

APPENDIX C: Equipment Decontamination Standard Operating Procedure (SOP)

A.1.14 EQUIPMENT DECONTAMINATION SOP (FO-16)

All field equipment that may directly or indirectly contact samples shall be decontaminated in a designated decontamination station in accordance with the approved UFP–QAPP. A decontamination station shall be established at each field site prior to initiating intrusive field activities. It shall consist of a plastic-lined pad where drilling equipment, such as auger flights, drill rods, and sampling devices, can be steam or pressure cleaned. In addition, the portion of the drill rig which stands above the boreholes shall be decontaminated by steam cleaning, pressure washing or handwashing with soapy water at the decontamination station. Drilling rigs and associated drilling equipment that does not contact samples shall be decontaminated between sites to minimize the potential for cross-contamination. All downhole equipment that makes contact with potential sample material shall be decontaminated between sample intervals/borings.

A.1.14.1 INSTRUMENT AND REUSABLE SAMPLING EQUIPMENT DECONTAMINATION

Instruments that contact water, such as an electronic water level indicator, shall be decontaminated following the procedures for sampling equipment described below. Instruments that are sensitive to soap and solvents, such as the pH meter, shall be rinsed with potable and deionized water. The probes shall be cleaned daily and stored overnight according to the manufacturer's recommended procedures.

All reusable field equipment used to collect, handle, or measure samples shall be decontaminated before coming into contact with any soil or groundwater samples. The decontamination procedure must match the degree of contamination of the sampling tool. For example, steam cleaning shall be necessary to remove dirt from auger flights and to prepare well screens and riser pipe for installation into the borehole. Brushes and soap may be required to remove dirt from split-spoon samplers. Sampling equipment that comes into contact with oil and grease shall be cleaned with methanol and hexane to remove any oily material. Clean, disposable gloves shall be worn during and after decontamination so that equipment shall not be re-contaminated.

General decontamination procedures for sampling and drilling devices such as split-spoon samplers, and other equipment that can be hand manipulated are as follows.

- Steam clean or pressure wash if practical;
- Scrub equipment with a solution of potable water and a laboratory grade phosphate-free detergent (e.g., Alconox) to remove all dirt from sampling or drilling item;
- Rinse sampling item thoroughly with potable water to remove residual dirt and rewash, if necessary;
- Rinse thoroughly with distilled water;
- For dioxin samples, wipe with pesticide-grade acetone;
- If glass sampling equipment is used and metals are part of the analysis program, rinse the interior/exterior surfaces of the glass equipment that will come in contact with the sample matrix with a 10 percent nitric acid solution;
- Rinse a final time with analyte-free water. This last rinse water can be captured and containerized, labeled, wrapped, and cooled to 4°C in a cooler as the Equipment Blank (EB) for the specific equipment.

Each lot of reagent-free water obtained shall be tested by collecting and submitting one sample to the laboratory for analysis of target analyte types.