

SOP S-3

**STANDARD OPERATING PROCEDURE FOR TEST PIT SAMPLING AT THE
WEST KINGSTON TOWN DUMP/ URI DISPOSAL AREA SITE**

Woodard & Curran, Inc.

Test Pit Sampling Procedure

Test Pits will be excavated with backhoe equipment to provide detailed visual examination of near surface soil, groundwater, and bedrock conditions. Test Pit soil samples may be collected using stainless steel and/or Teflon-lined scoops, trowels, shovels, spoons, or spatulas.

Equipment needed:

- Bound field logbook.
- Sample tags.
- Appropriate sample containers and labels.
- Insulated cooler and ice.
- Decontamination equipment and supplies.
- Personal protective clothing and equipment as required by the site-specific HASP.
- Stainless steel or aluminum trays or bowls.
- Stainless steel shovels, trowels, spoons, or spatulas.
- Backhoe Equipment

Test Pit Sampling Procedure:

1. Contact DIG SAFE in Maine at (800) DIG-SAFE prior to any subsurface investigation. In addition, contact local utilities that may have underground services on or near the Site.
2. Follow the sampling pattern outlined in the QAPP.
3. Mark the location of potential test pits.
4. At the direction of the W&C staff on-site, the backhoe operator will excavate the test pit in increments.
5. Test pit excavations will cease if any of the following occurs:
 - Distinct changes in stratigraphy or materials
 - Odors
 - Groundwater or fluid phase contaminants
6. The requirements for collecting grab samples of soil are as follows:
 - a. Use a clean stainless steel trowel or spoon to collect sufficient material to fill the sample containers.

- b. Fill the sample containers directly from the sampling device, removing stones, twigs, grass, etc., from the sample. Additional sample containers may be required to obtain enough material for a minimum of 30 percent solids.
- c. Immediately secure the caps on the sample container.
- d. Label container with the appropriate information. NOTE: Container may be labeled prior to sample collection.
- e. Record samples (e.g., sample ID, location, depth, method, etc...) in the bound field logbook.
- f. Pack sample in cooler with ice. The only preservation required for soil, sediment and sludge samples is to cool them to 4 degrees Celsius. A small plastic temperature blank will be filled with water and placed in the cooler with the samples. The temperature of the samples will be determined at the laboratory by measuring the temperature of the temperature blank.
- g. Use decontaminated sampling equipment at each sample location to minimize cross-contamination.
- h. In the event that a duplicate sample is collected: fill duplicate jars for VOAs as described above. For other parameters, place sufficient sample quantity in a stainless steel bowl and mix. Split duplicate sampling jars.
- i. VOC containers will be preserved with methanol. Pre-measured vials containing the appropriate quantity of methanol will be provided by the laboratory.

Field Log Information:

At a minimum, field logs for test pit excavation will include the following documentation:

- Plan and profile sketches of the test pit showing materials encountered, the depth of material, and sample locations
- Sketch of the test pit and distance and direction from permanent, identifiable location marks as appropriate.
- A description of the material removed from the excavation
- A record of samples collected
- The presence or absence of water in the test pit and the depth encountered
- Other readings, or measurements taken during excavation, including field screening reading

Unless otherwise specified and the site-specific Health and Safety Plan discusses appropriate procedures, no personnel will enter the test pit. In addition, all test pits will be backfilled on the day of excavation. In most cases, excavation materials will be used to fill the test pit. In the event that highly contaminated soil is excavated and it is expected that it will be more cost-effective to remove the soil from the site rather than use it as back fill, excavated soils may be stockpiled on polypropylene and the excavation will be filled with clean soil.

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QA/QC

QA/QC procedures are outlined in the Sampling procedures discussed above. Duplicates, blanks, and spikes have been incorporated into the QAPP to assess potential for sampling, shipping, and laboratory impacts on data quality. Percent solids will also be analyzed for each sediment sample so that proper concentration adjustments can be made.

References

None.