

SOP S-10

**STANDARD OPERATING PROCEDURE SURFACE WATER SAMPLING AT
THE WEST KINGSTON TOWN DUMP/ URI DISPOSAL AREA SITE**

Woodard & Curran, Inc.

SURFACE WATER SAMPLING PROCEDURES

Surface water grab samples will be collected from water bodies and wetlands. In cases where the depth of the surface water body presents sampling from the banks of the water body, sampling from a boat may be required. Some wetlands may not have a sufficient depth of water from which to collect a sample.

Equipment needed:

- Rubber boots and/or rubberized waders.
- A boat to sample from, if required.
- Personal protective clothing and equipment as required in the site-specific HASP.
- Decontamination equipment and supplies.
- Temperature probe or thermometers, specific conductance meter, pH meter, dissolved oxygen meter, and turbidimeter as required by QAPP.
- Appropriate sample containers (some will be pre-preserved) and labels.
- Bound field logbook.
- Hard plastic cooler with ice.
- Filters as required.

Procedure. The following steps will be taken when collecting samples of surface water for VOC and TAL inorganics analyses:

1. Slowly submerge unpreserved one-liter amber glass-capped bottle (SVOA) completely into the water. Open and fill bottle from below the water surface. If wading is required, approach the sample site from downstream and do not enter the actual sample area. Do not disturb bottom sediments. Open-end of the bottle should be pointed at approximately 90° to the upstream direction, in undisturbed gently flowing water. This procedure will be performed to minimize the effects due to high turbulence and aeration, or if surface scum is prevalent.
2. Collect a sufficient volume of water to fill all sample containers.
3. For VOA analyses, slowly pour surface water sample into pre-preserved 40 ml VOA vials taking care not to let it over flow and lose preservative. Place cap with Teflon septum on each vial as filled. Turn the vial upside down and check for air bubbles. Tap the bottom of the VOA vials to dislodge any bubbles that may have formed around the cap or sides. If bubbles are present, discard vial and re-sample using new VOA vial.
4. For TAL metals, slowly pour surface water sample into pre-preserved 500 ml plastic container to sufficiently fill the container. Surface water samples may be collected as totals (unfiltered) or dissolved (filtered).
5. Seal sample container.
6. Place labeled sample container(s) into a sample cooler with ice. 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. The sample temperature should be a maximum of 4 degrees Celsius (°C).

7. Record samples (e.g., sample ID, location, method, etc...) in the field logbook.
8. Collect an additional grab sample in an unpreserved sample container and measure and record field parameters in the log book or on sampling sheets. Measured field parameters include pH, temperature, specific conductance, turbidity and Eh.

The following steps will be followed when collecting surface water samples for SVOCs and PCBs.

1. Slowly submerge capped sample containers completely into the water. Open and fill containers from below the water surface. If wading is required, approach the sample site from downstream and do not enter the actual sample area. Do not disturb underlying sediments. Open end of the containers should be pointed at approximately 90° to the upstream direction in undisturbed, gently flowing water. This procedure will be performed to minimize the effects due to high turbulence and aeration, or if surface scum is prevalent.
2. Collect a sufficient volume of water to fill all sample containers.
3. Seal sample container.
4. Place labeled sample container(s) into a sample cooler containing ice and temperature blank.
5. Record samples (e.g., sample ID, location, method, etc...) in the field logbook.
6. Collect an additional grab sample in an unpreserved sample vial and measure and record field parameters in the log book or on sampling sheets. Measured field parameters include pH, temperature, specific conductance, turbidity and Eh.

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.

References

None.