

## Colorado Procedure 15-21

### *Standard Practice for*

### **Certification of Consultant Nuclear Moisture/Density Gauges**

#### **1. SCOPE**

An engineering consulting company contracted to perform materials testing for the Department must have their designated nuclear moisture / density gauges certified in the calibration bay located at CDOT's Central Materials Laboratory. Nuclear M/D gauges used for Process Control (PC) testing by the contractor or the contractor's agent will not be certified on the Department's calibration blocks.

#### **2. REFERENCED DOCUMENTS**

CP-L 5306, Certification of Consultant Nuclear Moisture / Density and Thin Layer Density Gauges

Statistical Stability Test and Drift Test, CDOT Form 1151

OA/PC Certified Nuclear Gauge – Consultant Nuclear Gauge Assignment Document, CDOT

CDOT Certified Nuclear Gauge Label, CDOT Form 30

#### **3. REQUIREMENTS**

- 3.1 The company must contact the Central Laboratory (aka Staff Materials & Geotechnical Branch at (303) 398-6547 to make an appointment to certify their M/D gauge. It is recommended that an adequate amount of time, i.e., at least two months, be allowed to ensure that the gauge is available when the contract commences.
- 3.2 The company must provide the Central Laboratory with a current copy of The Notice to Proceed and the referenced Task Order. Documentation provided must include project number, Contract ID (previously referred to as project code), project location, contract commencement date, and the contract expiration date or work duration time frame.
- 3.3 The company must ensure that the gauge requiring certification is clean and is in no need of maintenance or repairs. Cleaning, maintenance, and repairs will not be performed by CDOT's Central Laboratory personnel.
- 3.4 The company is required to have one gauge certified for the contracted project, plus one additional gauge certified as an emergency replacement. If the company has two contracted projects with the Department, three certified gauges would be required, that is, one M/D gauge for each project plus one emergency replacement gauge.
- 3.5 The company must have a recently performed passing Statistical Stability Test and Drift Test, CDOT Form 1151, for their gauge when they arrive for the certification.
- 3.6 The company employee who will be performing the certification procedure shall be capable of running the basic operations of the gauge and must have a personnel monitoring device, a calculator, and a minimum of 3 hours of available time. Arrival must be at the time of the appointment, and rescheduling will be required if the operator and gauge are not in the calibration room, commencing with the certification within 30 minutes of the established time.

**Note:** CDOT requires personnel monitoring devices be worn by an individual within proximity to its nuclear gauges. If the company's policy is to not require personnel monitoring devices of its employees, per current Colorado Department of Public Health & Environment directives, then a letter stating that CDOT will be held harmless from any exposure to CDOT nuclear gauges must be provided and signed by the company's Radiation Safety Officer (RSO).

- 3.7 A gauge passing the calibration will be certified with a label stating "CDOT OA/PC CERTIFIED NUCLEAR GAUGE" (CDOT Form 30).
- 3.8 The company will receive an OA/PC Certified Nuclear Gauge – Consultant Nuclear Gauge Assignment certificate. It must be completed, signed by the company's designated Radiation Safety Officer, and returned as soon as possible. If the nuclear gauge is assigned to a different project from the one listed on the Assignment certificate at any time during the certification period, then CDOT's Central Laboratory must be informed in writing.
- 3.9 The certification is valid for no more than 12 months.
- 3.10 The company must inform CDOT's Central Laboratory if any repairs take place on the gauge within this period of acceptance.



**COLORADO**  
Department of Transportation  
Division of Engineering Support

**OA/PC Certified Nuclear Gauge  
Consultant Nuclear Gauge Assignment**

**Consultant Name** \_\_\_\_\_  
**Address** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

The above named entity will be utilizing Gauge No \_\_\_\_\_ (Certification Date \_\_\_\_\_)  
under contract with the Colorado Department of Transportation, or the entity was sub-contracted to perform testing by the  
contracted engineering consulting company of \_\_\_\_\_

**Project No.** \_\_\_\_\_  
**Contract ID** \_\_\_\_\_  
**Project Location** \_\_\_\_\_  
**Contract Commences** \_\_\_\_\_ **Expires** \_\_\_\_\_

**Gauge Serial Number:** \_\_\_\_\_  
**Gauge Model** \_\_\_\_\_  
**Certified By:** \_\_\_\_\_  
**Expiration Date** \_\_\_\_\_

The following conditions that must be met to use the above gauge on a CDOT project:

1. Radioactive material shall be used by individuals, designated as users by the R.S.O.
2. Personnel monitoring devices capable of detecting both gamma and neutron radiation may not be required. However, CDOT must be informed in writing as to the Licensee's policy and the individual tester must comply for the duration of the contract.
3. Each sealed source containing radioactive material shall be tested for leakage and/or contamination in accordance with RH 4.16 of the State of Colorado *Rules and Regulations Pertaining to Radiation Control*.
4. Radioactive material shall be stored and used in a manner that will preclude use by unauthorized personnel.
5. The nuclear gauge and its associated DOT Type "A" carrying case will meet marking and labeling requirements. The carrying case must be capable of meeting the requirements of a DOT Type "A" transport container.
6. If a nuclear gauge is to be stored in a CDOT facility, the Consultant shall provide the Project Engineer a copy of the Consultant's Nuclear Incident Procedures to be posted in the facility.

**Print** \_\_\_\_\_ **Date** \_\_\_\_\_

**Signature** \_\_\_\_\_

Designated Radiation Safety Officer (RSO)

**Emergency Notification Telephone No.(s):** 1) \_\_\_\_\_  
2) \_\_\_\_\_

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