

567—135.19(455B) Analyzing for methyl tertiary-butyl ether (MTBE) in soil and groundwater samples.

135.19(1) General. The objective of analyzing for MTBE is to determine its presence in soil and water samples collected as part of investigation and remediation of contamination at underground storage tank facilities.

135.19(2) Required MTBE testing. Soil and water samples must be analyzed for MTBE when collected for risk-based corrective action as required in rules 135.8(455B) through 135.12(455B). These sampling requirements include but are not limited to:

a. Risk-based corrective action (RBCA) evaluations required for Tier 1, Tier 2, and Tier 3 assessments and corrective action design reports.

b. Site monitoring.

c. Site remediation monitoring.

135.19(3) MTBE testing not required. Soil and water samples for the following actions are not required to be analyzed for MTBE:

a. Closure sampling under rule 135.15(455B) unless Tier 1 or Tier 2 sampling is being performed.

b. Site checks under subrule 135.7(3) unless Tier 1 or Tier 2 sampling is being performed.

c. If prior analysis at a site under 135.19(2) has not shown MTBE present in soil or groundwater.

d. If the department determines MTBE analysis is no longer needed at a site.

135.19(4) Reporting. The analytical data must be submitted in a format prescribed by the department.

135.19(5) Analytical methods for methyl tertiary-butyl ether (MTBE). When having soil or water analyzed for MTBE from contamination caused by petroleum or hazardous substances, owners and operators of UST systems must use a laboratory certified under 567—Chapter 83 for petroleum analyses. In addition, the owners and operators must ensure all soil and water samples are properly preserved and shipped within 72 hours of collection to a laboratory certified under 567—Chapter 83 for petroleum analyses.

a. Sample preparation and analysis shall be by:

(1) GC/MS version of OA-1, “Method for Determination of Volatile Petroleum Hydrocarbons (gasoline),” revision 7/27/93, University Hygienic Laboratory, Iowa City, Iowa; or

(2) U.S. Environmental Protection Agency Method 8260B, SW-846, “Test Methods for Evaluating Solid Waste,” Third Edition.

b. Laboratories performing the analyses must run standards for MTBE on a routine basis, and standards for other possible compounds like ethyl tertiary-butyl ether (ETBE), tertiary-amyl methyl ether (TAME), diisopropyl ether (DIPE), and tertiary-butyl alcohol (TBA) to be certain of their identification should they be detected.

c. Laboratories must run a method detection limit study and an initial demonstration of capability for MTBE. These records must be kept on file.

d. The minimum detection level for MTBE in soil is 15 ug/kg. The minimum detection level for MTBE in water is 15 ug/l.