Groundwater & Environmental Services, Inc.

LOWER HUDSON VALLEY OFFICE

July 17, 2015

Ms. Jamie Verrigni
New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau C
625 Broadway – 11th Floor
Albany, New York 12233-7014

RE: Periodic Review Report
Orangeburg Shopping Center, Orangetown, NY
NYSDEC Site Number C344066

Dear Ms. Verrigni:

Enclosed is the *Periodic Review Report* for the above referenced site prepared by Groundwater & Environmental Services, Inc. (GES) on behalf of UB Orangeburg, LLC. The report summarizes work performed at the site from June 27, 2014 through June 16, 2015.

If you have any questions or comments regarding this submittal, please contact Christina Andreotto or Karen Bourque of GES at (866) 839-5195 at extensions 3862 and 3839 respectively.

Sincerely,

Christina Andreotto
Staff Geologist

Karen Bourque
Senior Project Manager

cc: Monica Roth, UB Orangeburg, LLC
Stephan Rapaglia, UB Orangeburg, LLC (e-copy)
Tom Myers, UB Orangeburg, LLC (e-copy)
Renata Ockerby, New York State Department of Health
Amen Omorogbe, New York State Department of Environmental Conservation
Hilton Soniker, Esq., JLJ Management
Gerald H. Cresap, Jr., P.E., Groundwater & Environmental Services, Inc.

Attachment

PERIODIC REVIEW REPORT
July 2015

Orangeburg (Orangetown) Shopping Center
Rockland County, New York

NYSDEC Site Number: C344066

Prepared for:

UB Orangeburg, LLC
321 Railroad Avenue
Greenwich, Connecticut 06830

Prepared by:

Groundwater & Environmental Services, Inc.
16 Mount Ebo Road South, Suite 21
Brewster, New York 10509

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1.0 EXECUTIVE SUMMARY

This document is required as an element of the remedial program at the Orangeburg (Orangetown) Shopping Center, located in the Town of Orangetown (Orangeburg), County of Rockland, New York (hereinafter referred to as the "site") under the New York State (NYS) Brownfield Cleanup Program (BCP) administered by the New York State Department of Environmental Conservation (NYSDEC). The site remediation activities have been conducted in accordance with the Brownfield Cleanup Agreement (BCA) Index #A3-0563-0906, site #C344066. JLJ Management Company (hereinafter referred to as the "JLJ") entered into a BCA with the NYSDEC in January of 2007 to remediate a 1.33-acre portion of the approximately 11-acre property containing chlorinated solvent compounds above NYSDEC standards. The subject property was purchased from JLJ by UB Orangeburg, LLC in 2012. On March 28, 2012, the Certificate of Completion was officially transferred from JLJ to UB Orangeburg, LLC.

Overall, the remedial activities outlined in the Site Management Plan (SMP) have been successful. Groundwater concentrations of tetrachloroethene, trichloroethene, Cis-1,2-dichloroethene, Trans-1,2-dichloroethene, 1,1-Dichloroethene, and Vinyl Chloride (constituents of concern) in down gradient well MW-10 have been reduced to below NYSDEC standards. Concentrations of constituents of concern (CoCs) in the source area have also been reduced, with the exception of vinyl chloride which has increased at several wells. Based on the observed decreases of tetrachloroethene, trichloroethene, Cis-1,2-dichloroethene, Trans-1,2-dichloroethene and 1,1-Dichloroethene and the observed increases of vinyl chloride and ethene, bio-augmented degradation of chlorinated solvent compounds is occurring. Based on data trends, the ability for the remedial program to achieve the remedial objectives for the site appears plausible.

No major non-compliance issues have been identified during the monitoring period.

GES, on behalf of UB Orangeburg, LLC, requests the following changes to the SMP monitoring plan:

- Permanent decommissioning of the sub-slab depressurization systems (SSDSs) currently in operation at the site based on results of a soil vapor intrusion (SVI) investigation completed in April of 2015. A formal proposal and work plan for system decommissioning will be submitted to the NYSDEC for review and approval under separate cover.

2.0 SITE OVERVIEW

The approximate geographical coordinates for the Property are 41 degrees, 2 minutes, 41.6 seconds North (Latitude) by 73 degrees, 57 minutes, 10.4 seconds West (Longitude). The Property is comprised of one (1) parcel (Section, Lot & Block: 74.10-67-1) that covers an area of approximately 11 acres. Included are the following: a Site Location Map (**Figure 1**) for the general Property location, a Site Map (**Figure 2**) showing the current key site features at the subject Property, and a Bio-Augmentation System Well Location Map (**Figure 3**) showing the current locations of active injection and monitoring well points in the vicinity of building #2.

Contamination was first observed at the site after a broken sewer line leaving the former Sparkle Cleaners Dry Cleaners was identified. The first remedial activity consisted of source removal activities and the repair of the sewer line in January of 2009. After completion of the remedial work described in Construction Completion Report #1: Source Removal (CCR-1), some contamination was left in the subsurface at this site, which is hereafter referred to as "remaining contamination." A Site Management Plan (SMP) was prepared to manage remaining contamination at the site until the Environmental Easement (EE) is extinguished in accordance with ECL Article 71, Title 36. Components of the selected remedy consist of a sub-surface depressurization system (SSDS) and a bio-augmented injection gallery.

- Because of the residual contaminated subsurface soil and contaminated groundwater, the SSDS was designed to mitigate potential vapor intrusion from residual chlorinated VOC contamination into the southern portion of building #2, which businesses include: former Sparkle Cleaners (currently vacant), former The Deli Spot (currently vacant), and New China House. The SSDS is configured to create a negative pressure (relative to the indoor environment) within the area beneath the concrete floor slabs of the businesses within the southern portion of building #2 thereby minimizing the potential for migration of contaminant vapor into the indoor air of the tenant spaces. The system was installed between February and May 2010, and it was activated in May 2010. The system as originally designed did not achieve the performance standard, and it was subsequently modified. Additional system performance testing was completed in June 2010 and a modified plan prepared and approved by NYSDEC in August 2010. Modifications were implemented between August and September 2010. The system was re-started with additional blowers in place on September 29, 2 010, and verified operation with another performance (vacuum response) test. Late in 2010, it was observed that ongoing heating, venting, and air conditioning (HVAC) issues in the building potentially affected system performance. These issues were the result of foundation leaking and back draft issues associated with furnaces and other fans. These issues were resolved in early 2011. The system was re-inspected in March to verify resolution of the issues. In late April 2011, three vapor-monitoring points were replaced in the New China Restaurant and another system check performed. This test verified that the system achieved measured vacuum greater than 0.0025 in-wc across the slab in the three tenant spaces.

- Because of the presence of contaminated groundwater and residual soil contamination under building #2, a bioaugmentation treatment system was designed. This treatment promotes in situ microbial degradation of contaminants in saturated soil and groundwater. Addition of a bio-stimulant (molasses) to subsurface soil and groundwater act as an electron donor that stimulates metabolic reduction of chlorinated VOCs to ethene via microorganisms that have been detected as being present at a site, as have bacteria of the genus *Dehalococcoides* (in MW-5 and MW-6) and *Dehalobacter* (in MW-5). Bioaugmentation injection points and manifold piping were installed after the source removal excavation between February and April 2010. A batch injection tank connects to the manifold via manual gate valves to direct electron donor solution (a 10% molasses solution) to control flow to the injection points. Additional injection points were installed during April and May of 2012 and January of 2014 in accordance to the *Remedial Action Work Plan* (RAWP). Baseline and post-injection sampling (from a network of monitoring wells), monitoring, and laboratory

analysis provide the means to monitor treatment effectiveness. The initial round of injections was completed in May, July and November 2010 and monitored. The first round of treatment indicated bioaugmentation was enhancing biodegradation and dechlorination of the contaminants. The results also suggest that additional injections of electron donor solution would enhance treatment.

The SSDS was temporarily shut down on March 27, 2015 in preparation for a SVI investigation which was completed on April 28, 2015. The SSDS was re-started upon completion of SVI investigation activities on April 28, 2015. A summary of the SVI investigation results and a request for shut-down of the SSDS was submitted to the NYSDEC under separate cover. Upon review of the SVI investigation results, the NYSDEC approved shut down and decommissioning of the SSDS in a letter dated June 18, 2015. The NYSDEC also requested that GES submit a proposal to discontinue and decommission the system which will be submitted for the Departments review and approval. Regulatory correspondences are attached as **Appendix A**. The SSDS will remain active until a proposal is submitted and approved by the NYSDEC.

Bioaugmentation monitoring and treatment of groundwater will continue, as determined by the NYSDEC, until residual groundwater concentrations are found to be consistently below NYSDEC standards or have become asymptotic at an acceptable level over an extended period. This treatment will continue until permission to discontinue is granted in writing by the NYSDEC. If groundwater contaminant concentrations become asymptotic at a level that is not acceptable to the NYSDEC, additional source removal, treatment, and/or control measures will be evaluated.

Conditions that warrant discontinuing the bioaugmentation treatment system include contaminant concentrations in groundwater that: (1) reach levels that are consistently below GWQS, (2) have become asymptotic to a low level over an extended period of time as accepted by the NYSDEC, or (3) the NYSDEC has determined that the bioaugmentation treatment system has reached the limit of its effectiveness. This assessment will be based in part on post-remediation contaminant levels in groundwater collected from monitoring wells located throughout the site. Systems will remain in place and operational until permission to discontinue their use is granted in writing by the NYSDEC.

3.0 EVALUATION OF REMEDY PERFORMANCE AND EFFECTIVNESS

3.1 Sub-Slab Depressurization System Evaluation

Quarterly Operation Maintenance and Monitoring (OM&M) visits to the site have been conducted to access the effectiveness of the SSDS. OM&M visits included the monitoring and inspection of the following components: Vacuum at each SSD branch (SSD-1 to SSD-8), flow readings at each SSDS branch (SSD-1 to SSD-8) and SSDS blower, visual inspection of fluid levels in each manometer, visual inspections of discharge stack piping and fittings, vacuum at each SSD monitoring point (SSD-MP-1 to SSD-MP-6 and VP-1 to VP-9), visual inspection of concrete floor slab for presence of new cracks and recent structural changes, and an update of each SSD blower label identifying the date of the OM&M visit. OM&M data sheets generated during the review

period are included in **Appendix B.** **Tables 6a** through **6c** represent data collected during each OM&M visit.

The SSDS was temporarily shut down on March 27, 2015 in preparation for an SVI investigation which was completed on April 28, 2015. The SSDS was re-started upon completion of SVI investigation activities on April 28, 2015. A summary of the SVI investigation results and a request for shut-down of the SSDS was submitted to the NYSDEC under separate cover. Upon review of the SVI investigation results, the NYSDEC approved shut down and decommissioning of the SSDS in a letter dated June 18, 2015. The NYSDEC also requested that GES submit a proposal to discontinue and decommission the system which will be submitted for the Departments review and approval. Regulatory correspondences are attached as **Appendix A**. The SSDS will remain active until a proposal is submitted and approved by the NYSDEC.

3.2 Bioaugmentation System Evaluation

Baseline and post-injection sampling (from a network of monitoring wells), monitoring, and laboratory analysis provide the means to monitor treatment effectiveness. Overall, a total of 11 injection events have been completed since August 2012. A total approximate volume of 7,700 gallons of 10% molasses solution has been injected over this period. Injection volumes for each injection event have been summarized in the July 17, 2014 *Periodic Review Report.*

The last molasses injection event was completed in June of 2014. Since that time, total organic carbon (TOC) levels in the targeted area (MW-5) have been within range indicating that molasses injections were not needed at the time. If TOC levels are above or below the targeted range, further molasses injection activities will be conducted.

A review of the data collected during this monitoring period indicates the selected remedy has been effective. Data indicates that reactions associated with the reductive transformation pathway for chlorinated solvents are occurring. Reductions in concentrations of the COCs have been noted in monitoring well MW-5, while COC concentrations in MW-4 have remained stable over the current monitoring period. MW-5 has historically had the highest concentrations of COCs. Please refer to **Figures 4a, 4b, 4c, 4d,** and **Table 4** for a summary of the concentrations and trends of the constituents of concerns. As illustrated on **Figure 5** and presented in **Tables 2** and **3**, bio-parameter levels in monitoring well MW-5 have achieved the optimal geochemical target range for both TOC concentration (50 mg/L to 500 mg/L) and pH (6 to 8).

4.0 INSTITUTIONAL CONTROL & ENGINEERING CONTROL PLAN COMPLIANCE

4.1 Institutional Controls

Institutional Controls (ICs) at the site include compliance with the EE (**Appendix C**). The EE contains the following stipulations: no new drinking water wells can be installed and new business and residences must be connected to city water. The SMP stipulates all engineering controls (ECs) must be operated and maintained as specified in the SMP, all ECs on the controlled property must be inspected at a frequency and in a manner defined in the SMP, groundwater and other environmental monitoring must be performed as defined in this SMP and data and information pertinent to site management of the control property must be reported at a frequency and in a manner specified in the SMP.

During the monitoring period all ICs have been in compliance with the EE. No new drinking wells have been installed and no new businesses have been built which would require a connection to city water. All ECs have been operated and maintained as specified in the SMP. ECs are inspected in accordance to the required frequency set forth by the SMP. Groundwater and other environmental monitoring have been performed as defined in the SMP. Progress reports summarizing groundwater and other environmental monitoring are submitted to the NYSDEC and NYSDOH as they are completed. Approval to discontinue submittal of monthly progress reports was granted by the NYSDEC in a letter dated August 25, 2014. Regulatory correspondences are attached as **Appendix A**.

4.2 Engineering Controls

The SMP requires that three separate ECs be maintained at the site: the SSDS, the bioaugmentation system and the composite cover system. Maintenance and inspections of the ECs at the site are reported to the NYSDEC and NYDOH as they are completed. Approval to discontinue submittal of monthly progress reports was granted by the NYSDEC in a letter dated August 25, 2014. Regulatory correspondences are attached as **Appendix A**.

Maintenance and inspections of the composite cover system consisting of existing impermeable surfaces (concrete slabs and asphalt paving) was conducted during the monitoring period. Photographs of the composite cover system are included in **Appendix D**.

Exposure to vapor intrusion within the southern portion of building #2 was mitigated by the operation of the SSDS. This system is comprised of extraction piping, sub-slab ventilation blowers and associated appurtenances at former Sparkle Cleaners, the former Deli Spot, and New China House tenant spaces. The SSDS creates a negative pressure which intercepts potential soil vapor from beneath the concrete floor using eight branches (SSD-1 through SSD-8) and transfers extracted vapors using in-line blowers to discharge locations outside the building (above the roof). Thirteen extraction points were installed between the three tenant spaces. Additional extraction points were added to each tenant space after the SSDS was initially installed. Fifteen SSD vacuum monitoring points were also installed within the three tenant spaces and can be measured to verify vacuum beneath the concrete slab. A manometer was installed on the suction

side of the in-line blower on each of the SSD branches to provide a visual indicator that the SSDS is operating properly.

The SSDS was temporarily shut down on March 27, 2015 in preparation for an SVI investigation which was completed on April 28, 2015. The SSDS was re-started upon completion of SVI investigation activities on April 28, 2015. A summary of the SVI investigation results and a request for shut-down of the SSDS was submitted to the NYSDEC under separate cover. Sub-slab and ambient air locations are depicted on **Figure 8** and the analytical data is summarized on **Tables 8** and **9**. In addition, the Category B laboratory analytical report provided by Accutest is included in **Appendix F**. Upon review of the SVI investigation results, the NYSDEC approved shut down and decommissioning of the SSDS in a letter dated June 18, 2015. The NYSDEC also requested that GES submit a proposal to discontinue and decommission the system which will be submitted for the Departments review and approval. Regulatory correspondences are attached as **Appendix A**. The SSDS will remain active until a proposal is submitted and approved by the NYSDEC.

Because of the presence of contaminated groundwater and residual soil contamination under building #2, a bioaugmentation treatment system was designed. This treatment promotes in situ microbial degradation of contaminants in saturated soil and groundwater. Addition of a molasses solution to subsurface soil and groundwater acts as an electron donor that stimulates metabolic reduction of chlorinated VOCs to ethene. Bioaugmentation injection points and manifold piping were installed after the source removal excavation between February and April 2010. An additional nine nested bioaugmentation injection points and four additional monitoring wells were installed between April and May of 2012 and January of 2014 in accordance to the RAWP, submitted by Kleinfelder on December 19, 2011. Details regarding the installation of additional monitoring points and nested injection wells can be referenced in the *May 2012 , January 2014 and February 2014 Monthly Progress Report*, submitted to the NYSDEC. The last molasses injection event was completed in June of 2014. Since that time, TOC levels in the targeted area (MW-5) have been within range indicating that molasses injections were not needed at the time. If TOC levels are above or below the targeted range, further molasses injection activities will be conducted. IC and EC certifications have been provided in **Appendix E**.

5.0 MONITORING PLAN COMPLIANCE

The Monitoring Plan describes the measures for evaluating the performance and effectiveness of the remedy to reduce or mitigate contamination at the site, the composite cover system, and all affected site media identified in the SMP. Monitoring results and performance evaluation of the ECs are reported to the NYSDEC and NYDOH as they are completed. Approval to discontinue submittal of monthly progress reports was granted by the NYSDEC in a letter dated August 25, 2014. Regulatory correspondences are attached as **Appendix A**.

Components and schedule of the monitoring plan are summarized in **Chart 1** (on the following page).

Chart 1
Monitoring / Inspection Schedule

Monitoring Program	Frequency	Matrix	Analysis
Composite Cover System	Annual (minimum) or during other (more frequent) inspections as time and conditions warrant	Soil	Visual Inspection of Cover
SSDS	Quarterly	Soil Vapor	Negative Pressure
Bioaugmentation system	Bi-monthly molasses injections and pre-/post-injection groundwater samples collected	Groundwater	Total Organic Carbon
Groundwater	Quarterly	Groundwater	Chlorinated VOCs, ethene

5.1 Composite Cover Monitoring Compliance

On June 16, 2015, the composite cover system was inspected by a qualified environmental professional. The composite cover system was determined to be intact and impervious to surface water infiltration. Photographs of the composite cover system are provided in **Appendix D.** Additional inspections occurred during one or more of the following activities: quarterly groundwater sampling, quarterly SSDS OM&Ms, and/or site visits.

5.2 Sub-Slab Depressurization System Monitoring Compliance

SSDS inspections and monitoring were conducted on a quarterly basis during this monitoring period as described in the SMP to evaluate the performance of the system. Data collected during the SSDS OM&M events can be referenced in **Tables 6a** through **6c**.

The SSDS was temporarily shut down on March 27, 2015 in preparation for an SVI investigation which was completed on April 28, 2015. The SSDS was re-started upon completion of SVI investigation activities on April 28, 2015. A summary of the SVI investigation results and a request for shut-down of the SSDS was submitted to the NYSDEC under separate cover. Sub-slab and ambient air locations are depicted on **Figure 8** and the analytical data is summarized on **Tables 8** and **9**. In addition, the Category B laboratory analytical report provided by Accutest is included in **Appendix F**. Upon review of the SVI investigation results, the NYSDEC approved shut down and decommissioning of the SSDS in a letter dated June 18, 2015. The NYSDEC also requested that GES submit a proposal to discontinue and decommission the system which will be submitted for the Departments review and approval. Regulatory correspondences are attached as **Appendix A**. The SSDS will remain active until a proposal is submitted and approved by the NYSDEC.

5.3 Bioaugmentation System Monitoring Compliance

Inspections and monitoring of the bioaugmentation system were completed as described in the SMP. Overall, a total of 11 injection events have been completed since August 2012. A total approximate volume of 7,700 gallons of 10% molasses solution has been injected over this period. Injection volumes for each injection event have been summarized in the July 17, 2014 *Periodic Review Report.*

The last molasses injection event was completed in June of 2014. Since that time, TOC levels in the targeted area (MW-5) have been within range indicating that molasses injections were not needed at the time. If TOC levels are below the targeted range, further molasses injection activities will be conducted.

Quarterly groundwater monitoring and annual baseline sampling were completed as specified in the SMP and the NYSDEC SMP and PRR Response Letter dated August 25, 2014. Monitoring wells MW-3, MW-4, MW-5, MW-8A, MW-8B, and MW-10 were sampled each quarter. Samples were submitted to Accutest Laboratories of Dayton, New Jersey (Accutest) for the following analysis: VOCs, ethene, TOC, nitrate, iron (total, ferrous and ferric) and sulfate. Analytical data provided by Accutest have been included as **Appendix F** and are represented in **Tables 2, 4,** and **5**, and **Figures 4a** through **4d.** Each quarter the Category B laboratory analytical reports provided by Accutest were submitted to RemVer for review of data quality. Subsequent to the data review, RemVer provided a data usability summary report (DUSR), included with **Appendix G**. Groundwater monitoring logs have been included in **Appendix B** and have served as the inspection form for the groundwater monitoring network.

Once annually, four select samples from an up-gradient well (MW-7), side gradient well (MW-6), down gradient well (MW-10) and centrally located well (MW-5) were submitted for the additional analysis of PCBs. Approval to eliminate the analyses for pesticides, semi-volatile organic compounds (SVOCs) and metals, was granted by the NYSDEC in a letter dated August 25, 2014. Annual baseline sampling was completed on March 27, 2015. Analytical data provided by Accutest have been included as **Appendix F**. Results from the annual baseline sampling can be referenced in **Tables 2, 4,** and **5**.

5.4 Non-Routine Maintenance

On November 5, 2014, GES was notified of a water main break located within the composite cover system, an EC, for the site at the above-referenced facility. The NYSDEC was immediately notified via e-mail of the emergency response activities required to repair the line. Regulatory correspondences are attached as **Appendix A**. Kings Capital Construction Group of White Plains, New York was contracted to complete the repairs. All soil excavated to access the water main was temporarily stockpiled within a lined and covered roll-off pending approval to transport the soil to a permitted facility.

During the emergency water line repairs, a natural gas line leak was also detected adjacent to the shopping center and within the composite cover system. Orange and Rockland (O&R) was immediately notified and repairs to the gas line were coordinated. Under GES oversight, American Environmental Assessment Corp. (AEAC) and O&R completed the scheduled repairs

on November 14, 2014. All soil excavated to access the gas line was temporarily stockpiled within a lined and covered roll-off pending approval to transport the soil to a permitted facility.

During excavation activities to uncover and repair the natural gas line, GES personnel were on-site to monitor air within the work zone. To protect the public from potential vapors and dust, the Community Air Monitoring Plan (CAMP) incorporated as part of the SMP was implemented during all intrusive work activities. Dust and volatiles were monitored within the work zone during soil disturbance activities. Monitoring results can be referenced in **Table 7**.

Upon completion of excavation, repair, and backfilling activities, GES collected waste composite samples from the stockpiled soil and submitted the analytical results to the NYSDEC for approval. Upon receipt of approval, the two roll-offs were transported by AEAC to the ESMI of New York facility located in Fort Edward, New York for thermal treatment. The NYSDEC approval letter is included in **Appendix A**, the laboratory analytical report in included in **Appendix F**, and the non-hazardous waste manifests and included in **Appendix H**.

Following utility repairs, the composite cover was restored to match the surrounding area. A photograph of the restored composite cover is included in **Appendix D**.

6.0 OPERATION, MONITORING & MAINTENANCE PLAN COMPLIANCE

The Operation, Monitoring & Maintenance Plans describe the measures necessary to operate, monitor, and maintain the mechanical components of the remedy selected for the site. This section has two specific OM&M plans: one for the SSDS and one for the bioaugmentation treatment system.

Annually, copies of the OM&M forms generated from field activities at the site are placed inside the on-site hazardous communications box. Additionally, a copy of the Sub-Slab Depressurization Operation, Monitoring, and Maintenance Plan, Bioaugmentation System Operation, Maintenance, and Monitoring Plan and manuals provided by the equipment manufacturer are stored in the hazardous communications box for reference.

6.1 Sub-Slab Depressurization OM&M Compliance

SSDS OM&M visits were completed on a quarterly basis as described in the Sub-Slab Depressurization Operation, Monitoring, and Maintenance Plan. Each visit included the following activities to evaluate performance and operation of the system: an inspection for security, vandalism, system damage, operating anomalies, equipment or conveyance malfunction, connection integrity, power outages or environmental effects, vacuum of each SSD branch (SSD-1 to SSD-8), flow reading of each SSD branch (SSD-1 to SSD-8) and SSD blower, visual inspection of fluid levels in each manometer, record vacuum readings using provided manometer from each sub-slab monitoring point and sub-slab vapor extraction well (SSD-MP-1 to SSD-MP-6 and VP-1 to VP-9), visual inspection of discharge stacks piping and fittings, collection of PID readings from each sample port on each stack located in the back of the shopping center (DS-1 through DS-8), and a visual inspection of concrete floor slabs for presence of new cracks and recent structural changes in the building.

All vacuum influence readings were within acceptable limits during each of the OM&M visits, except at one location (SSD-MP-5) on December 17, 2014 and at two locations (SSD-MP-5 and VP-7) on March 16, 2015. Low vacuum influence readings recorded on these dates are attributed to construction activities being conducted adjacent to the west side of the building. Vacuum influence can be referenced in **Tables 6a** through **6c**.

The SSDS was temporarily shut down on March 27, 2015 in preparation for a SVI investigation which was completed on April 28, 2015. The SSDS was re-started upon completion of SVI investigation activities on April 28, 2015. A summary of the SVI investigation results and a request for shut-down of the SSDS was submitted to the NYSDEC under separate cover. Sub-slab and ambient air locations are depicted on **Figure 8** and the analytical data is summarized on **Tables 8** and **9**. In addition, the Category B laboratory analytical report provided by Accutest is included in **Appendix F**. Upon review of the SVI investigation results, the NYSDEC approved shut down and decommissioning of the SSDS in a letter dated June 18, 2015. The NYSDEC also requested that GES submit a proposal to discontinue and decommission the system which will be submitted for the Departments review and approval. Regulatory correspondences are attached as **Appendix A**. The SSDS will remain active until a proposal is submitted and approved by the NYSDEC.

6.2 Bioaugmentation System OM&M Compliance

Bioaugmentation System OM&M visits were completed during quarterly sampling events, pre-/post-injection sampling events and molasses injection events as described in the Bioaugmentation System Operation, Maintenance, and Monitoring Plan. Each visit included the following activities to evaluate performance and operation of the system: an inspection for security issues, vandalism, system damage, equipment or conveyance malfunction, connection integrity, or environmental effects, gauging of BAS monitoring well network, collection of general groundwater chemistry parameters, pH adjustment titration for each monitoring point with field measured outside of the target range, visual inspection of piping stub-ups and BAS monitoring well road boxes and well pads and injection road boxes and road pads.

No groundwater titrations were performed during this monitoring period as all pH readings were within the optimal geochemical target range.

7.0 CONCLUSIONS AND RECOMMENDATIONS

7.1 Site Management Plan Compliance

During this monitoring period, all requirements set forth in the SMP have been completed. ICs described in the SMP are in place and in compliance. Monitoring and OM&M of the three ECs (composite cover, SSDS and bioaugmentation system) were conducted during the monitoring period as specified in the SMP. Inspections of the composite cover system were performed at a minimum frequency of once annually. Monitoring and OM&M of the SSDS were completed on

a quarterly basis. Monitoring and OM&M of the bioaugmentation system were completed on a quarterly basis during the quarterly groundwater sampling events.

7.2 Performance and Effectiveness of Remedy

The SSDS has functioned as required during this monitoring period. All vacuum influence readings were within acceptable limits during each of the OM&M visits, except at one location (SSD-MP-5) on December 17, 2014 and at two locations (SSD-MP-5 and VP-7) on March 16, 2015. Low vacuum influence readings recorded on these dates are attributed to construction activities being conducted adjacent to the west side of the building.

In addition, the SSDS was temporarily shut down on March 27, 2015 in preparation for an SVI investigation which was completed on April 28, 2015. The SSDS was re-started upon completion of SVI investigation activities on April 28, 2015. Upon review of the SVI investigation results, the NYSDEC approved shut down and decommissioning of the SSDS in a letter dated June 18, 2015. Therefore, GES recommends the following:

- Continue operation of the SSDS until a written proposal for discontinuation and decommissioning of the system is approved by the NYSDEC;
- Upon receipt of approval, the system will be shut down as specified in the approved work plan;
- The current approved SMP will be modified to reflect this change upon completion.

A total of 11 bioaugmentation injection events have been completed to date with an approximate total of 7,700 gallons of 10% molasses introduced into the subsurface. TOC concentrations are within the optimal geochemical target range in monitoring well MW-5. TOC concentrations in MW-5 can be referenced on **Table 2** and are graphically represented on **Figure 5**. Please refer to **Table 4** for a summary of the concentrations of the COCs for all currently sampled site monitoring wells. As demonstrated, monitoring well MW-5 exhibits an overall decreasing trend in groundwater concentrations since the initiation of the bioaugmentation remedy in August 2012. Based on the most recent groundwater data from May 2015, monitoring well MW-5 exhibits elevated concentrations of cis-1,2-Dichlorethene (458 ug/L). In addition, monitoring well MW-5 exhibits low ORP levels over the monitoring period, ranging from -66.9 to -211.1 millivolts (mv). This indicates that favorable reducing conditions have been maintained during the application of the bioaugmentation remedy within the targeted treatment area.

Concentrations of TOC in MW-5 (illustrated on **Figure 5)** have remained within the target range of 50 to 500 ug/L since the last molasses injection completed in June of 2014. Because the groundwater TOC concentrations in MW-5 have remained within the acceptable range, GES recommends continued monitoring of the TOC analytical data with additional bioaugmentation injection events as proposed in the July 17, 2014 *Periodic Review Report*:

- Target MW-5 for continued bioremediation by utilizing injection wells IP-3, IP-4, INJ-3 and INJ-4;

- Perform molasses injection (using a 10% solution) at a frequency of 4 to 6 months. This exact frequency will be determined based on the TOC data collected from MW-5;
- A total volume of 80 gallons of solution of molasses solution will be injected into each of the injection wells referenced above (320 gallons in total);
- Monitoring well MW-5 will be monitored for TOC, pH, DO, ORP, temperature, pH and conductivity to assess performance of the bioaugmentation remedy;
- Monitoring well MW-4 will be utilized as a control well, and will also be monitored for the parameters above;
- Continue to monitor trends for groundwater COC concentrations in MW-4 and MW-8A.

Groundwater monitoring will be conducted on a quarterly basis to evaluate the effectiveness of the bioaugmentation remedy. The groundwater quality parameters (TOC, pH, DO, ORP, temperature, pH and conductivity) will also be collected during quarterly sampling events for MW-4 and MW-5. These parameters will also be collected within 4 weeks after the completion of each injection event.

Prepared by:

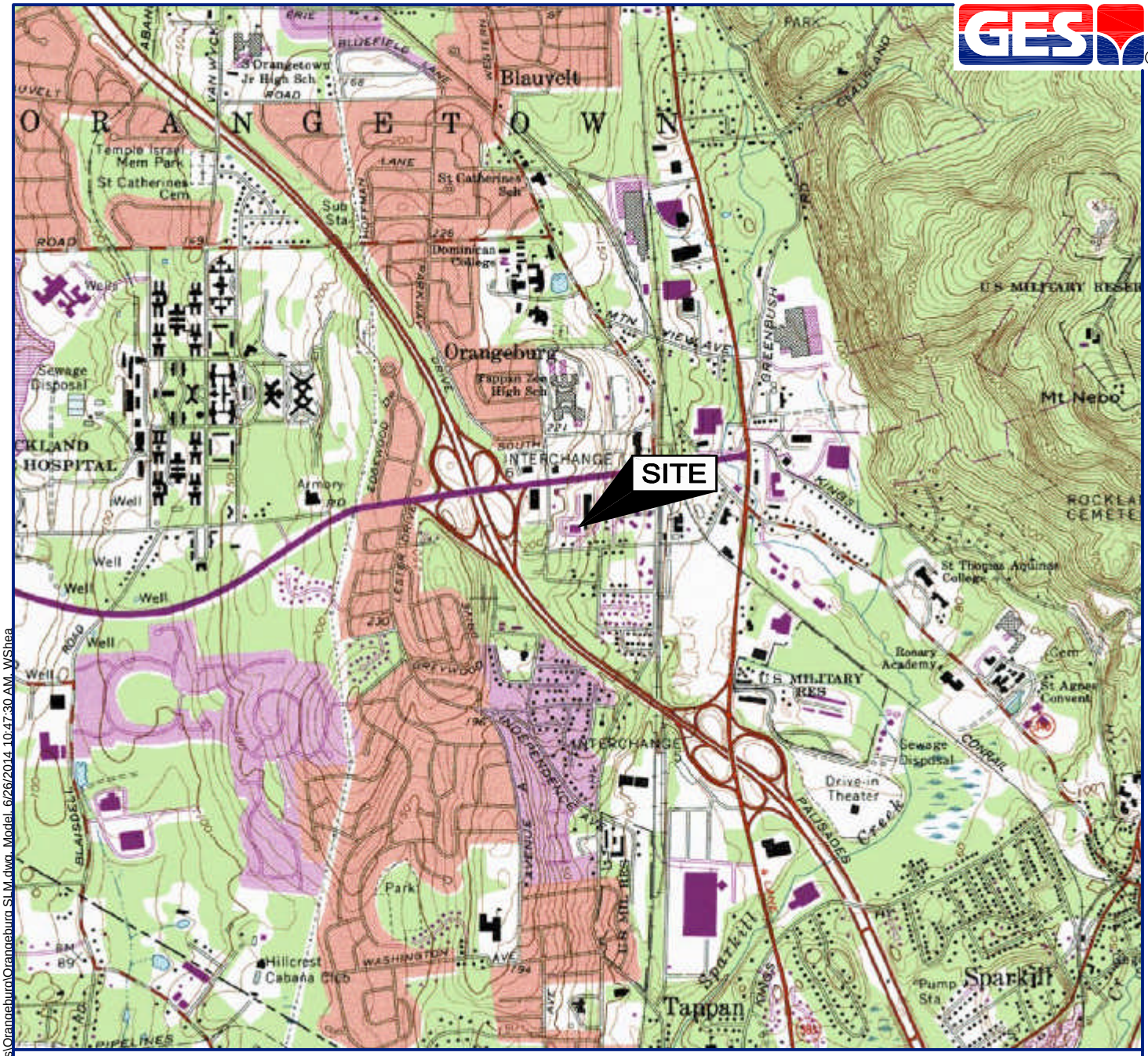
7/17/15
Christina Andreotto — Date
Staff Geologist

Reviewed by:

7/17/15
Karen Bourque — Date
Senior Project Manager

7/14/15
Gerald Cresap Jr, P.E. — Date
Regional Engineering Manager

FIGURES



SOURCE: USGS 7.5 MINUTE SERIES
TOPOGRAPHIC QUADRANGLE 1979
NYACK, NEW YORK
CONTOUR INTERVAL = 10'

QUADRANGLE LOCATION

DRAFTED BY: W.G.S. (N.J.)	SITE LOCATION MAP
CHECKED BY: CA	UB ORANGEBURG, LLC 1-45 ORANGETOWN SHOPPING CENTER ORANGEBURG, NEW YORK
REVIEWED BY: MD	Groundwater & Environmental Services, Inc. 16 MT. EBO ROAD SOUTH, SUITE 21, BREWSTER, NEW YORK 10509
NORTH	SCALE IN FEET: 0 – 2000 / DATE: 6-26-14 / FIGURE: 1

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LEGEND

- PROPERTY BOUNDARY
- CHAIN LINK FENCE
- CATCH BASIN
- UTILITY MANHOLE
- UTILITY POLE
- LIGHT POLE
- FIRE HYDRANT
- MONITORING WELL
- DESTROYED MONITORING WELL
- SOIL VAPOR EXTRACTION WELL
- SS — UNDERGROUND SANITARY SEWER LINE
- OHU — OVERHEAD UTILITIES

DRAFTED BY: W.G.S. (N.J.)	SITE MAP
CHECKED BY: CA	UB ORANGEBURG, LLC 1-45 ORANGETOWN SHOPPING CENTER ORANGEBURG, NEW YORK
REVIEWED BY: MD	Groundwater & Environmental Services, Inc. 16 MT. EBO ROAD SOUTH, SUITE 21, BREWSTER, NEW YORK 10509
NORTH	SCALE IN FEET: 0 APPROXIMATE 50 / DATE: 6-26-14 / FIGURE: 2

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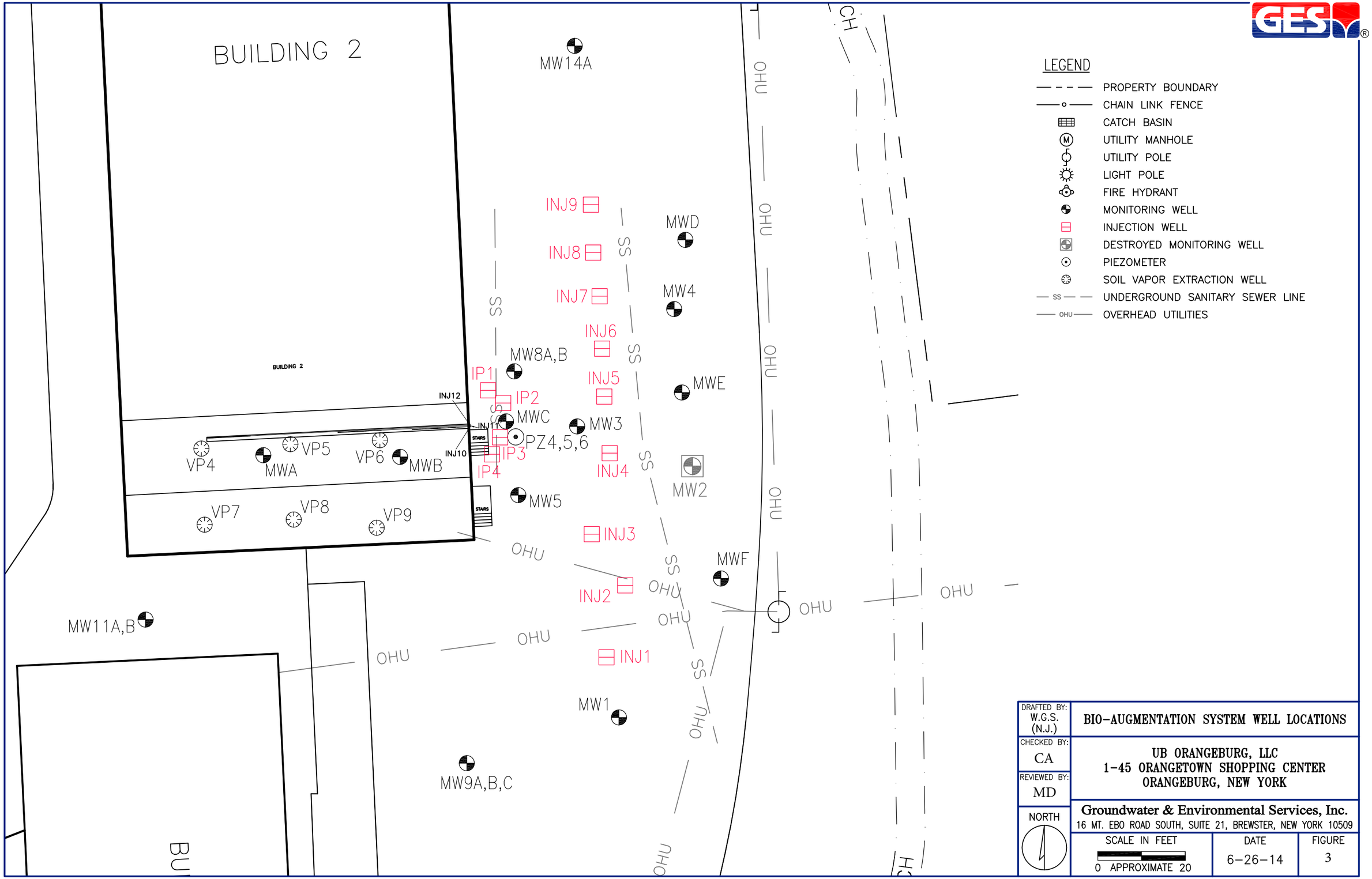

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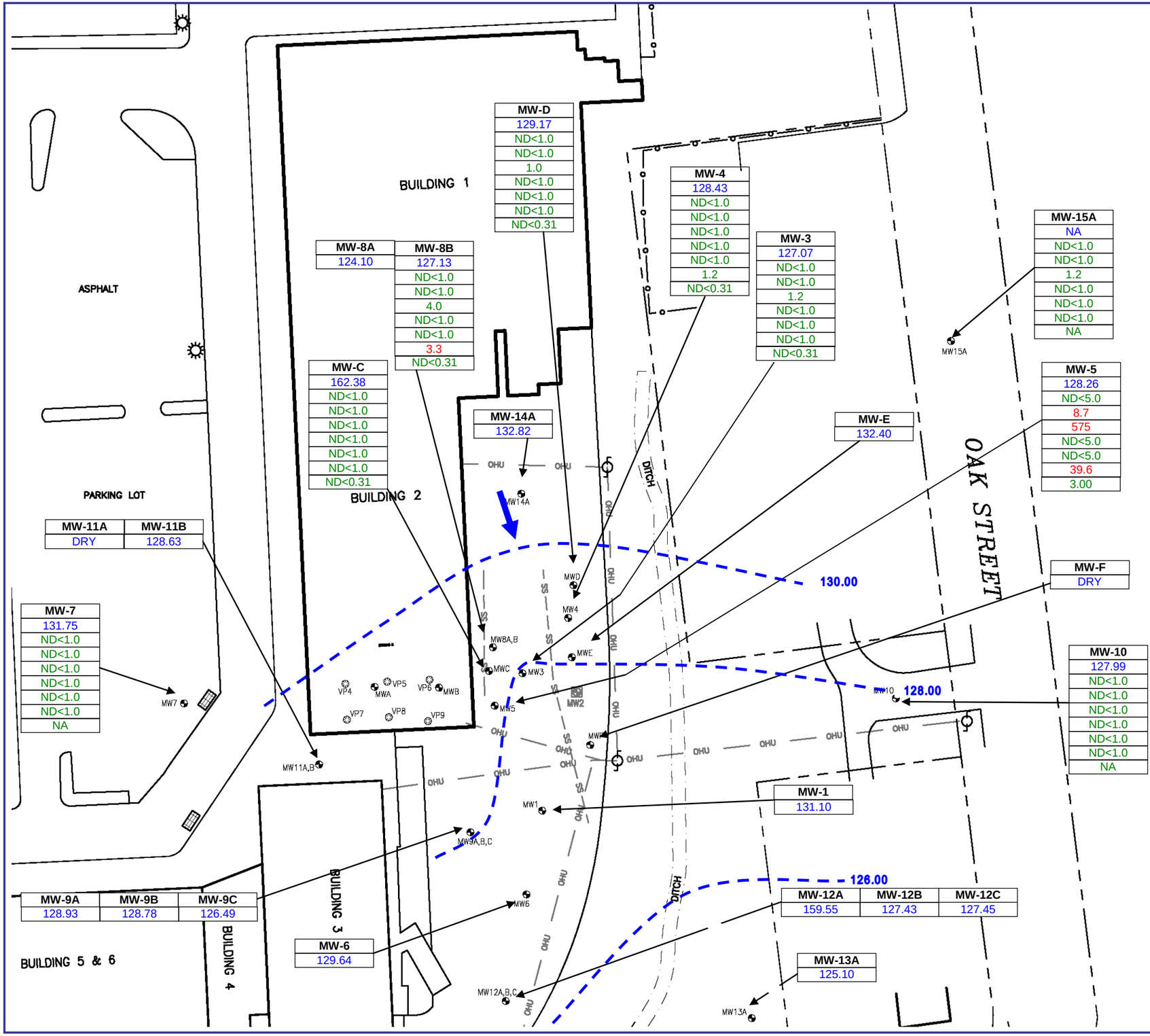


LEGEND

- PROPERTY BOUNDARY
- CHAIN LINK FENCE
- CATCH BASIN
- UTILITY MANHOLE
- UTILITY POLE
- LIGHT POLE
- FIRE HYDRANT
- MONITORING WELL
- INJECTION WELL
- DESTROYED MONITORING WELL
- PIEZOMETER
- SS — UNDERGROUND SANITARY SEWER LINE
- OHU — OVERHEAD UTILITIES

130.00 — GROUNDWATER CONTOUR (feet)

GROUNDWATER FLOW DIRECTION

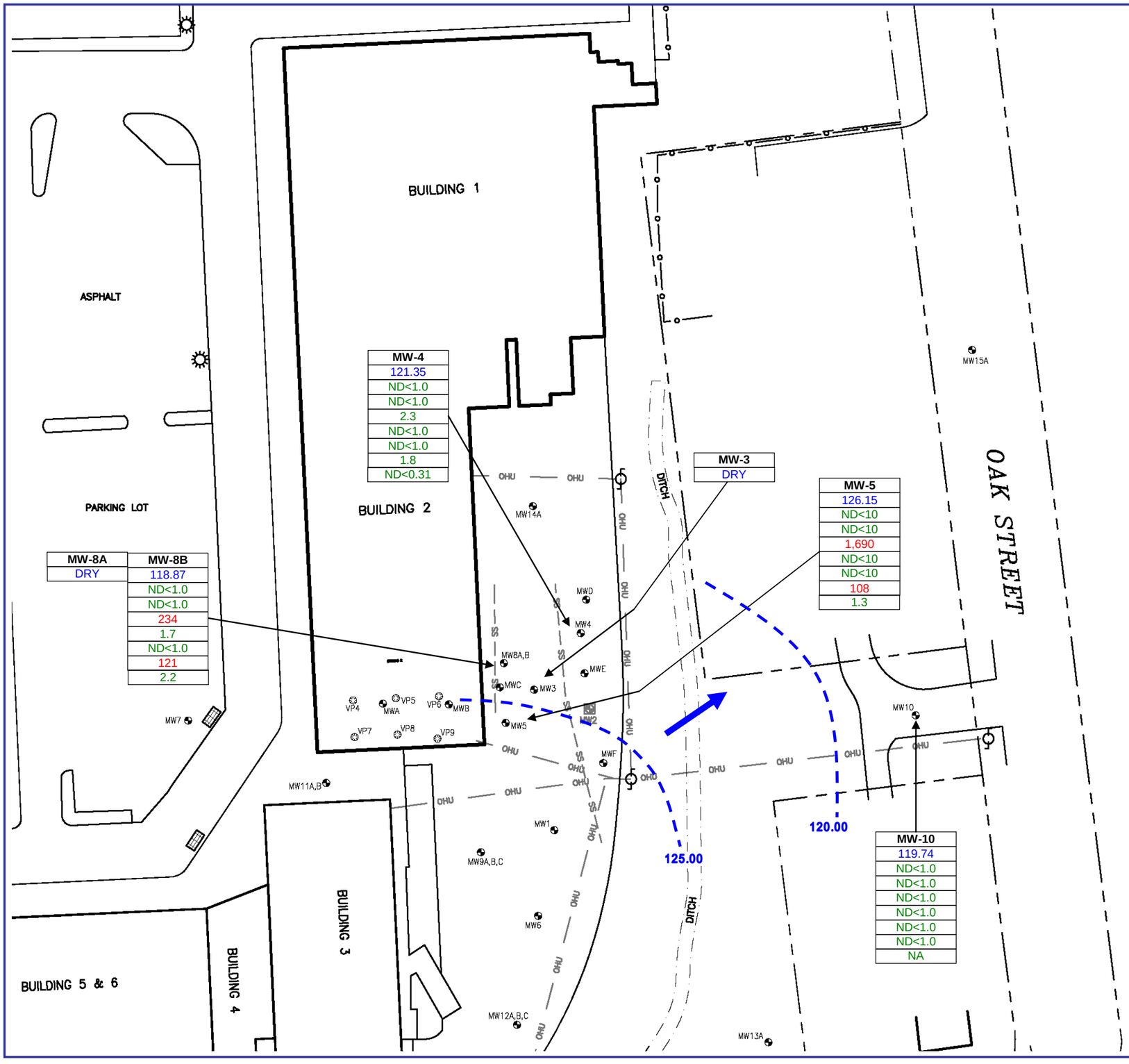
MW-5	WELL IDENTIFICATION
128.26	GROUNDWATER ELEVATION (feet)
ND<5.0	TETRACHLOROETHENE CONCENTRATION (µg/L)
8.7	TRICHLOROETHENE CONCENTRATION (µg/L)
575	CIS-1,2-DICHLOROETHENE CONCENTRATION (µg/L)
ND<5.0	TRANS-1,2- DICHLOROETHENE CONCENTRATION (µg/L)
ND<5.0	1,1-DICHLOROETHENE CONCENTRATION (µg/L)
39.6	VINYL CHLORIDE CONCENTRATION (µg/L)
3.00	ETHENE

NOTES

ND -Non-Detect
NA -Not available or not sampled for that parameter
µg/L -Microgram per liter
Red -Value exceeds NYSDEC TOGS 1.1.1 GWQS

On July 23 and 24, 2014, groundwater samples were not collected from MW-8A, MW-13A, MW-A, MW-B and MW-F due to insufficient volumes of water present and/or in-accessibility at the time of sampling.

DRAFTED BY: BCS	DEEP AQUIFER CONTOUR July 23 and 24, 2014
CHECKED BY: MJW	UB ORANGEBURG, LLC 1-45 ORANGETOWN SHOPPING CENTER ORANGEBURG, NEW YORK
REVIEWED BY: MCD	Groundwater & Environmental Services, Inc. 16 MOUNT EBO ROAD SOUTH, SUITE 21, BREWSTER, NY 10509
NORTH	SCALE IN FEET: 0 Approximate 50 / DATE: 10-28-14 / FIGURE: 4a



LEGEND

- PROPERTY BOUNDARY
- CHAIN LINK FENCE
- CATCH BASIN
- UTILITY MANHOLE
- UTILITY POLE
- LIGHT POLE
- FIRE HYDRANT
- MONITORING WELL
- INJECTION WELL
- DESTROYED MONITORING WELL
- PIEZOMETER
- SS — UNDERGROUND SANITARY SEWER LINE
- OHU — OVERHEAD UTILITIES

120.00 — GROUNDWATER CONTOUR (feet)

GROUNDWATER FLOW DIRECTION

MW-5	WELL IDENTIFICATION
126.15	GROUNDWATER ELEVATION (feet)
ND<10	TETRACHLOROETHENE CONCENTRATION (µg/L)
ND<10	TRICHLOROETHENE CONCENTRATION (µg/L)
1,690	CIS-1,2-DICHLOROETHENE CONCENTRATION (µg/L)
ND<10	TRANS-1,2- DICHLOROETHENE CONCENTRATION (µg/L)
ND<10	1,1-DICHLOROETHENE CONCENTRATION (µg/L)
108	VINYL CHLORIDE CONCENTRATION (µg/L)
1.3	ETHENE

NOTES

ND	-Non-Detect
NA	-Not available or not sampled for that parameter
µg/L	-Microgram per liter
Red	-Value exceeds NYSDEC TOGS 1.1.1 GWQS

On October 10, 2014, groundwater samples were not collected from MW-3 and MW-8A due to insufficient volumes of water present at the time of sampling.

DRAFTED BY: BCS	DEEP AQUIFER CONTOUR OCTOBER 10, 2014
CHECKED BY: CA	UB ORANGEBURG, LLC 1-45 ORANGETOWN SHOPPING CENTER ORANGEBURG, NEW YORK
REVIEWED BY: MCD	Groundwater & Environmental Services, Inc. 16 MOUNT EBO ROAD SOUTH, SUITE 21, BREWSTER, NY 10509
NORTH	SCALE IN FEET: 0 Approximate 50 / DATE: 1-6-15 / FIGURE: 4b

LEGEND

- PROPERTY BOUNDARY
- CHAIN LINK FENCE
- CATCH BASIN
- UTILITY MANHOLE
- UTILITY POLE
- LIGHT POLE
- FIRE HYDRANT
- MONITORING WELL
- INJECTION WELL
- DESTROYED MONITORING WELL
- PIEZOMETER
- SS — UNDERGROUND SANITARY SEWER LINE
- OHU — OVERHEAD UTILITIES

MW-5	WELL IDENTIFICATION
131.93	GROUNDWATER ELEVATION (feet)
2.8	TETRACHLOROETHENE CONCENTRATION (µg/L)
4.8	TRICHLOROETHENE CONCENTRATION (µg/L)
247	CIS-1,2-DICHLOROETHENE CONCENTRATION (µg/L)
1.4	TRANS-1,2- DICHLOROETHENE CONCENTRATION (µg/L)
ND<10	1,1-DICHLOROETHENE CONCENTRATION (µg/L)
13	VINYL CHLORIDE CONCENTRATION (µg/L)
0.22	ETHENE

HISTORIC GROUNDWATER FLOW DIRECTION (inferred)

NOTES

ND	-Non-Detect
NA	-Not available or not sampled for that parameter
µg/L	-Microgram per liter
Red	-Value exceeds NYSDEC TOGS 1.1.1 GWQS

DRAFTED BY: BCS	DEEP AQUIFER CONTOUR MARCH 27, 2015
CHECKED BY: CA	UB ORANGEBURG, LLC 1-45 ORANGETOWN SHOPPING CENTER ORANGEBURG, NEW YORK
REVIEWED BY: KB	Groundwater & Environmental Services, Inc. 16 MOUNT EBO ROAD SOUTH, SUITE 21, BREWSTER, NY 10509
NORTH	SCALE IN FEET: 0 Approximate 50 / DATE: 4-13-15 / FIGURE: 4c

LEGEND

- PROPERTY BOUNDARY
- CHAIN LINK FENCE
- CATCH BASIN
- UTILITY MANHOLE
- UTILITY POLE
- LIGHT POLE
- FIRE HYDRANT
- MONITORING WELL
- INJECTION WELL
- DESTROYED MONITORING WELL
- PIEZOMETER
- SS — UNDERGROUND SANITARY SEWER LINE
- OHU — OVERHEAD UTILITIES

MW-5	HISTORIC GROUNDWATER FLOW DIRECTION (inferred)
MW-5	WELL IDENTIFICATION
127.94	GROUNDWATER ELEVATION (feet)
2.9	TETRACHLOROETHENE CONCENTRATION (µg/L)
7.0	TRICHLOROETHENE CONCENTRATION (µg/L)
458	CIS-1,2-DICHLOROETHENE CONCENTRATION (µg/L)
3.7	TRANS-1,2- DICHLOROETHENE CONCENTRATION (µg/L)
ND<1.0	1,1-DICHLOROETHENE CONCENTRATION (µg/L)
0.9	VINYL CHLORIDE CONCENTRATION (µg/L)
ND<0.31	ETHENE

NOTES

ND	-Non-Detect
NA	-Not available or not sampled for that parameter
µg/L	-Microgram per liter
Red	-Value exceeds NYSDEC TOGS 1.1.1 GWQS

DRAFTED BY: BCS	DEEP AQUIFER CONTOUR MAY 11, 2015
CHECKED BY: CA	UB ORANGEBURG, LLC 1-45 ORANGETOWN SHOPPING CENTER ORANGEBURG, NEW YORK
REVIEWED BY: KB	Groundwater & Environmental Services, Inc. 16 MOUNT EBO ROAD SOUTH, SUITE 21, BREWSTER, NY 10509
NORTH	SCALE IN FEET: 0 Approximate 50 / DATE: 6-24-15 / FIGURE: 4d

Figure 5

Total Organic Carbon Concentration

Orangetown Shopping Center/Sparkle Cleaners
NYSDEC Site #C344066

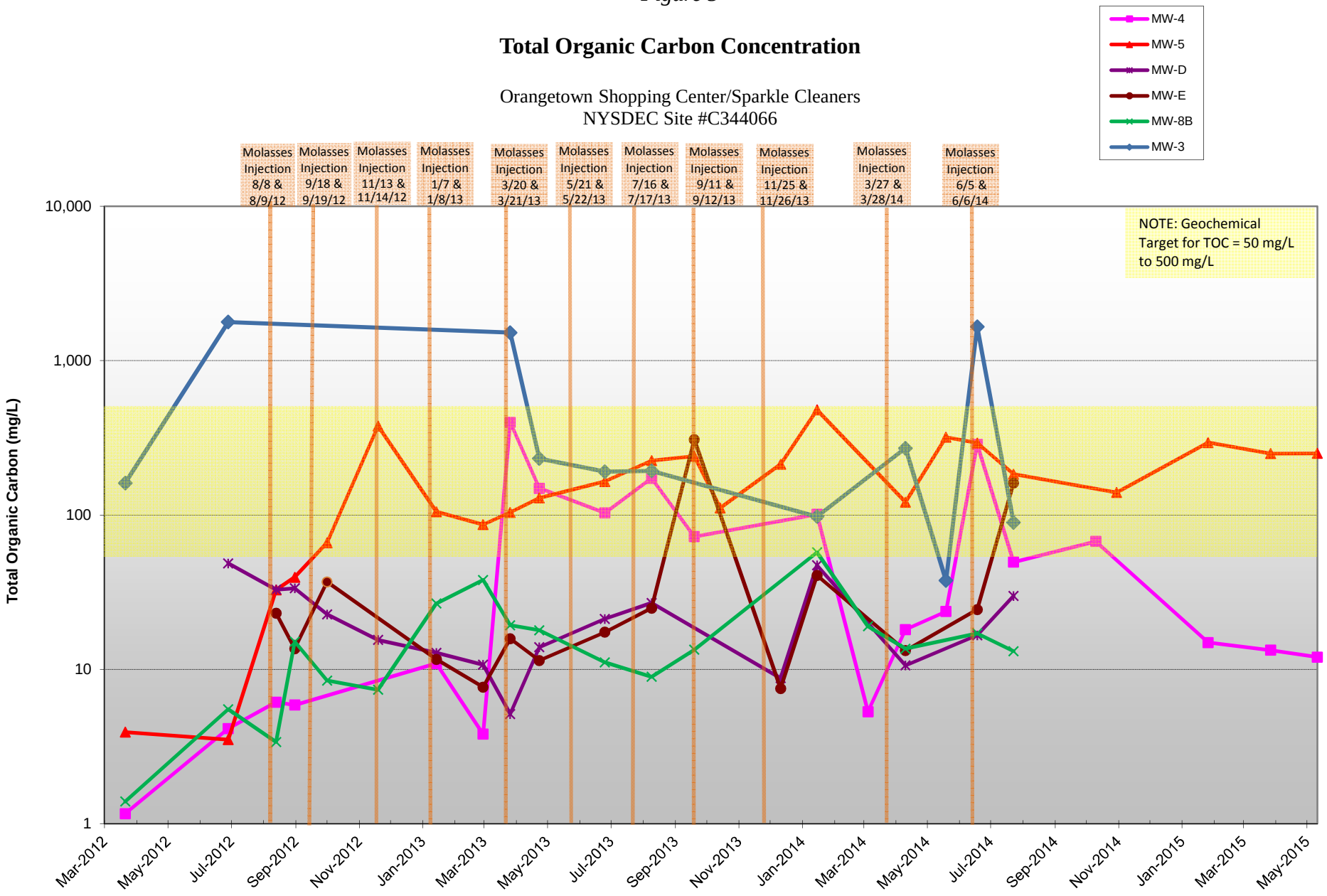
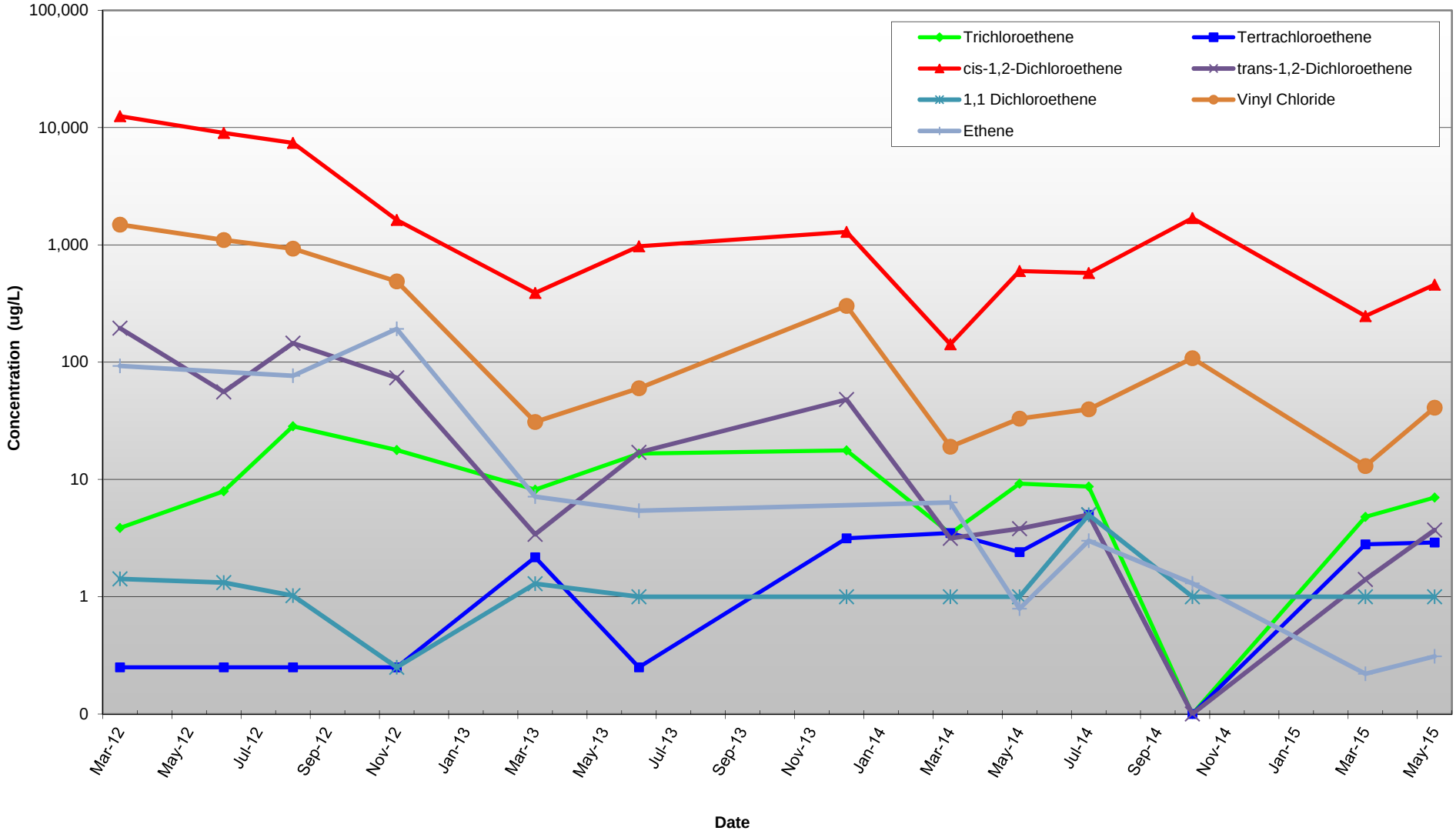
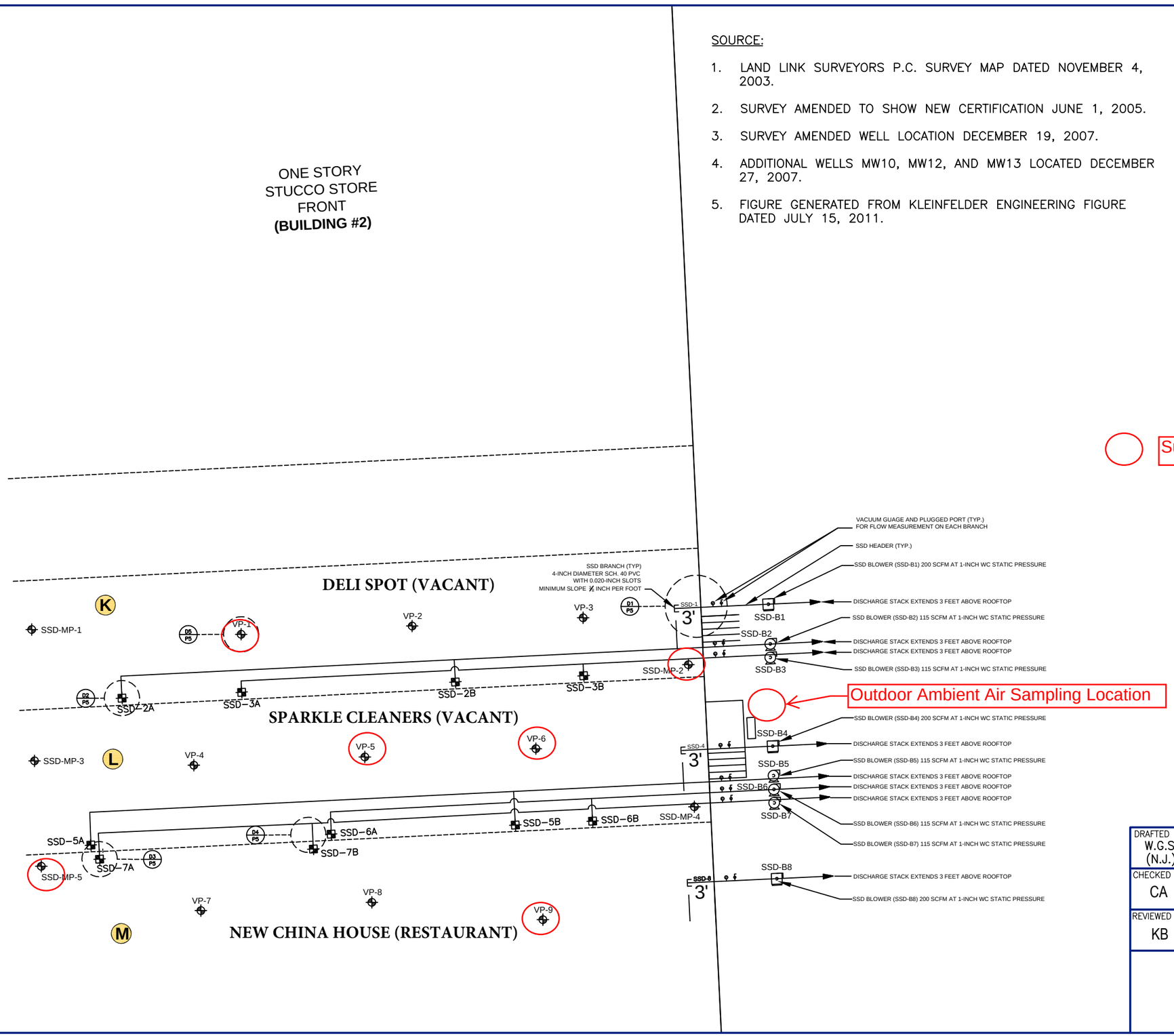


Figure 6

MW-5
Chlorinated Solvent Reductive Transformation Pathway

Orangetown Shopping Center/Sparkle Cleaners
NYSDEC Site #C344066





SOURCE:

1. LAND LINK SURVEYORS P.C. SURVEY MAP DATED NOVEMBER 4, 2003.
2. SURVEY AMENDED TO SHOW NEW CERTIFICATION JUNE 1, 2005.
3. SURVEY AMENDED WELL LOCATION DECEMBER 19, 2007.
4. ADDITIONAL WELLS MW10, MW12, AND MW13 LOCATED DECEMBER 27, 2007.
5. FIGURE GENERATED FROM KLEINFELDER ENGINEERING FIGURE DATED JULY 15, 2011.

LEGEND

- SSD-MP-6 — SUB-SLAB MONITORING PORT
- SUB-SLAB VAPOR EXTRACTION WELL
- D1 / P5 — DETAIL NUMBER / PLATE NUMBER
- SSD BLOWER (115 SCFM)
- SSD BLOWER (200 SCFM)
- VACUUM GAUGE
- PLUGGED PORT

COMMERCIAL STORE ID TABLE (BUILDING #2)

- (K) FORMER THE DELI SPOT
- (L) FORMER SPARKLE CLEANERS
- (M) NEW CHINA HOUSE

Sub-slab and/or ambient air sampling locations

NOTES:

1. THE EXTRACTION PIPING INSIDE THE BUILDING IS ROUTED ABOVE THE SUB-CEILING OR ALONG THE EXTERIOR WALL.
2. DISCHARGE STACKS EXTEND 3 FEET ABOVE THE ROOFTOP (TYP.).

DRAFTED BY: W.G.S. (N.J.)	Sub-Slab and Ambient Air Sampling Locations	
CHECKED BY: CA	UB ORANGEBURG, LLC 1-45 ORANGETOWN SHOPPING CENTER ORANGEBURG, NEW YORK	
REVIEWED BY: KB	Groundwater & Environmental Services, Inc. 16 MT. EBO ROAD SOUTH, SUITE 21, BREWSTER, NEW YORK 10509	
	NOT TO SCALE	DATE 10-24-14 / FIGURE 7

M:\Graphics\1100-Patterson-LHV\Misc\Urstadt Biddle Properties\Orangeburg\Engineering\Orangeburg (KLF-details).dwg, B- (3), 10/24/2014 10:14:39 AM, WShea

TABLES

Orangetown Shopping Center/Sparkle Cleaners
NYSDEC Site # C344066

Table 1 - Groundwater Gauging

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	GW Elevation (ft)	Detector Reading (ppm)
MW-3	3/22/2012	166.67	38.37	128.30	0.9
	6/28/2012	166.67	41.68	124.99	0.3
	8/13/2012	166.67	-		0
	8/31/2012	166.67	43.20	123.47	0
	10/1/2012	166.67	42.55	124.12	0
	11/19/2012	166.67	42.47	124.20	0
	1/14/2013	166.67	42.85	123.82	0
	2/28/2013	166.67	42.40	124.27	0
	3/26/2013	166.67	39.30	127.37	0
	4/23/2013	166.67	40.00	126.67	0
	6/25/2013	166.67	36.63	130.04	NS
	12/11/2013	166.67	42.39	124.28	NS
	1/15/2014	166.67	42.27	124.40	NS
	3/5/2014	166.67	38.76	127.91	0
	4/10/2014	166.67	38.76	127.91	0
	5/19/2014	166.67	34.95	131.72	0
	6/18/2014	166.67	35.58	131.09	0
	7/23/2014	166.67	39.60	127.07	0
	10/10/2014	166.67	DRY	NS	0
	3/27/2015	166.67	34.02	132.65	0
	5/11/2015	166.67	40.10	126.57	0
MW-4	3/21/2012	165.88	37.50	128.38	4.0
	6/28/2012	165.88	42.15	123.73	0.8
	8/13/2012	165.88	43.75	122.13	0
	8/31/2012	165.88	44.55	121.33	0
	10/1/2012	165.88	46.20	119.68	0
	11/19/2012	165.88	45.60	120.28	0
	1/14/2013	165.88	44.30	121.58	0
	2/28/2013	165.88	42.12	123.76	0
	3/26/2013	165.88	38.85	127.03	0
	4/23/2013	165.88	39.65	126.23	20.0
	6/25/2013	165.88	35.85	130.03	NS
	12/11/2013	165.88	46.05	119.83	NS
	1/15/2014	165.88	45.41	120.47	NS
	3/5/2014	165.88	43.31	122.57	0
	4/10/2014	165.88	38.21	127.67	0
	5/19/2014	165.88	34.18	131.70	0
	6/18/2014	165.88	34.52	131.36	0
	7/23/2014	165.88	37.45	128.43	0
	10/10/2014	165.88	44.53	121.35	0
	1/26/2015	165.88	42.90	122.98	0
	3/27/2015	165.88	38.82	127.06	0
	5/11/2015	165.88	37.76	128.12	0
MW-5	3/21/2012	166.70	39.70	127.00	22.6

Table 1 - Groundwater Gauging

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	GW Elevation (ft)	Detector Reading (ppm)
MW-5	6/28/2012	166.70	40.31	126.39	0.6
(Cont.)	8/13/2012	166.70	40.27	126.43	0.7
	8/31/2012	166.70	40.30	126.40	0
	10/1/2012	166.70	40.40	126.30	1.0
	11/19/2012	166.70	40.42	126.28	0
	1/14/2013	166.70	40.25	126.45	0
	2/28/2013	166.70	40.35	126.35	1.7
	3/26/2013	166.70	39.85	126.85	6.9
	4/23/2013	166.70	40.27	126.43	0
	6/25/2013	166.70	37.11	129.59	NS
	12/11/2013	166.70	40.65	126.05	NS
	1/15/2014	166.70	37.22	129.48	NS
	3/5/2014	166.70	40.11	126.59	0
	4/10/2014	166.70	39.41	127.29	0
	5/19/2014	166.70	34.98	131.72	0
	6/18/2014	166.70	35.42	131.28	0
	7/23/2014	166.70	38.44	128.26	0
	10/10/2014	166.70	40.55	126.15	0
	1/26/2015	166.70	39.01	127.69	0
	3/27/2015	166.70	34.77	131.93	0
	5/11/2015	166.70	38.76	127.94	0
MW-6	3/22/2012	166.14	36.85	129.29	0
	6/28/2012	166.14	41.41	124.73	0
	8/13/2012	166.14	41.11	125.03	0
	11/19/2012	166.14	47.15	118.99	0
	3/26/2013	166.14	39.65	126.49	0
	6/25/2013	166.14	36.61	129.53	NS
	12/11/2013	166.14	49.83	116.31	NS
	3/5/2014	166.14	41.53	124.61	0
	5/19/2014	166.14	34.71	131.43	0
	7/23/2014	166.14	36.50	129.64	0
	3/27/2015	166.14	39.22	126.92	0
MW-7	3/21/2012	171.49	39.30	132.19	0
	6/29/2012	171.49	42.18	129.31	0
	8/13/2012	171.49	46.97	124.52	0
	11/19/2012	171.49	47.80	123.69	0
	3/26/2013	171.49	44.98	126.51	0
	4/23/2013	171.49	42.73	128.76	NS
	6/25/2013	171.49	38.30	133.19	NS
	12/11/2013	171.49	47.27	124.22	NS
	3/5/2014	171.49	46.16	125.33	0
	5/19/2014	171.49	37.32	134.17	0
	7/23/2014	171.49	39.74	131.75	0
	3/27/2015	171.49	44.72	126.77	0

Table 1 - Groundwater Gauging

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	GW Elevation (ft)	Detector Reading (ppm)
MW-8A	3/21/2012	166.15	41.90	124.25	38.0
	6/28/2012	166.15	42.00	124.15	43.5
	8/13/2012	166.15	DRY		34.6
	8/31/2012	166.15	41.80	124.35	24.0
	10/1/2012	166.15	42.10	124.05	12.2
	11/19/2012	166.15	42.40	123.75	39.4
	1/14/2013	166.15	42.95	123.13	0
	2/28/2013	166.15	42.60	123.55	37.6
	3/26/2013	166.15	-		0.1
	4/23/2013	166.15	42.05	124.10	35.5
	6/25/2013	166.15	39.95	126.20	NS
	12/11/2013	166.15	41.80	124.35	NS
	1/15/2014	166.15	42.68	123.47	NS
	3/5/2014	166.15	42.63	123.52	0
	4/10/2014	166.15	39.67	126.48	0
	5/19/2014	166.15	42.83	123.32	0
	6/18/2014	166.15	37.12	129.03	0
	7/23/2014	166.15	42.05	124.10	0
	10/10/2014	166.15	DRY	NS	0
	3/27/2015	166.15	40.31	125.84	0
	5/11/2015	166.15	42.08	124.07	0
MW-8B	3/21/2012	166.08	39.13	126.95	14.6
	6/28/2012	166.08	42.55	123.53	5.1
	8/13/2012	166.08	45.30	120.78	0.7
	8/31/2012	166.08	46.40	119.68	0
	10/1/2012	166.08	49.40	116.68	0.1
	11/19/2012	166.08	48.45	117.63	0
	1/14/2013	166.08	47.07	119.01	0
	2/28/2013	166.08	44.00	122.08	0
	3/26/2013	166.08	40.32	125.76	4.6
	4/23/2013	166.08	40.08	126.00	30.2
	6/25/2013	166.08	37.20	128.88	NS
	12/11/2013	166.08	49.63	116.45	NS
	1/15/2014	166.08	49.63	116.45	NS
	3/5/2014	166.08	45.07	121.01	0
	4/10/2014	166.08	39.69	126.39	0
	5/19/2014	166.08	35.55	130.53	0
	6/18/2014	166.08	36.05	130.03	0
	7/23/2014	166.08	38.95	127.13	0
	10/10/2014	166.08	47.21	118.87	0
	3/27/2015	166.08	40.21	125.87	0
	5/11/2015	166.08	39.15	126.93	0
MW-10	3/21/2012	137.86	9.37	128.49	0
	6/29/2012	137.86	12.58	125.28	0

Table 1 - Groundwater Gauging

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	GW Elevation (ft)	Detector Reading (ppm)
MW-10	8/13/2012	137.86	15.38	122.48	0
(Cont.)	11/19/2012	137.86	18.00	119.86	0
	3/26/2013	137.86	9.90	127.96	0
	6/25/2013	137.86	8.05	129.81	NS
	12/11/2013	137.86	19.71	118.15	NS
	3/5/2014	137.86	9.33	128.53	0
	4/10/2014	137.86	9.33	128.53	0
	5/19/2014	137.86	5.75	132.11	0
	7/23/2014	137.86	9.87	127.99	0
	10/10/2014	137.86	18.12	119.74	0
	3/27/2015	137.86	9.55	128.31	0
	5/11/2015	137.86	9.92	127.94	0

Notes:

DRY = No water for sampling
NA = Not Available or not analyzed for that specific compound
NP = No Product Detected
NS = Not Sampled
ft = Feet
ppm = parts per million

Orangetown Shopping Center/Sparkle Cleaners
NYSDEC Site # C344066

Table 2 - General Chemistry Analytical Results

Monitoring Well	Date	Iron, Ferric (mg/l)	Iron, Ferrous (mg/l)	Iron, Total (mg/l)	Nitrate Nitrogen (mg/l)	Sulfate (mg/l)	Total Organic Carbon (mg/l)	Ethene (mg/l)
NY TOGS 1.1.1 GWQS		NA	NA	NA	NA	NA	NA	NA
MW-3	3/22/2012	NA	NA	NA	ND<0.0500 U	8.94	161	0.00628 B
	6/28/2012	NA	NA	NA	NA	NA	1,780	NA
	8/13/2012	NS	NS	NS	NS	NS	NS	NS
	8/31/2012	NS	NS	NS	NS	NS	NS	NS
	10/1/2012	NS	NS	NS	NS	NS	NS	NS
	11/19/2012	NS	NS	NS	NS	NS	NS	NS
	1/14/2013	NS	NS	NS	NS	NS	NS	NS
	2/28/2013	NS	NS	NS	NS	NS	NS	NS
	3/26/2013	5.60	41.6	47.2	NA	8.01	1520 B	ND<0.0025 U
	4/23/2013	NA	NA	NA	NA	NA	232 B	NA
	6/25/2013	6.50	24.4	30.9	NA	29.4	191	ND<0.0025 U
	12/11/2013	NS	NS	NS	NS	NS	NS	NS
	1/15/2014	NA	NA	NA	NA	NA	97.6	NA
	3/5/2014	NS	NS	NS	NS	NS	NS	NS
	4/10/2014	NA	NA	NA	NA	NA	271	NA
	5/19/2014	8.9	0.52	9.39	ND<0.11	ND<10	37.6	ND<0.00031
	6/18/2014	NA	NA	NA	NA	NA	1,660	NA
	7/24/2014	17.5	3.5	21.0	ND<0.10	ND<10	89.3	ND<0.00031
	10/10/2014	NS	NS	NS	NS	NS	NS	NS
	3/27/2015	102.0	ND<0.20	102	0.29	19.8	NS	ND<0.00031
	5/11/2015	36.0	0.52	36.5	ND<0.11	ND<20	NS	ND<0.00031
MW-4	3/21/2012	0.0560	ND<50.0 UJ	0.0560	0.993	24.9	1.16	ND<0.00250 U
	6/28/2012	NA	NA	NA	NA	NA	4.13 B	NA
	8/13/2012	NA	7.01	6.97	NA	28.9	NA	ND<0.005 U
	8/31/2012	NA	NA	NA	NA	NA	5.87	NA
	10/1/2012	NS	NS	NS	NS	NS	NS	NS
	11/19/2012	NA	NA	NA	NA	NA	NA	ND<0.005 U
	1/14/2013	NA	NA	NA	NA	NA	10.9	NA
	2/28/2013	NA	NA	NA	NA	NA	3.8	NA
	3/26/2013	0.300	10.6	10.3	NA	12.2	399 B	0.0083
	4/23/2013	NA	NA	NA	NA	NA	149	NA
	6/25/2013	1.70	12.1	13.8	NA	ND<0.6 U	103	0.00609
	12/11/2013	NS	NS	NS	NS	NS	NS	NS
	1/15/2014	NA	NA	NA	NA	NA	101	NA
	3/5/2014	ND<0.100 U	NA	4.03 B	NA	27.4	5.31	ND<0.00500 U
	4/10/2014	NA	NA	NA	NA	NA	18.1	NA
	5/19/2014	4.1	ND<0.20	4.23	ND<0.11	10.6	23.7	0.00043
	6/18/2014	NA	NA	NA	NA	NA	287	NA
	7/24/2014	3.4	2.41	5.81	ND<0.10	ND<10	49.5	ND<0.00031
	10/10/2014	NA	NA	NA	ND<0.10	ND<10	67.4	ND<0.00031
	1/26/2015	NA	NA	NA	NA	NA	14.9	NA
	3/27/2015	3.3	0.50	3.83	ND<0.10	ND<10	13.3	ND<0.00031
	5/11/2015	3.4	ND<0.20	3.60	0.23	20.9	12.0	ND<0.00031
MW-5	3/21/2012	2.27	0.253 UJ	2.52	ND<0.0500 U	7.65	3.92	0.0929
	6/28/2012	NA	NA	NA	NA	NA	3.5 B	NA
	8/13/2012	NA	3.37	4.1	NA	10.1	NA	0.0766
	8/31/2012	NA	NA	NA	NA	NA	39.5	NA
	10/1/2012	NA	NA	NA	NA	NA	66.1	NA
	11/19/2012	0.430	6.74	7.17	NA	26.5	377	0.192

Table 2 - General Chemistry Analytical Results

Monitoring Well	Date	Iron, Ferric (mg/l)	Iron, Ferrous (mg/l)	Iron, Total (mg/l)	Nitrate Nitrogen (mg/l)	Sulfate (mg/l)	Total Organic Carbon (mg/l)	Ethene (mg/l)
NY TOGS 1.1.1 GWQS		NA	NA	NA	NA	NA	NA	NA
MW-5	1/14/2013	NA	NA	NA	NA	NA	105	NA
(Cont.)	2/28/2013	NA	NA	NA	NA	NA	86.6	NA
	3/26/2013	4.10	12.5	16.6	NA	15.9	104 B	0.00712
	4/23/2013	NA	NA	NA	NA	NA	129 B	NA
	6/25/2013	0.900	9.03	8.13	NA	1.47	165	0.00541
	12/11/2013	ND<0.100 U	NA	3.75	NA	12.8	213	NA
	1/15/2014	NA	NA	NA	NA	NA	480	NA
	3/5/2014	5.80	NA	16.5 B	NA	1.69	NA	0.00637
	4/10/2014	NA	NA	NA	NA	NA	121	NA
	5/19/2014	13.6	4.4	18	ND<0.15	14.0	319	0.00079
	6/18/2014	NA	NA	NA	NA	NA	293	NA
	7/24/2014	13.7	2	15.70	ND<0.10	ND<10	184	ND<0.00030
	10/10/2014	NA	NA	NA	ND<0.10	12.0	NA	0.0013
	10/30/2014	NA	NA	NA	NA	NA	140	0.0013
	1/26/2015	NA	NA	NA	NA	NA	295	NA
	3/27/2015	31.0	1.9	32.9	ND<0.10	94.6	250	0.00022
	5/11/2015	NS	5.8	NS	ND<0.11	ND<200	251	ND<0.00031
MW-8A	3/21/2012	NS	NS	NS	NS	NS	NS	NS
	6/28/2012	NS	NS	NS	NS	NS	NS	NS
	8/13/2012	NS	NS	NS	NS	NS	NS	NS
	8/31/2012	NS	NS	NS	NS	NS	NS	NS
	10/1/2012	NA	NA	NA	NA	NA	2.75	NA
	11/19/2012	NS	NS	NS	NS	NS	NS	NS
	1/14/2013	NS	NS	NS	NS	NS	NS	NS
	2/28/2013	NS	NS	NS	NS	NS	NS	NS
	3/26/2013	NS	NS	NS	NS	NS	NS	NS
	4/23/2013	NS	NS	NS	NS	NS	NS	NS
	6/25/2013	NS	NS	NS	NS	NS	NS	NS
	12/11/2013	NS	NS	NS	NS	NS	NS	NS
	1/15/2014	NS	NS	NS	NS	NS	NS	NS
	3/5/2014	NS	NS	NS	NS	NS	NS	NS
	4/10/2014	NA	NA	NA	NA	NA	12.0	NA
	5/19/2014	NS	NS	NS	NS	NS	NS	NS
	7/24/2014	NS	NS	NS	NS	NS	NS	NS
	10/10/2014	NS	NS	NS	NS	NS	NS	NS
MW-8B	3/21/2012	ND<0.0500 U	0.113 UJ	0.0733	0.91	17.5	1.39	ND<0.00250 U
	6/28/2012	NA	NA	NA	NA	NA	5.51	NA
	8/13/2012	NA	3.92	4.27	NA	20.7	NA	0.00978
	8/31/2012	NA	NA	NA	NA	NA	15.1	NA
	10/1/2012	NA	NA	NA	NA	NA	8.45	NA
	11/19/2012	NA	NA	NA	NA	NA	7.37	0.0204
	1/14/2013	NA	NA	NA	NA	NA	26.7	NA
	2/28/2013	NA	NA	NA	NA	NA	37.9	NA
	3/26/2013	1.44	5.91	7.35	NA	1.48	19.3 B	ND<0.0025 U
	4/23/2013	NA	NA	NA	NA	NA	17.9 B	NA
	6/25/2013	ND<0.0800 U	5.74	5.73	NA	1.73	11.1	0.0317
	12/11/2013	NS	NS	NS	NS	NS	NS	NS
	1/15/2014	NA	NA	NA	NA	NA	57.3	NA
	3/5/2014	ND<0.100 U	NA	9.28 B	NA	5.68	19.0	ND<0.00500 U

Table 2 - General Chemistry Analytical Results

Monitoring Well	Date	Iron, Ferric (mg/l)	Iron, Ferrous (mg/l)	Iron, Total (mg/l)	Nitrate Nitrogen (mg/l)	Sulfate (mg/l)	Total Organic Carbon (mg/l)	Ethene (mg/l)
NY TOGS 1.1.1 GWQS		NA	NA	NA	NA	NA	NA	NA
MW-8B	4/10/2014	NA	NA	NA	NA	NA	13.6	NA
(Cont.)	5/19/2014	NA	0.32	NA	NA	NA	NA	0.00020
	6/18/2014	NA	NA	NA	NA	NA	17.1	NA
	7/24/2014	2.4	0.2	2.6	ND<0.10	11.8	13.1	ND<0.00031
	10/10/2014	NA	NA	NA	ND<0.10	15.5	NA	0.0022
	3/27/2015	NA	NA	NA	ND<0.10	15.5	NA	0.00026
	5/11/2015	7.4	0.82	8.22	ND<0.11	ND<20	NA	0.00067
MW-10	3/21/2012	0.0631	ND<50.0 UJ	0.0631	2.13	27.6	0.935 UJ	ND<0.00250 U
	6/29/2012	NS	NS	NS	NS	NS	NS	NS
	8/13/2012	NA	ND<0.100 U	0.139	NA	24.6	1.56	ND<0.005 U
	11/19/2012	5.18	0.610	5.79	NA	24.3	3.39	ND<0.005 U
	3/26/2013	0.291	ND<0.0800 U	0.291	NA	20.6	1.26 B	ND<0.0025 U
	6/25/2013	0.704	ND<0.0800 U	0.704	NA	24.5	1.13	ND<0.0025 U
	12/11/2013	NS	NS	NS	NS	NS	NS	NS
	3/5/2014	NS	NS	NS	NS	NS	NS	NS
	4/10/2014	NS	NS	NS	NS	NS	NS	NS
	5/19/2014	NS	NS	NS	NS	NS	NS	NS
	7/24/2014	NS	NS	NS	NS	NS	NS	NS
	10/10/2014	NS	NS	NS	NS	NS	NS	NS

Notes:

mg/L = Milligrams per liter (parts per million)
µg/L = Micrograms per liter (parts per billion)
NA = Not available/not analyzed for that specific compound
ND = Not detected (# is method detection limit)
UJ = Reporting limit raised due to sample matrix effects
UJ* = Holding time for this test is immediate
HF = Field parameter with holding time of 15 minutes
B1 = Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.
B = Analyte was detected in associated method blank
NYSDEC = New York State Department of Conservation
TOGS = Technical and Operational Guidance Series 1.1.1
GWQS = Groundwater Quality Standards or Guidance Values

Table 3 - General Groundwater Chemistry

Monitoring Well	Date	pH	Temperature (°C)	Specific Conductivity (uS/cm or umhos/cm)	Dissolved Oxygen (mg/L)	Oxygen Reduction Potential (mV)	Turbidity (NTUs)
MW-3	03/22/2012	7.36	16.59	3,090	1.42	-39.0	309
	06/28/2012	6.25	21.29	2,370	0.48	-101.2	149.6
	03/26/2013	6.07	13.13	3,551	2.10	99.1	406.0
	04/23/2013	6.58	13.88	1,925	1.30	-88.4	NA
	06/25/2013	6.37	19.73	2,051	0.42	-88.8	397.4
	08/09/2013	6.33	17.72	2,252	1.13	-77.3	NA
	09/19/2013	5.77	15.77	3,462	0.45	-70.9	68.9
	01/15/2014	6.41	14.53	2,422	0.62	-73.3	NA
	05/19/2014	6.13	18.58	2,171	5.47	-11.9	21.2
	06/18/2014	6.51	17.20	3,874	0.96	-45.5	NA
	07/24/2014	6.27	15.76	2,047	0.54	441.4	41.4
	10/10/2014	NA	NA	NA	NA	NA	NA
	03/27/2015	7.67	10.49	1,405	3.69	-269.8	NA
	05/11/2015	6.56	15.59	1,951	0.10	-173.2	NA
MW-4	03/21/2012	7.31	15.25	1,400	1.09	147.0	6.2
	06/28/2012	6.69	19.46	764	3.61	47.9	28.1
	08/13/2012	6.59	17.75	1,621	6.21	9.1	152.1
	08/31/2012	6.07	17.45	1,450	1.08	-21.4	NA
	11/19/2012	6.32	11.63	1,126	1.59	70.6	85.28
	01/14/2013	6.36	14.62	1,486	1.75	-56.9	NA
	02/28/2013	6.51	13.92	2,014	1.45	-35.1	NA
	03/26/2013	5.90	14.32	2,212	2.16	-49.0	64.7
	04/23/2013	6.54	13.31	1,685	2.02	-24.1	NA
	06/25/2013	6.51	18.03	1,982	0.82	-70.1	55.5
	08/09/2013	6.18	17.27	1,872	1.43	-39.3	NA
	09/19/2013	6.22	14.79	2,101	0.55	-72.5	143.3
	01/15/2014	6.11	14.74	10,411	0.91	-26.4	NA
	03/05/2014	6.01	12.86	3,755	1.70	-52.2	22.4
	05/19/2014	6.28	18.76	13	13.01	-54.8	21.8
	06/18/2014	7.23	17.09	2,770	1.73	-29.6	NA
	07/24/2014	6.32	14.92	2,284	0.89	-155.1	9.47
	10/10/2014	6.64	19.02	2,345	1.50	-34.8	20.30
	01/26/2015	6.49	12.42	5,329	2.80	-118.7	NA
	03/27/2015	6.78	12.84	2,480	0.82	-213.0	NA
	05/11/2015	6.60	17.24	2,328	2.78	-142.2	NA
MW-5	03/21/2012	7.37	16.16	3,900	3.06	-30.0	0.0
	06/28/2012	6.88	22.10	1,399	1.74	28.6	29.6
	08/13/2012	6.43	19.91	2,188	1.54	-17.6	88.0
	08/31/2012	6.25	20.12	1,580	2.22	-22.5	NA
	10/01/2012	6.19	17.02	2,433	1.36	3.8	NA
	11/19/2012	6.60	14.24	13,900	1.27	70.4	1025
	01/14/2013	6.38	15.36	8,535	0.95	-103.6	NA
	02/28/2013	6.67	14.21	5,230	2.06	-63.4	NA
	03/26/2013	6.91	13.16	6,468	1.02	-27.6	171.6
	04/23/2013	6.85	14.40	6,231	1.56	-71.2	NA
	06/25/2013	6.82	20.21	8,587	0.82	-87.2	77.7
	08/09/2013	6.75	17.51	7,434	1.88	-71.7	NA
	09/19/2013	6.56	16.06	7,413	0.94	-118.8	87.9
	10/14/2013	6.51	15.93	3,671	3.55	-66.8	104.3
	12/11/2013	6.59	11.53	8,003	5.48	-135.6	52.0

Table 3 - General Groundwater Chemistry

Monitoring Well	Date	pH	Temperature (°C)	Specific Conductivity (uS/cm or umhos/cm)	Dissolved Oxygen (mg/L)	Oxygen Reduction Potential (mV)	Turbidity (NTUs)
MW-5	01/15/2014	6.63	12.97	19,214	1.45	-123.4	NA
(Cont.)	03/05/2014	6.61	11.20	14,120	0.21	-73.3	203.7
	04/10/2014	6.54	15.05	10,980	1.59	-65.5	NA
	05/19/2014	6.76	16.82	10,036	0.96	-41.4	43.0
	06/18/2014	7.94	17.14	14,984	1.00	-90.4	NA
	07/24/2014	6.72	15.85	1,271	0.51	-113.5	35.3
	10/10/2014	6.82	17.40	1,477	0.50	-66.9	147.6
	01/26/2015	6.59	9.46	17,539	1.30	-133.8	NA
	03/27/2015	7.17	12.35	15,077	0.51	-211.1	NA
	05/11/2015	6.67	24.60	16,764	0.41	-156.9	NA
MW-6	03/22/2012	7.49	16.43	1,130	2.62	-13.0	221.0
	03/26/2013	6.59	16.42	1,463	3.55	-27.8	59.1
	03/05/2014	6.40	13.59	11,770	2.50	-23.0	226.7
	03/27/2015	7.39	12.71	5,356	0.65	-209.6	NA
MW-7	03/21/2012	8.37	14.25	2,700	1.14	119.0	17.0
	06/29/2012	6.89	17.71	2,960	4.78	159.8	151.6
	08/13/2012	6.17	20.76	2,380	4.39	80.1	250.1
	03/26/2013	6.69	13.98	11,320	3.21	171.2	125.6
	06/25/2013	6.02	17.49	2,625	4.45	292.5	37.3
	09/19/2013	6.95	18.24	10,986	2.07	191.2	37.0
	10/14/2013	7.02	17.13	2,533	1.26	130.6	43.9
	12/11/2013	6.80	9.60	5.129	4.94	63.8	95.6
	03/05/2014	6.24	12.15	4,919	2.02	104.7	29.8
	05/19/2014	6.76	16.48	4,881	3.43	145.4	57.9
	07/23/2014	7.07	18.62	2,688	3.91	55.7	35.3
	03/27/2015	6.60	13.71	44,406	0.50	-205.4	NA
MW-8A	06/28/2012	6.93	23.61	33	7.43	-43.1	275.6
	10/01/2012	6.33	19.60	1,323	1.52	-4.3	NA
	06/25/2013	6.02	23.16	1,535	4.44	-20.8	326.1
	12/11/2013	6.70	11.55	1,531	9.49	-48.9	905.0
	10/10/2014	NA	NA	NA	NA	NA	NA
	03/27/2015	7.09	14.25	2,376	0.98	-165.7	NA
	05/11/2015	NA	NA	NA	NA	NA	NA
MW-8B	03/21/2012	6.80	17.09	1,580	6.74	-12.0	216.0
	06/28/2012	6.82	20.11	1,196	2.75	-3.9	30.4
	08/13/2012	6.51	19.15	791	1.79	59.2	105.4
	08/31/2012	6.30	21.40	535	3.08	46.7	NA
	10/01/2012	6.46	17.43	1,122	1.66	-21.7	NA
	11/19/2012	6.83	16.96	1,350	0.85	75.7	1,311
	01/14/2013	6.87	14.33	1,501	1.95	-50.7	NA
	02/28/2013	6.98	15.73	1,592	2.21	-74.3	NA
	03/26/2013	6.70	13.22	3,372	0.52	-80.1	75.1
	04/23/2013	7.16	12.33	1,865	3.15	-74.2	NA
	06/25/2013	6.02	20.37	1,808	3.24	-4.0	20.2
	08/09/2013	6.90	19.41	1,577	2.75	-68.9	NA
	09/19/2013	6.99	17.89	1,537	1.85	-70.1	1.85
	01/15/2014	6.44	12.22	1,865	1.30	-3.1	NA
	03/05/2014	6.47	12.62	3,725	2.64	-24.4	57.50
	05/19/2014	6.51	19.90	1,252	2.68	-29.5	15.70
	06/18/2014	7.73	18.93	2,728	1.95	2.9	NA

Table 3 - General Groundwater Chemistry

Monitoring Well	Date	pH	Temperature (°C)	Specific Conductivity (uS/cm or umhos/cm)	Dissolved Oxygen (mg/L)	Oxygen Reduction Potential (mV)	Turbidity (NTUs)
MW-8B	07/24/2014	6.75	20.09	2,227	2.98	-72.8	23.00
(Cont.)	10/10/2014	7.24	18.60	110	3.90	-35.5	211.30
	03/27/2015	7.00	13.24	3,702	2.89	-149.2	NA
	05/11/2015	6.85	19.72	4,042	2.29	-98.0	NA
MW-10	03/21/2012	7.36	12.98	1,310	4.56	150.0	5.2
	06/29/2012	6.73	16.09	1,338	11.37	138.7	159.6
	08/13/2012	6.29	15.29	1,413	7.11	56.1	129.6
	11/19/2012	6.80	12.51	1,009	7.23	102.7	NA
	03/26/2013	6.89	11.57	521	8.86	219.7	79.2
	06/25/2013	6.17	17.89	655	9.27	205.3	26.4
	09/19/2013	6.86	15.64	1,093	5.75	211.7	106.7
	10/14/2013	7.01	15.13	1,349	7.97	37.2	37.2
	12/11/2013	6.85	12.52	555	6.32	-45.5	7.5
	04/10/2014	6.16	12.48	424	8.29	23.1	NA
	05/19/2014	6.35	12.73	529	7.98	169.4	53.5
	07/23/2014	6.65	16.76	1,190	5.06	122.1	55.1
	10/10/2014	6.64	15.67	451	6.74	150.0	41.0
	03/27/2015	7.23	9.35	287	7.21	-133.1	NA
	05/11/2015	6.51	15.96	1,593	6.66	-23.2	NA

Notes:

mg/L = Milligrams per Liter
uS/cm = Micro-Siemens per centimeter
umhos/cm = Micro-mhos/centimeter
mV = Millivolts
Spec.Cond. = Specific conductance
°C = Degrees Celsius
pH = Potential of Hydrogen

Table 4 - Constituents of Concern Table

Monitoring Well	Date	Tetrachloro-ethene (ug/l)	Trichloro-ethene (ug/l)	cis-1,2-Dichloro-ethene (ug/l)	trans-1,2-Dichloro-ethene (ug/l)	1,1-Dichloro-ethene (ug/l)	Vinyl Chloride (ug/l)	Ethene (ug/l)
NY TOGS 1.1.1 GWQS		5	5	5	5	5	2	NA
MW-3	3/22/2012	ND<5.00 UJ	ND<5.00 UJ	60.1	ND<5.00 UJ	ND<5.00 UJ	23.4	6.28 B
	6/28/2012	ND<5.00 U	ND<5.00 U	143	ND<5.00 U	ND<5.00 U	47.5	NA
	8/13/2012	NS	NS	NS	NS	NS	NS	NS
	8/31/2012	NS	NS	NS	NS	NS	NS	NS
	10/1/2012	NS	NS	NS	NS	NS	NS	NS
	11/19/2012	NS	NS	NS	NS	NS	NS	NS
	1/14/2013	NS	NS	NS	NS	NS	NS	NS
	2/28/2013	NS	NS	NS	NS	NS	NS	NS
	3/26/2013	ND<0.250 U	0.327 J	2.62	0.269 J	ND<0.250 U	2.26	ND<2.5 U
	4/23/2013	NS	NS	NS	NS	NS	NS	NS
	6/25/2013	ND<0.250 U	ND<0.200 U	7.02	0.617 J	ND<0.250 U	3.43	ND<2.5 U
	12/11/2013	NS	NS	NS	NS	NS	NS	NS
	1/15/2014	NS	NS	NS	NS	NS	NS	NS
	3/5/2014	NS	NS	NS	NS	NS	NS	NS
	4/10/2014	NS	NS	NS	NS	NS	NS	NS
	5/19/2014	ND<1.0	ND<1.0	12.6	ND<1.0	ND<1.0	2.2	ND<0.31
	7/24/2014	ND<1.0	ND<1.0	1.2	ND<1.0	ND<1.0	ND<1.0	ND<0.31
	10/10/2014	NS	NS	NS	NS	NS	NS	NS
	3/27/2015	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<0.31
	5/11/2015	ND<1.0	ND<1.0	8.6	ND<1.0	ND<1.0	2.9	ND<0.31
MW-4	3/21/2012	ND<0.500 U	5.28	276	0.680 J	ND<0.500 U	1.59	ND<2.50 U
	6/28/2012	ND<0.500 U	7.71	495	4.29	ND<0.500 U	21.9	NA
	8/13/2012	ND<1.00 U	4.51	197	1.16	ND<1.00 U	8.66	ND<5 U
	8/31/2012	NS	NS	NS	NS	NS	NS	NS
	10/1/2012	NS	NS	NS	NS	NS	NS	NS
	11/19/2012	ND<1.00 U	3.48	200	ND<1.00 U	ND<1.00 U	13.1	ND<5 U
	1/14/2013	NS	NS	NS	NS	NS	NS	NS
	2/28/2013	NS	NS	NS	NS	NS	NS	NS
	3/26/2013	ND<0.250 U	1.20	39.8	0.634 J	ND<0.250 U	57.7	8.3
	4/23/2013	NS	NS	NS	NS	NS	NS	NS
	6/25/2013	ND<0.250 U	ND<0.200 U	3.88	0.288 J	ND<0.250 U	2.84	6.09
	12/11/2013	NS	NS	NS	NS	NS	NS	NS
	1/15/2014	NS	NS	NS	NS	NS	NS	NS
	3/5/2014	ND<1.00 U	ND<1.00 U	4.25	0.336 J	ND<1.00 U	5.03	ND<5.00 U
	4/10/2014	NS	NS	NS	NS	NS	NS	NS
	5/19/2014	ND<1.0	3.4	104	ND<1.0	ND<1.0	35.1	0.43
	7/24/2014	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	1.2	ND<0.31
	10/10/2014	ND<1.0	ND<1.0	2.3	ND<1.0	ND<1.0	1.8	ND<0.31
	3/27/2015	ND<1.0	ND<1.0	3.4	ND<1.0	ND<1.0	5.8	ND<0.31
	5/11/2015	ND<1.0	ND<1.0	2.1	ND<1.0	ND<1.0	1.7	ND<0.31
MW-5	3/21/2012	ND<0.500 U	3.86	12,500	195	1.42	1,490	92.9
	6/28/2012	ND<0.500 U	7.93	9,000	55.7	1.32	1,100	NA
	8/13/2012	ND<1.00 U	28.4	7,410	145	1.02	928	76.6
	8/31/2012	NS	NS	NS	NS	NS	NS	NS
	10/1/2012	NS	NS	NS	NS	NS	NS	NS
	11/19/2012	ND<1.00 U	17.8	1,630	73.6	ND<1.00 U	489	192
	1/14/2013	NS	NS	NS	NS	NS	NS	NS

Table 4 - Constituents of Concern Table

Monitoring Well	Date	Tetrachloro-ethene (ug/l)	Trichloro-ethene (ug/l)	cis-1,2-Dichloro-ethene (ug/l)	trans-1,2-Dichloro-ethene (ug/l)	1,1-Dichloro-ethene (ug/l)	Vinyl Chloride (ug/l)	Ethene (ug/l)
NY TOGS 1.1.1 GWQS		5	5	5	5	5	2	NA
MW-5	2/28/2013	NS	NS	NS	NS	NS	NS	NS
(Cont.)	3/26/2013	2.17	8.19	389	3.40	1.29	30.9	7.12
	4/23/2013	NS	NS	NS	NS	NS	NS	NS
	6/25/2013	ND<2.50 U	16.6	972	17.0	ND<2.50 U	60.0	5.41
	12/11/2013	3.15 J	17.7	1,290	48.0	ND<10.0 U	302	NA
	1/15/2014	NS	NS	NS	NS	NS	NS	NS
	3/5/2014	3.49 J	3.45 J	142	3.15 J	ND<10.0 U	19.0	6.37
	4/10/2014	NS	NS	NS	NS	NS	NS	NS
	5/19/2014	2.4	9.2	598	3.8	ND<1.0	33.0	0.79
	7/24/2014	ND<5.0	8.7	575	ND<5.0	ND<5.0	39.6	3.00
	10/10/2014	ND<10	ND<10	1,690	ND<10	ND<10	108	1.3
	3/27/2015	2.8	4.8	247	1.4	ND<1.0	13	0.22
	5/11/2015	2.9	7.0	458	3.7	ND<1.0	40.9	ND<0.31
MW-8A	3/21/2012	NS	NS	NS	NS	NS	NS	NS
	6/28/2012	1.20	46.2	786	8.66	ND<0.500 U	29.4	NA
	8/13/2012	NS	NS	NS	NS	NS	NS	NS
	8/31/2012	NS	NS	NS	NS	NS	NS	NS
	10/1/2012	NS	NS	NS	NS	NS	NS	NS
	11/19/2012	NS	NS	NS	NS	NS	NS	NS
	1/14/2013	NS	NS	NS	NS	NS	NS	NS
	2/28/2013	NS	NS	NS	NS	NS	NS	NS
	3/26/2013	NS	NS	NS	NS	NS	NS	NS
	4/23/2013	NS	NS	NS	NS	NS	NS	NS
	6/25/2013	ND<0.250 U	14.8	358	4.17	ND<0.250 U	59.3	NA
	12/11/2013	ND<1.00 U	ND<1.00 U	7.70	0.300 J	ND<1.00 U	0.665 J	NA
	1/15/2014	NS	NS	NS	NS	NS	NS	NS
	3/5/2014	NS	NS	NS	NS	NS	NS	NS
	4/10/2014	NS	NS	NS	NS	NS	NS	NS
	5/19/2014	NS	NS	NS	NS	NS	NS	NS
	7/24/2014	NS	NS	NS	NS	NS	NS	NS
	10/10/2014	NS	NS	NS	NS	NS	NS	NS
	3/27/2015	ND<1.0	3.4	17.4	ND<1.0	ND<1.0	ND<1.0	NS
	3/27/2015	NS	NS	NS	NS	NS	NS	NS
MW-8B	3/21/2012	ND<0.500 U	9.02	387	1.49	ND<0.500 UJ	26.0 UJ	ND<2.50 U
	6/28/2012	ND<0.500 U	6.40	331	2.28	ND<0.500 U	1.39	NA
	8/13/2012	ND<1.00 U	6.29	265	1.16	ND<1.00 U	8.60	9.78
	8/31/2012	NS	NS	NS	NS	NS	NS	NS
	10/1/2012	NS	NS	NS	NS	NS	NS	NS
	11/19/2012	ND<1.00 U	11.7	786	23.5	ND<1.00 U	43.6	20.4
	1/14/2013	NS	NS	NS	NS	NS	NS	NS
	2/28/2013	NS	NS	NS	NS	NS	NS	NS
	3/26/2013	ND<0.250 U	0.479 J	6.75	0.725 J	ND<0.250 U	3.06	ND<2.5 U
	4/23/2013	NS	NS	NS	NS	NS	NS	NS
	6/25/2013	ND<0.250 U	0.811 J	36.6	1.61	ND<0.250 U	93.9	31.7
	12/11/2013	NS	NS	NS	NS	NS	NS	NS
	1/15/2014	NS	NS	NS	NS	NS	NS	NS
	3/5/2014	ND<1.00 U	ND<1.00 U	2.55	0.359 J	ND<1.00 U	2.24	ND<5.00 U

Table 4 - Constituents of Concern Table

Monitoring Well	Date	Tetrachloro-ethene (ug/l)	Trichloro-ethene (ug/l)	cis-1,2-Dichloro-ethene (ug/l)	trans-1,2-Dichloro-ethene (ug/l)	1,1-Dichloro-ethene (ug/l)	Vinyl Chloride (ug/l)	Ethene (ug/l)
NY TOGS 1.1.1 GWQS		5	5	5	5	5	2	NA
MW-8B	4/10/2014	NS	NS	NS	NS	NS	NS	NS
(Cont.)	5/19/2014	ND<1.0	ND<1.0	3.6	ND<1.0	ND<1.0	4.5	0.20
	7/24/2014	ND<1.0	ND<1.0	4.0	ND<1.0	ND<1.0	3.3	ND<0.31
	10/10/2014	ND<1.0	ND<1.0	234	1.7	ND<1.0	121	2.2
	3/27/2015	ND<1.0	ND<1.0	14.2	ND<1.0	ND<1.0	1.2	0.26
	5/11/2015	ND<1.0	ND<1.0	10.1	ND<1.0	ND<1.0	23.3	0.67
MW-10	3/21/2012	ND<0.500 U	1.41	74.8	0.780 J	ND<0.500 U	ND<0.500 U	ND<2.50 U
	6/29/2012	ND<0.500 U	ND<0.500 U	21.1	ND<0.500 U	ND<0.500 U	ND<0.500 U	NA
	8/13/2012	ND<1.00 U	ND<1.00 U	17.2	ND<1.00 U	ND<1.00 U	ND<1.00 U	ND<5 U
	11/19/2012	ND<1.00 U	ND<1.00 U	1.84	ND<1.00 U	ND<1.00 U	ND<1.00 U	ND<5 U
	3/26/2013	ND<0.250 U	ND<0.200 U	1.16	ND<0.230 U	ND<0.250 U	ND<0.180 U	ND<2.5 U
	6/25/2013	ND<0.250 U	ND<0.200 U	0.798 J	ND<0.230 U	ND<0.250 U	ND<0.180 U	ND<2.5 U
	12/11/2013	ND<1.00 U	ND<1.00 U	0.667 J	ND<1.00 U	ND<1.00 U	ND<1.00 U	NA
	3/5/2014	NS	NS	NS	NS	NS	NS	NS
	4/10/2014	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	NA
	5/19/2014	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	NA
	7/23/2014	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	NA
	10/10/2014	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	NA
	3/27/2015	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	NS
	5/11/2015	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	NS

Notes:

µg/L = Micrograms/liter
BDL = Below Detection Limit
DRY = No water for sampling
GWQS = Groundwater Quality Standards
NA = Not Available or not analyzed for that specific compound
ND = Not detected (# is method detection limit)
TOGS = Technical and Operational Guidance Series 1.1.1

Orangetown Shopping Center/Sparkle Cleaners
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Table 5 - Polychlorinated Biphenyls (EPA Method 8082) Analytical Results

Monitoring Well	Date	Aroclor 1016 (ug/l)	Aroclor 1221 (ug/l)	Aroclor 1232 (ug/l)	Aroclor 1242 (ug/l)	Aroclor 1248 (ug/l)	Aroclor 1254 (ug/l)	Aroclor 1260 (ug/l)
NY TOGS 1.1.1 GWQS		0.09	0.09	0.09	0.09	0.09	0.09	0.09
MW-5	3/21/2012	ND<0.25 U	ND<0.25 U	ND<0.25 U	ND<0.25 U	ND<0.25 U	ND<0.25 U	ND<0.25 U
	3/26/2013	ND<3.06 U	ND<16.3 U	ND<4.38 U	ND<4 U	431	ND<0.438 U	ND<0.75 U
	4/23/2013	ND<0.0485 U	ND<0.257 U	ND<0.0693 U	ND<0.0634 U	ND<0.0683 U	ND<0.00693 U	ND<0.0119 U
	3/27/2015	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
MW-6	3/22/2012	ND<0.24 U	ND<0.24 U	ND<0.24 U	ND<0.24 U	ND<0.24 U	ND<0.24 U	ND<0.24 U
	3/26/2013	ND<0.0458 U	ND<0.243 U	ND<0.0654 U	ND<0.0598 U	ND<0.0645 U	ND<0.00654 U	ND<0.0112 U
	3/5/2014	ND<0.521 U	ND<0.521 U	ND<0.521 U	ND<0.521 U	ND<0.521 U	ND<0.521 U	ND<0.521 U
	3/27/2015	ND<0.050	ND<0.050	ND<0.050	0.35	ND<0.050	ND<0.050	ND<0.050
MW-7	3/21/2012	ND<0.243 U	ND<0.243 U	ND<0.243 U	ND<0.243 U	ND<0.243 U	ND<0.243 U	ND<0.243 U
	4/23/2013	ND<0.048 U	ND<0.255 U	ND<0.0686 U	ND<0.0627 U	0.528	ND<0.00686 U	ND<0.0118 U
	6/25/2013	ND<0.0485 U	ND<0.257 U	ND<0.0693 U	0.22 J	ND<0.0683 U	ND<0.00693 U	ND<0.0119 U
	3/5/2014	ND<0.446 U	ND<0.446 U	ND<0.446 U	ND<0.446 U	ND<0.446 U	ND<0.446 U	ND<0.446 U
	3/27/2015	ND<0.042	ND<0.042	ND<0.042	ND<0.042	ND<0.042	ND<0.042	ND<0.042
MW-10	3/21/2012	ND<0.243 U	ND<0.243 U	ND<0.243 U	2.99	ND<0.243 U	ND<0.243 U	ND<0.243 U
	6/29/2012	ND<0.263 U	ND<0.263 U	ND<0.263 U	ND<0.263 U	ND<0.263 U	ND<0.263 U	ND<0.263 U
	3/26/2013	ND<0.0458 U	ND<0.243 U	ND<0.0654 U	ND<0.0598 U	ND<0.0645 U	ND<0.00654 U	ND<0.0112 U
	3/27/2015	ND<0.053	ND<0.053	ND<0.053	ND<0.053	ND<0.053	ND<0.053	ND<0.053

Notes

µg/L = Micrograms per liter (parts per billion)
ND = Not detected (# is method detection limit)
NYSDEC = New York State Department of Conservation
TOGS = Technical and Operational Guidance Series 1.1.1
GWQS = Groundwater Quality Standards or Guidance Values

Orangetown Shopping Center/Sparkle Cleaner
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Table 6a - Summary of Sub-Slab Depressurization System (SSDS) Performance
Blowers Summary Performance

Blowers	Vacuum (in WC) 3/27/12	Vacuum (in WC) 6/28/12	Vacuum (in WC) 9/11/12	Vacuum (in WC) 9/20/12	Vacuum (in WC) 11/07/12	Vacuum (in WC) 01/14/13	Vacuum (in WC) 06/13/13	Vacuum (in WC) 09/12/13	Vacuum (in WC) 12/18/13	Vacuum (in WC) 3/28/14	Vacuum (in WC) 6/28/14	Vacuum (in WC) 9/24/14	Vacuum (in WC) 12/17/14	Vacuum (in WC) 3/16/15	Vacuum (in WC) 6/16/15
Deli Spot															
SSD-B1	2.550	2.390	N/A	2.491	2.700	2.681	2.180	2.921	2.773	2.640	2.519	2.532	2.360	2.621	2.618
SSD-B2	1.380	1.334	0.019	0.101	1.550	1.390	0.918	1.327	Offline	Offline	0.090	0.960	0.246	1.265	1.000
SSD-B3	1.830	1.681	1.758	1.845	1.860	1.385	1.270	1.698	Offline	Offline	0.090	1.680	1.763	1.765	1.515
Sparkle Cleaners															
SSD-B4	1.840	1.871	2.891	2.839	2.450	2.626	2.345	2.208	2.608	2.666	2.242	2.320	2.250	2.494	2.379
SSD-B5	0.074	1.310	0.025	0.048	0.550	0.753	0.938	0.775	Offline	Offline	0.022	1.783	1.210	1.207	1.245
SSD-B6	0.025	1.219	2.340	2.350	0.650	0.637	0.659	0.670	Offline	Offline	0.702	0.560	1.691	0.851	1.665
New China															
SSD-B7	0.075	1.013	0.017	0.021	1.570	0.431	1.075	0.775	Offline	Offline	0.581	0.645	0.732	0.856	0.675
SSD-B8	0.690	1.689	0.657	0.712	0.667	0.683	0.654	0.458	0.764	0.875	0.769	0.667	1.001	0.688	0.636

Notes:

in WC - inches of water column

NR - not recorded

Minimum Vacuum Required = 0.0025 in WC

*Access to Sparkle Cleaners and/or the SSD locations could not be obtained resulting in the inability to record SSDS performance.

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Table 6b - Summary of Sub-Slab Depressurization System (SSDS) Performance
Extraction Wells Summary

Extraction Wells	Vacuum (in WC) 3/27/12	Vacuum (in WC) 6/28/12	Vacuum (in WC) 9/11/12	Vacuum (in WC) 9/20/12	Vacuum (in WC) 11/07/12	Vacuum (in WC) 01/14/13	Vacuum (in WC) 06/13/13	Vacuum (in WC) 09/12/13	Vacuum (in WC) 12/18/13	Vacuum (in WC) 3/28/14	Vacuum (in WC) 6/28/14	Vacuum (in WC) 9/24/14	Vacuum (in WC) 12/17/14	Vacuum (in WC) 3/16/15	Vacuum (in WC) 6/16/15
Deli Spot															
SSD-2A	1.400	1.539	1.400	1.500	1.400	1.400	1.267	1.550	Offline	Offline	1.400	1.500	0.600	0.600	0.400
SSD-2B	1.200	1.345	1.750	1.780	1.800	1.821	1.800	1.680	Offline	Offline	1.200	1.300	0.600	0.600	1.000
SSD-3A	1.800	1.674	1.250	1.400	1.450	1.200	1.228	1.480	Offline	Offline	0.300	1.600	1.600	1.600	1.400
SSD-3B	1.700	1.675	1.800	1.800	1.700	1.700	1.793	1.750	Offline	Offline	0.400	1.700	1.600	1.600	1.600
Sparkle Cleaners															
SSD-5A	NR*	1.200	1.250	1.210	1.000	1.200	0.764	0.800	Offline	Offline	0.700	0.800	1.000	0.800	NR*
SSD-5B	NR*	NR*	1.000	1.050	0.800	1.000	0.775	1.000	Offline	Offline	0.800	0.900	1.000	1.000	NR*
SSD-6A	NR*	NR*	1.400	1.490	1.400	1.200	1.685	1.570	Offline	Offline	0.300	2.000	2.000	2.000	NR*
SSD-6B	NR*	NR*	1.500	1.600	1.500	1.570	1.700	1.520	Offline	Offline	0.400	1.600	1.600	1.600	NR*
New China															
SSD-7A	NR	0.400	0.400	0.400	0.570	0.400	0.499	0.500	Offline	Offline	0.600	0.700	0.600	0.800	NR*
SSD-7B	NR	NR	0.500	0.600	1.600	1.560	0.519	0.500	Offline	Offline	0.600	0.700	0.800	0.800	NR*

Notes:

in WC - inches of water column

NR - not recorded

Minimum Vacuum Required = 0.0025 in WC

*Access to Sparkle Cleaners and/or the SSD locations could not be obtained resulting in the inability to record SSDS performance.

Orangetown Shopping Center/Sparkle Cleaners
NYSDEC Site #C344066

Table 6c - Summary of Sub-Slab Depressurization System (SSDS) Performance
Vapor/Monitoring Points Summary

Vapor/Monitoring Points	Vacuum (in WC) 3/27/12	Vacuum (in WC) 6/28/12	Vacuum (in WC) 9/11/12	Vacuum (in WC) 9/20/12	Vacuum (in WC) 11/07/12	Vacuum (in WC) 01/14/13	Vacuum (in WC) 06/13/13	Vacuum (in WC) 09/12/13	Vacuum (in WC) 12/18/13	Vacuum (in WC) 3/28/14	Vacuum (in WC) 6/28/14	Vacuum (in WC) 9/24/14	Vacuum (in WC) 12/17/14	Vacuum (in WC) 3/16/15	Vacuum (in WC) 6/16/15
Deli Spot															
SSD-MP-1	0.060	0.019	0.025	0.019	0.098	0.014	0.013	0.017	0.000	0.045	0.023	0.026	0.015	0.014	0.017
VP-1	0.026	0.048	0.043	0.041	0.019	0.011	0.036	0.044	0.000	0.000	0.323	0.252	0.075	0.040	0.029
VP-2	0.009	0.513	0.012	0.465	0.246	0.271	0.413	0.429	0.000	0.000	0.322	0.275	0.055	0.120	0.013
VP-3	0.138	0.259	0.229	0.231	0.029	0.199	0.083	0.150	0.000	0.001	0.198	0.194	0.083	0.010	0.016
SSD-MP-2	0.014	0.020	0.012	0.011	0.017	0.009	0.011	0.011	0.020	0.009	0.024	0.012	0.024	0.014	0.120
Sparkle Cleaners															
SSD-MP-3	NR*	NR*	0.015	0.019	0.074	0.053	0.010	0.010	0.000	0.043	0.030	0.020	0.010	0.019	NR*
VP-4	NR*	NR*	0.010	0.019	0.850	0.056	0.012	0.011	0.000	NR	0.025	0.017	0.015	0.014	NR*
VP-5	NR*	NR*	0.015	0.021	0.085	0.057	0.011	0.010	0.000	0.045	0.026	0.012	0.031	0.132	NR*
VP-6	NR*	NR*	0.012	0.015	0.038	0.024	0.012	0.016	0.000	NR	NR	0.059	0.048	0.042	NR*
SSD-MP-4	NR*	NR*	0.011	0.010	0.024	0.018	0.014	0.010	0.012	0.035	0.036	0.019	0.032	0.023	NR*
New China															
SSD-MP-5	0.000	0.021	0.021	0.021	0.090	0.033	0.009	0.009	0.000	0.011	0.025	0.015	0.000**	0.009**	0.014
VP-7	0.013	0.015	0.024	0.024	0.030	0.034	0.009	0.011	0.000	0.010	0.026	0.015	0.019	0.010	0.064
VP-8	0.000	0.020	0.022	0.022	0.032	0.035	0.010	0.013	0.000	0.011	0.026	0.014	0.029	0.009**	0.078
VP-9	0.001	0.015	0.020	0.020	0.030	0.036	0.009	0.009	0.000	0.013	0.022	0.014	0.028	0.011	0.014
SSD-MP-6	0.039	0.019	0.016	0.016	0.064	0.036	0.011	0.011	0.019	0.022	0.026	0.019	0.050	0.014	0.011

Notes:

in WC - inches of water column

NR - not recorded

Minimum Vacuum Required = 0.0025 in WC

*Access to Sparkle Cleaners and/or the SSD locations could not be obtained resulting in the inability to record SSDS performance.

**Low readings on 12/17/14 and 3/16/15 due to construction adjacent to SSD-MP-5, VP-7, and VP-8

Table 1

AIR MONITORING RESULTS

November 14, 2014

UB Orangeburg
1-45 Orangetown Shopping Center
Orangeburg, New York

Monitoring	**Particulates**		**VOCs**	Comments
Location	Work Zone Instant	Work Zone TWA	Work Zone	
Time: (15 Minute Increments)	Results (mg/m3):	Results (mg/m3):	Results (ppm):	
0830	0.000	0.000	0.0	Background
0845	0.000	0.000	0.0	
0900	0.000	0.000	0.0	
0915	0.000	0.000	0.0	
0930	0.000	0.000	0.0	
0945	0.000	0.379	0.0	Saw-cutting activities being completed
1000	0.000	0.379	0.0	Saw-cutting activities being completed
1015	0.000	0.379	0.0	Saw-cutting activities being completed
1030	0.270	0.326	0.0	Saw-cutting activities being completed
1045	0.701	0.327	0.0	Saw-cutting activities being completed
1100	0.000	0.253	0.0	Saw-cutting activities being completed
1115	0.020	0.227	0.0	Saw-cutting activities being completed
1130	0.031	0.198	0.0	Saw-cutting activities being completed
1145	0.016	0.198	0.0	Saw-cutting activities being completed
1200	0.044	0.198	0.0	
1215	0.360	0.187	0.0	
1230	0.000	0.143	0.0	
1245	0.000	0.143	0.0	
1300	0.000	0.143	0.0	
1315	0.060	0.134	0.0	
1330	0.060	0.134	0.0	
1345	0.070	0.134	0.0	
1400	0.150	0.134	0.0	

Notes:
ppm = parts per million

Table 8
Soil Vapor Intrusion - GC/MS Volatiles (TO-15) (ug/m3)

UB Orangeburg
1-45 Orangetown Shopping Center
Orangeburg, New York

Client Sample ID:	DELI VP-1	DELI VP-1 AMBIENT	DELI SSD-MP-2	DELI SSD-MP-2 AMBIENT	CHINA SSD-MP-5	CHINA SSD-MP-5 AMBIENT	CHINA VP-9	CHINA VP-9 AMBIENT	SPARKLE VP-6	SPARKLE VP-6 AMBIENT	SPARKLE VP-5	SPARKLE VP-5 AMBIENT	OUTSIDE AMBIENT	REGULATORY GUIDANCE		
Lab Sample ID:	JB93613-1	JB93613-2	JB93613-3	JB93613-4	JB93613-5	JB93613-6	JB93613-7	JB93613-8	JB93613-10	JB93613-11	JB93613-12	JB93613-13	JB93613-9			
Date Sampled:	4/28/2015	4/28/2015	4/28/2015	4/28/2015	2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015			
Matrix:	Sub Slab	Ambient Air	Sub Slab	Ambient Air	Sub Slab	Ambient Air	Sub Slab	Ambient Air	Sub Slab	Ambient Air	Sub Slab	Ambient Air	Ambient Air	NYSDOH 2003 Soil Vapor Indoor 95th Percentile (1)	NYSDOH 2003 Soil Vapor Intrusion Air Guidance Value (2)	EPA 2001 BASE 90th Percentile (3)
	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.			
Acetone	50.1	44.2	60.3	53.9	103	73.9	109	70.3	64.9	19	70.8	18	7.6	140	NS	98.9
1,3-Butadiene	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.49)	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)	NS	NS	<3.0
Benzene	0.89	0.73	2.5	3.5	1.6	0.64	1.2	ND (0.64)	0.93	ND (0.64)	0.99	ND (0.64)	ND (0.64)	29	NS	9.4
Bromodichloromethane	ND (0.67)	ND (0.67)	ND (0.67)	ND (0.67)	ND (0.74)	ND (0.67)	ND (0.67)	ND (0.67)	ND (0.67)	ND (0.67)	ND (0.67)	ND (0.67)	ND (0.67)	NS	NS	NS
Bromoform	ND (0.41)	ND (0.41)	ND (0.41)	ND (0.41)	ND (0.44)	ND (0.41)	ND (0.41)	ND (0.41)	ND (0.41)	ND (0.41)	ND (0.41)	ND (0.41)	ND (0.41)	NS	NS	NS
Bromomethane	ND (0.78)	ND (0.78)	ND (0.78)	ND (0.78)	ND (0.85)	ND (0.78)	ND (0.78)	ND (0.78)	ND (0.78)	ND (0.78)	ND (0.78)	ND (0.78)	ND (0.78)	0.9	NS	<1.7
Bromoethene	ND (0.87)	ND (0.87)	ND (0.87)	ND (0.87)	ND (0.96)	ND (0.87)	ND (0.87)	ND (0.87)	ND (0.87)	ND (0.87)	ND (0.87)	ND (0.87)	ND (0.87)	NS	NS	NS
Benzyl Chloride	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.1)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NS	NS	<6.8
Carbon disulfide	ND (0.62)	ND (0.62)	ND (0.62)	ND (0.62)	ND (0.69)	0.62	10	1	ND (0.62)	ND (0.62)	ND (0.62)	ND (0.62)	ND (0.62)	NS	NS	4.2
Chlorobenzene	ND (0.92)	ND (0.92)	ND (0.92)	ND (0.92)	ND (1.0)	ND (0.92)	ND (0.92)	ND (0.92)	ND (0.92)	ND (0.92)	ND (0.92)	ND (0.92)	ND (0.92)	<0.25	NS	<0.9
Chloroethane	ND (0.53)	ND (0.53)	ND (0.53)	ND (0.53)	ND (0.58)	ND (0.53)	ND (0.53)	ND (0.53)	ND (0.53)	ND (0.53)	ND (0.53)	ND (0.53)	ND (0.53)	0.6	NS	<1.1
Chloroform	ND (0.98)	ND (0.98)	ND (0.98)	ND (0.98)	1.1	ND (0.98)	ND (0.98)	0.98	ND (0.98)	ND (0.98)	ND (0.98)	ND (0.98)	ND (0.98)	4.6	NS	1.1
Chloromethane	0.62	1.7	1.7	1.6	2.3	1.5	1.2	1.7	0.83	1.5	0.99	1.5	1.6	5.2	NS	3.7
3-Chloropropene	ND (0.63)	ND (0.63)	ND (0.63)	ND (0.63)	ND (0.69)	ND (0.63)	ND (0.63)	ND (0.63)	ND (0.63)	ND (0.63)	ND (0.63)	ND (0.63)	ND (0.63)	NS	NS	NS
2-Chlorotoluene	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.1)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NS	NS	NS
Carbon tetrachloride	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	0.75	ND (0.25)	0.61	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	1.1	NS	<1.3
Cyclohexane	11	12	12	7.2	3	1	2.3	0.93	2.1	ND (0.69)	2.1	ND (0.69)	ND (0.69)	19	NS	NS
1,1-Dichloroethane	ND (0.81)	ND (0.81)	ND (0.81)	ND (0.81)	ND (0.89)	ND (0.81)	ND (0.81)	ND (0.81)	ND (0.81)	ND (0.81)	ND (0.81)	ND (0.81)	ND (0.81)	<0.25	NS	<0.7
1,1-Dichloroethylene	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.87)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	<0.25	NS	<1.4
1,2-Dibromoethane	ND (0.77)	ND (0.77)	ND (0.77)	ND (0.77)	ND (0.85)	ND (0.77)	ND (0.77)	ND (0.77)	ND (0.77)	ND (0.77)	ND (0.77)	ND (0.77)	ND (0.77)	<0.25	NS	<1.5
1,2-Dichloroethane	ND (0.81)	ND (0.81)	ND (0.81)	ND (0.81)	ND (0.89)	ND (0.81)	ND (0.81)	ND (0.81)	ND (0.81)	ND (0.81)	ND (0.81)	ND (0.81)	ND (0.81)	<0.25	NS	<0.9
1,2-Dichloropropane	ND (0.92)	ND (0.92)	ND (0.92)	ND (0.92)	ND (1.0)	ND (0.92)	ND (0.92)	ND (0.92)	ND (0.92)	ND (0.92)	ND (0.92)	ND (0.92)	ND (0.92)	<0.25	NS	<1.6
1,4-Dioxane	ND (0.72)	ND (0.72)	ND (0.72)	ND (0.72)	ND (0.79)	ND (0.72)	ND (0.72)	ND (0.72)	ND (0.72)	ND (0.72)	ND (0.72)	ND (0.72)	ND (0.72)	NS	NS	NS
Dichlorodifluoromethane	2.5	2.9	2.9	2.6	3.8	2.5	3.1	2.8	2.8	2.8	2.8	2.6	2.7	26	NS	16.5
Dibromochloromethane	ND (0.85)	ND (0.85)	ND (0.85)	ND (0.85)	ND (0.94)	ND (0.85)	ND (0.85)	ND (0.85)	ND (0.85)	ND (0.85)	ND (0.85)	ND (0.85)	ND (0.85)	NS	NS	NS
trans-1,2-Dichloroethylene	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.87)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	NS	NS	NS
cis-1,2-Dichloroethylene	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.87)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	1.2	NS	<1.9
cis-1,3-Dichloropropene	ND (0.91)	ND (0.91)	ND (0.91)	ND (0.91)	ND (1.0)	ND (0.91)	ND (0.91)	ND (0.91)	ND (0.91)	ND (0.91)	ND (0.91)	ND (0.91)	ND (0.91)	<0.25	NS	<2.3
m-Dichlorobenzene	ND (0.60)	ND (0.60)	ND (0.60)	ND (0.60)	ND (0.66)	ND (0.60)	ND (0.60)	ND (0.60)	ND (0.60)	ND (0.60)	ND (0.60)	ND (0.60)	ND (0.60)	1	NS	<2.4
o-Dichlorobenzene	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.26)	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.24)	0.9	NS	<1.2
p-Dichlorobenzene	ND (0.60)	ND (0.60)	ND (0.60)	ND (0.60)	ND (0.66)	ND (0.60)	ND (0.60)	ND (0.60)	ND (0.60)	ND (0.60)	ND (0.60)	ND (0.60)	ND (0.60)	2.6	NS	5.5
trans-1,3-Dichloropropene	ND (0.91)	ND (0.91)	ND (0.91)	ND (0.91)	ND (1.0)	ND (0.91)	ND (0.91)	ND (0.91)	ND (0.91)	ND (0.91)	ND (0.91)	ND (0.91)	ND (0.91)	<0.25	NS	<1.3
Ethanol	74.1	35	84.4 E	59.4	203 E	339 E	187 E	290 E	92.9 E	24.1	104 E	26	2.8	NS	NS	210
Ethylbenzene	1.8	1	2	10	1.2	1.1	0.91	1	0.91	ND (0.87)	ND (0.87)	ND (0.87)	ND (0.87)	13.0	NS	5.7
Ethyl Acetate	4.7	3.6	4	72.7	6.8	11	3.5	4.7	2.7	5	4	1.9	2.3	NS	NS	5.4
4-Ethyltoluene	1.3	ND (0.98)	2.1	1.4	2.3	ND (0.98)	2	ND (0.98)	2.2	ND (0.98)	1.6	ND (0.98)	ND (0.98)	NS	NS	NS
Freon 113	ND (0.77)	ND (0.77)	ND (0.77)	ND (0.77)	0.92	ND (0.77)	ND (0.77)	ND (0.77)	ND (0.77)	ND (0.77)	ND (0.77)	ND (0.77)	ND (0.77)	NS	NS	3.5
Freon 114	ND (0.70)	ND (0.70)	ND (0.70)	ND (0.70)	ND (0.77)	ND (0.70)	ND (0.70)	ND (0.70)	ND (0.70)	ND (0.70)	ND (0.70)	ND (0.70)	ND (0.70)	NS	NS	NS
Heptane	1.2	ND (0.82)	3.4	4.1	2.5	1.8	1.8	1.8	0.86	ND (0.82)	0.86	ND (0.82)	ND (0.82)	NS	NS	NS
Hexachlorobutadiene	ND (0.96)	ND (0.96)	ND (0.96)	ND (0.96)	ND (1.0)	ND (0.96)	ND (0.96)	ND (0.96)	ND (0.96)	ND (0.96)	ND (0.96)	ND (0.96)	ND (0.96)	11.0	NS	<6.8
Hexane	3	2.4	7.4	10	6	1.5	3.1	2.1	2.8	1.9	3.1	2.1	1.2	NS	NS	NS
2-Hexanone	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.90)	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)	NS	NS	NS
Isopropyl Alcohol	15	2.7	16	132 E	31.7	4.7	48.4	4.4	15	2.7	17	2.3	1	NS	NS	250
Methylene chloride	1.6	1.6	1.6	1.9	7.6	1.4	1.9	2.2	2.2	1.1	1.9	2.1	1.4	45.0	60	10
Methyl ethyl ketone	8	2.2	6.5	2.3	13	3.2	9.4	2.3	5.6	2.3	6.8	1.3	1.3	39.0	NS	NS

Table 8
Soil Vapor Intrusion - GC/MS Volatiles (TO-15) (ug/m3)

UB Orangeburg
1-45 Orangetown Shopping Center
Orangeburg, New York

Client Sample ID:	DELI VP-1	DELI VP-1 AMBIENT	DELI SSD-MP-2	DELI SSD-MP-2 AMBIENT	CHINA SSD-MP-5	CHINA SSD-MP-5 AMBIENT	CHINA VP-9	CHINA VP-9 AMBIENT	SPARKLE VP-6	SPARKLE VP-6 AMBIENT	SPARKLE VP-5	SPARKLE VP-5 AMBIENT	OUTSIDE AMBIENT	REGULATORY GUIDANCE		
Lab Sample ID:	JB93613-1	JB93613-2	JB93613-3	JB93613-4	JB93613-5	JB93613-6	JB93613-7	JB93613-8	JB93613-10	JB93613-11	JB93613-12	JB93613-13	JB93613-9			
Date Sampled:	4/28/2015	4/28/2015	4/28/2015	4/28/2015	2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015			
Matrix:	Soil Vapor	Ambient Air	Soil Vapor	Ambient Air	Soil Vapor	Ambient Air	Soil Vapor	Ambient Air	Soil Vapor	Ambient Air	Soil Vapor	Ambient Air	Ambient Air	NYSDOH 2003 Soil Vapor Indoor 95th Percentile (1)	NYSDOH 2003 Soil Vapor Intrusion Air Guidance Value (2)	EPA 2001 BASE 90th Percentile (3)
	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.			
Methyl Isobutyl Ketone	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.90)	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)	5.3	NS	NS
Methyl Tert Butyl Ether	ND (0.72)	ND (0.72)	ND (0.72)	ND (0.72)	ND (0.79)	ND (0.72)	ND (0.72)	ND (0.72)	ND (0.72)	ND (0.72)	ND (0.72)	ND (0.72)	ND (0.72)	71.0	NS	11.5
Methylmethacrylate	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.90)	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)	1.1	NS	NS
Propylene	ND (0.86)	ND (0.86)	1.1	1.5	5.3	ND (0.86)	2.1	ND (0.86)	0.98	ND (0.86)	1.1	ND (0.86)	ND (0.86)	NS	NS	NS
Styrene	ND (0.85)	1.2	ND (0.85)	ND (0.85)	3.7	5.1	2.7	4.7	ND (0.85)	ND (0.85)	ND (0.85)	ND (0.85)	ND (0.85)	2.3	NS	1.9
1,1,1-Trichloroethane	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.60)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	6.9	NS	20.6
1,1,2,2-Tetrachloroethane	ND (0.69)	ND (0.69)	ND (0.69)	ND (0.69)	ND (0.76)	ND (0.69)	ND (0.69)	ND (0.69)	ND (0.69)	ND (0.69)	ND (0.69)	ND (0.69)	ND (0.69)	<0.25	NS	NS
1,1,2-Trichloroethane	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.60)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	<0.25	NS	<1.5
1,2,4-Trichlorobenzene	ND (0.74)	ND (0.74)	ND (0.74)	ND (0.74)	ND (0.82)	ND (0.74)	ND (0.74)	ND (0.74)	ND (0.74)	ND (0.74)	ND (0.74)	ND (0.74)	ND (0.74)	6.3	NS	<6.8
1,2,4-Trimethylbenzene	3.1	1.4	4.8	4.2	6.9	4.5	4.9	4.2	5.4	ND (0.98)	3.7	ND (0.98)	ND (0.98)	18	NS	9.5
1,3,5-Trimethylbenzene	1.2	ND (0.98)	1.7	1	2.6	1.8	2	1.6	2	ND (0.98)	1.5	ND (0.98)	ND (0.98)	6.5	NS	NS
2,2,4-Trimethylpentane	2.5	ND (0.93)	3.2	3.2	4.1	ND (0.93)	3.1	ND (0.93)	1.9	ND (0.93)	2.1	ND (0.93)	ND (0.93)	NS	NS	NS
Tertiary Butyl Alcohol	1.4	ND (0.61)	ND (0.61)	ND (0.61)	9.7	9.1	4.2	8.5	ND (0.61)	0.79	3.3	0.7	ND (0.61)	NS	NS	NS
Tetrachloroethylene	0.31	0.41	ND (0.27)	ND (0.27)	2	2	1.8	2.7	0.5	0.38	0.63	0.51	ND (0.27)	4.1	30	15.9
Tetrahydrofuran	11	ND (0.59)	11	ND (0.59)	20	ND (0.59)	15	ND (0.59)	8.8	ND (0.59)	10	ND (0.59)	ND (0.59)	9.4	NS	NS
Toluene	4.5	3.7	12	18	29	33	22	30	4.5	3	3.8	2.2	1.2	110	NS	43
Trichloroethylene	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.23)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	0.8	5	4.2
Trichlorofluoromethane	1.5	1.6	1.7	1.4	2.4	1.4	1.8	1.6	1.5	1.5	1.6	1.5	1.6	30	NS	18.1
Vinyl chloride	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.11)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	<0.25	NS	<1.9
Vinyl Acetate	ND (0.70)	ND (0.70)	ND (0.70)	ND (0.70)	ND (0.77)	ND (0.70)	ND (0.70)	ND (0.70)	ND (0.70)	ND (0.70)	ND (0.70)	ND (0.70)	ND (0.70)	NS	NS	NS
m,p-Xylene	8.3	5.6	9.6	46	4.8	4.8	3.8	4.1	4.3	1.5	2.5	1.2	ND (0.87)	21.0	NS	22.2
o-Xylene	3.8	2.4	3.3	7.8	2.1	2.1	1.6	2	2.1	ND (0.87)	1.2	ND (0.87)	ND (0.87)	13.0	NS	7.9
Xylenes (total)	12	8.3	13	54.3	6.9	6.9	5.2	6.1	6.5	2.2	3.7	1.8	ND (0.87)	NS	NS	NS

Results and Standards expressed in micrograms per cubic meter (µg/m3)
NS = No Standard
ND = Not detected above laboratory reporting limits
E = The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
B = Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants. Data users should consider anything <10x the blank value as artifact.
(1) 95th percentile indoor air values from "Table C1. NYSDOH 2003: Study of Volatile Organic Chemicals in Air of Fuel Oil Heated Homes', published in the NYSDOH Soil Vapor Intrusion Guidance Document, Appendix C" (October 2006)
(2) NYSDOH Air Guidance Values (AGVs) presented in the Final Guidance for evaluating Soil Vapor Intrusion in the State of New York, dated October 2006 ("NYSDOH Vapor Intrusion Guidance Document"); however, Tetrachloroethene (PCE) guidance was revised to 30 ug/m3 in September of 2013
(3) 90th percentile indoor air values from "Table C-2. EPA 2001: Building Assessment and Survey Evaluation (BASE) Database, SUMMA canister method" published in the NYSDOH Soil Vapor Intrusion Guidance Document, Appendix C" (October 2006)

Table 9
Soil Vapor Intrusion - Constituents of Concern (ug/m3)

UB Orangeburg
1-45 Orangetown Shopping Center
Orangeburg, New York

Client Sample ID:	DELI VP-1	DELI VP-1 AMBIENT	DELI SSD-MP-2	DELI SSD-MP-2 AMBIENT	CHINA SSD-MP-5	CHINA SSD-MP-5 AMBIENT	CHINA VP-9	CHINA VP-9 AMBIENT	SPARKLE VP-6	SPARKLE VP-6 AMBIENT	SPARKLE VP-5	SPARKLE VP-5 AMBIENT	OUTSIDE AMBIENT	REGULATORY GUIDANCE		
Lab Sample ID:	JB93613-1	JB93613-2	JB93613-3	JB93613-4	JB93613-5	JB93613-6	JB93613-7	JB93613-8	JB93613-10	JB93613-11	JB93613-12	JB93613-13	JB93613-9			
Date Sampled:	4/28/2015	4/28/2015	4/28/2015	4/28/2015	2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	4/28/2015	NYSDOH 2003 Soil Vapor Indoor 95th Percentile (1)	NYSDOH 2003 Soil Vapor Intrusion Air Guidance Value (2)	EPA 2001 BASE 90th Percentile (3)
Matrix:	Sub Slab	Ambient Air	Sub Slab	Ambient Air	Sub Slab	Ambient Air	Sub Slab	Ambient Air	Sub Slab	Ambient Air	Sub Slab	Ambient Air	Ambient Air			
	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.			
Carbon tetrachloride	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	0.75	ND (0.25)	0.61	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	1.1	NS	<1.3
1,1-Dichloroethylene	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.87)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	<0.25	NS	<1.4
trans-1,2-Dichloroethylene	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.87)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	NS	NS	NS
cis-1,2-Dichloroethylene	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.87)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	ND (0.79)	1.2	NS	<1.9
1,1,1-Trichloroethane	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.60)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	ND (0.55)	6.9	NS	20.6
Tetrachloroethylene	0.31	0.41	ND (0.27)	ND (0.27)	2.0	2.0	1.8	2.7	0.50	0.38	0.63	0.51	ND (0.27)	4.1	30	15.9
Trichloroethylene	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.23)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	ND (0.21)	0.8	5	4.2
Vinyl chloride	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.11)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	<0.25	NS	<1.9

Results and Standards expressed in micrograms per cubic meter (µg/m3)
NS = No Standard
ND = Not detected above laboratory reporting limits
E = The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
B = Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants. Data users should consider anything <10x the blank value as artifact.
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(2) NYSDOH Air Guidance Values (AGVs) presented in the Final Guidance for evaluating Soil Vapor Intrusion in the State of New York, dated October 2006 ("NYSDOH Vapor Intrusion Guidance Document"); however, Tetrachloroethene (PCE) guidance was revised to 30 ug/m3 in September of 2013
(3) 90th percentile indoor air values from "Table C-2. EPA 2001: Building Assessment and Survey Evaluation (BASE) Database, SUMMA canister method" published in the NYSDOH Soil Vapor Intrusion Guidance Document, Appendix C" (October 2006)

APPENDIX A

Correspondences

New York State Department of Environmental Conservation
Division of Environmental Remediation, 11th Floor
625 Broadway, Albany, New York 12233
Phone: (518) 402-9662
Fax: 518-402-9679
Website: www.dec.ny.gov

Joe Martens
Commissioner

August 25, 2014

Dan Logue
UB Orangeburg, LLC
Urstadt Biddle Properties Inc
321 Railroad Avenue
Greenwich, CT 06830

Re: Site Management (SM) Periodic Review Report (PRR) Response Letter
Orangeburg (Orangetown) Shopping Center, Orangetown
Rockland County, Site No.: C344066

Dear Mr. Logue:

The New York State Department of Environmental Conservation (Department) has reviewed your Periodic Review Report (PRR) and IC/EC Certification for following period: June 17, 2013 to June 17, 2014.

The Department hereby accepts the PRR and associated Certification. The frequency of Periodic Reviews for this site is 1 year, your next PRR is due in July 2015. You will receive a reminder letter and updated certification form prior to the due date.

Also, the Department hereby approves your request to eliminate the analyses for metals, pesticides and semi-volatile organic compounds (SVOCs), eliminate the full list volatile organic compound (VOC) analytical table from the site progress reports, modify the bio-augmentation application to the MW-5 area, and submit the site progress reports only during months when field activities have been completed as outlined in the July 2014 Periodic Review Report (PRR) with the following modifications.

- Groundwater monitoring should continue on a quarterly basis at the following wells: MW-3, MW-4, MW-5, MW-8A, MW-8B and MW-10.

- Monthly progress reports do not need to be submitted to the Department. Please ensure data continues to be submitted in electronic data deliverable (EDD) format as it is validated. All field activities completed should be documented in the periodic review report submitted at the approved frequency (i.e., annually). In the event that an institutional control/engineering control (IC/EC) fails and corrective measures are needed, a work plan to correct the issue and a schedule should be provided to the Department prior to the submittal of the PRR.

Please provide the Department with a revised Site Management Plan (SMP), which incorporates these changes.

If you have any questions, or need additional forms, please contact me at 518-402-9662 or e-mail: jamie.verrigni@dec.ny.gov.

Sincerely,

Jamie Verrigni
Project Manager

ec: Jamie Verrigni
James Candiloro
Edward Moore
Renata Ockerby – NYSDOH
Maureen Schuck – NYSDOH
Michael DeGloria – GES – MDeGloria@gesonline.com
Dan Logue - Urstadt Biddle Properties Inc – dlogue@ubproperties.com

Michael C. DeGloria

From: Verrigni, Jamie L (DEC) <jamie.verrigni@dec.ny.gov>
Sent: Friday, November 07, 2014 11:25 AM
To: Michael C. DeGloria
Subject: RE: UPDATE- Notice- Potential Work within the Soil Management Area- Orangetown Shopping Center Site #C344066

Michael,

Thank you for notifying me of the situation and for keeping me updated. I just spoke with Maribeth McCormick from O&R, who informed me that there is also a gas leak at the site, which appears to be in the vicinity of the water main break. O&R will be contacting you to obtain any data that you obtained during the water main break work. Please ensure that you are at the site for this work and the soils are screened per the SMP.

Thanks,
Jamie

Jamie L. Verrigni
Environmental Engineer
NYS Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau C, Section A
625 Broadway, 11th Floor
Albany, NY 12233-7014
Phone: (518) 402-9662
Fax: (518) 402-9679
Jamie.verrigni@dec.ny.gov

From: Michael C. DeGloria [mailto:MDeGloria@gesonline.com]
Sent: Wednesday, November 05, 2014 4:01 PM
To: Verrigni, Jamie L (DEC)
Subject: UPDATE- Notice- Potential Work within the Soil Management Area- Orangetown Shopping Center Site #C344066

Jamie- The water line was compromised at around MW-14. Note that water was pushed out several wells and ran over-ground before the main could be shut down. This would have been primarily potable water vs groundwater as there is so little in soils at this site.

Please let me know if you have any questions or comments as this repair is being made.

I will continue to provide you with updates.

Thank you,

Michael DeGloria
Project Manager

GES Lower Hudson Valley Office
16 Mount Ebo Road South | Suite 21
Brewster | New York | 10509

O | 866-839-5195 ext. 3839
C | 845-661-4180
F | 866-902-2187

From: Michael C. DeGloria
Sent: Wednesday, November 05, 2014 12:55 PM
To: 'Verrigni, Jamie L (DEC)'
Subject: Notice- Potential Work within the Soil Management Area- Orangetown Shopping Center Site #C344066

Jamie- GES responded to a suspected water main break this afternoon at the former Sparkle Cleaners project #C3344066. The exact location and extent of damage to the water main is not known, but emergency repairs are being coordinated immediately. The water main is located under the composite cover system (see figure) and we suspect that emergency repairs will include uncovering the damaged section of piping for repairs. This will expose soils from under the composite cover.

We are onsite to screen soils with a PID and will instruct the contractor to wet soils if dust is present. I don't suspect that this will be the case under the circumstances. Soil will be placed on poly and covered for testing. A dust meter will not be available given the emergency situation, but as I mentioned above, soils will be wetted as needed to eliminate dust concerns.

The depth of the water line should shallower than the historic release point so I do not believe impacted soil will be identified. I've also looked over historical soil data and believe that we are outside the area which was historically impacted. However, we will screen soils as noted.

Please contact me with any questions or concerns. Further communications will be provided as I receive information from the field and a Non-Routine Letter will be prepared as required.

Thank you,

Michael DeGloria
Project Manager

GES Lower Hudson Valley Office
16 Mount Ebo Road South | Suite 21
Brewster | New York | 10509

O | 866-839-5195 ext. 3839

C | 845-661-4180
F | 866-902-2187

November 25, 2014

Ms. Jamie Verrigni

New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau C
625 Broadway – 11th Floor
Albany, New York 12233-7014

RE: Waste Composite Sample
Orangetown Shopping Center, Orangeburg, NY
NYSDEC Site Number C344066

Dear Ms. Verrigni,

Groundwater and Environmental Services, Inc. (GES) requests New York State Department of Environmental Conservation (NYSDEC) review of the analytical results of the waste characterization sampling performed on the soil generated during the repair of utilities located under the composite system cover at the Orangetown Shopping Center site. The repairs of the utilities were completed on November 14, 2014. The associated soil has been stock piled in a lined and covered roll off pending receipt of analytical results.

Based on these results (attached), and the accompanying letter from ESMI of New York (attached), GES requests approval to manage this soil as non-hazardous solid waste under NYSDEC Solid Waste Permit #5-5330-00038/00019.

If there are any questions or concerns regarding this work, please contact Michael DeGloria at 866-839-5195, extension 3839.

GROUNDWATER & ENVIRONMENTAL SERVICES, INC.

Michael DeGloria
Project Manager

Attachments:

TestAmerica Analytical Report
November 25, 2014, ESMI of New York Correspondence

cc: Daniel Logue, UB Orangeburg, LLC
Stephan Rapaglia, UB Orangeburg, LLC (e-copy)
Renata Ockerby, New York State Department of Health
James Candiloro, New York State Department of Environmental Conservation
Hilton Soniker, Esq., JLJ Management

New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau C, 11th Floor
625 Broadway, Albany, New York 12233-7014
Phone: (518) 402-9662 • **Fax:** (518) 402-9679
Website: www.dec.ny.gov

Joe Martens
Commissioner

December 1, 2014

Michael DeGloria
GES Lower Hudson Valley Office
16 Mount Ebo Road South
Suite 21
Brewster, NY 10509

RE: Orangetown Shopping Center
Site ID No. C344066
Town of Orangetown, Rockland County
Waste Composite Sample

Dear Mr. DeGloria:

The New York State Department of Environmental Conservation has reviewed the analytical results of the waste characterization sampling performed on the soil generated during the repair of utilities located under the composite system cover at the Orangetown Shopping Center site (Site) dated November 25, 2014. Based on the results provided the soil may be handled and disposed of as a non-hazardous solid waste, to be disposed of at a facility permitted under 6 NYCRR Part 360.

If you have any questions or comments please feel free to contact me at (518) 402-9662 or jamie.verrigni@dec.ny.gov.

Sincerely,

Jamie Verrigni
Project Manager
Remedial Bureau C
Division of Environmental Remediation

ec: James Candiloro
Jamie Verrigni
Maureen Schuck – NYSDOH
Renata Ockerby – NYSDOH
Michael DeGloria – GES – MDeGloria@gesonline.com

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Remedial Bureau C
625 Broadway, 11th Floor, Albany, NY 12233-7014
P: (518) 402-9662 I F: (518) 402-9679
www.dec.ny.gov

June18, 2015

Karen Bourque
Groundwater & Environmental Services, Inc.
16 Mt. Ebo South, Suite 21
Brewster, NY 10509

Re: Orangetown Shopping Center
Site ID No. C344066
Orangetown, Rockland County
Soil Vapor Intrusion Investigation Summary

Dear Ms. Bourque:

The New York State Department of Environmental Conservation and Health (Departments) have reviewed the Soil Vapor Intrusion Investigation Summary for the Orangetown Shopping Center Site, dated June 2015.

Based on review of the data, the Departments concur with the recommendation for the potential shut down and decommissioning of the sub-slab depressurization systems (SSDSs) at the site. Please note that the proposed quarterly air monitoring using a photo-ionization detector (PID) will not be necessary.

Please submit a proposal to discontinue and decommission the systems for the Departments review and approval. Please note that appropriate revisions to the Site Management Plan will be necessary following the decommissioning of the systems.

Also, please note that a letter should be provided to the property owner summarizing the results of the soil vapor intrusion investigation activities. This letter should state that soil vapor intrusion is not an issue at the site and include a proposal to shut down the systems. This letter should be provided to the Departments for review and approval prior to being submitted to the property owner.

If you have any questions or comments please feel free to contact me at (518) 402-9662 or jamie.verrigni@dec.ny.gov.

Sincerely,

Jamie Verrigni, P.E.
Project Manager
Remedial Bureau C
Division of Environmental Remediation

ec: Jamie Verrigni
Amen Omorogbe
Maureen Schuck – NYSDOH
Renata Ockerby – NYSDOH
Karen Bourque – GES – kbourque@gesonline.com
Monica Roth – UB Orangeburg, LLC – mroth@ubproperties.com
Stephan Rapaglia – UB Orangeburg, LLC – srapaglia@ubproperties.com
Tom Myers – UB Orangeburg, LLC – tmyers@ubproperties.com

APPENDIX B

Field Forms

DAILY SIGN IN SHEET
Hazard Asessment Checklist

Site Name/Project #: Orangeburg Shopping Center / 1102323

Site Address: 1-45 Orangetown Shopping Center, Orangetown, NY 10962 Date: 7/23/14 7/24/14

The Site Supervisor will review the hazards of the job with all employees and visitors daily. If the work includes intrusive work, confined space, lockout/tagout, a plan or permit is required to be completed. Emergency response plans will be reviewed before work begins. Signatures are required for each day of work. Revisions to this form must be initialed and dated.

Description of Work (Tasks to be Completed)

Groundwater Sampling

Traffic Control Methods:

Cones, flags, signs

Site Hazards/PPE/Hazard Control: Prior to the start of work, take a few minutes to review and discuss the strategy to deal with each hazard associated with the job and document above in "Tailgate Meeting"

PERSONAL PROTECTION:
- ✓ Chemical Resistant Gloves
- ✓ Cloth/Leather Gloves
- ___ Tyvek Suit
- ___ Rubber Boots
- ✓ Safety Goggles
- ✓ Steel Toed Boots
- ___ Face Shield
- ___ Respirator
- ___ Hearing Protection
- ___ Hard Hat
- ___ Safety Glasses w/Shields
- ___ Saranex Suit
- ___ Safety Harness/Lanyard
- ___ Other _____

LEVELS OF PPE
- ✓ D
- ___ Modified Level D
- ___ C (Respirator)

AIR MONITORING EQUIPMENT
- ✓ PID
- ___ LEL/O2
- ___ Drager Pump/Tubes
- ___ Other_____

PERMITS
- ___ Hot/Cold (Attach Permit)
- ___ Traffic
- ___ Air Quality
- ___ One Call/Dig Safe NotificationCompleted

Number: _____
Expires: _____

Incident Reporting System
- ✓ Emergency contacts listed
- ✓ Understand Incident/Injury/Near Miss procedures and responsibilities

TOOLS:
- ✓ Proper Tools for Job
- ✓ Good Tool Condition

ACCESS:
- ___ Scaffolds Inspected & Tagged
- ___ Ladders Tied Off
- ___ Personal Man Basket
- ___ Confined Space (Attach Form)

EMERGENCY EQUIPMENT LOCATION KNOWN:
- ✓ Site-specific Health & Safety Plan/MSDS's
- ___ Fire Monitors
- ✓ Fire Extinguishers
- ___ Safety Showers
- ✓ Eye Wash
- ✓ Evacuation Route Reviewed
- ✓ Local Emergency Numbers
- ✓ Hospital
- ___ Emergency Shut Off Switch

Location: _____ _____

DRILLING:
- ___ Utility Clearance
- ___ Hearing Protection
- ___ Inspection by competent person
- ___ No loose clothing/jewelry worn
- ___ Established hand signals
- ___ Visual Contact
- ___ 25' Clearance from Overhead
- ___ Power Lines
- ___ Pre-Drill checklist completed
- ___ Driller has current/valid license

License # _____

JLA:
- ✓ Available on site for all scheduled tasks
- ✓ Reviewed and understood by all

LIFTING/Materials Handling:
- ___ Cherry Picker (current inspection)
- ___ Scissor Lift (current inspection)
- ___ Fork Lift (current inspection)
- ___ Drum Dolly
- ___ Truck Ramps
- ___ Overhead Lines (clearance)
- ___ Manual Lifting
- ___ Valid Crane Operator's License

POTENTIAL HAZARDS:
- ✓ Airborne Particles
- ___ Gases/Vapors
- ___ Fire/Explosion
- ___ Electrical Shock
- ✓ Slips, Trips and Falls
- ✓ Heat Stress
- ___ Cold Stress
- ✓ Heavy Objects
- ___ Hot/Cold Surfaces
- ___ Inadequate Lighting
- ✓ First Opening of Equipment
- ___ High Noise Level
- ___ Access/Egress
- ✓ Sharp Objects
- ✓ Poisonous Plants
- ✓ Insects and Snakes
- ✓ Body Pinch Points
- ✓ Housekeeping
- ✓ Traffic

TRAFFIC CONTROL ELEMENTS:
- ✓ ORANGE TRAFFIC CONES
- ✓ MEN WORKING SIGN(S)
- ✓ TRAFFIC CONTROL PLAN?
- ✓ ORANGE TRAFFIC FLAGS
- ✓ CAUTIONS TAPE, PENNANT FLAGS
- ___ POLICE DETAIL
- ___ ABANDONED (PROPERLY BARRICADED)
- ✓ HIGH VISIBILITY VEST/CLOTHING

ELECTRICAL:
- ___ Locked/Tagged Out
- ___ Bonding
- ___ Verify Isolation
- ___ GFCI Used
- ___ Condition of Electrical Cords
- ___ Other _____

EXCAVATION:
- ___ Visual Inspection of Trench
- ___ Soil Typing
- ___ Ladder Every 25' of Lateral Travel
- ___ Ladder Extends 3' above Trench
- ___ Adequate Shoring and Sloping
- ___ Accumulating Water Removal from Trench
- ___ Spoils Pile 2' from Edge of Trench
- ___ Surface Encumbrances
- ___ Barricade or Fill in Unattended Excavations

CLEANUP:
- ✓ Cleanup is required after work completion
- ✓ Pick up tools and misc. items to prevent tripping hazards
- ___ Discard trash

Training
- ✓ Full Day LPS Training Session (ExxonMobil Projects)
- ✓ Awareness Short Course (on-site)
- ✓ LPS Cards verified for all personnel
- ✓ OSHA 40/8 Hour Updates current?

Other: _____

DAILY SIGN IN SHEET
Hazard Asessment Checklist

Site Name/Project #: Orangeburg Shopping Center / 1102323

Site Address: 1-45 Orangetown Shopping Center, Orangetown, NY 10962 Date: 7/23/14

All GES employees and subcontractors must comply with the site HASP and GES Policies/Procedures.
Non-conformance shall prohibit admittance to the site.

Employee/Visitor Name (Print)	Signature	Company Representing	Tasks Assigned	LPS Training Type (Full or Awareness)	On-site Hours
Gregg Marcinkowski	Gregg Marcinkowski	GES	Groundwater Sampling	Full	3.50
7/24/14 Greg Marcinkowski	Gregg Marcinkowski	GES	Groundwater Sampling	Full	5.25

On-Site Supervisor Signature:

GES Instrument Calibration Sheet

Station Location: 1-45 Orangetown Shopping Center

Station Number: NYSDEC #C344066

Equipment Name- Photoionization Detector (Pid)
Serial Number- 110-012180
Calibration Technician GM
Calibration Gas or Calibration Method- span isobutylene
Concentration (ppm)- 100
Comments-

Date- 7/23/14
Readings Before Calibration- 99.7
Readings After Calibration- 100.0
Span Check-

Equipment Name- YSI
Serial Number-
Calibration Technician

Date-

Parameter

_pH	Standard	Initial	Calibrated	Mid-Day Bump Check
	4.00			
	7.00			
	10.00			
Turbidity	**Standard**	**Initial**	**Calibrated**	**Mid-Day Bump Check**
DO	**Standard**	**Initial**	**Calibrated**	**Mid-Day Bump Check**
	100%			
Conductivity	**Standard**	**Initial**	**Calibrated**	**Mid-Day Bump Check**

Comments-

Well Condition Check Sheet

Date: 7/24/14

Well ID	Check if all Good	Road box size and condition	Well gripper and condition	Lock	Pad Condition	Comments:
MW-F	✓					
MW-E	✓					
MW-4	✓					
MW-D	✓					
MW-3	✓					
MW-5	✓					
MW-C	✓					
MW-8A	✓					
MW-8B	✓					
MW-7	✓					
MW-10	✓					
MW-15A	✓					
MW-13A	✓					
					Page ___ of ____.	

Site Name: Orangeburg Shopping Center

Site Location: 1-45 Orangetown Shopping Ctr., Orangetown, NY

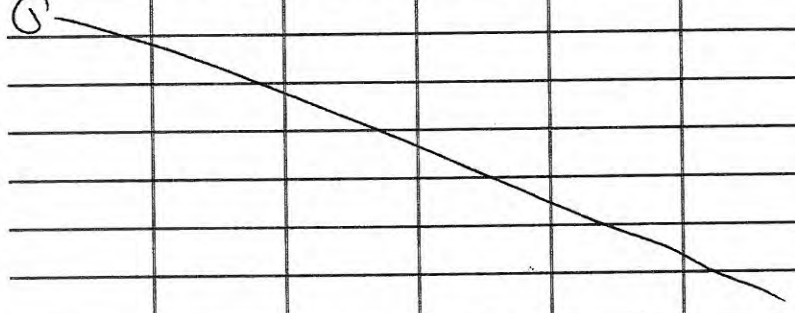
7/23/14 Urstadt Biddle - Orangetown Shopping Ctr
GWS, sunny, 70° Dayl

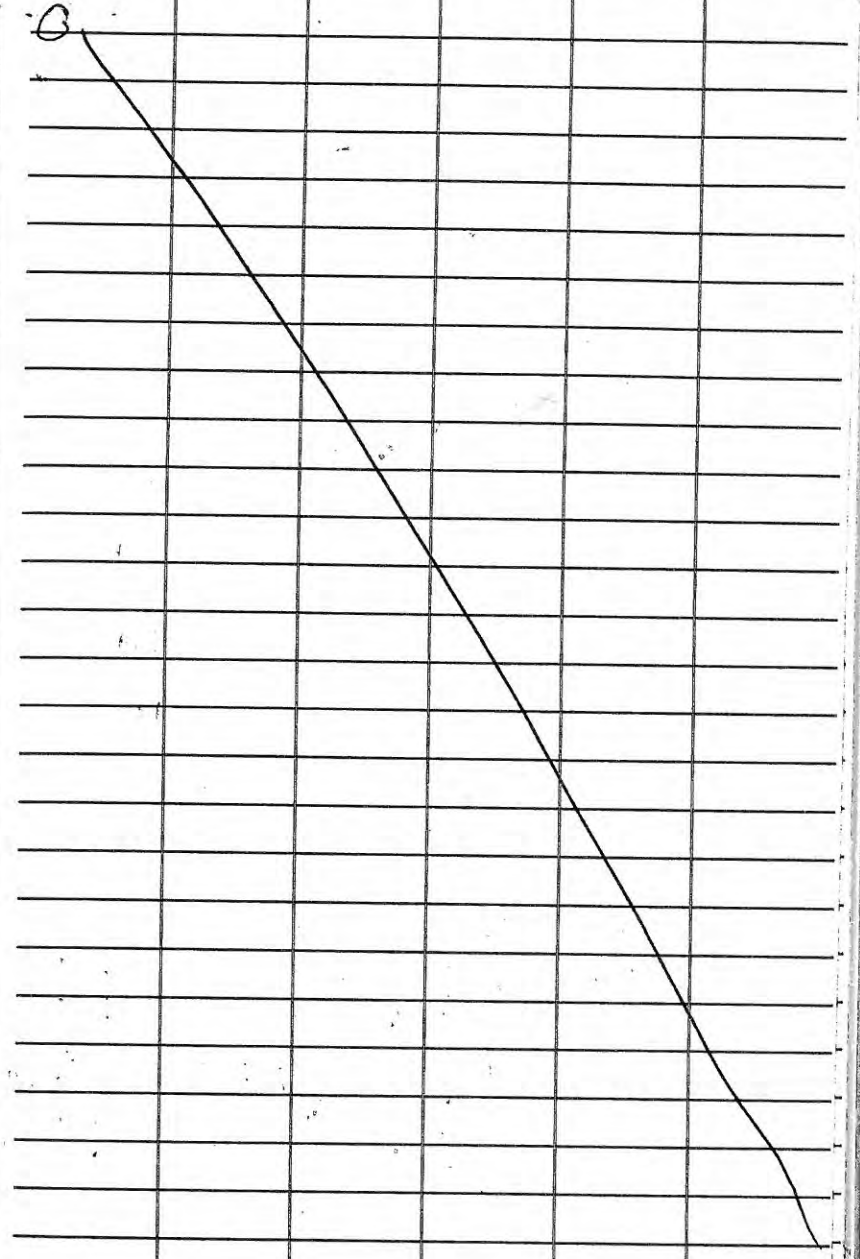
0700 leave for site

0800 GM onsite
- H+S meeting, review HASP, JSAs, SPSAs, PPE, traffic controls
- start GWS
- gauge all the gauge only's.
- bolt and lock drum.

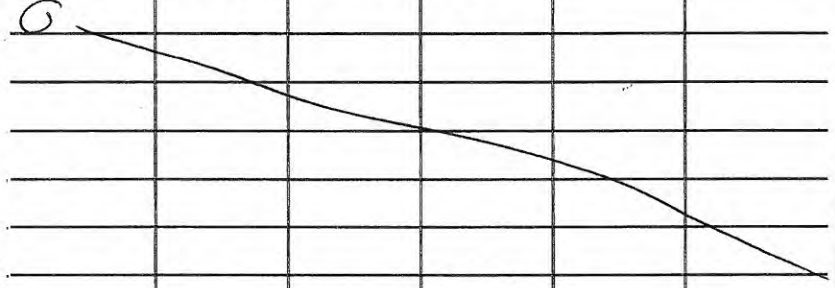
1130 offsite

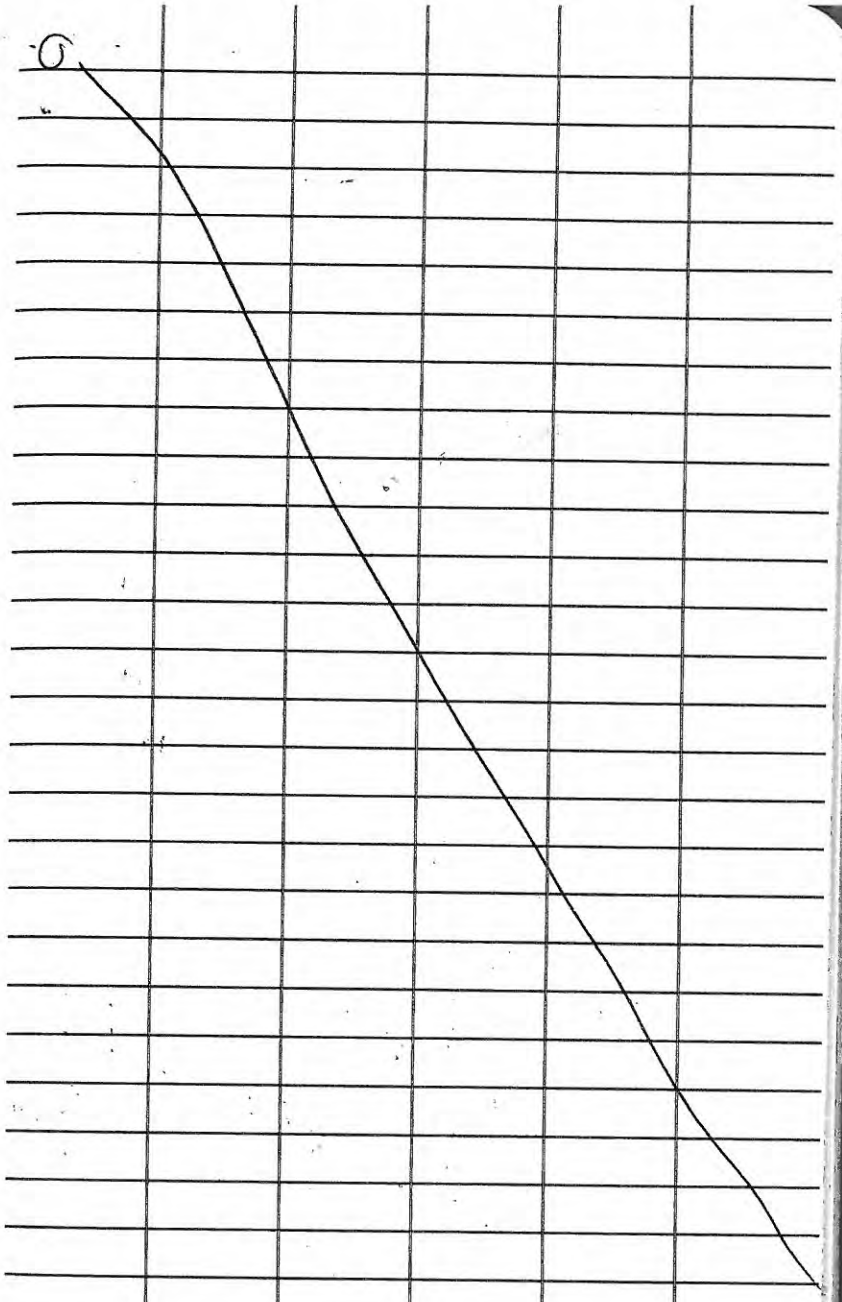
Note: MW-13A did not have enough water to sample.
- Duplicate taken from MW-7
- MW-xx MS + MW-xx MSD taken from MW-10





7/24/14 Urstadt Biddle - Orangetown Shopping Ctr.
- GWS Day 2
0630 leave For site
0730 GM onsite
- H+S Meeting, review HASP, JSAs, SPSAs, PPE, traffic controls
- start GWS.
- MW-F was Dry
- MW-8A the bailer won't go down the well, pvc maybe bent
- MW-A + MW-B were inaccessable.
- drum is 2/3 full need drum pickup
- lock drum
- paperwork
1245 Offsite
1345 back at office





Site: Orangetown Shopping Center
Address: 1-45 Orangetown Shopping Center
Orangeburg, New York

Tech: Guy
Date: 7/23/14 - 7/24/14
Weather: Sunny

Daily Field Log (Gauging Table)

Well ID	PID (outer)	PID (inner)	Depth to Water	Depth to DNAPL	Depth to Bottom (last visit)	Depth to Bottom (measured)	Well Diameter	Well Volume	Comments	Analytical Parameters
MW-1	0.0	0.0	37.90		39.10	39.05	2"	NA	Gauge Only	
MW-3	0.8	0.0	39.60		42.70	43.00	2"	N/A	Gauge & Sample	VOCs, Ethene, TOC, Electron Acceptors
MW-4	0.0	0.0	37.45		46.80	46.72	2"	4.0	Gauge & Sample	VOCs, Ethene, TOC, Electron Acceptors
MW-5	0.0	0.0	38.44		45.20	45.27	2"	3.0	Gauge & Sample	VOCs, Ethene, TOC, Electron Acceptors
MW-6	0.0	0.0	36.50		51.20	51.20	2"	NA	Gauge Only	
MW-7	0.0	0.0	39.74		48.20	48.20	2"	4.0	Gauge & Sample	VOCs
MW-8A	0.0	0.0	42.05		43.15	43.15	1"	N/A	Gauge & Sample	VOCs, Ethene, TOC, Electron Acceptors Couldnot sample pvc maybe bent
MW-8B	0.0	0.0	38.95		52.00	52.00	1"	1.0	Gauge & Sample	VOCs, Ethene, TOC, Electron Acceptors
MW-9A	0.0	0.0	36.75		37.55	37.50	1"	NA	Gauge Only	
MW-9B	0.0	0.0	36.90		56.22	56.20	1"	NA	Gauge Only	
MW-9C	0.0	0.0	39.19		71.26	70.90	1"	NA	Gauge Only	
MW-10	0.0	0.0	9.87		33.62	33.60	4"	25	Gauge & Sample	VOCs
MW-11A	0.0	0.0	Dry		39.48	39.48	1"	NA	Gauge Only	
MW-11B	0.0	0.0	41.60		48.98	48.95	1"	NA	Gauge Only	
MW-12A	0.0	0.0	5.55		10.00	4.46	1"	NA	Gauge Only	
MW-12B	0.0	0.0	37.57		39.55	34.55	1"	NA	Gauge Only	
MW-12C	0.0	0.0	37.55		45.10	45.10	1"	NA	Gauge Only	
MW-13A	0.0	0.0	15.00		15.15	15.15	1"	N/A	Gauge & Sample	VOCs Not enough to Sample
MW-14A	0.0	0.0	33.67		37.16	37.17	1"	NA	Gauge Only	
MW-15A	0.0	0.0	11.98		18.95	15.90	1"	.25	Gauge & Sample	VOCs
MW-A	N/A				24.45		1"		Gauge & Sample	VOCs, Ethene, TOC, Electron Acceptors
MW-B	N/A				20.32		1"		Gauge & Sample	VOCs, Ethene, TOC, Electron Acceptors
MW-C	0.0	0.0	4.80		9.55	9.55	2"	2.0	Gauge & Sample	VOCs, Ethene, TOC, Electron Acceptors
MW-D	0.0	0.0	36.50		38.75	38.68	2"	N/A	Gauge & Sample	VOCs, Ethene, TOC, Electron Acceptors
MW-E	0.0	0.0	32.63		35.60	35.55	2"	0	Gauge & Sample	VOCs, Ethene, TOC, Electron Acceptors
MW-F	0.0	0.0	Dry		32.25	32.16	2"	N/A	Gauge & Sample	VOCs, Ethene, TOC, Electron Acceptors

Groundwater Sampling

(DTB - DTW)*X = _____ (1well volume in gallons) *Remove at least 3 well volumes*

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

BOTTLEWARE:	Electron Acceptors:
VOCs: 3 HCL VOAs	Sulfate: 250 mL unpreserved plastic
Ethene: 3 HCL VOAs	Ferric, Ferrous, Total Iron: 500 mL w/HNO3 & 500 mL unpsreserved
TOC: 1-60 mL HCL	Nitrate: 250 mL w/H2SO4 and 250 mL unpreserved

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-10

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 7/23/14

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** CM

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** Sunny

2. MONITORING WELL DATA:

Depth to Water: 9.87 **Depth to Bottom (last round):** 33.62

Casing Diameter: 4 **Calculated Purge Amount:** 45 gallons

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☒ No ☐

Did well purge dry? Yes ☒ No ☐ **Depth to Water after purge:** 32.70

Actual Purge Amount: 25 gallons **Depth to Water after recharge:** 25.20

Water Quality Meter Model: _____ **Time elapsed for recharge:** 5 mins.

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity	DO	ORP	Turbidity	Comments or Observations
First Volume	6.89	19.06	1,140	4.81	147.8	51.5	
Second Volume	6.67	16.45	1,079	5.54	125.5	56.5	
Third Volume*	6.65	16.76	1,190	5.06	122.1	55.1	

** - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.*

4. SAMPLE DATA

Sample ID: MW-10 **Depth to Water at time of Sampling:** 23.12

Sample Time: 0930 **Number of Containers:** 9

Analyses: COC **Duplicate Sample Collected?** Yes ☐ No ☐

MS/MSD Sample Collected? Yes ☒ No ☐

Was there enough sample volume to fill all sample jars? Yes ☒ No ☐ explain: _____

Depth to Bottom of Well (measure after sampling): 33.40 **Depth to DNAPL:** _____

5. COMMENTS _____

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-7

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 7/23/14

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** CM

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** Sunny

2. MONITORING WELL DATA:

Depth to Water: 39.74 **Depth to Bottom (last round):** 48.20

Casing Diameter: 2 **Calculated Purge Amount:** 4.0 gallons

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☒ No ☐

Did well purge dry? Yes ☐ No ☒ **Depth to Water after purge:** 45.70

Actual Purge Amount: 4.0 gallons **Depth to Water after recharge:** 42.62

Water Quality Meter Model: _____ **Time elapsed for recharge:** 5 mins

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity	DO	ORP	Turbidity	Comments or Observations
First Volume	7.47	20.79	4.007	2.18	17.4	25.3	
Second Volume	7.22	18.90	3.158	2.68	39.0	47.6	
Third Volume*	7.07	18.62	2.688	3.41	55.7	35.3	

** - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.*

4. SAMPLE DATA

Sample ID: MW-7 **Depth to Water at time of Sampling:** 41.60

Sample Time: 1015 **Number of Containers:** 6

Analyses: COC **Duplicate Sample Collected?** Yes ☒ No ☐

MS/MSD Sample Collected? Yes ☐ No ☒

Was there enough sample volume to fill all sample jars? Yes ☒ No ☐ explain: _____

Depth to Bottom of Well (measure after sampling): 48.20 **Depth to DNAPL:** _____

5. COMMENTS _____

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-15A

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 7/23/14

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** GM

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** Sunny

2. MONITORING WELL DATA:

Depth to Water: 11.98 **Depth to Bottom (last round):** 15.90

Casing Diameter: 2 **Calculated Purge Amount:** .50 gallons

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☐ No ☒

Did well purge dry? Yes ☐ No ☒ **Depth to Water after purge:** 13.65

Actual Purge Amount: .25 gallons **Depth to Water after recharge:** 13.60

Water Quality Meter Model: _____ **Time elapsed for recharge:** 5 min.

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity	DO	ORP	Turbidity	Comments or Observations
First Volume	6.76	17.93	1,807	2.83	136.7	103.	
Second Volume							
Third Volume*							

** - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.*

4. SAMPLE DATA

Sample ID: MW-15A **Depth to Water at time of Sampling:** 13.57

Sample Time: 0830 **Number of Containers:** 3

Analyses: COC **Duplicate Sample Collected?** Yes ☐ No ☒

MS/MSD Sample Collected? Yes ☐ No ☒

Was there enough sample volume to fill all sample jars? Yes ☒ No ☐ explain: _____

Depth to Bottom of Well (measure after sampling): 15.90 **Depth to DNAPL:** _____

5. COMMENTS Only one reading taken not enough water.

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-E

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 7/24/14

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** CM

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** Cloudy

2. MONITORING WELL DATA:

Depth to Water: 32.63 **Depth to Bottom (last round):** 35.60

Casing Diameter: 2 **Calculated Purge Amount:** 1.0 *gallons*

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☐ No ☒

Did well purge dry? Yes ☐ No ☒ **Depth to Water after purge:** N/A

Actual Purge Amount: 0.0 gallons **Depth to Water after recharge:** ↓

Water Quality Meter Model: _____ **Time elapsed for recharge:** ↓

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity	DO	ORP	Turbidity	Comments or Observations
First Volume	6.91	14.47	1.760	3.00	-206.4	927	
Second Volume							
Third Volume*							

** - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.*

4. SAMPLE DATA

Sample ID: MW-E **Depth to Water at time of Sampling:** 32.63

Sample Time: 0815 **Number of Containers:** 11

Analyses: COC **Duplicate Sample Collected?** Yes ☐ No ☒

MS/MSD Sample Collected? Yes ☐ No ☒

Was there enough sample volume to fill all sample jars? Yes ☑ No ☐ explain: _____

Depth to Bottom of Well (measure after sampling): 35.55 **Depth to DNAPL:** _____

5. COMMENTS Not enough water to purge, only one reading.

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-4

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 7/24/14

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** CM

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** cloudy

2. MONITORING WELL DATA:

Depth to Water: 37.45 **Depth to Bottom (last round):** 46.80

Casing Diameter: 2 **Calculated Purge Amount:** 4.0 gallons

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☐ No ☒

Did well purge dry? Yes ☐ No ☒ **Depth to Water after purge:** 43.20

Actual Purge Amount: 4.0 gallons **Depth to Water after recharge:** 43.19

Water Quality Meter Model: _____ **Time elapsed for recharge:** 5 min.

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity	DO	ORP	Turbidity	Comments or Observations
First Volume	6.28	15.16	2.343	0.81	-160.9	13.2	
Second Volume	6.33	14.86	2.343	0.57	-169.8	11.1	
Third Volume*	6.32	14.92	2.284	0.89	-155.1	9.47	

** - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.*

4. SAMPLE DATA

Sample ID: MW-4 **Depth to Water at time of Sampling:** 43.15

Sample Time: 0910 **Number of Containers:** 11

Analyses: COC **Duplicate Sample Collected?** Yes ☐ No ☒

MS/MSD Sample Collected? Yes ☐ No ☒

Was there enough sample volume to fill all sample jars? Yes ☒ No ☐ explain: _____

Depth to Bottom of Well (measure after sampling): 46.72 **Depth to DNAPL:** _____

5. COMMENTS _____

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-D

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 7/24/14

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** CM

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** Cloudy

2. MONITORING WELL DATA:

Depth to Water: 34.50 **Depth to Bottom (last round):** 38.75

Casing Diameter: 2 **Calculated Purge Amount:** 0.8 gallons

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☐ No ☒

Did well purge dry? Yes ☐ No ☒ **Depth to Water after purge:** N/A

Actual Purge Amount: 0.0 gallons **Depth to Water after recharge:** J

Water Quality Meter Model: _____ **Time elapsed for recharge:** J

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity	DO	ORP	Turbidity	Comments or Observations
First Volume	6.70	14.74	1.095	0.39	-194.2	2392	
Second Volume							
Third Volume*							

* - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.

4. SAMPLE DATA

Sample ID: MW-D **Depth to Water at time of Sampling:** 34.50

Sample Time: 0935 **Number of Containers:** 8

Analyses: COC **Duplicate Sample Collected?** Yes ☐ No ☒

MS/MSD Sample Collected? Yes ☐ No ☒

Was there enough sample volume to fill all sample jars? Yes ☐ No ☒ explain: _____

Depth to Bottom of Well (measure after sampling): 38.68 **Depth to DNAPL:** _____

5. COMMENTS Only One reading taken not enough water to purge.

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-3

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 9/24/14

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** CM

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** partly sunny

2. MONITORING WELL DATA:

Depth to Water: 39.60 **Depth to Bottom (last round):** 42.70

Casing Diameter: 2 **Calculated Purge Amount:** 1.5 *gallons*

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☐ No ☒

Did well purge dry? Yes ☐ No ☒ **Depth to Water after purge:** N/A

Actual Purge Amount: N/A gallons **Depth to Water after recharge:** ↓

Water Quality Meter Model: _____ **Time elapsed for recharge:** ↓

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity	DO	ORP	Turbidity	Comments or Observations
First Volume	6.27	15.76	2.047	0.54	-141.4	41.4	
Second Volume							
Third Volume*							

* - *Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.*

4. SAMPLE DATA

Sample ID: MW-3 **Depth to Water at time of Sampling:** 39.60

Sample Time: 1000 **Number of Containers:** 1

Analyses: COC **Duplicate Sample Collected?** Yes ☐ No ☒

MS/MSD Sample Collected? Yes ☐ No ☒

Was there enough sample volume to fill all sample jars? Yes ☒ No ☐ explain: _____

Depth to Bottom of Well (measure after sampling): 43.00 **Depth to DNAPL:** _____

5. COMMENTS Only one reading note enough to purge.

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-5

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 7/24/14

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** GM

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** partly sunny

2. MONITORING WELL DATA:

Depth to Water: 38.44 **Depth to Bottom (last round):** 45.28

Casing Diameter: 2 **Calculated Purge Amount:** 3.0 *gallons*

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☐ No ☒

Did well purge dry? Yes ☐ No ☒ **Depth to Water after purge:** 43.65

Actual Purge Amount: 3.0 gallons **Depth to Water after recharge:** NA

Water Quality Meter Model: _____ **Time elapsed for recharge:** ↓

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity	DO	ORP	Turbidity	Comments or Observations
First Volume	6.78	16.88	8.249	0.31	-157.0	34.7	
Second Volume	6.69	15.78	10.06	0.46	-121.9	20.6	
Third Volume*	6.72	15.85	12.71	0.51	-113.5	35.3	

* - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.

4. SAMPLE DATA

Sample ID: MW-5 **Depth to Water at time of Sampling:** 43.64

Sample Time: 1045 **Number of Containers:** 11

Analyses: COC **Duplicate Sample Collected?** Yes ☐ No ☒

MS/MSD Sample Collected? Yes ☐ No ☒

Was there enough sample volume to fill all sample jars? Yes ☒ No ☐ explain: _____

Depth to Bottom of Well (measure after sampling): 45.27 **Depth to DNAPL:** _____

5. COMMENTS _____

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-C

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 7/24/14

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** AM

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** Partly Sunny

2. MONITORING WELL DATA:

Depth to Water: 4.80 **Depth to Bottom (last round):** 9.55

Casing Diameter: 2 **Calculated Purge Amount:** 2.0 gallons

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☒ No ☐

Did well purge dry? Yes ☐ No ☒ **Depth to Water after purge:** 7.43

Actual Purge Amount: 2.0 gallons **Depth to Water after recharge:** 6.40

Water Quality Meter Model: _____ **Time elapsed for recharge:** 3 mins

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity	DO	ORP	Turbidity	Comments or Observations
First Volume	6.89	24.38	1.228	0.67	-111.0	26.3	
Second Volume	6.72	22.94	1.198	1.22	-114.8	43.0	
Third Volume*	6.64	22.26	1.226	1.61	-104.5	47.2	

** - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.*

4. SAMPLE DATA

Sample ID: MW-C **Depth to Water at time of Sampling:** 5.25

Sample Time: 1120 **Number of Containers:** 11

Analyses: COC **Duplicate Sample Collected?** Yes ☐ No ☒

MS/MSD Sample Collected? Yes ☐ No ☒

Was there enough sample volume to fill all sample jars? Yes ☒ No ☐ explain: _____

Depth to Bottom of Well (measure after sampling): 9.55 **Depth to DNAPL:** _____

5. COMMENTS _____

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-8B

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 11/24/14

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** CM

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** Sunny

2. MONITORING WELL DATA:

Depth to Water: 38.95 **Depth to Bottom (last round):** 52.00

Casing Diameter: 2 **Calculated Purge Amount:** 1.0 gallons

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☒ No ☐

Did well purge dry? Yes ☐ No ☒ **Depth to Water after purge:** 41.80

Actual Purge Amount: 1.0 gallons **Depth to Water after recharge:** 41.30

Water Quality Meter Model: _____ **Time elapsed for recharge:** 5 mins

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity	DO	ORP	Turbidity	Comments or Observations
First Volume	6.52	21.06	0.625	3.44	-36.7	14.2	
Second Volume	6.56	19.54	0.205	1.68	-101.3	10.3	
Third Volume*	6.75	20.09	2.227	2.98	-72.8	23.0	

** - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.*

4. SAMPLE DATA

Sample ID: MW-8B **Depth to Water at time of Sampling:** 40.93

Sample Time: 12:15 **Number of Containers:** 11

Analyses: CoC **Duplicate Sample Collected?** Yes ☐ No ☒

MS/MSD Sample Collected? Yes ☐ No ☒

Was there enough sample volume to fill all sample jars? Yes ☒ No ☐ explain: _____

Depth to Bottom of Well (measure after sampling): 52.00 **Depth to DNAPL:** _____

5. COMMENTS _____

DAILY SIGN IN SHEET
Hazard Asessment Checklist

Site Name/Project #: Orangeburg Shopping Center / 1102323

Site Address: 1-45 Orangetown Shopping Center, Orangetown, NY 10962 Date: 9-24-14

The Site Supervisor will review the hazards of the job with all employees and visitors daily. If the work includes intrusive work, confined space, lockout/tagout, a plan or permit is required to be completed. Emergency response plans will be reviewed before work begins. Signatures are required for each day of work. Revisions to this form must be initialed and dated.

Description of Work (Tasks to be Completed)

QUARTERLY SSDS INSPECTION, WASTE REMOVAL

Traffic Control Methods: CONES / SIGNS

Site Hazards/PPE/Hazard Control: Prior to the start of work, take a few minutes to review and discuss the strategy to deal with each hazard associated with the job and document above in "Tailgate Meeting"

PERSONAL PROTECTION:
- ___ Chemical Resistant Gloves
- ✓ Cloth/Leather Gloves
- ___ Tyvek Suit
- ___ Rubber Boots
- ___ Safety Goggles
- ✓ Steel Toed Boots
- ___ Face Shield
- ___ Respirator
- ___ Hearing Protection
- ✓ Hard Hat
- ✓ Safety Glasses w/Shields
- ___ Saranex Suit
- ___ Safety Harness/Lanyard
- ___ Other _____

LEVELS OF PPE
- ✓ D
- ___ Modified Level D
- ___ C (Respirator)

AIR MONITORING EQUIPMENT
- ___ PID NA
- ___ LEL/O2
- ___ Drager Pump/Tubes
- ___ Other_____

PERMITS
- ___ Hot/Cold (Attach Permit) NA
- ___ Traffic
- ___ Air Quality
- ___ One Call/Dig Safe NotificationCompleted

Number: _____
Expires: _____

Incident Reporting System
- ___ Emergency contacts listed
- ___ Understand Incident/Injury/Near Miss procedures and responsibilities

TOOLS:
- ✓ Proper Tools for Job
- ✓ Good Tool Condition

ACCESS:
- ___ Scaffolds Inspected & Tagged
- ✓ Ladders Tied Off
- ✓ Personal Man Basket
- ___ Confined Space (Attach Form)

EMERGENCY EQUIPMENT
LOCATION KNOWN:
- ✓ Site-specific Health & Safety Plan/MSDS's
- ___ Fire Monitors
- ___ Fire Extinguishers
- ___ Safety Showers
- ___ Eye Wash
- ✓ Evacuation Route Reviewed
- ✓ Local Emergency Numbers
- ✓ Hospital
- ✓ Emergency Shut Off Switch

Location: _____

DRILLING:
- ___ Utility Clearance
- ___ Hearing Protection
- ___ Inspection by competent person
- ___ No loose clothing/jewelry worn
- ___ Established hand signals
- ___ Visual Contact
- ___ 25' Clearance from Overhead Power Lines
- ___ Pre-Drill checklist completed
- ___ Driller has current/valid license

License # _____

JLA:
- ___ Available on site for all scheduled tasks
- ___ Reviewed and understood by all

LIFTING/Materials Handling:
- ✓ Cherry Picker (current inspection)
- ___ Scissor Lift (current inspection)
- ✓ Fork Lift (current inspection)
- ✓ Drum Dolly
- ___ Truck Ramps
- ___ Overhead Lines (clearance)
- ___ Manual Lifting
- ___ Valid Crane Operator's License

POTENTIAL HAZARDS:
- ___ Airborne Particles
- ___ Gases/Vapors
- ___ Fire/Explosion
- ___ Electrical Shock
- ___ Slips, Trips and Falls
- ___ Heat Stress
- ___ Cold Stress
- ___ Heavy Objects
- ___ Hot/Cold Surfaces
- ___ Inadequate Lighting
- ___ First Opening of Equipment
- ___ High Noise Level
- ___ Access/Egress
- ___ Sharp Objects
- ✓ Poisonous Plants
- ✓ Insects and Snakes
- ___ Body Pinch Points
- ___ Housekeeping
- ___ Traffic

TRAFFIC CONTROL ELEMENTS:
- ✓ ORANGE TRAFFIC CONES
- ✓ MEN WORKING SIGN(S)
- ___ TRAFFIC CONTROL PLAN?
- ___ ORANGE TRAFFIC FLAGS
- ___ CAUTIONS TAPE, PENNANT FLAGS
- ___ POLICE DETAIL
- ___ ABANDONED (PROPERLY BARRICADED)
- ✓ HIGH VISIBILITY VEST/CLOTHING

ELECTRICAL:
- ✓ Locked/Tagged Out
- ___ Bonding
- ___ Verify Isolation
- ___ GFCI Used
- ✓ Condition of Electrical Cords
- ___ Other _____

EXCAVATION:
- ___ Visual Inspection of Trench
- ___ Soil Typing
- ___ Ladder Every 25' of Lateral Travel
- ___ Ladder Extends 3' above Trench
- ___ Adequate Shoring and Sloping
- ___ Accumulating Water Removal from Trench
- ___ Spoils Pile 2' from Edge of Trench
- ___ Surface Encumbrances
- ___ Barricade or Fill in Unattended Excavations

CLEANUP:
- ___ Cleanup is required after work completion
- ✓ Pick up tools and misc. items to prevent tripping hazards
- ✓ Discard trash

Training
- ✓ Full Day LPS Training Session (ExxonMobil Projects)
- ___ Awareness Short Course (on-site)
- ___ LPS Cards verified for all personnel
- ___ OSHA 40/8 Hour Updates current?

Other: _____

UB, Orangeburg, LLC
Urstadt - Orangetown Shopping Center / Sparkle Cleaners
1-45 Orangetown Shopping Center
Orangeburg Rockland NY
Operation, Monitoring, and Maintenance Data Sheets

Date: 9/24

Name: Rich B.

Location: Deli Spot (Vacant)

Blowers	Vacuum (in WC)
SSD-B1	2.537
SSD-B2	0.960
SSD-B3	1.680

Vapor Extraction wells	Vacuum (in WC)
SSD-2A	1.5
SSD-2B	1.3
SSD-3A	1.6
SSD-3B	1.7

Monitoring Points	Vacuum (in WC)
SSD-MP-1	.026
VP-1	.252
VP-2	~~.285~~ .275
VP-3	.194
SSD-MP-2	.012

Visual Inspection	Repairs Required	
	Yes	No
Pipe and fittings		✓
Concrete floor slab		✓
Manometers		✓

Notes:

Location: Sparkle Cleaners

Blowers	Vacuum (in WC)
SSD-B4	2.320
SSD-B5	1.783
SSD-B6	.560

Vapor Extraction wells	Vacuum (in WC)
SSD-5A	0.8
SSD-5B	.9
SSD-6A	2.0
SSD-6B	1.6

Monitoring Points	Vacuum (in WC)
SSD-MP-3	0.020
VP-4	~~.016~~ .017
VP-5	.012
VP-6	.059
SSD-MP-4	.019

Visual Inspection	Repairs Required	
	Yes	No
Pipe and fittings		✓
Concrete floor slab	✓	✓
Manometers		✓

Notes: REPLACED VP-6
PLUG VOID NEAR SW
WALL/FLOOR

4702.53

Location: New China

Blowers	Vacuum (in WC)
SSD-B7	0.645
SSD-B8	0.667

Vapor Extraction wells	Vacuum (in WC)
SSD-7A	~~0.695~~ 0.70
SSD-7B	0.7

Monitoring Points	Vacuum (in WC)
SSD-MP-5	0.015
VP-7	0.015
VP-8	0.014
VP-9	0.014
SSD-MP-6	0.019

Visual Inspection	Repairs Required	
	Yes	No
Pipe and fittings		✓
Concrete floor slab		✓
Manometers		✓

Notes:

REPLACED SSD #5
LIKE FOR LIKE

LORCO PETROLEUM SERVICES

450 SOUTH FRONT STREET, ELIZABETH, NJ 07202

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

G002 **NON-HAZARDOUS WASTE MANIFEST**

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of 1 | **NHZ 984557**

3. Generator's Name and Mailing Address: UB Orangeburg, LLC c/o Groundwater + Environmental, 16 Mount Ebo Road, Suite 21, Brewster, NY — Orange Town Shopping Center, 1-4 Orange Town Shopping Center, Orangeburg, NY 10962

4. Generator's Phone (866) 839-5795

5. Transporter 1 Company Name	6. US EPA ID Number	A. Transporter's Phone
LORCO PETROLEUM SERVICES	NJR000023036	908-820-8800
7. Transporter 2 Company Name	**8. US EPA ID Number**	**B. Transporter's Phone**
9. Designated Facility Name and Site Address	**10. US EPA ID Number**	**C. Facility's Phone**
LORCO PETROLEUM SERVICES 450 SOUTH FRONT STREET ELIZABETH, NJ 07202	NJR000023036	908-820-8800

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. UST GROUND WATER, NON-RCRA NON-DOT REGULATED	001	DM	xxx50	G
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

24-HOUR EMERGENCY RESPONSE #908-820-8800

DECAL #________

EGR# 127

TRUCK # 164

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
Michael DeGloria	Michael DeGloria on behalf of UB Orangeburg	9	2	14

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Jeff Blank	Jeff Blank	09	2	14

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year

GENERATOR'S COPY

Lorco Petroleum Services
450 South Front St.
Elizabeth, NJ 07202
(908) 820-8800
(800) 734-0910
FAX: (908) 820-8412

LORCO PETROLEUM SERVICES

www.lorcopetroleum.com

STANDARD COLLECTION ORDER FORM

1071083

GENERATOR/LOCATION

SALES ORDER #

NAME

INFORMATION/ATTENTION LINE | ACCOUNT APPROVAL CODE

DELIVERY ADDRESS

CITY | STATE | ZIP

PHONE NUMBER | PURCHASE ORDER NUMBER

TIME IN | TIME OUT

BILL TO (IF DIFFERENT FROM LOCATION)

NAME

INFORMATION/ATTENTION LINE | ACCOUNT APPROVAL CODE

DELIVERY ADDRESS

CITY | STATE | ZIP

PHONE NUMBER | PURCHASE ORDER NUMBER

MANIFEST NUMBER

SHIPPING INFORMATION

This is to certify that the below named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation

NO.	TYPE	QTY.	UNIT	US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	SALES REPRESENTATIVE

SERVICE SECTION

ITEM #	DESCRIPTION	WASTE CODE	QUANTITY	UNIT PRICE	PRICE	TAX	LINE TOTAL
40500	USED OIL REMOVAL						
40300	ANTIFREEZE REMOVAL						
40400	OILY WATER DISPOSAL						
41100	SLUDGE DISPOSAL						
41000	GASOLINE/WATER						
40900	DRUM DISPOSAL						
40611	NEW 55 GAL DRUMS / 17H						
40515	OIL WATER SEPARATOR SERVICE						
41513	TANK WASHER						
41507	TANK ENTRY						
41500	TRANSPORTATION						
41508	TRUCK AND OPERATOR						
41514	ADDITIONAL LABOR						
				TOTAL			

PARTS WASHER SERVICE INTERVAL _____ DAYS.
USED OIL CUSTOMER SERVICED EVERY 30 DAYS UNLESS OTHERWISE INDICATED.
USED OIL SERVICE INTERVAL _____ DAYS.

GENERATOR WARRANTS AND REPRESENTS THAT THE MATERIALS PROVIDED LORCO HEREUNDER HAVE NOT BEEN MIXED, COMBINED, OR OTHERWISE BLENDED IN ANY QUANTITY WITH MATERIALS CONTAINING POLYCHLORINATED BIPHENYLS (PCB) OR ANY OTHER MATERIAL DEFINED AS HAZARDOUS WASTE UNDER APPLICABLE LAWS, INCLUDING BUT NOT LIMITED TO 40 CFR PART 261, GENERATOR AGREES TO INDEMNIFY AND HOLD LORCO HARMLESS FOR ANY DAMAGES, COSTS, ATTORNEY'S FEES, ETC. ARISING OUT OF OR IN ANY WAY RELATED TO A BREACH OF THE ABOVE WARRANTY BY THE GENERATOR.

Generator certifies that the waste is ☐ used oil ☐ used antifreeze ☐ oily water ☐ oil filter ☐ parts washer solvent

☐ Other _____
Description

In accordance the N.J.A.C. 7:26-12.1 et seq, LORCO has the required permits to accept the above described waste.

X _____ Print Name _____ Title

X _____ Signature _____ Date

GENERATOR/CUSTOMER

CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR CERTIFICATION

I certify that this generator generates less than 100 kilograms of hazardous waste per month, as defined at 40 C.F.R. 261, and does not accumulate more than 1,000 kilograms of such waste during the month

X _____
GENERATOR'S SIGNATURE

NON CONDITIONALLY EXEMPT LARGE QUANTITY GENERATOR CERTIFICATION

DEXSIL CDT TEST RESULTS

X _____ PPM

CUSTOMER

CHARGE MY ACCOUNT FOR THIS TRANSACTION UNLESS OTHERWISE INDICATED IN THE PAYMENT SECTION. $ _____
INVOICES REFLECTING CHARGES TO CUSTOMER ARE SUBJECT TO AN INTEREST RATE OF THE LESSER OF 1½% PER MONTH (18% PER ANNUM) OR THE MAXIMUM RATE ALLOWED BY LAW ON ANY INVOICES THAT ARE NOT PAID WITHIN 30 DAYS. IN THE EVENT OF DEFAULT, LORCO SHALL BE ENTITLED TO RECOVER COSTS OF COLLECTION, INCLUDING REASONABLE ATTORNEY'S FEES. INITIAL _____

PAYMENT RECEIVED SECTION

CASH ☐	TOTAL RECEIVED
CHECK NUMBER	

In accordance with NJAC7:26-6.7b + 40CFR PART 279 LORCO has notified the US EPA of its location and used oil management activities.

X _____ Print Name

X _____ Signature _____ Date

LORCO REPRESENTATIVE

9/24/14

ORANGEBURG –

– 0600 LEAVE CIN
– 0700 P/U BOOM LIFT

0900 – ARRIVE @ UB-O
WONCO/GES

– Review & SIGN HASP
– DEBRIEFINGS JSA –
TALKED ABOUT HAND
SAFETY – PINCH POINTS
STAY CLEAR OF DRUM
EDGES WHEN RAISING DRUM

– PICK UP – 1 DRUM H2O

0930 – LOADED OFFSITE w/
1 DRUM.
– Rich bolted down well
bolt.

1015 – Rick HARNESS up –
COMPLETED HARNESS
CHECK

-SETUP OUTRIGGERS AND WORK ZONE-

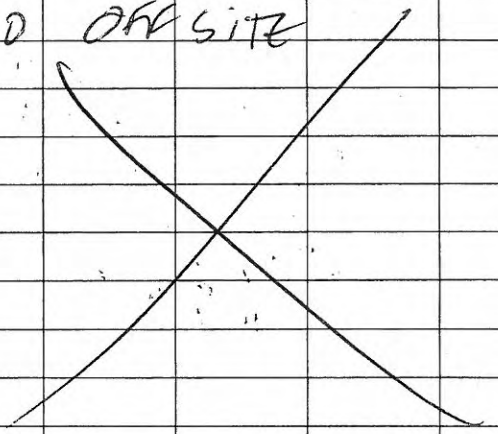
FAN #5 INOPERABLE - REPLACE LIKE FOR LIKE XR-261

1130 AERIAL WORK DONE

1300 OTM COMPLETE - REPLACED UP-L

1330 Checked SIA/SIB DCPMS & GOOD - NO ISSUES

1400 OFF SITE



DAILY SIGN IN SHEET
Hazard Asessment Checklist

Site Name/Project #: Orangeburg Shopping Center / 1102323

Site Address: 1-45 Orangetown Shopping Center, Orangetown, NY 10962 **Date:** 12/10/14

The Site Supervisor will review the hazards of the job with all employees and visitors daily. If the work includes intrusive work, confined space, lockout/tagout, a plan or permit is required to be completed. Emergency response plans will be reviewed before work begins. Signatures are required for each day of work. Revisions to this form must be initialed and dated.

Description of Work (Tasks to be Completed)

Groundwater Sampling

Traffic Control Methods:

Cones, flags, caution tape, PPE

Site Hazards/PPE/Hazard Control: Prior to the start of work, take a few minutes to review and discuss the strategy to deal with each hazard associated with the job and document above in "Tailgate Meeting"

PERSONAL PROTECTION:
- ___ Chemical Resistant Gloves
- ___ Cloth/Leather Gloves
- ___ Tyvek Suit
- ___ Rubber Boots
- ✓ Safety Goggles
- ✓ Steel Toed Boots
- ___ Face Shield
- ___ Respirator
- ___ Hearing Protection
- ___ Hard Hat
- ___ Safety Glasses w/Shields
- ___ Saranex Suit
- ___ Safety Harness/Lanyard
- ___ Other _____

LEVELS OF PPE
- ✓ D
- ___ Modified Level D
- ___ C (Respirator)

AIR MONITORING EQUIPMENT
- ✓ PID
- ___ LEL/O2
- ___ Drager Pump/Tubes
- ___ Other_____

PERMITS
- ___ Hot/Cold (Attach Permit)
- ___ Traffic
- ___ Air Quality
- ___ One Call/Dig Safe NotificationCompleted

Number: _____
Expires: _____

Incident Reporting System
- ___ Emergency contacts listed
- ___ Understand Incident/Injury/Near Miss procedures and responsibilities

TOOLS:
- ✓ Proper Tools for Job
- ✓ Good Tool Condition

ACCESS:
- ___ Scaffolds Inspected & Tagged
- ___ Ladders Tied Off
- ___ Personal Man Basket
- ___ Confined Space (Attach Form)

EMERGENCY EQUIPMENT LOCATION KNOWN:
- ✓ Site-specific Health & Safety Plan/MSDS's
- ___ Fire Monitors
- ✓ Fire Extinguishers
- ___ Safety Showers
- ✓ Eye Wash
- ___ Evacuation Route Reviewed
- ___ Local Emergency Numbers
- ___ Hospital
- ___ Emergency Shut Off Switch Location: _____

DRILLING:
- ___ Utility Clearance
- ___ Hearing Protection
- ___ Inspection by competent person
- ___ No loose clothing/jewelry worn
- ___ Established hand signals
- ___ Visual Contact
- ___ 25' Clearance from Overhead Power Lines
- ___ Pre-Drill checklist completed
- ___ Driller has current/valid license
- License # _____

JLA:
- ___ Available on site for all scheduled tasks
- ___ Reviewed and understood by all

LIFTING/Materials Handling:
- ___ Cherry Picker (current inspection)
- ___ Scissor Lift (current inspection)
- ___ Fork Lift (current inspection)
- ___ Drum Dolly
- ___ Truck Ramps
- ___ Overhead Lines (clearance)
- ___ Manual Lifting
- ___ Valid Crane Operator's License

POTENTIAL HAZARDS:
- ___ Airborne Particles
- ___ Gases/Vapors
- ___ Fire/Explosion
- ___ Electrical Shock
- ___ Slips, Trips and Falls
- ___ Heat Stress
- ___ Cold Stress
- ___ Heavy Objects
- ___ Hot/Cold Surfaces
- ___ Inadequate Lighting
- ___ First Opening of Equipment
- ___ High Noise Level
- ___ Access/Egress
- ___ Sharp Objects
- ___ Poisonous Plants
- ✓ Insects and Snakes
- ___ Body Pinch Points
- ___ Housekeeping
- ✓ Traffic

TRAFFIC CONTROL ELEMENTS:
- ✓ ORANGE TRAFFIC CONES
- ✓ MEN WORKING SIGN(S)
- ___ TRAFFIC CONTROL PLAN?
- ✓ ORANGE TRAFFIC FLAGS
- ✓ CAUTIONS TAPE, PENNANT FLAGS
- ___ POLICE DETAIL
- ___ ABANDONED (PROPERLY BARRICADED)
- ___ HIGH VISIBILITY VEST/CLOTHING

ELECTRICAL:
- ___ Locked/Tagged Out
- ___ Bonding
- ___ Verify Isolation
- ___ GFCI Used
- ___ Condition of Electrical Cords
- ___ Other _____

EXCAVATION:
- ___ Visual Inspection of Trench
- ___ Soil Typing
- ___ Ladder Every 25' of Lateral Travel
- ___ Ladder Extends 3' above Trench
- ___ Adequate Shoring and Sloping
- ___ Accumulating Water Removal from Trench
- ___ Spoils Pile 2' from Edge of Trench
- ___ Surface Encumbrances
- ___ Barricade or Fill in Unattended Excavations

CLEANUP:
- ✓ Cleanup is required after work completion
- ✓ Pick up tools and misc. items to prevent tripping hazards
- ✓ Discard trash

Training
- ✓ Full Day LPS Training Session (ExxonMobil Projects)
- ___ Awareness Short Course (on-site)
- ___ LPS Cards verified for all personnel
- ___ OSHA 40/8 Hour Updates current?

Other: _____

DAILY SIGN IN SHEET
Hazard Asessment Checklist

Site Name/Project #: Orangeburg Shopping Center / 1102323

Site Address: 1-45 Orangetown Shopping Center, Orangetown, NY 10962 Date: 12/10/14

All GES employees and subcontractors must comply with the site HASP and GES Policies/Procedures.
Non-conformance shall prohibit admittance to the site.

Employee/Visitor Name (Print)	Signature	Company Representing	Tasks Assigned	LPS Training Type (Full or Awareness)	On-site Hours
Mark Rosell		GES	GWS	Full	

On-Site Supervisor Signature:

GES Instrument Calibration Sheet

Station Location: 1-45 Orangetown Shopping Center

Station Number: NYSDEC #C344066

Equipment Name- **Photoionization Detector (Pid)**
Serial Number-
Calibration Technician
Calibration Gas or Calibration Method- span isobutylene
Concentration (ppm)-
Comments- Clean air calibration

Date- 10/10/14
Readings Before Calibration- 0.0
Readings After Calibration- 0.0
Span Check-

Equipment Name- **YSI**
Serial Number- Pine Rental #3525
Calibration Technician M Rosett

Date- 10/10/14

Parameter

_pH	Standard	Initial	Calibrated	Mid-Day Bump Check
	4.00	4.00	4.00	
	7.00	7.00	7.00	
	10.00	10.00	10.00	
Turbidity	**Standard**	**Initial**	**Calibrated**	**Mid-Day Bump Check**
	0.00	0.00	0.00	
	126.00	126.00	126.0	
DO	**Standard**	**Initial**	**Calibrated**	**Mid-Day Bump Check**
	100%	100.0%	100.0%	
Conductivity	**Standard**	**Initial**	**Calibrated**	**Mid-Day Bump Check**
	1.413	1.413	1.413	

Comments-

Site: Orangetown Shopping Center **Tech:** M Rosetti

Address: 1-45 Orangetown Shopping Center **Date:** 10/10/14

Daily Field Log (Gauging Table) Orangeburg, New York **Weather:** 60°F clear

Well ID	PID (outer)	PID (inner)	Depth to Water	Depth to DNAPL	Depth to Bottom (last visit)	Depth to Bottom (measured)	Well Diameter	Well Volume	Comments	Analytical Parameters
MW-3	0.0	0.0	DRY	NA	42.70	42.65	2"	0.0	Gauge & Sample	VOCs, Ethene, Electron Acceptors
MW-4	0.0	0.0	44.53	NA	46.80	46.72	2"	0.347	Gauge & Sample	VOCs, Ethene, Electron Acceptors, AND TOC
MW-5	0.0	0.0	40.55	NA	45.20	45.30	2"	0.75	Gauge & Sample	VOCs, Ethene, Electron Acceptors, AND TOC
MW-8A	0.0	0.0	DRY	NA	43.15	42.70	1"	0.0	Gauge & Sample	VOCs, Ethene, Electron Acceptors
MW-8B	0.0	0.0	47.21	NA	52.00	51.70	1"	0.193	Gauge & Sample	VOCs, Ethene, Electron Acceptors
MW-10	0.0	0.0	18.12	NA	33.62	33.57	4"	10.12	Gauge & Sample	VOCs

Groundwater Sampling

(DTB - DTW)*X = _____ (1well volume in gallons) *Remove at least 3 well volumes*

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

BOTTLEWARE:	Electron Acceptors:
VOCs: 3 HCL VOAs	Sulfate: 250 mL unpreserved plastic
Ethene: 3 HCL VOAs	Ferric, Ferrous, Total Iron: 500 mL w/HNO3 & 500 mL unpsreserved
TOC: 1-60 mL HCL	Nitrate: 250 mL w/H2SO4 and 250 mL unpreserved

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-3

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 10/10/14

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** M Rosell.

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** 50°F Clear

2. MONITORING WELL DATA:

Depth to Water: 41.96 **Depth to Bottom (last round):** 42.70

Casing Diameter: 2" **Calculated Purge Amount:** NA *gallons*

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☐ No ☒

Did well purge dry? Yes ☑ No ☐ **Depth to Water after purge:** N/A

Actual Purge Amount: _____ gallons **Depth to Water after recharge:** N/A

Water Quality Meter Model: _____ **Time elapsed for recharge:** N/A

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity	DO	ORP	Turbidity	Comments or Observations
First Volume							
Second Volume							
Third Volume*							

** - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.*

4. SAMPLE DATA

Sample ID: _____ **Depth to Water at time of Sampling:** N/A

Sample Time: N/A **Number of Containers:** 0

Analyses: _____ **Duplicate Sample Collected?** Yes ☐ No ☒

_____ **MS/MSD Sample Collected?** Yes ☐ No ☒

Was there enough sample volume to fill all sample jars? Yes ☐ No ☒ explain: _____

Depth to Bottom of Well (measure after sampling): 42.65 **Depth to DNAPL:** _____

5. COMMENTS No Samples or measurements collected well ~~has~~ doesn't have enough water

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-4

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 10/2/14

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** Mark Rosell

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** 60°F Clear

2. MONITORING WELL DATA:

Depth to Water: 44.53 **Depth to Bottom (last round):** 46.80

Casing Diameter: 2" **Calculated Purge Amount:** 0.347 gallons

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☐ No ☒

Did well purge dry? Yes ☑ No ☐ **Depth to Water after purge:** N/A

Actual Purge Amount: _____ gallons **Depth to Water after recharge:** N/A

Water Quality Meter Model: _____ **Time elapsed for recharge:** N/A

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity (µS/cm)	DO	ORP	Turbidity	Comments or Observations
First Volume	6.64	19.02	2345	1.50	-34.6	20.3	
Second Volume							
Third Volume*							

** - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.*

4. SAMPLE DATA

Sample ID: MW-4 **Depth to Water at time of Sampling:** 44.65

Sample Time: 1030 **Number of Containers:** 9

Analyses: See COC **Duplicate Sample Collected?** Yes ☐ No ☑

MS/MSD Sample Collected? Yes ☐ No ☑

Was there enough sample volume to fill all sample jars? Yes ☐ No ☑ explain: _____

Depth to Bottom of Well (measure after sampling): 46.72 **Depth to DNAPL:** N/A

5. COMMENTS _____

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-5

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 10/10/14

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** M Rosell

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** 50°F Clear

2. MONITORING WELL DATA:

Depth to Water: 40.55 **Depth to Bottom (last round):** 45.20

Casing Diameter: 2" **Calculated Purge Amount:** 0.75 gallons

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☐ No ☑

Did well purge dry? Yes ☑ No ☐ **Depth to Water after purge:** 1024

Actual Purge Amount: 0.75 gallons **Depth to Water after recharge:** N/A

Water Quality Meter Model: _____ **Time elapsed for recharge:** N/A

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity µS/cm²	DO	ORP	Turbidity	Comments or Observations
First Volume	6.82	17.40	1477	0.50	-66.9	147.6	well purged dry
Second Volume							
Third Volume*							

* - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.

4. SAMPLE DATA

Sample ID: MW-5 **Depth to Water at time of Sampling:** 41.10

Sample Time: 1115 **Number of Containers:** 4

Analyses: See COC **Duplicate Sample Collected?** Yes ☐ No ☒

MS/MSD Sample Collected? Yes ☐ No ☒

Was there enough sample volume to fill all sample jars? Yes ☐ No ☑ explain: _____

Depth to Bottom of Well (measure after sampling): 45.30 **Depth to DNAPL:** N/A

5. COMMENTS Well purged dry after first set of readings.

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-8A

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 10/12/14

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** M Rosen

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** 50°F Clear

2. MONITORING WELL DATA:

Depth to Water: DRY **Depth to Bottom (last round):** 43.15

Casing Diameter: 1" **Calculated Purge Amount:** N/A gallons

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☐ No ☑

Did well purge dry? Yes ☐ No ☐ **Depth to Water after purge:** N/A

Actual Purge Amount: N/A gallons **Depth to Water after recharge:**

Water Quality Meter Model: **Time elapsed for recharge:**

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity	DO	ORP	Turbidity	Comments or Observations
First Volume							
Second Volume							
Third Volume*							

* - *Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.*

4. SAMPLE DATA

Sample ID: NO Sample **Depth to Water at time of Sampling:** N/A

Sample Time: N/A **Number of Containers:** 0

Analyses: N/A **Duplicate Sample Collected?** Yes ☐ No ☑

MS/MSD Sample Collected? Yes ☐ No ☑

Was there enough sample volume to fill all sample jars? Yes ☐ No ☑ explain:

Depth to Bottom of Well (measure after sampling): ~~45~~ 42.70 **Depth to DNAPL:**

5. COMMENTS Well is dry

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-8B

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 10/10/14

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** M Rosen

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** 50°F Clear

2. MONITORING WELL DATA:

Depth to Water: 47.21 **Depth to Bottom (last round):** 52.00

Casing Diameter: 1" **Calculated Purge Amount:** 0.193 gallons

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☐ No ☒

Did well purge dry? Yes ☑ No ☐ **Depth to Water after purge:** _____

Actual Purge Amount: 740 mL gallons **Depth to Water after recharge:** _____

Water Quality Meter Model: _____ **Time elapsed for recharge:** _____

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity (us/cm)	DO	ORP	Turbidity	Comments or Observations
First Volume	7.78	22.04	140	2.39	32.7	8.9	
Second Volume	7.24	19.60	110	3.90	-35.5	21.3	
Third Volume*							

** - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.*

4. SAMPLE DATA

Sample ID: MW-8B **Depth to Water at time of Sampling:** 47.35

Sample Time: 1200 **Number of Containers:** 8

Analyses: See COC **Duplicate Sample Collected?** Yes ☐ No ☒

MS/MSD Sample Collected? Yes ☐ No ☒

Was there enough sample volume to fill all sample jars? Yes ☐ No ☒ explain: _____

Depth to Bottom of Well (measure after sampling): 51.70 **Depth to DNAPL:** _____

5. COMMENTS _____

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-10

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 10/10/14

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** M Rosetti

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** 50°F Clear

2. MONITORING WELL DATA: 18.12

Depth to Water: ~~18.62~~ **Depth to Bottom (last round):** 33.62

Casing Diameter: 4" **Calculated Purge Amount:** _____ gallons

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☐ No ☒

Did well purge dry? Yes ☐ No ☒ **Depth to Water after purge:** 18.25

Actual Purge Amount: 0.90 gallons **Depth to Water after recharge:** N/A

Water Quality Meter Model: _____ **Time elapsed for recharge:** N/A

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity (µS/cm²)	DO	ORP	Turbidity	Comments or Observations
First Volume	7.80	15.56	90	6.45	85.7	6.6	
Second Volume	6.61	15.93	870	6.72	137.9	25.6	
Third Volume*	6.64	15.67	451	6.74	150	41.0	

** - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.*

4. SAMPLE DATA

Sample ID: MW-10 **Depth to Water at time of Sampling:** 18.75

Sample Time: 1245 **Number of Containers:** 12

Analyses: See COC **Duplicate Sample Collected?** Yes ☑ No ☐

MS/MSD Sample Collected? Yes ☑ No ☐

Was there enough sample volume to fill all sample jars? Yes ☑ No ☐ explain: _____

Depth to Bottom of Well (measure after sampling): 33.57 **Depth to DNAPL:** N/A

5. COMMENTS _____

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID:

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** _____

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** _____

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** _____

2. MONITORING WELL DATA:

Depth to Water: _____ **Depth to Bottom (last round):** _____

Casing Diameter: _____ **Calculated Purge Amount:** _____ *gallons*

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** *Yes* ☐ *No* ☐

Did well purge dry? *Yes* ☐ *No* ☐ **Depth to Water after purge:** _____

Actual Purge Amount: _____ gallons **Depth to Water after recharge:** _____

Water Quality Meter Model: _____ **Time elapsed for recharge:** _____

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity	DO	ORP	Turbidity	Comments or Observations
First Volume							
Second Volume							
Third Volume*							

** - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.*

4. SAMPLE DATA

Sample ID: _____ **Depth to Water at time of Sampling:** _____

Sample Time: _____ **Number of Containers:** _____

Analyses: _____ **Duplicate Sample Collected?** *Yes* ☐ *No* ☐

_____ **MS/MSD Sample Collected?** *Yes* ☐ *No* ☐

Was there enough sample volume to fill all sample jars? *Yes* ☐ *No* ☐ explain: _____

Depth to Bottom of Well (measure after sampling): _____ **Depth to DNAPL:** _____

5. COMMENTS _____

10/10/14 GB Orangeburg
500F Clear Orangeburg, NY

-0730 Begin
-0800 Leave for Site
-0915 MR onsite for
GWS Event
Review HASP, SSA's,
SDSA's, don PPE
-0930 Begin GWS

Sample ID	Sample Time
MW-4	1030
MW-5	1115
MW-8B	1200
MW-10	1245
MW-10MS	1245
MW-10MSD	1245
Duplicate from MW-10	1200
Field Blank	1330
Equipment Blank	1345
Trip Blank	1500

- MW-8 and MW-8A not enough water for sample + Parameters
- drum + lock left onsite for purge water
- MW-5 + injection well flooded most likely being used to dump water alert Christina A. pictures taken
- 1400: MR offsite
- 1500 Return to office
- 1515 End

MR
10/10/14

Blank
10/30/14
MR

10/30/14 UB Orangeburg
50°F clear Orangetown Shopping Ctr

- 0815 Begin
- 0830 Leave office
- 0930 MR onsite for TOC Sample.
Review: HASP, SSAbs, SPSAbs, don PPE

collect sample from MW-5

Sample: MW-5 0945

- 1200 MR offsite

- 1115 Return to office / End

DAILY SIGN IN SHEET
Hazard Asessment Checklist

Site Name/Project #: Orangeburg Shopping Center / 1102323

Site Address: 1-45 Orangetown Shopping Center, Orangetown, NY 10962 **Date:** 11-5-14

The Site Supervisor will review the hazards of the job with all employees and visitors daily. If the work includes intrusive work, confined space, lockout/tagout, a plan or permit is required to be completed. Emergency response plans will be reviewed before work begins. Signatures are required for each day of work. Revisions to this form must be initialed and dated.

Description of Work (Tasks to be Completed)

ER - Waterline Damage

Traffic Control Methods: Caution Tape, Cones, Barriers

Site Hazards/PPE/Hazard Control: Prior to the start of work, take a few minutes to review and discuss the strategy to deal with each hazard associated with the job and document above in "Tailgate Meeting"

PERSONAL PROTECTION:
- ✓ Chemical Resistant Gloves
- ✓ Cloth/Leather Gloves
- Tyvek Suit
- Rubber Boots
- Safety Goggles
- ✓ Steel Toed Boots
- Face Shield
- Respirator
- Hearing Protection
- ✓ Hard Hat
- ✓ Safety Glasses w/Shields
- Saranex Suit
- Safety Harness/Lanyard
- Other _____

LEVELS OF PPE
- D
- ✓ Modified Level D
- C (Respirator)

AIR MONITORING EQUIPMENT
- ✓ PID
- ✓ LEL/O2
- Drager Pump/Tubes
- Other_____

PERMITS
- Hot/Cold (Attach Permit)
- Traffic
- Air Quality
- One Call/Dig Safe NotificationCompleted

Number: _____
Expires: _____

Incident Reporting System
- ✓ Emergency contacts listed
- ✓ Understand Incident/Injury/Near Miss procedures and responsibilities

TOOLS:
- ✓ Proper Tools for Job
- ✓ Good Tool Condition

ACCESS:
- Scaffolds Inspected & Tagged
- Ladders Tied Off
- Personal Man Basket
- Confined Space (Attach Form)

EMERGENCY EQUIPMENT LOCATION KNOWN:
- ✓ Site-specific Health & Safety Plan/MSDS's
- Fire Monitors
- Fire Extinguishers
- Safety Showers
- Eye Wash
- ✓ Evacuation Route Reviewed
- ✓ Local Emergency Numbers
- ✓ Hospital
- Emergency Shut Off Switch Location: _____ _____

DRILLING:
- Utility Clearance
- Hearing Protection
- Inspection by competent person
- No loose clothing/jewelry worn
- Established hand signals
- Visual Contact
- 25' Clearance from Overhead Power Lines
- Pre-Drill checklist completed
- Driller has current/valid license
- License # _____

JLA:
- Available on site for all scheduled tasks
- Reviewed and understood by all

LIFTING/Materials Handling:
- Cherry Picker (current inspection)
- Scissor Lift (current inspection)
- Fork Lift (current inspection)
- Drum Dolly
- Truck Ramps
- Overhead Lines (clearance)
- Manual Lifting
- Valid Crane Operator's License

POTENTIAL HAZARDS:
- ✓ Airborne Particles
- ✓ Gases/Vapors
- ✓ Fire/Explosion
- Electrical Shock
- ✓ Slips, Trips and Falls
- Heat Stress
- ✓ Cold Stress
- ✓ Heavy Objects
- Hot/Cold Surfaces
- ✓ Inadequate Lighting
- First Opening of Equipment
- High Noise Level
- Access/Egress
- ✓ Sharp Objects
- Poisonous Plants
- Insects and Snakes
- ✓ Body Pinch Points
- ✓ Housekeeping
- ✓ Traffic

TRAFFIC CONTROL ELEMENTS:
- ✓ ORANGE TRAFFIC CONES
- MEN WORKING SIGN(S)
- ✓ TRAFFIC CONTROL PLAN?
- ORANGE TRAFFIC FLAGS
- ✓ CAUTIONS TAPE, PENNANT FLAGS
- POLICE DETAIL
- ABANDONED (PROPERLY BARRICADED)
- ✓ HIGH VISIBILITY VEST/CLOTHING

ELECTRICAL:
- Locked/Tagged Out
- Bonding
- Verify Isolation
- GFCI Used
- Condition of Electrical Cords
- Other _____

EXCAVATION:
- ✓ Visual Inspection of Trench
- ✓ Soil Typing
- Ladder Every 25' of Lateral Travel
- Ladder Extends 3' above Trench
- ✓ Adequate Shoring and Sloping
- ✓ Accumulating Water Removal from Trench
- ✓ Spoils Pile 2' from Edge of Trench
- Surface Encumbrances
- Barricade or Fill in Unattended Excavations

CLEANUP:
- ✓ Cleanup is required after work completion
- ✓ Pick up tools and misc. items to prevent tripping hazards
- ✓ Discard trash

Training
- Full Day LPS Training Session (ExxonMobil Projects)
- ✓ Awareness Short Course (on-site)
- ✓ LPS Cards verified for all personnel
- ✓ OSHA 40/8 Hour Updates current?

Other: _____

DAILY SIGN IN SHEET
Hazard Asessment Checklist

Site Name/Project #: Orangeburg Shopping Center / 1102323

Site Address: 1-45 Orangetown Shopping Center, Orangetown, NY 10962 Date: 11-5-14

All GES employees and subcontractors must comply with the site HASP and GES Policies/Procedures.
Non-conformance shall prohibit admittance to the site.

Employee/Visitor Name (Print)	Signature	Company Representing	Tasks Assigned	LPS Training Type (Full or Awareness)	On-site Hours
C. Andreotto	C. Andreotto	GES	Env. Oversight	Full	6.5

On-Site Supervisor Signature:

11-30-14 Orangetown Shopping Center (CA)
Orangeburg, NY
1102333

Objective - emergency Response
Weather - overcast, windy, ~65°F

1130 - CA arrives on-Site
- H+S: REVIEW HASP, JSA's, PPE, SPSA's.
- Kings Capital Group is on-Site.
- Discuss Site Conditions
1330 - Dan Logue (UB) on-Site
- Discuss Plan for finding and Repairing the line.
1420 - Master Locators (Pat) on-Site
I ask that he Locate the water line and verify the gas line Location since it is w/in Close proximity to the water line.
- Locate water main and some of the individual lines.
- There is a Location flag has Settled Just ~~northeast~~ NW of INT-9.

(69)

11-30-14 Orangetown Shopping Center (CA)

- Break apart asphalt and uncover a void space that has filled w/some of the water.
- Dig out some of the damp Soil and place on poly Sheeting; PID = 0.0ppm.
- Natural gas odor noted, Call O+R.
- O+R arrives on-Site to Check gas lines and verify if there is a leak.
- There is a leak detected ("Code 1"). They have to repair prior to the water line repair.
- Dan explains that GES will not be needed during O+R's repair work.
- CA Writes Instructions for O+R on how to handle the Soil.

1800 - CA off-Site.

(70)

Table 1

DAILY AIR MONITORING RESULTS

UB Orangeburg
1-45 Orangetown Shopping Center
Orangeburg, New York

Sample Date / Monitoring Location / Time: (15 Minute Increments)	Particulates				Wind Direction VOCs		Comments
	Upwind Instant Results (mg/m3):	Upwind TWA Results (mg/m3):	Downwind Instant Results (mg/m3):	Downwind TWA Results (mg/m3):	Upwind Results (ppm):	Downwind Results (ppm):	
0830			0.0	0.0		0.0	BACKGROUND
0845			0.0	0.0		0.0	
0900			0.0	0.0		0.0	
0915			0.0	0.0		0.0	
0930			0.0	0.0		0.0	
0945			0.0	0.379		0.0	
1000			0.0	0.374		0.0	↑ ↑
1015			0.0	0.376		0.0	
1030			0.27	0.386		0.0	
1045			.701	0.327		0.0	SAW CUTTING
1100			1000	0.253		0.0	
1115			1002	1.207		0.0	
1130			.031	.198		0.0	↓ ↓
1145			.016	.198		0.0	
1200			.044	.198		0.0	
1215			0.36	.187		0.0	
1230			.000	.143		0.0	
1245			.000	.143		0.0	
1300			.000	.143		0.0	
1315			0.06	.134		0.0	
1330			0.06	.134		0.0	
1345			0.07	.134		0.0	
1400			0.15	.134		0.0	

Notes:
ppm = parts per million mg/m3 = milligrams per cubic meter

DAILY JOB REPORT

Name: AEAC Date: 11-14-14

Job Name: GCS Weather: cloudy

Job Location: Orange Beach

Leave Yard/Office AM: 0500	Arrive At Site 0700
Leave Site:	Back In Yard/Office: Home PM:

Work Performed: Hand dig 2 3x5x3 pits
Load approx 20 yds soil in Rolloff
Clean site Decon tools

Personnel On Site: Pete G.
Omar H

Remarks (Changes, additional work, pick up material, problems with equipment, etc...):

Subcontractors on site:

Equipment (trucks, excavator, pump truck etc.)	Time In	Time Out
R-1		
skip truck		

Client Signature: X _____ *AEAC Signature:* X _____

Site: Orangetown Shopping Center

Address: 1-45 Orangetown Shopping Center

Orangeburg, New York

Daily Field Log (Gauging Table)

Well ID	Depth to Water		Depth to Bottom (measured)	Well Diameter	COMMENTS
MW-14A	33.70		37.20	1	
MW-D	24.40		38.60	2	
MW-4	45.41		46.80	2	
MW-E	35.60		32.14	2	
MW-F	28.40		32.80	2	
MW-1	35.62		39.10	2	
MW-9A	36.41		37.50	1	
MW-9B	45.13		56.00	1	
MW-9C	71.00		58.20	1	
INJ-1	43.30		44.70	2	
INJ-2	DRY		43.80	2	
INJ-3	43.27		44.50	2	
INJ-4	42.80		43.80	2	
INJ-5	36.05		37.20	2	
INJ-6	24.40		24.55	2	
INJ-7	24.40		24.60	2	
INJ-8	43.92		43.80	2	
INJ-9	24.35		24.40	2	
MW-8A	41.95		43.30	1	
MW-8B	49.63		52.10	1	
MW-C	4.77		9.50	2	
MW-5	42.50		45.30	2	
MW-3	42.61		43.70	2	

GES HOT WORK PERMIT

Only the work area supervisor shall be authorized to issue hot work permits. The Local Health and Safety Officer must be notified prior to issuing the permit. These hot work permits are valid for one shift only. After completing the hot work, the permit shall be kept on file by the requesting department for at least one year.

Client/Site Name: UB – Orangeburg

Hotwork Location: Behind Shopping Center

Fire Prevention Measures

1. ☒ Yes / ☐ No / ☐ NA — Can the work be performed in a "designated hot work area"? Is such an area best-equipped for hot work?
2. ☐ Yes / ☒ No / ☐ NA — Is the work area a "hot work prohibited" area? Hot work shall never be performed in hot work prohibited areas (e.g., Oil/solvent storage).
3. ☒ Yes / ☐ No / ☐ NA — Is the flame or spark-producing equipment in good repair?
4. ☐ Yes / ☐ No / ☒ NA — If the activity is occurring inside a building, are sprinklers operational?
5. ☒ Yes / ☐ No / ☐ NA — Are there combustible gases, vapors, dusts, fibers or liquids in the area? Verify drums, tanks, or equipment previously containing such materials has been purged.
6. ☒ Yes / ☐ No / ☐ NA — Has the area been monitored to verify the absence of a potentially flammable condition?
7. ☒ Yes / ☐ No / ☐ NA — Fire watch provided during and continuously for 30 minutes after work, including during any work breaks. **Note: Monitoring for combustible gases must be performed continuously by fire watch personnel.*
8. ☐ Yes / ☐ No / ☒ NA — If arc welding will be performed, are welding flash curtains to confine slag and ultraviolet light available for use?
9. ☐ Yes / ☐ No / ☒ NA — Are surrounding floors and work areas clean of debris? If the flooring is combustible, has it been wetted down?
10. ☒ Yes / ☐ No / ☐ NA — Place 2 (two) 20# ABC fire extinguishers within 10 feet of the hot work area.
11. ☐ Yes / ☐ No / ☒ NA — If combustible materials were present in the hot work area, have they been moved at least 35 feet from the hot work area? If this is not feasible, have the combustible materials been protected with metal guards or flameproof covers? In tanks, this shall include inerting the inside of the tank so that a combustible environment does not exist.
12. ☐ Yes / ☐ No / ☒ NA — Have all floor and wall openings within 35 feet of the work been covered?
13. ☐ Yes / ☐ No / ☒ NA — Have all client-specific work and hot work permit requirements been satisfied?

CHEMICAL	NO RESPIRATOR REQUIRED	NO ROUTINE WORK PERMITTED	CONTINUOUS MONITORING REQUIRED	RESULT	TIME	RESULT	TIME	RESULT	TIME	RESULT	TIME	RESULT	TIME	RESULT	TIME
Oxygen	19.5% to 23.5%	19.5% OR 23.5%	☒ Yes ○ No	20.6	0915	20.9	1015	20.9	1115	20.9	1215	20.9	1315		
%LEL (hot work)	See Total Hydrocarbons	10% LEL	☒ Yes ○ No	0	↓	0	↓	0	↓	0	↓	0	↓		

Site Supervisor: Liam Maher — Date: 11-14-14

Designated Fire Watch: AEAC (Pete – Omar) — Date: 11-14-14

11-14-14 CM

UB - ORANGETown Shopping
I-45 O-Town Shopping Center
Orangeburg NY
1102488-08-229

0530 - @ office, prep for field event
0600 - DEPART for SITE
0700 - CM onsite, MASTER locaters onsite, American onsite
- Pine drop off equipment
- check in w/ MD
- SET-UP dust monitor
- CALIBRATE LEL + PIDs
0800 - backhoe delivered
- begin loading soil Pile into roll-off
0815 - collect sample of soil Pile
0830 - O+R onsite - show AREA of gas line to be exposed @ T-VALVE AND RISER NEXT to building
- saw-cut ASPHALT
- remove + begin hand clearing of gas line, APPROX 2' below grade
- screen soil around gas line - 0.0 PPM
1130 - O+R begin repairs to gas line
1330 - repairs finished
- begin backfill
* NO TAMPER onsite
- New line covered w/ SAND then stone to grade
- left w/ High vis barriers + cones
1400 - O+R + American offsite
- finish site gauging
1500 - CM offsite
1600 - Back @ office

DAILY SIGN IN SHEET
Hazard Asessment Checklist

Site Name/Project #: Orangeburg Shopping Center / 1102323

Site Address: 1-45 Orangetown Shopping Center, Orangetown, NY 10962

Date: 12-11-14
12-12-14

The Site Supervisor will review the hazards of the job with all employees and visitors daily. If the work includes intrusive work, confined space, lockout/tagout, a plan or permit is required to be completed. Emergency response plans will be reviewed before work begins. Signatures are required for each day of work. Revisions to this form must be initialed and dated.

Description of Work (Tasks to be Completed)

WASTE PICK UP

Traffic Control Methods:

CONES / FLAGS / CAUTION TAPE

Site Hazards/PPE/Hazard Control: Prior to the start of work, take a few minutes to review and discuss the strategy to deal with each hazard associated with the job and document above in "Tailgate Meeting"

PERSONAL PROTECTION:
- ✓ Chemical Resistant Gloves
- ✓ Cloth/Leather Gloves
- ___ Tyvek Suit
- ___ Rubber Boots
- ___ Safety Goggles
- ✓ Steel Toed Boots
- ___ Face Shield
- ___ Respirator
- ___ Hearing Protection
- ✓ Hard Hat
- ✓ Safety Glasses w/Shields
- ___ Saranex Suit
- ___ Safety Harness/Lanyard
- ___ Other _____

LEVELS OF PPE
- ___ D
- ✓ Modified Level D
- ___ C (Respirator)

AIR MONITORING EQUIPMENT
- ___ PID
- ___ LEL/O2
- ___ Drager Pump/Tubes
- ___ Other_____

PERMITS
- ___ Hot/Cold (Attach Permit)
- ___ Traffic
- ___ Air Quality
- ___ One Call/Dig Safe NotificationCompleted

Number: _____
Expires: _____

Incident Reporting System
- ✓ Emergency contacts listed
- ✓ Understand Incident/Injury/Near Miss procedures and responsibilities

TOOLS:
- ✓ Proper Tools for Job
- ✓ Good Tool Condition

ACCESS:
- ___ Scaffolds Inspected & Tagged
- ___ Ladders Tied Off
- ___ Personal Man Basket
- ___ Confined Space (Attach Form)

EMERGENCY EQUIPMENT
LOCATION KNOWN:
- ✓ Site-specific Health & Safety Plan/MSDS's
- ___ Fire Monitors
- ___ Fire Extinguishers
- ✓ Safety Showers
- ✓ Eye Wash
- ✓ Evacuation Route Reviewed
- ✓ Local Emergency Numbers
- ✓ Hospital
- ___ Emergency Shut Off Switch

Location: _____
_____

DRILLING:
- ___ Utility Clearance
- ___ Hearing Protection
- ___ Inspection by competent person
- ___ No loose clothing/jewelry worn
- ___ Established hand signals
- ___ Visual Contact
- ___ 25' Clearance from Overhead Power Lines
- ___ Pre-Drill checklist completed
- ___ Driller has current/valid license

License # _____

JLA:
- ✓ Available on site for all scheduled tasks
- ✓ Reviewed and understood by all

LIFTING/Materials Handling:
- ___ Cherry Picker (current inspection)
- ___ Scissor Lift (current inspection)
- ___ Fork Lift (current inspection)
- ___ Drum Dolly
- ___ Truck Ramps
- ___ Overhead Lines (clearance)
- ___ Manual Lifting
- ___ Valid Crane Operator's License

POTENTIAL HAZARDS:
- ___ Airborne Particles
- ___ Gases/Vapors
- ___ Fire/Explosion
- ___ Electrical Shock
- ✓ Slips, Trips and Falls
- ___ Heat Stress
- ✓ Cold Stress
- ✓ Heavy Objects
- ___ Hot/Cold Surfaces
- ___ Inadequate Lighting
- ___ First Opening of Equipment
- ___ High Noise Level
- ___ Access/Egress
- ___ Sharp Objects
- ___ Poisonous Plants
- ___ Insects and Snakes
- ✓ Body Pinch Points
- ✓ Housekeeping
- ✓ Traffic

TRAFFIC CONTROL ELEMENTS:
- ✓ ORANGE TRAFFIC CONES
- ✓ MEN WORKING SIGN(S)
- ___ TRAFFIC CONTROL PLAN?
- ✓ ORANGE TRAFFIC FLAGS
- ✓ CAUTIONS TAPE, PENNANT FLAGS
- ___ POLICE DETAIL
- ___ ABANDONED (PROPERLY BARRICADED)
- ✓ HIGH VISIBILITY VEST/CLOTHING

ELECTRICAL:
- ___ Locked/Tagged Out
- ___ Bonding
- ___ Verify Isolation
- ___ GFCI Used
- ___ Condition of Electrical Cords
- ___ Other _____

EXCAVATION:
- ___ Visual Inspection of Trench
- ___ Soil Typing
- ___ Ladder Every 25' of Lateral Travel
- ___ Ladder Extends 3' above Trench
- ___ Adequate Shoring and Sloping
- ___ Accumulating Water Removal from Trench
- ___ Spoils Pile 2' from Edge of Trench
- ___ Surface Encumbrances
- ___ Barricade or Fill in Unattended Excavations

CLEANUP:
- ✓ Cleanup is required after work completion
- ✓ Pick up tools and misc. items to prevent tripping hazards
- ✓ Discard trash

Training
- ✓ Full Day LPS Training Session (ExxonMobil Projects)
- ✓ Awareness Short Course (on-site)
- ✓ LPS Cards verified for all personnel
- ✓ OSHA 40/8 Hour Updates current?

Other: _____
_____
_____

DAILY SIGN IN SHEET
Hazard Asessment Checklist

Site Name/Project #: Orangeburg Shopping Center / 1102323

Site Address: 1-45 Orangetown Shopping Center, Orangetown, NY 10962 Date: 12-11-14 - 12-12-14

All GES employees and subcontractors must comply with the site HASP and GES Policies/Procedures.

Non-conformance shall prohibit admittance to the site.

Employee/Visitor Name (Print)	Signature	Company Representing	Tasks Assigned	LPS Training Type (Full or Awareness)	On-site Hours
[illegible]	[illegible]	GES	Waste Pickup	full	
[illegible]	[illegible]	AEAC	" "	"	
[illegible]	[illegible]	AEAC	" "	full	
Christina Andreotto	[illegible]	GES	Waste Pickup	Full	
[illegible]	[illegible]	AEAC	"	FULL	

On-Site Supervisor Signature:

12-11-14 CM

-1102488-08-229

UB - O-burg

1-45 Orangetown Shopping

Orangeburg, NY

~~1102488-05-282~~

0600 - Depart for site,

-Snowing

0715 - CM onsite for waste

Pick-up - HASP, JSA's, SPSA's

PPE, Traffic control

* MW-6 is missing well

lid (12" center bolt 15/16)

-Pic taken - Sent to

MDG

- filled in manhole w/

sand + Item, flush

to grade

0800 - AEAC onsite, H+S

meeting (10 mins)

Discuss scope of work

- Transfer 1/2 of soil into

new roll-off

1000 - All offsite

12-12-14 ~~FA~~ (CA) UB Orangeburg (CA)
1-Orangetown Shopping Center
Orangeburg, NY

Day 2 Objective - Pick up 2nd Roll-off, transport off-site (AEAC)
Weather - partly cloudy, ~32°F
Personnel - CA (GES), Pete Go (AEAC)
Onsite - 0730
Off site - 0830

0730 - CA + Pete (AEAC) onsite
- H+S: Review HASP, JSA's, PPE, SPSA's. Discuss low overhead wires and using CA as a spotter
- Conduct Daily Sign in.
- Driver ensures the tarp is secure over the Roll-off
- Load onto truck
- CA signs Non-Haz Waste Manifest on behalf of UB Orangeburg

0830 - All off-site.

C. [signature]

C. [signature]

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone (631) 586-2300	4. Waste Tracking Number 0603928

GENERATOR

5. Generator's Name and Mailing Address

UB Orangeburg C-O GES
19 Mount Ebo Road South Suite 21
Brewster, NY 10509 USA

Generator's Phone:

Generator's Site Address (if different than mailing address)

Grandetown Shopping Center
I-45 Orangeburg Shopping Center
Orangeburg, NY 10962

6. Transporter 1 Company Name: AMERICAN ENVIRONMENTAL ASSESSMENT CORP.

U.S. EPA ID Number: NYR000044412

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

E.S.M.I. of NY
364 Towpath Lane
Fort Edward, NY 12828 USA

U.S. EPA ID Number

Facility's Phone:

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1	NON RCRA, NON DOT REGULATED (Impacted Soils)	001	CM	15	T	
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name | Signature | Month | Day | Year

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name | Signature | Month | Day | Year

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) | Month | Day | Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name | Signature | Month | Day | Year

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
		(631) 589-2000	0603930

GENERATOR

5. Generator's Name and Mailing Address

DB Orangeburg C-O GES
16 Mount Ebo Road South Suite 21
Brewster, NY 10509 USA

Generator's Site Address (if different than mailing address)

Orangeburg Shopping Center
145 Orangeburg Shopping Center
Orangeburg NY 10962

Generator's Phone:

6. Transporter 1 Company Name: AMERICAN ENVIRONMENTAL ASSESSMENT CORP.

U.S. EPA ID Number: NYR000044412

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

E.S.M.I. of NY
304 Towpath Lane
Fort Edward NY 12828 USA

U.S. EPA ID Number

Facility's Phone:

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1	NON RCRA, NON DOT REGULATED (Impacted Soils)	001	CM	15	T	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name | Signature | Month 12 | Day 12 | Year 14

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name | Signature | Month | Day | Year

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) | Month | Day | Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name | Signature | Month | Day | Year

DAILY SIGN IN SHEET
Hazard Assessment Checklist

Site Name/Project #: Orangeburg Shopping Center / 1102323

Site Address: 1-45 Orangetown Shopping Center, Orangetown, NY 10962 Date: 12-17-15

The Site Supervisor will review the hazards of the job with all employees and visitors daily. If the work includes intrusive work, confined space, lockout/tagout, a plan or permit is required to be completed. Emergency response plans will be reviewed before work begins. Signatures are required for each day of work. Revisions to this form must be initialed and dated.

Description of Work (Tasks to be Completed)

Other - FAN #1 replacement, well lid repair, oven stub ups

Traffic Control Methods: Cones / Flags / Work Area Signs.

Site Hazards/PPE/Hazard Control: Prior to the start of work, take a few minutes to review and discuss the strategy to deal with each hazard associated with the job and document above in "Tailgate Meeting"

PERSONAL PROTECTION:
- ___ Chemical Resistant Gloves
- ✓ Cloth/Leather Gloves
- ___ Tyvek Suit
- ___ Rubber Boots
- ___ Safety Goggles
- ✓ Steel Toed Boots
- ___ Face Shield
- ___ Respirator
- ___ Hearing Protection
- ___ Hard Hat
- ✓ Safety Glasses w/Shields
- ___ Saranex Suit
- ___ Safety Harness/Lanyard
- ___ Other _____

LEVELS OF PPE
- ✓ D
- ___ Modified Level D
- ___ C (Respirator)

AIR MONITORING EQUIPMENT
- ✓ PID
- ___ LEL/O2
- ___ Drager Pump/Tubes
- ___ Other_____

PERMITS
- ___ Hot/Cold (Attach Permit)
- ___ Traffic
- ___ Air Quality
- ___ One Call/Dig Safe NotificationCompleted
- Number N/A
- Expires _____

Incident Reporting System
- ✓ Emergency contacts listed
- ✓ Understand Incident/Injury/Near Miss procedures and responsibilities

TOOLS:
- ✓ Proper Tools for Job
- ✓ Good Tool Condition

ACCESS:
- ___ Scaffolds Inspected & Tagged
- ___ Ladders Tied Off
- ___ Personal Man Basket
- ___ Confined Space (Attach Form)

EMERGENCY EQUIPMENT LOCATION KNOWN:
- ✓ Site-specific Health & Safety Plan/MSDS's
- ✓ Fire Monitors
- ✓ Fire Extinguishers
- ___ Safety Showers
- ✓ Eye Wash
- ✓ Evacuation Route Reviewed
- ✓ Local Emergency Numbers
- ✓ Hospital
- ✓ Emergency Shut Off Switch
  Location: _____

DRILLING:
- ___ Utility Clearance
- ___ Hearing Protection
- ___ Inspection by competent person
- ___ No loose clothing/jewelry worn
- ___ Established hand signals
- ___ Visual Contact
- ___ 25' Clearance from Overhead Power Lines
- ___ Pre-Drill checklist completed
- ___ Driller has current/valid license
- License # _____

JLA:
- ✓ Available on site for all scheduled tasks
- ✓ Reviewed and understood by all

LIFTING/Materials Handling:
- ___ Cherry Picker (current inspection)
- ___ Scissor Lift (current inspection)
- ___ Fork Lift (current inspection)
- ___ Drum Dolly
- ___ Truck Ramps
- ___ Overhead Lines (clearance)
- ___ Manual Lifting
- ___ Valid Crane Operator's License

POTENTIAL HAZARDS:
- ✓ Airborne Particles
- ✓ Gases/Vapors
- ✓ Fire/Explosion
- ✓ Electrical Shock
- ✓ Slips, Trips and Falls
- ___ Heat Stress
- ✓ Cold Stress
- ___ Heavy Objects
- ✓ Hot/Cold Surfaces
- ✓ Inadequate Lighting
- ___ First Opening of Equipment
- ___ High Noise Level
- ✓ Access/Egress
- ✓ Sharp Objects
- ___ Poisonous Plants
- ✓ Insects and Snakes
- ✓ Body Pinch Points
- ✓ Housekeeping
- ✓ Traffic

Very Poor

TRAFFIC CONTROL ELEMENTS:
- ✓ ORANGE TRAFFIC CONES
- ✓ MEN WORKING SIGN(S)
- ✓ TRAFFIC CONTROL PLAN?
- ✓ ORANGE TRAFFIC FLAGS
- ✓ CAUTIONS TAPE, PENNANT FLAGS
- ___ POLICE DETAIL
- ___ ABANDONED (PROPERLY BARRICADED)
- ✓ HIGH VISIBILITY VEST/CLOTHING

ELECTRICAL:
- ✓ Locked/Tagged Out
- ✓ Bonding
- ✓ Verify Isolation
- ___ GFCI Used
- ___ Condition of Electrical Cords
- ___ Other _____

EXCAVATION:
- ✓ Visual Inspection of Trench
- ___ Soil Typing
- ___ Ladder Every 25' of Lateral Travel
- ___ Ladder Extends 3' above Trench
- ___ Adequate Shoring and Sloping
- ___ Accumulating Water Removal from Trench
- ___ Spoils Pile 2' from Edge of Trench
- ___ Surface Encumbrances
- ___ Barricade or Fill in Unattended Excavations

CLEANUP:
- ✓ Cleanup is required after work completion
- ✓ Pick up tools and misc. items to prevent tripping hazards
- ✓ Discard trash

Training
- ✓ Full Day LPS Training Session (ExxonMobil Projects)
- ___ Awareness Short Course (on-site)
- ✓ LPS Cards verified for all personnel
- ✓ OSHA 40/8 Hour Updates current?

Other: _____

DAILY SIGN IN SHEET
Hazard Asessment Checklist

Site Name/Project #: Orangeburg Shopping Center / 1102323

Site Address: 1-45 Orangetown Shopping Center, Orangetown, NY 10962 Date: 12-12-14

All GES employees and subcontractors must comply with the site HASP and GES Policies/Procedures.
Non-conformance shall prohibit admittance to the site.

Employee/Visitor Name (Print)	Signature	Company Representing	Tasks Assigned	LPS Training Type (Full or Awareness)	On-site Hours
Rich Brand		GBS		Full	5

On-Site Supervisor Signature:

12-17-14 WBO
Overcast lt rain
- pick up lock box for
Stub ups
1200 - NB on site
- sign HASP
- PPE
- SSAS - SPSAS.

- replace well lid
- photo
- Install lock box over
Stub ups. - photo

- photo black top patch
- photo Ideam 4 pile

1400 - replace #1 fan
- begin otm

** lots of construction occuring in
front of Stores

* large holes through slab
for new Iron posts.
- see photos.

= Only new China had a
Jump reading of zero
- due to location of jump to
hole in floor. see photo

- All else ok.

1600 - NB off site

UB, Orangeburg, LLC
Urstadt - Orangetown Shopping Center / Sparkle Cleaners
1-45 Orangetown Shopping Center
Orangeburg Rockland NY
Operation, Monitoring, and Maintenance Data Sheets

Date: 12-17-14

Name: Richard

Location: Deli Spot (Vacant)

Blowers	Vacuum (in WC)
SSD-B1	1.300
SSD-B2	0.346
SSD-B3	1.763

New

Vapor Extraction wells	Vacuum (in WC)
SSD-2A	0.60
SSD-2B	0.60
SSD-3A	1.60
SSD-3B	1.600

Monitoring Points	Vacuum (in WC)
SSD-MP-1	0.015
VP-1	0.075
VP-2	0.055
VP-3	0.083
SSD-MP-2	0.024

Minimun Range: 0.0025 - 0.0035 in WC

Visual Inspection	Repairs Required	
	Yes	No
Pipe and fittings		X
Concrete floor slab	X	
Manometers		X

Notes:
See Photos 1 holes in front
1 stone 1 through slab
1

Location: Sparkle Cleaners

Blowers	Vacuum (in WC)
SSD-B4	1.250
SSD-B5	1.210
SSD-B6	1.691

Vapor Extraction wells	Vacuum (in WC)
SSD-5A	1.0
SSD-5B	1.0
SSD-6A	2.0
SSD-6B	1.60

Monitoring Points	Vacuum (in WC)
SSD-MP-3	0.010
VP-4	0.015
VP-5	0.031
VP-6	0.048
SSD-MP-4	0.032

Minimun Range: 0.0025 - 0.0035 in WC

Visual Inspection	Repairs Required	
	Yes	No
Pipe and fittings		X
Concrete floor slab	X	
Manometers		X

Notes:
See Photos 1 holes in front
1 stone 1 through slab
1

Location: New China

Blowers	Vacuum (in WC)
SSD-B7	0.738
SSD-B8	1.501

Vapor Extraction wells	Vacuum (in WC)
SSD-7A	0.60
SSD-7B	0.80

Monitoring Points	Vacuum (in WC)
SSD-MP-5	0.000
VP-7	0.019
VP-8	0.029
VP-9	0.028
SSD-MP-6	0.050

Minimum Range: 0.0025 - 0.0035 in WC

Visual Inspection	Repairs Required	
	Yes	No
Pipe and fittings		X
Concrete floor slab	X	
Manometers		X

Notes: See photo 1 new hole in floor next to MPs

Groundwater & Environmental Services, Inc.
(GES)
Lockout/ Tag out Checklist (Permit)

Name of individual completing the permit: Rich Brown
Client / Location: LRBJ
Date: 12-10-14

Pre-work Guidelines (check if completed)

Y Energy Control procedures have been identified for the equipment or machine.
Y Employees have been trained on the Energy Control and lockout/Tag out Procedures.
Y Individuals have been trained in the GES Lockout/ Tag out Program.

Lockout/ Tag out Equipment (check if completed)

Y Lockout/ Tag out devices are designed to prevent removal without the use of excessive force or unusual techniques.
Y Lockout/ Tag out devices identify the employee applying the device(s).
Y Individual locks and keys are supplied to each employee working on the equipment.
__ Blocks are used whenever possible injury could result from mechanical movement or gravity.
__ Chains or cables are used whenever locking out valves and where locking provisions are not available.
Y Tag out devices warn of hazardous conditions if the machine or equipment is energized and include the following: "Danger – Do not Operate".
Y Tag out devices are securely attached to energy isolating devices so that they cannot be inadvertently or accidentally removed.

Lockout/ Tag out Requirements (check if completed)

Y Affected personnel are notified of the machine or equipment to be locked and tagged out.
Y Lockout and Tag out devices are used together, when feasible, and are placed directly on the energy isolating devices (i.e. switch, valve, blocking device, etc.).
Y "Zero" Energy state has been achieved for all potential sources of energy including, but not limited to:

- Y - Electrical
- __ - Pneumatic
- __ - Thermal
- __ - Other
- __ - Chemical
- __ - Mechanical
- __ - Hydraulic

Y Lockout devices are affixed in a manner that will hold the energy isolating devices in a "safe" or "off" position.
Y Each employee working on the machine or equipment has affixed his/her own lock to the isolating device.
Y Prior to starting service and maintenance work, the machine or equipment is checked to verify that isolation and/ or de-energizing techniques have been done correctly by attempting to activate or "turn on" the machine or equipment, and checking electrical circuits and sources using a voltmeter or other appropriate test equipment.

Re-energizing Requirements (check if completed)

Y After maintenance or service is complete, the work area is inspected to ensure that nonessential items (i.e. tools, debris, etc.) have been removed from the machine or equipment.
Y The machine or equipment components are checked to ensure they are operationally intact.
Y Affected employees have been notified that the machinery or equipment will be put back in service.
Y Each Lockout device is removed by the employee who applied the device.
__ In the event that an employee has left the site and forgot to remove his/her lock, the Supervisor in charge of the operation removes the lock only after ensuring that the employee has left the work site, and he has made a reasonable effort to contact the employee to let him know his lock is going to be or has been removed.
Y The equipment or machine is re-energized using manufacturer's start-up procedures.

Please note reason(s) for not completing: _____

UB, Orangeburg, LLC
Urstadt - Orangetown Shopping Center / Sparkle Cleaners
1-45 Orangetown Shopping Center
Orangeburg Rockland NY

Date: 12-17-14

Name: NB

need PPBrae

Sample ID	PID Reading
DS-1	0.0
DS-2	0.0
DS-3	0.0
DS-4	0.0
DS-5	0.0
DS-6	0.0
DS-7	0.0
DS-8	0.0
DS-9 N-A	—

DAILY SIGN IN SHEET
Hazard Asessment Checklist

Site Name/Project #: Orangeburg Shopping Center / 1102323

Site Address: 1-45 Orangetown Shopping Center, Orangetown, NY 10962 Date: 1/26/15

The Site Supervisor will review the hazards of the job with all employees and visitors daily. If the work includes intrusive work, confined space, lockout/tagout, a plan or permit is required to be completed. Emergency response plans will be reviewed before work begins. Signatures are required for each day of work. Revisions to this form must be initialed and dated.

Description of Work (Tasks to be Completed)

Groundwater Sampling.

Traffic Control Methods:

Cones, Flags / Signs.

Site Hazards/PPE/Hazard Control: Prior to the start of work, take a few minutes to review and discuss the strategy to deal with each hazard associated with the job and document above in "Tailgate Meeting"

PERSONAL PROTECTION:
- [X] Chemical Resistant Gloves
- [X] Cloth/Leather Gloves
- [ ] Tyvek Suit
- [ ] Rubber Boots
- [X] Safety Goggles
- [X] Steel Toed Boots
- [ ] Face Shield
- [ ] Respirator
- [ ] Hearing Protection
- [ ] Hard Hat
- [ ] Safety Glasses w/Shields
- [ ] Saranex Suit
- [ ] Safety Harness/Lanyard
- [ ] Other _____

LEVELS OF PPE
- [X] D
- [ ] Modified Level D
- [ ] C (Respirator)

AIR MONITORING EQUIPMENT
- [X] PID
- [ ] LEL/O2
- [ ] Drager Pump/Tubes
- [ ] Other_____

PERMITS
- [ ] Hot/Cold (Attach Permit)
- [ ] Traffic
- [ ] Air Quality
- [ ] One Call/Dig Safe NotificationCompleted

Number: _____
Expires: _____

Incident Reporting System
- [X] Emergency contacts listed
- [X] Understand Incident/Injury/Near Miss procedures and responsibilities

TOOLS:
- [X] Proper Tools for Job
- [X] Good Tool Condition

ACCESS:
- [ ] Scaffolds Inspected & Tagged
- [ ] Ladders Tied Off
- [ ] Personal Man Basket
- [ ] Confined Space (Attach Form)

EMERGENCY EQUIPMENT LOCATION KNOWN:
- [X] Site-specific Health & Safety Plan/MSDS's
- [ ] Fire Monitors
- [X] Fire Extinguishers
- [ ] Safety Showers
- [X] Eye Wash
- [X] Evacuation Route Reviewed
- [X] Local Emergency Numbers
- [X] Hospital
- [ ] Emergency Shut Off Switch

Location: _____
_____

DRILLING:
- [ ] Utility Clearance
- [ ] Hearing Protection
- [ ] Inspection by competent person
- [ ] No loose clothing/jewelry worn
- [ ] Established hand signals
- [ ] Visual Contact
- [ ] 25' Clearance from Overhead
- [ ] Power Lines
- [ ] Pre-Drill checklist completed
- [ ] Driller has current/valid license

License # _____

JLA:
- [X] Available on site for all scheduled tasks
- [X] Reviewed and understood by all

LIFTING/Materials Handling:
- [ ] Cherry Picker (current inspection)
- [ ] Scissor Lift (current inspection)
- [ ] Fork Lift (current inspection)
- [ ] Drum Dolly
- [ ] Truck Ramps
- [ ] Overhead Lines (clearance)
- [ ] Manual Lifting
- [ ] Valid Crane Operator's License

POTENTIAL HAZARDS:
- [ ] Airborne Particles
- [ ] Gases/Vapors
- [ ] Fire/Explosion
- [ ] Electrical Shock
- [X] Slips, Trips and Falls
- [ ] Heat Stress
- [X] Cold Stress
- [X] Heavy Objects
- [X] Hot/Cold Surfaces
- [ ] Inadequate Lighting
- [X] First Opening of Equipment
- [ ] High Noise Level
- [ ] Access/Egress
- [X] Sharp Objects
- [ ] Poisonous Plants
- [ ] Insects and Snakes
- [X] Body Pinch Points
- [X] Housekeeping
- [X] Traffic

TRAFFIC CONTROL ELEMENTS:
- [X] ORANGE TRAFFIC CONES
- [X] MEN WORKING SIGN(S)
- [X] TRAFFIC CONTROL PLAN?
- [X] ORANGE TRAFFIC FLAGS
- [X] CAUTIONS TAPE, PENNANT FLAGS
- [ ] POLICE DETAIL
- [ ] ABANDONED (PROPERLY BARRICADED)
- [X] HIGH VISIBILITY VEST/CLOTHING

ELECTRICAL:
- [ ] Locked/Tagged Out
- [ ] Bonding
- [ ] Verify Isolation
- [ ] GFCI Used
- [ ] Condition of Electrical Cords
- [ ] Other _____

EXCAVATION:
- [ ] Visual Inspection of Trench
- [ ] Soil Typing
- [ ] Ladder Every 25' of Lateral Travel
- [ ] Ladder Extends 3' above Trench
- [ ] Adequate Shoring and Sloping
- [ ] Accumulating Water Removal from Trench
- [ ] Spoils Pile 2' from Edge of Trench
- [ ] Surface Encumbrances
- [ ] Barricade or Fill in Unattended Excavations

CLEANUP:
- [X] Cleanup is required after work completion
- [X] Pick up tools and misc. items to prevent tripping hazards
- [X] Discard trash

Training
- [X] Full Day LPS Training Session (ExxonMobil Projects)
- [ ] Awareness Short Course (on-site)
- [X] LPS Cards verified for all personnel
- [X] OSHA 40/8 Hour Updates current?

Other: _____
_____
_____

DAILY SIGN IN SHEET
Hazard Asessment Checklist

Site Name/Project #: Orangeburg Shopping Center / 1102323

Site Address: 1-45 Orangetown Shopping Center, Orangetown, NY 10962 Date: 1/28/25

All GES employees and subcontractors must comply with the site HASP and GES Policies/Procedures.
Non-conformance shall prohibit admittance to the site.

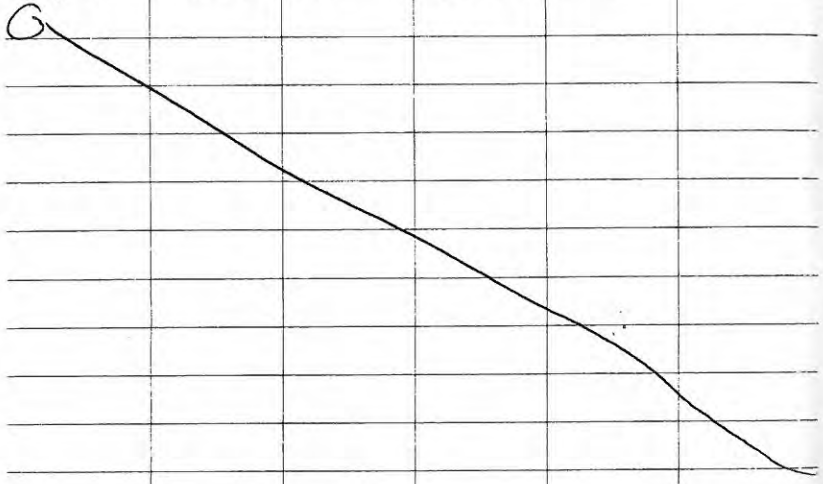
Employee/Visitor Name (Print)	Signature	Company Representing	Tasks Assigned	LPS Training Type (Full or Awareness)	On-site Hours
Gregg Marenkowski	Gregg Marenkowski	GES	Groundwater Sampling	Full	

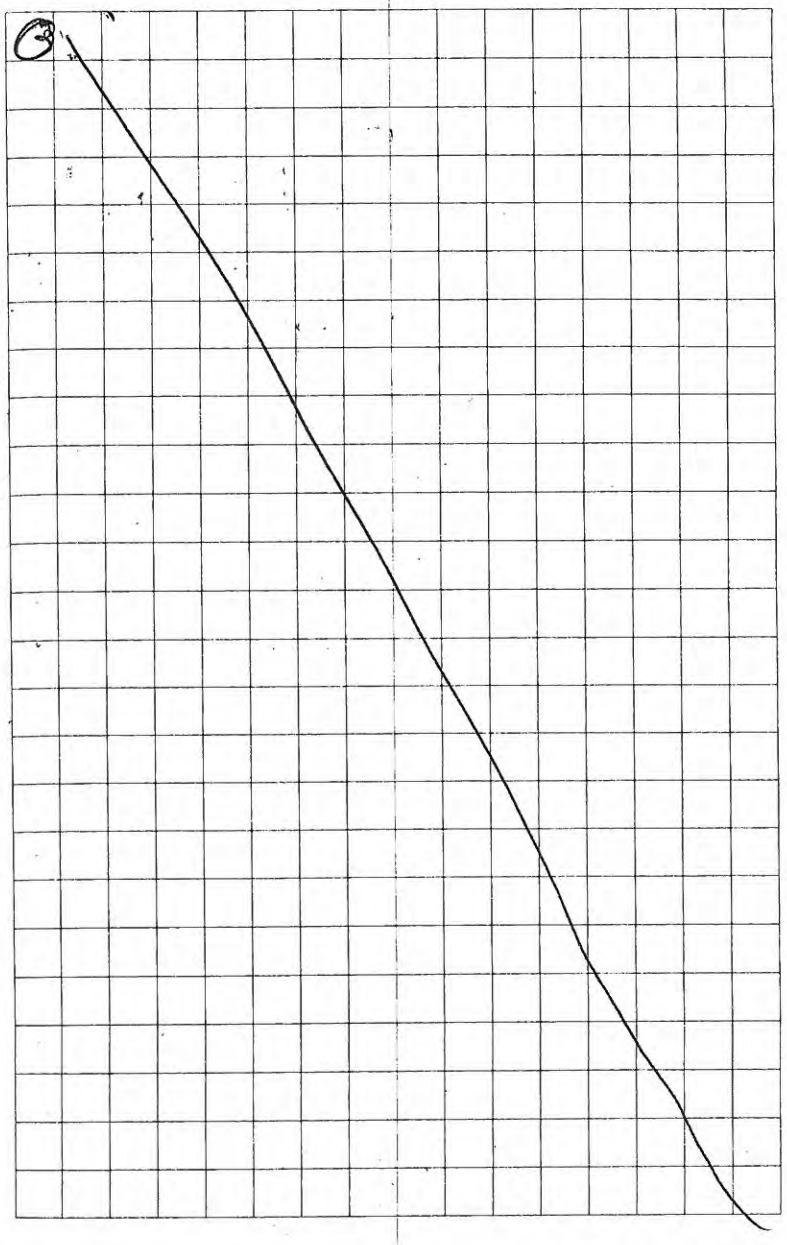
On-Site Supervisor Signature:

11/26/15 Urstadt - Orangetown Shopping Ctr.
- GWS
- cloudy, flurrying 20°
0745 leave for site
0845 GM onsite
- H&S meeting, review HASP, JSAs, SPSAs, PPE, traffic controls.
- start GWS

well #	DTW	DTB	Diam	Purge	Time
MW-4	42.90	46.76	2	0.25	0915
MW-5	41.01	45.27	2	2.00	1000

- Drum is 1/3 full
1015 offsite.
1115 back at office





Site: Orangetown Shopping Center
Address: 1-45 Orangetown Shopping Center
Orangeburg, New York

Tech: CM ~~#2645~~
Date: 1/26/15
Weather: snowing, 20°

Daily Field Log (Gauging Table)

Well ID	PID (outer)	PID (inner)	Depth to Water	Depth to DNAPL	Depth to Bottom (last visit)	Depth to Bottom (measured)	pH Reading	Well Diameter	Well Volume	Comments	Bottleware Needed
MW-4	0.0	0.0	42.90		46.80	46.76	6.49	2"	0.25	Gauge, Sample, Parameters	1-60 mL clear glass w/HCL
MW-5	0.0	0.0	39.01		45.51	45.27	6.59	2"	2.0	Gauge, Sample, Parameters	1-60 mL clear glass w/HCL

Groundwater Sampling

(DTB - DTW)*X = _____ (1well volume in gallons) *Remove at least 3 well volumes*

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-4

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:**

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:**

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** Snowing

2. MONITORING WELL DATA:

Depth to Water: 42.90 **Depth to Bottom (last round):** 46.80

Casing Diameter: 2 **Calculated Purge Amount:** 2.0 *gallons*

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☐ No ☒

Did well purge dry? Yes ☒ No ☐ **Depth to Water after purge:** 45.90

Actual Purge Amount: 0.25 gallons **Depth to Water after recharge:** —

Water Quality Meter Model: _____ **Time elapsed for recharge:** —

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity	DO	ORP	Turbidity	Comments or Observations
First Volume	6.49	12.42	5329	2.80 ~~11.67~~	-118.7	—	
Second Volume							
Third Volume*							

** - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.*

4. SAMPLE DATA

Sample ID: MW-4 **Depth to Water at time of Sampling:** 45.86

Sample Time: 0915 **Number of Containers:** 1

Analyses: TOC **Duplicate Sample Collected?** Yes ☐ No ☒

MS/MSD Sample Collected? Yes ☐ No ☒

Was there enough sample volume to fill all sample jars? Yes ☒ No ☐ explain:

Depth to Bottom of Well (measure after sampling): 46.76 **Depth to DNAPL:**

5. COMMENTS Only enough water for one reading.

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-5

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 1/29/15

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** AM

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** Snowing

2. MONITORING WELL DATA:

Depth to Water: 39.01 **Depth to Bottom (last round):** 45.51

Casing Diameter: 2 **Calculated Purge Amount:** 3.0 gallons

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653	
Well Diameter	1"	2"	3"	4"	*Remove at least 3 well volumes*

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☒ No ☐

Did well purge dry? Yes ☒ No ☐ **Depth to Water after purge:** 44.60

Actual Purge Amount: 2.0 gallons **Depth to Water after recharge:** 42.30

Water Quality Meter Model: _____ **Time elapsed for recharge:** 10 min

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity	DO	ORP	Turbidity	Comments or Observations
First Volume	6.55	11.68	14.692	1.14	-134.2	—	
Second Volume	6.59	9.46	17539	1.30	-133.8	—	
Third Volume*							

** - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.*

4. SAMPLE DATA

Sample ID: MW-5 **Depth to Water at time of Sampling:** 41.50

Sample Time: 1000 **Number of Containers:** 1

Analyses: TOC **Duplicate Sample Collected?** Yes ☐ No ☒

MS/MSD Sample Collected? Yes ☐ No ☒

Was there enough sample volume to fill all sample jars? Yes ☒ No ☐ explain: _____

Depth to Bottom of Well (measure after sampling): 45.27 **Depth to DNAPL:** _____

5. COMMENTS

Only two reading well went dry

GES Instrument Calibration Sheet

Station Location: 1-45 Orangetown Shopping Center

Station Number: NYSDEC #C344066

Equipment Name- Photoionization Detector (Pid)
Serial Number- 110-012180
Calibration Technician GM
Calibration Gas or Calibration Method- span isobutylene
Concentration (ppm)- 100
Comments-

Date- 1/26/15
Readings Before Calibration- 99.5
Readings After Calibration- 100
Span Check-

Equipment Name- YSI
Serial Number-
Calibration Technician GM

Date- 1/26/15

Parameter

pH	Standard	Initial	Calibrated	Mid-Day Bump Check
	4.00	4.05	4.00	
	7.00	7.03	7.00	
	10.00	9.98	10.00	
Turbidity	**Standard**	**Initial**	**Calibrated**	**Mid-Day Bump Check**
DO	**Standard**	**Initial**	**Calibrated**	**Mid-Day Bump Check**
	100%			
Conductivity	**Standard**	**Initial**	**Calibrated**	**Mid-Day Bump Check**

Comments-

Well Condition Check Sheet

Date: 1/26/15

Well ID	Check if all Good	Road box size and condition	Well gripper and condition	Lock	Pad Condition	Comments:
MW-4	✓					
MW-5	✓					

Page ___ of ____.

Site Name: Orangeburg Shopping Center

Site Location: 1-45 Orangetown Shopping Ctr., Orangetown, NY

DAILY SIGN IN SHEET
Hazard Asessment Checklist

Site Name/Project #: Orangeburg Shopping Center / 1102323

Site Address: 1-45 Orangetown Shopping Center, Orangetown, NY 10962

Date: 3-16-15

The Site Supervisor will review the hazards of the job with all employees and visitors daily. If the work includes intrusive work, confined space, lockout/tagout, a plan or permit is required to be completed. Emergency response plans will be reviewed before work begins. Signatures are required for each day of work. Revisions to this form must be initialed and dated.

Description of Work (Tasks to be Completed)

O+M

Traffic Control Methods: Cones / Flags / work area signs

Site Hazards/PPE/Hazard Control: Prior to the start of work, take a few minutes to review and discuss the strategy to deal with each hazard associated with the job and document above in "Tailgate Meeting"

PERSONAL PROTECTION:
- X Chemical Resistant Gloves
- X Cloth/Leather Gloves
- ___ Tyvek Suit
- ___ Rubber Boots
- ___ Safety Goggles
- X Steel Toed Boots
- ___ Face Shield
- ___ Respirator
- ___ Hearing Protection
- ___ Hard Hat
- X Safety Glasses w/Shields
- ___ Saranex Suit
- ___ Safety Harness/Lanyard
- ___ Other ___

LEVELS OF PPE
- X D
- ___ Modified Level D
- ___ C (Respirator)

AIR MONITORING EQUIPMENT
- X PID
- ___ LEL/O2
- ___ Drager Pump/Tubes
- ___ Other ___

PERMITS
- ___ Hot/Cold (Attach Permit)
- ___ Traffic
- ___ Air Quality
- ___ One Call/Dig Safe NotificationCompleted

Number: ___
Expires: ___

Incident Reporting System
- X Emergency contacts listed
- X Understand Incident/Injury/Near Miss procedures and responsibilities

TOOLS:
- X Proper Tools for Job
- X Good Tool Condition

ACCESS:
- ___ Scaffolds Inspected & Tagged
- ___ Ladders Tied Off
- ___ Personal Man Basket
- ___ Confined Space (Attach Form)

EMERGENCY EQUIPMENT LOCATION KNOWN:
- X Site-specific Health & Safety Plan/MSDS's
- ___ Fire Monitors
- X Fire Extinguishers
- ___ Safety Showers
- X Eye Wash
- X Evacuation Route Reviewed
- X Local Emergency Numbers
- X Hospital
- X Emergency Shut Off Switch

Location: At each blower & breaker panel

DRILLING:
- ___ Utility Clearance
- ___ Hearing Protection
- ___ Inspection by competent person
- ___ No loose clothing/jewelry worn
- ___ Established hand signals
- ___ Visual Contact
- ___ 25' Clearance from Overhead Power Lines
- ___ Pre-Drill checklist completed
- ___ Driller has current/valid license

License # ___

JLA:
- ___ Available on site for all scheduled tasks
- X Reviewed and understood by all

LIFTING/Materials Handling:
- ___ Cherry Picker (current inspection)
- ___ Scissor Lift (current inspection)
- ___ Fork Lift (current inspection)
- ___ Drum Dolly
- ___ Truck Ramps
- ___ Overhead Lines (clearance)
- ___ Manual Lifting
- ___ Valid Crane Operator's License

POTENTIAL HAZARDS:
- X Airborne Particles
- X Gases/Vapors
- ___ Fire/Explosion
- ___ Electrical Shock
- X Slips, Trips and Falls
- ___ Heat Stress
- ___ Cold Stress
- ___ Heavy Objects
- ___ Hot/Cold Surfaces
- X Inadequate Lighting
- ___ First Opening of Equipment
- ___ High Noise Level
- X Access/Egress
- X Sharp Objects
- ___ Poisonous Plants
- ___ Insects and Snakes
- ___ Body Pinch Points
- X Housekeeping
- X Traffic (KS)

TRAFFIC CONTROL ELEMENTS:
- X ORANGE TRAFFIC CONES
- X MEN WORKING SIGN(S)
- X TRAFFIC CONTROL PLAN?
- X ORANGE TRAFFIC FLAGS
- X CAUTIONS TAPE, PENNANT FLAGS
- ___ POLICE DETAIL
- ___ ABANDONED (PROPERLY BARRICADED)
- X HIGH VISIBILITY VEST/CLOTHING

ELECTRICAL:
- ___ Locked/Tagged Out
- ___ Bonding
- ___ Verify Isolation
- ___ GFCI Used
- ___ Condition of Electrical Cords
- ___ Other ___

EXCAVATION:
- ___ Visual Inspection of Trench
- ___ Soil Typing
- ___ Ladder Every 25' of Lateral Travel
- ___ Ladder Extends 3' above Trench
- ___ Adequate Shoring and Sloping
- ___ Accumulating Water Removal from Trench
- ___ Spoils Pile 2' from Edge of Trench
- ___ Surface Encumbrances
- ___ Barricade or Fill in Unattended Excavations

CLEANUP:
- X Cleanup is required after work completion
- X Pick up tools and misc. items to prevent tripping hazards
- X Discard trash

Training
- X Full Day LPS Training Session (ExxonMobil Projects)
- ___ Awareness Short Course (on-site)
- ___ LPS Cards verified for all personnel
- X OSHA 40/8 Hour Updates current?

Other: ___

DAILY SIGN IN SHEET
Hazard Asessment Checklist

Site Name/Project #: Orangeburg Shopping Center / 1102323

Site Address: 1-45 Orangetown Shopping Center, Orangetown, NY 10962 Date: 3-16-15

All GES employees and subcontractors must comply with the site HASP and GES Policies/Procedures.
Non-conformance shall prohibit admittance to the site.

Employee/Visitor Name (Print)	Signature	Company Representing	Tasks Assigned	LPS Training Type (Full or Awareness)	On-site Hours
Rich Brown		GES	OTM	Full 8-19	6

On-Site Supervisor Signature:

3-16-15 US Orangeburg

Clear 40's

1000 - RB onsite

- update + sign HASP onsite
- Add last O&M visit to onsite binder

* need 2014 O&M forms for binder *

- Inspect all onsite well vaults.
  - All lids intact
- Inspect + Int. onsite ~~drums~~ drum
  - Appears ok.
- Int. All blower placards

* Construction still ongoing

* It appears that the holes in the sidewalks have been filled w concrete.

- readings are both in new binder.

- Check CBY - leave copy onsite

Complete O&M

- see data table for readings

* was able to get on floor and take flow readings from blowers 6, 5, 7, 2, 3

- Secure site + return keys to GC.

1600 - RB // site

UB, Orangeburg, LLC
Urstadt - Orangetown Shopping Center / Sparkle Cleaners
1-45 Orangetown Shopping Center
Orangeburg Rockland NY
Operation, Monitoring, and Maintenance Data Sheets

Date: 3-16-15

Name: Rich Brown

Location: Deli Spot (Vacant)

Blowers	Vacuum (in WC)	Flow (cfm)
SSD-B1	2.621	14.5
SSD-B2	2.265	55.8
SSD-B3	1.765	4.00

Update the label on the blower during each O&M visit

Vapor Extraction wells	Vacuum (in WC)
SSD-2A	0.60
SSD-2B	0.60
SSD-3A	1.60
SSD-3B	1.60

Monitoring Points	Vacuum (in WC)
SSD-MP-1	0.014
VP-1	0.040
VP-2	0.120
VP-3	0.010
SSD-MP-2	0.014

Minimun Range: 0.0025 - 0.0035 in wc
If not call back to office

Visual Inspection	Repairs Required	
	Yes	No
Discharge stack piping and fittings		X
Concrete floor slab		X
Fluid level in Manometers		X

Notes: ~~[illegible]~~
B-2 → not flow from ~~[illegible]~~
B-3 roof

Location: Sparkle Cleaners

Blowers	Vacuum (in WC)	Flow (cfm)
SSD-B4	2.494	14.4
SSD-B5	1.207	47.5
SSD-B6	0.851	20.5

Update the label on the blower during each O&M visit

Vapor Extraction wells	Vacuum (in WC)
SSD-5A	0.80
SSD-5B	~~0.132~~ 1.00
SSD-6A	2.00
SSD-6B	1.60

Monitoring Points	Vacuum (in WC)
SSD-MP-3	0.019
VP-4	0.014
VP-5	0.132
VP-6	0.042
SSD-MP-4	0.023

Minimun Range: 0.0025 - 0.0035 in wc
If not call back to office

Visual Inspection	Repairs Required	
	Yes	No
Discharge stack piping and fittings		X
Concrete floor slab		X
Fluid level in Manometers		X

Notes: ~~[illegible]~~
B-5 → take flow from roof
B-6

Location: New China

Blowers	Vacuum (in WC)	Flow (cfm)
SSD-B7	0.856	34.8
SSD-B8	0.688	168.3

Update the label on the blower during each O&M visit

Vapor Extraction wells	Vacuum (in WC)
SSD-7A	0.80
SSD-7B	0.80

Monitoring Points	Vacuum (in WC)
SSD-MP-5	0.009
VP-7	0.010
VP-8	0.009
VP-9	0.011
SSD-MP-6	0.014

Minimun Range: 0.0025 - 0.0035 in wc
If not call back to office

Visual Inspection	Repairs Required	
	Yes	No
Discharge stack piping and fittings		N
Concrete floor slab		N
Fluid level in Manometers		N

Notes: None

~~B-7 flow~~

B-7 Incr. flow from prev

Critical Equipment Inspection and Testing Checklist

Urstadt - Orangetown Shopping Center/Sparkle Cleaners
1-45 Orangetown Shopping Ctr
Orangeburg, NY

Date: 3-16-15
Time: 1500
Purpose of Inspection: Q5
Technician: B. Brown / BB
(name/signature)

Critical Equipment Shall be Checked Minimally on a Quarterly Basis, during system start-up, during restarts after extended shutdown time, or when equipment is changed or removed.

NOTE: If the CE fails testing, please describe the failure in the comments section. Please also describe changes required to the inspection procedure in the comments section.

CE #	CE Name	Inspection Procedure	Inspection Results	Circle one:		Comments
-	Signs	Ensure that warning signs and emergency signs are legible, securely fastened, and accurate. Repair or replace the signs as required.	Signs are present and visable.	(Yes)	No	Int. All Blown Signs
-	Piping	Confirm that piping inside and at stacks is in good condition.	Pipes are in good condition.	(Yes)		All pipes Appear to be in good Condition
-	Locks	Check all locked monitoring well caps, vaults, and enclosures for missing or damaged locks. Check the operation of each lock. Repair or replace locks as required.	Locks are present and working.	(Yes)	No	All locks Appear to be in good working order
-	Electrical Ground	Visually check grounding wire connections for damage, continuity, and connection tightness. Check control panel ground circuit continuity with an ohmmeter. Tighten, repair or replace grounding wire connections as required.	Electrical Ground is present and properly connected/secured.	(Yes)	No	Ground is intact

Describe any LO/TO required following Inspection: None

Describe any variances applied: None

List any parts that need to be ordered: None

UB, Orangeburg, LLC
Urstadt - Orangetown Shopping Center / Sparkle Cleaners
1-45 Orangetown Shopping Center
Orangeburg Rockland NY

Date: 3/6/25

Name: [illegible]

Sample ID	PID Reading
DS-1	0.0
DS-2	0.0
DS-3	0.2
DS-4	0.0
DS-5	0.1
DS-6	0.0
DS-7	0.0
DS-8	0.0
DS-9	0.0

DAILY SIGN IN SHEET
Hazard Asessment Checklist

Site Name/Project #: Orangeburg Shopping Center / ~~1102323~~ 1102513

Site Address: 1-45 Orangetown Shopping Center, Orangetown, NY 10962 Date: 3.27.15

The Site Supervisor will review the hazards of the job with all employees and visitors daily. If the work includes intrusive work, confined space, lockout/tagout, a plan or permit is required to be completed. Emergency response plans will be reviewed before work begins. Signatures are required for each day of work. Revisions to this form must be initialed and dated.

Description of Work (Tasks to be Completed)

GWS

Traffic Control Methods:

men working / cones / flags

Site Hazards/PPE/Hazard Control: Prior to the start of work, take a few minutes to review and discuss the strategy to deal with each hazard associated with the job and document above in "Tailgate Meeting"

PERSONAL PROTECTION:
- ✓ Chemical Resistant Gloves
- ✓ Cloth/Leather Gloves
- ___ Tyvek Suit
- ___ Rubber Boots
- ___ Safety Goggles
- ✓ Steel Toed Boots
- ___ Face Shield
- ___ Respirator
- ___ Hearing Protection
- ✓ Hard Hat
- ✓ Safety Glasses w/Shields
- ___ Saranex Suit
- ___ Safety Harness/Lanyard
- ___ Other _____

LEVELS OF PPE
- ___ D
- ✓ Modified Level D
- ___ C (Respirator)

AIR MONITORING EQUIPMENT
- ✓ PID
- ___ LEL/O2
- ___ Drager Pump/Tubes
- ___ Other_____

PERMITS
- ___ Hot/Cold (Attach Permit)
- ___ Traffic
- ___ Air Quality
- ___ One Call/Dig Safe NotificationCompleted

Number: _____
Expires: _____

Incident Reporting System
- ✓ Emergency contacts listed
- ✓ Understand Incident/Injury/Near Miss procedures and responsibilities

TOOLS:
- ✓ Proper Tools for Job
- ✓ Good Tool Condition

ACCESS:
- ___ Scaffolds Inspected & Tagged
- ___ Ladders Tied Off
- ___ Personal Man Basket
- ___ Confined Space (Attach Form)

EMERGENCY EQUIPMENT LOCATION KNOWN:
- ✓ Site-specific Health & Safety Plan/MSDS's
- ___ Fire Monitors
- ✓ Fire Extinguishers
- ___ Safety Showers
- ✓ Eye Wash
- ___ Evacuation Route Reviewed
- ✓ Local Emergency Numbers
- ✓ Hospital
- ___ Emergency Shut Off Switch

Location: _____
_____

DRILLING:
- ___ Utility Clearance
- ___ Hearing Protection
- ___ Inspection by competent person
- ___ No loose clothing/jewelry worn
- ___ Established hand signals
- ___ Visual Contact
- ___ 25' Clearance from Overhead Power Lines
- ___ Pre-Drill checklist completed
- ___ Driller has current/valid license

License # _____

JLA:
- ___ Available on site for all scheduled tasks
- ___ Reviewed and understood by all

LIFTING/Materials Handling:
- ___ Cherry Picker (current inspection)
- ___ Scissor Lift (current inspection)
- ___ Fork Lift (current inspection)
- ___ Drum Dolly
- ___ Truck Ramps
- ___ Overhead Lines (clearance)
- ___ Manual Lifting
- ___ Valid Crane Operator's License

POTENTIAL HAZARDS:
- ___ Airborne Particles
- ✓ Gases/Vapors
- ___ Fire/Explosion
- ___ Electrical Shock
- ✓ Slips, Trips and Falls
- ✓ Heat Stress
- ✓ Cold Stress
- ✓ Heavy Objects
- ___ Hot/Cold Surfaces
- ___ Inadequate Lighting
- ✓ First Opening of Equipment
- ___ High Noise Level
- ___ Access/Egress
- ___ Sharp Objects
- ___ Poisonous Plants
- ___ Insects and Snakes
- ✓ Body Pinch Points
- ✓ Housekeeping
- ✓ Traffic

TRAFFIC CONTROL ELEMENTS:
- ✓ ORANGE TRAFFIC CONES
- ✓ MEN WORKING SIGN(S)
- ___ TRAFFIC CONTROL PLAN?
- ✓ ORANGE TRAFFIC FLAGS
- ✓ CAUTIONS TAPE, PENNANT FLAGS
- ___ POLICE DETAIL
- ___ ABANDONED (PROPERLY BARRICADED)
- ✓ HIGH VISIBILITY VEST/CLOTHING

ELECTRICAL:
- ___ Locked/Tagged Out
- ___ Bonding
- ___ Verify Isolation
- ___ GFCI Used
- ___ Condition of Electrical Cords
- ___ Other _____

EXCAVATION:
- ___ Visual Inspection of Trench
- ___ Soil Typing
- ___ Ladder Every 25' of Lateral Travel
- ___ Ladder Extends 3' above Trench
- ___ Adequate Shoring and Sloping
- ___ Accumulating Water Removal from Trench
- ___ Spoils Pile 2' from Edge of Trench
- ___ Surface Encumbrances
- ___ Barricade or Fill in Unattended Excavations

CLEANUP:
- ✓ Cleanup is required after work completion
- ✓ Pick up tools and misc. items to prevent tripping hazards
- ✓ Discard trash

Training
- ✓ Full Day LPS Training Session (ExxonMobil Projects)
- ___ Awareness Short Course (on-site)
- ___ LPS Cards verified for all personnel
- ✓ OSHA 40/8 Hour Updates current?

Other: _____
_____
_____

DAILY SIGN IN SHEET

Hazard Asessment Checklist

Site Name/Project #: Orangeburg Shopping Center / ~~1102323~~ 1102513

Site Address: 1-45 Orangetown Shopping Center, Orangetown, NY 10962 Date:

All GES employees and subcontractors must comply with the site HASP and GES Policies/Procedures.

Non-conformance shall prohibit admittance to the site.

Employee/Visitor Name (Print)	Signature	Company Representing	Tasks Assigned	LPS Training Type (Full or Awareness)	On-site Hours
[illegible]	[illegible]	GES	GES	Full	

On-Site Supervisor Signature:

3.3.1.1 Sampling Protocol

All monitoring well sampling activities will be recorded in a field book and a groundwater-sampling log presented in Appendix G. Other observations (e.g., well integrity, etc.) will be noted on the well sampling log. The well sampling log will serve as the inspection form for the groundwater monitoring well network.

Monitoring wells will be gauged for depth to water and the presence of DNAPL using an EIP. Selected monitoring wells will be sampled by purging up to three well volumes from each well using disposable Teflon lined polyethylene bailers. Sample collection will be via bailers following completion of the purge.

During sampling, various parameters will be collected including: oxidation-reduction potential (ORP), pH, and dissolved oxygen (DO), among others. Groundwater samples will be submitted for laboratory analysis of volatile organic compounds (VOC) including ethene by EPA method 8260. On August 25, 2014 the NYSDEC approved termination of analyses for metals, pesticides and SVOCs.

Once annually, groundwater samples from an up-gradient, side gradient, and down gradient monitoring well (typically MW-5, MW-6, MW-7 and MW-10) will be submitted for analysis of PCBs by EPA method 8082.

3.3.1.2 Monitoring Well Repairs, Replacement and Decommissioning

If biofouling or silt accumulation occurs in the Site monitoring wells, the wells will be physically agitated/surged and redeveloped. Additionally, monitoring wells will be properly decommissioned and replaced (as per the Monitoring Plan), if an event renders the wells unusable.

Repairs and/or replacement of wells in the monitoring well network will be performed based on assessments of structural integrity and overall performance.

The NYSDEC will be notified prior to any repair or decommissioning of monitoring wells for the purpose of replacement, and the repair or decommissioning and replacement process will be documented in the subsequent periodic report. Well decommissioning without replacement will be done only with the prior approval of

GES Instrument Calibration Sheet

Station Location: 1-45 Orangetown Shopping Center

Station Number: NYSDEC #C344066

Equipment Name- Photoionization Detector (Pid)
Serial Number- 110-012180
Calibration Technician CW
Calibration Gas or Calibration Method- span isobutylene
Concentration (ppm)- 100
Comments-

Date- 3.27.15
Readings Before Calibration- 96.4
Readings After Calibration- 100.1
Span Check- 100.1

Equipment Name- YSI
Serial Number-
Calibration Technician

Date-

Parameter

_pH	Standard	Initial	Calibrated	Mid-Day Bump Check
	4.00			
	7.00			
	10.00			
Turbidity	**Standard**	**Initial**	**Calibrated**	**Mid-Day Bump Check**
DO	**Standard**	**Initial**	**Calibrated**	**Mid-Day Bump Check**
	100%			
Conductivity	**Standard**	**Initial**	**Calibrated**	**Mid-Day Bump Check**

Comments-

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-7

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 3.27.15

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** LM

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** OVERCAST

2. MONITORING WELL DATA:

Depth to Water: 44.72 **Depth to Bottom (last round):** 48.20

Casing Diameter: 2 **Calculated Purge Amount:** 1.7 gallons

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☒ No ☐

Did well purge dry? Yes ☐ No ☒ **Depth to Water after purge:** 46.31

Actual Purge Amount: 2 gallons **Depth to Water after recharge:** 44.93

Water Quality Meter Model: YSI 556 **Time elapsed for recharge:** 15min

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity	DO	ORP	Turbidity	Comments or Observations
First Volume	6.63	13.48	44391	0.67	-193.3	NA	
Second Volume	6.60	13.56	44395	0.51	-202.6	↓	
Third Volume*	6.60	13.71	44406	0.50	-205.4	↓	

* - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.

4. SAMPLE DATA

Sample ID: MW-7 **Depth to Water at time of Sampling:** 44.93

Sample Time: 1410 **Number of Containers:** 2

Analyses: See CoC **Duplicate Sample Collected?** Yes ☐ No ☒

MS/MSD Sample Collected? Yes ☐ No ☒

Was there enough sample volume to fill all sample jars? Yes ☒ No ☐ explain:

Depth to Bottom of Well (measure after sampling): 48.20 **Depth to DNAPL:** NA

5. COMMENTS

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-4

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** ~~MW-4~~ 3.27.15

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** CM

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** OVERCAST

2. MONITORING WELL DATA:

Depth to Water: 38.82 **Depth to Bottom (last round):** 46.80

Casing Diameter: 2 **Calculated Purge Amount:** 3.8 *gallons*

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☒ No ☐

Did well purge dry? Yes ☐ No ☒ **Depth to Water after purge:** 40.81

Actual Purge Amount: 3.8 gallons **Depth to Water after recharge:** 39.16

Water Quality Meter Model: YSI 556 **Time elapsed for recharge:** 15

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity	DO	ORP	Turbidity	Comments or Observations
First Volume	6.81	12.35	2482	1.34	-209.1	NA	
Second Volume	6.79	12.57	2480	0.88	-210.7	↓	
Third Volume*	6.78	12.84	2480	0.82	-213	↓	

** - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.*

4. SAMPLE DATA

Sample ID: MW-4 **Depth to Water at time of Sampling:** 39.16

Sample Time: 1345 **Number of Containers:** _____

Analyses: See CoC **Duplicate Sample Collected?** Yes ☐ No ☒

MS/MSD Sample Collected? Yes ☐ No ☒

Was there enough sample volume to fill all sample jars? Yes ☒ No ☐ explain: _____

Depth to Bottom of Well (measure after sampling): 46.80 **Depth to DNAPL:** ND

5. COMMENTS _____

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-3

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 3.27.15

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** LM

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:**

2. MONITORING WELL DATA:

Depth to Water: 34.02 **Depth to Bottom (last round):** 42.70

Casing Diameter: 2 **Calculated Purge Amount:** 4 *gallons*

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☒ No ☐

Did well purge dry? Yes ☐ No ☒ **Depth to Water after purge:** 36.92

Actual Purge Amount: 4 gallons **Depth to Water after recharge:** 34.56

Water Quality Meter Model: YSI 556 **Time elapsed for recharge:** 15

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity	DO	ORP	Turbidity	Comments or Observations
First Volume	7.75	10.67	1344	4.74	-157.1	NA	
Second Volume	7.53	10.53	1404	3.99	-202.7	↑	
Third Volume*	7.67	10.49	1405	3.69	-269.8	↓	

* - *Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.*

4. SAMPLE DATA

Sample ID: MW-3 **Depth to Water at time of Sampling:** 34.56

Sample Time: 1310 **Number of Containers:**

Analyses: See COC **Duplicate Sample Collected?** Yes ☐ No ☒

MS/MSD Sample Collected? Yes ☐ No ☒

Was there enough sample volume to fill all sample jars? Yes ☒ No ☐ explain:

Depth to Bottom of Well (measure after sampling): 42.70 **Depth to DNAPL:** ND

5. COMMENTS 6 VOAs 250 NaOH 500 HNO_3 500 NaOH 250 H_2SO_4 250 NaOH

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW 83

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 3.27.15

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** LM

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** Overcast

2. MONITORING WELL DATA:

Depth to Water: 40.21 **Depth to Bottom (last round):** 52.00

Casing Diameter: 1 **Calculated Purge Amount:** 1.4 *gallons*

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☐ No ☒

Did well purge dry? Yes ☒ No ☐ **Depth to Water after purge:** 50.88

Actual Purge Amount: 1.5 gallons **Depth to Water after recharge:** 50.88

Water Quality Meter Model: YSI 556 **Time elapsed for recharge:** 15

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity	DO	ORP	Turbidity	Comments or Observations
First Volume	7.00	13.24	3702	2.89	-149.2	NA	
Second Volume						↓	
Third Volume*						↓	

** - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.*

4. SAMPLE DATA

Sample ID: MW-83 **Depth to Water at time of Sampling:** 50.88

Sample Time: 1235 **Number of Containers:** 6

Analyses: See CoC **Duplicate Sample Collected?** Yes ☐ No ☒

MS/MSD Sample Collected? Yes ☐ No ☒

Was there enough sample volume to fill all sample jars? Yes ☐ No ☒ explain:

Depth to Bottom of Well (measure after sampling): 52.00 **Depth to DNAPL:** ND

5. COMMENTS 6 VOAs | 250 NONE | 500 HNO_3 | 500 NONE | 250 H_2SO_4 | 250 NONE

* only 6 VOAs collected *

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-6

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 3.27.15

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** LM

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** overcast

2. MONITORING WELL DATA:

Depth to Water: 39.22 **Depth to Bottom (last round):** 51.20

Casing Diameter: 2 **Calculated Purge Amount:** 5-7 *gallons*

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☒ No ☐

Did well purge dry? Yes ☐ No ☒ **Depth to Water after purge:** 45.17

Actual Purge Amount: 5.7 gallons **Depth to Water after recharge:** 40.93

Water Quality Meter Model: YSI **Time elapsed for recharge:** 15

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity	DO	ORP	Turbidity	Comments or Observations
First Volume	7.22	12.41	5291	0.86	-222.6	NA	
Second Volume	7.36	12.59	5350	0.67	-210	↓	
Third Volume*	7.39	12.71	5356	0.65	-209.6	↓	

** - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.*

4. SAMPLE DATA

Sample ID: MW-6 **Depth to Water at time of Sampling:** 40.93

Sample Time: 1025 **Number of Containers:** 2

Analyses: See CoC **Duplicate Sample Collected?** Yes ☐ No ☒

MS/MSD Sample Collected? Yes ☐ No ☒

Was there enough sample volume to fill all sample jars? Yes ☒ No ☐ explain:

Depth to Bottom of Well (measure after sampling): 51.20 **Depth to DNAPL:** ND

5. COMMENTS

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-10

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 3-27-15

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** CM

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** OVERCAST

2. MONITORING WELL DATA:

Depth to Water: 9.55 **Depth to Bottom (last round):** 33.60

Casing Diameter: 4 **Calculated Purge Amount:** 47 *gallons*

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☒ No ☐

Did well purge dry? Yes ☐ No ☒ **Depth to Water after purge:** 10.73

Actual Purge Amount: 20 gallons **Depth to Water after recharge:** NA

Water Quality Meter Model: YSI **Time elapsed for recharge:** NA

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity	DO	ORP	Turbidity	Comments or Observations
First Volume	7.30	10.36	371	6.84	-133.1	NA	
Second Volume	7.26	9.63	356	6.93	-133.8	↓	
Third Volume*	7.23	9.35	287	7.21	-133.1	↓	

** - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.*

4. SAMPLE DATA

Sample ID: MW10 **Depth to Water at time of Sampling:** 10.73

Sample Time: 0955 **Number of Containers:** ~~11~~ 14

Analyses: See COC **Duplicate Sample Collected?** Yes ☒ No ☐

MS/MSD Sample Collected? Yes ☒ No ☐

Was there enough sample volume to fill all sample jars? Yes ☒ No ☐ explain:

Depth to Bottom of Well (measure after sampling): 33.60 **Depth to DNAPL:** ND

5. COMMENTS

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-5

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 3.27.15

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** LM

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** OVERCAST

2. MONITORING WELL DATA:

Depth to Water: 34.77 **Depth to Bottom (last round):** 45.20

Casing Diameter: 2 **Calculated Purge Amount:** 5 *gallons*

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ~~☐~~ ☒ No ☐

Did well purge dry? Yes ☐ No ~~☒~~ **Depth to Water after purge:** 38.45

Actual Purge Amount: 5 gallons **Depth to Water after recharge:** 36.19

Water Quality Meter Model: YSI **Time elapsed for recharge:** 15

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity	DO	ORP	Turbidity	Comments or Observations
First Volume	7.20	12.72	15250	0.13	-208.6	NA	
Second Volume	7.36	12.13	15186	0.27	-209.8	↓	
Third Volume*	7.17	12.35	15077	0.51	-211.1	↓	

* - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.

4. SAMPLE DATA

Sample ID: MW-5 **Depth to Water at time of Sampling:** 36.19

Sample Time: 1130 **Number of Containers:** 14

Analyses: See CoC **Duplicate Sample Collected?** Yes ☐ No ~~☐~~ ☒

MS/MSD Sample Collected? Yes ☐ No ~~☐~~ ☒

Was there enough sample volume to fill all sample jars? Yes ~~☐~~ ☒ No ☐ explain:

Depth to Bottom of Well (measure after sampling): 45.20 **Depth to DNAPL:** ND

5. COMMENTS

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-8A

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 3.27.15

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** LM

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** OVERCAST

2. MONITORING WELL DATA:

Depth to Water: 40.31 **Depth to Bottom (last round):** 43.15

Casing Diameter: 1 **Calculated Purge Amount:** 3 *gallons*

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☐ No ☒

Did well purge dry? Yes ☒ No ☐ **Depth to Water after purge:** 42.95

Actual Purge Amount: 1 gallons **Depth to Water after recharge:** 42.61

Water Quality Meter Model: YSI 556 **Time elapsed for recharge:** 15

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity	DO	ORP	Turbidity	Comments or Observations
First Volume	7.09	14.25	2376	0.98	-165.7	NA	
Second Volume						↓	
Third Volume*						↓	

** - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.*

4. SAMPLE DATA

Sample ID: MW-8A **Depth to Water at time of Sampling:** 42.61

Sample Time: 1200 **Number of Containers:** 3

Analyses: See CoC **Duplicate Sample Collected?** Yes ☐ No ☒

MS/MSD Sample Collected? Yes ☐ No ☒

Was there enough sample volume to fill all sample jars? Yes ☐ No ☒ explain:

Depth to Bottom of Well (measure after sampling): 43.15 **Depth to DNAPL:** ND

5. COMMENTS 6 VOA's | 250 NaOH | 500 HNO_3 | 500 None | 250 H_2SO_4 | 250 None

* only enough H_2O for 3 VOAs *

Site: Orangetown Shopping Center **Tech:** LM

Address: 1-45 Orangetown Shopping Center **Date:** 3.27.15

Orangeburg, New York **Weather:** OVERCAST

Daily Field Log (Gauging Table)

Well ID	PID (outer)	PID (inner)	Depth to Water	Depth to DNAPL	Depth to Bottom (last visit)	Depth to Bottom (measured)	Well Diameter	Well Volume	Comments	Analytical Parameters
MW-3	0	0	34.02	ND	42.70	42.70	2"		Gauge & Sample	VOCs, Ethene, Electron Acceptors
MW-4	0	0	38.32		46.80	46.80	2"		Gauge & Sample	VOCs, Ethene, Electron Acceptors, and TOC
MW-5	0	0	34.77		45.20	45.20	2"		Gauge & Sample	VOCs, Ethene, Electron Acceptors, TOC, and PCBs
MW-6	0	0	34.22		51.20	51.20	2"		Gauge & Sample	PCBs
MW-7	0	0	44.72		48.20	48.20	2"		Gauge & Sample	PCBs
MW-8A	0	0	40.31		43.15	43.15	1"	.3	Gauge & Sample	VOCs, Ethene, Electron Acceptors
MW-8B	0	0	40.21		52.00	52.00	1"		Gauge & Sample	VOCs, Ethene, Electron Acceptors
MW-10	0	0	9.55		33.62	33.62	4"		Gauge & Sample	VOCs and PCBs

Groundwater Sampling

(DTB - DTW)*X = _____ (1well volume in gallons) *Remove at least 3 well volumes*

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

BOTTLEWARE:	Electron Acceptors:
VOCs: 3 HCL VOAs	Sulfate: 250 mL unpreserved plastic
Ethene: 3 HCL VOAs	Ferric, Ferrous, Total Iron: 500 mL w/HNO3 & 500 mL
TOC: 1-60 mL HCL	unpsreserved
PCB: 2-Amber Liters	Nitrate: 250 mL w/H2SO4 and 250 mL unpreserved

3-27-15 LM

OB - Orangetown
1-45 Orangetown Shopping...
O-burg, New York
1162513-06-206
overcast / Rain
0730 - @ office, prep coolers +
load equipment
0800 - Depart for site
0900 - LM onsite for GWS,
HASP / JSA's / SPSAs / PPE
Traffic control
- Start GWS @ MW-10
- Duplicate collected from
MW-10
- MS / MSD collected from
MW-10

1430 - offsite
1530 - @ office - sample pack
1600 - finished

Day 1

DAILY SIGN IN SHEET
Hazard Asessment Checklist

Site Name/Project #: Orangeburg Shopping Center / 1102323

Site Address: 1-45 Orangetown Shopping Center, Orangetown, NY 10962 Date: 4/28/15

The Site Supervisor will review the hazards of the job with all employees and visitors daily. If the work includes intrusive work, confined space, lockout/tagout, a plan or permit is required to be completed. Emergency response plans will be reviewed before work begins. Signatures are required for each day of work. Revisions to this form must be initialed and dated.

Description of Work (Tasks to be Completed)

SUI Investigation

Traffic Control Methods:

Cones, flags, Signs.

Site Hazards/PPE/Hazard Control: Prior to the start of work, take a few minutes to review and discuss the strategy to deal with each hazard associated with the job and document above in "Tailgate Meeting"

PERSONAL PROTECTION:
- ✓ Chemical Resistant Gloves
- ✓ Cloth/Leather Gloves
- ___ Tyvek Suit
- ___ Rubber Boots
- ✓ Safety Goggles
- ✓ Steel Toed Boots
- ___ Face Shield
- ___ Respirator
- ___ Hearing Protection
- ___ Hard Hat
- ___ Safety Glasses w/Shields
- ___ Saranex Suit
- ___ Safety Harness/Lanyard
- ___ Other _____

LEVELS OF PPE
- ✓ D
- ___ Modified Level D
- ___ C (Respirator)

AIR MONITORING EQUIPMENT
- ___ PID
- ___ LEL/O2
- ___ Drager Pump/Tubes
- ___ Other_____

PERMITS
- ___ Hot/Cold (Attach Permit)
- ___ Traffic
- ___ Air Quality
- ___ One Call/Dig Safe NotificationCompleted

Number: _____
Expires: _____

Incident Reporting System
- ✓ Emergency contacts listed
- ✓ Understand Incident/injury/Near Miss procedures and responsibilities

TOOLS:
- ✓ Proper Tools for Job
- ✓ Good Tool Condition

ACCESS:
- ___ Scaffolds Inspected & Tagged
- ___ Ladders Tied Off
- ___ Personal Man Basket
- ___ Confined Space (Attach Form)

EMERGENCY EQUIPMENT LOCATION KNOWN:
- ✓ Site-specific Health & Safety Plan/MSDS's
- ___ Fire Monitors
- ✓ Fire Extinguishers
- ___ Safety Showers
- ✓ Eye Wash
- ✓ Evacuation Route Reviewed
- ✓ Local Emergency Numbers
- ✓ Hospital
- ___ Emergency Shut Off Switch Location: _____

DRILLING:
- ___ Utility Clearance
- ___ Hearing Protection
- ___ Inspection by competent person
- ___ No loose clothing/jewelry worn
- ___ Established hand signals
- ___ Visual Contact
- ___ 25' Clearance from Overhead Power Lines
- ___ Pre-Drill checklist completed
- ___ Driller has current/valid license

License # _____

JLA:
- ✓ Available on site for all scheduled tasks
- ✓ Reviewed and understood by all

LIFTING/Materials Handling:
- ___ Cherry Picker (current inspection)
- ___ Scissor Lift (current inspection)
- ___ Fork Lift (current inspection)
- ___ Drum Dolly
- ___ Truck Ramps
- ___ Overhead Lines (clearance)
- ___ Manual Lifting
- ___ Valid Crane Operator's License

POTENTIAL HAZARDS:
- ✓ Airborne Particles
- ✓ Gases/Vapors
- ___ Fire/Explosion
- ___ Electrical Shock
- ✓ Slips, Trips and Falls
- ___ Heat Stress
- ___ Cold Stress
- ___ Heavy Objects
- ___ Hot/Cold Surfaces
- ___ Inadequate Lighting
- ___ First Opening of Equipment
- ___ High Noise Level
- ___ Access/Egress
- ✓ Sharp Objects
- ___ Poisonous Plants
- ___ Insects and Snakes
- ✓ Body Pinch Points
- ✓ Housekeeping
- ___ Traffic

TRAFFIC CONTROL ELEMENTS:
- ✓ ORANGE TRAFFIC CONES
- ✓ MEN WORKING SIGN(S)
- ✓ TRAFFIC CONTROL PLAN?
- ✓ ORANGE TRAFFIC FLAGS
- ___ CAUTIONS TAPE, PENNANT FLAGS
- ___ POLICE DETAIL
- ___ ABANDONED (PROPERLY BARRICADED)
- ✓ HIGH VISIBILITY VEST/CLOTHING

ELECTRICAL:
- ___ Locked/Tagged Out
- ___ Bonding
- ___ Verify Isolation
- ___ GFCI Used
- ___ Condition of Electrical Cords
- ___ Other _____

EXCAVATION:
- ___ Visual Inspection of Trench
- ___ Soil Typing
- ___ Ladder Every 25' of Lateral Travel
- ___ Ladder Extends 3' above Trench
- ___ Adequate Shoring and Sloping
- ___ Accumulating Water Removal from Trench
- ___ Spoils Pile 2' from Edge of Trench
- ___ Surface Encumbrances
- ___ Barricade or Fill in Unattended Excavations

CLEANUP:
- ✓ Cleanup is required after work completion
- ✓ Pick up tools and misc. items to prevent tripping hazards
- ✓ Discard trash

Training
- ✓ Full Day LPS Training Session (ExxonMobil Projects)
- ___ Awareness Short Course (on-site)
- ✓ LPS Cards verified for all personnel
- ✓ OSHA 40/8 Hour Updates current?

Other: _____

DAILY SIGN IN SHEET
Hazard Asessment Checklist

Site Name/Project #: Orangeburg Shopping Center / 1102323

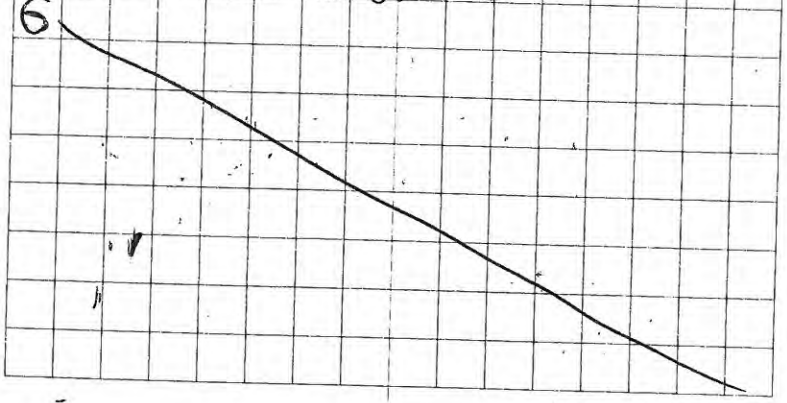
Site Address: 1-45 Orangetown Shopping Center, Orangetown, NY 10962 Date: 4/28/15

All GES employees and subcontractors must comply with the site HASP and GES Policies/Procedures.
Non-conformance shall prohibit admittance to the site.

Employee/Visitor Name (Print)	Signature	Company Representing	Tasks Assigned	LPS Training Type (Full or Awareness)	On-site Hours
Gregg Marcinkowski	Gregg Marcinkowski	GES	SUI Investigation	Full	11
		GES	SUI	Full	6

On-Site Supervisor Signature:

4/28/15 UB Orangetown Shopping Ctr.
SVI Investigation
- Sunny 56°
0700 leave for site
0800 CM+RB onsite
- H+S meeting, review HASP, JSAs, SPSAs, PPE, traffic control.
- only have access to deli for now trying to get key.
- called office
- test helium leakage in deli then start Summas
VP-1 - 1.25 Flow
SSD-MP-2 - 1.25 Flow
SSD-MP-5 - 1.25 Flow
VP-9 - 1.25 Flow
VP-6 - 1.25 Flow
VP-5 - 1.25 Flow
- All Summas are running
- write down inventar check list take photos.
- check Summas periodically over 8 hrs. to ensure in of Hg and are still working.
- RB offsite
- returning equipment to Eco rentals.
- Summas in the Deli are done close valve take final readings put equipment back in boxes
- close points.
- lock door, return key to contractor
- repeated for china and Sparkles.
- paperwork started system
1900 offsite
2000 back at office.



Christina Andreotto

From: Karen Bourque
Sent: Thursday, April 23, 2015 10:26 AM
To: Christina Andreotto
Subject: FW: For Your Approval: Orangeburg Soil Vapor Intrusion Investigation Work Plan - Deviation Request

Karen A. Bourque
Sr. Project Manager
Groundwater & Environmental Services, Inc.
16 Mt. Ebo South, Suite 21
Brewster, New York 10509
Phone - (866) 839-5195 ext. 3833
Cell - (203)731-9329
866-902-2187 *please use a cover page with my name included for incoming faxes!
kbourque@gesonline.com

Please consider the environment before printing

From: Ockerby, Renata E (HEALTH) [mailto:renata.ockerby@health.ny.gov]
Sent: Thursday, April 23, 2015 10:24 AM
To: Karen Bourque; Verrigni, Jamie L (DEC)
Subject: RE: For Your Approval: Orangeburg Soil Vapor Intrusion Investigation Work Plan - Deviation Request

Jamie,

After reviewing the Figure, my recommendation would be to utilize VP-5 or VP-6, which are more centrally located in the tenant unit.

Sincerely,
Renata

From: Karen Bourque [mailto:KBourque@gesonline.com]
Sent: Thursday, April 23, 2015 10:13 AM
To: Verrigni, Jamie L (DEC)
Cc: Christina Andreotto; Ockerby, Renata E (HEALTH); Candiloro, James (DEC)
Subject: RE: For Your Approval: Orangeburg Soil Vapor Intrusion Investigation Work Plan - Deviation Request

Jamie

Thank you. Please confirm that we can utilize the VP points as well as the SSD-MP in lieu of installing new temporary points. I have attached the figure for your reference. We are specifically looking to utilize VP-4, VP-5 or VP-6 located near the center of the Sparkle Cleaners.

Thanks
Karen

Karen A. Bourque
Sr. Project Manager
Groundwater & Environmental Services, Inc.
16 Mt. Ebo South, Suite 21
Brewster, New York 10509
Phone - (866) 839-5195 ext. 3833
Cell - (203)731-9329
866-902-2187 *please use a cover page with my name included for incoming faxes!
kbourque@gesonline.com

Please consider the environment before printing

From: Verrigni, Jamie L (DEC) [mailto:jamie.verrigni@dec.ny.gov]
Sent: Tuesday, April 21, 2015 2:53 PM
To: Karen Bourque
Cc: Christina Andreotto; Ockerby, Renata E (HEALTH); Candiloro, James (DEC)
Subject: RE: For Your Approval: Orangeburg Soil Vapor Intrusion Investigaton Work Plan - Deviation Request

Karen,

The Department and NYSDOH have reviewed your request for modification to the SVI investigation Work Plan and are ok with using five out of the six permanent sub-slab monitoring points, the exception being SSD-MP4. The Sparkle Cleaners Unit should have a sub-slab point towards the center of the Unit.

If you have any questions, please feel free to contact me.

Jamie

Jamie Verrigni
Environmental Engineer, Division of Environmental Remediation

New York State Department of Environmental Conservation
625 Broadway, Albany, NY 12233
P: (518) 402-9662 | F: (518) 402-9679 | jamie.verrigni@dec.ny.gov

www.dec.ny.gov |

From: Karen Bourque [mailto:KBourque@gesonline.com]
Sent: Monday, April 20, 2015 10:31 AM
To: Verrigni, Jamie L (DEC)
Cc: Christina Andreotto
Subject: For Your Approval: Orangeburg Soil Vapor Intrusion Investigaton Work Plan - Deviation Request

Jamie –

GES is in the process of planning the completion of the SVI activities at the Orangetown Shopping Center in Orangeburg New York. As you are aware, GES maintains a sub-slab depressurization system (SSDS) at the site. There are currently sub-slab monitoring points associated with the system located in all three of the tenant spaces where the soil vapor intrusion work is scheduled to be completed. GES, on behalf of UB Orangeburg LLC, would like to utilize the existing points rather than install 6 temporary points in the tenant spaces. Each permanent monitoring point has been installed beneath the building slab and will be tested with a helium trace test per the approved work plan. Upon completion of helium tracer testing, GES will complete the 8-hour soil vapor intrusion investigation per the approved Work Plan. Upon completion of work, the points will remain in place as they will continue to be utilized as monitoring points for the SSDS.

Please let me know if we have approval to modify the approved Workplan to include the changes noted above. I have attached a figure showing the location of the possible SDS points that can be used. Note that only 2 points within each store front will be used.

Thank you in advance,
Karen

Karen Bourque
GES, Inc.
16 Mt. Ebo Road South, Ste. 21
Brewster, New York
Phone - 866-839-5195 ext. 3833
Cell - 203-731-9329

Christina Andreotto

From: Verrigni, Jamie L (DEC) <jamie.verrigni@dec.ny.gov>
Sent: Tuesday, April 21, 2015 2:53 PM
To: Karen Bourque
Cc: Christina Andreotto; Ockerby, Renata E (HEALTH); Candiloro, James (DEC)
Subject: RE: For Your Approval: Orangeburg Soil Vapor Intrusion Investigaton Work Plan - Deviation Request

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If you have any questions, please feel free to contact me.

Jamie

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From: Karen Bourque [mailto:KBourque@gesonline.com]
Sent: Monday, April 20, 2015 10:31 AM
To: Verrigni, Jamie L (DEC)
Cc: Christina Andreotto
Subject: For Your Approval: Orangeburg Soil Vapor Intrusion Investigaton Work Plan - Deviation Request

Jamie –

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Brewster, New York
Phone - 866-839-5195 ext. 3833
Cell - 203-731-9329

DAILY SIGN IN SHEET
Hazard Asessment Checklist

Site Name/Project #: Orangeburg Shopping Center

Site Address: 1-45 Orangetown Shopping Center, Orangetown, NY 10962 Date: 5/11/15

The Site Supervisor will review the hazards of the job with all employees and visitors daily. If the work includes intrusive work, confined space, lockout/tagout, a plan or permit is required to be completed. Emergency response plans will be reviewed before work begins. Signatures are required for each day of work. Revisions to this form must be initialed and dated.

Description of Work (Tasks to be Completed)

Groundwater Sampling

Traffic Control Methods:

Flags, Cones, Work Signs

Site Hazards/PPE/Hazard Control: Prior to the start of work, take a few minutes to review and discuss the strategy to deal with each hazard associated with the job and document above in "Tailgate Meeting"

PERSONAL PROTECTION:
- ✓ Chemical Resistant Gloves
- ✓ Cloth/Leather Gloves
- ___ Tyvek Suit
- ___ Rubber Boots
- ✓ Safety Goggles
- ✓ Steel Toed Boots
- ___ Face Shield
- ___ Respirator
- ___ Hearing Protection
- ___ Hard Hat
- ___ Safety Glasses w/Shields
- ___ Saranex Suit
- ___ Safety Harness/Lanyard
- ___ Other _____

LEVELS OF PPE
- ✓ D
- ___ Modified Level D
- ___ C (Respirator)

AIR MONITORING EQUIPMENT
- ✓ PID
- ___ LEL/O2
- ___ Drager Pump/Tubes
- ___ Other_____

PERMITS
- ___ Hot/Cold (Attach Permit)
- ___ Traffic
- ___ Air Quality
- ___ One Call/Dig Safe NotificationCompleted

Number: _____
Expires: _____

Incident Reporting System
- ✓ Emergency contacts listed
- ✓ Understand Incident/Injury/Near Miss procedures and responsibilities

TOOLS:
- ✓ Proper Tools for Job
- ✓ Good Tool Condition

ACCESS:
- ___ Scaffolds Inspected & Tagged
- ___ Ladders Tied Off
- ___ Personal Man Basket
- ___ Confined Space (Attach Form)

EMERGENCY EQUIPMENT LOCATION KNOWN:
- ___ Site-specific Health & Safety Plan/MSDS's
- ___ Fire Monitors
- ___ Fire Extinguishers
- ___ Safety Showers
- ___ Eye Wash
- ___ Evacuation Route Reviewed
- ___ Local Emergency Numbers
- ___ Hospital
- ___ Emergency Shut Off Switch

Location: _____

DRILLING:
- ___ Utility Clearance
- ___ Hearing Protection
- ___ Inspection by competent person
- ___ No loose clothing/jewelry worn
- ___ Established hand signals
- ___ Visual Contact
- ___ 25' Clearance from Overhead Power Lines
- ___ Pre-Drill checklist completed
- ___ Driller has current/valid license

License # _____

JLA:
- ✓ Available on site for all scheduled tasks
- ✓ Reviewed and understood by all

LIFTING/Materials Handling:
- ___ Cherry Picker (current inspection)
- ___ Scissor Lift (current inspection)
- ___ Fork Lift (current inspection)
- ___ Drum Dolly
- ___ Truck Ramps
- ___ Overhead Lines (clearance)
- ___ Manual Lifting
- ___ Valid Crane Operator's License

POTENTIAL HAZARDS:
- ✓ Airborne Particles
- ✓ Gases/Vapors
- ___ Fire/Explosion
- ___ Electrical Shock
- ✓ Slips, Trips and Falls
- ___ Heat Stress
- ___ Cold Stress
- ✓ Heavy Objects
- ___ Hot/Cold Surfaces
- ___ Inadequate Lighting
- ✓ First Opening of Equipment
- ___ High Noise Level
- ___ Access/Egress
- ✓ Sharp Objects
- ___ Poisonous Plants
- ✓ Insects and Snakes
- ✓ Body Pinch Points
- ✓ Housekeeping
- ✓ Traffic

TRAFFIC CONTROL ELEMENTS:
- ✓ ORANGE TRAFFIC CONES
- ✓ MEN WORKING SIGN(S)
- ✓ TRAFFIC CONTROL PLAN?
- ✓ ORANGE TRAFFIC FLAGS
- ✓ CAUTIONS TAPE, PENNANT FLAGS
- ___ POLICE DETAIL
- ___ ABANDONED (PROPERLY BARRICADED)
- ✓ HIGH VISIBILITY VEST/CLOTHING

ELECTRICAL:
- ___ Locked/Tagged Out
- ___ Bonding
- ___ Verify Isolation
- ___ GFCI Used
- ___ Condition of Electrical Cords
- ___ Other _____

EXCAVATION:
- ___ Visual Inspection of Trench
- ___ Soil Typing
- ___ Ladder Every 25' of Lateral Travel
- ___ Ladder Extends 3' above Trench
- ___ Adequate Shoring and Sloping
- ___ Accumulating Water Removal from Trench
- ___ Spoils Pile 2' from Edge of Trench
- ___ Surface Encumbrances
- ___ Barricade or Fill in Unattended Excavations

CLEANUP:
- ✓ Cleanup is required after work completion
- ✓ Pick up tools and misc. items to prevent tripping hazards
- ✓ Discard trash

Training
- ✓ Full Day LPS Training Session (ExxonMobil Projects)
- ___ Awareness Short Course (on-site)
- ✓ LPS Cards verified for all personnel
- ✓ OSHA 40/8 Hour Updates current?

Other: _____

DAILY SIGN IN SHEET
Hazard Asessment Checklist

Site Name/Project #: Orangeburg Shopping Center

Site Address: 1-45 Orangetown Shopping Center, Orangetown, NY 10962 Date: 5/11/15

All GES employees and subcontractors must comply with the site HASP and GES Policies/Procedures.

Non-conformance shall prohibit admittance to the site.

Employee/Visitor Name (Print)	Signature	Company Representing	Tasks Assigned	LPS Training Type (Full or Awareness)	On-site Hours
Gregg Marcinkowski	Gregg Marcinkowski	GES	Groundwater Sampling	Full	6.25

On-Site Supervisor Signature:

OPERATION, MAINTENANCE AND MONITORING DATA SHEET

System ID:	Orangetown Shopping Center	**Date:**	5/11/15
NYSDEC Site No.:	C344066	**Name:**	GM
Site Address:	1-45 Orangetown Shopping Center Orangetown, New York 10962		
Site Owner Contact Information:	JLJ Management Company, Inc. 197 Trenor Drive New Rochelle, New York 10804	**Site Operator Contact Information:**	Groundwater & Environmental Services, Inc. 70 Jon Barrett Road, Suite B Patterson, NY 12563 (866)-839-5195

Visual Inspection

Location	Acceptable	Notes:
Lockable Stub Up Enclosure	(YES) / NO	
Hazard Communication Box	(YES) / NO	
IP-1	(YES) / NO	
IP-2	YES / (NO)	needs threading and a bolt
IP-3	(YES) / NO	
IP-4	(YES) / NO	
IP-5	(YES) / NO	
IP-6	(YES) / NO	
IP-7	(YES) / NO	
IP-8	(YES) / NO	
IP-9	(YES) / NO	
IP-10	YES / NO	
IP-11	(YES) / NO	
IP-12	(YES) / NO	
IP-13	(YES) / NO	
IP-14	(YES) / NO	
MW-2	YES / NO	
MW-3	(YES) / NO	
MW-4	(YES) / NO	
MW-5	(YES) / NO	
MW-8A/B	(YES) / NO	
MW-A	YES / NO	
MW-B	YES / NO	
MW-C	(YES) / NO	
MW-D	(YES) / NO	
MW-E	(YES) / NO	
MW-F	(YES) / NO	

Well Condition Check Sheet

Date: _____

Well ID	Check if all Good	Road box size and condition	Well gripper and condition	Lock	Pad Condition	Comments:
MW-11A,B	✓					
MW-7	✓					
INJ-9	✓					
INJ-8	✓					
INJ-7	✓					
INJ-6	✓					
INJ-5	✓					
INJ-4	✓					
INJ-3	✓					
INJ-2						- needs threading onda bolt
INJ-1	✓					

Well Condition Check Sheet

Date: _____

Well ID	Check if all Good	Road box size and condition	Well gripper and condition	Lock	Pad Condition	Comments:
MW-15A	✓					
MW-10	✓					
MW-13	✓					
MW-12A,B,C	✓					
MW-6	✓					
MW-9A,B,C	✓					
MW-1	✓					
MW-F	✓					
MW-E	✓					
MW-4	✓					
MW-D	✓					
MW-14A	✓					
MW-8A,B	✓					
MW-C	✓					
MW-3	✓					
MW-5	✓					

GES Instrument Calibration Sheet

Station Location: 1-45 Orangetown Shopping Center

Station Number: NYSDEC #C344066

Equipment Name- Photoionization Detector (Pid)
Serial Number-
Calibration Technician CM
Calibration Gas or Calibration Method- span isobutylene
Concentration (ppm)- 100 ppm
Comments-

Date- 5/11/15
Readings Before Calibration- 99.6
Readings After Calibration- 100.0
Span Check-

Equipment Name- YSI
Serial Number-
Calibration Technician CM

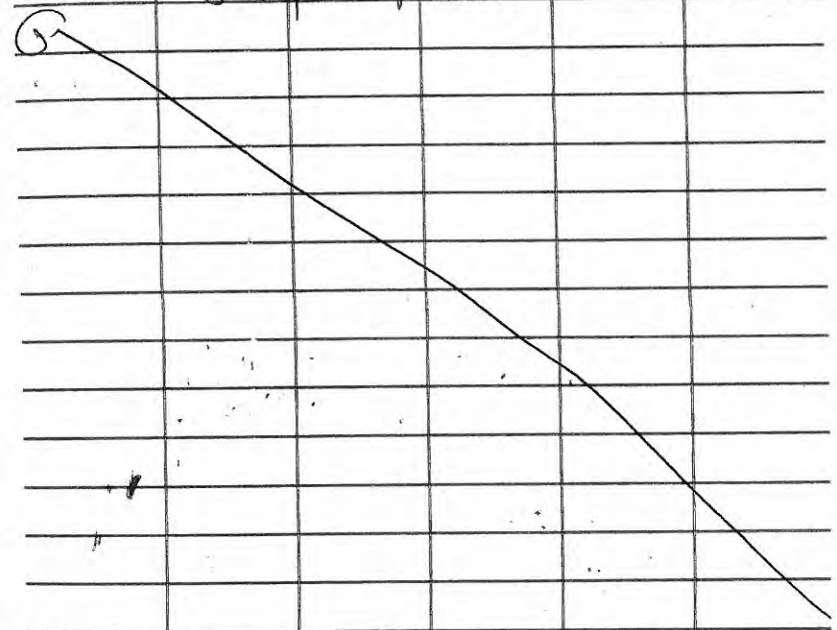
Date- 5/11/15

Parameter

_pH	Standard	Initial	Calibrated	Mid-Day Bump Check
	4.00	4.15	4.00	
	7.00	6.92	7.00	
	10.00	10.08	10.00	
Turbidity	**Standard**	**Initial**	**Calibrated**	**Mid-Day Bump Check**
DO	**Standard**	**Initial**	**Calibrated**	**Mid-Day Bump Check**
	100%			
Conductivity	**Standard**	**Initial**	**Calibrated**	**Mid-Day Bump Check**

Comments-

5/11/15 Urstadt Orangetown Shopping Ctr.
- GWS
- partly cloudy 73°
0645 Prep equipment
0700 leave for site
0815 GM onsite
- H+S meeting, review HASP, JSAs, SPSAs, PPE, traffic controls
- start GWS
Note: MW-3 had limited water dropped YSI in well and then drop sampled
- MW-8A - bailer kept getting stuck, well maybe bent no sample collected
- MW-8B when plug was removed spring broke bailer went down well could not recover still able to purge and sample.
- MW-5 did not have enough water to sample all bottle ware.
- missed HNO_3 bottle.
- drum was almost 2/3 full
- photographed site and wells
- INJ-2 needs rethreading and a bolt, bolts are onsite in lock box
- call office
1430 offsite
1530 back at office
- sample packs.



Site: Orangetown Shopping Center
Address: 1-45 Orangetown Shopping Center
Orangeburg, New York

Tech: GM
Date: 5/11/15
Weather: partly cloudy 73°

Daily Field Log (Gauging Table)

Well ID	PID (outer)	PID (inner)	Depth to Water	Depth to DNAPL	Depth to Bottom (last visit)	Depth to Bottom (measured)	Well Diameter	Well Volume	Comments	Analytical Parameters
MW-3	0.0	0.0	40.60		42.70	43.68	2"	—	Gauge & Sample	VOCs, Ethene, Electron Acceptors
MW-4	0.0	0.0	37.74		46.80	46.75	2"	4.0	Gauge & Sample	VOCs, Ethene, Electron Acceptors, and TOC
MW-5	0.0	0.0	38.72		45.20	45.25	2"	2.0	Gauge & Sample	VOCs, Ethene, Electron Acceptors, and TOC
MW-8A	0.0	0.0	42.08		43.15	43.15	1"	NA	Gauge & Sample	VOCs, Ethene, Electron Acceptors
MW-8B	0.0	0.0	39.15		52.00	52.00	1"	1.5	Gauge & Sample	VOCs, Ethene, Electron Acceptors
MW-10	0.0	0.0	9.92		33.62	33.68	4"	20	Gauge & Sample	VOCs

Groundwater Sampling

(DTB - DTW)*X = _____ (1well volume in gallons) *Remove at least 3 well volumes*

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

BOTTLEWARE:	Electron Acceptors:
VOCs: 3 HCL VOAs	Sulfate: 250 mL unpreserved plastic
Ethene: 3 HCL VOAs	Ferric, Ferrous, Total Iron: 500 mL w/HNO3 & 500 mL unpsreserved
TOC: 1-60 mL HCL	Nitrate: 250 mL w/H2SO4 and 250 mL unpreserved

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-5

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 5/11/15

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** CM

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** Sunny

2. MONITORING WELL DATA:

Depth to Water: 38.76 **Depth to Bottom (last round):** 45.20

Casing Diameter: 2 **Calculated Purge Amount:** 3.0 *gallons*

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☐ No ☒

Did well purge dry? Yes ☒ No ☐ **Depth to Water after purge:** 45.10

Actual Purge Amount: 2.0 gallons **Depth to Water after recharge:** 43.00

Water Quality Meter Model: _____ **Time elapsed for recharge:** 45 min.

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity	DO	ORP	Turbidity	Comments or Observations
First Volume	6.62	18.49	16911	0.90	-168.3	—	
Second Volume	6.67	24.80	16764	0.41	-156.9	—	
Third Volume*							

** - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.*

4. SAMPLE DATA

Sample ID: MW-5 **Depth to Water at time of Sampling:** 42.97

Sample Time: 1315 **Number of Containers:** 9

Analyses: COC **Duplicate Sample Collected?** Yes ☐ No ☒

MS/MSD Sample Collected? Yes ☐ No ☒

Was there enough sample volume to fill all sample jars? Yes ☐ No ☒ explain: _____

Depth to Bottom of Well (measure after sampling): 45.25 **Depth to DNAPL:** _____

5. COMMENTS After well was purge dry allowed time to recharge did not have enough to sample everything.

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-8B

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 5/11/15

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** AM

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** Sunny

2. MONITORING WELL DATA:

Depth to Water: 39.15 **Depth to Bottom (last round):** 52.00

Casing Diameter: 1 **Calculated Purge Amount:** 1.5 *gallons*

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☐ No ☒

Did well purge dry? Yes ☐ No ☒ **Depth to Water after purge:** 39.30

Actual Purge Amount: 1.5 gallons **Depth to Water after recharge:** 39.27

Water Quality Meter Model: _____ **Time elapsed for recharge:** 5 min.

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity	DO	ORP	Turbidity	Comments or Observations
First Volume	7.94	19.76	3632	2.30	-46.8	—	
Second Volume	8.20	18.97	3875	2.18	-52.8	—	
Third Volume*	6.85	19.72	4042	2.29	-98.0	—	

** - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.*

4. SAMPLE DATA

Sample ID: MW-8B **Depth to Water at time of Sampling:** 39.23

Sample Time: 1200 **Number of Containers:** 10

Analyses: COC **Duplicate Sample Collected?** Yes ☐ No ☒

MS/MSD Sample Collected? Yes ☐ No ☒

Was there enough sample volume to fill all sample jars? Yes ☒ No ☐ explain: _____

Depth to Bottom of Well (measure after sampling): 52.00 **Depth to DNAPL:** _____

5. COMMENTS _____

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-3

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 5/11/15

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** AM

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** cloudy

2. MONITORING WELL DATA:

Depth to Water: 40.10 **Depth to Bottom (last round):** 42.70

Casing Diameter: 2 **Calculated Purge Amount:** ~~2.0~~ 2.0 gallons

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☐ No ☒

Did well purge dry? Yes ☐ No ☒ **Depth to Water after purge:** —

Actual Purge Amount: Drop gallons **Depth to Water after recharge:** —

Water Quality Meter Model: _____ **Time elapsed for recharge:** —

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity	DO	ORP	Turbidity	Comments or Observations
First Volume	6.56	15.59	1951	0.10	-173.2	—	
Second Volume							
Third Volume*							

* - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.

4. SAMPLE DATA

Sample ID: MW-3 **Depth to Water at time of Sampling:** 40.10

Sample Time: 1100 **Number of Containers:** 10

Analyses: COC **Duplicate Sample Collected?** Yes ☐ No ☒

MS/MSD Sample Collected? Yes ☐ No ☒

Was there enough sample volume to fill all sample jars? Yes ☒ No ☐ explain: _____

Depth to Bottom of Well (measure after sampling): 43.68 **Depth to DNAPL:** _____

5. COMMENTS Not enough to purge drop YSI down well then sample

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-4

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 5/11/15

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** CM

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** partly cloudy

2. MONITORING WELL DATA:

Depth to Water: 37.76 **Depth to Bottom (last round):** 46.80

Casing Diameter: 2 **Calculated Purge Amount:** 4.0 gallons

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☒ No ☒

Did well purge dry? Yes ☐ No ☒ **Depth to Water after purge:** 38.06

Actual Purge Amount: 4.0 gallons **Depth to Water after recharge:** 38.06

Water Quality Meter Model: _____ **Time elapsed for recharge:** —

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity	DO	ORP	Turbidity	Comments or Observations
First Volume	6.54	14.94	2299	2.17	-159.1	—	
Second Volume	6.57	16.65	2300	2.14	-145.8	—	
Third Volume*	6.60	17.24	2328	2.78	-142.2	—	

* - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.

4. SAMPLE DATA

Sample ID: MW-4 **Depth to Water at time of Sampling:** 38.02

Sample Time: 10:00 **Number of Containers:** 11

Analyses: COC **Duplicate Sample Collected?** Yes ☐ No ☒

MS/MSD Sample Collected? Yes ☐ No ☒

Was there enough sample volume to fill all sample jars? Yes ☒ No ☐ explain: _____

Depth to Bottom of Well (measure after sampling): 46.75 **Depth to DNAPL:** _____

5. COMMENTS

_____

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-1C

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 5/11/15

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** GM

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** partly cloudy

2. MONITORING WELL DATA:

Depth to Water: 9.92 **Depth to Bottom (last round):** 33.62

Casing Diameter: 4" **Calculated Purge Amount:** 47.00 gallons

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** Yes ☒ No ☐

Did well purge dry? Yes ☒ No ☐ **Depth to Water after purge:** 28.40

Actual Purge Amount: 20 gallons **Depth to Water after recharge:** 20.32

Water Quality Meter Model: _____ **Time elapsed for recharge:** 5 min

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity	DO	ORP	Turbidity	Comments or Observations
First Volume	6.57	16.02	1463	6.98	-26.1	—	
Second Volume	6.50	15.71	1537	6.81	-24.4	—	
Third Volume*	6.51	15.96	1593	6.66	-23.2		

** - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.*

4. SAMPLE DATA

Sample ID: MW-10 **Depth to Water at time of Sampling:** 10.45

Sample Time: 0900 **Number of Containers:** 12

Analyses: COC **Duplicate Sample Collected?** Yes ☒ No ☐

MS/MSD Sample Collected? Yes ☒ No ☐

Was there enough sample volume to fill all sample jars? Yes ☒ No ☐ explain: _____

Depth to Bottom of Well (measure after sampling): 33.68 **Depth to DNAPL:** _____

5. COMMENTS _____

GROUNDWATER PURGE AND SAMPLING FIELD SHEET

Well ID: MW-8A

1. PROJECT INFORMATION:

Site: Orangetown Shopping Center **Client:** UB Orangeburg, LLC **Date:** 5/11/15

Address: 1-45 Orangetown Shopping Ctr. **Project #:** 1102323-05-206 **Sampler:** CM

Orangeburg, New York **NYSDEC Site #:** C344066 **Weather:** Sunny

2. MONITORING WELL DATA:

Depth to Water: 42.08 **Depth to Bottom (last round):** 43.15

Casing Diameter: 2 **Calculated Purge Amount:** 1.0 *gallons*

Purge Volume Calculation:

(DTB - DTW)*X = _____ (1well volume in gallons)

X	0.041	0.163	0.367	0.653
Well Diameter	1"	2"	3"	4"

Remove at least 3 well volumes

3. PURGE DATA

Purge Method: Dedicated Teflon Bailers **Did well recharge?** *Yes* ☐ *No* ☐

Did well purge dry? *Yes* ☐ *No* ☐ **Depth to Water after purge:** _____

Actual Purge Amount: _____ gallons **Depth to Water after recharge:** _____

Water Quality Meter Model: _____ **Time elapsed for recharge:** _____

Observe water quality parameters following removal of each well volume:

	pH	Temperature	Conductivity	DO	ORP	Turbidity	Comments or Observations
First Volume							
Second Volume							
Third Volume*							

** - Sample water parameters. If well ran dry, record the parameters of any remaining sample water here.*

4. SAMPLE DATA

Sample ID: _____ **Depth to Water at time of Sampling:** _____

Sample Time: _____ **Number of Containers:** _____

Analyses: _____ **Duplicate Sample Collected?** *Yes* ☐ *No* ☐

_____ **MS/MSD Sample Collected?** *Yes* ☐ *No* ☐

Was there enough sample volume to fill all sample jars? *Yes* ☐ *No* ☐ explain: _____

Depth to Bottom of Well (measure after sampling): _____ **Depth to DNAPL:** _____

5. COMMENTS Couldn't Sample no water could be collected in bailer pvc maybe bent

DAILY SIGN IN SHEET
Hazard Asessment Checklist

Site Name/Project #: Orangeburg Shopping Center / 1102323

Site Address: 1-45 Orangetown Shopping Center, Orangetown, NY 10962 Date: 6-16-15

The Site Supervisor will review the hazards of the job with all employees and visitors daily. If the work includes intrusive work, confined space, lockout/tagout, a plan or permit is required to be completed. Emergency response plans will be reviewed before work begins. Signatures are required for each day of work. Revisions to this form must be initialed and dated.

Description of Work (Tasks to be Completed)

O&M

Traffic Control Methods: Cones MKSS Work Area Signs

Site Hazards/PPE/Hazard Control: Prior to the start of work, take a few minutes to review and discuss the strategy to deal with each hazard associated with the job and document above in "Tailgate Meeting"

PERSONAL PROTECTION:
- ✓ Chemical Resistant Gloves
- ✓ Cloth/Leather Gloves
- ___ Tyvek Suit
- ___ Rubber Boots
- ___ Safety Goggles
- ✓ Steel Toed Boots
- ___ Face Shield
- ___ Respirator
- ___ Hearing Protection
- ✓ Hard Hat
- ✓ Safety Glasses w/Shields
- ___ Saranex Suit
- ___ Safety Harness/Lanyard
- ___ Other _____

LEVELS OF PPE
- ✓ D
- ___ Modified Level D
- ___ C (Respirator)

AIR MONITORING EQUIPMENT
- ✓ PID
- ✓ LEL/O2
- ___ Drager Pump/Tubes
- ___ Other_____

PERMITS
- ___ Hot/Cold (Attach Permit)
- ___ Traffic
- ___ Air Quality
- ___ One Call/Dig Safe NotificationCompleted

Number: _____
Expires: _____

Incident Reporting System
- ___ Emergency contacts listed
- ___ Understand Incident/Injury/Near Miss procedures and responsibilities

TOOLS:
- ✓ Proper Tools for Job
- ✓ Good Tool Condition

ACCESS:
- ___ Scaffolds Inspected & Tagged
- ___ Ladders Tied Off
- ___ Personal Man Basket
- ___ Confined Space (Attach Form)

EMERGENCY EQUIPMENT
LOCATION KNOWN:
- ✓ Site-specific Health & Safety Plan/MSDS's
- ___ Fire Monitors
- ✓ Fire Extinguishers
- ✓ Safety Showers
- ✓ Eye Wash
- ___ Evacuation Route Reviewed
- ✓ Local Emergency Numbers
- ✓ Hospital
- ___ Emergency Shut Off Switch

Location: _____
_____

DRILLING:
- ___ Utility Clearance
- ___ Hearing Protection
- ___ Inspection by competent person
- ___ No loose clothing/jewelry worn
- ___ Established hand signals
- ___ Visual Contact
- ___ 25' Clearance from Overhead
- ___ Power Lines
- ___ Pre-Drill checklist completed
- ___ Driller has current/valid license

License # _____

JLA:
- ✓ Available on site for all scheduled tasks
- ___ Reviewed and understood by all

LIFTING/Materials Handling:
- ___ Cherry Picker (current inspection)
- ___ Scissor Lift (current inspection)
- ___ Fork Lift (current inspection)
- ___ Drum Dolly
- ___ Truck Ramps
- ___ Overhead Lines (clearance)
- ___ Manual Lifting
- ___ Valid Crane Operator's License

POTENTIAL HAZARDS:
- ___ Airborne Particles
- ___ Gases/Vapors
- ___ Fire/Explosion
- ✓ Electrical Shock
- ✓ Slips, Trips and Falls
- ___ Heat Stress
- ___ Cold Stress
- ___ Heavy Objects
- ✓ Hot/Cold Surfaces
- ✓ Inadequate Lighting
- ___ First Opening of Equipment
- ___ High Noise Level
- ___ Access/Egress
- ___ Sharp Objects
- ___ Poisonous Plants
- ___ Insects and Snakes
- ✓ Body Pinch Points
- ✓ Housekeeping
- ___ Traffic

TRAFFIC CONTROL ELEMENTS:
- ✓ ORANGE TRAFFIC CONES
- ✓ MEN WORKING SIGN(S)
- ✓ TRAFFIC CONTROL PLAN?
- ✓ ORANGE TRAFFIC FLAGS
- ___ CAUTIONS TAPE, PENNANT FLAGS
- ✓ POLICE DETAIL
- ___ ABANDONED (PROPERLY BARRICADED)
- ✓ HIGH VISIBILITY VEST/CLOTHING

ELECTRICAL:
- ___ Locked/Tagged Out
- ___ Bonding
- ___ Verify Isolation
- ___ GFCI Used
- ___ Condition of Electrical Cords
- ___ Other _____

EXCAVATION:
- ___ Visual Inspection of Trench
- ___ Soil Typing
- ___ Ladder Every 25' of Lateral Travel
- ___ Ladder Extends 3' above Trench
- ___ Adequate Shoring and Sloping
- ___ Accumulating Water Removal from Trench
- ___ Spoils Pile 2' from Edge of Trench
- ___ Surface Encumbrances
- ___ Barricade or Fill in Unattended Excavations

CLEANUP:
- ✓ Cleanup is required after work completion
- ✓ Pick up tools and misc. items to prevent tripping hazards
- ✓ Discard trash

Training
- ✓ Full Day LPS Training Session (ExxonMobil Projects)
- ___ Awareness Short Course (on-site)
- ✓ LPS Cards verified for all personnel
- ✓ OSHA 40/8 Hour Updates current?

Other: _____
_____
_____

DAILY SIGN IN SHEET
Hazard Asessment Checklist

Site Name/Project #: Orangeburg Shopping Center / 1102323

Site Address: 1-45 Orangetown Shopping Center, Orangetown, NY 10962 Date: 6-16-15

All GES employees and subcontractors must comply with the site HASP and GES Policies/Procedures.
Non-conformance shall prohibit admittance to the site.

Employee/Visitor Name (Print)	Signature	Company Representing	Tasks Assigned	LPS Training Type (Full or Awareness)	On-site Hours
[illegible]	[signature]	GES	[signature]	Full	4

On-Site Supervisor Signature:

6-16-15 WBD

Overcast 70°F

0900 - On site
- Sign HASP
- PPE / SDS's / SOPs.

- Check CB's - All pass

- Complete sys inspection form - Added 120 vac/1 ph
  Sticker to panel

- Unable to enter Sparkle Cleaners - no key
  - Talked w/ KB.

- Perform O&M.

- Init All Tags

- Inspect Drum onsite
  - Drum labeled
  - in good shape

* In order to get flow readings we need to bring a ladder and second person to hold it for Blowers/Fans

  B-2
  B-3
  B-5
  B-6
  B-7

* Able to get vac/psp readings from ground level w/ existing tubings.

1300 - Off site

Critical Equipment Inspection and Testing Checklist

Urstadt - Orangetown Shopping Center/Sparkle Cleaners
1-45 Orangetown Shopping Ctr
Orangeburg, NY

Date: Rill Brown
Time: 1200
Purpose of Inspection: OT
Technician: Rubrow / [illegible] (name/signature)

Critical Equipment Shall be Checked Minimally on a Quarterly Basis, during system start-up, during restarts after extended shutdown time, or when equipment is changed or removed.

NOTE: If the CE fails testing, please describe the failure in the comments section. Please also describe changes required to the inspection procedure in the comments section.

CE #	CE Name	Inspection Procedure	Inspection Results	Circle one:		Comments
-	Signs	Ensure that warning signs and emergency signs are legible, securely fastened, and accurate. Repair or replace the signs as required.	Signs are present and visable.	Yes (circled)	No	None
-	Piping	Confirm that piping inside and at stacks is in good condition.	Pipes are in good condition.	Yes		None
-	Locks	Check all locked monitoring well caps, vaults, and enclosures for missing or damaged locks. Check the operation of each lock. Repair or replace locks as required.	Locks are present and working.	Yes (circled)	No	None
-	Electrical Ground	Visually check grounding wire connections for damage, continuity, and connection tightness. Check control panel ground circuit continuity with an ohmmeter. Tighten, repair or replace grounding wire connections as required.	Electrical Ground is present and properly connected/secured.	Yes (circled)	No	NONE

Describe any LO/TO required following Inspection: —

Describe any variances applied: —

List any parts that need to be ordered: —

UB, Orangeburg, LLC
Urstadt - Orangetown Shopping Center / Sparkle Cleaners
1-45 Orangetown Shopping Center
Orangeburg Rockland NY

Date: 6-16-16

Name: RichBrown

Sample ID	PID Reading
DS-1	0.0
DS-2	0.0
DS-3	0.0
DS-4	0.0
DS-5	0.0
DS-6	0.0
DS-7	0.0
DS-8	0.0
~~DS-9~~	N/A

SYSTEM INSPECTION FORM

Job Name:	Mostat - Orrisburg	**Date:**	6-16-15
Job No.:	1402373	**GES Office:**	LHV
Inspectors:	RWB.	**Inspection:**	**Start-Up, Transition, Inactive or Routine Bi-Annual**

The following checklist is to be completed for all active GES remediation system sites twice per year (once with technician and professional engineer or designee and once with technician and project manager). Inactive systems are to be inspected once per year. If the response to any item is "No," please explain why in the comment section. (*Remember, a loss or near loss report may be required based on the findings of the inspection.)*

Note: *For items requiring additional explanation, use comments section to discuss findings and/or provide additional information needed to perform corrective measures. For additional comment space, use back of page.*

Equipment/Information to needed to complete the inspection

- ☐ Previously completed system inspection form
- ☐ Tools to open control panel and other equipment
- ☐ Tools to open manholes and well vaults
- ☒ Digital Camera to document conditions
- ☐ Multimeter/amperage clamp to check equipment amperage and voltages
- ☐ Knowledge of the IBC, NEC, fire codes, pressure vessel codes and client specific requirements

Site Health & Safety / General Site Conditions

1.	Is current Health & Safety Plan (HASP) in a conspicuous place?	☒ Yes	☐ No	
2.	Are Material Safety Data Sheets (MSDS) in HASP?	☒ Yes	☐ No	
3.	Is GES' Emergency Sign Placard posted in a conspicuous place?	☒ Yes	☐ No	
4.	Is the site and enclosure clear of trash and debris?	☒ Yes	☐ No	
5.	Are walkways clear of trip hazards?	☒ Yes	☐ No	
6.	Are vaults/manholes/trenches in good conditions and locked?	☒ Yes	☐ No	
7.	Is vegetation (trees, vines, weeds) present that may pose trip or overhead hazards, including branches that could fall onto equipment, enclosures, or overhead utilities?	☒ Yes	☐ No	
8.	Is the log book present, protected from the elements and include all up-to-date permits, log sheets, checklists/forms and HASP?	☒ Yes	☐ No	
9.	Are on-site soil piles, if present, properly encapsulated?	☐ Yes	☐ No	☒ N/A
10.	Are there drums or storage tanks on site? (If YES, answer questions below)	☒ Yes	☐ No	
	– Do drums/tanks have secondary containment?	☐ Yes	☒ No	
	– Are the drums/tanks in good condition?	☒ Yes	☐ No	
	– Are the drums/tanks properly vented and grounded (product drums must be grounded)?	☐ Yes	☒ No	
	– Are the drums/tanks properly labeled, including a flammable sticker?	☐ Yes	☒ No	

COMMENTS:

- not Grounded Drum for purge water
- Added prop.
- no Flammable Sticker.

Enclosure/Structure/Building *(Requires knowledge of IBC to complete)* ☒ Not applicable ☐ Not checked

1.	Is the enclosure in good condition? (check doors, roof, interior/exterior walls, trailer leveling jacks, fence material and posts, stack guy wires, structural elements)	☐ Yes	☐ No	
2.	Is the shed properly heated, if necessary?	☐ Yes	☐ No	☐ N/A
3.	Is the air in the shed properly exhausted?	☐ Yes	☐ No	
4.	Is the exhaust fan guard in place?	☐ Yes	☐ No	
5.	Are there sufficient fresh air louvers?	☐ Yes	☐ No	
6.	Are the louvers or exhaust vents sealed off in the winter?	☐ Yes	☐ No	☐ N/A
7.	Are all sheds/compounds locked?	☐ Yes	☐ No	☐ N/A
8.	Are fire extinguishers on site? (If YES, expiration date: /20)	☐ Yes	☐ No	
9.	Are combustible/flammable materials separated from sources of ignition?	☐ Yes	☐ No	

COMMENTS: System Computers are ~~inside~~ outside 1 Active retail space
2 Empty retail spaces

Remedial System

Describe major system components, noting any changes completed to the remedial system since the last inspection

8 Radon Fans w/ 4" Sch 40 PVC pipes.
10 Manometers (Liquid ~~Filled~~ Filled)

1.	Has the remedial system changed since the last inspection?	☐ Yes	☒ No	
2.	Was the system operating upon arrival?	☒ Yes	☐ No	☐ N/A
3.	Is an accurate copy of remedial system trenching diagram posted? → inside Lock Box on-site	☐ Yes	☐ No	
4.	Is the posted P&ID accurate?	☐ Yes	☐ No	
5.	Are CEs/CSDs/sample ports/manifolds/flow direction/equipment properly labeled?	☒ Yes	☐ No	
6.	Reviewed system CEs/CSDs, interlock, alarm inspection forms and procedures?	☐ Yes	☐ No	☒ N/A
7.	Are pipe, tanks, hose, etc., supported properly and in acceptable condition (including those located in areas difficult to access [behind/under equipment])?	☒ Yes	☐ No	
8.	Are piping, hoses, tubing, valves, and other system components rated for (e.g., pressure, temperature, flow capacity, fluid type, concentration, and chemical compatibility) the service for which they are used (e.g., compressed air, high-temperature vapors)?	☒ Yes	☐ No	
9.	Are cam locks secured with pins, cable ties, or other equivalent means?	☐ Yes	☐ No	☒ N/A
10.	Is piping outside the structure properly insulated and heat traced?	☐ Yes	☐ No	☒ N/A
11.	Are buckle clamps used to connect hose to barbs?	☐ Yes	☐ No	☒ N/A
12.	Is there a floor sump (or other leak/spill detection) within the structure?	☐ Yes	☐ No	☒ N/A
13.	Is the system free of all additional hazards (e.g., confined space, ladders required)?	☒ Yes	☐ No	
14.	Is there at least 24 inches of space between equipment, control panels, and walls to allow O&M to be conducted safely?	☒ Yes	☐ No	
15.	Are supports and braces on vibrating equipment tight?	☐ Yes	☐ No	☒ N/A

16. Is all equipment in good operating condition? ☒ Yes ☐ No

COMMENTS: P+ID + Plans are inside exterior lock Box

National Electric Code *(This section must be completed during the first inspection and by a qualified individual)*

1. Has any electrical component of this system changed since the last inspection? ☐ Yes ☒ No
   (If YES, answer section below)
   How are areas classified? (Write name of area below)
   a. ☐ Class I Div I ☐ Class I Div II ☒ Not Classified — a)
   b. ☐ Class I Div I ☐ Class I Div II ☒ Not Classified — b)
   c. ☐ Class I Div I ☐ Class I Div II ☒ Not Classified — c)
2. Is the electrical classification correct? ☒ Yes ☐ No
3. Does all of the electrical equipment (lights, heaters, pumps, blowers, etc.) comply with the classification? ☒ Yes ☐ No
4. Is the voltage and amperage to the system and components correct? ☒ Yes ☐ No
5. Are proper voltage and phase labels posted on circuit breaker panel? ☐ Yes ☒ No 120 VAC
6. Is the proper high voltage **(208 volts or greater)** label on the outside of the panel? ☐ Yes ☐ No N/A
7. Are circuit breakers labeled in conjunction with equipment? ☒ Yes ☐ No
8. Are the motor starters properly sized? ☐ Yes ☐ No N/A
9. Are the **Thermal overloads** sized and set for the proper motor amperage? ☐ Yes ☐ No N/A
10. Are the gages of the wire correct for the equipment? ☒ Yes ☐ No
11. Is wiring in acceptable condition (no frayed, mashed, or loose wiring or burnt)? ☒ Yes ☐ No
12. Is wiring neat and attached to walls (shed and vaults)? ☒ Yes ☐ No
13. Are seal-offs poured? ☐ Yes ☐ No ☒ N/A
14. Are lights bulbs shatterproof, fluorescent, or shielded? ☐ Yes ☐ No N/A
15. Are GFIs and weather-proof outlets installed? Switches ☒ Yes ☐ No ~~N/A~~
16. Is all equipment properly wired (no extension cords, etc)? ☒ Yes ☐ No

COMMENTS: Need to add 120 VAC w/ tags stem to breaker panel

Compressed Air/Pressure Vessel

1. Are compressed air vessels used with the remedial system? *(If no, skip this section)* ☐ Yes ☐ No
2. According to the pressure vessel code for the applicable state, the pressurized vessel does need to be inspected? (If yes, document in the comment section when the vessel was last inspected.) ☐ Yes ☐ No
3. Are air compressor guards and warning labels (Danger – Hot) in place? ☐ Yes ☐ No
4. Is integrity of compressed air lines acceptable? ☐ Yes ☐ No
5. Are compressed air lines securely connected? ☐ Yes ☐ No

6.	Is air compressor oil compatible with piping (Synthetic oil and ABS piping are not)?	☐ Yes	☐ No
7.	The compressor coalescing filter is changed on a routine schedule?	☐ Yes	☐ No
8.	Has the oil been changed with the proper type?	☐ Yes	☐ No
9.	Has it been changed within 3 months?	☐ Yes	☐ No
10.	Have the air filters been inspected and replaced for the A/C and Filter/ Regulator?	☐ Yes	☐ No

COMMENTS: NO Compressor onsite

Remedial System Inspection Corrective Action Form

1.	Was a remedial system inspection corrective action form generated from this inspection?	☒ Yes	☐ No
2.	Is the completed remedial system inspection corrective action form attached to the checklist?	☒ Yes	☐ No

Completed inspections must be reviewed and acknowledged by the following:

	Title	*Printed Name*	*Signature*	*Date*
1.	Technician	Richard Brown		6-16-15
2.	Project Engineer			
3.	Project Manager			
4.	LHSO			
5.	Professional Engineer or Regional Engineer			

Remedial System Inspection Corrective Action Form

(print additional forms if necessary and attach to inspection checklist after completed. If no tasks make as none and attach to checklist)

Task	Completed By	Date Completed	Verified By	Date Verified
Add 120 VAC Sticker to Breaker Panel	RB	6-16-15	RB	6-16-15 – photo Doc

UB, Orangeburg, LLC
Urstadt - Orangetown Shopping Center / Sparkle Cleaners
1-45 Orangetown Shopping Center
Orangeburg Rockland NY
Operation, Monitoring, and Maintenance Data Sheets

Date: 6-16-15

Name: Rich Brown

Location: Deli Spot (Vacant)

Blowers	Vacuum (in WC)	Flow (cfm)
SSD-B1	2.618	15.1
SSD-B2	1.000	N/A
SSD-B3	1.515	N/A

Update the label on the blower during each O&M visit

need 30' ladder

Vapor Extraction wells	Vacuum (in WC)
SSD-2A	0.4
SSD-2B	1.0
SSD-3A	1.4
SSD-3B	1.66

Monitoring Points	Vacuum (in WC)
SSD-MP-1	0.017
VP-1	0.029
VP-2	0.013
VP-3	0.016
SSD-MP-2	0.12

Minimun Range: 0.0025 - 0.0035 in wc
If not call back to office

Visual Inspection	Repairs Required	
	Yes	No
Discharge stack piping and fittings		X
Concrete floor slab		X
Fluid level in Manometers		X

Notes:

Location: Sparkle Cleaners

Blowers	Vacuum (in WC)	Flow (cfm)
SSD-B4	2.374	15.1
SSD-B5	1.745	N/A
SSD-B6	1.665	N/A

ladder

Update the label on the blower during each O&M visit

Vapor Extraction wells	Vacuum (in WC)
SSD-5A	N/A
SSD-5B	
SSD-6A	
SSD-6B	

Monitoring Points	Vacuum (in WC)
SSD-MP-3	n/a
VP-4	
VP-5	
VP-6	
SSD-MP-4	

Minimun Range: 0.0025 - 0.0035 in wc
If not call back to office

Visual Inspection	Repairs Required	
	Yes	No
Discharge stack piping and fittings	(B)	X
Concrete floor slab		N/A
Fluid level in Manometers		N/A

Notes:

No access

Location: New China

Blowers	Vacuum (in WC)	Flow (cfm)
SSD-B7	0-675	N/A
SSD-B8	0636	171-3

Update the label on the blower during each O&M visit

Vapor Extraction wells	Vacuum (in WC)
SSD-7A	N/A
SSD-7B	N/A

Monitoring Points	Vacuum (in WC)
SSD-MP-5	0.014
VP-7	0.064
VP-8	0.078
VP-9	0.014
SSD-MP-6	0.011

Minimun Range: 0.0025 - 0.0035 in wc
If not call back to office

Visual Inspection	Repairs Required	
	Yes	No
Discharge stack piping and fittings		✓
Concrete floor slab		✓
Fluid level in Manometers		✓

Notes: 7A 7B are inside sample doors

APPENDIX C

Environmental Easement

Rockland County, NY
Paul Piperato County Clerk

1 South Main St Ste 100
New City, NY 10956
Phone Number : (845) 638-5070

Official Receipt : 2011-00049305

Printed On : 10/13/2011 **at** 11:01:36 AM **By :** 76 **on** INDEX9

Customer :
CLASS ABSTRACT SERVICES INC
72 JERICHO TPKE SUITE 3
MINEOLA, NY 11501

Date Recorded : October 04, 2011

Instrument ID	Amount
File Number : 2011-00035889	$101.00

Transaction : Ease, Rightway, A/Rent
Name(s): JLJ MANAGEMENT CO
To : PEOPLE OF THE STATE OF NEW YORK
Remarks : HAH

Itemized Check Listing

Check Number : 13622	$101.00

Total Due :	$101.00
Paid by Check :	$101.00
Change Tendered :	$0.00

HAVE A NICE DAY!

Paul Piperato, County Clerk
1 South Main St Ste 100
New City, NY 10956
(845) 638-5070

Rockland County Clerk Recording Cover Sheet

Received From :
CLASS ABSTRACT SERVICES INC
72 JERICHO TPKE SUITE 3
MINEOLA, NY 11501

Return To :
CLASS ABSTRACT SERVICES INC L
72 JERICHO TPKE SUITE 3
MINEOLA, NY 11501

First GRANTOR
JLJ MANAGEMENT CO

First GRANTEE
PEOPLE OF THE STATE OF NEW YORK

Index Type : Land Records
Instr Number : 2011-00035889
Book : **Page :**

Type of Instrument : Easement
Type of Transaction : Ease, Rightway, A/Rent
Recording Fee : $101.00

Recording Pages : 11

The Property affected by this instrument is situated in Orangetown, in the County of Rockland, New York

Real Estate Transfer Tax

RETT # :	815
Deed Amount :	$0.00
RETT Amount :	$0.00
Total Fees :	$101.00

State of New York
County of Rockland
I hereby certify that the within and foregoing was recorded in the Clerk's office for Rockland County, New York

On (Recorded Date) : 10/04/2011
At (Recorded Time) : 10:58:00 AM

Doc ID - 023456330011

Paul Piperato, County Clerk

This sheet constitutes the Clerks endorsement required by Section 319 of Real Property Law of the State of New York

Entered By: HAH Printed On : 10/13/2011 At : 3:11:40PM

County: Rockland Site No: C 344066 BCA Index No: A3-0563-0906
CLC 407990

ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

THIS INDENTURE made this 16th day of September, 2011, between Owner(s) JLJ Management Co., a New York Partnership, having an office at 197 Trenor Drive, New Rochelle, County of Rockland, State of New York (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233.

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

Sec 74.10 Blk 1 part of Lot 67

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor, is the owner of real property located at the address of 1-45 Orangetown Shopping Center in the Town of Orangetown, County of Rockland and State of New York, known and designated on the tax map of the County Clerk of Rockland as tax map parcel numbers: Section 74.10 Block 1 Lot 67, being the same as that property conveyed to Grantor by deed dated April 4, 1990 recorded in the Rockland County Clerk's Office in Book 0404 at Page 2555, the Environmental Easement area of which comprising approximately 1.3308 ± acres, and hereinafter more fully described in the Land Title Survey dated April 27, 2011 prepared by Joseph R. Link of Link Land Surveyors P.C., which will be attached to the Site Management Plan. The property description and survey (the "Controlled Property") is set forth in and attached hereto as Schedule A; and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of human health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

County: Rockland Site No: C 344066 BCA Index No: A3-0563-0906

NOW THEREFORE, in consideration of the mutual covenants contained herein and the terms and conditions of Brownfield Cleanup Agreement Number: A3-0563-0906, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement")

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv)

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP.

(4) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(5) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(6) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

(7) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP.

(8) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP.

(9) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Residential or Restricted Residential purposes, and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall annually, or such time as NYSDEC may allow, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved b the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5 the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:
Site Number: C 344066
Office of General Counsel
NYSDEC
625 Broadway
Albany, New York 12233-5500

With a copy to:
Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by

the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

Grantor: JLJ Management Co., a New York Partnership

DAFO Realty Corp., its General Partner

By: _____

Print Name: Hilton Soniker

Title: President Date: 9/2/11

ODAF Realty Corp., its General Partner

By: _____

Print Name: Hilton Soniker

Title: President Date: 9/2/11

County: Rockland Site No: C 344066 BCA Index No: A3-0563-0906

Grantor's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF NY)

On the 2nd day of September, in the year 20 11, before me, the undersigned, personally appeared Hilton Sonitker, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Notary Public - State of New York

JEROME KAMERMAN
Notary Public, State of New York
No. 02KA7146175
Qualified in Westchester County
Certificate Filed in New York County
Commission Expires October 31, 20

STATE OF NEW YORK)
) ss:
COUNTY OF NY)

On the 2nd day of September, in the year 20 11, before me, the undersigned, personally appeared Hilton Sonitker, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Notary Public - State of New York

JEROME KAMERMAN
Notary Public, State of New York
No. 02KA7146175
Qualified in Westchester County
Certificate Filed in New York County
Commission Expires October 31, 20

County: Rockland Site No: C 344066 BCA Index No: A3-0563-0906

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner.

By: _____
Dale A. Desnoyers, Director
Division of Environmental Remediation

Grantee's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF Albany)

On the 16th day of September, in the year 2011 before me, the undersigned, personally appeared Dale Desnoyers, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

David J. Chiusano
Notary Public, State of New York
No. 01CH6093246
Qualified in Schenectady County
Commission Expires August 22, 2014

County: Rockland Site No: C 344066 BCA Index No: A3-0563-0906

SCHEDULE "A" ENVIRONMENTAL EASEMENT PROPERTY DESCRIPTION

I-45 ORANGETOWN SHOPPING CENTER
ORANGETOWN, COUNTY OF ROCKLAND, NY
SECTION: 74.10 BLOCK: 1 LOT: 67

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND, WITH IMPROVEMENTS THEREON ERECTED, SITUATED AND LYING AND BEING IN THE TOWN OF ORANGETOWN, COUNTY OF ROCKLAND AND STATE OF NEW YORK.

BEGINNING AT A POINT ON THE WESTERLY SIDE OF OAK STREET WHERE THE SAME IS INTERSECTED BY THE DIVISION LINE BETWEEN LAND NOW OR FORMERLY JLJ MANAGEMENT ON THE SOUTH AND LAND NOW OR FORMERLY SEEBACH ON THE NORTH, SAID POINT ALSO BEING 430.52 FEET SOUTHERLY FROM THE SOUTHERLY END OF A CURVE HAVING A RADIUS OF 36.15 LENGTH OF 56.81 FEET CONNECTING THE SOUTHERLY SIDE OF ORANGEBURG ROAD AND THE WESTERLY SIDE OF OAK STREET.

THENCE RUNNING ALONG THE WESTERLY SIDE OF OAK STREET SOUTH 7°24'00" EAST 66.89 FEET TO THE DIVISION LINE BETWEEN JLJ MANAGEMENT AND LAND NOW OR FORMERLY HOFFMAN;

THENCE ALONG SAID DIVISION LINE SOUTH 82° 36'00" WEST 100.00 FEET;
THENCE CONTINUING ALONG SAID DIVISION LINE AND ALONG THE DIVISION LINE BETWEEN JLJ MANAGEMENT AND LAND NOW OR FORMERLY FARINI SOUTH 7°24'00" EAST 88.00 FEET.

THENCE RUNNING THROUGH LANDS OF JLJ MANAGEMENT THE FOLLOWING FIVE (5) COURSES AND DISTANCES;

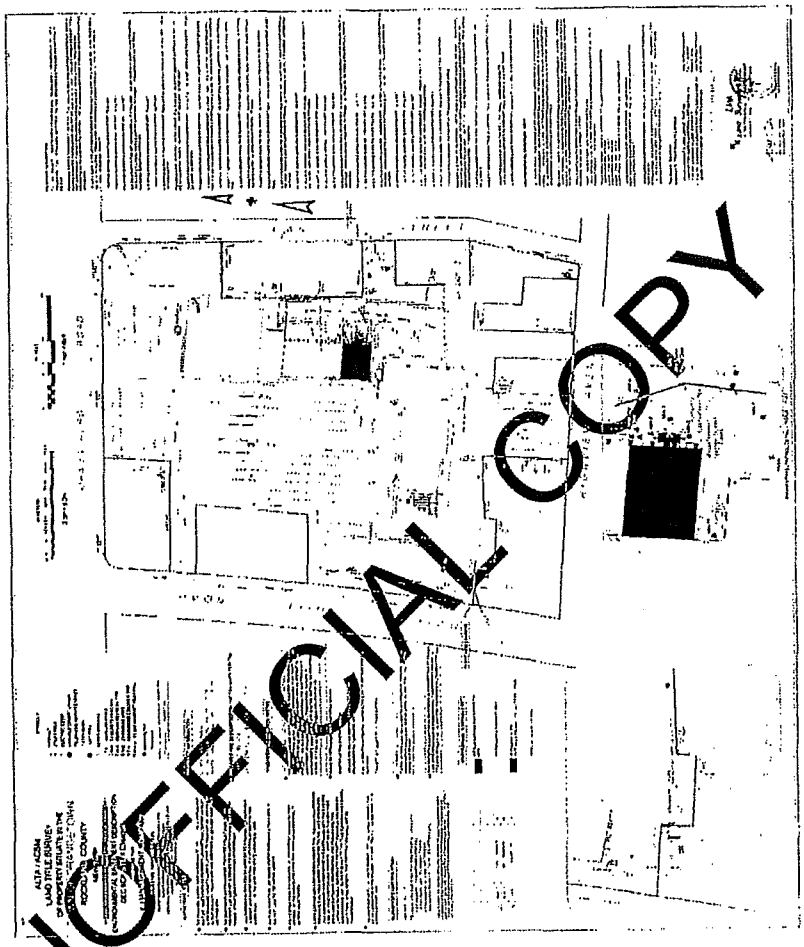
1. SOUTH 82° 36' 00" WEST 168.00 FEET;
2. NORTH 3° 04' 00" WEST 111.00 FEET;
3. SOUTH 87° 02' 00" WEST 56.00 FEET;
4. NORTH 2° 58' 00" WEST 182.10 FEET;
5. NORTH 87° 02' 00" EAST 176.89 FEET TO THE WESTERLY SIDE OF LAND NOW OR FORMERLY UCKER

THENCE RUNNING ALONG LAND OF UCKER AND CONTINUING ALONG LAND OF SEEBACH SOUTH 7° 24" 00" WEST 134.00 FEET AND NORTH 82° 36' 00": EAST 125.00 FEET TO THE POINT AND PLACE OF BEGINNING.

CONTAINING 1.3308 ACRES / 57,970 SQ. FT.

County: Rockland Site No: C 344066 BCA Index No: A3-0563-0906

SURVEY



ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

THIS INDENTURE made this 16th day of September, 20 11, between Owner(s) JLJ Management Co., a New York Partnership, having an office at 197 Trenor Drive, New Rochelle, County of Rockland, State of New York (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233.

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor, is the owner of real property located at the address of 1-45 Orangetown Shopping Center in the Town of Orangetown, County of Rockland and State of New York, known and designated on the tax map of the County Clerk of Rockland as tax map parcel numbers: Section 74.10 Block 1 Lot 67, being the same as that property conveyed to Grantor by deed dated April 4, 1990 recorded in the Rockland County Clerk's Office in Book 0404 at Page 2555, the Environmental Easement area of which comprising approximately 1.3308 ± acres, and hereinafter more fully described in the Land Title Survey dated April 27, 2011 prepared by Joseph R. Link of Link Land Surveyors P.C., which will be attached to the Site Management Plan. The property description and survey (the "Controlled Property") is set forth in and attached hereto as Schedule A; and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of human health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the mutual covenants contained herein and the terms and conditions of Brownfield Cleanup Agreement Number: A3-0563-0906, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement")

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv)

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP.

(4) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(5) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(6) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

(7) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP.

(8) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP.

(9) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Residential or Restricted Residential purposes, and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall annually, or such time as NYSDEC may allow, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved b the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5 the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:

Site Number: C 344066
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by

the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

Grantor: JLJ Management Co., a New York Partnership

DAFO Realty Corp., its General Partner

By: Hilton Sonker

Print Name: Hilton Sonker

Title: President Date: 9/2/11

ODAF Realty Corp., its General Partner

By: Hilton Sonker

Print Name: Hilton Sonker

Title: President Date: 9/2/11

Grantor's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF NY)

On the 2nd day of September, in the year 20 11, before me, the undersigned, personally appeared Hilton Soniker, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Jerome Kamerman
Notary Public - State of New York

JEROME KAMERMAN
Notary Public, State of New York
No. 02KA7146175
Qualified in Westchester County
Certificate Filed in New York County
Commission Expires October 31, 2015

STATE OF NEW YORK)
) ss:
COUNTY OF NY)

On the 2nd day of September, in the year 20 11, before me, the undersigned, personally appeared Hilton Soniker, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Jerome Kamerman
Notary Public - State of New York

JEROME KAMERMAN
Notary Public, State of New York
No. 02KA7146175
Qualified in Westchester County
Certificate Filed in New York County
Commission Expires October 31, 2015

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner.

By: _____
Dale A. Desnoyers, Director
Division of Environmental Remediation

Grantee's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF Albany)

On the 16th day of September, in the year 2011, before me, the undersigned, personally appeared Dale Desnoyers, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

David J. Chiusano
Notary Public, State of New York
No. 01CH5032146
Qualified in Schenectady County
Commission Expires August 22, 2014

SCHEDULE "A" ENVIRONMENTAL EASEMENT PROPERTY DESCRIPTION

1-45 ORANGETOWN SHOPPING CENTER
ORANGETOWN, COUNTY OF ROCKLAND, NY
SECTION: 74.10 BLOCK: 1 LOT: 67

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND, WITH IMPROVEMENTS THEREON ERECTED, SITUATED AND LYING AND BEING IN THE TOWN OF ORANGETOWN, COUNTY OF ROCKLAND AND STATE OF NEW YORK.

BEGINNING AT A POINT ON THE WESTERLY SIDE OF OAK STREET WHERE THE SAME IS INTERSECTED BY THE DIVISION LINE BETWEEN LAND NOW OR FORMERLY JLJ MANAGEMENT ON THE SOUTH AND LAND NOW OR FORMERLY SEEBACH ON THE NORTH, SAID POINT ALSO BEING 430.52 FEET SOUTHERLY FROM THE SOUTHERLY END OF A CURVE HAVING A RADIUS OF 36.15 LENGTH OF 56.81 FEET CONNECTING THE SOUTHERLY SIDE OF ORANGEBURG ROAD AND THE WESTERLY SIDE OF OAK STREET.

THENCE RUNNING ALONG THE WESTERLY SIDE OF OAK STREET SOUTH 7°24'00" EAST 60.89 FEET TO THE DIVISION LINE BETWEEN JLJ MANAGEMENT AND LAND NOW OR FORMERLY HOFFMAN;

THENCE ALONG SAID DIVISION LINE SOUTH 82° 36'00" WEST 100.00 FEET;
THENCE CONTINUING ALONG SAID DIVISION LINE AND ALONG THE DIVISION LINE BETWEEN JLJ MANAGEMENT AND LAND NOW OR FORMERLY FARINI SOUTH 7°24"00" EAST 88.00 FEET.

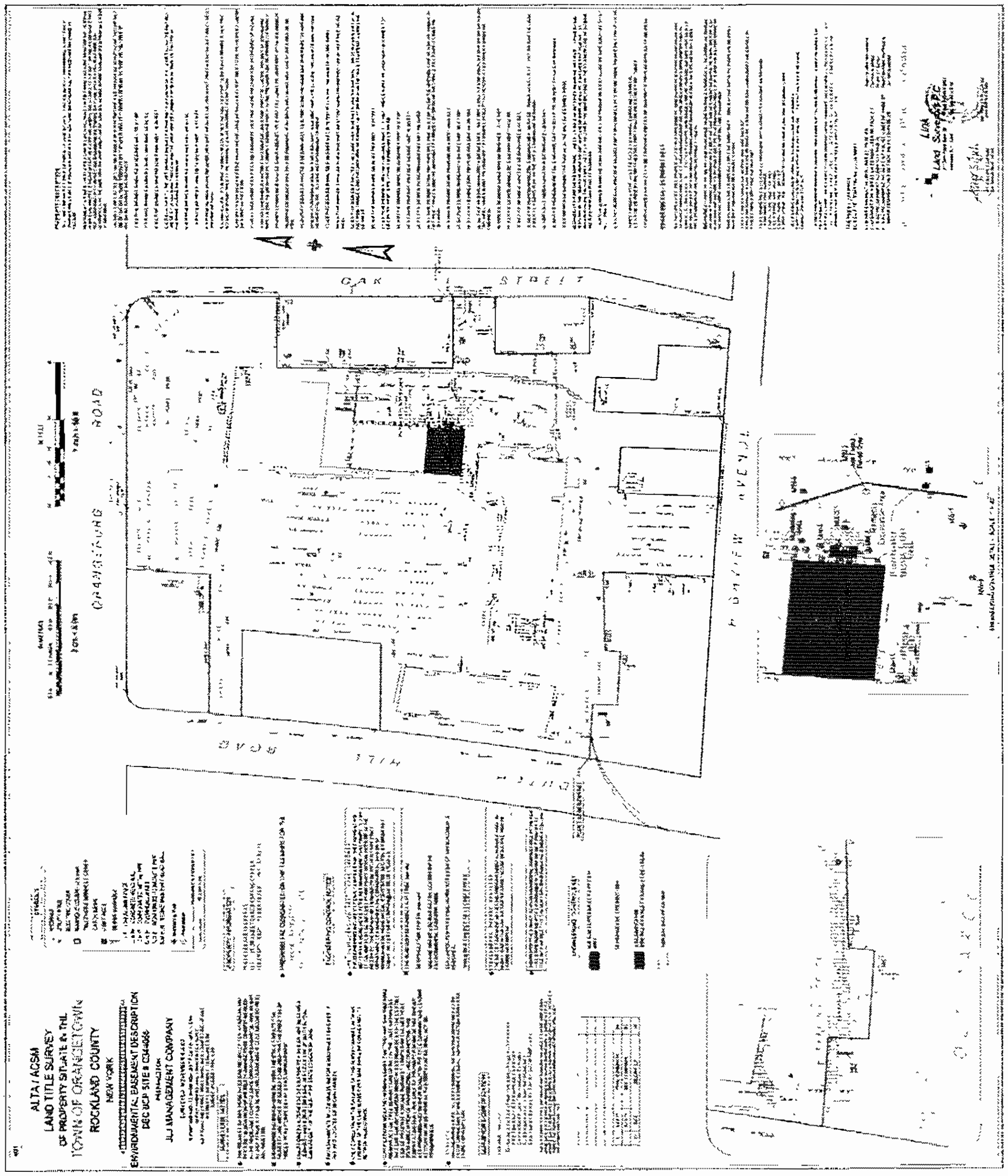
THENCE RUNNING THROUGH LANDS OF JLJ MANAGEMENT THE FOLLOWING FIVE (5) COURSES AND DISTANCES;

1. SOUTH 82° 36' 00" WEST 168.00 FEET;
2. NORTH 3° 04' 00" WEST 111.00 FEET;
3. SOUTH 87° 02' 00" WEST 56.00 FEET;
4. NORTH 2° 58' 00" WEST 182.10 FEET;
5. NORTH 87° 02' 00" EAST 176.89 FEET TO THE WESTERLY SIDE OF LAND NOW OR FORMERLY UCKER

THENCE RUNNING ALONG LAND OF UCKER AND CONTINUING ALONG LAND OF SEEBACH SOUTH 7° 24" 00" WEST 134.00 FEET AND NORTH 82° 36" 00": EAST 125.00 FEET TO THE POINT AND PLACE OF BEGINNING.

CONTAINING 1.3308 ACRES / 57,970 SQ. FT.

SURVEY



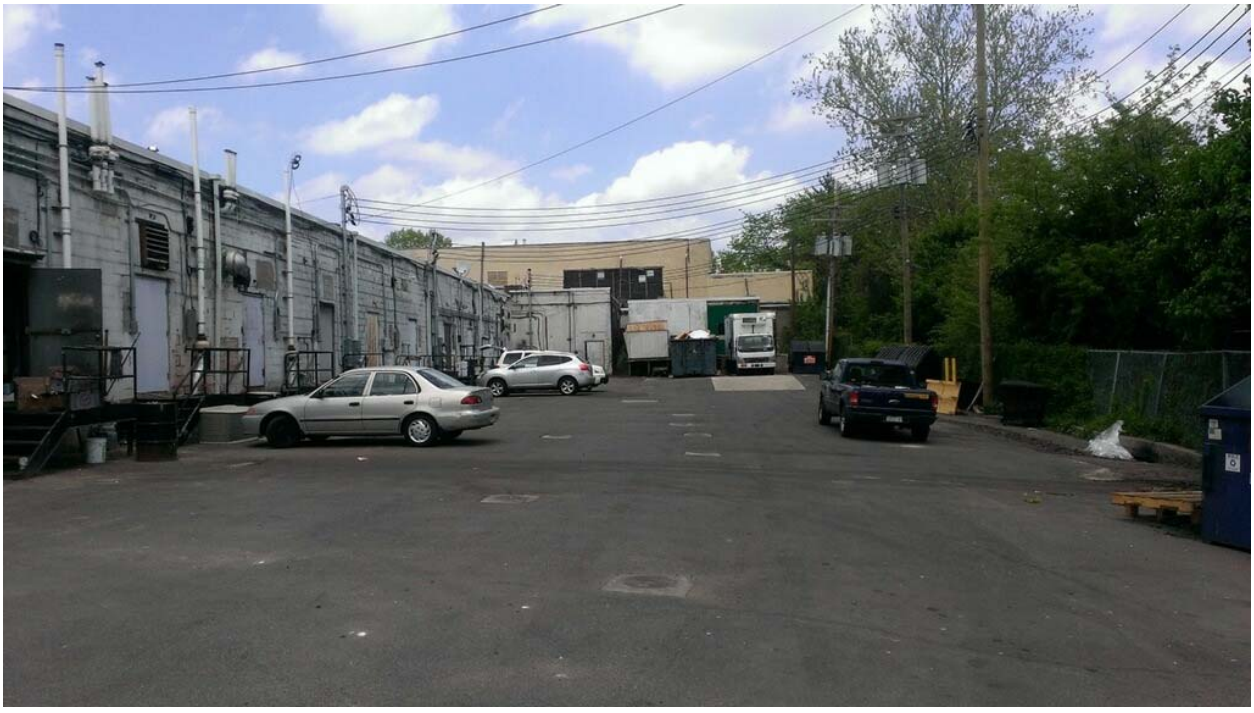
APPENDIX D

Photographs

View to the west of the waterline and gas line repairs made to the east of building #2 in November 2014

View to the south of the southeastern side of the side.

View to the southwest of the eastern side of the site



View to the north of the eastern side of the site

APPENDIX E

EC/IC Certifications

Enclosure 2

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details — Box 1

Site No. C344066

Site Name Orangeburg (Orangetown) Shopping Center

Site Address: 1-45 Orangetown Shopping Center Zip Code: 10962
City/Town: Orangetown
County: Rockland
Site Acreage: 1.3

Reporting Period: June 17, 2014 to June 17, 2015

	YES	NO
1. Is the information above correct?	☑	☐
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☑
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☑
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	☑
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	☑

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Commercial and Industrial	☑	☐
7. Are all ICs/ECs in place and functioning as designed?	☑	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

N/A
Signature of Owner, Remedial Party or Designated Representative

7/17/15
Date

Box 2A

	YES	NO
8. Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?	☐	☑
If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.		
9. Are the assumptions in the Qualitative Exposure Assessment still valid? (The Qualitative Exposure Assessment must be certified every five years)	☑	☐
If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.		

SITE NO. C344066

Box 3

Description of Institutional Controls

Parcel	Owner	Institutional Control
74.10-1-67	UB Orangeburg, LLC	Ground Water Use Restriction Soil Management Plan Landuse Restriction Monitoring Plan Site Management Plan O&M Plan IC/EC Plan

The Controlled Property may be used for: Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv).

The use of groundwater underlying the site is restricted as a source of potable or process water, without necessary water quality treatment as determined by the Department, NYSDOH, or County DOH.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
74.10-1-67	Groundwater Treatment System Vapor Mitigation Cover System

The site owner will be responsible for the operation and maintenance of the sub-slab depressurization system as discussed in the Site Management Plan.

The site owner will be responsible for the operation and maintenance of the bio-augmentation system as discussed in the Site Management Plan.

The site owner will be responsible for the operation and maintenance of the composite cover system as discussed in the Site Management Plan.

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
☑	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
☑	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

N/A
Signature of Owner, Remedial Party or Designated Representative

7/17/15
Date

IC CERTIFICATIONS
SITE NO. C344066

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Karen Bourque (print name) at 16 Mt. Ebo Rd South, Suite 21, Brewster, Ny 10509 (print business address)

am certifying as Remediation Party (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Karen Bourque
Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

7/17/15
Date

IC/EC CERTIFICATIONS

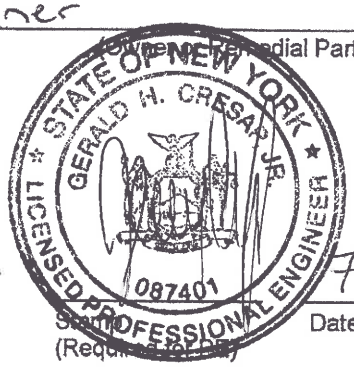
Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Gerald Cresap (print name) at GES, 364 Littleton Rd., Westford, MA (print business address)

am certifying as a Professional Engineer for the Owner (Owner or Remedial Party)



Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification

Stamp (Required for PE)

7/14/15
Date

APPENDIX F

Laboratory Analytical Reports
(Included Separately on CD)

APPENDIX G

Data Usability Summary Reports (DUSR)

RemVer

Quality Assessment
Data Usability Summary Report

			RemVer Project #2014GE01 Client Project # 11022323-05-206
Site:	Orangetown Shopping Center	**Site #:**	C344066
Client:	GES, Inc.	**Site Owner:**	UB Orangeburg, LLC (UBO)
Sample Delivery Group (SDG)	JB72531		
Sample Matrix:	☐ Drinking water ☒ Groundwater ☐ Surface water ☐ Soil ☐ Sediment ☐ Air ☐ Biota (tissue, type: _____) ☐ Other: _____		

Introduction

RemVer performed a data quality assessment (DQA) on the analytical data reported in Sample Delivery Groups (SDGs) #JB72531 for groundwater samples. The DQA evaluated the performance of the analytical procedures and the quality of the resulting data. RemVer followed the requirements of the New York State Department of Environmental Conservation (NYSDEC) Data Usability Summary Report (DUSR) guidelines for an Analytical Services Protocol (ASP) Category B Data Deliverable. This report includes a narrative discussion of sample results qualified during the DQA. Table 1 describes qualification flags applied to the data either by Test America or during the DQA process.

Reported Methods

- ☐ Method 1311 TCLP
- ☐ Method 1312 SPLP
- ☒ Method 6010A, B & C / 6020 Trace Metals
- ☐ Method 7000 Metals
- ☐ Method 7196 Hexavalent Chromium (other:_____)
- ☐ Method 7470A or 7471 Mercury
- ☐ Method 8021 Volatile Organic Compounds (VOCs) GC
- ☐ Method 8081B Pesticides
- ☐ Method 8082 PCBs
- ☐ Method 8151 Chlorinated Herbicides
- ☒ Method 8260C VOCs GC/MS
- ☐ Method 8270D Semi-VOCs (sVOCs) GC/MS
- ☐ Method 9010/9012/9014 Cyanides (_____)
- ☐ Method TO-13A PAHs (air)
- ☐ Method TO-14A / -15 VOCs (air, summa) (_____)
- ☐ Method TO-17 VOCs (air, sorbent)
- ☐ Extractable Petroleum Hydrocarbons (EPH)
- ☐ Volatile Petroleum Hydrocarbons (VPH) Method
- ☐ EPH-total
- ☒ Other Methods:
  - Method 9060A Total Organic Carbon
  - Method MCAWW 300.0 Anions (IC)
  - Method RSK-175 Dissolved Gases
  - Method SM3500 Iron – Ferric
  - Method SM3500 Fe B Iron – Ferrous

Quality Control Requirements Summary

- ☒ Duplicate
- ☒ Matrix Spike [MS] / Matrix Spike Duplicate [MSD]
- ☒ Trip Blank(s)
- ☒ Equipment, Method, &/or Rinsate Blank
- ☒ Other Field QC: Field notes regarding sampling
- ☐ Special QAPP Requirements: _____
  _____

Intended Use of Data under Review

The client collected groundwater samples during a two-day collection events: July 23, 2014 and July 24, 2014 at the referenced New York State Brownfields site. The site is under a Site Management Plan (SMP) that requires several kinds of monitoring. The sampling event provided gauging/biostimulant and quarterly groundwater monitoring (see §3.3 of Kleinfelder, 2011).

Significant Data Usability Issues Identified For SDG: #JB72531

Of the fourteen samples discussed herein, RemVer rejected no results, but flagged certain analytes as estimated due to the quality of the analysis and the results are acceptable for use.

Some analytes had either sampling, calibration, Matrix Spike/Spike Duplicate, or other quality issues requiring UJ/J flagging for certain analytes.

All Ferrous Iron results were qualified (UJ or J) due to a holding violation. Because the Ferric Iron results are derivatives (via calculation) of the ferrous results, they too were qualified.

Please refer to the Lab Results and Data Usability Narrative section for further detail.

Detailed Quality Review

Field Notes Review

	Y	N	NA	COMMENTS
Sampling notes	☒	☐	☐	Summary sheets only
Field meteorological data	☐	☐	☒	No review required under QAPP
Associated sampling location and plan included	☒	☐	☐	See RAP/QAPP
Associated drilling logs available, reviewed	☐	☐	☒	No review required under QAPP
Identification of QC samples in notes	☒	☐	☐	
Sampling instrument decontamination records	☐	☐	☒	No review required under QAPP
Sampling instrument calibration logs	☐	☐	☒	No review required under QAPP
Chain of custody included	☒	☐	☐	With analytical report
Notes include communication logs	☐	☒	☐	
Any corrective action (CA) reports	☐	☒	☐	If so, CA documentation of results required.
Any deviation from methods noted? If so, explain	☐	☒	☐	None
Any electronic data deliverables	☒	☐	☐	See Attachment #4
Sampling Report (by Field Team Leader)	☒	☐	☐	

Lab Report Contents (Test America SDG Report: # JB72531)

☒ SDG Narrative
☒ Contract Lab Sample Information Sheets
☒ Data Package Summary Forms
☒ Chain-of-Custody (COC) Forms
☒ Test Results (no tentatively identified compounds [TICs])
☒ Calibration standards
☒ Surrogate recoveries
☒ Blank results
☒ Spike recoveries
☒ Duplicate results
☒ Confirmation (lab check/QC) samples
☒ Internal standard area & retention time summary
☒ Chromatograms
☒ Raw data files
☒ Other specific information

The SDG reported on the following samples:

Sample ID	SDGJB72531– Sample #	Matrix	Sampled	Received
MW-3	#-1	Water	07/24/14	07/24/14
MW-4	#-2	Water	07/24/14	07/24/14
MW-5	#-3	Water	07/24/14	07/24/14
MW-6				
MW-7	#-5	Water	07/23/14	07/24/14
MW-8A				
MW-8B	#-4	Water	07/23/14	07/24/14
MW-10	#-6	Water	07/23/14	07/24/14
MW-15A	#-7	Water	07/23/14	07/24/14
MW-C	#-8	Water	07/24/14	07/24/14
MW-D	#-9	Water	07/23/14	07/24/14
MW-E	#-10	Water	07/23/14	07/24/14
MW-F				
MW-10 (MS/MSD)	See #-6	Water	07/23/14	07/24/14
Field Duplicate (FD) (MW-7)	#-11	Water	07/23/14	07/24/14
Field Blank (FB)	#-12	Water	07/23/14	07/24/14
Equipment Blank (EB)	#-13	Water	07/23/14	07/24/14
Trip Blank (TB #1)	#-14	Water	07/24/14	07/24/14

The SDG included the following samples with their particular analyses:

72531:	Well	VOCs	Ethene	TOC	Iron	Fe^{+2}	Fe^{+3}	NO_3	SO_4	Pest/PCB	SVOCs	RCRA13
#-1	MW-3	X	X	X	X	X	X	X	X	—	—	—
#-2	MW-4	X	X	X	X	X	X	X	X	—	—	—
#-3	MW-5	X	X	X	X	X	X	X	X	—	—	—
None	MW-6	—	—	—	—	—	—	—	—	—	—	—
#-5	MW-7	X	—	—	—	—	—	—	—	—	—	—
None	MW-8A *	—	—	—	—	—	—	—	—	—	—	—
#-4	MW-8B	X	X	X	X	X	X	X	X	—	—	—
#-6	MW-10	X	—	—	—	—	—	—	—	—	—	—
#-6MS	MW-10	X	—	—	—	—	—	—	—	—	—	—
#-6MSD	MW-10	X	—	—	—	—	—	—	—	—	—	—
None	MW-13A †	—	—	—	—	—	—	—	—	—	—	—
#-7	MW-15A	X	—	—	—	—	—	—	—	—	—	—
None	MW-A *	—	—	—	—	—	—	—	—	—	—	—
None	MW-B *	—	—	—	—	—	—	—	—	—	—	—
#-8	MW-C	X	X	X	X	X	X	X	X	—	—	—
#-9	MW-D	X	X	X	—	—	—	X	X	—	—	—
#-10	MW-E	X	X	X	X	X	X	X	X	—	—	—
None	MW-F	—	—	—	—	—	—	—	—	—	—	—
#-11	FD (MW-7)	X	—	—	—	—	—	—	—	—	—	—
#-12	FB	X	—	—	—	—	—	—	—	—	—	—
#-13	EB	X	—	—	—	—	—	—	—	—	—	—
#-14	TB-1	X	—	—	—	—	—	—	—	—	—	—

TOC: Total Organic Carbon | Iron: Total Iron | Fe^{+2}: Ferrous Iron | Fe^{+3}: Ferric Iron | NO_3: Nitrate | SO_4: Sulfate
* Dry, no sample † No sample

Is the data package complete as defined under the requirements for the NYSDEC ASP Category B?		
Laboratory Report	**Complete (Y/N)**	**Comments**
JB72531	Y	Yes

Sample Preservation Requirements & Holding Times Met?			
Laboratory Report	**Hold Times (Y/N)**	**Preservation (Y/N)**	**Exception Comment**
JB72531	Y	Y	Hold time for all ferrous analysis missed, effects ferric as well, flag UJ/J

Do all QC data fall within the protocol required limits and specifications?
(1) blanks, (2) instrument tunings, (3) calibration standards, (4) calibration verifications, (5) surrogate recoveries, (6) spike recoveries, (7) replicate analyses, (8) laboratory controls, (9) and sample data

SDG	1	2	3	4	5	6	7	8	9
#JB672531	☐	☐	☐	☒	☐	☒	☐	☐	☒

The narrative section, below, discusses these deficiencies in detail, see Attachment 2 as well.

Have all of the data been generated using established and agreed upon analytical protocols?		
Laboratory Report	**Protocols (Y/N)**	**Exception Comment**
#JB72531	Y	None

Do the raw data confirm the results provided in the data summary sheets and quality control verification forms?		
Laboratory Report	**Confirmation (Y/N)**	**Exception Comment**
#JB72531	Y	None

Have the correct data qualifiers been used and are they consistent with the most current guidance?		
Laboratory Report	**Qualifiers (Y/N)**	**Comment**
#JB72531	Y	The laboratory generally applied appropriate qualifiers. To prepare the DUSR, it was necessary to apply additional qualifications or adjust qualifications to certain results as shown in Attachments 3 and 4.

Have any quality control (QC) exceedances been specifically noted in this DUSR and the corresponding QC summary sheets from the data packages referenced?		
Laboratory Report	**QC Exceedances Documented (Y/N)**	**Comment**
#JB72531	Y	Several data qualifications were applied as described below

Data Quality and Usability Narrative

Field Notes Inspection

The groundwater samples came from a two-day collection event: July 23, 2014 and July 24, 2014. A review of the field notes provided the following information pertaining to data usability.

Groundwater MWs	July-2014 Comments SDG #72531
MW-3	Bailer purge (0-gal), sampled—UJ/J flag all samples due to lack of purge
MW-4	Bailer purge (4-gal), sampled
MW-5	Bailer purge (3-gal), sampled
MW-6	Gauged only
MW-7	Bailer purge (4-gal), sampled; Duplicate came from this well
MW-8A	Could not sample, possible well damage
MW-8B	Bailer purge (1-gal), sampled
MW-10	Bailer purge (25-gal), sampled; MS/MSD samples came from this well
MW-13A	Insufficient water, no sample
MW-15A	Bailer purge (<1-gal), sampled but limited # (VOAs only)
MW-A	Dry, no sample
MW-B	Dry, no sample
MW-C	Bailer purge (2-gal), sampled
MW-D	Bailer purge (0-gal), sampled but limited # (no iron speciation) —UJ/J flag all samples due to lack of purge
MW-E	Bailer purge (0-gal), sampled—UJ/J flag all samples due to lack of purge
MW-F	Dry, no sample

Laboratory Report Inspection

The laboratory produced SDG report #JB72531 (dated 20 August 2014). The final reports contained the required data and information. The narrative discussion and analytical parameter listings had several errors requiring additional review of the analytical detail to verify and validate data.

Chain of Custody (COC) Evaluation

GES produced one COC for the referenced fieldwork (#JB72531, single, two-page COC); one samples had an issue: #-9 (MW-D)—while originally checked for ferric, ferrous, and total iron analyses, the COC was crossed out and not performed due to inadequate sample volume.

Sample Preservation & Holding Time Evaluation

Laboratory received three coolers with samples on 7/25/2014 @ 10:00 (designated as SDG-JB72531) in proper condition and, where required, on ice. The temperature of the coolers at receipt time were 2.6, 2.4, and 4.2ºC, respectively. All holding times and preservation requirements were met with the following exceptions:

- Ferrous Iron—the analytical method for this analyte requires a 15-minute holding time in the field. Because all samples designated for this analysis missed the hold time, RemVer qualified the resulting data as estimated ("UJ or J") (see Attachment 2 and 3).
- Ferric Iron—because this analyte is derived by calculation (from the ferrous iron results) all ferric results were similarly qualified as ferrous iron (see Attachment 2 and 3).

Blank Evaluation

The sampling event TB (#-14) had no detectable VOC analytes (above their respective the reporting limits). The Equipment and Field Blank (EB and FB, respectively) had no detectable VOC analytes (above their respective the RLs).

Laboratory Method Blanks (MBs) had conforming parameters and analytes below their respective RLs.

Laboratory Control Samples (LCS)

The various LCS' were within the acceptable range for their particular analyses in this SDG.

Surrogates

Surrogates added to a sample allow testing of preparatory and instrument behavior resulting in recoveries within appropriate method ranges for all analytes.

Site-Specific Matrix Spikes and Matrix Spike Duplicates

The matrix spike/matrix spike duplicate (MS/MSD) runs for all analyses for JB6440 & JB67331 met the QA criteria with the following exceptions:

- Samples #-1 – #-9 & #-11 – #-14—MS/MSD recoveries for Acetone were <LCL most likely due to matrix interference, therefore, UJ flag all results. This does not affect #-10.
- MS recovery for nitrate + nitrite analysis was greater than the upper control limit, due to sample matrix interference and/or non-homogeneity, the associated LCS/LCSD recoveries were within limits, resulting in flagging the results UJ or J. Nitrate results are obtained by calculation ([Nitrate + Nitrite] – Nitrite); because the nitrate + nitrite results were flagged, the nitrate results were similarly flagged UJ or J.

Other QC Data (Elevated Detection/Foaming Method 8260)

- Sample #10 foamed during preparation requiring additional dilution, only detected analytes flagged J.

Other QC Data (Serial Dilutions Method 6010)

- The RPD(s) for the dilutions for Samples #-1, #-2, #-3, #-4, #-8, & #-10 were outside control limits for Iron, likely due to matrix interference and/or low sample concentration. Results were UJ/J flagged.

Duplicates

GES collected a field replicate of MW-D (compare samples #-5 and #-11). The VOC analytes met the RPD performance criteria of <20% (see below Attachment #2).

Tentatively Identified Compounds (TICs)

This SDG had no analysis of TICs.

Sample Result and Usability Evaluation

Due to certain sample issues or laboratory performance, some results were qualified; however, the data are usable. No data received an R (rejected) flag. If an analyte was above the MDL but below the RL, then it was flagged as "UJ".

Measurement of Total Iron used Inductively Coupled Plasma (ICP) based on nitric acid preserved samples; whereas measurement of Ferrous Iron used the Phenanthroline Method (SM3500), which is a colorimetric method using hydrochloric-preserved samples. Interferences resulting in positive bias in the ferrous result include strong oxidizing agents, cyanide, nitrite, phosphates (polyphosphates more so than orthophosphate), chromium, or zinc in concentrations exceeding 10X greater than iron, or cobalt and copper in excess of 5 mg/L, or nickel in excess of 2 mg/L; moreover, bismuth, cadmium, mercury, molybdate, and silver precipitate phenanthroline, which is the color reagent used for ferrous iron. Using the analytically estimated Total and Ferrous Iron concentrations, Test America calculated the concentration of Ferric Iron by difference. Any qualifier flags associated with analytic results automatically attach to the calculated results.

RemVer modified Test America's laboratory electronic data reports by adding quality flags, highlighted in yellow (see Attachment #4 [separate file]: Orangetown_2014Q3_DUSR.xls [EXCEL file]).

References

Kleinfelder, 2011, *Site Management Plan, Orangetown Shopping Center, 1-45 Orangetown Shopping Center, Orangeburg, NY, NYSDEC Site #C344066*, Final, 21-November, 250p

NYSDEC, 2010, *Technical Guidance for Site Investigation and Remediation*, "DER-10," Division of Environmental Remediation: Albany, NY, May, 232p

NYSDEC, 2010, *Guidance for Data Deliverables and the Development of Data Usability Summary Reports*, Appendix 2B IN *Technical Guidance for Site Investigation and Remediation*, Division of Environmental Remediation: Albany, NY, May, 232p

USEPA, 2008, *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, OSWER 9240.1-48, USEPA-540-R-08-01, Office of Superfund Remediation and Technology Innovation: Washington, DC, June, 225p

USEPA, 2010, *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, OSWER 9240.1-51, USEPA-540-R-10-011, Office of Superfund Remediation and Technology Innovation: Washington, DC, January, 110p

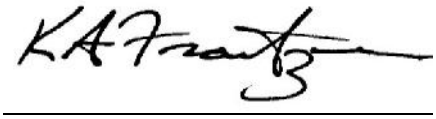
USEPA, 2012, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*, Current Online Revision: http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm, accessed April 2012

Tables

1. Qualifier Flags

Attachments

1. Data Usability Reviewer Qualifications
2. DQA Detail Worksheet
3. DQA Non-Conformance Summary Workheet
4. Separate EXCEL File: Orangetown_2014Q3_DUSR.xls [NOTE: RemVer modified the Test America work products by adding quality flags, which are in yellow highlight.]



Prepared by: Kurt A. Frantzen, PhD, CHMM
October 11, 2014

GES PO# 213265

Table 1
Qualifier Flags

Qualifier	Quality Implication
U	Analyte analyzed for, but not detected above the sample's reported quantitation limit
J	Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample
J +	Sample likely to have a high bias
J –	Sample likely to have a low bias
UJ	Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample
N	The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
R	Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (*i.e.*, dilutions or re-analyses), the most technically acceptable result is considered acceptable.
B | EB **TB | BB**	An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.
P	Use professional judgment based on data use. It usually has an "M' with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (*see below*).
PM	A manual review of the raw data is recommended to determine if the defect affects data use, as in "R" above. This review should include consideration of potential affects that could result from using the "P" qualified data. For example, in the case of holding-time exceedance, the Project Manager or delegate can decide to use the data with no qualification when analytes of interest are known not to be adversely affected by holding-time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria; because this is likely due to sample non-homogeneity rather than contract laboratory error, then the manager or delegate must decide how to use the data.

Attachment 1
Data Usability Reviewer: Kurt A. Frantzen, PhD, CHMM

Experience

2014-Present	AECC	Senior EHS Consultant
2013-Present	d/b/a RemVer	Owner
2011-2012	RemVer, Inc.	President
2006-2011	Kleinfelder	Senior Principal Scientist
2005	Kleinfelder	Principal Scientist, Part-Time/On Call
2004-2006	d/b/a Environmental Risk Group	Owner
2004-2006	RemVer, Inc., Larchmont, NY	Founder, President
1999-2004	VHB, Inc.	ERM Director & Associate
1997-1998	GEI Consultants, Inc.	Senior Project Manager
1992-1997	Ecology and Environment, Inc.	Technical Chief
1991-1992	EA Engineering, Science, & Technology, Inc.	Project Manager III
1990-1991	Ecology and Environment, Inc.	Technical Group Manager
1986-1990	Ecology and Environment, Inc.	Senior Environmental Scientist

Education

Am Cancer Soc. Post-Doctoral Fellow, U Washington 1985-1986

PhD—Life Sci. / Biochem, NU—Lincoln	1985
MS—Plant Pathology, Kansas State Univ.	1980
BS—Biology, NU—Omaha	1978

Registrations

Certified Hazardous Materials Manager, since 2007, #14143

Professional Affiliations

Society Risk Analysis ('09 & '11 Chair, Eco-Risk Assessment) Am. Chemistry Society
Am. Assoc. Advance Science NY Academy of Science Am. Institute of Biological Sciences
LSP Association

Other

- CERCLA & RCRA experience, as well as DOD (Air Force & Army) & DOE (INEL)
- NE Regional Experience—NY BCP; Mass MCP; & various sites in CT, RI & NH
- National Experience: NE, SE, Gulf & West Coast, Mid-west, Inter-mountain, California, Alaska
- International: Germany, Israel, Kuwait, Australia
- Selected Publications
    - o *Using Risk Appraisals to Manage Environmentally Impaired Properties*, 2000, VHB Site Works, Report 108
    - o *Risk-Based Analysis for Environmental Managers*, 2001, CRC/Lewis
    - o Chapter 7 Risk Assessment, *Managing Hazardous Materials*, 2002 & 2009, IHMM
    - o Chapter 22 Cleanup Goals, *Brownfields Law & Practice*, 2004-Present, Lexis/Nexis
    - o *Use of Risk Assessment in Risk Management of Contaminated Sites*, 2008, ITRC
- 60 Conference Papers & Invited Professional Presentations
    - o 1999-2014, Visiting Lecturer, Brownfields Program, Harvard Graduate School of Design
    - o 2010-2013, Invited Lecturer, Pace University Law School

Attachment 2
DQA Detail Worksheet

BLANKS	>RL?	Compounds	Notes
Method Blank: VOCs	No	—	No Comment
Method Blank: Ethene	No	—	No Comment
Method Blank: Iron	No	—	No Comment
Method Blank: TOC	No	—	No Comment
Method Blank: Nitrate & Sulfate	No	—	No Comment
Method Blank: Ferrous	No	—	No Comment
Field Blank (FB)	No	—	No Comment
Equip. Blank (EB)	No	—	No Comment
Trip Blank	No	—	No Comment

LCS	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOCs	—	—	—	VOCs	No Comment
Ethene	—	—	—	Ethene	No Comment
Metals	—	—	—	Metals	No Comment
TOC	—	—	—	TOC	No Comment
NO_3 / SO_4	—	—	—	Nitrate & Sulfate	No Comment
Ferrous	—	—	—	Iron +2	No Comment

SURROGATES	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOCs	—	—	—	—	No Comment
Dis. Gases	—	—	—	—	No Comment
Metals	—	—	—	—	No Comment
TOC	—	—	—	—	No Comment
NO_3 / SO_4	—	—	—	—	No Comment
Ferrous	—	—	—	—	No Comment

Attachment 2 continued

MS/MSDs	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	QC Source	RPDs	Notes
VOCs #-1 – #-9 & #-11 – #-14	—	Acetone	—	SDG Batch	—	Flag UJ / J
Dis. Gases	—	—	—	SDG Batch	—	No Comment
Metals (Fe)	—	X	—	SDG Batch	—	Flag UJ / J
TOC	—	—	—	SDG Batch	—	No Comment
Sulfate	—	—	—	SDG Batch	—	No Comment
Nitrate/Nitrite	—	—	X	SDG Batch	—	Flag UJ / J
Ferrous Ferric (calc)	—	—	—	SDG Batch	—	No Comment

FIELD DUPLICATES RPDs	QC Source	Soil RPD > 50%	Water RPD > 20%	Compounds	Notes
VOCs	MW-7 (#-5 & #-11)	N/A	—	—	No Comment
Dissolved Gases		N/A	N/C	—	Not Collected
Total Iron		N/A	N/C	—	
Nitrate & Sulfate		N/A	N/C	—	
Total Metals (Iron)		N/A	N/C	—	
Iron, Ferrous & Ferric		N/A	N/C	—	
TOC		N/A	N/C	—	
LAB DUPLICATES					
JB72531	Batch	N/A	—	As listed	No Comment

Reasonable Confidence Achieved	☐ Y	☐ N—Not Applicable
Significant QC Variances Noted	☒ Y	☐ N
Requested Reporting Limits Achieved	☒ Y	☐ N
Preservation Requirements Met	☐ Y	☒ N—some preservations missed, no analyses performed, no flag
Holding Time Requirements Met	☐ Y	☒ N—Ferrous Iron samples, results qualified, as are ferric

Abbreviations:
RL = Reporting Limit LCS = Laboratory Control Sample SV = Significant QC Variance
RPD = Relative Percent Difference LCL= RCP Lower Control Limit UCL= RCP Upper Control Limit
VOCs = Volatile Organic Compounds SVOCs = Semi-volatile Organic Compounds Pest = Pesticides
EPH = Extractable Petroleum Hydrocarbons VPH = Volatile Petroleum Hydrocarbons ETPH = EPH-Total
PCBs = Polychlorinated Biphenyls N/A = Not Applicable N/C = Not Collected -- = nothing to report
Notes: * Typical lab contaminants, not site-related

Attachment 3
DQA Non-Conformance Summary Worksheet

Only Flagged Results Shown Below

Sample Number(s)	Compound(s)	QC Non-Conformance	% Recovery	% RPD †	High or Low Bias ‡	Comments
MW-3 #–1	All	Sampling, Non-Purge	—	—	Hi/Lo	Flag UJ/J
	Acetone	MS/MSD	>LCL	—	Lo	Flag UJ/J
	Nitrate	MS/MSD	>UCL	—	Hi	Flag UJ/J
	Iron	MS/MSD	<LCL	—	Lo	Flag UJ/J
	Ferrous	Holding Time & MS	—	—	—	Flag UJ/J
	Ferric	Tot. Iron & Ferrous	—	—	—	Flag UJ/J
MW-4 #–2	Acetone	MS/MSD	>LCL	—	Lo	Flag UJ/J
	Iron	MS/MSD	<LCL	—	Lo	Flag UJ/J
	Nitrate	MS/MSD	>UCL	—	Hi	Flag UJ/J
	Ferrous	Holding Time & MS	—	—	—	Flag UJ/J
	Ferric	Tot. Iron & Ferrous	—	—	—	Flag UJ/J
MW-5 #–3	Acetone	MS/MSD	>LCL	—	Lo	Flag UJ/J
	Iron	MS/MSD	<LCL	—	Lo	Flag UJ/J
	Nitrate	MS/MSD	>UCL	—	Hi	Flag UJ/J
	Ferrous	Holding Time & MS	—	—	—	Flag UJ/J
	Ferric	Tot. Iron & Ferrous	—	—	—	Flag UJ/J
MW-8B #–4	Acetone	MS/MSD	>LCL	—	Lo	Flag UJ/J
	Iron	MS/MSD	<LCL	—	Lo	Flag UJ/J
	Nitrate	MS/MSD	>UCL	—	Hi	Flag UJ/J
	Ferrous	Holding Time & MS	—	—	—	Flag UJ/J
	Ferric	Tot. Iron & Ferrous	—	—	—	Flag UJ/J
MW-7 #–5	Acetone	MS/MSD	>LCL	—	Lo	Flag UJ/J
MW-10 #–6	Acetone	MS/MSD	>LCL	—	Lo	Flag UJ/J
MW-15A #–7	Acetone	MS/MSD	>LCL	—	Lo	Flag UJ/J
MW-C #–8	Acetone	MS/MSD	>LCL	—	Lo	Flag UJ/J
	Iron	MS/MSD	<LCL	—	Lo	Flag UJ/J
	Nitrate	MS/MSD	>UCL	—	Hi	Flag UJ/J
	Ferrous	Holding Time & MS	—	—	—	Flag UJ/J
	Ferric	Tot. Iron & Ferrous	—	—	—	Flag UJ/J

Sample Number(s)	Compound(s)	QC Non-Conformance	% Recovery	% RPD †	High or Low Bias ‡	Comments
MW-D #–9	Acetone	MS/MSD	>LCL	—	Lo	Flag UJ/J
MW-E #-10	All	Sampling, Non-Purge	—	—	Hi/Lo	Flag UJ/J
	Acetone	MS/MSD	>LCL	—	Lo	Flag UJ/J
	Iron	MS/MSD	<LCL	—	Lo	Flag UJ/J
	Nitrate	MS/MSD	>UCL	—	Hi	Flag UJ/J
	Ferrous	Holding Time & MS	—	—	—	Flag UJ/J
	Ferric	Tot. Iron & Ferrous	—	—	—	Flag UJ/J
Duplicate (MW-7) #11	Acetone	MS/MSD	>LCL	—	Lo	Flag UJ/J

Notes: † RPD—Relative Percent Difference
‡ Bias High—Reported result may be lower, Reporting Limit (RL) is acceptable as reported. Bias Low—Reported results may be higher, RL may be higher than reported.

RemVer

Quality Assessment
Data Usability Summary Report

			RemVer Project #2014GE01 Client Project # 11022323-05-206
Site:	Orangetown Shopping Center	**Site #:**	C344066
Client:	GES, Inc.	**Site Owner:**	UB Orangeburg, LLC (UBO)
Sample Delivery Group (SDG)	JB79034		
Sample Matrix:	☐ Drinking water ☒ Groundwater ☐ Surface water ☐ Soil ☐ Sediment ☐ Air ☐ Biota (tissue, type: _____) ☐ Other: _____		

Introduction

RemVer performed a data quality assessment (DQA) on the analytical data reported in Sample Delivery Groups (SDGs) #JB79034 for groundwater samples. The DQA evaluated the performance of the analytical procedures and the quality of the resulting data. RemVer followed the requirements of the New York State Department of Environmental Conservation (NYSDEC) Data Usability Summary Report (DUSR) guidelines for an Analytical Services Protocol (ASP) Category B Data Deliverable. This report includes a narrative discussion of sample results qualified during the DQA. Table 1 describes qualification flags applied to the data either by Test America or during the DQA process.

Reported Methods

☐ Method 1311 TCLP
☐ Method 1312 SPLP
☐ Method 6010A, B & C / 6020 Trace Metals
☐ Method 7000 Metals
☐ Method 7196 Hexavalent Chromium (other:_____)
☐ Method 7470A or 7471 Mercury
☐ Method 8021 Volatile Organic Compounds (VOCs) GC
☐ Method 8081B Pesticides
☐ Method 8082 PCBs
☐ Method 8151 Chlorinated Herbicides
☒ Method 8260C VOCs GC/MS
☐ Method 8270D Semi-VOCs (sVOCs) GC/MS
☐ Method 9010/9012/9014 Cyanides (_____)
☐ Method TO-13A PAHs (air)
☐ Method TO-14A / -15 VOCs (air, summa) (_____)
☐ Method TO-17 VOCs (air, sorbent)
☐ Extractable Petroleum Hydrocarbons (EPH)
☐ Volatile Petroleum Hydrocarbons (VPH) Method
☐ EPH-total
☒ Other Methods:
Method 9060A Total Organic Carbon
Method MCAWW 300.0 Anions (IC)
Method RSK-175 Dissolved Gases

Quality Control Requirements Summary

☒ Duplicate
☒ Matrix Spike [MS] / Matrix Spike Duplicate [MSD]
☐ Trip Blank(s)
☒ Equipment, Method, &/or Rinsate Blank
☒ Other Field QC: Field notes regarding sampling
☐ Special QAPP Requirements: _____
_____

Intended Use of Data under Review

The client collected groundwater samples during a one-day collection event: October 10, 2014 at the referenced New York State Brownfields site. The site is under a Site Management Plan (SMP) that requires several kinds of monitoring. The sampling event provided gauging/biostimulant and quarterly groundwater monitoring (see §3.3 of Kleinfelder, 2011).

Significant Data Usability Issues Identified For SDG: # JB79034

Of the seven samples discussed herein, RemVer rejected no results, but flagged certain analytes as estimated due to the quality of the analysis and the results are acceptable for use.

Some analytes had either preservation, holding, lab control, or other quality issues requiring UJ/J flagging for certain analytes.

All the Nitrite results were qualified (UJ or J) due to a holding violation, causing similar flagging of calculated Nitrate results.

Please refer to the Lab Results and Data Usability Narrative section for further detail.

Detailed Quality Review

Field Notes Review

	Y	N	NA	COMMENTS
Sampling notes	☒	☐	☐	Summary sheets only
Field meteorological data	☐	☐	☒	No review required under QAPP
Associated sampling location and plan included	☒	☐	☐	See RAP/QAPP
Associated drilling logs available, reviewed	☐	☐	☒	No review required under QAPP
Identification of QC samples in notes	☒	☐	☐	
Sampling instrument decontamination records	☐	☐	☒	No review required under QAPP
Sampling instrument calibration logs	☐	☐	☒	No review required under QAPP
Chain of custody included	☒	☐	☐	With analytical report
Notes include communication logs	☐	☒	☐	
Any corrective action (CA) reports	☐	☒	☐	If so, CA documentation of results required.
Any deviation from methods noted? If so, explain	☐	☒	☐	None
Any electronic data deliverables	☒	☐	☐	See Attachment #4
Sampling Report (by Field Team Leader)	☒	☐	☐	

Lab Report Contents (Test America SDG Report: #JB79034)

☒ SDG Narrative
☒ Contract Lab Sample Information Sheets
☒ Data Package Summary Forms
☒ Chain-of-Custody (COC) Forms
☒ Test Results (no tentatively identified compounds [TICs])
☒ Calibration standards
☒ Surrogate recoveries
☒ Blank results
☒ Spike recoveries
☒ Duplicate results
☒ Confirmation (lab check/QC) samples
☒ Internal standard area & retention time summary
☒ Chromatograms
☒ Raw data files
☒ Other specific information

The SDG reported on the following samples:

Sample ID	SDG #JB79034–Sample #	Matrix	Sampled	Received
MW-3				
MW-4	#-1	Water	10/10/14	10/13/14
MW-5	#-2	Water	10/10/14	10/13/14
MW-6				
MW-7				
MW-8A				
MW-8B				
MW-10	#-4	Water	10/10/14	10/13/14
MW-15A				
MW-C				
MW-D				
MW-E				
MW-F				
MW-10 (MS/MSD)	#-4	Water	10/10/14	10/13/14
Field Duplicate (FD) (MW-10)	#-5	Water	10/10/14	10/13/14
Field Blank (FB)	#-6	Water	10/10/14	10/13/14
Equipment Blank (EB)	#-7	Water	10/10/14	10/13/14
Trip Blank (TB #1)				

The SDG included the following samples with their particular analyses:

79034:	Well	VOCs	Ethene	TOC	Iron	Fe^{+2}	Fe^{+3}	NO_3	SO_4	Pest/PCB	SVOCs	RCRA13
None	MW-3 *	—	—	—	—	—	—	—	—	—	—	—
#-1	MW-4	X	X	X	—	—	—	X	X	—	—	—
#-2	MW-5	X	X	X	—	—	—	X	X	—	—	—
None	MW-6 †	—	—	—	—	—	—	—	—	—	—	—
None	MW-7 †	—	—	—	—	—	—	—	—	—	—	—
None	MW-8A *	—	—	—	—	—	—	—	—	—	—	—
#-3	MW-8B	X	X	—	—	—	—	X	X	—	—	—
#-4	MW-10	X	—	—	—	—	—	—	—	—	—	—
#-4MS	MW-10	X	—	—	—	—	—	—	—	—	—	—
#-4MSD	MW-10	X	—	—	—	—	—	—	—	—	—	—
None	MW-13A †	—	—	—	—	—	—	—	—	—	—	—
None	MW-15A †	—	—	—	—	—	—	—	—	—	—	—
None	MW-A *	—	—	—	—	—	—	—	—	—	—	—
None	MW-B *	—	—	—	—	—	—	—	—	—	—	—
None	MW-C	—	—	—	—	—	—	—	—	—	—	—
None	MW-D	—	—	—	—	—	—	—	—	—	—	—
None	MW-E	—	—	—	—	—	—	—	—	—	—	—
None	MW-F	—	—	—	—	—	—	—	—	—	—	—
#-5	FD (MW-10)	X	—	—	—	—	—	—	—	—	—	—
#-6	FB	X	—	—	—	—	—	—	—	—	—	—
#-7	EB	X	—	—	—	—	—	—	—	—	—	—
None	TB-1	—	—	—	—	—	—	—	—	—	—	—

TOC: Total Organic Carbon | Iron: Total Iron | Fe^{+2}: Ferrous Iron | Fe^{+3}: Ferric Iron | NO_3: Nitrate | SO_4: Sulfate
* Dry, no sample † No sample

Is the data package complete as defined under the requirements for the NYSDEC ASP Category B?		
Laboratory Report	**Complete (Y/N)**	**Comments**
JB79034	Y	Yes

Sample Preservation Requirements & Holding Times Met?			
Laboratory Report	**Hold Times (Y/N)**	**Preservation (Y/N)**	**Exception Comment**
JB79034	Y	Y	VOA bottles had bubbles, flag UJ/J Hold time for all nitrate analysis missed, effects derivatives as well, flag UJ/J

Do all QC data fall within the protocol required limits and specifications? *(1) blanks, (2) instrument tunings, (3) calibration standards, (4) calibration verifications, (5) surrogate recoveries, (6) spike recoveries, (7) replicate analyses, (8) laboratory controls, (9) and sample data*									
SDG	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
JB79034	☐	☐	☐	☐	☐	☒	☐	☐	☒
The narrative section, below, discusses these deficiencies in detail, see Attachment 2 as well.									

Have all of the data been generated using established and agreed upon analytical protocols?		
Laboratory Report	**Protocols (Y/N)**	**Exception Comment**
JB79034	Y	None

Do the raw data confirm the results provided in the data summary sheets and quality control verification forms?		
Laboratory Report	**Confirmation (Y/N)**	**Exception Comment**
JB79034	Y	None

Have the correct data qualifiers been used and are they consistent with the most current guidance?		
Laboratory Report	**Qualifiers (Y/N)**	**Comment**
JB79034	Y	The laboratory generally applied appropriate qualifiers. To prepare the DUSR, it was necessary to apply additional qualifications or adjust qualifications to certain results as shown in Attachments 3 and 4.

Have any quality control (QC) exceedances been specifically noted in this DUSR and the corresponding QC summary sheets from the data packages referenced?		
Laboratory Report	**QC Exceedances Documented (Y/N)**	**Comment**
JB79034	Y	Several data qualifications were applied as described below

Data Quality and Usability Narrative

Field Notes Inspection

The groundwater samples came from a one-day collection event: October 10, 2014. A review of the field notes provided the following information pertaining to data usability.

Groundwater MWs	October-2014 Comments SDG #JB79034
MW-3	Dry, no sample
MW-4	Bailer purge (<1-gal), sampled
MW-5	Bailer purge (<1-gal), sampled
MW-6	No sample
MW-7	No sample
MW-8A	Dry, no sample
MW-8B	Bailer purge (<1-gal), sampled
MW-10	Bailer purge (<1-gal), sampled; MS/MSD & duplicate samples came from this well
MW-13A	No sample
MW-15A	No sample
MW-A	No sample
MW-B	No sample
MW-C	No sample
MW-D	No sample
MW-E	No sample
MW-F	No sample

Laboratory Report Inspection

The laboratory produced SDG report #JB79034 (dated 20 August 2014). The final reports contained the required data and information.

Chain of Custody (COC) Evaluation

GES produced one COC for the referenced fieldwork (#JB79034, single, one-page COC).

Sample Preservation & Holding Time Evaluation

Laboratory received three coolers with samples on 10/13/2014 @ 10:00 (designated as SDG-JB79034) in proper condition and, where required, on ice. The temperature of the coolers at

receipt time were 1.9 and 1.9ºC, respectively. All holding times and preservation requirements were met with the following exceptions:

- #-2 VOC—all bottles had macrobubbles, therefore, RemVer qualified all detected results as estimated (J) (see Attachment 2 and 3).
- Nitrogen-Nitrite—samples #-1, -2, & -3 received outside of holding for this analysis, all results flagged as UJ/J.
- Nitrogen-Nitrate—because this analyte is derived by calculation all Nitrate results were similarly qualified as Nitrite (see Attachment 2 and 3).

Blank Evaluation

This sampling event had no Trip Blank. While technically required by the QAPP, the EB and FB can be relied upon regarding potential contamination issue; no flag set.

The Equipment and Field Blank (EB and FB, respectively) had no detectable VOC analytes (above their respective the RLs).

Laboratory Method Blanks (MBs) had conforming parameters and analytes below their respective RLs.

Laboratory Control Samples (LCS)

The various LCS' were within the acceptable range for their particular analyses in SDG JB79034, with the exception of Tetrachlororethene, which was beyond control limits and with high percent recoveries.

Surrogates

Surrogates added to a sample allow testing of preparatory and instrument behavior resulting in recoveries within appropriate method ranges for all analytes.

Site-Specific Matrix Spikes and Matrix Spike Duplicates

The matrix spike/matrix spike duplicate (MS/MSD) runs for all analyses for JB79034 met the QA criteria.

Other QC Data (Elevated Detection/Foaming Method 8260)

Sample #-2 foamed during preparation requiring additional dilution, only detected analytes flagged J.

Duplicates

GES collected a field replicate of MW-D (compare samples #-5 and #-11). The VOC analytes met the RPD performance criteria of <20% (see below Attachment #2).

Tentatively Identified Compounds (TICs)

This SDG had no analysis of TICs.

Sample Result and Usability Evaluation

Due to certain sample issues or laboratory performance, some results were qualified; however, the data are usable. No data received an R (rejected) flag. If an analyte was above the MDL but below the RL, then it was flagged as "UJ".

RemVer modified Test America's laboratory electronic data reports by adding quality flags, highlighted in yellow (see Attachment #4 [separate file]: Orangetown_2014Q4_DUSR.xls [EXCEL file]).

References

Kleinfelder, 2011, *Site Management Plan, Orangetown Shopping Center, 1-45 Orangetown Shopping Center, Orangeburg, NY, NYSDEC Site #C344066*, Final, 21-November, 250p

NYSDEC, 2010, *Technical Guidance for Site Investigation and Remediation*, "DER-10," Division of Environmental Remediation: Albany, NY, May, 232p

NYSDEC, 2010, *Guidance for Data Deliverables and the Development of Data Usability Summary Reports*, Appendix 2B IN *Technical Guidance for Site Investigation and Remediation*, Division of Environmental Remediation: Albany, NY, May, 232p

USEPA, 2008, *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, OSWER 9240.1-48, USEPA-540-R-08-01, Office of Superfund Remediation and Technology Innovation: Washington, DC, June, 225p

USEPA, 2010, *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, OSWER 9240.1-51, USEPA-540-R-10-011, Office of Superfund Remediation and Technology Innovation: Washington, DC, January, 110p

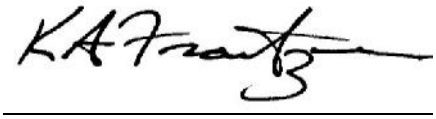
USEPA, 2012, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*, Current Online Revision: http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm, accessed April 2012

Tables

1. Qualifier Flags

Attachments

1. Data Usability Reviewer Qualifications
2. DQA Detail Worksheet
3. DQA Non-Conformance Summary Workheet
4. Separate EXCEL File: Orangetown_2014Q4_DUSR.xls [NOTE: RemVer modified the Test America work products by adding quality flags, which are in yellow highlight.]



Prepared by: Kurt A. Frantzen, PhD, CHMM
November 26, 2014

GES PO#213281

Table 1
Qualifier Flags

Qualifier	Quality Implication
U	Analyte analyzed for, but not detected above the sample's reported quantitation limit
J	Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample
J +	Sample likely to have a high bias
J –	Sample likely to have a low bias
UJ	Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample
N	The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
R	Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (*i.e.*, dilutions or re-analyses), the most technically acceptable result is considered acceptable.
B | EB **TB | BB**	An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.
P	Use professional judgment based on data use. It usually has an "M' with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (*see below*).
PM	A manual review of the raw data is recommended to determine if the defect affects data use, as in "R" above. This review should include consideration of potential affects that could result from using the "P" qualified data. For example, in the case of holding-time exceedance, the Project Manager or delegate can decide to use the data with no qualification when analytes of interest are known not to be adversely affected by holding-time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria; because this is likely due to sample non-homogeneity rather than contract laboratory error, then the manager or delegate must decide how to use the data.

Attachment 1
Data Usability Reviewer: Kurt A. Frantzen, PhD, CHMM

Experience

2014-Present	AECC	Senior EHS Consultant
2013-Present	d/b/a RemVer	Owner
2011-2012	RemVer, Inc.	President
2006-2011	Kleinfelder	Senior Principal Scientist
2005	Kleinfelder	Principal Scientist, Part-Time/On Call
2004-2006	d/b/a Environmental Risk Group	Owner
2004-2006	RemVer, Inc., Larchmont, NY	Founder, President
1999-2004	VHB, Inc.	ERM Director & Associate
1997-1998	GEI Consultants, Inc.	Senior Project Manager
1992-1997	Ecology and Environment, Inc.	Technical Chief
1991-1992	EA Engineering, Science, & Technology, Inc.	Project Manager III
1990-1991	Ecology and Environment, Inc.	Technical Group Manager
1986-1990	Ecology and Environment, Inc.	Senior Environmental Scientist

Education

Am Cancer Soc. Post-Doctoral Fellow, U Washington 1985-1986

PhD—Life Sci. / Biochem, NU—Lincoln	1985
MS—Plant Pathology, Kansas State Univ.	1980
BS—Biology, NU—Omaha	1978

Registrations

Certified Hazardous Materials Manager, since 2007, #14143

Professional Affiliations

Society Risk Analysis ('09 & '11 Chair, Eco-Risk Assessment) Am. Chemistry Society
Am. Assoc. Advance Science NY Academy of Science Am. Institute of Biological Sciences
LSP Association

Other

- CERCLA & RCRA experience, as well as DOD (Air Force & Army) & DOE (INEL)
- NE Regional Experience—NY BCP; Mass MCP; & various sites in CT, RI & NH
- National Experience: NE, SE, Gulf & West Coast, Mid-west, Inter-mountain, California, Alaska
- International: Germany, Israel, Kuwait, Australia
- Selected Publications
    - o *Using Risk Appraisals to Manage Environmentally Impaired Properties*, 2000, VHB Site Works, Report 108
    - o *Risk-Based Analysis for Environmental Managers*, 2001, CRC/Lewis
    - o Chapter 7 Risk Assessment, *Managing Hazardous Materials*, 2002 & 2009, IHMM
    - o Chapter 22 Cleanup Goals, *Brownfields Law & Practice*, 2004-Present, Lexis/Nexis
    - o *Use of Risk Assessment in Risk Management of Contaminated Sites*, 2008, ITRC
- 60 Conference Papers & Invited Professional Presentations
    - o 1999-2014, Visiting Lecturer, Brownfields Program, Harvard Graduate School of Design
    - o 2010-2013, Invited Lecturer, Pace University Law School

Attachment 2
DQA Detail Worksheet

BLANKS	>RL?	Compounds	Notes
Method Blank: VOCs	No	—	No Comment
Method Blank: Ethene	No	—	No Comment
Method Blank: TOC	No	—	No Comment
Method Blank: Nitrate & Sulfate	No	—	No Comment
Field Blank (FB)	No	—	No Comment
Equip. Blank (EB)	No	—	No Comment

LCS	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOCs	—	—	X	Tetrachlororethene	Flag UJ/J
VOCs	—	—	—	All other VOCs	No Comment
Ethene	—	—	—	Ethene	No Comment
TOC	—	—	—	TOC	No Comment
NO_3 / SO_4	—	—	—	Nitrate & Sulfate	No Comment

SURROGATES	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOCs	—	—	—	—	No Comment
Dis. Gases	—	—	—	—	No Comment
TOC	—	—	—	—	No Comment
NO_3 / SO_4	—	—	—	—	No Comment

Attachment 2 continued

MS/MSDs	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	QC Source	RPDs	Notes
VOCs #-1 – #-9 & #-11 – #-14	—	—	—	SDG Batch	—	No Comment
Dis. Gases	—	—	—	SDG Batch	—	No Comment
TOC	—	—	—	SDG Batch	—	No Comment
Sulfate	—	—	—	SDG Batch	—	No Comment
Nitrate/Nitrite	—	—	—	SDG Batch	—	No Comment

FIELD DUPLICATES RPDs	QC Source	Soil RPD > 50%	Water RPD > 20%	Compounds	Notes
VOCs	MW-10 (#-4 & #-5)	N/A	—	—	No Comment
Dissolved Gases		N/A	N/C	—	Not Collected
Total Iron		N/A	N/C	—	
Nitrate & Sulfate		N/A	N/C	—	
Total Metals (Iron)		N/A	N/C	—	
Iron, Ferrous & Ferric		N/A	N/C	—	
TOC		N/A	N/C	—	
LAB DUPLICATES					
JB79034	Batch	N/A	—	As listed	No Comment

Reasonable Confidence Achieved ☐ Y ☐ N—Not Applicable
Significant QC Variances Noted ☒ Y ☐ N
Requested Reporting Limits Achieved ☒ Y ☐ N
Preservation Requirements Met ☐ Y ☒ N—some preservations missed, flag
Holding Time Requirements Met ☐ Y ☒ N—some Nitrate samples analyzed outside of holding. flag

Abbreviations:
RL = Reporting Limit LCS = Laboratory Control Sample SV = Significant QC Variance
RPD = Relative Percent Difference LCL= RCP Lower Control Limit UCL= RCP Upper Control Limit
VOCs = Volatile Organic Compounds SVOCs = Semi-volatile Organic Compounds Pest = Pesticides
EPH = Extractable Petroleum Hydrocarbons VPH = Volatile Petroleum Hydrocarbons ETPH = EPH-Total
PCBs = Polychlorinated Biphenyls N/A = Not Applicable N/C = Not Collected -- = nothing to report
Notes: * Typical lab contaminants, not site-related

Attachment 3
DQA Non-Conformance Summary Worksheet

Only Flagged Results Shown Below

Sample Number(s)	Compound(s)	QC Non-Conformance	% Recovery	% RPD †	High or Low Bias ‡	Comments
MW-4 #–1	All Detected VOCs	—	—	—	—	—
	Tetrachloroethene	LCS	>UCL	>UCL	Hi	Flag UJ/J
	Nitrite/Nitrate	Holding	—	—	—	Flag detected as J
MW-5 #–2	All Detected VOCs	Preservation	—	—	—	Flag detected as J
	Tetrachloroethene	LCS	>UCL	>UCL	Hi	Flag UJ/J
	Nitrite/Nitrate	Holding	—	—	—	Flag detected as J
MW-8B #–3	All Detected VOCs	—	—	—	—	—
	Tetrachloroethene	LCS	>UCL	>UCL	Hi	Flag UJ/J
	Nitrite/Nitrate	Holding	—	—	—	Flag detected as J
MW-10 #–4	All Detected VOCs	—	—	—	—	—
	Tetrachloroethene	LCS	>UCL	>UCL	Hi	Flag UJ/J
Duplicate (MW-10) #–5	All Detected VOCs	—	—	—	—	—

Notes: † RPD—Relative Percent Difference
‡ Bias High—Reported result may be lower, Reporting Limit (RL) is acceptable as reported. Bias Low—Reported results may be higher, RL may be higher than reported.

Quality Assessment
Data Usability Summary Report

		RemVer Project #2014GE01 Client Project # 11022323-05-206	
Site:	Orangetown Shopping Center	**Site #:**	C344066
Client:	GES, Inc.	**Site Owner:**	UB Orangeburg, LLC (UBO)
Sample Delivery Group (SDG)	JA91101		
Sample Matrix:	☐ Drinking water ☒ Groundwater ☐ Surface water ☐ Soil ☐ Sediment ☐ Air ☐ Biota (tissue, type: _____) ☐ Other: _____		

Introduction

RemVer performed a data quality assessment (DQA) on the analytical data reported in Sample Delivery Groups (SDGs) #JA91101 for groundwater samples. The DQA evaluated the performance of the analytical procedures and the quality of the resulting data. RemVer followed the requirements of the New York State Department of Environmental Conservation (NYSDEC) Data Usability Summary Report (DUSR) guidelines for an Analytical Services Protocol (ASP) Category B Data Deliverable. This report includes a narrative discussion of sample results qualified during the DQA. Table 1 describes qualification flags applied to the data either by Test America or during the DQA process.

Reported Methods

☐ Method 1311 TCLP
☐ Method 1312 SPLP
☒ Method 6010A, B & C / 6020 Trace Metals
☐ Method 7000 Metals
☐ Method 7196 Hexavalent Chromium (other:_____)
☐ Method 7470A or 7471 Mercury
☐ Method 8021 Volatile Organic Compounds (VOCs) GC
☐ Method 8081B Pesticides
☒ Method 8082 PCBs
☐ Method 8151 Chlorinated Herbicides
☒ Method 8260C VOCs GC/MS
☐ Method 8270D Semi-VOCs (sVOCs) GC/MS
☐ Method 9010/9012/9014 Cyanides (_____)

☐ Method TO-13A PAHs (air)
☐ Method TO-14A / -15 VOCs (air, summa) (_____)
☐ Method TO-17 VOCs (air, sorbent)
☐ Extractable Petroleum Hydrocarbons (EPH)
☐ Volatile Petroleum Hydrocarbons (VPH) Method
☐ EPH-total
☒ Other Methods:
Method 9060A Total Organic Carbon
Method MCAWW 300.0 Anions (IC)
Method RSK-175 Dissolved Gases
Method SM4500 Nitrite
Method 353 Nitrite & Nitrate

Quality Control Requirements Summary

☒ Duplicate
☒ Matrix Spike [MS] / Matrix Spike Duplicate [MSD]
☒ Trip Blank(s)
☒ Equipment, Method, &/or Rinsate Blank

☒ Other Field QC: Field notes regarding sampling
☐ Special QAPP Requirements: _____
_____

Intended Use of Data under Review

The client collected groundwater samples during a one-day collection event: March 27, 2015 at the referenced New York State Brownfields site. The site is under a Site Management Plan (SMP) that requires several kinds of monitoring. The sampling event provided gauging/biostimulant and quarterly groundwater monitoring (see §3.3 of Kleinfelder, 2011).

Significant Data Usability Issues Identified For SDG: # JA91101

Of the nine samples (plus three blanks) discussed herein, RemVer rejected no results, but flagged certain analytes as estimated due to the quality of the analysis and the results are acceptable for use.

Some analytes had either lab control, matrix spike, or other quality issues requiring UJ/J flagging for certain analytes.

All the Ferrous results were qualified (UJ or J) due to a holding violation, causing similar flagging of calculated Ferric results.

Please refer to the Lab Results and Data Usability Narrative section for further detail.

Detailed Quality Review

Field Notes Review

	Y	N	NA	COMMENTS
Sampling notes	☒	☐	☐	Summary sheets only
Field meteorological data	☐	☐	☒	No review required under QAPP
Associated sampling location and plan included	☒	☐	☐	See RAP/QAPP
Associated drilling logs available, reviewed	☐	☐	☒	No review required under QAPP
Identification of QC samples in notes	☒	☐	☐	
Sampling instrument decontamination records	☐	☐	☒	No review required under QAPP
Sampling instrument calibration logs	☐	☐	☒	No review required under QAPP
Chain of custody included	☒	☐	☐	With analytical report
Notes include communication logs	☐	☒	☐	
Any corrective action (CA) reports	☐	☒	☐	If so, CA documentation of results required.
Any deviation from methods noted? If so, explain	☐	☒	☐	None
Any electronic data deliverables	☒	☐	☐	See Attachment #4
Sampling Report (by Field Team Leader)	☒	☐	☐	

Lab Report Contents (Test America SDG Report: #JA91101)

☒ SDG Narrative
☒ Contract Lab Sample Information Sheets
☒ Data Package Summary Forms
☒ Chain-of-Custody (COC) Forms
☒ Test Results (no tentatively identified compounds [TICs])
☒ Calibration standards
☒ Surrogate recoveries
☒ Blank results
☒ Spike recoveries
☒ Duplicate results
☒ Confirmation (lab check/QC) samples
☒ Internal standard area & retention time summary
☒ Chromatograms
☒ Raw data files
☒ Other specific information

The SDG reported on the following samples:

Sample ID	SDG #JA91101–Sample #	Matrix	Sampled	Received
MW-3	#-1	Water	3/27/15	3/28/15
MW-4	#-2	Water	3/27/15	3/28/15
MW-5	#-3	Water	3/27/15	3/28/15
MW-6	#-4	Water	3/27/15	3/28/15
MW-7	#-5	Water	3/27/15	3/28/15
MW-8A	#-6	Water	3/27/15	3/28/15
MW-8B	#-7	Water	3/27/15	3/28/15
MW-10	#-8	Water	3/27/15	3/28/15
MW-15A				
MW-C				
MW-D				
MW-E				
MW-F				
MW-10 (MS/MSD)	#-8	Water	3/27/15	3/28/15
Field Duplicate (FD) (MW-10)	#-9	Water	3/27/15	3/28/15
Field Blank (FB)	#-10	Water	3/27/15	3/28/15
Equipment Blank (EB)	#-11	Water	3/27/15	3/28/15
Trip Blank (TB #1)	#-12	Water	3/27/15	3/28/15

The SDG included the following samples with their particular analyses:

79034:	Well	VOCs	Ethene	TOC	Iron	Fe^{+2}	Fe^{+3}	NO_3	SO_4	Pest/PCB	SVOCs	RCRA13
#-1	MW-3	X	X	X	X	X	X	X	X	—	—	—
#-2	MW-4	X	X	X	X	X	X	X	X	—	—	—
#-3	MW-5	X	X	X	X	X	X	X	X	—	—	—
#-4	MW-6	X	—	—	—	—	—	—	—	X	—	—
#-5	MW-7	X	—	—	—	—	—	—	—	X	—	—
#-6	MW-8A	X	—	—	—	—	—	—	—	—	—	—
#-7	MW-8B	X	X	—	—	—	—	—	—	—	—	—
#-8	MW-10	X	—	—	—	—	—	—	—	X	—	—
#-8MS	MW-10	X	—	—	—	—	—	—	—	—	—	—
#-8MSD	MW-10	X	—	—	—	—	—	—	—	—	—	—
None	MW-13A †	—	—	—	—	—	—	—	—	—	—	—
None	MW-15A †	—	—	—	—	—	—	—	—	—	—	—
None	MW-A †	—	—	—	—	—	—	—	—	—	—	—
None	MW-B †	—	—	—	—	—	—	—	—	—	—	—
None	MW-C †	—	—	—	—	—	—	—	—	—	—	—
None	MW-D †	—	—	—	—	—	—	—	—	—	—	—
None	MW-E †	—	—	—	—	—	—	—	—	—	—	—
None	MW-F †	—	—	—	—	—	—	—	—	—	—	—
#-9	FD (MW-10)	X	—	—	—	—	—	—	—	—	—	—
#-10	FB	X	—	—	—	—	—	—	—	—	—	—
#-11	EB	X	—	—	—	—	—	—	—	—	—	—
#-12	TB-1	X	—	—	—	—	—	—	—	—	—	—

TOC: Total Organic Carbon | Iron: Total Iron | Fe^{+2}: Ferrous Iron | Fe^{+3}: Ferric Iron | NO_3: Nitrate | SO_4: Sulfate
* Dry, no sample † No sample

Is the data package complete as defined under the requirements for the NYSDEC ASP Category B?		
Laboratory Report	Complete (Y/N)	Comments
JA91101	Y	Yes

Sample Preservation Requirements & Holding Times Met?			
Laboratory Report	Hold Times (Y/N)	Preservation (Y/N)	Exception Comment
JA91101	Y	Y	#2 (MW4) 1 VOA bottle broke in transit Hold time for all Ferrous analysis missed, effects derivatives as well, flag UJ/J

Do all QC data fall within the protocol required limits and specifications? *(1) blanks, (2) instrument tunings, (3) calibration standards, (4) calibration verifications, (5) surrogate recoveries, (6) spike recoveries, (7) replicate analyses, (8) laboratory controls, (9) and sample data*									
SDG	1	2	3	4	5	6	7	8	9
JA91101	☐	☐	☐	☐	☐	☒	☐	☒	☒
The narrative section, below, discusses these deficiencies in detail, see Attachment 2 as well.									

Have all of the data been generated using established and agreed upon analytical protocols?		
Laboratory Report	Protocols (Y/N)	Exception Comment
JA91101	Y	None

Do the raw data confirm the results provided in the data summary sheets and quality control verification forms?		
Laboratory Report	Confirmation (Y/N)	Exception Comment
JA91101	Y	None

Have the correct data qualifiers been used and are they consistent with the most current guidance?		
Laboratory Report	Qualifiers (Y/N)	Comment
JA91101	Y	The laboratory generally applied appropriate qualifiers. To prepare the DUSR, it was necessary to apply additional qualifications or adjust qualifications to certain results as shown in Attachments 3 and 4.

Have any quality control (QC) exceedances been specifically noted in this DUSR and the corresponding QC summary sheets from the data packages referenced?		
Laboratory Report	QC Exceedances Documented (Y/N)	Comment
JA91101	Y	Several data qualifications were applied as described below

Data Quality and Usability Narrative

Field Notes Inspection

The groundwater samples came from a one-day collection event: March 27, 2015. A review of the field notes provided the following information pertaining to data usability.

Groundwater MWs	March-2015 Comments SDG #JA91101
MW-3	Bailer purge (4-gal), sampled
MW-4	Bailer purge (3.8-gal), sampled
MW-5	Bailer purge (5-gal), sampled
MW-6	Bailer purge (5.7-gal), sampled
MW-7	Bailer purge (2-gal), sampled
MW-8A	Bailer purge (<1-gal), sampled
MW-8B	Bailer purge (<1-gal), sampled
MW-10	Bailer purge (20-gal), sampled; MS/MSD & duplicate samples came from this well
MW-13A	No sample
MW-15A	No sample
MW-A	No sample
MW-B	No sample
MW-C	No sample
MW-D	No sample
MW-E	No sample
MW-F	No sample

Laboratory Report Inspection

The laboratory produced SDG report #JA91101 (dated 14 April 2015). The final reports contained the required data and information.

Chain of Custody (COC) Evaluation

GES produced one COC for the referenced fieldwork (#JA91101, single, one-page COC).

Sample Preservation & Holding Time Evaluation

Laboratory received two coolers with samples on 10/13/2014 @ 10:15 (designated as SDG-JA91101) in proper condition and, where required, on ice. The temperatures of the coolers at

receipt time were 3.2 and 4.1ºC, respectively. All holding times and preservation requirements were met with the following exceptions:

- Ferrous—samples #-1, -2, & -3 received outside of holding for this analysis, all results flagged as UJ/J.
- Ferric—because this analyte is derived by calculation all results were similarly qualified as Ferrous (see Attachment 2 and 3).

Blank Evaluation

The TB had no detectable VOC analytes (above their respective the reporting limits).
The Equipment and Field Blank (EB and FB, respectively) had no detectable VOC analytes (above their respective the RLs). Laboratory Method Blanks (MBs) had conforming parameters and analytes below their respective RLs.

Laboratory Control Samples (LCS)

The various LCS' were within the acceptable range for their particular analyses in SDG JA91101, with the exception of Bromobenzene for the batch covering the Duplicate #-9, which was beyond control limits and with high percent recoveries.

Surrogates

Surrogates added to a sample allow testing of preparatory and instrument behavior resulting in recoveries within appropriate method ranges for all analytes, with the following exception:

- Sample #-3, $-4 &#-8 Method 8082 for PCBs—Tetrachloro-m-xylene was outside control limits possibly due to matrix interference, therefore, UJ flag all results.

Site-Specific Matrix Spikes and Matrix Spike Duplicates

The matrix spike/matrix spike duplicate (MS/MSD) runs for all analyses for JA91101 met the QA criteria, with the following exception:

- Either the MS or MSD (or both) recoveries for the batch including Sample #-9 (Duplicate) were outside of control limits for multiple VOCs as indicated in Attachment 2. Despite this exception, these compounds were not detected, therefore, no flag required.
- Sample #-3, #-4 & #-8 had MS/MSD recoveries for Aroclor 1260 outside control limits, most likely due to matrix interference, therefore, UJ/J flag all results.
- Sample #-1, #-2 & #-3—MS/MSD recovery for nitrite analysis and nitrate + nitrite analysis was greater than the RPD control limit, due to low concentrations, the associated LCS/LCSD recoveries were within limits, resulting in flagging the results UJ or J. Nitrate results are obtained by calculation ([Nitrate + Nitrite] – Nitrite); because the nitrate + nitrite results were flagged, the nitrate results were similarly flagged UJ or J.

Duplicates

GES collected a field replicate of MW-10 (compare samples #-8 and #-9). The VOC analytes met the RPD performance criteria of <20% (see below Attachment #2).

Tentatively Identified Compounds (TICs)

This SDG had no analysis of TICs.

Sample Result and Usability Evaluation

Due to certain sample issues or laboratory performance, some results were qualified; however, the data are usable. No data received an R (rejected) flag. If an analyte was above the MDL but below the RL, then it was flagged as "UJ".

Measurement of Total Iron used Inductively Coupled Plasma (ICP) based on nitric acid preserved samples; whereas measurement of Ferrous Iron used the Phenanthroline Method (SM3500), which is a colorimetric method using hydrochloric-preserved samples. Interferences resulting in positive bias in the ferrous result include strong oxidizing agents, cyanide, nitrite, phosphates (polyphosphates more so than orthophosphate), chromium, or zinc in concentrations exceeding 10X greater than iron, or cobalt and copper in excess of 5 mg/L, or nickel in excess of 2 mg/L; moreover, bismuth, cadmium, mercury, molybdate, and silver precipitate phenanthroline, which is the color reagent used for ferrous iron. Using the analytically estimated Total and Ferrous Iron concentrations, Test America calculated the concentration of Ferric Iron by difference. Any qualifier flags associated with analytic results automatically attach to the calculated results.

RemVer modified Test America's laboratory electronic data reports by adding quality flags, highlighted in yellow (see Attachment #4 [separate file]: Orangetown_2015Q1_DUSR.xls [EXCEL file]).

References

Kleinfelder, 2011, *Site Management Plan, Orangetown Shopping Center, 1-45 Orangetown Shopping Center, Orangeburg, NY, NYSDEC Site #C344066*, Final, 21-November, 250p

NYSDEC, 2010, *Technical Guidance for Site Investigation and Remediation*, "DER-10," Division of Environmental Remediation: Albany, NY, May, 232p

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Tables

1. Qualifier Flags

Attachments

1. Data Usability Reviewer Qualifications
2. DQA Detail Worksheet
3. DQA Non-Conformance Summary Workheet
4. Separate EXCEL File: Orangetown_2014Q4_DUSR.xls [NOTE: RemVer modified the Test America work products by adding quality flags, which are in yellow highlight.]

Prepared by: Kurt A. Frantzen, PhD, CHMM
May 1, 2015

GES PO#538885

Table 1
Qualifier Flags

Qualifier	Quality Implication
U	Analyte analyzed for, but not detected above the sample's reported quantitation limit
J	Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample
J +	Sample likely to have a high bias
J –	Sample likely to have a low bias
UJ	Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample
N	The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
R	Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (*i.e.*, dilutions or re-analyses), the most technically acceptable result is considered acceptable.
B | EB TB | BB	An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.
P	Use professional judgment based on data use. It usually has an "M" with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (*see below*).
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Experience

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2006-2011	Kleinfelder	Senior Principal Scientist
2005	Kleinfelder	Principal Scientist, Part-Time/On Call
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1997-1998	GEI Consultants, Inc.	Senior Project Manager
1992-1997	Ecology and Environment, Inc.	Technical Chief
1991-1992	EA Engineering, Science, & Technology, Inc.	Project Manager III
1990-1991	Ecology and Environment, Inc.	Technical Group Manager
1986-1990	Ecology and Environment, Inc.	Senior Environmental Scientist

Education

Am Cancer Soc. Post-Doctoral Fellow, U Washington 1985-1986

PhD—Life Sci. / Biochem, NU—Lincoln	1985
MS—Plant Pathology, Kansas State Univ.	1980
BS—Biology, NU—Omaha	1978

Registrations

Certified Hazardous Materials Manager, since 2007, #14143

Professional Affiliations

Society Risk Analysis ('09 & '11 Chair, Eco-Risk Assessment)
Am. Chemistry Society
Am. Assoc. Advance Science
NY Academy of Science
Am. Institute of Biological Sciences
LSP Association

Other

- CERCLA & RCRA experience, as well as DOD (Air Force & Army) & DOE (INEL)
- NE Regional Experience—NY BCP; Mass MCP; & various sites in CT, RI & NH
- National Experience: NE, SE, Gulf & West Coast, Mid-west, Inter-mountain, California, Alaska
- International: Germany, Israel, Kuwait, Australia
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- 60 Conference Papers & Invited Professional Presentations
    - 1999-2014, Visiting Lecturer, Brownfields Program, Harvard Graduate School of Design
    - 2010-2013, Invited Lecturer, Pace University Law School

Attachment 2
DQA Detail Worksheet

BLANKS	>RL?	Compounds	Notes
Method Blank: VOCs	No	—	No Comment
Method Blank: Ethene	No	—	No Comment
Method Blank: PCBs	No	—	No Comment
Method Blank: TOC	No	—	No Comment
Method Blank: Nitrate & Sulfate	No	—	No Comment
Method Blank: Iron	No	—	No Comment
Method Blank: Ferrous	No	—	No Comment
Field Blank (FB)	No	—	No Comment
Equip. Blank (EB)	No	—	No Comment
Trip Blank (TB)	No	—	No Comment

LCS	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOCs	—	—	X	Bromobenzene	#-9 Flag UJ/J
VOCs	—	—	—	All other VOCs	No Comment
Ethene	—	—	—	Ethene	No Comment
PCBs	—	—	—	PCBs	No Comment
Metals	—	—	—	Iron	No Comment
TOC	—	—	—	TOC	No Comment
NO_3 / SO_4	—	—	—	Nitrate & Sulfate	No Comment
Ferrous/Ferric	—	—	—	Iron +2 / Iron +3	No Comment

SURROGATES	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOCs	—	—	—	—	No Comment
Dis. Gases	—	—	—	—	No Comment
PCBs		—	X	Tetrachloro-m-xylene:	Flag UJ/J
TOC	—	—	—	—	No Comment
NO_3 / SO_4	—	—	—	—	No Comment

Attachment 2 continued

MS/MSDs	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	QC Source	RPDs	Notes
VOCs #-1 – #-3 & #-6 – #-12	—	—	—	SDG Batch	—	No Comment
VOCs #-9	—	—	—	SDG Batch	>UCL	1,1,2,2-Tetrachloroethane, 1,1-Dichloroethane, 1,2-Dichlorobenzene, 1,3,5-Trimethylbenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Bromobenzene,

MS/MSDs	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	QC Source	RPDs	Notes
						Bromochloromethane, Carbon disulfide, Isopropylbenzene, n-Propylbenzene, o-Chlorotoluene, p-Chlorotoluene, p-Isopropyltoluene, sec-Butylbenzene, tert-Butylbenzene, Tetrachloroethene, trans-1,2-Dichloroethene
Dis. Gases	—	—	—	SDG Batch	—	No Comment
PCBs	—	—	>UCL	SDG Batch	>UCL	1260 only Flag UJ/J
TOC	—	—	—	SDG Batch	—	No Comment
Sulfate	—	—	—	SDG Batch	—	No Comment
Nitrate	—	—	—	SDG Batch	—	No Comment
Nitrite	—	—	—	SDG Batch	>UCL	Flag UJ/J

FIELD DUPLICATES RPDs	QC Source	Soil RPD > 50%	Water RPD > 20%	Compounds	Notes
VOCs	MW-10 (#-8 & #-9)	N/A	—	—	No Comment
Dissolved Gases		N/A	N/C	—	Not Collected
Total Iron		N/A	N/C	—	
Nitrate & Sulfate		N/A	N/C	—	
Total Metals (Iron)		N/A	N/C	—	
Iron, Ferrous & Ferric		N/A	N/C	—	
TOC		N/A	N/C	—	
LAB DUPLICATES					
JA91101	Batch	N/A	—	As listed	No Comment

Reasonable Confidence Achieved	☐ Y	☐ N—Not Applicable
Significant QC Variances Noted	☒ Y	☐ N
Requested Reporting Limits Achieved	☒ Y	☐ N
Preservation Requirements Met	☒ Y	☐ N
Holding Time Requirements Met	☐ Y	☒ N—Ferrous Iron samples, results qualified, as are ferric

Abbreviations:
RL = Reporting Limit LCS = Laboratory Control Sample SV = Significant QC Variance
RPD = Relative Percent Difference LCL= RCP Lower Control Limit UCL= RCP Upper Control Limit
VOCs = Volatile Organic Compounds SVOCs = Semi-volatile Organic Compounds Pest = Pesticides
EPH = Extractable Petroleum Hydrocarbons VPH = Volatile Petroleum Hydrocarbons ETPH = EPH-Total
PCBs = Polychlorinated Biphenyls N/A = Not Applicable N/C = Not Collected -- = nothing to report
Notes: * Typical lab contaminants, not site-related

Attachment 3
DQA Non-Conformance Summary Worksheet

Only Flagged Results Shown Below

Sample Number(s)	Compound(s)	QC Non-Conformance	% Recovery	% RPD †	High or Low Bias ‡	Comments
MW-3 #–1	Ferrous (Ferric)	Holding Time & MS	—	—	—	Flag UJ/J
	Nitrite (Nitrate)	MS/MSD	>UCL	>UCL	Hi	Flag UJ/J
MW-4 #–2	—	—	—	—	—	—
	Ferrous (Ferric)	Holding Time & MS	—	—	—	Flag UJ/J
	Nitrite (Nitrate)	MS/MSD	>UCL	>UCL	Hi	Flag UJ/J
MW-5 #–3	All PCBS	Surrogates 1260	> —	— >	HI	Flag UJ/J
	Ferrous (Ferric)	Holding Time & MS	—	—	—	Flag UJ/J
	Nitrite (Nitrate)	MS/MSD	>UCL	>UCL	Hi	Flag UJ/J
MW-6 #–4	All PCBs	Surrogates 1260	> —	— >	HI	Flag UJ/J
MW-7 #-5	—	—	—	—	—	—
MW-8A #–6	—	—	—	—	—	—
MW-8B #–7	—	—	—	—	—	—
MW-10 #–8	All PCBs	Surrogates 1260	> —	— >	HI	Flag UJ/J
Duplicate (MW-10) #–9	—	—	—	—	—	—

Notes: † RPD—Relative Percent Difference
‡ Bias High—Reported result may be lower, Reporting Limit (RL) is acceptable as reported. Bias Low—Reported results may be higher, RL may be higher than reported.

Quality Assessment
Data Usability Summary Report

		RemVer Project #2014GE01 Client Project # 11022323-05-206	
Site:	Orangetown Shopping Center	**Site #:**	C344066
Client:	GES, Inc.	**Site Owner:**	UB Orangeburg, LLC (UBO)
Sample Delivery Group (SDG)	JB93613		
Sample Matrix:	☐ Drinking water ☐ Groundwater ☐ Surface water ☐ Soil ☐ Sediment ☒ Air ☐ Biota (tissue, type: _____) ☐ Other: _____		

Introduction

RemVer performed a data quality assessment (DQA) on the analytical data reported in Sample Delivery Groups (SDGs) #JB93613 for air samples. The DQA evaluated the performance of the analytical procedures and the quality of the resulting data. RemVer followed the requirements of the New York State Department of Environmental Conservation (NYSDEC) Data Usability Summary Report (DUSR) guidelines for an Analytical Services Protocol (ASP) Category B Data Deliverable. This report includes a narrative discussion of sample results qualified during the DQA. Table 1 describes qualification flags applied to the data either by Test America or during the DQA process.

Reported Methods

☐ Method 1311 TCLP
☐ Method 1312 SPLP
☐ Method 6010A, B & C / 6020 Trace Metals
☐ Method 7000 Metals
☐ Method 7196 Hexavalent Chromium (other:_____)
☐ Method 7470A or 7471 Mercury
☐ Method 8021 Volatile Organic Compounds (VOCs) GC
☐ Method 8081B Pesticides
☐ Method 8082 PCBs
☐ Method 8151 Chlorinated Herbicides
☐ Method 8260C VOCs GC/MS
☐ Method 8270D Semi-VOCs (sVOCs) GC/MS
☐ Method 9010/9012/9014 Cyanides (_____)

☐ Method TO-13A PAHs (air)
☒ Method TO-14A / -15 VOCs (air, summa) (_____)
☐ Method TO-17 VOCs (air, sorbent)
☐ Extractable Petroleum Hydrocarbons (EPH)
☐ Volatile Petroleum Hydrocarbons (VPH) Method
☐ EPH-total
☐ Other Methods:
Method 9060A Total Organic Carbon
Method MCAWW 300.0 Anions (IC)
Method RSK-175 Dissolved Gases
Method SM4500 Nitrite
Method 353 Nitrite & Nitrate

Quality Control Requirements Summary

☒ Duplicate (internal)
☐ Matrix Spike [MS] / Matrix Spike Duplicate [MSD]
☐ Trip Blank(s)
☐ Equipment, Method, &/or Rinsate Blank

☒ Other Field QC: Field notes regarding sampling
☐ Special QAPP Requirements: _____
_____

Intended Use of Data under Review

The client collected air samples during a one-day collection event: April 28, 2015 at the referenced New York State Brownfields site. The site is under a Site Management Plan (SMP) that requires several kinds of monitoring. The sampling event provided gauging/biostimulant and quarterly groundwater monitoring (see §3.3 of Kleinfelder, 2011).

Significant Data Usability Issues Identified For SDG: #JB93613

Of the thirteen samples (six soil gas, six indoor ambient air, and one outdoor ambient) discussed herein, RemVer rejected no results, but flagged certain analytes as estimated due to the quality of the analysis and the results are acceptable for use. Some analytes had quality issues associated with results failing beyond the calibrated range requiring UJ/J flagging for certain analytes.

Please refer to the Lab Results and Data Usability Narrative section for further detail.

Detailed Quality Review

Field Notes Review

	Y	N	NA	COMMENTS
Sampling notes	☒	☐	☐	COC sheets only
Field meteorological data	☐	☐	☒	No review required under QAPP
Associated sampling location and plan included	☒	☐	☐	See RAP/QAPP
Associated drilling logs available, reviewed	☐	☐	☒	No review required under QAPP
Identification of QC samples in notes	☒	☐	☐	
Sampling instrument decontamination records	☐	☐	☒	No review required under QAPP
Sampling instrument calibration logs	☐	☐	☒	No review required under QAPP
Chain of custody included	☒	☐	☐	With analytical report
Notes include communication logs	☐	☒	☐	
Any corrective action (CA) reports	☐	☒	☐	If so, CA documentation of results required.
Any deviation from methods noted? If so, explain	☐	☒	☐	None
Any electronic data deliverables	☒	☐	☐	See Attachment #4
Sampling Report (by Field Team Leader)	☒	☐	☐	

Lab Report Contents (Test America SDG Report: #JB93613)

☒ SDG Narrative
☒ Contract Lab Sample Information Sheets
☒ Data Package Summary Forms
☒ Chain-of-Custody (COC) Forms
☒ Test Results (no tentatively identified compounds [TICs])
☒ Calibration standards
☒ Surrogate recoveries
☒ Blank results
☒ Spike recoveries
☒ Duplicate results
☒ Confirmation (lab check/QC) samples
☒ Internal standard area & retention time summary
☒ Chromatograms
☒ Raw data files
☒ Other specific information

The SDG reported on the following samples:

Sample ID	SDG #JB93613–Sample #	Matrix	Sampled	Received
Deli VP-1	#-1	SG	4/28/15	4/30/15
Deli VP-1 Ambient	#-2	IA	4/28/15	4/30/15
Deli SSD M-2	#-3	SG	4/28/15	4/30/15
Deli SSD M-2 Ambient	#-4	IA	4/28/15	4/30/15
China SSD M-5	#-5	SG	4/28/15	4/30/15
China SSD M-5 Ambient	#-6	IA	4/28/15	4/30/15
China VP-9	#-7	SG	4/28/15	4/30/15
China VP-9 Ambient	#-8	IA	4/28/15	4/30/15
Outside Ambient	#-9	OA	4/28/15	4/30/15
Sparkle VP-6	#-10	SG	4/28/15	4/30/15
Sparkle VP-6 Ambient	#-11	IA	4/28/15	4/30/15
Sparkle VP-5	#-12	SG	4/28/15	4/30/15
Sparkle VP-5 Ambient	#-13	IA	4/28/15	4/30/15

NOTES: SG = Soil Gas (Vapor) IA = Indoor Air OA = Outdoor Air

All samples associated with SDG #JB93613 were analyzed using USEPA Method TO-15.

Is the data package complete as defined under the requirements for the NYSDEC ASP Category B?		
Laboratory Report	Complete (Y/N)	Comments
JB93613	Y	Yes

Sample Preservation Requirements & Holding Times Met?			
Laboratory Report	Hold Times (Y/N)	Preservation (Y/N)	Exception Comment
JB93613	Y	Y	None

Do all QC data fall within the protocol required limits and specifications? *(1) blanks, (2) instrument tunings, (3) calibration standards, (4) calibration verifications, (5) surrogate recoveries, (6) spike recoveries, (7) replicate analyses, (8) laboratory controls, (9) and sample data*									
SDG	1	2	3	4	5	6	7	8	9
JB93613	☐	☐	☒	☐	☐	☐	☐	☐	☐
The narrative section, below, discusses these deficiencies in detail, see Attachment 2 as well.									

Have all of the data been generated using established and agreed upon analytical protocols?		
Laboratory Report	Protocols (Y/N)	Exception Comment
JB93613	Y	None

Do the raw data confirm the results provided in the data summary sheets and quality control verification forms?		
Laboratory Report	Confirmation (Y/N)	Exception Comment
JB93613	Y	None

Have the correct data qualifiers been used and are they consistent with the most current guidance?		
Laboratory Report	Qualifiers (Y/N)	Comment
JB93613	Y	The laboratory generally applied appropriate qualifiers. To prepare the DUSR, it was necessary to apply additional qualifications or adjust qualifications to certain results as shown in Attachments 3 and 4.

Have any quality control (QC) exceedances been specifically noted in this DUSR and the corresponding QC summary sheets from the data packages referenced?		
Laboratory Report	QC Exceedances Documented (Y/N)	Comment
JB93613	Y	Several data qualifications were applied as described below

Data Quality and Usability Narrative

Field Notes Inspection

The air samples came from a one-day collection event: April 28, 2015. There were no specific field notes beyond the COC.

Laboratory Report Inspection

The laboratory produced SDG report #JB93613 (dated 13 May 2015). The final reports contained the required data and information.

Chain of Custody (COC) Evaluation

GES produced one COC for the referenced fieldwork (#JB93613, single, two-page COC). The laboratory noted that COC listed Sample #-1 Summa Canister as #8227, whereas the Canister's actual identifying number was #A227. This has no impact to quality.

Sample Preservation & Holding Time Evaluation

Laboratory received the canister samples on 4/30/2015 @ 10:05 (designated as SDG-JB93613) in proper condition. All holding times and preservation requirements were met. There were no issues noted with the canisters nor the flow controllers.

Blank Evaluation

There were no associated blanks, other than the ambient indoor and outdoor air samples.

All laboratory method blanks performed within acceptable parameters.

Laboratory Control Samples (LCS)

The various LCS' were within the acceptable range for their particular analyses in SDG JB93613.

Surrogates

Surrogates added to a sample allow testing of preparatory and instrument behavior resulting in recoveries within appropriate method ranges for all analytes.

Site-Specific Matrix Spikes and Matrix Spike Duplicates

No matrix spike/matrix spike duplicate (MS/MSD) runs were required for the analyses per TO-15 Method.

Duplicates

The laboratory used internal duplicates for these VOC analytes; all duplicates met the RPD performance criteria of <20% (see below Attachment #2).

Tentatively Identified Compounds (TICs)

This SDG had no analysis of TICs.

Sample Result and Usability Evaluation

Due to certain sample issues or laboratory performance (result beyond calibration range), some results were qualified; however, the data are usable. No data received an R (rejected) flag. If an analyte was above the MDL but below the RL, then it was flagged as "UJ".

RemVer modified Test America's laboratory electronic data reports by adding quality flags, highlighted in yellow (see Attachment #4 [separate file]: Orangetown_2015Q2air_DUSR.xlsx [EXCEL file]).

References

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Prepared by: Kurt A. Frantzen, PhD, CHMM
May 26, 2015

GES PO#543450

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B | EB TB | BB	An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.
P	Use professional judgment based on data use. It usually has an "M" with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (*see below*).
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1992-1997	Ecology and Environment, Inc.	Technical Chief
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1990-1991	Ecology and Environment, Inc.	Technical Group Manager
1986-1990	Ecology and Environment, Inc.	Senior Environmental Scientist

Education

Am Cancer Soc. Post-Doctoral Fellow, U Washington 1985-1986

PhD—Life Sci. / Biochem, NU—Lincoln	1985
MS—Plant Pathology, Kansas State Univ.	1980
BS—Biology, NU—Omaha	1978

Registrations

Certified Hazardous Materials Manager, since 2007, #14143

Professional Affiliations

Society Risk Analysis ('09 & '11 Chair, Eco-Risk Assessment)
Am. Chemistry Society
Am. Assoc. Advance Science
NY Academy of Science
Am. Institute of Biological Sciences
LSP Association

Other

- CERCLA & RCRA experience, as well as DOD (Air Force & Army) & DOE (INEL)
- NE Regional Experience—NY BCP; Mass MCP; & various sites in CT, RI & NH
- National Experience: NE, SE, Gulf & West Coast, Mid-west, Inter-mountain, California, Alaska
- International: Germany, Israel, Kuwait, Australia
- Selected Publications
    - *Using Risk Appraisals to Manage Environmentally Impaired Properties*, 2000, VHB Site Works, Report 108
    - *Risk-Based Analysis for Environmental Managers*, 2001, CRC/Lewis
    - Chapter 7 Risk Assessment, *Managing Hazardous Materials*, 2002 & 2009, IHMM
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BLANKS	>RL?	Compounds	Notes
Method Blank: VOCs	No	—	No Comment
—	—	—	—

LCS	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOCs	—	—	—	VOCs	No Comment
—	—	—	—	—	—

SURROGATES	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOCs	—	—	—	—	No Comment
—	—	—	—	—	—

MS/MSDs	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	QC Source	RPDs	Notes
VOCs	—	—	—	—	—	No Comment, none required
—	—	—	—	—	—	—

FIELD DUPLICATES RPDs	QC Source	Soil RPD > 50%	Water RPD > 20%	Compounds	Notes
N/A	N/A	N/A	N/A	N/A	N/A
N/A		N/A	N/A	N/A	N/A
LAB DUPLICATES					
Batch V5W442 for #-2, #-4, #-6, & #-8	JB9359 0-1DUP	N/A	N/A	All TO-15 VOCs	No Comment
Batch V5W443 for #-1, #-3, #-5, #-7, #-9, #-10, #-11, #-12, & #-13	JB9361 3-3DUP	N/A	N/A	All TO-15 VOCs	No Comment

Reasonable Confidence Achieved	☐ Y	☐ N—Not Applicable
Significant QC Variances Noted	☒ Y	☐ N
Requested Reporting Limits Achieved	☒ Y	☐ N
Preservation Requirements Met	☒ Y	☐ N
Holding Time Requirements Met	☒ Y	☐ N

Abbreviations:
RL = Reporting Limit LCS = Laboratory Control Sample SV = Significant QC Variance
RPD = Relative Percent Difference LCL= RCP Lower Control Limit UCL= RCP Upper Control Limit
VOCs = Volatile Organic Compounds SVOCs = Semi-volatile Organic Compounds Pest = Pesticides
EPH = Extractable Petroleum Hydrocarbons VPH = Volatile Petroleum Hydrocarbons ETPH = EPH-Total
PCBs = Polychlorinated Biphenyls N/A = Not Applicable N/C = Not Collected -- = nothing to report
Notes: * Typical lab contaminants, not site-related

Attachment 3
DQA Non-Conformance Summary Worksheet

Only Flagged Results Shown Below

Sample Number(s)	Compound(s)	QC Non-Conformance	% Recovery	% RPD †	High or Low Bias ‡	Comments
#-1	Ethanol	Beyond range	—	—	high	Flag J
	All Other VOCs	—	—	—	—	No Flag
#-2	Ethanol	Beyond range	—	—	high	Flag J
	All Other VOCs	—	—	—	—	No Flag
#-3	Ethanol	Beyond range	—	—	high	Flag J
	All Other VOCs	—	—	—	—	No Flag
#-4	Ethanol	Beyond range	—	—	high	Flag J
	All Other VOCs	—	—	—	—	No Flag
#-5	Ethanol	Beyond range	—	—	high	Flag J
	All Other VOCs	—	—	—	—	No Flag
#-6	Isopropyl Alcohol	Beyond range	—	—	high	Flag J
	All Other VOCs	—	—	—	—	No Flag
#-7	All Other VOCs	—	—	—	—	No Flag
#-8	All Other VOCs	—	—	—	—	No Flag
#-9	All Other VOCs	—	—	—	—	No Flag
#-10	Ethanol	Beyond range	—	—	high	Flag J
	All Other VOCs	—	—	—	—	No Flag
#-11	All Other VOCs	—	—	—	—	No Flag
#-12	Ethanol	Beyond range	—	—	high	Flag J
	All Other VOCs	—	—	—	—	No Flag
#-13	All Other VOCs	—	—	—	—	No Flag

Notes: † RPD—Relative Percent Difference
‡ Bias High—Reported result may be lower, Reporting Limit (RL) is acceptable as reported. Bias Low—Reported results may be higher, RL may be higher than reported.

Quality Assessment
Data Usability Summary Report

		RemVer Project #2014GE01 Client Project # 11022323-05-206	
Site:	Orangetown Shopping Center	**Site #:**	C344066
Client:	GES, Inc.	**Site Owner:**	UB Orangeburg, LLC (UBO)
Sample Delivery Group (SDG)	JB94458		
Sample Matrix:	☐ Drinking water ☒ Groundwater ☐ Surface water ☐ Soil ☐ Sediment ☐ Air ☐ Biota (tissue, type: _____) ☐ Other: _____		

Introduction

RemVer performed a data quality assessment (DQA) on the analytical data reported in Sample Delivery Groups (SDGs) #JB94458 for groundwater samples. The DQA evaluated the performance of the analytical procedures and the quality of the resulting data. RemVer followed the requirements of the New York State Department of Environmental Conservation (NYSDEC) Data Usability Summary Report (DUSR) guidelines for an Analytical Services Protocol (ASP) Category B Data Deliverable. This report includes a narrative discussion of sample results qualified during the DQA. Table 1 describes qualification flags applied to the data either by Test America or during the DQA process.

Reported Methods

☐ Method 1311 TCLP
☐ Method 1312 SPLP
☒ Method 6010A, B & C / 6020 Trace Metals
☐ Method 7000 Metals
☐ Method 7196 Hexavalent Chromium (other:_____)
☐ Method 7470A or 7471 Mercury
☐ Method 8021 Volatile Organic Compounds (VOCs) GC
☐ Method 8081B Pesticides
☒ Method 8082 PCBs
☐ Method 8151 Chlorinated Herbicides
☒ Method 8260C VOCs GC/MS
☐ Method 8270D Semi-VOCs (sVOCs) GC/MS
☐ Method 9010/9012/9014 Cyanides (_____)

☐ Method TO-13A PAHs (air)
☐ Method TO-14A / -15 VOCs (air, summa) (_____)
☐ Method TO-17 VOCs (air, sorbent)
☐ Extractable Petroleum Hydrocarbons (EPH)
☐ Volatile Petroleum Hydrocarbons (VPH) Method
☐ EPH-total
☒ Other Methods:
Method 9060A Total Organic Carbon
Method MCAWW 300.0 Anions (IC)
Method RSK-175 Dissolved Gases
Method SM4500 Nitrite
Method 353 Nitrite & Nitrate

Quality Control Requirements Summary

☒ Duplicate
☒ Matrix Spike [MS] / Matrix Spike Duplicate [MSD]
☒ Trip Blank(s)
☒ Equipment, Method, &/or Rinsate Blank

☒ Other Field QC: Field notes regarding sampling
☐ Special QAPP Requirements: _____
_____

Intended Use of Data under Review

The client collected groundwater samples during a one-day collection event: May 11, 2015 at the referenced New York State Brownfields site. The site is under a Site Management Plan (SMP) that requires several kinds of monitoring. The sampling event provided gauging/biostimulant and quarterly groundwater monitoring (see §3.3 of Kleinfelder, 2011).

Significant Data Usability Issues Identified For SDG: # JB94458

Of the six samples (plus three blanks) discussed herein, RemVer rejected no results, but flagged certain analytes as estimated due to the quality of the analysis and the results are acceptable for use.

Some analytes had either matrix spike or other quality issues requiring UJ/J flagging for certain analytes.

All the Ferrous results were qualified (UJ or J) due to a holding violation, causing similar flagging of calculated Ferric results.

Please refer to the Lab Results and Data Usability Narrative section for further detail.

Detailed Quality Review

Field Notes Review

	Y	N	NA	COMMENTS
Sampling notes	☒	☐	☐	Summary sheets only
Field meteorological data	☐	☐	☒	No review required under QAPP
Associated sampling location and plan included	☒	☐	☐	See RAP/QAPP
Associated drilling logs available, reviewed	☐	☐	☒	No review required under QAPP
Identification of QC samples in notes	☒	☐	☐	
Sampling instrument decontamination records	☐	☐	☒	No review required under QAPP
Sampling instrument calibration logs	☐	☐	☒	No review required under QAPP
Chain of custody included	☒	☐	☐	With analytical report
Notes include communication logs	☐	☒	☐	
Any corrective action (CA) reports	☐	☒	☐	If so, CA documentation of results required.
Any deviation from methods noted? If so, explain	☐	☒	☐	None
Any electronic data deliverables	☒	☐	☐	See Attachment #4
Sampling Report (by Field Team Leader)	☒	☐	☐	

Lab Report Contents (Test America SDG Report: #JB94458)

☒ SDG Narrative
☒ Contract Lab Sample Information Sheets
☒ Data Package Summary Forms
☒ Chain-of-Custody (COC) Forms
☒ Test Results (no tentatively identified compounds [TICs])
☒ Calibration standards
☒ Surrogate recoveries
☒ Blank results
☒ Spike recoveries
☒ Duplicate results
☒ Confirmation (lab check/QC) samples
☒ Internal standard area & retention time summary
☒ Chromatograms
☒ Raw data files
☒ Other specific information

The SDG reported on the following samples:

Sample ID	SDG #JB94458–Sample #	Matrix	Sampled	Received
MW-3	#-1	Water	5/11/15	5/12/15
MW-4	#-2	Water	5/11/15	5/12/15
MW-5	#-3	Water	5/11/15	5/12/15
MW-6				
MW-7				
MW-8A				
MW-8B	#-4	Water	5/11/15	5/12/15
MW-10	#-5	Water	5/11/15	5/12/15
MW-15A				
MW-C				
MW-D				
MW-E				
MW-F				
MW-10 (MS/MSD)	#-5	Water	5/11/15	5/12/15
Field Duplicate (FD) (MW-10)	#-6	Water	5/11/15	5/12/15
Field Blank (FB)	#-7	Water	5/11/15	5/12/15
Equipment Blank (EB)	#-8	Water	5/11/15	5/12/15
Trip Blank (TB #1)	#-9	Water	5/11/15	5/12/15

The SDG included the following samples with their particular analyses:

94458:	Well	VOCs	Ethene	TOC	Iron	Fe^{+2}	Fe^{+3}	NO_3	SO_4	Pest/PCB	SVOCs	RCRA13
#-1	MW-3	X	X	—	X	X	X	X	X	—	—	—
#-2	MW-4	X	X	X	X	X	X	X	X	—	—	—
#-3	MW-5	X	X	X	X	X	X	X	X	—	—	—
None	MW-6	—	—	—	—	—	—	—	—	—	—	—
None	MW-7	—	—	—	—	—	—	—	—	—	—	—
None	MW-8A	—	—	—	—	—	—	—	—	—	—	—
#-4	MW-8B	X	X	—	X	X	X	X	X	—	—	—
#-5	MW-10	X	—	—	—	—	—	—	—	—	—	—
#-5MS	MW-10	X	—	—	—	—	—	—	—	—	—	—
#-5MSD	MW-10	X	—	—	—	—	—	—	—	—	—	—
None	MW-13A †	—	—	—	—	—	—	—	—	—	—	—
None	MW-15A †	—	—	—	—	—	—	—	—	—	—	—
None	MW-A †	—	—	—	—	—	—	—	—	—	—	—
None	MW-B †	—	—	—	—	—	—	—	—	—	—	—
None	MW-C †	—	—	—	—	—	—	—	—	—	—	—
None	MW-D †	—	—	—	—	—	—	—	—	—	—	—
None	MW-E †	—	—	—	—	—	—	—	—	—	—	—
None	MW-F †	—	—	—	—	—	—	—	—	—	—	—
#-6	FD (MW-10)	X	—	—	—	—	—	—	—	—	—	—
#-7	FB	X	—	—	—	—	—	—	—	—	—	—
#-8	EB	X	—	—	—	—	—	—	—	—	—	—
#-9	TB-1	X	—	—	—	—	—	—	—	—	—	—

TOC: Total Organic Carbon | Iron: Total Iron | Fe^{+2}: Ferrous Iron | Fe^{+3}: Ferric Iron | NO_3: Nitrate | SO_4: Sulfate
* Dry, no sample † No sample

Is the data package complete as defined under the requirements for the NYSDEC ASP Category B?		
Laboratory Report	Complete (Y/N)	Comments
JB94458	Y	Yes

Sample Preservation Requirements & Holding Times Met?			
Laboratory Report	Hold Times (Y/N)	Preservation (Y/N)	Exception Comment
JB94458	Y	Y	None Hold time for all Ferrous analysis missed, effects derivatives as well, flag UJ/J

Do all QC data fall within the protocol required limits and specifications? *(1) blanks, (2) instrument tunings, (3) calibration standards, (4) calibration verifications, (5) surrogate recoveries, (6) spike recoveries, (7) replicate analyses, (8) laboratory controls, (9) and sample data*									
SDG	1	2	3	4	5	6	7	8	9
JB94458	☒	☐	☐	☐	☐	☒	☐	☐	☒
The narrative section, below, discusses these deficiencies in detail, see Attachment 2 as well.									

Have all of the data been generated using established and agreed upon analytical protocols?		
Laboratory Report	Protocols (Y/N)	Exception Comment
JB94458	Y	None

Do the raw data confirm the results provided in the data summary sheets and quality control verification forms?		
Laboratory Report	Confirmation (Y/N)	Exception Comment
JB94458	Y	None

Have the correct data qualifiers been used and are they consistent with the most current guidance?		
Laboratory Report	Qualifiers (Y/N)	Comment
JB94458	Y	The laboratory generally applied appropriate qualifiers. To prepare the DUSR, it was necessary to apply additional qualifications or adjust qualifications to certain results as shown in Attachments 3 and 4.

Have any quality control (QC) exceedances been specifically noted in this DUSR and the corresponding QC summary sheets from the data packages referenced?		
Laboratory Report	QC Exceedances Documented (Y/N)	Comment
JB94458	Y	Several data qualifications were applied as described below

Data Quality and Usability Narrative

Field Notes Inspection

The groundwater samples came from a one-day collection event: May 11, 2015. A review of the field notes provided the following information pertaining to data usability.

Groundwater MWs	May-2015 Comments SDG #JB94458
MW-3	No purge (low recharge), sampled
MW-4	Bailer purge (4-gal), sampled
MW-5	Bailer purge (2-gal), sampled
MW-6	No sample
MW-7	No sample
MW-8A	No sample, insufficient water
MW-8B	Bailer purge (1.5-gal), sampled
MW-10	Bailer purge (20-gal), sampled; MS/MSD & duplicate samples came from this well
MW-13A	No sample
MW-15A	No sample
MW-A	No sample
MW-B	No sample
MW-C	No sample
MW-D	No sample
MW-E	No sample
MW-F	No sample

Laboratory Report Inspection

The laboratory produced SDG report #JB94458 (dated 5 June 2015). The final report contained the required data and information.

Chain of Custody (COC) Evaluation

GES produced one COC for the referenced fieldwork (#JB94458, single, one-page COC).

Sample Preservation & Holding Time Evaluation

Laboratory received one cooler with samples on 5/5/2015 @ 10:00 (designated as SDG-JB94458) in proper condition and, where required, on ice. The temperature of the cooler at

receipt time was 1.9ºC, respectively. All holding times and preservation requirements were met with the following exceptions:

- Ferrous—samples #-1, -2, -3 & -4 received outside of holding for this analysis, all results flagged as UJ/J.
- Ferric—because this analyte is derived by calculation all results were similarly qualified as Ferrous (see Attachment 2 and 3).

Blank Evaluation

The TB had no detectable VOC analytes (above their respective the reporting limits). The Equipment and Field Blank (EB and FB, respectively) had no detectable VOC analytes (above their respective the RLs). Laboratory Method Blanks (MBs) had conforming parameters and analytes below their respective RLs.

Laboratory Control Samples (LCS)

The various LCS' were within the acceptable range for their particular analyses in SDG JB94458.

Surrogates

Surrogates added to a sample allow testing of preparatory and instrument behavior resulting in recoveries within appropriate method ranges for all analytes.

Site-Specific Matrix Spikes and Matrix Spike Duplicates

The matrix spike/matrix spike duplicate (MS/MSD) runs for all analyses for JB94458 met the QA criteria, with the following exception:

- Either the MS or MSD (or both) recoveries for the batch including Sample #-3 were outside of control limits for Tetrachloroethene as indicated in Attachment 2. The compound was 'J' flagged to indicate a suspect detection.
- Sample #-1, #-2, #-3, & #-4—MS/MSD recovery for nitrite analysis and nitrate + nitrite analysis was greater than the RPD control limit, due to matrix interference, resulting in flagging the results UJ or J. Nitrate results are obtained by calculation ([Nitrate + Nitrite] – Nitrite); because the nitrate + nitrite results were flagged, the nitrate results were similarly flagged UJ or J.

Duplicates

GES collected a field replicate of MW-10 (compare samples #-8 and #-9). The VOC analytes met the RPD performance criteria of <20% (see below Attachment #2).

Tentatively Identified Compounds (TICs)

This SDG had no analysis of TICs.

Other Quality Issues

Laboratory Contaminants

Several samples had low concentration VOC detections of common laboratory contaminants. Such compounds if they are less than 5-times the reported detection limit are typically flagged as 'B' and discounted as a real detectable site-related compound. In this report, the following were so labelled:

- Sample #-3 (MW-5): Methylene Chloride
- Samples #-2, -3, -4: Acetone

In the case of Sample #-1 (MW-3), there as a detection of Tetrahydrofuran just above the detection limit. As this compound is not a site-related chemical, as not detected in other samples, and it is common to laboratories, RemVer flagged the single detection with a 'J'.

Sample Result and Usability Evaluation

Due to certain sample issues or laboratory performance, some results were qualified; however, the data are usable. No data received an R (rejected) flag. If an analyte was above the MDL but below the RL, then it was flagged as "UJ".

Measurement of Total Iron used Inductively Coupled Plasma (ICP) based on nitric acid preserved samples; whereas measurement of Ferrous Iron used the Phenanthroline Method (SM3500), which is a colorimetric method using hydrochloric-preserved samples. Interferences resulting in positive bias in the ferrous result include strong oxidizing agents, cyanide, nitrite, phosphates (polyphosphates more so than orthophosphate), chromium, or zinc in concentrations exceeding 10X greater than iron, or cobalt and copper in excess of 5 mg/L, or nickel in excess of 2 mg/L; moreover, bismuth, cadmium, mercury, molybdate, and silver precipitate phenanthroline, which is the color reagent used for ferrous iron. Using the analytically estimated Total and Ferrous Iron concentrations, Test America calculated the concentration of Ferric Iron by difference. Any qualifier flags associated with analytic results automatically attach to the calculated results.

RemVer modified Test America's laboratory electronic data reports by adding quality flags, highlighted in yellow (see Attachment #4 [separate file]: Orangetown_2015Q2_DUSR.xls [EXCEL file]).

References

Kleinfelder, 2011, *Site Management Plan, Orangetown Shopping Center, 1-45 Orangetown Shopping Center, Orangeburg, NY, NYSDEC Site #C344066*, Final, 21-November, 250p

NYSDEC, 2010, *Technical Guidance for Site Investigation and Remediation*, "DER-10," Division of Environmental Remediation: Albany, NY, May, 232p

NYSDEC, 2010, *Guidance for Data Deliverables and the Development of Data Usability Summary Reports*, Appendix 2B IN *Technical Guidance for Site Investigation and Remediation*, Division of Environmental Remediation: Albany, NY, May, 232p

USEPA, 2008, *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, OSWER 9240.1-48, USEPA-540-R-08-01, Office of Superfund Remediation and Technology Innovation: Washington, DC, June, 225p

USEPA, 2010, *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, OSWER 9240.1-51, USEPA-540-R-10-011, Office of Superfund Remediation and Technology Innovation: Washington, DC, January, 110p

USEPA, 2012, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*, Current Online Revision: http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm, accessed April 2012

Tables

1. Qualifier Flags

Attachments

1. Data Usability Reviewer Qualifications
2. DQA Detail Worksheet
3. DQA Non-Conformance Summary Workheet
4. Separate EXCEL File: Orangetown_2015Q2_DUSR.xls [NOTE: RemVer modified the Test America work products by adding quality flags, which are in yellow highlight.]

Prepared by: Kurt A. Frantzen, PhD, CHMM
June 22, 2015

GES PO#545448

Table 1
Qualifier Flags

Qualifier	Quality Implication
U	Analyte analyzed for, but not detected above the sample's reported quantitation limit
J	Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample
J +	Sample likely to have a high bias
J –	Sample likely to have a low bias
UJ	Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample
N	The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
R	Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (*i.e.*, dilutions or re-analyses), the most technically acceptable result is considered acceptable.
B | EB TB | BB	An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.
P	Use professional judgment based on data use. It usually has an "M" with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (*see below*).
PM	A manual review of the raw data is recommended to determine if the defect affects data use, as in "R" above. This review should include consideration of potential affects that could result from using the "P" qualified data. For example, in the case of holding-time exceedance, the Project Manager or delegate can decide to use the data with no qualification when analytes of interest are known not to be adversely affected by holding-time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria; because this is likely due to sample non-homogeneity rather than contract laboratory error, then the manager or delegate must decide how to use the data.

Attachment 1
Data Usability Reviewer: Kurt A. Frantzen, PhD, CHMM

Experience

2014-Present	AECC	Senior EHS Consultant
2013-Present	d/b/a RemVer	Owner
2011-2012	RemVer, Inc.	President
2006-2011	Kleinfelder	Senior Principal Scientist
2005	Kleinfelder	Principal Scientist, Part-Time/On Call
2004-2006	d/b/a Environmental Risk Group	Owner
2004-2006	RemVer, Inc., Larchmont, NY	Founder, President
1999-2004	VHB, Inc.	ERM Director & Associate
1997-1998	GEI Consultants, Inc.	Senior Project Manager
1992-1997	Ecology and Environment, Inc.	Technical Chief
1991-1992	EA Engineering, Science, & Technology, Inc.	Project Manager III
1990-1991	Ecology and Environment, Inc.	Technical Group Manager
1986-1990	Ecology and Environment, Inc.	Senior Environmental Scientist

Education

Am Cancer Soc. Post-Doctoral Fellow, U Washington 1985-1986

PhD—Life Sci. / Biochem, NU—Lincoln	1985
MS—Plant Pathology, Kansas State Univ.	1980
BS—Biology, NU—Omaha	1978

Registrations

Certified Hazardous Materials Manager, since 2007, #14143

Professional Affiliations

Society Risk Analysis ('09 & '11 Chair, Eco-Risk Assessment)
Am. Chemistry Society
Am. Assoc. Advance Science
NY Academy of Science
Am. Institute of Biological Sciences
LSP Association

Other

- CERCLA & RCRA experience, as well as DOD (Air Force & Army) & DOE (INEL)
- NE Regional Experience—NY BCP; Mass MCP; & various sites in CT, RI & NH
- National Experience: NE, SE, Gulf & West Coast, Mid-west, Inter-mountain, California, Alaska
- International: Germany, Israel, Kuwait, Australia
- Selected Publications
    - *Using Risk Appraisals to Manage Environmentally Impaired Properties*, 2000, VHB Site Works, Report 108
    - *Risk-Based Analysis for Environmental Managers*, 2001, CRC/Lewis
    - Chapter 7 Risk Assessment, *Managing Hazardous Materials*, 2002 & 2009, IHMM
    - Chapter 22 Cleanup Goals, *Brownfields Law & Practice*, 2004-Present, Lexis/Nexis
    - *Use of Risk Assessment in Risk Management of Contaminated Sites*, 2008, ITRC
- 60 Conference Papers & Invited Professional Presentations
    - 1999-2014, Visiting Lecturer, Brownfields Program, Harvard Graduate School of Design
    - 2010-2013, Invited Lecturer, Pace University Law School

Attachment 2
DQA Detail Worksheet

BLANKS	>RL?	Compounds	Notes
Method Blank: VOCs	No	—	No Comment
Method Blank: Ethene	No	—	No Comment
Method Blank: TOC	No	—	No Comment
Method Blank: Nitrate & Sulfate	No	—	No Comment
Method Blank: Iron	No	—	No Comment
Method Blank: Ferrous	No	—	No Comment
Field Blank (FB)	No	—	No Comment
Equip. Blank (EB)	No	—	No Comment
Trip Blank (TB)	No	—	No Comment

LCS	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOCs	—	—	—	All other VOCs	No Comment
Ethene	—	—	—	Ethene	No Comment
Metals	—	—	—	Iron	No Comment
TOC	—	—	—	TOC	No Comment
NO_3 / SO_4	—	—	—	Nitrate & Sulfate	No Comment
Ferrous/Ferric	—	—	—	Iron +2 / Iron +3	No Comment

SURROGATES	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOCs	—	—	—	—	No Comment
Dis. Gases	—	—	—	—	No Comment
TOC	—	—	—	—	No Comment
NO_3 / SO_4	—	—	—	—	No Comment
Ferrous/Ferric	—	—	—	Iron +2 / Iron +3	No Comment

Attachment 2 continued

MS/MSDs	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	QC Source	RPDs	Notes
VOCs All other samples	—	—	—	SDG Batch	—	No Comment
VOCs #-3	—	—	—	SDG Batch	>UCL	Tetrachloroethene
Dis. Gases	—	—	—	SDG Batch	—	No Comment
TOC	—	—	—	SDG Batch	—	No Comment
Sulfate	—	—	—	SDG Batch	—	No Comment
Nitrate	—	—	—	SDG Batch	>UCL	Flag UJ/J
Nitrite	—	—	—	SDG Batch	>UCL	Flag UJ/J

FIELD DUPLICATES RPDs	QC Source	Soil RPD > 50%	Water RPD > 20%	Compounds	Notes
VOCs	MW-10 (#-5 & #-6)	N/A	—	—	No Comment
Dissolved Gases		N/A	N/C	—	Not Collected
Total Iron		N/A	N/C	—	
Nitrate & Sulfate		N/A	N/C	—	
Total Metals (Iron)		N/A	N/C	—	
Iron, Ferrous & Ferric		N/A	N/C	—	
TOC		N/A	N/C	—	
LAB DUPLICATES					
JB94458	Batch	N/A	—	As listed	No Comment

Reasonable Confidence Achieved	☐ Y	☐ N—Not Applicable
Significant QC Variances Noted	☒ Y	☐ N
Requested Reporting Limits Achieved	☒ Y	☐ N
Preservation Requirements Met	☒ Y	☐ N
Holding Time Requirements Met	☐ Y	☒ N—Ferrous Iron samples, results qualified, as are ferric

Abbreviations:
RL = Reporting Limit LCS = Laboratory Control Sample SV = Significant QC Variance
RPD = Relative Percent Difference LCL= RCP Lower Control Limit UCL= RCP Upper Control Limit
VOCs = Volatile Organic Compounds SVOCs = Semi-volatile Organic Compounds Pest = Pesticides
EPH = Extractable Petroleum Hydrocarbons VPH = Volatile Petroleum Hydrocarbons ETPH = EPH-Total
PCBs = Polychlorinated Biphenyls N/A = Not Applicable N/C = Not Collected -- = nothing to report
Notes: * Typical lab contaminants, not site-related

Attachment 3
DQA Non-Conformance Summary Worksheet

Only Flagged Results Shown Below

Sample Number(s)	Compound(s)	QC Non-Conformance	% Recovery	% RPD †	High or Low Bias ‡	Comments
MW-3 #–1	Tetrahydrofuran	Possible Lab Contaminant	—	—	—	Flag J
	Ferrous (Ferric)	Holding Time & MS	—	—	—	Flag UJ/J
	Nitrite (Nitrate)	MS/MSD	>UCL	>UCL	Hi	Flag UJ/J
MW-4 #–2	Acetone	Lab Contaminant	—	—	—	Flag B
	Ferrous (Ferric)	Holding Time & MS	—	—	—	Flag UJ/J
	Nitrite (Nitrate)	MS/MSD	>UCL	>UCL	Hi	Flag UJ/J
MW-5 #–3	Acetone & Methylene Chloride	Lab Contaminant	—	—	—	Flag B
	Tetrachloroethene	MS/MSD	<LCL	—	Lo	Flag UJ/J
	Ferrous (Ferric)	Holding Time & MS	—	—	—	Flag UJ/J
	Nitrite (Nitrate)	MS/MSD	>UCL	>UCL	Hi	Flag UJ/J
MW-8B #–4	Acetone	Lab Contaminant	—	—	—	Flag B
	Nitrite (Nitrate)	MS/MSD	>UCL	>UCL	Hi	Flag UJ/J
	Ferrous (Ferric)	Holding Time & MS	—	—	—	Flag UJ/J
MW-10 #–5	—	—	—	—	—	—
Duplicate (MW-10) #–6	—	—	—	—	—	—

Notes: † RPD—Relative Percent Difference
‡ Bias High—Reported result may be lower, Reporting Limit (RL) is acceptable as reported. Bias Low—Reported results may be higher, RL may be higher than reported.

APPENDIX H

Non-Hazardous Waste Manifest

ESMI of New York
304 Towpath Road, Fort Edward, New York, 12828
800.511.3764 Phone 518.747.1181 Fax

November 25, 2014

Michael DeGloria
Groundwater & Environmental Services, Inc.
70 Jon Barrett Road, Suite B
Patterson, New York 12563

Re: ESMI of New York
DEC Facility ID:58Z01
DEC Solid Waste Permit #: 5-5330-00038/00019

Subject: Orangeburg (Site ID c344066) Soil Acceptance

Dear Mr. DeGloria:

ESMI of New York (ESMI) is a Low Temperature Thermal Desorption facility permitted to accept soils contaminated with hydrocarbons and solvents such as Tetrachloroethylene (PCE) provided the soil is not deemed to be a characteristic hazardous waste. Soils contaminated by listed organic hazardous waste, such as PCE, and "contained-out" by the New York State Department of Environmental Conservation (NYSDEC) may be transported to ESMI for thermal treatment.

ESMI received 10.57 tons of Non-hazardous soil from this same Orangeburg Site in February and March of 2014. This soil was laboratory profiled and accepted for delivery to ESMI based on a "contained-in determination" letter from Jamie Verrigni, Project Manager, NYSDEC dated February 12, 2014. This letter is attached.

ESMI is in receipt of a composite sample result of soil tested for TPH-DRO, TPH-GRO, SVOCs by method 8270, and VOCs by method 8260. If a NYSDEC representative approves of the handling of this newly excavated soil as non-hazardous solid waste, ESMI can accept it for treatment.

Please do not hesitate to contact me if you require anything further.
Sincerely,

Peter C. Hansen
Compliance Manager – ESMI of New York

We purchase green power in amounts that meet EPA's requirements.

New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau C, 11th Floor
625 Broadway, Albany, New York 12233-7014
Phone: (518) 402-9662 • **Fax:** (518) 402-9679
Website: www.dec.ny.gov

Joe Martens
Commissioner

February 12, 2014

Michael DeGloria
Groundwater & Environmental Services, Inc.
70 Jon Barrett Road
Robin Hill Corp Park, Suite B
Patterson, NY 12563

RE: Orangetown Shopping Center
Site ID No. C344066
Town of Orangetown, Rockland County
Waste Composite Sample

Dear Mr. DeGloria:

The New York State Department of Environmental Conservation (Department) has reviewed the analytical results of the waste characterization sampling performed for the soil generated during installation of monitoring wells MW-A and MW-B and the lateral injection gallery at the Orangetown Shopping Center site (Site) dated February 6, 2014. Based on the results provided the soil may be handled and disposed of as a non-hazardous solid waste, to be disposed of at a facility permitted under 6 NYCRR Part 360.

If you have any questions or comments please feel free to contact me at (518) 402-9662 or jlverrig@gw.dec.state.ny.us.

Sincerely,

Jamie Verrigni
Project Manager
Remedial Bureau C
Division of Environmental Remediation

ec: James Candiloro
Jamie Verrigni
Maureen Schuck – NYSDOH
Nate Walz – NYSDOH
Michael DeGloria – GES – MdeGloria@gesonline.com

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone (631) 586-2000	4. Waste Tracking Number 0603928

GENERATOR

5. Generator's Name and Mailing Address

UB Orangeburg C-O GES
16 Mount Ebo Road-South, Suite 21
Brewster, NY 10509 USA

Generator's Phone:

Generator's Site Address (if different than mailing address)

Orangetown Shopping Center
1-45 Orangetown Shopping Center
Orangeburg, NY 10962

6. Transporter 1 Company Name: AMERICAN ENVIRONMENTAL ASSESSMENT CORP. — U.S. EPA ID Number: NYR000044412

7. Transporter 2 Company Name: — U.S. EPA ID Number:

8. Designated Facility Name and Site Address

E.S.M.I of NY
304 Towpath Lane
Fort Edward, NY 12828 USA

U.S. EPA ID Number:

Facility's Phone:

9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1. NON RCRA, NON DOT REGULATED (Impacted Soils)	XX1	CM	15	T
2.			12.69 (circled)	
3.				
4.				

13. Special Handling Instructions and Additional Information

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: on behalf of UB orangeburg — Signature: on behalf of UB orangeburg — Month 12 Day 11 Year 14

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Peter Gaynor — Signature: [signature] — Month 12 Day 11 Year 14

Transporter 2 Printed/Typed Name: — Signature: — Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: [signature] — Signature: [signature] — Month 12 Day 11 Year 14

169-BLC-O 6 10498 (Rev. 9/09)

DESIGNATED FACILITY TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number

2. Page 1 of

3. Emergency Response Phone: (631) 586-2000

4. Waste Tracking Number: 0603930

5. Generator's Name and Mailing Address

UB Orangeburg C-O GES
16 Mount Ebo Road-South,Suite 21
Brewster, NY 10509 USA

Generator's Phone:

Generator's Site Address (if different than mailing address)

Orangetown Shopping Center
1-45 Orangetown Shopping Center
Orangeburg, NY 10962

6. Transporter 1 Company Name: AMERICAN ENVIRONMENTAL ASSESSMENT CORP.

U.S. EPA ID Number: NYR000044412

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

E.S.M.I of NY
304 Towpath Lane
Fort Edward, NY 12828 USA

U.S. EPA ID Number

Facility's Phone:

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1	NON RCRA, NON DOT REGULATED (Impacted Soils)	XX1	CM	15	T
2.				13.43	T
3.					
4.					

13. Special Handling Instructions and Additional Information

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: C. Andreotto On Behalf of UB Orangeburg

Signature:

Month: 12 Day: 12 Year: 14

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Peter Gagnon

Signature: Peter Gagnon

Month: 12 Day: 12 Year: 14

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Robert Bell

Signature:

Month: 12 Day: 12 Year: 14

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY