

Notice of Continuation: April 18, 2007

Authorizing, and Implemented or Interpreted Law: 19-6-105;  
~~19-6-403~~; 19-6-408

## Environmental Quality, Environmental Response and Remediation

### **R311-205**

## Underground Storage Tanks: Site Assessment Protocol

### NOTICE OF PROPOSED RULE

(Amendment)

DAR FILE NO.: 34275

FILED: 12/01/2010

#### RULE ANALYSIS

**PURPOSE OF THE RULE OR REASON FOR THE CHANGE:** Guidance documents for collecting soil and groundwater samples are incorporated by reference because samplers are required to follow the protocols in these documents when they collect samples. The reference to approval of Certified Environmental Laboratories by the Executive Secretary is removed because laboratory certification is already performed by the Utah Department of Health, so it is not necessary for the Executive Secretary to approve the laboratories. Removal of the reference to the table of analytical methods and the listing of the analytical methods separately in the rule are done to allow for more flexibility in methods used and to allow laboratories to use the most current method version without having to change the rule each time a new method version is created. Differences between versions are usually not significant and do not affect the validity of the method or the analysis. Because most laboratories use the current version, removing the reference to a specific version allows the rule to remain current with method versions as they change. The actual methods required by the rule are not changed.

**SUMMARY OF THE RULE OR CHANGE:** Incorporates by reference guidance documents for collecting soil and groundwater samples for UST site assessments. Removes the reference to the approval of Certified Environmental Laboratories by the Executive Secretary. Removes the reference to the table of analytical methods to be used for sample analysis, and specifies the analytical methods for each analyte separately in the rule text. Removes references to specific versions of analytical methods.

**STATUTORY OR CONSTITUTIONAL AUTHORIZATION FOR THIS RULE:** Section 19-6-105 and Section 19-6-403 and Section 19-6-413

#### MATERIALS INCORPORATED BY REFERENCES:

- ◆ Adds Description and Sampling of Contaminated Soils, A Field Pocket Guide, published by United States Environmental Protection Agency, 11/01/1991
- ◆ Removes Analytical Methods for Environmental Sampling at Underground Storage Tank Sites in Utah (July 2004), published by Division of Environmental Response and Remediation, Utah DEQ, 07/01/2004
- ◆ Adds RCRA Ground-Water Monitoring Technical Enforcement Guidance Document, published by United States Environmental Protection Agency, 09/01/1986
- ◆ Adds Compendium of ERT Surface Water and Sediment Sampling Procedures, published by United States Environmental Protection Agency, 01/01/1991

#### ANTICIPATED COST OR SAVINGS TO:

- ◆ **THE STATE BUDGET:** Savings of approximately \$600 per year in personnel costs because the Executive Secretary will no longer be required to approve laboratories.
- ◆ **LOCAL GOVERNMENTS:** No costs or savings are associated with the changes. The analytical method change only provides a way to keep the rule current with changes in laboratory methods. It has no effect on the methods that are in use by laboratories. Guidance documents are available free of charge on the Internet from EPA.
- ◆ **SMALL BUSINESSES:** No costs or savings are associated with the changes. The analytical method change only provides a way to keep the rule current with changes in laboratory methods. It has no effect on the methods that are in use by laboratories. Guidance documents are available free of charge on the Internet from EPA.
- ◆ **PERSONS OTHER THAN SMALL BUSINESSES, BUSINESSES, OR LOCAL GOVERNMENTAL ENTITIES:** No costs or savings are associated with the changes. The analytical method change only provides a way to keep the rule current with changes in laboratory methods. It has no effect on the methods that are in use by laboratories. Guidance documents are available free of charge on the Internet from EPA.

**COMPLIANCE COSTS FOR AFFECTED PERSONS:** None anticipated. The analytical method change only provides a way to keep the rule current with changes in laboratory methods. It has no effect on the methods that are in use by laboratories. Guidance documents are available free of charge on the Internet from EPA.

**COMMENTS BY THE DEPARTMENT HEAD ON THE FISCAL IMPACT THE RULE MAY HAVE ON BUSINESSES:** There should not be any fiscal impact on businesses. Environmental laboratories keep their analytical methods current, so the rule change would not affect them. If a laboratory uses one of the earlier method variations, it would still be acceptable, because a specific method version is no longer required by the rule.

THE FULL TEXT OF THIS RULE MAY BE INSPECTED,  
DURING REGULAR BUSINESS HOURS, AT:

ENVIRONMENTAL QUALITY  
ENVIRONMENTAL RESPONSE AND  
REMEDIATION  
ROOM FIRST FLOOR  
195 N 1950 W  
SALT LAKE CITY, UT 84116-3085  
or at the Division of Administrative Rules.

DIRECT QUESTIONS REGARDING THIS RULE TO:

♦ Gary Astin by phone at 801-536-4103, by FAX at 801-359-8853, or by Internet E-mail at gastin@utah.gov

INTERESTED PERSONS MAY PRESENT THEIR VIEWS ON  
THIS RULE BY SUBMITTING WRITTEN COMMENTS NO  
LATER THAN AT 5:00 PM ON 01/14/2011

INTERESTED PERSONS MAY ATTEND A PUBLIC  
HEARING REGARDING THIS RULE:

♦ 01/06/2011 02:00 PM, MASOB, 195 N 1950 W, Room 1015,  
Salt Lake City, UT

THIS RULE MAY BECOME EFFECTIVE ON: 02/14/2011

AUTHORIZED BY: Brent Everett, Director

### **R311. Environmental Quality, Environmental Response and Remediation.**

#### **R311-205. Underground Storage Tanks: Site Assessment Protocol.**

##### **R311-205-1. Definitions.**

Definitions are found in Rule R311-200.

##### **R311-205-2. Site Assessment Protocol.**

###### **(a) General Requirements.**

(1) When a site assessment or site check is required, pursuant to 40 CFR 280 or Subsection 19-6-428(3), owners or operators shall perform or commission to be performed a site assessment or a site check according to the protocol outlined in Rule R311-205 or equivalent, as approved by the Executive Secretary. Additional environmental samples must be collected when contamination is found, suspected, or as requested by the Executive Secretary.

(2) This Subsection incorporates by reference the documents referenced in Subsections R311-205-2(a)(2)(A) through (C). These documents contain guidance and methodologies for collecting soil and groundwater samples.

(A) Groundwater samples shall be collected in accordance with ~~the~~ "[EPA-]RCRA Ground-[w]Water Monitoring Technical Enforcement Guidance Document" (OSWER Directive 9950.1), published by EPA and dated September 1986, or as determined by the Executive Secretary.

(B) Surface water samples shall be collected in accordance with protocol established in ~~the~~ "[EPA-]Compendium of ERT Surface Water and Sediment Sampling Procedures", published by EPA and dated January 1991, or as determined by the Executive Secretary.

(C) Soil samples shall be collected in accordance with ~~the~~ "[EPA-]Description and Sampling of Contaminated Soils, A Field Pocket Guide", published by EPA and dated November 1991, or as determined by the Executive Secretary.

(3) Owners and operators must document and report to the Executive Secretary sample types, sample locations and depths, field and sampling measurement methods, the nature of the stored substance, the type of backfill and native soil, the depth to groundwater, and other factors appropriate for identifying the source area and the degree and extent of subsurface soil and groundwater contamination.

(4) The owner or operator shall report the discovery of any release or suspected release to the Executive Secretary within twenty-four hours. Owners or operators shall begin release investigation and confirmation steps in accordance with 40 CFR 280, Subpart E upon suspecting a release. Owners or operators shall begin release response and corrective action in accordance with 40 CFR 280, Subpart F upon confirming a release.

(5) All environmental samples shall be collected by a certified groundwater and soil sampler who meets the requirements of Rule R311-201. The certified groundwater and soil sampler shall record the depth below grade and location of each sample collected to within one foot.

(6) All environmental samples shall be analyzed within the time frame allowed, in accordance with Table 4.1 of ~~the~~ "[EPA-]RCRA Ground-[w]Water Monitoring Technical Enforcement Guidance Document" (OSWER Directive 9950.1), by a ~~Utah~~ Certified Environmental Laboratory ~~approved by the Executive Secretary~~. Soil samples must be corrected for moisture, if necessary, with percent moisture reported to accurately represent the level of contamination.

(7) Environmental samples for UST permanent closure or change in service shall be collected according to the protocol outlined in Subsection R311-205-2(b), after the UST system is emptied and cleaned and after the closure plan has been approved.

(8) Environmental confirmation samples are required following overexcavation of soils. Confirmation samples shall be taken at locations and depths sufficient to detect the presence, extent and degree of a release from any portion of the UST in accordance with 40 CFR 280, Subparts E, F and G. Additional confirmation samples may be required as determined by the Executive Secretary.

(9) Upon confirming a release, a site assessment report, an updated site plat, analytical laboratory results, chain of custody forms, and all other applicable documentation required by 40 CFR 280, Subparts E and F, following any abatement, investigation or assessment, monitoring, remediation or corrective action activities, shall be submitted to the Executive Secretary within the specified time frames as outlined in compliance schedules.

(10) When conducting environmental sampling to satisfy the requirements of 40 CFR 280, subparts E and F, soil classification samples to determine native soil type shall be collected at locations and depths as outlined in compliance schedules, or as determined by the Executive Secretary. Techniques of the Unified Soil Classification such as a sieve analysis or laboratory classification, or a field description from a qualified individual as determined by the Executive Secretary, may be used to satisfy requirements of determining native soil type.

(11) Other types of environmental or quality assurance samples may be required as determined by the Executive Secretary.

## (b) Site Assessment Protocol for UST Closure.

(1) The appropriate number of environmental samples, as described in Subsection R311-205-2(b)(4) shall be collected in native soils, below the backfill material, and as close as technically feasible to the tank, piping or dispenser island. Any other samples required by Subsection R311-205-2(a) must also be collected. Soil samples shall be collected from a depth of zero to two feet below the backfill and native soil interface. If groundwater is contacted in the process of collecting the soil samples, the soil samples required by Subsection R311-205-2(b)(4) shall be collected from the unsaturated zone immediately above the capillary fringe. Groundwater samples shall be collected using proper surface water collection techniques, from a properly installed groundwater monitoring well, or as determined by the Executive Secretary. All environmental samples shall be analyzed using the appropriate analytical methods outlined in Subsection R311-205-2(d).

(2) One soil classification sample to determine native soil type shall be collected at the same depth as indicated for environmental samples, at each tank and product piping area. For all dispenser islands, only one representative sample to determine native soil type is required. Techniques of the Unified Soil Classification such as a sieve analysis or laboratory classification shall be used to satisfy requirements of determining native soil type when taking samples for UST closure.

(3) For purposes of complying with Rule R311-205, for tanks or piping to be removed, closed in-place or that undergo a change in service, a tank or product piping area is considered to be an excavation zone or equivalent volume of material containing one, or more than one immediately adjacent, UST or piping run.

## (4) Environmental Sampling Protocol for UST closures:

(A) For a tank area containing one UST, one soil sample shall be collected at each end of the tank. If groundwater is contacted during the process of collecting soil samples, a minimum of one groundwater and one soil sample shall be collected from each end of the tank.

(B) For a tank area containing more than one UST, one soil sample shall be collected from each corner of the tank area. If groundwater is contacted during the process of collecting soil samples, a minimum of one groundwater and one soil sample shall be collected from each end of the tank area.

(C) Product piping samples shall be collected from each product piping area, at locations where leaking is most likely to occur, such as joints, connections and fittings, at intervals which do not allow more than 50 linear feet of piping in a single piping area to go unsampled. If groundwater is contacted during the process of collecting soil samples, a minimum of one groundwater and one soil sample shall be collected from each piping area where groundwater was encountered.

(D) For dispenser islands, environmental samples shall be collected from the middle of each dispenser island. Additional environmental samples shall be collected at intervals which do not allow more than 25 linear feet of dispenser island piping to go unsampled. If groundwater is contacted during the process of collecting soil samples, a minimum of one groundwater and one soil sample shall be collected from each dispenser island where groundwater was encountered.

(c) Site Check Requirements for Re-applying to Participate in the Petroleum Storage Tank Trust Fund Program.

(1) Owners or operators wishing to re-apply for participation in the Petroleum Storage Tank Trust Fund Program following a period of lapse or non-participation shall perform a tank tightness test and site check pursuant to Subsection 19-6-428(3)(a). The tank tightness test and site check shall be consistent with requirements for testing and site assessment as defined under 40 CFR 280, Subparts D and E.

(2) The owner or operator shall develop or commission to have developed a site check plan outlining the intended sampling program. The Executive Secretary shall review and approve the site check plan prior to its implementation. The site check shall meet the sampling requirements for USTs, dispensers and piping as defined in Subsection R311-205-2(b), or as determined by the Executive Secretary on a site-specific basis. Additional sampling may be required by the Executive Secretary based on review of the proposed site check plan and site specific conditions.

## (d) Laboratory Analyses of Environmental Samples.

(1) Environmental samples which have been collected to determine levels of contamination from underground storage tanks shall be analyzed ~~[using appropriate laboratory analytical methods as referenced in the "Analytical Methods for Environmental Sampling at Underground Storage Tank Sites in Utah (July 2004)", or as determined by the Executive Secretary.]~~ by a Certified Environmental Laboratory. Unless otherwise approved by the Executive Secretary, the required analytes and corresponding analytical methods shall be:

~~(2)A~~ [Environmental samples which have been collected to determine levels of contamination by g] Gasoline contamination-

~~(i) [shall be analyzed for] total petroleum hydrocarbons (purgeable TPH as gasoline range organics C<sub>6</sub> - C<sub>10</sub>) by either EPA 8015 or EPA 8260; and~~ [;]

~~(ii) benzene, toluene, ethylbenzene, xylenes, [and] naphthalene (BTEXN), and [for] methyl tertiary butyl ether (MTBE) by either EPA 8021 or EPA 8260.~~

~~(3)B~~ [Environmental samples which have been collected to determine levels of contamination by d] Diesel fuel contamination- [shall be analyzed for]

~~(i) total petroleum hydrocarbons (extractable TPH as diesel range organics C<sub>10</sub> - C<sub>28</sub>) [;] by EPA 8015; and~~

~~(ii) benzene, toluene, ethylbenzene, xylenes and naphthalene (BTEXN) by either EPA 8021 or EPA 8260.~~

~~(4)C~~ [Environmental samples which have been collected to determine levels of contamination by u] Used oil [shall be analyzed for] contamination-

~~(i) oil and grease (O and G) or total recoverable petroleum hydrocarbons (TRPH) by EPA 1664; and~~

~~(ii) [-for] benzene, toluene, ethylbenzene, xylenes, naphthalene (BTEXN)[;], methyl tertiary butyl ether (MTBE)[;], and halogenated volatile organic compounds (VOX) by EPA 8021 or EPA 8260.~~

~~(5)D~~ [Environmental samples which have been collected to determine levels of contamination by n] New oil [shall be analyzed for] contamination- oil and grease (O and G) or total recoverable petroleum hydrocarbons (TRPH) by EPA 1664.

~~(6)E~~ [Environmental samples which have been collected to determine levels of e] Contamination from underground storage tanks which contain substances other than or in addition to