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December 11, 2007

Mr. Joseph Martella II
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, RI 02908-5767

RE: Workplan for Pre-Remediation Delineation
Former Gorham Silver Facility
Adelaide Avenue
Providence, RI
Case No. 97-030

Dear Mr. Martella:

This workplan describes investigation activities to supplement the delineation of the extent of the tetrachloroethylene (PCE) source area at the above-referenced site (the site). This scope of work is designed to better delineate the horizontal extent of PCE in groundwater to the northeast of monitoring well cluster MW-207 and north of monitoring well MW-201 (see **Figure 1**). This work is described below.

ENSR proposes to install four (4) soil borings using a direct-push drill rig to profile groundwater around the source area. At each location, three (3) to four (4) groundwater grab samples will be collected at approximately 10-foot intervals to delineate the vertical and horizontal extent of PCE around the identified thermal treatment zone. The locations of these soil borings are presented in **Figure 1**. These groundwater samples will be submitted for analysis of CVOCs. The four locations depicted in **Figure 1** were selected based on the estimated extent of the previously identified source area and the direction(s) of groundwater flow. The proposed activities for this task include:

- Pre-marking and DigSafe clearing of utilities.
- Advancement of four (4) soil borings to profile chlorinated volatile organic compound (CVOC) concentrations in groundwater between the water table and the top of the till.
- Installation and development of one monitoring well couplet with two (2) 10-foot-long well screens positioned at the depths of greatest apparent impacts.
- Well development and collection of groundwater samples for analysis of CVOCs from the newly installed monitoring well couplet.

Groundwater-profiling soil borings will be installed by direct-push rig to an average depth of approximately 60 feet. Groundwater samples will be collected from these soil borings, using a Geoprobe® Groundwater Profiler (Profiler). Groundwater samples will be collected approximately every 10 feet from 30 feet bgs (i.e., just below the water table) to 60 feet bgs (i.e., just above the till). Because soil sampling will not be performed, the depth of the till will be inferred from existing boring logs from soil boring nearest the proposed investigation locations. Groundwater samples will be submitted to Spectrum Analytical for analysis of CVOCs on a one-week turn-around time.

Following receipt of the groundwater analytical results, a well couplet will be installed downgradient of the groundwater profiling location with the highest concentration of CVOCs. If groundwater profiling concentrations do not indicate PCE concentrations above 1,000 micrograms per liter (ug/L), the

monitoring well couplet will be installed at the eastern profiling location with the highest detected concentration of PCE.

Wells will be installed by pushing 3-inch casing to the desired depth and installing wells in two adjacent borings. Wells will be constructed of one-inch inside-diameter polyvinyl chloride risers with 10 feet of pre-packed well screen. The annulus between the pre-packed screen and the well casing will be filled with sandpack to approximately two feet above the well screen, and a three-foot bentonite grout seal will be tremied into place to isolate the screened interval from the overlying aquifer. Following installation of the grout seal, the drill casing will be withdrawn and the boring allowed to collapse.

After allowing 24 hours for the grout seal to cure, each newly installed well will be developed by gently surging and pumping with an inertial pump. The wells will then be allowed to equilibrate for a minimum of one week following well development before sampling the wells using low-flow sampling techniques and a peristaltic pump to collect groundwater samples for analysis of CVOCs. Purge water and drill cuttings will be containerized and staged on site for eventual disposal by Textron.

Reporting

Upon completion of the field work, ENSR will prepare a report documenting the groundwater profiling and well installation activities and presenting investigation results. The report will include tables of field and analytical data, a figure of sampling locations, and interpreted groundwater isoconcentration diagrams for the shallow and deep overburden.

Schedule

Work will commence on December 12, 2007, and sampling is expected to be completed before the end of the year. The report is expected to be issued by February 2007.

If you have any questions, please contact the undersigned at (978) 589-3000 or Greg Simpson of Textron at (401) 457-2635.

Sincerely yours,

Patrick Haskell, CHMM
Sr. Project Manager

Daniel M. Groher, P.E.
Principal Remediation Specialist

Figure 1
Delineation Investigation Locations
Former Gorham Silver Site
Providence, Rhode Island