

VIA ELECTRONIC MAIL

July 18, 2013

Ms. Tara L. Diaz Project Manager, Remedial Bureau A Division of Environmental Remediation, 11th Floor New York State Department of Environmental Conservation 625 Broadway Albany, NY 12233-7015

Re: Additional Groundwater Sampling Work Plan <u>Former TransTechnology Corporation Facility Glen Head, New York</u>

Dear Tara:

WSP, on behalf of our client, Breeze-Eastern Corporation, has prepared this work plan for additional groundwater sampling at the former TransTechnology Corporation (TTC) facility in Glen Head, New York (Figure 1). The proposed work, which includes sampling both on and offsite groundwater monitoring wells, is a replication of sampling that was originally performed in support of the Supplemental Remedial Investigation (SRI) for Operable Unit No. 2. That round of samples was collected in 2012 to provide a snapshot of the current groundwater conditions; the existing groundwater data up to that point was up to 10 years old. The results of the sampling indicated significant decreases (when compared to the previous results) in the chlorinated mass in both the trichloroethene-based (TCE-based) plume associated with the TTC facility and the regional tetrachloroethene-based (PCE-based) regional plume when compared to the previous results. These data will be helpful in determining the proposed approach outlined in the groundwater focused feasibility study (FFS; currently being drafted for the site). The follow-up sampling proposed in this work plan is intended to verify the SRI data.

All of the proposed work will be performed in accordance with New York State Department of Environmental Conservation's (NYSDEC's) *Technical Guidance for Site Investigation and Remediation (DER-10)*, dated May 2010, WSP's standard operating procedures (SOPs), and, where appropriate, consistent with the approved approach used for the 2012 SRI groundwater sampling¹. The detailed procedures for the work are presented below along with the proposed schedule.

Scope of Work

WSP is proposing to sample all seven² existing groundwater monitoring wells at the site. Wells TT-MW-02, TT-MW-09, and TT-MW-10, will be sampled to assess the water quality along the western (downgradient) property line (Figure 2). The four remaining onsite wells, TT-MW-04, TT-MW-05, TT-MW-07, and TT-MW-08, will be sampled to characterize the water quality at the northern (TT-MW-07 and TT-MW-08) and southern (TT-MW-4 and TT-MW-5) ends of the site. WSP is also proposing to sample the seven off-site wells that remain serviceable, wells MW-01, MW-03 through MW-05, MW-07, MW-08, and

¹ As detailed in the approved *Residential Reclassification and Feasibility Study Work Plan*, dated December 9, 2011.

² Onsite wells TT-MW-01, TT-MW-03, and TT-MW-11 were damaged or destroyed during the OU-1 soil remediation activities in 2011 and, thus, could not be sampled during the March 2012 event. Similarly, well TT-MW-06 could not be located and is presumed to have been destroyed.

MW-11, located south and west of the site to provide information on the nature and extent of the regional PCE plume.

The groundwater samples will be collected using passive diffusion bag samplers (PDBs) to minimize the amount of investigation-derived waste generated during the sampling activities. The PDBs, such as Columbia Analytical Services' 24-inch long, 1.25-inch diameter, heat-sealed, low-density polyethylene samplers (or equivalent), are typically pre-filled by the laboratory with 220 milliliters of laboratory-grade analyte-free, de-ionized water and suspended in the well within the screen interval. The samplers are allowed to stand undisturbed in the well for a minimum period of 2 weeks during which time the water within the membrane equilibrates with the formation water within the well casing. Once equilibrated, WSP will retrieve the samplers from the well casing, slice open the bags, and pour the contents into the appropriate laboratory-supplied, pre-cleaned sample vials. The recovered samples will then be labeled, packed on ice, and shipped by overnight carrier to a New York-certified analytical laboratory for analysis of the site-related chlorinated VOCs (i.e., PCE, TCE, and the dechlorination daughter products *cis* and *trans*-1,2-dichloroethene, and vinyl chloride) by EPA Method 8260. All of the shipping and handling procedures will be in accordance with WSP's SOP 20 (Enclosure A).

Quality Assurance/Quality Control

Field quality assurance/quality control (QA/QC) procedures for the proposed sampling activities will include the collection and analysis of blind duplicate samples, matrix spike and matrix spike duplicates (MS/MSDs), and trip blanks. The blind duplicate samples will be analyzed with the other samples to evaluate the reproducibility of the sample collection and analytical procedures, and the MS/MSD samples will be collected to evaluate the effect of the matrix on the analytical protocol. Finally, a trip blank will accompany the sample containers from the laboratory to the field and the samples from the field to the laboratory. The trip blank is used to assess cross-contamination during transit. All of the QA/QC samples will be collected in accordance WSP's SOP 21 (Enclosure A).

Decontamination Procedures

Non-dedicated sampling equipment will be decontaminated before each use in accordance with the procedures outlined in WSP's SOPs 16 and 17 (Enclosure A). The decontamination rinsate will be placed in Department of Transportation-approved (DOT-approved) 55-gallon drums and moved to a designated onsite storage area.

Investigation-Derived Wastes

Investigation-derived waste generated during the drilling and sampling activities, including decontamination rinsate, will be placed in DOT-approved 55-gallon steel drums and staged onsite for later offsite disposal in accordance with state and federal regulations.

Schedule and Reporting

Deployment of the PDB samplers will begin within 2 weeks of receiving approval of this work plan with the sampler retrieval scheduled for approximately 3 weeks after deployment (i.e., after completing the minimum equilibration period). The results of the sampling will be incorporated into the groundwater FFS, which is scheduled to be completed in the fourth quarter of 2013.

Please do not hesitate to contact me at (315) 655-3900, if you have any questions or comments regarding this work plan.

Sincerely yours,

David P. Bouchard Senior Project Director

DPB:paw

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Enclosures

cc/encl.: John Simon, Gnarus Advisors, LLC Matthew Lubart, Esq., Fox Rothschild, LLP Figures





DN RING WELL

FIGURE 2

Drawing Number

00028873-D21

Enclosure A

Standard Operating Procedure - 16

Decontamination of Submersible Pumps

Materials:

Field logbook Personal protective equipment (PPE) Polyethylene sheeting Garbage bags Nonphosphate detergent (e.g., Liquinox or Alconox) Tap water Deionized water Two containers (e.g., garbage cans, buckets, plastic tubs) Nylon brushes Isopropanol Spray bottles Paper towels

<u>Note</u>: To limit the potential for cross-contamination between wells, wells should be pumped in the order of increasing constituent concentrations whenever possible. This SOP assumes that dedicated tubing is being used at each well. If dedicated tubing is not being used, the tubing should also be decontaminated using the following procedures.

Decontamination Procedure:

- 1. Use appropriate PPE as specified in the site-specific health and safety plan.
- 2. Prepare a decontamination area by spreading polyethylene sheeting on a firm, flat surface (if possible). Create a berm around the decontamination area to contain inadvertent spillage. A berm can be created by rolling under the edges of the polysheeting or by draping the plastic over a wooden frame, etc.
- 3. Place two clean containers (e.g., garbage cans, buckets, plastic tubs) on the polysheeting. Place tap water in one container with non-phosphate detergent. Place only tap water in the second container. The containers may also be lined with garbage bags.
- 4. If an oily film or residue is observed on the pump or leads when they are removed from the well, the pump should be sprayed with isopropanol to remove the oil and then wiped clean with paper towels before proceeding with Step 5 below. The oily rinsate should be contained in a separate container for proper disposal.
- 5. Place the pump and wire leads in the container of non-phosphate detergent and tap water and scrub the exterior of the pump with a brush. Circulate the soapy solution through the pump for at least 5 minutes. Rinse the exterior of the pump and leads with additional tap water to remove excess soap (if necessary) before proceeding with Step 6.
- 6. Place the pump and leads in the container of tap water and run the pump for a least 5 minutes. Run water through the pump until all residual detergent has been removed. The soapy solution and rinse water should be changed when it becomes oily or too silty.

- 7. Remove the pump and leads from the rinse water. Spray off the pump thoroughly with deionized water and wipe it dry with clean paper towels. Wipe off the wire leads with a paper towel soaked with deionized water.
- 8. Wrap the pump and leads in plastic sheeting or a new plastic garbage bag to prevent possible contamination during transportation. Label the sheeting or bag with the date of decontamination for future reference.
- 9. Properly manage all PPE and decontamination rinsate in accordance with state and federal requirements (See SOP 26). The spent wash water and rinse water can potentially be placed in the facility's waste water treatment system. However, field personnel should obtain approval from facility personnel and from the local POTW.

Standard Operating Procedure - 17

Decontamination of Water Level Indicators

Materials:

- Field logbook Personal protective equipment (PPE) Non-phosphate detergent (e.g., Liquinox or Alconox) Deionized water Isopropanol Two buckets Spray bottles Paper towels
- <u>Note</u>: To limit the potential for cross-contamination between wells, wells should be gauged in the order of increasing constituent concentrations whenever possible.

Decontamination Procedure:

- 1. Use appropriate PPE as specified in the site-specific health and safety plan.
- 2. If the groundwater is grossly contaminated (i.e., LNAPL or DNAPL is present), the tape should be pulled out of the well, <u>NOT</u> reeled up, and placed directly into a bucket of nonphosphate detergent and tap water. The tape and probe should be scrubbed with a brush to remove visible contamination. The tape and probe should then be rinsed in a second bucket of tap water before proceeding with Step 3. If persistent stains or oily films remain, apply isopropanol to a paper towel and wipe the tape and probe until clean.
- 3. Thoroughly wet a paper towel with deionized water from a spray bottle. Fold the paper towel over the tape and wipe it as the tape is reeled up.
- 4. The water level probe should also be sprayed with deionized water and wiped dry with a clean paper towel.
- 5. Place water level indicator in the clean carrying case or in a clean plastic bag to prevent contamination during transportation.
- 6. Properly manage all PPE, used paper towels, and decontamination rinsates in accordance with state and federal requirements (See SOP 26).

Standard Operating Procedure – 20

Sample Shipping Procedures

Materials:

Suitable shipping container (e.g., plastic cooler or lab supplied styrofoam cooler) Chain-of-custody forms Custody seals WSP mailing labels Strapping, clear packing, or duct tape Ziploc[®] plastic bags Knife or scissors Permanent marker Latex or nitrile gloves Large plastic garbage bag Wet ice Bubble wrap or other packing material Universal sorbent materials Sample container custody seals (if required) Federal Express form (with WSP account number) Vermiculite (or commercially available cat litter)

Procedures:

For shipping purposes, samples are segregated into two classes; environmental samples and restricted articles (i.e., hazardous materials). Environmental samples can also be categorized based on expected or historical analyte levels (i.e., low or high). An environmental sample is one that is not defined as a hazardous material by the Department of Transportation (DOT, 49 CFR Part 171.8). The DOT defines a "hazardous material" as a substance which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and which has been so designated. Any material of a suspected hazardous nature, previously characterized as hazardous, or known to be hazardous is considered a restricted article.

In general, the two major concerns in shipping samples are protecting the samples from incidental breakage during shipment and complying with applicable DOT and courier requirements for restricted article shipments.

Protecting the samples from incidental breakage can be achieved using "common sense." All samples should be packed in a manner that will not allow them to freely move about in the cooler or shipping container. Glass surfaces should not be allowed to contact each other. When possible, repack the samples in the same materials that they were originally received in from the laboratory. Each container should be cushioned with plastic bubble wrap, styrofoam, or other nonreactive cushioning material. Shipping hazardous materials should conform to the packaging, marking, labeling, and shipping instructions identified in 49 CFR Parts 172 & 173.

Environmental samples shall be packed for shipment using the following procedures:

- 1. Line the shipping container with a large, heavy-duty plastic garbage bag. Place universal sorbent materials (e.g., sorbent pads) between the cooler and the heavy-duty plastic bag. The amount of sorbent material should be sufficient to absorb the volume of wet ice and aqueous samples. If using a plastic cooler, securely tape the drain plug closed on the outside of the cooler.
- 2. Place 2-4 inches of bubble wrap or other packing material inside the heavy-duty plastic bag in the bottom of the cooler.
- 3. The sample packer should wear latex or nitrile gloves when handling the samples during the packing process.
- 4. Place the bottles in the cooler with sufficient space to allow for the addition of more bubble wrap or other packing material between the bottles. Large or heavy sample containers should be placed on the bottom of the cooler with lighter samples (i.e., VOAs) placed on top to eliminate breakage.
- 5. Place the "wet ice" inside two sealed heavy-duty zipper-style plastic bags and package the bags of ice on top of or between the samples. Pack enough ice in the cooler to chill the samples during transit. If the cooler is shipped on a Friday or Saturday for Monday delivery, double the amount of ice placed in the cooler (Monday delivery should be used only as a last resort). Fill all remaining space with bubble wrap or other packing material. Securely close and seal with tape the top of the heavy-duty plastic bag.
- 6. Place chain-of-custody form (and, if applicable, CLP traffic reports) into a Ziploc® plastic bag and affix to the cooler's inside lid, then close the cooler. Securely fasten the top of the cooler shut with tape. Place two signed and dated chain-of-custody seals on the top and sides of the cooler so that the cooler cannot be opened without breaking the seals.
- 7. Once cooler is sealed, shake test the cooler to make sure that there are no loose sample containers in the cooler. If loose samples are detected, open the cooler and repack the samples.
- 8. Using clear tape, affix a mailing label with WSP's return address to the top of the cooler.
- 9. Ship samples via priority overnight express to the contracted analytical laboratory for next morning delivery. If applicable, check the appropriate box on the airbill for Saturday delivery.
- 10. Declare value of samples on the shipping form for insurance purposes. The declared value should reflect the cost to recollect the samples.
- 11. Record the tracking numbers from the Federal Express forms in the field notebook and on the chain of custody form. Also, retain the customer's copy of the Federal Express airbill.

Hazardous materials should be packed according to the above procedures with the following additions:

- 1. Place samples in individual Ziploc[®] plastic bags and secure with a plastic tie or tape.
- 2. Place samples in paint cans in a manner which would prevent bottle breakage (i.e., do not place glass against glass).

- 3. Place vermiculite or other absorbent packing material in the paint can around the samples. The amount of packing material used should be sufficient to absorb the entire contents of the sample if the container is broken during shipment.
- 4. Secure a lid to the paint can with can clips and label the outside of the can with sample numbers and quantity. Mark the paint can with "This End Up" and arrow labels that indicate the proper upward position of the paint can.
- 5. Package the paint cans in DOT-authorized boxes or coolers, with appropriate DOT shipping labels and markings on two adjacent sides of the box or cooler.
- 6. Ship the restricted articles via overnight courier following the courier's documentation requirements. A special airbill must be completed for each shipment. Retain a copy of the airbill for WSP records and tracking purposes, if necessary.

Standard Operating Procedure – 21

Field Quality Assurance/Quality Control Samples

Materials:

Field logbook Personal protective equipment (PPE) Sample containers Sample labels Clear tape Laboratory analyte free water Clean or dedicated sampling equipment

Procedure:

- 1. Use appropriate PPE as specified in the site-specific health and safety plan.
- 2. Select the appropriate glassware for the field Quality Assurance/Quality Control (QA/QC) samples. Refer to the WSP Standard Operating Procedure for Sample Container, Preservatives, and Holding Times to determine the appropriate bottles to use.
- 3. Field QA/QC samples include the following:

trip blanks duplicate samples equipment blanks

- 4. Trip blanks should be provided by the analytical laboratory for all projects where samples are being collected for analysis of volatile organic compounds (VOCs). Trip blanks should accompany the sample bottles from the analytical laboratory to the site, accompany the sample containers at all times during the sampling event, and return to the laboratory with the sample containers. One trip blank should be submitted to the analytical laboratory with each shipment containing samples for VOC analysis. The trip blank should be analyzed only for VOCs.
- 5. One duplicate sample should be collected for every 20 samples of each matrix (e.g., soil and groundwater) collected during each sampling event. Duplicate samples of soil and other solid matrices should be collected by dividing the sample material in half and alternately filling the two sample bottle sets. Duplicate samples of groundwater and other aqueous matrices should be collected by alternately filling the two sample bottle sets from the same sampling vessel (e.g., bailer). The appropriate SOP should be followed for the collection of each sample type (soil, groundwater, sediment, sludge). Duplicate samples should be analyzed for all the analytes that are being analyzed for during the sampling event.
- 6. One equipment blank should be collected in the field at a rate of one per type of equipment per decontamination event not to exceed one per day. If dedicated sampling equipment is used, the equipment blanks should be prepared in the field before sampling begins. If field decontamination of sampling equipment is required, the equipment blanks should be prepared after the equipment has been used and field-decontaminated at least once. Equipment blanks should be prepared by filling or rinsing the precleaned equipment with analyte-free water and

collecting the rinsate in the appropriate sample containers. The samples should be labeled, preserved, and filtered (if required) in the same manner as the environmental samples. Equipment blanks should be analyzed for all the analytes for which the environmental samples are being analyzed. Decontamination of the equipment following equipment blank procurement is not required.

7. All QA/QC samples should be submitted to the analytical laboratory with unique sample numbers. Therefore, the QA/QC samples should be labeled as separate environmental samples following the same numbering scheme used during that particular sampling event. However, the QA/QC samples should be clearly identified on WSP's copy of the chain-of-custody form and in the field logbook.