



PROCEDURES FOR THE COLLECTION OF SOIL SAMPLES AT UST SITES

North Dakota Department of Environmental Quality

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Updated 2-2021

This document provides general guidance for the collection of soil samples contaminated by gasoline or other petroleum hydrocarbons at underground storage tank sites. Petroleum underground storage tanks are regulated by the North Dakota Underground Storage Tank (UST) Rules - Chapter 33.1-24-08 of NDAC Article 33.1-24.

I. General Procedures

- A. The locations of surface soil samples, soil borings, and excavation areas should be identified and documented on a site map. Soil boring logs should be prepared by qualified personnel (e.g., geologist, engineer, etc.) and be included along with the site map in a Site Investigation Report. The appropriate method for obtaining a soil sample is determined by site conditions. Soil samples can be obtained using the following methods:
1. Hand auger, trowel or spatula for collecting surface samples and composite samples or stockpiled soils;
 2. Split spoon sampler when drilling well boreholes and constructing depth profiles; and
 3. Backhoe for collecting samples from the UST excavation area.

II. Surface Sampling

- A. All soil sampling equipment must be decontaminated prior to each use. A shovel, trowel or scoop can be used for sample collection of surface soils. Soil samples taken at depths greater than three inches should be collected with a hand auger or a tube sampler. Stainless steel sampling equipment should be used whenever possible.

III. Subsurface Sampling

- A. Borings for subsurface sampling should be advanced with a hollow-stem, continuous flight auger. Other drilling methods may be used as dictated by site specific conditions and approved in advance by the North Dakota Department of Environmental Quality.
- B. Soil samples should be obtained using a split spoon sampler. The sampling method as prescribed by ASTM:D 1586-84 may be used. Samples should, at a minimum, be taken every five feet or as often as necessary to accurately describe the stratigraphy and any zones of contamination. The sampling device should be decontaminated between each sampling event.

IV. Soil Samples

- A. The labels on the soil sample containers should indicate the following:
 - 1. Type of analysis;
 - 2. Name of facility;
 - 3. Sampling point identification;
 - 4. Name of person collecting the sample; and
 - 5. Time and date the sample was collected.

- B. Chain of custody tracking must be done for all samples. Chain of custody provides a record of all the personnel responsible for handling the samples. A log should be kept of all sampling activities.