

SOP S-13

**STANDARD OPERATING PROCEDURE FOR EQUIPMENT
DECONTAMINATION AT THE
WEST KINGSTON TOWN DUMP/ URI DISPOSAL AREA SITE**

Woodard & Curran, Inc.

FIELD EQUIPMENT DECONTAMINATION PROCEDURE

Decontamination of field equipment is necessary to ensure the quality of samples by preventing cross-contamination. In addition, decontamination reduces health hazards and prevents the spread of contaminants off-site.

Equipment needed:

Large/heavy Equipment (i.e., Drill rigs, backhoes, augers, drill pipe, bits, casing, and screen):

- High-pressure pump with steam-spray unit.
- Stiff-bristle brushes.

Small/sampling Equipment (i.e., Split spoons, bailers, bowls, and pumps):

- Soap
- Polyethylene sheeting
- Stiff-bristle brushes.
- Wash bottles or manual pump sprayer.
- 10% methanol solution (optional)
- Distilled water
- Tap water

Procedure. The following steps will be followed when decontaminating large/heavy equipment:

1. The drilling contractor will construct a decontamination area at a designated area on site of 6-mil polyethylene, large enough to capture decontamination fluids. Decontamination of drilling equipment will be performed over the decontamination pad. Depending on site contaminants, drilling equipment may be decontaminated at each drilling location and decon water allowed to infiltrate into site soils.
2. Drill rigs and tools will be cleaned between each location and prior to the initiation of any sampling. Steam-cleaning/pressure washing water will be allowed to soak back into the ground.
3. Spray areas (rear of rig or backhoe) exposed to contaminated soils using steam or high-pressure sprayer. Be sure to spray down all surfaces, including the undercarriage.
4. Document that decontamination was performed in the appropriate logbook.

Procedure. The following steps will be followed when decontaminating sampling equipment including split-spoons, spatulas, and hand tools that directly contact samples.

1. Set up a decontamination line. The decontamination line should progress from “dirty” to “clean”, with an area for drying decontaminated equipment. The decontamination line should be set up on polyethylene sheeting.
2. Wash the item thoroughly in a bucket of soapy water (tap water). Use a stiff-bristle brush to dislodge any clinging dirt. Disassemble any items that might trap contaminants internally before washing. Do not reassemble until decontamination is complete.
3. Rinse the item in a bucket containing clear tap water. Rinse water should be replaced as needed.
4. Document that decontamination was performed in the appropriate logbook.
5. Disposable items will be bagged for disposal as general refuse.
6. Decontamination water will be discarded to ground surface.

Procedure. The following steps will be followed when decontaminating pumps.

1. Pumps should be set-up in the same configuration as for sampling. Flush the pump with potable water.
2. Submerge pump intake (or pump if submersible) and all downhole wetted parts (tubing, piping, foot valve) in soapy water. Pump a minimum of three pump assembly volumes of soapy water through the entire assembly. Note: If dedicated tubing is used for monitoring wells, the tubing will not need to be decontaminated.
3. Replace soapy water with potable water. All downhole wetted parts must be immersed in the potable water rinse. Pump a minimum of three pump assembly volumes of clean water through the entire assembly.
4. Document that decontamination was performed in the groundwater sampling log book.
5. All fluids used in the decontamination process will be allowed to soak into the ground.

QA/QC

The SSO or designated alternate will oversee decontamination procedures to ensure that they have been completed according to the procedures outlined above. Equipment blanks will be collected and analyzed throughout the program to determine the effectiveness of decontamination procedures. Blank number and frequencies are presented in the QAPP.

References

None.