avenue, Suite 200
 Lakewood CO 80232

Russ Cirillo
 Project Number: [none]
 Project: 11500710

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5H28009 - EPA 5030B (Water)

LCS (5H28009-BS1)

Prepared: 08/28/2015 Analyzed: 08/28/2015

n-Butylbenzene	55	1.0	ug/L	50.0		111	69-134			
n-Propylbenzene	55	1.0	"	50.0		111	74-132			
o-Xylene	55	1.0	"	50.0		110	76-129			
sec-Butylbenzene	55	1.0	"	50.0		110	74-128			
Styrene	56	1.0	"	50.0		112	74-126			
tert-Butylbenzene	52	1.0	"	50.0		105	72-123			
Tetrachloroethene	55	1.0	"	50.0		109	78-132			
Toluene	53	1.0	"	50.0		105	76-128			
trans-1,2-Dichloroethene	52	1.0	"	50.0		104	79-120			
trans-1,3-Dichloropropene	52	1.0	"	50.0		104	74-122			
Trichloroethene	51	1.0	"	50.0		102	76-125			
Trichlorofluoromethane	53	1.0	"	50.0		105	66-149			
Vinyl chloride	56	1.0	"	50.0		112	70-137			
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		96.3	84-121			
Surrogate: Toluene-d8	64		"	62.5		102	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.8	84-114			

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Russ Cirillo
 Project Number: [none]
 Project: 11500710

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5H28009 - EPA 5030B (Water)

Matrix Spike (5H28009-MS1)	Source: X508324-01			Prepared: 08/28/2015 Analyzed: 08/28/2015						
1,1,1,2-Tetrachloroethane	54	1.0	ug/L	50.0	ND	109	82-130			
1,1,1-Trichloroethane	49	1.0	"	50.0	ND	98.7	81-125			
1,1,2,2-Tetrachloroethane	53	1.0	"	50.0	ND	107	74-120			
1,1,2-Trichloroethane	53	1.0	"	50.0	ND	106	80-118			
1,1-Dichloroethane	50	1.0	"	50.0	ND	99.8	79-120			
1,1-Dichloroethene	50	1.0	"	50.0	ND	101	73-130			
1,1-Dichloropropene	50	1.0	"	50.0	ND	99.1	77-124			
1,2,3-Trichlorobenzene	50	5.0	"	50.0	ND	100	55-144			
1,2,3-Trichloropropane	53	5.0	"	50.0	ND	106	67-126			
1,2,4-Trichlorobenzene	55	5.0	"	50.0	ND	109	56-141			
1,2,4-Trimethylbenzene	52	1.0	"	50.0	ND	104	62-132			
1,2-Dibromo-3-chloropropane	47	5.0	"	50.0	ND	93.2	56-142			
1,2-Dibromoethane (EDB)	52	1.0	"	50.0	ND	104	84-124			
1,2-Dichlorobenzene	55	1.0	"	50.0	ND	110	74-124			
1,2-Dichloroethane	51	1.0	"	50.0	ND	101	76-120			
1,2-Dichloropropane	51	1.0	"	50.0	ND	101	78-117			
1,3,5-Trimethylbenzene	51	1.0	"	50.0	ND	101	64-138			
1,3-Dichlorobenzene	49	1.0	"	50.0	ND	98.9	73-126			
1,3-Dichloropropane	52	1.0	"	50.0	ND	104	83-120			
1,4-Dichlorobenzene	56	1.0	"	50.0	ND	112	64-130			
2,2-Dichloropropane	52	1.0	"	50.0	ND	103	77-129			
2-Butanone	250	5.0	"	250	ND	99.4	66-128			
2-Chlorotoluene	50	1.0	"	50.0	ND	101	71-130			
2-Hexanone	250	5.0	"	250	ND	101	74-123			
4-Chlorotoluene	52	1.0	"	50.0	ND	104	66-128			
4-Isopropyltoluene	52	1.0	"	50.0	ND	104	60-140			

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Russ Cirillo
 Project Number: [none]
 Project: 11500710

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5H28009 - EPA 5030B (Water)

Matrix Spike (5H28009-MS1)	Source: X508324-01			Prepared: 08/28/2015 Analyzed: 08/28/2015						
4-Methyl-2-pentanone	260	5.0	ug/L	250	ND	104	65-125			
Acetone	250	8.0	"	250	ND	98.5	63-134			
Benzene	48	1.0	"	50.0	ND	96.6	74-130			
Bromobenzene	52	1.0	"	50.0	ND	104	70-130			
Bromochloromethane	50	1.0	"	50.0	ND	101	80-118			
Bromodichloromethane	52	1.0	"	50.0	ND	103	76-122			
Bromoform	55	1.0	"	50.0	ND	109	80-128			
Bromomethane	48	1.0	"	50.0	ND	95.4	69-144			
Carbon disulfide	51	5.0	"	50.0	ND	101	70-131			
Carbon tetrachloride	50	1.0	"	50.0	ND	100	81-130			
Chlorobenzene	50	1.0	"	50.0	ND	100	72-128			
Chloroethane	54	1.0	"	50.0	ND	107	79-140			
Chloroform	50	1.0	"	50.0	ND	100	76-118			
Chloromethane	54	1.0	"	50.0	ND	107	72-128			
cis-1,2-Dichloroethene	50	1.0	"	50.0	ND	101	78-120			
cis-1,3-Dichloropropene	54	1.0	"	50.0	ND	108	79-120			
Dibromochloromethane	54	1.0	"	50.0	ND	108	81-121			
Dibromomethane	49	1.0	"	50.0	ND	98.7	84-115			
Ethylbenzene	53	1.0	"	50.0	ND	105	76-132			
Hexachlorobutadiene	51	5.0	"	50.0	ND	101	70-130			
Iodomethane	48	10	"	50.0	ND	96.2	72-127			
Isopropylbenzene	52	1.0	"	50.0	ND	104	66-135			
m,p-Xylene	110	2.0	"	100	ND	105	69-139			
Methylene Chloride	70	5.0	"	50.0	8.2	123	87-118			QM-07
Methyl tert-Butyl Ether	48	1.0	"	50.0	ND	95.4	62-138			
Naphthalene	51	4.0	"	50.0	0.7	101	59-148			

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Russ Cirillo
 Project Number: [none]
 Project: 11500710

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5H28009 - EPA 5030B (Water)

Matrix Spike (5H28009-MS1)	Source: X508324-01			Prepared: 08/28/2015 Analyzed: 08/28/2015						
n-Butylbenzene	52	1.0	ug/L	50.0	ND	105	52-146			
n-Propylbenzene	52	1.0	"	50.0	ND	104	66-141			
o-Xylene	53	1.0	"	50.0	ND	105	74-131			
sec-Butylbenzene	52	1.0	"	50.0	ND	103	63-138			
Styrene	54	1.0	"	50.0	ND	108	72-128			
tert-Butylbenzene	50	1.0	"	50.0	ND	99.9	67-129			
Tetrachloroethene	52	1.0	"	50.0	ND	105	76-134			
Toluene	51	1.0	"	50.0	ND	102	73-131			
trans-1,2-Dichloroethene	50	1.0	"	50.0	ND	100	78-123			
trans-1,3-Dichloropropene	53	1.0	"	50.0	ND	107	75-125			
Trichloroethene	49	1.0	"	50.0	ND	97.7	73-131			
Trichlorofluoromethane	52	1.0	"	50.0	ND	105	83-141			
Vinyl chloride	55	1.0	"	50.0	ND	110	73-139			
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		98.1	84-121			
Surrogate: Toluene-d8	65		"	62.5		104	85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		103	84-114			

Origins Laboratory, Inc.



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Pinyon
 9100 West Jewell Avenue, Suite 200
 Lakewood CO 80232

Russ Cirillo
 Project Number: [none]
 Project: 11500710

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5H28009 - EPA 5030B (Water)

Matrix Spike Dup (5H28009-MSD1)	Source: X508324-01			Prepared: 08/28/2015 Analyzed: 08/28/2015						
1,1,1,2-Tetrachloroethane	56	1.0	ug/L	50.0	ND	112	82-130	2.81	20	
1,1,1-Trichloroethane	51	1.0	"	50.0	ND	101	81-125	2.72	20	
1,1,2,2-Tetrachloroethane	55	1.0	"	50.0	ND	110	74-120	2.66	20	
1,1,2-Trichloroethane	52	1.0	"	50.0	ND	105	80-118	0.835	20	
1,1-Dichloroethane	51	1.0	"	50.0	ND	102	79-120	1.65	20	
1,1-Dichloroethene	51	1.0	"	50.0	ND	102	73-130	0.711	20	
1,1-Dichloropropene	51	1.0	"	50.0	ND	101	77-124	2.24	20	
1,2,3-Trichlorobenzene	52	5.0	"	50.0	ND	105	55-144	4.49	20	
1,2,3-Trichloropropane	75	5.0	"	50.0	ND	150	67-126	34.4	20	QM-07
1,2,4-Trichlorobenzene	56	5.0	"	50.0	ND	113	56-141	2.90	20	
1,2,4-Trimethylbenzene	52	1.0	"	50.0	ND	105	62-132	0.191	20	
1,2-Dibromo-3-chloropropane	50	5.0	"	50.0	ND	101	56-142	7.78	20	
1,2-Dibromoethane (EDB)	54	1.0	"	50.0	ND	107	84-124	3.43	20	
1,2-Dichlorobenzene	56	1.0	"	50.0	ND	112	74-124	1.50	20	
1,2-Dichloroethane	52	1.0	"	50.0	ND	104	76-120	2.24	20	
1,2-Dichloropropane	51	1.0	"	50.0	ND	103	78-117	1.33	20	
1,3,5-Trimethylbenzene	50	1.0	"	50.0	ND	101	64-138	0.357	20	
1,3-Dichlorobenzene	50	1.0	"	50.0	ND	99.7	73-126	0.866	20	
1,3-Dichloropropane	52	1.0	"	50.0	ND	105	83-120	0.978	20	
1,4-Dichlorobenzene	56	1.0	"	50.0	ND	112	64-130	0.0715	20	
2,2-Dichloropropane	53	1.0	"	50.0	ND	106	77-129	2.90	20	
2-Butanone	260	5.0	"	250	ND	105	66-128	5.72	20	
2-Chlorotoluene	51	1.0	"	50.0	ND	102	71-130	0.888	20	
2-Hexanone	260	5.0	"	250	ND	105	74-123	3.42	20	
4-Chlorotoluene	52	1.0	"	50.0	ND	105	66-128	0.960	20	
4-Isopropyltoluene	52	1.0	"	50.0	ND	105	60-140	1.09	20	

Origins Laboratory, Inc.



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Pinyon
 9100 West Jewell Avenue, Suite 200
 Lakewood CO 80232

Russ Cirillo
 Project Number: [none]
 Project: 11500710

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5H28009 - EPA 5030B (Water)

Matrix Spike Dup (5H28009-MSD1)	Source: X508324-01			Prepared: 08/28/2015 Analyzed: 08/28/2015						
4-Methyl-2-pentanone	270	5.0	ug/L	250	ND	109	65-125	4.59	20	
Acetone	260	8.0	"	250	ND	103	63-134	4.37	20	
Benzene	49	1.0	"	50.0	ND	98.5	74-130	1.89	20	
Bromobenzene	50	1.0	"	50.0	ND	99.2	70-130	4.72	20	
Bromochloromethane	51	1.0	"	50.0	ND	102	80-118	1.71	20	
Bromodichloromethane	53	1.0	"	50.0	ND	106	76-122	3.03	20	
Bromoform	57	1.0	"	50.0	ND	114	80-128	4.27	20	
Bromomethane	48	1.0	"	50.0	ND	96.6	69-144	1.23	20	
Carbon disulfide	51	5.0	"	50.0	ND	103	70-131	1.72	20	
Carbon tetrachloride	53	1.0	"	50.0	ND	106	81-130	6.07	20	
Chlorobenzene	51	1.0	"	50.0	ND	101	72-128	0.754	20	
Chloroethane	56	1.0	"	50.0	ND	111	79-140	3.67	20	
Chloroform	51	1.0	"	50.0	ND	102	76-118	1.82	20	
Chloromethane	53	1.0	"	50.0	ND	106	72-128	1.33	20	
cis-1,2-Dichloroethene	52	1.0	"	50.0	ND	104	78-120	3.10	20	
cis-1,3-Dichloropropene	55	1.0	"	50.0	ND	109	79-120	1.51	20	
Dibromochloromethane	55	1.0	"	50.0	ND	110	81-121	2.22	20	
Dibromomethane	51	1.0	"	50.0	ND	102	84-115	2.80	20	
Ethylbenzene	54	1.0	"	50.0	ND	107	76-132	1.85	20	
Hexachlorobutadiene	52	5.0	"	50.0	ND	103	70-130	2.05	20	
Iodomethane	49	10	"	50.0	ND	97.9	72-127	1.79	20	
Isopropylbenzene	53	1.0	"	50.0	ND	105	66-135	1.40	20	
m,p-Xylene	110	2.0	"	100	ND	106	69-139	0.823	20	
Methylene Chloride	70	5.0	"	50.0	8.2	124	87-118	0.857	20	QM-07
Methyl tert-Butyl Ether	50	1.0	"	50.0	ND	99.0	62-138	3.70	20	
Naphthalene	54	4.0	"	50.0	0.7	107	59-148	5.53	20	

Origins Laboratory, Inc.



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Pinyon
 9100 West Jewell Avenue, Suite 200
 Lakewood CO 80232

Russ Cirillo
 Project Number: [none]
 Project: 11500710

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5H28009 - EPA 5030B (Water)

Matrix Spike Dup (5H28009-MSD1)	Source: X508324-01			Prepared: 08/28/2015 Analyzed: 08/28/2015						
n-Butylbenzene	52	1.0	ug/L	50.0	ND	105	52-146	0.0953	20	
n-Propylbenzene	53	1.0	"	50.0	ND	105	66-141	1.49	20	
o-Xylene	53	1.0	"	50.0	ND	107	74-131	1.38	20	
sec-Butylbenzene	52	1.0	"	50.0	ND	104	63-138	1.33	20	
Styrene	55	1.0	"	50.0	ND	110	72-128	2.29	20	
tert-Butylbenzene	50	1.0	"	50.0	ND	101	67-129	0.996	20	
Tetrachloroethene	52	1.0	"	50.0	ND	104	76-134	0.420	20	
Toluene	51	1.0	"	50.0	ND	102	73-131	0.0392	20	
trans-1,2-Dichloroethene	50	1.0	"	50.0	ND	101	78-123	0.199	20	
trans-1,3-Dichloropropene	55	1.0	"	50.0	ND	110	75-125	2.96	20	
Trichloroethene	50	1.0	"	50.0	ND	99.7	73-131	2.01	20	
Trichlorofluoromethane	52	1.0	"	50.0	ND	105	83-141	0.0383	20	
Vinyl chloride	56	1.0	"	50.0	ND	112	73-139	1.67	20	
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		99.0	84-121			
Surrogate: Toluene-d8	64		"	62.5		102	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	84-114			

Origins Laboratory, Inc.



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Pinyon
9100 West Jewell Avenue, Suite 200
Lakewood CO 80232

Russ Cirillo
Project Number: [none]
Project: 11500710

Notes and Definitions

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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9/16/2015
Mr. Russ Cirillo
Pinyon Environmental
9100 West Jewell Avenue

Lakewood CO 80232

Project Name: NATIONAL WESTERN
Project #: 11500710
Workorder #: 1509193

Dear Mr. Russ Cirillo

The following report includes the data for the above referenced project for sample(s) received on 9/15/2015 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 SIM are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free the Project Manager: Brian Whittaker at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Brian Whittaker
Project Manager

WORK ORDER #: 1509193

Work Order Summary

CLIENT: Mr. Russ Cirillo
Pinyon Environmental
9100 West Jewell Avenue
Lakewood, CO 80232

BILL TO: Mr. Russ Cirillo
Pinyon Environmental
9100 West Jewell Avenue
Lakewood, CO 80232

PHONE: 303-980-5200

P.O. #

FAX: 303-980-0089

PROJECT # 11500710 NATIONAL WESTERN

DATE RECEIVED: 09/15/2015

CONTACT: Brian Whittaker

DATE COMPLETED: 09/16/2015

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	SV-201 5'	Modified TO-15 SIM	12.6 "Hg	5 psi
02A	SV-201 10'	Modified TO-15 SIM	13.5 "Hg	4.9 psi
03A	SV-200 5'	Modified TO-15 SIM	14.7 "Hg	4.8 psi
04A	SV-200 10'	Modified TO-15 SIM	13.3 "Hg	4.9 psi
05A	Lab Blank	Modified TO-15 SIM	NA	NA
06A	CCV	Modified TO-15 SIM	NA	NA
07A	LCS	Modified TO-15 SIM	NA	NA
07AA	LCSD	Modified TO-15 SIM	NA	NA

CERTIFIED BY:



Technical Director

DATE: 09/16/15

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.

Eurofins Air Toxics Inc. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15 SIM
Pinyon Environmental
Workorder# 1509193

Eight 6 Liter Summa Canister (SIM Certified) samples were received on September 15, 2015. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
ICAL %RSD acceptance criteria	$\leq 30\%$ RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is $\leq 30\%$ RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD
Daily Calibration	+ - 30% Difference	Project specific; default criteria is $\leq 30\%$ Difference with 10% of compounds allowed out up to $\leq 40\%$; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Dilution was performed on sample SV-200 5' due to the presence of high level target species.

Dilution was performed on samples SV-201 5', SV-201 10' and SV-200 10' due to the presence of high level non-target species.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See

data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

**Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS SIM**

Client Sample ID: SV-201 5'

Lab ID#: 1509193-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	0.066	3.7	0.45	25

Client Sample ID: SV-201 10'

Lab ID#: 1509193-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	0.061	7.3	0.41	49

Client Sample ID: SV-200 5'

Lab ID#: 1509193-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.032	0.036	0.083	0.091
Trichloroethene	0.065	0.34	0.35	1.8
Tetrachloroethene	0.065	33	0.44	220

Client Sample ID: SV-200 10'

Lab ID#: 1509193-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.030	0.043	0.076	0.11
Trichloroethene	0.060	0.076	0.32	0.41
Tetrachloroethene	0.060	1.4	0.40	9.2



Air Toxics

Client Sample ID: SV-201 5'

Lab ID#: 1509193-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	v091507sim	Date of Collection:	9/14/15 11:35:00 AM
Dil. Factor:	3.31	Date of Analysis:	9/15/15 01:55 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.033	Not Detected	0.085	Not Detected
cis-1,2-Dichloroethene	0.066	Not Detected	0.26	Not Detected
Trichloroethene	0.066	Not Detected	0.36	Not Detected
Tetrachloroethene	0.066	3.7	0.45	25
trans-1,2-Dichloroethene	0.33	Not Detected	1.3	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	98	70-130

Client Sample ID: SV-201 10'

Lab ID#: 1509193-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	v091508sim	Date of Collection: 9/14/15 11:58:00 AM
Dil. Factor:	3.03	Date of Analysis: 9/15/15 02:44 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.030	Not Detected	0.077	Not Detected
cis-1,2-Dichloroethene	0.061	Not Detected	0.24	Not Detected
Trichloroethene	0.061	Not Detected	0.32	Not Detected
Tetrachloroethene	0.061	7.3	0.41	49
trans-1,2-Dichloroethene	0.30	Not Detected	1.2	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	98	70-130

Client Sample ID: SV-200 5'

Lab ID#: 1509193-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	v091509sim	Date of Collection: 9/14/15 12:40:00 PM
Dil. Factor:	3.25	Date of Analysis: 9/15/15 03:45 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.032	0.036	0.083	0.091
cis-1,2-Dichloroethene	0.065	Not Detected	0.26	Not Detected
Trichloroethene	0.065	0.34	0.35	1.8
Tetrachloroethene	0.065	33	0.44	220
trans-1,2-Dichloroethene	0.32	Not Detected	1.3	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	97	70-130

Client Sample ID: SV-200 10'

Lab ID#: 1509193-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	v091510sim	Date of Collection: 9/14/15 12:50:00 PM
Dil. Factor:	2.99	Date of Analysis: 9/15/15 04:21 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.030	0.043	0.076	0.11
cis-1,2-Dichloroethene	0.060	Not Detected	0.24	Not Detected
Trichloroethene	0.060	0.076	0.32	0.41
Tetrachloroethene	0.060	1.4	0.40	9.2
trans-1,2-Dichloroethene	0.30	Not Detected	1.2	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	98	70-130

Client Sample ID: Lab Blank

Lab ID#: 1509193-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	v091506sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/15/15 01:20 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1509193-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	v091502sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/15/15 10:08 AM

Compound	%Recovery
Vinyl Chloride	101
cis-1,2-Dichloroethene	102
Trichloroethene	102
Tetrachloroethene	92
trans-1,2-Dichloroethene	102

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1509193-07A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	v091503sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/15/15 10:52 AM

Compound	%Recovery	Method Limits
Vinyl Chloride	105	70-130
cis-1,2-Dichloroethene	115	70-130
Trichloroethene	102	70-130
Tetrachloroethene	94	70-130
trans-1,2-Dichloroethene	90	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	97	70-130

Client Sample ID: LCSD

Lab ID#: 1509193-07AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	v091504sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/15/15 12:02 PM

Compound	%Recovery	Method Limits
Vinyl Chloride	103	70-130
cis-1,2-Dichloroethene	113	70-130
Trichloroethene	101	70-130
Tetrachloroethene	93	70-130
trans-1,2-Dichloroethene	89	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	95	70-130