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April 18, 2011

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

Re: Work plan for Pump Test Activities
Former Gorham Silver Facility
Adelaide Avenue, Providence, RI
Case No. 97-030

Dear Mr. Martella:

This workplan describes investigation activities to support the design of a groundwater remediation system to address chlorinated volatile organic compounds (CVOCs) at the above-referenced site (the site). This work is described below.

Well Installation

AECOM proposes to install a 6-inch diameter steel recovery well for the purpose of pumping during an aquifer test and. AECOM also proposes to install two staff gauge/piezometers in the shallow water of Mashpaug Pond to assess the influence of groundwater pumping on surface water. The location of the proposed recovery well and piezometers are presented in Figure 1. The proposed activities for this task include:

- Pre-marking and contacting Dig Safe, reviewing site utility plans, and vacuum excavating to a depth of five feet below ground surface (bgs) to clear utilities;
- Installation and development of one recovery well with a twenty five-foot-long well screen positioned at or around the static water table.
- Installation by hand of two 1.25-inch diameter steel staff gauge/piezometers to a depth of approximately three to five feet bgs;
- Well development of the recovery well by surging and pumping and storage of generated groundwater in a fractionation (frac) tank to be located on site; and
- Completion of the recovery well with a locking flush-mount roadbox.

Soil cuttings associated with well installation activities will be collected and stored in drums followed by the disposal of the drums at a Textron-approved waste facility.

The proposed well will be located on the north side of the retail building and will be screened from 20-45 feet below ground surface. (The static water table at this location is approximately 23 feet

below ground surface). This well will be installed using a hollow stem auger drill rig advanced to an approximate depth of 48 feet below ground surface. Upon reaching the desired depth, the extraction well, constructed of wire-wrapped stainless steel screen and bare steel riser pipe and three-foot sump, will be installed. Well casing will be brought to near ground surface. A bentonite seal will be placed above the sand pack, and cement grout will fill the remaining annular space to approximately five feet below ground surface, above which clean sand will be placed to allow later excavation for connection of the well to a permanent groundwater treatment system. Surface completion of the new well will consist of a flush-mount road box set in cement and locking compression cap to prevent unauthorized access.

After allowing at least 24 hours for the grout seal to cure following well installation, the extraction well will be developed via pump and surge techniques (or equivalent) until total dissolved solids are acceptably low (typically >10 NTU) and the well produces water at a stable rate. This water will be tested to confirm the planned water treatment approach during the pumping test.

Aquifer pumping test

AECOM will conduct a two-day aquifer pump test to characterize the aquifer in the vicinity of the Parcel A retail building . The goal of the pump test is to better understand aquifer response to pumping to aid in the design of the full scale groundwater treatment activities. The proposed activities and / or goals for this task include:

- To observe the aquifer response time to pumping at a location suitable to capture portions of the CVOC plume currently discharging to Mashapaug Pond:
- To characterize the hydrology of and relationship between shallow and deep soils:
- To evaluate the effect of Mashapaug Pond on the aquifer response time to pumping;
- To develop aquifer parameters for use in a groundwater remedial design: and
- To obtain parameters for use in the remedial system design (e.g., water quality during pumping).

Prior to starting the pump test, a baseline round of water levels at wells, piezometers and staff gages will be collected to establish antecedent conditions. This data will be used for establishing baseline conditions for the pump test and design of the eventual extraction well network.

A submersible pump will be installed in the steel recovery well and plumbed to a temporary water treatment system. It is anticipated that the treatment system will consist of two frac tanks in series and two 2,000-pound granular activated carbon vessels. It is anticipated that groundwater will be discharged to the storm drain system at the facility, which is routed to a detention pond and infiltration basin located immediately north of the retail complex, under a RIPDES permit. AECOM will contact RIDEM to determine whether this method of discharge is acceptable. If not, an application will be submitted to the Narragansett Bay Commission for discharge to the sanitary sewer.

The pumping test will be a constant rate test and the rate will be determined by a step test. Three to four 1-hour pumping steps will be completed to determine the pumping rate that produces adequate drawdown in observation wells and maintains a constant groundwater level well above the pump. The pumping rate (approximately 75 gpm based on preliminary calculations) will be maintained by a gate valve and the rate measured with an in-line flow meter.

During the pumping test, water levels will be measured periodically in the pumping well and in the monitoring wells surrounding the pumping well. Approximately twelve monitoring wells will be equipped with pressure transducers to collect a high frequency of data prior to, during, and following the pump test. Precipitation for the entire period will be obtained online for the nearest NOAA station.

Following the completion of the pump test, the water level recovery measurements will be collected from the pumping well and observation wells manually for the remainder of the working day (i.e., up to 4 hours) and recovery in monitoring wells equipped with transducers will be monitored for a period of three days.

Reporting

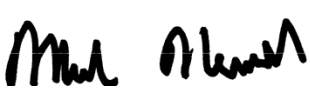
Upon completion of the field work, AECOM will prepare a report documenting the recovery well Installation activities and will present investigation results. The report will include the results of the aquifer test, analytical data obtained during the pump test, and conclusions and recommendations with figures and tables to support the report.

Schedule

The work will commence in May 2011, and a report is expected to be submitted by fall 2011.

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

Sincerely yours,



Mark F. Newell
Project Manager

Patrick Haskell, CHMM
Sr. Project Manager

PROPOSED PIEZOMETER

PROPOSED RECOVERY WELL

Legend

- Diffusion Bag Sample Point
- Sediment Sample Location
- Groundwater Sample Location
- Elevation Contour
- Railroad
- Pavement
- Park Parcel Boundary

0 50 100 Feet

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SOURCE:
BASE MAP FROM MACTEC, INC.

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TEXTRON INC.
40 WESTMINSTER STREET
PROVIDENCE, RI 02903

PROJ. NUMBER: 60212521

DATE: 04/13/11

SITE PLAN

333 ADELAIDE AVENUE
PROVIDENCE, RI

DRAWING NUMBER: 1

SHEET NUMBER: 1 OF 1

REVISION 0