URS

REMEDIAL INVESTIGATION REPORT

For The

FORMER BERNZOMATIC FACILITY

Located At

1 BERNZOMATIC DRIVE, ORLEANS COUNTY, MEDINA, NY

NYSDEC BROWNFIELD CLEANUP PROGRAM Site No. C837018

Revised: August 2018

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E.0 EXECUTIVE SUMMARY

On behalf of Irwin Industrial Tool Company, c/o Newell Brands Inc. (Newell), URS Corporation (URS), an AECOM company, performed environmental investigations at the property located at 1 Bernzomatic Drive in Medina, Orleans County, New York (**Figure 1**). The purpose of the investigations was to characterize and assess the potential for environmental impacts which may be present as a result of historical use.

Investigations at the property were performed in multiple phases. A non-intrusive Phase 1 Environmental Site Assessment (ESA) was performed in 2010, followed by Phase II ESA activities in 2014 and 2015. A remedial investigation (RI) was performed in 2017 following the Site's acceptance into the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP). Irwin Industrial Tool Company, c/o Newell, entered the BCP as a Participant as defined in ECL 27-1405(1)(a).

A draft RI report (RIR) was submitted to NYSDEC in August 2017. Based on NYSDEC review comments and request for additional information dated December 2017, a supplemental RI was performed in 2018.

The overall Newell property occupies approximately 30 acres. Only a 14.5-acre portion of the property was included in the BCP and is the focus of this RI. The BCP parcel (herein referred to as the Site) includes a manufacturing building, truck and trailer parking areas to the north of the building, and employee and visitor parking to the south (**Figure 2**). As shown in **Figure 3**, the manufacturing building consists of a storage/assembly/office building (herein referred to as the manufacturing building)and a connected machining and parts washing area in an older, connected building off the northeast corner (herein referred to as the machining building).

The immediate peripheral areas of the property are generally wooded and vacant and provide a buffer zone to neighboring residential and commercial properties. A railroad corridor runs along the north side of the property.

The topography of the Site and surrounding properties is generally flat. The Site is underlain by approximately 5 to 12.5 feet of unconsolidated materials overlying bedrock. The unconsolidated materials consist of as much as 4 feet of fill composed of fine to medium sand and gravel with some concrete and wood. Natural deposits of silt, sand, and gravel underlie the fill. Groundwater occurs at depths ranging from 0.6 to 6.7 feet with an overall flow to the northwest. A manmade stormwater retention pond is located off the southwestern side of the manufacturing building. The pond receives overflow from a cistern, previously used as a source of water for fire protection, located inside the manufacturing building.

Investigations at the Site included collection and analysis of surface and subsurface soil, groundwater, surface water and sediment, sub-slab vapor, indoor air, and outdoor air samples. The analytical results revealed chlorinated volatile organic compound (VOC) contamination in groundwater and soil vapor underlying the eastern portion of the manufacturing building. The absence of VOC impacts in perimeter Site wells indicates that the VOCs are not migrating offsite.

Some semi-volatile organic compounds (SVOCs) were detected in surface soils and some pesticides and metals were detected in surface and subsurface soils. The SVOCs detected at the Site are located in close proximity to asphalt paved areas and are also commonly associated with partial combustion of fuel typically found in vehicle traffic areas as a result of vehicle emissions. The presence of SVOCs in the surface soil and not in the subsurface soil supports this observation. As such, the SVOCs may be associated with proximity to asphalt pavement or past vehicular traffic at the Site. At some locations in close proximity to asphalt pavement and vehicle traffic areas, SVOCs exceeded NYSDEC Industrial Use soil cleanup objectives (SCOs).

The few pesticides detected in the surface and subsurface soils may be associated with historical pest control activities at the Site and surrounding area. None of the pesticides were detected at concentrations above the Industrial Use SCOs.

Metals detected in the surface and subsurface soils are predominantly aluminum, calcium, and iron, which are common components of soil minerals. Other metals sporadically detected include lead and zinc. None of the metals detected exceeded the Industrial Use SCOs. The detection of arsenic, barium,

cadmium chromium, and lead in groundwater near the machining building area is likely associated with past Site operations.

Based on the analytical results, impacts likely associated with past Site manufacturing activities include VOCs and metals in groundwater and VOCs in soil vapor. SVOCs, pesticides, and metals in soils and metals in sediment appear to be incidental to manufacturing activities.

There are no records of rare or state-listed animals or plants, or significant natural communities at the Site or in its immediate vicinity. Also, based on the low concentrations of constituents of concern, in accordance with NYSDEC's DER-10 Technical Guidance for Site Investigation and Remediation, Appendix 3C, a Fish and Wildlife Resource Impact Assessment was not performed.

1. INTRODUCTION

1.1 Purpose

On behalf of Irwin Industrial Tool Company, c/o Newell Brands Inc. (Newell), URS Corporation (URS), an AECOM company, performed environmental site investigation activities at the Former Bernzomatic facility located at 1 Bernzomatic Drive in the Village of Medina, New York (**Figures 1** and **2**). The purpose of the investigations, which culminated with this remedial investigation (RI) report, was to characterize soil, groundwater, soil vapor, surface water, and sediment conditions at the site.

1.2 Scope of Work

Investigation activities were initiated following a non-intrusive Phase I Environmental Site Assessment (ESA) completed by Earth Tech, Inc. in November 2010. The Phase I ESA identified industrial equipment (e.g., parts washing equipment, metal chip bins, empty drums, and gas cylinders) stored outside the northeast corner of the machining area (**Figure 3**) as a recognized environmental concern (REC). The Phase I ESA stated that the soils at the periphery of this area were observed to be stained and dark colored.

Phase II investigations in May and June 2015, were initially performed to identify potential environmental impacts in the REC area. Based on the findings of the initial Phase II investigation, the subsequent Phase II investigations were expanded to delineate chlorinated volatile organic compound (VOC) impacts in the REC area and to investigate subsurface conditions in the area of a cistern located in the manufacturing building. Investigation activities included geophysical surveys, direct-push soil borings, monitoring well installations, and soil and groundwater sampling and analyses.

In 2016, Irwin Industrial Tool Company, c/o Newell, applied and was accepted into the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP), site number C837018. Irwin Industrial Tool Company, c/o Newell, entered the BCP as a Participant as defined in ECL 27-1405(1)(a). Approximately 14.5 acres of the property was included in the BCP (herein referred to as the Site).

Following acceptance into the BCP, investigation activities were expanded to include assessing surface and subsurface conditions throughout the remainder of the BCP parcel, sub-slab and indoor air sampling in the manufacturing building, and collection of surface water and sediment samples from the on-site pond. In addition to VOCs, the RI analytical list was expanded to include semi-volatile organic compounds (SVOCs), pesticides, and metals.

A draft RI report (RIR) was submitted to NYSDEC in August 2017. Based on NYSDEC comments and requests for additional information dated December 2017, a supplemental RI was performed in April 2018.

2. BACKGROUND

2.1 Site Description and Features

The BCP parcel includes two connected buildings approximately 160,000 square feet in size located on the west side of Bernzomatic Drive (**Figure 2**). The western building previously consisted of assembly, packaging, warehouse/storage and office areas and is herein referred to as the manufacturing building. The eastern and older building was used for machining, parts washing, and materials storage and is herein referred to as the machining building. A concrete pad located off the northeast corner of the machining building was used for equipment storage and is the area identified as the REC.

The buildings are currently unoccupied and no operations (with the exception of dry goods storage in the northwest corner of the manufacturing building) are being performed at the Site.

Truck and trailer parking areas are located to the north of the manufacturing building and employee and visitor parking is located to its south.

Peripheral areas of the property are generally wooded and vacant and serve as a buffer zone to neighboring residential and commercial properties. Roof drains from the building discharge into a cistern system located beneath the manufacturing building. The cistern functioned as a backup water supply for fire suppression. Overflow from the cistern discharges to a manmade stormwater pond located southwest of the manufacturing building.

A former engineering laboratory approximately 4,000 square feet in size, and a former storage building approximately 8,000 square feet in size, are located on the east side of Bernzomatic Drive but are not considered part of the BCP parcel.

The topography of the Site and surrounding properties is generally flat. The Site is underlain by as much as 12.5 feet of unconsolidated deposits over bedrock. The depth to groundwater ranges from 0.6 to 6.7 feet. Groundwater flow is to the northwest.

2.2 Site History and Land Use

The Site is located in the I Industrial District in the Village of Medina. According to the Orleans County tax records, the property use is identified as Manufacturing and Processing and Vacant Land. The reasonably anticipated future use of the Site is industrial.

Historical records indicate that industrial use of the property began around 1915. Early activities included canneries and food processing. Ancillary buildings included a pipe shed, machine shop, and oil house. Records indicate that parts cleaning operations were once performed using solvent degreasing agents.

Past Site operations involved the machining, assembly, packing, and shipping of hand-held torches by Bernzomatic, a division of Newell. In 2011, Newell sold the business to Worthington Industries who continued manufacturing torches until July 2014. With the exception of the periodic presence of a Site manager and dry goods storage in the northwest corner of the manufacturing building, the Site has been unoccupied since August 2014.

2.3 Adjacent Property Land Use

The adjacent properties are characterized as a mixture of industrial, commercial, and residential uses. The Site is bordered by vacant, wooded land, and a mix of residential, commercial, and industrial properties along Bates Road, by the New York Central Railroad and a vacant commercial property to the north; by vacant wooded land, a condominium development (senior citizen housing) and residential properties to the south; and by the Cook Building (a warehouse formerly leased by Bernzomatic), a “rag production factory” (manufacturer of industrial wipe cloths, fabrics and leather materials), and residential properties along East Avenue to the west.

3. REMEDIAL INVESTIGATION ACTIVITIES

The Phase II investigation activities, which began in 2014, were performed in accordance with scopes of work authorized by Newell. The 2017 RI investigation was performed in accordance with the NYSDEC-approved Remedial Investigation Work Plan (RIWP), dated November 2016. Phase II investigation activities were performed during the periods of May 16 through 27, 2014, October 20 through 28, 2014, and January 30 through June 5, 2015. The 2017 RI activity was performed from February 16 through March 29, 2017.

A draft RIR was submitted to the NYSDEC in August 2017. Based on NYSDEC comments on the draft RIR dated December 2017, a Supplemental Remedial Investigation Work Plan (SRIWP) was prepared and submitted to NYSDEC in January 2018. In February 2018, the NYSDEC approved the SRIWP with some modifications. Field activities performed in accordance with the approved SRIWP were completed in April 2018.

Investigation activities were supervised and documented by qualified URS personnel. A copy of investigation field notes is provided in **Appendix A**. Photographs of the Site are provided in **Appendix B**.

3.1 Utility Clearance

In January, March, April, and May 2015, URS retained the services of Pegasus Environmental Ltd. (Pegasus) to identify subsurface utilities at the proposed boring locations. Pegasus utilized a 400 MHz antenna Ground Penetrating Radar (GPR) and marked out utilities directly on the pavement/ground surface.

In February 2017, URS retained Applus RTD (Applus) to identify subsurface utilities prior to RI drilling activities. Applus also utilized GPR. Applus performed GPR surveys over the proposed boring locations and marked out utilities directly on the pavement/ground surface. Applus documented the survey in a report, a copy of which is provided in **Appendix C**

URS also reviewed facility plans to identify underground utilities. Additional public utility clearance was performed by each boring contractor by notifying DigSafelyNewYork. Also, with the exception of the GSP borings, each boring was manually precleared to a depth of approximately 5 feet prior to drilling.

3.2 Drilling and Well Installation

3.2.1 Drilling

Drilling services in May 2014 were provided by Russo Development Inc. (Russo), in October 2014 to February 2015 by Nothnagle Drilling, Inc. (Nothnagle), in March through June 2015 by Zebra Environmental, Inc. (Zebra), and in February 2017 by Nothnagle.

Drilling of the initial four borings (i.e., SB-01 through SB-04) in May 2014 was performed using a direct-push drill rig. Drilling for the 13 monitoring wells (i.e., MW-1 through MW-13) in October 2014 and February 2015 was performed using a track-mounted drill rig and 4 ¼-inch hollow stem augers (HSAs). Drilling of the GSP borings (i.e., GSP-01 through 36), which were advanced for the purpose of collecting groundwater grab samples, were completed using direct-push drill rig. Finally, drilling for the four borings (i.e., SB-06 through SB-09) and eight monitoring wells (i.e., MW-14 through MW-21) in February 2017 was performed using a direct-push drill rig with HSA capabilities. Investigation locations are shown in **Figure 4**.

With the exception of the GSP locations, all borings were continuously sampled to drilling refusal. Direct-push samples were collected using a 4-foot long, acetate-lined Macrocore sampler. During HSA drilling, soil sampling was performed using a 2-inch outside diameter by 2-foot long split-spoon sampler advanced in accordance with ASTM D-1586. The GSP borings were advanced to bedrock without sampling.

Upon recovery, each soil sample was inspected for evidence of contamination (e.g., staining, odors, etc.) and screened for VOCs using a photoionization detector (PID). The URS geologist classified the soils in

accordance with the Unified Soil Classification System (USCS). Drilling observations were recorded on boring logs presented in **Appendix D**.

One to two soil samples were retained from each boring for laboratory analysis. One sample was collected from the interval just above the water table or, if groundwater was not encountered, the sample was collected from the bottom of the boring. If apparent contamination was present, a second sample was collected from the interval of greatest apparent contamination. Only one boring, for well MW-08, was advanced into bedrock. The MW-08 well boring was advanced approximately 15.5 feet into bedrock using an NQ core barrel.

Drilling observations are summarized below:

Boring/Well ID	Total Depth (ft)	Depth to Water (ft)	Maximum PID reading (PPM)	Remarks
SB-01	10	4.4	1.2	In the REC area
SB-02	10	2.5	0	In the REC area
SB-03	9.5	4.7	0	In the REC area
SB-04	9	4.5	0	In the REC area
SB-05	3.5			North of the machining building. Hit refusal and moved boring to SB-05A.
SB-05A	10.4	5.0	6.7	North of the machining building
SB-06	9	3.9	0	North of REC area
SB-07	9.2	3.5	0.3	Southeast of REC area
SB-08	9.2	4.5	0	East of the machining building
SB-09	12.5	2.5	185	Inside manufacturing building. Max PID at 10 ft
MW-01	12	4.7/*4.64*/**2.41**	0	Inside manufacturing building
MW-02	12	5/*5.23*	0	Inside manufacturing building
MW-03	11.5	5/*4.80*	0	Inside manufacturing building
MW-04	10.75	5/*5.48*/**3.87**	0	Inside manufacturing building
MW-05	10.25	5/*4.70*	0	In the REC area
MW-06	9.25	5/*4.53*/**2.79**	0	In the REC area
MW-07	9.25	5/*4.53*	0	In the REC area
MW-08	25	5/*6.70*	0	Completed in bedrock in the REC area
MW-09	9.75	4/*4.09*	0	North of REC area
MW-10	10	4/*4.54*	0	East of REC area
MW-11	9.5	4/*3.82*/**2.31**	0	South of REC area
MW-12	12.5	5/*2.37*	0	East side of the manufacturing building
MW-13	11.5	5/*3.20*	0	Inside manufacturing building
MW-14	9.4	**0.55**	0	Southeast of the manufacturing building
MW-15	5.6	**0.85**	1.1	Northwest corner of the Site
MW-16	5.24	**1.60**	0.1	North central portion of the Site
MW-17	8.55	**3.05**	0.2	Northeast portion of the Site
MW-18	8.65	**3.44**	0	Northeast of the manufacturing building
MW-19	8.5	**2.09**	0	East side of the machining building
MW-20	8.3	**1.19**	0.1	North side of the manufacturing building
MW-21	5.8	**1.14**	0	North side of the manufacturing building

Notes: Water levels with no italics or bold indicate approximate water levels recorded at the time of drilling, italics indicates water levels during October 2014 or February 2015 sampling, and bold indicates water levels recorded during March 2017 sampling.

3.2.2 Groundwater Grab Sample Collection

Soil borings SB-01 through SB-04 were drilled to refusal on presumed bedrock (later corroborated by depth to bedrock at MW-08). Upon reaching refusal, a temporary well using 1-inch diameter polyvinyl chloride (PVC) riser and 5 feet of 0.010-inch screen was placed in each boring and groundwater samples were then collected using a peristaltic pump and dedicated (per boring) disposable HDPE tubing. Following collection of the groundwater sample, each temporary well screen and riser were removed and the borehole was backfilled with the soil cuttings and granular bentonite and the ground surface was restored to near original condition.

In March, April, and June 2015, a total of 36 locations (GSP-1 through GSP-36) were drilled to refusal using direct-push drilling. Soil sampling was not performed during these activities. Upon reaching refusal at each location, the drilling rods were partially retracted exposing a temporary well screen. Groundwater samples were then collected using a peristaltic pump. The purpose of the sampling effort was to delineate groundwater impacts and guide the placement of future monitoring wells.

3.2.3 Well Installation

Permanent shallow monitoring wells were constructed using a 2-inch ID PVC well casing and 0.010-inch well screens. The annular space was filled with #00N sand from the well bottom to a depth of approximately 1 foot above the screen and riser coupling. A hydrated bentonite seal was placed above the sand pack to approximately 1 foot below ground surface (bgs). Each well was finished with a flush-mount well box set in concrete to a depth of 1 foot bgs.

Monitoring well MW-08 was completed as a deep (i.e., bedrock) well. The MW-08 well boring was initially advanced approximately 3 feet into bedrock (a depth of approximately 12.5 feet bgs) using HSAs. A 6-inch diameter steel separation casing was then grouted in place. After the grout was allowed to cure for a minimum of 24 hours, the boring was advanced to a depth of 25 feet bgs using an NQ core barrel (approximately 3 inch outside diameter). Following coring to 25 feet bgs, the well was completed with a 2-inch diameter, 10-slot PVC well screen set from 15 feet to 25 feet bgs. The annular space was filled with #00N sand from the well bottom to a depth of approximately 14 feet bgs. A hydrated bentonite seal was placed from 14 to 11 feet bgs. Cement/bentonite grout was placed from 11 feet to approximately 1 foot bgs. The well was finished with a flush-mount well box set in concrete to a depth of 1 foot bgs. Well construction logs are provided in **Appendix E**. **Table 1** presents a summary of well construction information. Well condition inspection logs for all wells are also provided in **Appendix E.**

3.2.4 Well Development

At least 48 hours after well construction, each monitoring well was developed using a foot valve and surge block attached to disposable high-density polyethylene (HDPE) tubing operated by a Waterra hydrolift pump. Water quality measurements of pH, specific conductivity, temperature, and turbidity were measured periodically during the well development process. The turbidity remained very high (i.e., >1,000 Nephelometric Turbidity Units [NTUs]) in most wells throughout the well development process, reflecting the high silt content in the formation. Details of each well development are provided in the well development logs located in **Appendix F**.

3.2.5 Hydraulic Conductivity Testing

On May 11, 2017, hydraulic conductivity (slug) tests were performed on wells MW-16, MW-18, MW-19, and MW-21. Both rising and falling head tests were performed. The tests were performed using a solid plastic slug approximately 2 feet long by 1.5 inches in diameter. Prior to testing, a Level Troll data logger was placed in the well. As the slug was inserted into the well, the drop in water level (falling head) was monitored using a Rugged Reader. The slug was removed after water level returned to approximately 95% of the original, static water level. The water level recovery (rising head) was then monitored to approximately 95% of the original, static water level.

The testing data was reduced following the Bouwer and Rice Slug Test method using AQTESOLV Version 3.50 software. The results indicated hydraulic conductivities ranging from 7.58×10^{-4} centimeters per

second (cm/sec) in MW-21 to 4.99 x 10^{-3} cm/sec in MW-19. Hydraulic conductivity testing results are provided in **Appendix G**.

3.2.6 Monitoring Well Groundwater Sampling

Groundwater samples were collected during each field investigation phase. Groundwater samples collected from monitoring wells were collected using a peristaltic pump and dedicated (per location) disposable HDPE tubing. Monitoring wells were purged prior to sample collection. During the purging process, the water quality parameters pH, temperature, specific conductivity, dissolved oxygen (DO), turbidity, and oxidation-reduction potential (ORP) were measured utilizing a flow-through cell. Well purging continued until these water quality parameters stabilized within specific tolerances for at least three consecutive readings. Copies of low-flow purge logs are provided in **Appendix H**.

3.2.7 Surface Soil Sampling

In February and March 2017, surface soil samples (obtained from a depth of 0 - 2 inches below the vegetative cover) were collected for monitoring well locations MW-14 through MW-21, soil boring locations SB-05 through SB-09, and surface soil locations SS-01 through SS-03. Following their review of the draft RIR, the NYSDEC requested the collection and analysis of supplemental surface soil samples to address the extent of SVOC and metals contamination in surface soils at locations SS-01, SS-02, SS-03, and MW-15. The supplemental sampling was performed in April 2018. The supplemental samples were located within five to ten feet and more distant from asphalt pavement than the original locations. The supplemental surface soil samples were identified as follows:

Original Location	Supplemental Location
SS-01	SS-05
SS-02	SS-06
SS-03	SS-07
MW-15	SS-04

3.2.8 Cistern Sampling

A water sample from the cistern was collected on October 29, 2014 using a disposable polyethylene bailer.

Following their review of the draft RIR, the NYSDEC requested the collection and analysis of a supplemental cistern water sample and a sediment sample. The supplemental water sample was collected in April 2018 using a bailer. There was insufficient sediment present to enable the collection of the sediment sample. The cistern water sample collection forms are provided in **Appendix D**.

3.2.9 Surface Water and Sediment Sampling

Two collocated surface water and sediment samples were collected from the Site pond on March 23, 2017. SW-01/SED-01 (0 - 6 inches) samples were collected adjacent to the corrugated galvanized steel influent overflow pipe from the cistern at the northern end of the pond. SW-02/SED-02 (0 - 6 inches) were collected adjacent to the concrete headwall outlet pipe at the southeastern end of the pond. A duplicate sediment sample was collected at SED-02 location.

Following their review of the draft RIR, the NYSDEC requested the collection of three supplemental sediment samples from additional locations around the perimeter of the pond and one supplemental sample from the center of the pond. NYSDEC also requested that the supplemental samples be collected from 0 to 6 inch and 6 to 12 inch intervals. The supplemental sediment samples were requested to be analyzed for SVOCs and metals, only. Supplemental surface water samples were not requested.

In April 2018, supplemental sediment samples were collected from the following locations (**Figure 4**):

- SED-03 (0-6") and (6-12"): southwest corner of the pond;
- SED-04 (0-6") and (6-12"): west side of the pond; and,
- SED-05 (0-6") and (6-12"): northeast corner of the pond.
- There was no sediment in the center of the pond; therefore, a sediment sample was not collected. The absence of sediment in the center of the pond suggests that the pond was created by excavating soils to bedrock.

In March 2017, surface water samples were collected prior to collection of the collocated sediment samples. Pond water was collected using a clean, laboratory-supplied container to dip into the pond and transfer sample volume directly to sample containers. In March 2017 and April 2018, the sediment samples were collected using a stainless steel hand auger. The sediment sample volume from each interval was placed in a clean stainless steel bowl. Following collection of the VOC samples, the remaining sediment in the bowl was homogenized and the remaining sample containers were filled. Sampling equipment was decontaminated between sample locations. Surface water and sediment sampling forms are provided in **Appendix D**.

3.2.10 Vapor Intrusion Sampling

On March 8, 2017, two paired indoor air and sub-slab vapor samples (SSV-01 and SSV-02) were collected in the manufacturing building and one outdoor (ambient) air sample was collected off the southwestern side of the building. The indoor air and sub-slab vapor samples were collected from areas where underlying groundwater impacts were found. No samples were collected from the machining building because, at the time of sampling, it was assumed that the machining building would eventually be demolished and therefore there would be no future occupancy.

During vapor intrusion (VI) sampling activities, the manufacturing building was unoccupied, but the HVAC system was operating. The building was essentially empty. The product inventory conducted at the time of sampling identified the following materials:

- One 16 ounce container of Bernzomatic MMP gas (used);
- One 16 ounce container of Windex (used);
- One 12 ounce container of disinfectant spray (used);
- One 12 ounce container of CRE Knocker Loose (used); and,
- One 1 gallon container of acrylic latex enamel paint (used).

The sub-slab vapor, indoor air, and outdoor air samples were collected simultaneously over an 8-hour period using 6 liter Summa canisters following procedures presented in the New York State Department of Health (NYSDOH) *Guidance for Evaluating Soil Vapor Intrusion in the State of New York*, dated October 2006. The building floor slab was found to be approximately 6 to 8-inches thick and in good condition. Copies of the sampling logs and the product inventory are presented in **Appendix I**.

3.2.11 Surveying

With the exception of the 2018 surface soil and sediment locations, the investigation points were surveyed for location and elevation by a NY State Licensed Land Surveyor. The survey coordinates were geo-referenced to North American Datum (NAD) 1983 New York State Plane Coordinates and National Geodetic Vertical Datum (NGVD) 1988 Datum. Measurements were recorded to within 0.01 foot. The 2018 surface soil and sediment points were located using a high accuracy Trimble Global Positioning System (GPS) unit to provide sub-foot post-processed data accuracy. The survey data were placed in the project database and used to generate the Site figures presented in this report.

3.2.12 Sample Analyses

Samples collected during the May 2014 investigation were delivered under proper chain-of-custody to ALS Environmental in Rochester, New York, an NYSDOH Environmental Laboratory Approval Program (ELAP) certified laboratory. Samples collected during the remaining investigations were delivered under proper chain-of-custody to TestAmerica Laboratories, Inc. in Amherst, New York, which is also an NYSDOH ELAP certified laboratory.

Sample analytical parameters and methods are shown in **Table 2**. Analyses during the Phase II investigations focused on delineating VOC impacts, with some samples analyzed for SVOCs and Resource Conservation and Recovery Act (RCRA) metals. Following acceptance into the BCP, the RI analyses included VOCs, SVOCs, polychlorinated biphenyls (PCBs), pesticides, and target analyte list (TAL) metals. Following NYSDEC's review of the draft RIR, the 2018 Supplemental RI locations included analyses for SVOCs and TAL metals.

3.2.13 Decontamination Procedures

Equipment used for borehole clearing and sampling (e.g., post hole diggers and Macrocore samplers) were decontaminated with a non-phosphate detergent (Alconox) and potable water solution followed by a potable water rinse. Down-hole drilling equipment (e.g., HSAs and drilling rods) were initially cleaned of soil and then cleaned with high-pressure steam.

3.2.14 Investigation-Derived Waste Characterization and Disposal

Investigation-derived waste (IDW), including decontamination water, purge water, soil cuttings, disposable sampling materials, and personal protective equipment, was segregated and stored in DOT approved 55-gallon steel drums. The drums were temporarily staged on-site, pending subsequent transport to a permitted disposal facility.

4. PHYSICAL SITE CHARACTERISTICS

The Site consists of approximately 14.5 acres and includes a single story manufacturing building and attached machining building with a combined surface area of approximately 160,000 square feet in size (**Figure 2**). Truck and trailer parking areas are located to the north of the manufacturing building and employee and visitor parking is located to its south.

A stormwater retention pond is located to the southwest of the manufacturing building. A cistern system beneath the manufacturing building functions as a source of water for fire protection. Overflow from the cistern discharges to the stormwater retention pond.

Peripheral areas of the Site are generally wooded and vacant and act as a buffer zone to neighboring residential and commercial properties.

The Site is located in the Erie-Ontario Lowlands Physiographic Province. The Site is relatively flat, with a ground surface elevation around 546 feet above mean sea level. The U.S. Department of Agriculture's (USDA) Soil Conservation Service (USDA, 2014), has identified the surface soils as Appleton silt loam, with 0 to 3 percent slopes.

Drilling observations indicate that the Site is underlain by approximately 5 to 12.5 feet of unconsolidated materials overlying bedrock. The unconsolidated materials consist of as much as 4 feet of fill composed of fine to medium sand and gravel with some concrete and wood. The fill is underlain by natural deposits of sand and silt with some gravel. The underlying bedrock consists of approximately 10 feet of the Irondequoit Limestone underlain by Medina Group sandstone.

Depth to groundwater ranges from 0.5 to 6.7 feet below ground surface. Water level measurements recorded during the March 2017 groundwater sampling event are presented in **Table 3**. Using the measurements in **Table 3**, **Figure 5** presents the groundwater elevation contour map. As shown in **Figure 5**, overall groundwater flow is to the northwest. The results of slug tests indicate hydraulic conductivities in the unconsolidated materials range from approximately 7.58×10^{-4} cm/sec to 4.99×10^{-3} cm/sec.

Water at the Site is provided by the Village of Medina, which purchases the water from the Niagara County Water District. In response to a URS request, the Village of Medina, Town of Shelby, and Town of Ridgeway reported that there are no known public or private water wells that exist within 0.5 miles of the Site.

5. NATURE AND EXTENT OF CONTAMINATION

5.1 Analytical Data

Upon receipt from the laboratory, the analytical results were validated by a URS chemist in accordance with NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation and USEPA Region II data validation procedures. Copies of Data Usability Summary Reports (DUSRs) are provided in **Appendix J**. Copies of the laboratory analytical reports are contained in **Appendix K**. The validated analytical results are summarized in **Tables 4** through **10** and **Figures 6** through **10**. The data are compared to applicable Standards, Criteria, and Guidance (SCG) values.

Soil Criteria

The soil analytical results are compared to Unrestricted Use, Protection of Groundwater, and Industrial Use Soil Cleanup Objectives (SCOs) presented in New York Codes, Rules, and Regulations (NYCRR) Chapter IV Part 375. The criteria include parameters present in NYSDEC's CP-51 Soil Cleanup Guidance.

Groundwater Criteria

The groundwater and cistern water analytical results are compared to NYSDEC Technical & Operational Guidance Series 1.1.1, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda (TOGS) for Class GA.

Surface Water Criteria

Surface water analytical results are compared to NYSDEC TOGS Class A water quality standards.

Sediment Criteria

Sediment analytical results are compared to NYSDEC Screening and Assessment of Contaminated Sediment, June 24, 2014, Class A and Class C. The sediment guidance values (SGV) for organic compounds were re-calculated using site-specific total organic carbon (TOC) values.

For example, for sample SED-01 with a TOC of 41,100 milligrams (mg) per kilogram (kg):

> The Class C SGV for total polycyclic aromatic hydrocarbons (PAHs) = 35,000 mg/kg (based on 2% TOC (20,000 mg/kg)
>
> The sample-specific organic fraction is 41,100/20,000 = 2.055 (unitless)
>
> The re-calculated sample-specific SGV is 35,000 mg/kg x 2.055 = 71,925 mg/kg (adjusted for 4.1% TOC [41,100 mg/kg])

As requested by NYSDEC, the sediment sample results are also compared to Unrestricted Use, Protection of Groundwater, and Industrial Use SCOs.

VI Criteria

The NYSDOH document titled *Guidance for Evaluating Soil Vapor Intrusion in New York State*, dated 2006 with a 2017 update, identifies sub-slab and indoor air concentration limits for eight chlorinated VOCs which are assigned to three decision matrices:

Matrix A	Matrix B	Matrix C
Trichloroethene (TCE)	Tetrachloroethene (PCE)	Vinyl chloride (VC)
Carbon tetrachloride (CCL4)	1,1,1-Trichloroethane (1,1,1-TCA)	
1,1-Dichloroethene (1,1-DCE)	Methylene chloride (MC)	
cis-1,2-Dichloroethene (cis-1,2-DCE)		

In the guidance document, NYSDOH provides recommendations (e.g., no further action, monitor, or mitigate) for various concentrations of these compounds in sub-slab vapor and indoor air.

5.2 Soil Analytical Results

Soil samples collected during the Phase II investigations were only analyzed for VOCs. Following acceptance into the BCP, soil samples from wells MW-14 and higher and soil borings SB-05 and higher were analyzed for VOCs, SVOCs, PCBs, pesticides, and metals. Soil samples collected in April 2018 were analyzed for SVOCs only.

The soil analytical results are presented in **Tables 4a** (surface) and **4b** (subsurface), and **Figures 6A** (surface) and **6B** (subsurface).

5.2.1 Surface Soil Analytical Results

A total of 19 surface soil samples and two duplicate surface soil samples were collected from 0 – 2 inches below the vegetative cover. Fifteen of the 19 surface soil samples were collected as part of the 2017 RI investigation and the remaining four surface soil samples were collected during the April 2018 supplemental RI investigation.

VOC Surface Soil Analytical Results

PCE was detected in only one surface soil sample. PCE was detected in SB-07 at a concentration of 0.0012J mg/kg, which did not exceed any SCO. No other VOCs were detected in surface soil samples.

SVOC Surface Soil Analytical Results

Nine surface soil samples and one field duplicate surface soil sample contained SVOCs at concentrations above the Unrestricted Use SCOs. Certain constituents in eight of the nine samples also exceeded the Protection of Groundwater SCOs. Certain constituents in five of the nine samples also exceeded Industrial Use SCOs.

As mentioned in Section 3.2.7 above, the NYSDEC requested the collection and analysis of supplemental surface soil samples in 2018 to address the extent of SVOC contamination in surface soils at locations SS-01, SS-02, SS-03, and MW-15. The April 2018 analytical results show that no SVOCs were detected at concentrations above the SCOs in the supplemental samples collected near SS-01, SS-02, and MW-15 (i.e., SS-05, SS-06, and SS-04, respectively). Three SVOCs were detected in sample SS-07, collected near SS-03. The three SVOCs detected exceeded the Unrestricted Use SCOs; one SVOC exceeded the Protection of Groundwater SCO; and, none exceeded the Industrial Use SCOs.

PCB Surface Soil Analytical Results

No PCBs were detected in the surface soil samples.

Pesticide Surface Soil Analytical Results

Pesticides were detected in six surface soil samples at concentrations exceeding the Unrestricted Use SCOs. None of the samples exceeded Protection of Groundwater or Industrial Use SCOs.

Metals Surface Soil Analytical Results

Fourteen surface soil samples and two duplicate surface soil samples contained at least one metal at a concentration above the Unrestricted Use SCOs. Metals detected above Unrestricted SCOs included aluminum, calcium, iron, lead, and zinc. None of the samples exceeded Protection of Groundwater or Industrial Use SCOs.

5.2.2 Subsurface Soil Analytical Results

A total of 47 subsurface soils and four duplicate subsurface soils were collected during site investigations. Forty subsurface soil samples were collected prior to April 2018 (this includes well boring samples

collected from the 0 to 2 foot interval). Seven supplemental subsurface soils from the 0.2 to 1 foot interval were collected as part of the supplemental RI in April 2018.

VOC Subsurface Soil Analytical Results

Only one VOC, acetone, was detected at a concentration above the NYSDEC SCOs, and only in one sample. Acetone was detected at a concentration of 0.063 mg/kg in MW-13, which is above the Unrestricted Use and Protection of Groundwater SCO of 0.050 mg/kg and below the Industrial Use SCO of 1,000 mg/kg.

SVOC Subsurface Soil Analytical Results

One subsurface soil sample contained one SVOC at a concentration above CP-51 Supplemental SCOs. Di-n-butylphthalate was detected at a concentration of 0.045J mg/kg in MW-20, which is above the Residential Use SCO of 0.014 mg/kg and below the Protection of Groundwater SCO of 8.1 mg/kg; there is no Industrial Use SCO for this compound. SVOCs detected at 11 other locations were below Residential Use SCOs.

PCB Subsurface Soil Analytical Results

No PCBs were detected in the subsurface soil samples.

Pesticide Subsurface Soil Analytical Results

Pesticide compound 4-4'-DDT was detected at a concentration of 0.0079J mg/kg in MW-14 and at a concentration of 0.025J mg/kg in MW-15, both of which are above the Unrestricted Use SCO of 0.0033 mg/kg and below Protection of Groundwater SCO of 136 mg/kg and Industrial Use SCO of 94 mg/kg. No pesticides were detected at concentrations exceeding SCOs in any other sample.

Metals Subsurface Soil Analytical Results

Thirteen subsurface soil samples contained from one to three metals at concentrations above respective Unrestricted Use SCOs and below Protection of Groundwater and Industrial Use SCOs. Metals detected above respective Unrestricted Use SCOs were aluminum, calcium, iron, and lead. No metals were detected at concentrations exceeding SCOs in any other sample.

5.3 Groundwater Analytical Results

Groundwater sampling was initiated during the first Phase II investigation when samples were collected from soil borings in the REC and cistern areas. Based on the review of the soil boring groundwater data, monitoring wells were installed. Initially, the monitoring wells were analyzed for VOCs only. Following acceptance into the BCP, additional wells were installed, sampled (along with four existing wells), and analyzed for VOCs, SVOCs, PCBs, pesticides, and metals.

Select samples collected in February/March 2017 were also analyzed for bacteria (*Dehalococcoides* [DHC]) and DHC functional genes. DHC is a genus of bacteria that is known for its reductive dehalogenation of halogenated organic compounds. The DHC analysis is used to characterize the existing microbial community for better site-specific understanding of the potential for biodegradation of chlorinated VOCs. The presence of significant quantities of DHC and DHC functional genes would indicate likelihood for reductive dechlorination of chlorinated compounds.

The groundwater analytical results are summarized in **Tables 5** and **6** and **Figure 7**.

VOC Groundwater Analytical Results

Groundwater samples from the machining building area and the eastern portion of the manufacturing building contained VOCs at concentrations above the groundwater criteria, with the greater impacts present beneath the machining building. VOC impacts were limited to chlorinated VOCs except at two locations: at MW-10, only acetone was detected; and, at GSP-24, total xylene was detected (as well as several chlorinated VOCs).

SVOC Groundwater Analytical Results

No SVOCs were detected at concentrations exceeding groundwater criteria.

PCB Groundwater Analytical Results

No PCBs were detected in the groundwater samples.

Pesticide Groundwater Analytical Results

No pesticides were detected in the groundwater samples.

Metals Groundwater Analytical Results

Metals at concentrations exceeding the groundwater criteria were detected in samples from SB-01, SB-02, SB-03, and SB-04 in the REC area. Metals exceeding the groundwater criteria included arsenic, barium, cadmium, chromium, and lead.

Natural Attenuation Analytical Results

Samples from wells MW-6, MW-11, MW-19, MW-20, and MW-21 were analyzed for natural attenuation parameters, TOC, DHC, and DHC functional genes.

TOC concentrations ranged from 1.5 milligrams per liter (mg/l) (MW-06) to 15.7 mg/l (MW-19).

DHC and DHC functional gene concentrations were non-detect in MW-11, MW-20, and MW-21. In MW-06, DHC was detected at an estimated concentration of 0.4 cells per milliliter (cells/ml) and BAV1 Vinyl Chloride Reductase was detected at an estimated concentration of 0.1 cells/ml. In MW-19, DHC was detected at 2.4 cells/ml and BAV1 Vinyl Chloride Reductase was detected at 2.0 cells/ml. Dehalobacter was detected in all five samples with the highest concentrations observed in MW-06 (985 cells/ml) and MW-19 (18,000 cells/ml); concentrations in the other three samples ranged from 3.9 cells/ml to 8 cells/ml.

Functional genes tceA Reductase and Vinyl Chloride Reductase were not detected in the samples.

Field Measurements

Field water quality measurements of pH, temperature, specific conductivity, DO, and ORP were recorded during well purging and groundwater sample collection. The measurements recorded for the 12 wells sampled during the March 2017 sampling are presented in **Table 7** and briefly discussed below.

- pH values were generally neutral, ranging from 6.81 to 7.65.
- Temperatures in wells MW-01 and MW-04, both located within the manufacturing building, were 17.49 and 19.04 degrees Celsius, respectively. Temperatures in the remaining wells ranged from 4.54 to 8.65 degrees Celsius.
- Specific conductivity values ranged from 0.40 to 2.74 milliSiemens per centimeter (mS/cm).
- DO levels were non-detect in all wells.
- Turbidity values ranged from 1.1 to 58.3 NTUs.
- ORP values ranged from -101 to 199 milliVolts (mV). ORP values in five of the 12 wells were less than zero.
- Wells MW-06, MW-11, MW-19, MW-20, and MW-21 were analyzed in the field for ferrous iron. The range was 0.08 – 2.01 mg/L with MW-19 having the highest ferrous iron concentration. The other four locations were between 0.08 and 0.10 mg/L.

5.4 Surface Water and Sediment Analytical Results

During the March 2017 RI, surface water and accompanying sediment samples were collected from the Site pond and analyzed for VOCs, SVOCs, PCBs, pesticides, metals and TOC. During the supplemental RI in April 2018, three pond sediment samples were collected and analyzed for SVOCs, metals, and TOC.

Surface Water

The surface water analytical results are presented in **Table 8**. Review of the surface water results indicates that no parameters were detected at concentrations above the NYSDEC TOGS Class A criteria.

Sediment – Compared to Sediment Criteria

Table 9A and **Figure 8A** present the sediment analytical results compared to sediment criteria (See Section 5.1).

The SED-01 (0 - 6 inches) sample, collected adjacent to the corrugated galvanized steel influent pipe, contained six metals at concentrations above the Class A criteria (arsenic, chromium, copper, lead, nickel, and zinc). Concentrations of chromium, copper, nickel, and zinc were also above the Class C criteria.

The SED-02 (0 - 6 inches) primary sample contained copper and zinc at a level above the Class A criteria. The SED-02 duplicate sample contained total PAHs, copper and zinc at levels above the Class A criteria. None of the parameters detected in the SED-02 sample exceeded the Class C criteria.

The SED-03 (0 - 6 inches) sample contained total PAHs and copper, nickel, and zinc at levels above the Class A criteria. None of the parameters detected in the SED-03 (0 - 6 inches) sample exceeded the Class C criteria.

The SED-03 (6 - 12 inches) sample contained copper and zinc at a level above the Class A criteria. None of the parameters detected in the SED-03 (6 -12 inches) sample exceeded the Class C criteria.

The SED-04 (0 - 6 inches) sample contained copper, nickel, and zinc at a level above the Class A criteria. None of the parameters detected in the SED-04 (0 - 6 inches) sample exceeded the Class C criteria.

The SED-04 (6 - 12 inches) sample contained copper and zinc at a concentration above the Class A criteria. None of the parameters detected in the SED-04 (6 - 12 inches) sample exceeded the Class C criteria.

The SED-05 (0 - 6 inches) primary sample had no parameters at concentrations above Class A or Class C criteria. The SED-05 (0 - 6 inches) duplicate sample contained copper and zinc at levels above the Class A criteria and below Class C Criteria. No other parameters detected in the SED-05 (0-6 inches) or the duplicate sample exceeded the Class C criteria.

The SED-05 (6 - 12 inches) sample had no parameters at concentrations above the Class A or Class C criteria.

Sediment – Compared to SCOs

Table 9B and **Figure 8B** present the sediment analytical results compared to SCOs.

The SED-01 (0 – 6 inches) and SED-02 (0 – 6 inches) samples exceeded Unrestricted Use and Protection of Groundwater SCO for acetone. The SED-03 sample (0 - 6 inches) had three PAHs above the Unrestricted Use SCO and one PAH (Chrysene) above the Protection of Groundwater SCO. No parameters from any sample exceeded Industrial Use SCOs.

All sediment samples exceeded Unrestricted Use SCO for one or more the following metals: aluminum, arsenic, barium, calcium, chromium, cobalt, copper, iron, nickel, vanadium, and zinc. Arsenic in SED-01 (0 – 6 inches), detected at 16.8J- mg/kg, slightly exceeded the Protection of Groundwater and Industrial Use SCO of 16 mg/kg. No other metals in any other sediment samples exceeded Protection of Groundwater or Industrial Use SCOs.

5.5 Cistern Water Samples

One cistern water sample was collected in October 2014 and a supplemental cistern water sample was collected in April 2018. Review of the cistern water results (**Table 8** and **Figure 8A**) indicates that no parameters were detected at concentrations above TOGS criteria.

5.6 Vapor Intrusion Analytical Results

The indoor air, sub-slab vapor, and outdoor air analytical results are summarized in **Table 10** and **Figure 9** (See Section 3.2.10 for vapor intrusion building conditions and inventory).

Elevated levels of VOCs were detected in both sub-slab samples, with the higher concentrations detected in the SSV-01 sample. Neither sample pair had combined indoor air/sub-slab chlorinated VOC concentrations that trigger an NYSDOH recommendation for further action. However, the PCE concentration of 1,200 µg/m^3 in the SSV-01 sub-slab sample exceeds the 1,000 µg/m^3 criterion, above which NYSDOH guidance recommends mitigation to minimize current or potential exposures.

6. CONTAMINANT FATE AND TRANSPORT

This section describes fate and transport processes that may influence the behavior of the contaminants detected at the Site. The discussion emphasizes the processes that are essential in evaluating potential exposure of human and environmental receptors to the Site contaminants detected at concentrations above the SCGs. The following items are presented in this section:

1. General description of fate and transport processes occurring in soil, soil vapor/indoor air, surface water/sediments, and groundwater systems.
2. Identification and description of properties of contaminants detected above the SCGs in the various media at the Site.
3. Media-specific and contaminant-specific evaluation of potential fate and transport mechanisms occurring at the Site.

6.1 General Description of Fate and Transport Mechanisms

This section provides general descriptions of the fate and transport processes that can occur in the environment in which samples were collected as part of this RI and previous site investigations. In addition, the Site characteristics that can affect these processes are discussed. Contaminants identified at the Site include VOCs, SVOCs (primarily PAHs), pesticides, and metals.

6.1.1 Transport Processes

Contaminant transport processes on the ground surface can occur through volatilization, wind erosion, and as movement of dissolved contaminants in surface water runoff.

Contaminant transport in the subsurface can occur as movement of dissolved contaminants in groundwater and/or as migration of volatilized contaminants in soil vapor. The primary transport mechanisms are mass partitioning, advection, and dispersion.

Mass partitioning is a process in which contaminants move between different environmental media in response to concentration gradients. For example, contaminants dissolved in groundwater may sorb (i.e., attach) onto soil particles or volatilize into the soil vapor. The process may involve mass transfer in any direction between any of the environmental media. The net result of mass partitioning is the distribution of the contaminant between all phases that remain in physical contact with each other. Typically, mass partitioning acts to inhibit the migration of contaminants in groundwater or soil vapor by immobilizing a part of the mass in the soil matrix (retardation). However, the process may be reversed, resulting in the release of the sorbed contamination into the groundwater or soil vapor.

In the unsaturated zone (i.e., between ground surface and the water table), the total mass of a contaminant is partitioned between the dissolved phase (soil moisture), the gas phase (soil vapor), and the solid phase (soil matrix). In the saturated zone, the soil vapor phase is absent and the partitioning occurs only between the soil matrix and groundwater. Under equilibrium conditions, each phase contains a fraction of the total contaminant mass present in the system (i.e., total of all phases equals 100 percent of the contaminant mass present). The relative mass fractions are determined by the properties of each contaminant and by the nature of the soil matrix. Equilibrium conditions may be disturbed by phenomena such as migration of contaminated groundwater or soil vapor into an area, or removal of contaminant mass from one of the media through degradation processes or gravity flow. Under these circumstances, concentration gradients are created resulting in the occurrence of mass transfer between the media until equilibrium is re-established.

The contaminant mass sorbed onto the soil matrix is essentially immobile. The exception is the mass in the topmost soil layer near the ground surface, which can be transported by processes capable of moving soil particles (wind or surface water runoff). However, since soil within most of the Site area is not exposed due to covers such as pavement and concrete, this is not a significant transport pathway.

Transport of contaminants dissolved in the soil moisture in the unsaturated zone is generally limited as a result of very low flow rates in the absence of full saturation. The only significant mechanisms may be driven by water level fluctuations and gravity-driven downward flow during wet-weather periods, or possibly sewer lines and manholes/catch basins which may be leaking and/or act as preferential pathways. Such vertical transport of contaminants acts as a source for the saturated zone below.

The contaminant mass, especially VOCs, contained within the soil vapor in the unsaturated zone and within groundwater in the saturated zone is more mobile. Soil vapor can migrate in both vertical and horizontal directions in response to pressure gradients. Soil vapor migration can create a discharge of contaminants into the atmosphere or act as a source of contamination for groundwater in the saturated zone. Migrating soil vapor may transfer mass into the soil matrix and soil moisture in previously uncontaminated areas, thus increasing the areal extent of soil contamination in the unsaturated zone.

The primary transport mechanisms for contaminants dissolved in groundwater are advection and dispersion. Advection is the movement of the dissolved contaminants carried by the flow of groundwater. Dispersion refers to dissolved contaminants spreading due to the presence of non-uniformities of the groundwater flow field. Dispersion results in a general widening of a plume, as well in smearing of the plume boundaries. Processes similar to those that occur for soil vapor can enable dissolved contaminants to reach a previously uncontaminated area and enter other environmental media. Given the relatively moderate hydraulic gradient observed in the groundwater levels, dispersion and advection are transport mechanisms in groundwater at this Site.

Contamination migrating with soil vapor or groundwater constantly interacts with the soil matrix. The driving forces behind this process are created by concentration gradients between different phases and the properties of the contamination and the soil matrix. Contaminant mass may either sorb from the mobile soil vapor or groundwater onto the soil particles or it may undergo a reverse process of desorption.

In the case of sorption, contaminant mass is transferred from the mobile medium into the immobile soil medium. This retardation phenomenon tends to decrease the velocity of contaminant migration. The magnitude of the retardation depends on the properties of each contaminant and the soil matrix. The key indicator parameter for the retardation properties of the soil is the organic carbon content. Soils with high organic carbon content sorb dissolved contaminants more readily and create a more significant retardation effect than soil with limited, or no organic carbon content. Desorption is the reverse process. Contamination is transferred from the soil matrix into the groundwater or soil vapor. As a result, soil containing contaminant mass may act as a source if exposed to the less-contaminated soil vapor or groundwater. Desorption from soil into the soil vapor or groundwater is increasingly inhibited by increasing content of organic carbon in the soil.

The primary transport mechanisms in the limited surface water at the Site are advection, dispersion, and mass partitioning. These are essentially the same as described for groundwater, although advection and dispersion of contaminants may be enhanced due to the increased water flow rates as compared to groundwater flow rates at the Site. In addition, volatilization is greater in surface water. The transport of contaminants in surface water is also affected by flocculation and/or precipitation of contaminants. These processes may change the rate at which contaminants are transported or may cause them to settle out of the surface water into the underlying sediment.

Mass partitioning and erosion/particle entrainment are two primary transport mechanisms of contaminants in sediment. Contaminants sorbed to sediment particles are in equilibrium with the water immediately adjacent to the particles, based on the organic carbon content of the sediment and portioning properties of each contaminant. Particle entrainment is a process where sediment particles are moved from one location to another due to turbulent water flow. Contaminants in the sediment are transported along with the sediment particles.

6.1.2 Mass Destruction Processes

Abiotic mass destruction processes that rely on the presence of air or exposure to sunlight (such as hydrolysis and photolysis) have not been proven to be effective on the contaminants present in the surface soil and on the pavement/concrete surfaces of the Site (i.e., PAHs and metals).

The most significant mass destruction process that takes place in the subsurface environment is microbial degradation. The most significant microbial degradation processes for organic contaminants that operate in the subsurface are: biological oxidation (aerobic and anaerobic); reductive dechlorination; and cometabolic degradation. During degradation, organic compounds are transformed into daughter forms, which may be recalcitrant or further degradable. Daughter compounds can be either more or less toxic than the parent compounds. If a contaminant degrades into a sequence of degradable daughter compounds, it is ultimately fully metabolized into such compounds as carbon dioxide, methane, water, and chloride. PCE is a common solvent and the presence of elevated levels of PCE daughter compounds in the groundwater, such as TCE and cis-1,2-DCE, suggests that degradation of PCE is occurring.

6.1.3 Properties of Site Contaminants

This section discusses the properties of the contaminants identified at the Site that will impact their fate and transport. As described in Section 4.0, groups of compounds detected at concentrations above SCGs include: VOCs, SVOCs, pesticides, and metals. These are briefly discussed below.

VOCs

In general, VOCs readily volatilize into the atmosphere or soil vapor. At the surface, these compounds may decay and/or volatilize upon exposure to sunlight and to the atmosphere. VOCs are soluble in water and their dissolved contaminants are transported by advection and dispersion in groundwater and surface water. The same processes of advection and dispersion are responsible for the migration of these compounds in the atmosphere or the soil.

VOCs detected at concentrations above SCGs are chlorinated VOCs. These compounds have a low to moderate organic carbon-to-water partitioning coefficient and do not readily partition into the soil, making them relatively mobile in the environment. Chlorinated VOCs undergo reductive dechlorination under anaerobic conditions.

Acetone and xylenes were also detected and are volatile and moderately soluble in water. They are readily biodegraded under aerobic conditions and also degrade under anaerobic conditions, albeit at slower rates. They have low to moderate organic carbon-to-water partitioning coefficients and do not readily partition into the soil or sediment, making them relatively mobile in the environment.

SVOCs

PAHs are often associated with the combustion of organic materials and are commonly found at elevated levels in industrial areas and adjacent to roadways. Generally, SVOCs are characterized by low volatility, low solubility in water, and a high organic carbon-to-water partitioning coefficient. As a result, they are relatively immobile, and typically sorb onto the soil/sediment matrix. The potential for leaching from soil/sediment to groundwater or surface water decreases as the compound's molecular weight increases. As a result, the primary transport mechanism for SVOCs (PAHs especially) is mechanically by wind and erosion/particle entrainment. Biodegradation rates are relatively low.

PAHs are a class of SVOCs and are generally characterized by low volatility, low solubility in water, and a high carbon-to-water partitioning coefficient. As a result, they are relatively immobile, and typically sorb onto the soil/sediment matrix. Potential for leaching from the soil/sediment to groundwater or surface water decreases as the compound's molecular weight increases. Biodegradation rates are relatively low.

Pesticides

The properties of pesticides vary significantly. However, 4,4-DDT, the most common pesticide detected at the Site, has properties similar to SVOCs: low volatility, low solubility in water, and a high organic carbon-to-water partitioning coefficient. As a result, 4,4-DDT is relatively immobile and typically sorbs onto the soil/sediment matrix.

Metals

Metals detected above SCGs include aluminum, calcium, iron, lead, and zinc. Metals are generally persistent and they may form complexes with other elements. They do not volatilize or degrade.

However, in their soluble form, metals are mobile in groundwater and surface water. The preference of metals towards soil/sediment sorption as opposed to dissolution in water depends mostly on the acidity or alkalinity of the system.

6.2 Fate and Transport in the Unsaturated Zone

6.2.1 Migration

The propagation of contaminants in the unsaturated zone is dominated by three processes: migration of the dissolved phase contaminants with infiltrating precipitation; migration of the volatilized contaminants in the soil vapor; and migration of the sorbed contamination with fugitive dust emissions or surface runoff. Some of the soil at the Site is located under a relatively impervious cover (either pavement or concrete). However, contaminants present on the surface or within the soil or sorbed to the soil may dissolve as precipitation percolates through the unsaturated zone. The flow is mostly gravity-driven and directed downwards. Such downward migration through the unsaturated zone may constitute a source of contamination of the saturated zone below.

Infiltration-induced migration is expected to be higher for the contaminants with higher solubility, such as the VOC acetone, and lower for PAHs and 4,4-DDT because of their lower solubility in water. The absence of SVOCs and pesticides in Site groundwater and surface water demonstrates this condition.

For metals, the degree of solubility is determined primarily by the type of metal and the pH of the environment with a general decrease in metals solubility with increasing pH. According to the purge logs for monitoring wells and piezometers sampled during site investigations, the pH at the Site ranges from 6.81 to 7.65, which suggests limited solubility.

Contaminants can enter the soil vapor through the process of volatilization. There are elevated levels of VOCs present at the Site and, as a result, the migration of contaminants through the gas phase could be significant.

The Site contains a relatively large percentage of vegetated areas south of the manufacturing building. Exposed surfaces of soil, pavement, and concrete at the Site can generate fugitive dust emissions. Erosion and transport of surface soils by wind and runoff are likely migration pathways for contamination present on the surface and adsorbed onto surface soils.

6.2.2 Degradation

Generally, the occurrence and rates of unsaturated zone degradation have to be determined by means of field studies, such as respiration tests. However, unsaturated zone biodegradation is limited by the amount of moisture present in the soil and transport processes between bacteria and contaminants. Sufficient moisture for active biological growth may not be present at all locations where contamination is elevated. Also, without a continuous aqueous phase, mass transfer between the bacteria and contaminants will be low, especially for low mobility compounds such as PAHs, 4,4-DDT, and metals. These conditions tend to limit the amount of natural biodegradation of some compounds that will occur in the unsaturated zone.

6.3 Fate and Transport in the Saturated Zone

6.3.1 Migration

Contaminant migration in the saturated zone takes place predominantly by means of the transport of the dissolved-phase contamination in groundwater. The dominant factors are the direction of groundwater flow within the aquifer, the hydraulic gradient, the hydraulic conductivity of the aquifer material (both the average value and spatial distribution) and the chemical composition of the soil matrix. VOCs may also migrate from the groundwater/soil to soil vapor in the unsaturated zone.

The primary hydrogeologic unit beneath the investigation area is unconfined groundwater found within the fill and natural deposits. The depth to groundwater ranges from about 0.6 to 6.7 feet bgs across the Site.

VOCs (primarily chlorinated) and metals were detected above SCGs in groundwater samples. It is noted that the metal exceedances were in groundwater samples from soil borings and likely represent the presence of fines in the samples rather that true groundwater conditions.

Figure 10 presents groundwater iso-concentration contours for TCE, PCE, cis-1,2-DCE, and VC based on the March 2017 analytical results. The general pattern of VOC concentrations in groundwater suggests that the source area is in the former machining area with some downgradient migration. Some impacts are also present in the cistern area.

VOCs exceeding SCGs were not present in the groundwater samples from wells and borings located near the periphery of the Site, indicating that off-site contaminant migration in groundwater is not occurring.

6.3.2 Degradation

VOCs present in groundwater can degrade by both aerobic and anaerobic processes, although the rate of degradation of chlorinated VOCs is greater in anaerobic environments. The DO measurements recorded for the 12 wells sampled in March 2017 were all non-detect and almost half of the wells had negative ORP values, which suggests an anaerobic environment. DHC bacteria were either very low or non-detect, thus suggesting limited biodegradation is occurring under existing conditions. The presence of daughter products suggests that some degradation of PCE is occurring.

6.4 Fate and Transport in Sediments

6.4.1 Migration

Metals were detected above SCGs in the five sediment samples and the one duplicate sample and PAHs were detected above the SGCs only in the one sediment duplicate sample. The absence of metals and PAHs the surface water could be due to dilution, but is more likely because these compounds are bound to the sediment particles. Migration of metals and PAHs in sediments occurs primarily by physical transportation of the sediment particles.

6.4.2 Degradation

Elemental metals do not degrade. However, metal complexes can form or degrade, thus changing the availability of metals in sediments.

6.5 Summary

Contaminants of concern at the Site are chlorinated VOCs, SVOCs, metals, and pesticides. The presence of chlorinated VOCs and some metals in soil and groundwater are likely associated with past manufacturing activities. The presence of SVOCs and pesticides in surface soils could be related to past vehicular traffic at the Site and pest control activities, respectively.

VOCs can enter the soil vapor through the process of volatilization. As a result, the migration of VOCs through the gas phase either in soil vapor or the atmosphere may be occurring. The indoor air sample results indicate that there is minimal sub-slab VOC migration into the indoor air.

Infiltration-induced migration is expected to be high for the VOC contaminants due to their higher solubility. VOCs migrate in the saturated zone predominantly by means of the transport of the dissolved-phase contamination in groundwater. It is noted that VOCs were not detected in the groundwater samples near the periphery of the Site, indicating that contaminant migration in groundwater to off-site areas does not appear to be occurring. Metals impacts in the groundwater are localized to the immediate REC area.

7. QUALITATIVE HUMAN HEALTH EXPOSURE ASSESSMENT AND FISH AND WILDLIFE ASSESSMENT

This section presents the qualitative Human Health Exposure Assessment (HHEA) and fish and wildlife resource impact analysis (FWRIA) for the Site. The qualitative HHEA uses data and information collected during the RI to assess human health exposure in the immediate and surrounding areas. The qualitative HHEA provides an evaluation of potential adverse health effects under current and potential future Site conditions that may result from exposure to contaminants attributable to former activities at the Site.

7.1 Qualitative Human Health Exposure Assessment

This qualitative HHEA follows the general format and procedures set forth in the USEPA's Risk Assessment Guidance for Superfund (RAGS) (USEPA 1997a). The HHEA includes three components: Hazard Identification, Exposure Assessment, and Toxicity Assessment. This qualitative HHEA uses data and information collected during Site investigations to assess human health exposure in the immediate and surrounding areas and provides an evaluation of potential adverse health effects, under current and potential future Site conditions, that may result from exposure to contaminants at the Site.

7.1.1 Identification of Chemicals of Potential Concern

Based upon the analytical data obtained and presented in Section 4, contaminants of potential concern (CPCs) were identified as chlorinated VOCs based on the frequency of detection, range of concentrations, and potential for migration, as well as whether the detected analytes exceeded applicable SCGs. A “medium of potential concern” is identified as a physical medium (e.g., soil, groundwater, surface water) in which one or more contaminants were detected at concentrations exceeding their SCGs.

Contaminants detected in soil that exceeded SCGs include one VOC (acetone) in subsurface soil, and SVOCs, pesticides, and metals in surface and subsurface soil.

Indoor air and sub-slab soil vapor were sampled at two locations during the RI. Several VOCs were detected in the sub-slab samples at elevated concentrations. However, PCE was detected in one sub-slab sample at a concentration warranting mitigation.

Chlorinated VOCs were detected in groundwater samples above SCGs. Volatilization of VOCs from groundwater to indoor air may occur in the existing or future on-site building(s). SVOCs, some pesticides (e.g., 4,4-DDT), and metals are not readily volatile; therefore migration of these contaminants through the gas phase is not expected.

The surface water samples collected from the Site were analyzed for VOCs, SVOCs, pesticides, and metals. No compounds were detected at levels above the SCGs.

The sediment samples collected during the RI were also analyzed for VOCs, SVOCs, pesticides, and metals. Total PAHs were detected in the SED-02 and SED-03 samples at concentrations above the Class A criteria. Two to six metals were detected above the Class A sediment criteria in eight of the ten sediment samples. Acetone in SED-01 and SED-02, three SVOCs in SED-03, and one to as many as seven metals were detected above the Unrestricted Use SCOs in the sediment samples.

7.2 Exposure Pathways

An exposure pathway is a manner by which an individual may come in contact with a contaminant. The elements of a completed exposure pathway include: the contaminated environmental media (e.g., soil, soil vapor/air, surface water, and groundwater); the receptor (e.g., construction worker, public) exposed to the contamination; and the routes of exposure or how the contaminant enters the body (e.g., inhalation, ingestion, and/or dermal contact).

With the exception of the periodic presence of a Site manager, the Site is currently unoccupied. Future use of the Site would be in conjunction with its current zoning for industrial use. Under current or future conditions, human contact with the Site can be expected to occur primarily by three types of receptors: vendors, visitors, or trespassers who may enter the property; construction/utility workers who may be involved in construction/repairs to existing buildings or systems or future buildings or systems; and future industrial workers.

The following subsections discuss the rationale for identifying completed exposure pathways.

7.2.1 Soil and Ground Surface Materials

As discussed in Section 6.2.1 above, portions of the surface of the Site are covered by buildings, pavement or concrete and the remainder is covered with vegetation. The only potential completed exposure pathways are for vendors, visitors, trespassers or construction/utility workers for surface soil and ground surface material, and for subsurface soil for construction/utility workers who could come into contact with contaminated soil during intrusive activities both under current and future conditions. Potential exposure to these materials by future industrial workers is unlikely.

7.2.2 Outdoor Air

One outdoor air sample was collected at the Site. Ten VOCs were detected in the sample at low, estimated concentrations below the laboratory reporting limits. The levels are not considered a concern.

7.2.3 Indoor Air and Sub-Slab Vapor

Two indoor air and sub-slab vapor samples were collected at the Site. PCE was detected in one sub-slab vapor sample at a concentration warranting a “mitigation” recommendation in the Decision Matrices (Matrix A). Volatilization of VOCs to soil vapor from soil or groundwater may occur. Currently, there are no on-site personnel working within a building, so there is no completed indoor air pathway under current conditions. However, a completed exposure pathway to on-site employees may occur in the future.

7.2.4 Sediment

Sediment in the pond is accessible to construction/utility workers or trespassers through dermal contact or ingestion.

7.2.5 Groundwater

Under the current use scenario, groundwater is not known to be used as a potable water supply or for any other known industrial purposes in the vicinity of the Site. Drinking water is supplied by the Niagara County Water District. Therefore, it is not a completed exposure pathway under the current use scenario. It is not anticipated that in the future that on-site groundwater would be used for potable purposes. Construction workers could be exposed to groundwater contaminants during current or future intrusive activities through dermal contact, ingestion, and/or inhalation.

7.2.6 Routes of Exposure

VOCs present the greatest exposure through inhalation, but can also provide exposure through dermal contact and ingestion. Pesticides and PAHs in surface and near surface soils can provide exposure through dermal contact and ingestion.

7.2.7 Summary

Under some current and future use conditions, there are completed exposure pathways from indoor air, outdoor air, surface soil, sediment, and groundwater. For future use conditions, an additional completed exposure pathway from indoor air may be present.

7.3 Fish and Wildlife Resources Impact Analysis

The need to perform a fish and wildlife resource impact assessment (FWRIA) is discussed in the NYSDEC document titled *Fish and Wildlife Impact Analysis for Inactive Hazardous Waste Sites*, dated October 1994 [NYSDEC, 1994]. The NYSDEC requires a FWRIA when there is a significant potential for fish and wildlife resources to be present at a site, and there is a significant potential for the migration of residuals to these resources.

The DER-10 Appendix 3C Fish and Wildlife Resources Impact Analysis Decision Key has been completed as part of this RI (**Appendix L**). Also presented in **Appendix L** is correspondence from NYSDEC Division of Fish, Wildlife & Marine Resources, New York Natural Heritage Program indicating there are no records of rare or state-listed animals or plants, or significant natural communities at the Site or in its immediate vicinity. From the sampling previously performed at the Site, the concentrations of constituents of concern appear to be low. Therefore, in accordance with DER-10 Appendix 3C, performance of an FWRIA is not planned for this Site. If significant impacts are identified, the need to perform a FWRIA will be further discussed with NYSDEC.

8. CONCLUSIONS

The Site occupies approximately 14.5 acres in the Village of Medina, New York. Past Site operations involved the machining, assembly, packing, and shipping of hand-held torches by Bernzomatic, a division of Newell. In 2011, Newell sold the business to Worthington Industries who continued manufacturing torches until July 2014. With the exception of the periodic presence of a Site manager and dry goods storage in the northwest corner of the manufacturing building, the Site has been unoccupied since August 2014. The current and reasonably anticipated future land use is industrial.

A Phase I ESA, two phases of Phase II ESA, and an RI have been performed at the Site and included geophysical surveys; completion of soil borings; installation of monitoring wells; and, collection and analysis of surface and subsurface soil, groundwater, surface water and co-located sediment, sub-slab soil vapor and co-located indoor air, and outdoor air samples.

Soil

Surface Soil

No VOCs were detected at concentrations exceeding SCOs.

For surface soil samples collected in February/March 2017, SVOCs were detected above Unrestricted Use SCOs at nine locations and above Industrial Use SCOs at five of the nine locations. Supplemental surface soil samples were collected in April 2018 and analytical results show that no SVOCs were detected at concentrations above SCOs in three of four supplemental locations; three SVOCs detected at a fourth location exceeded the Unrestricted Use SCOs while none exceeded Industrial Use SCOs. The presence of SVOCs in surface soil at locations across the Site, including upgradient areas, suggests that their occurrence is not related to former Site manufacturing operations, but may be associated with proximity to asphalt pavement and vehicular traffic at and near the Site.

No PCBs were detected in the surface soil samples.

Pesticides were detected in six surface soil samples at concentrations exceeding the Unrestricted Use SCOs. None of the samples exceeded Protection of Groundwater or Industrial Use SCOs. Pesticides, particularly DDT and its breakdown product DDE, were not likely associated with former manufacturing operations, but may have been used for pest control during facility operations. DDT was commonly used as a pesticide from the 1940s until the 1970s when its use was banned. DDT is persistent in the environment and the presence in Site soils is likely due to residual impacts from pesticide use at the Site or in the vicinity.

Fourteen surface soil samples contained at least one metal at a concentration above the Unrestricted Use SCOs. Metals detected above Unrestricted SCOs included aluminum, calcium, iron, lead, and zinc. None of the samples exceeded Protection of Groundwater or Industrial Use SCOs. Based on their ubiquitous distribution in soil across the Site, some of the metals such as aluminum, calcium and iron, which were detected at elevated concentrations, are more likely associated with natural background conditions rather than past manufacturing operations.

Subsurface Soil

Soil analytical results indicate a single VOC, acetone, was detected at a concentration exceeding Unrestricted Use and Protection of Groundwater soil SCOs at one location. No other VOC parameters exceeded any SCO.

One subsurface soil sample contained one SVOC, di-n-butylphthalate, at a concentration above CP-51 Supplemental SCO for Residential Use and below the Supplemental SCO for Protection of Groundwater. No other SVOCs were detected above SCOs.

No PCBs were detected in the subsurface soil samples.

Pesticide compound 4-4'-DDT was detected at two shallow subsurface soil locations at concentrations above the Unrestricted Use SCO and below Protection of Groundwater and Industrial Use SCOs. No pesticides were detected at concentrations exceeding SCOs in any other sample.

Thirteen subsurface soil samples contained from one to three metals at concentrations above respective Unrestricted Use SCOs and below Protection of Groundwater and Industrial Use SCOs. Metals detected above respective Unrestricted Use SCOs were aluminum, calcium, iron, and lead. No metals were detected at concentrations exceeding SCOs in any other sample.

Groundwater

Groundwater impacts in the overburden are primarily associated with chlorinated VOCs and some metals. A source area was not found but Phase I information and mapping of VOC levels in groundwater suggest that the likely source was in the former machining area. No chlorinated VOC impacts were detected in well MW-8, which was completed in bedrock.

PCE and/or TCE were likely the VOCs originally released into the groundwater beneath the Site. However, their current levels are not considered significantly elevated and the presence of dechlorination products (e.g., cis-1,2-DCE) suggests degradation is occurring. Groundwater concentrations of DO were non-detect and ORP levels were generally low, indicating an anaerobic environment, which is conducive for degradation of chlorinated VOCs. However, DHC bacteria levels were very low and would need to be increased to enhance in-situ biodegradation of VOCs in groundwater.

The presence of heavy metals in groundwater near the machining area is likely associated with past manufacturing operations.

VI

One outdoor air and two paired indoor air and sub-slab vapor samples were collected at the Site. With respect to indoor air concentrations, constituents listed in Matrix A were either non-detect or detected at or below 0.67J µg/m^3; constituents in Matrix B were either non-detect or detected at or below 1.3J µg/m^3; and, the constituent in Matrix C (vinyl chloride) was non-detect. PCE was detected in one sub-slab vapor sample at a concentration warranting a "mitigation" recommendation in the Decision Matrices (Matrix A). Currently, there are no on-site personnel working within the manufacturing building, so there is no completed indoor air pathway under current conditions. However, a completed exposure pathway to on-site employees may occur if building use changes in the future.

Surface Water and Sediment

Surface water samples collected from the stormwater retention pond and cistern did not contain any constituents at concentrations above the surface water criteria.

The five sediment sample locations contained metals at concentrations above the Class A criteria. Two of the five locations had PAHs that exceeded the Class A criteria. Only one sample, SED-01 (0 – 6 inches), contained metals (chromium, copper, nickel, and zinc) above the Class C criteria.

All sediment samples exceeded Unrestricted Use SCO for one or more the following metals: aluminum, arsenic, barium, calcium, chromium, cobalt, copper, iron, nickel, vanadium, and zinc. Arsenic in SED-01 (0 – 6 inches) exceeded Protection of Groundwater and Industrial Use SCOs. No other metals in any other sediment samples exceeded Protection of Groundwater or Industrial Use SCOs.

Assessment

The findings of the Phase II ESA and this RI show that past manufacturing operations at the Site appear to have resulted in the release of chlorinated solvents and certain metals into the environment. The data show that groundwater impacts are contained on-site, with the greatest concentrations occurring in the area of the former machining area. Chlorinated VOC concentrations in soil vapor were found at elevated levels in the eastern portion of the manufacturing building and are likely associated with the groundwater impacts. No chlorinated VOC impacts in soil were found. However, some soil impacts should be present in the original release area, which was likely in the former machining area.

The limited pesticide and PAH impacts in surface soil do not appear to be associated with actual past manufacturing operations, but may be ancillary impacts due to past Site activities.

The information obtained to date should be sufficient for use in selection of a remedial approach for the Site.

9. REFERENCES

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United States Environmental Protection Agency, 1997. Risk Assessment Guidance for Superfund. 12/1989, EPA/540/1-89/002.

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TABLES

TABLE 1
MONITORING WELL CONSTRUCTION INFORMATION
FORMER BERNZOMATIC FACILITY

Location ID	Install Date	Total Depth (ft bgs)	Screened Interval (ft bgs)	Northing	Easting	Ground Elevation (ft msl)	Casing Elevation (ft msl)	Top of Riser Elevation (ft msl)
MW-01	10/21/2014	12	4-12	1172819.43	1203736.30	546.63	546.63	546.31
MW-02	10/20/2014	12	4-12	1172880.23	1203725.44	546.66	546.66	546.36
MW-03	10/21/2014	11.5	4-11.5	1172808.01	1203693.17	546.71	546.71	546.42
MW-04	10/20/2014	10.75	4-10.75	1172870.67	1203681.71	546.68	546.68	546.42
MW-05	10/22/2014	10	4-10	1173157.74	1203910.37	546.64	546.64	546.14
MW-06	10/22/2014	9.25	4-9.25	1173182.13	1203969.20	546.22	546.22	545.97
MW-07	10/22/2014	9.25	4-9.25	1173149.14	1203972.60	546.25	546.25	545.92
MW-08	2/6/2015	25	15-25	1173163.30	1203971.60	546.49	546.49	546.22
MW-09	2/3/2015	9.75	4-9.75	1173205.98	1203945.35	546.42	546.42	545.91
MW-10	2/5/2015	10	5-10	1173166.60	1203998.41	546.82	546.82	546.43
MW-11	2/3/2015	9.5	4-9.5	1173112.01	1203968.18	546.56	546.56	545.98
MW-12	2/5/2015	12.5	4-12.5	1172840.05	1203809.31	545.97	545.97	545.55
MW-13	2/6/2015	11.5	4-11.5	1172780.88	1203742.61	546.60	546.60	546.18
MW-14	3/2/2017	10	2-10	1172803.63	1203992.26	545.90	545.90	545.57
MW-15	3/1/2017	6	3-6	1173154.06	1203279.07	541.51	541.51	541.26
MW-16	2/28/2017	6	4-6	1173206.90	1203566.09	541.69	541.69	541.41
MW-17	2/28/2017	9	4-9	1173284.50	1203863.17	545.69	545.69	545.42
MW-18	3/1/2017	8.8	3.3-8.8	1173242.17	1204003.08	546.09	546.09	545.73
MW-19	2/28/2017	9	2.5-9	1173024.71	1203969.90	545.94	545.94	545.63
MW-20	2/28/2017	8.5	2.5-8.5	1173068.44	1203599.86	542.69	542.69	542.38
MW-21	3/1/2017	6.5	3-6.5	1173124.67	1203714.67	542.83	542.83	542.60

Notes: ft bgs - feet below ground surface
ft msl - feet mean sea level
Locations referenced to North American Datum (NAD) 1983 New York State Plane Coordinates
Elevations referenced to National Geodetic Vertical Datum (NGVD) 1988 Datum.

TABLE 2
ANALYTICAL SCHEDULE
FORMER BERNZOMATIC FACILITY

Matrix/Analytical Group	Analytical Method	Sampling Event			
		Initial Phase II ESA (2014)	Supplemental Phase II ESA (2015)	Remedial Investigation (2017)	Supplemental Remedial Investigation (2018)
Soil Samples					
Volatile Organics	SW-846 8260C	x	x	x	
Semi-Volatile Organics	SW-846 8270D	x		x	x
Polychlorinated Biphenyls	SW-846 8082A			x	
Pesticides	SW-846 8081A			x	
Metals	SW-846 6010C & 7470A	x*		x	
Total Organic Carbon	SW-846 9060A			x	
Groundwater Samples					
Volatile Organics	SW-846 8260C	x		x	
Semi-Volatile Organics	SW-846 8270D			x	
Polychlorinated Biphenyls	SW-846 8082A			x	
Pesticides	SW-846 8081A			x	
Metals	SW-846 6010C & 7471A			x	
Total Organic Carbon	SW-846 9060A			x	
Bacteria & Functional Genes	CENSUS			x**	
Surface Water Samples					
Volatile Organics	SW-846 8260C			x	
Semi-Volatile Organics	SW-846 8270D			x	x
Polychlorinated Biphenyls	SW-846 8082A			x	
Pesticides	SW-846 8081A			x	
Metals	SW-846 6010C & 7471A			x	x
Sediment Samples					
Volatile Organics	SW-846 8260C			x	
Semi-Volatile Organics	SW-846 8270D			x	x
Polychlorinated Biphenyls	SW-846 8082A			x	
Pesticides	SW-846 8081A			x	
Metals	SW-846 6010C & 7470A			x	x
Total Organic Carbon	SW-846 9060A			x	x
Vapor Intrusion Samples					
Volatile Organics	EPA TO-15			x	

Notes:

* -RCRA metals

** - for five select wells only

TABLE 3
GROUNDWATER LEVEL MEASUREMENTS - MARCH 23, 2017
FORMER BERNZOMATIC FACILITY

Location ID	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date	Depth to Water (ft)	Water Elev. (ft)
MW-01	1172819.43	1203736.30	546.63	546.63	546.31	A	3/23/2017	2.48	543.83
MW-02	1172880.23	1203725.44	546.66	546.66	546.36	A	3/23/2017	3.45	542.91
MW-03	1172808.01	1203693.17	546.71	546.71	546.42	A	3/23/2017	3.03	543.39
MW-04	1172870.67	1203681.71	546.68	546.68	546.42	A	3/23/2017	3.81	542.61
MW-05	1173157.74	1203910.37	546.64	546.64	546.14	A	3/23/2017	2.96	543.18
MW-06	1173182.13	1203969.20	546.22	546.22	545.97	A	3/23/2017	2.99	542.98
MW-07	1173149.14	1203972.60	546.25	546.25	545.92	A	3/23/2017	2.91	543.01
MW-08	1173163.30	1203971.60	546.49	546.49	546.22	D	3/23/2017	5.91	540.31
MW-09	1173205.98	1203945.35	546.42	546.42	545.91	A	3/23/2017	3.20	542.71
MW-10	1173166.60	1203998.41	546.82	546.82	546.43	A	3/23/2017	4.08	542.35
MW-11	1173112.01	1203968.18	546.56	546.56	545.98	A	3/23/2017	2.70	543.28
MW-12	1172840.05	1203809.31	545.97	545.97	545.55	A	3/23/2017	1.46	544.09
MW-13	1172780.88	1203742.61	546.60	546.60	546.18	A	3/23/2017	2.35	543.83
MW-14	1172803.63	1203992.26	545.90	545.90	545.57	A	3/23/2017	1.25	544.32
MW-15	1173154.06	1203279.07	541.51	541.51	541.26	A	3/23/2017	0.84	540.42
MW-16	1173206.91	1203566.09	541.69	541.69	541.41	A	3/23/2017	1.55	539.86
MW-17	1173284.50	1203863.17	545.69	545.69	545.42	A	3/23/2017	3.05	542.37
MW-18	1173242.17	1204003.08	546.09	546.09	545.73	A	3/23/2017	3.47	542.26
MW-19	1173024.71	1203969.90	545.94	545.94	545.63	A	3/23/2017	1.98	543.65
MW-20	1173068.44	1203599.86	542.69	542.69	542.38	A	3/23/2017	1.28	541.10
MW-21	1173124.67	1203714.67	542.83	542.83	542.60	A	3/23/2017	1.59	541.01

Geologic Zone:

S Shallow Unconfined Aquifer

D Deep (Bedrock) Aquifer

TABLE 4A
SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-14	MW-15	MW-16	MW-16	MW-17
Sample ID					MW-14-SS (0-2)"	MW-15-SS	MW-16-SS	MW-66-SS	MW-17-SS
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2
Date Sampled					02/27/17	02/28/17	02/28/17	02/28/17	02/28/17
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**				Field Duplicate (1-1)	
Volatile Organic Compounds									
Tetrachloroethene	MG/KG	1.3	1.3	300					
Semivolatile Organic Compounds									
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	1000			0.045 J		
Acenaphthene	MG/KG	20	98	1000					
Anthracene	MG/KG	100	1000	1000		1.1 J			
Benzo(a)anthracene	MG/KG	1	1	11	0.72 J	7.1	0.11 J		
Benzo(a)pyrene	MG/KG	1	22	1.1	0.82 J	6.8	0.12 J	0.030 J	
Benzo(b)fluoranthene	MG/KG	1	1.7	11	1.1 J	10	0.17 J	0.044 J	
Benzo(g,h,i)perylene	MG/KG	100	1000	1000	0.69 J	5.9	0.14 J	0.037 J	
Benzo(k)fluoranthene	MG/KG	0.8	1.7	110	0.47 J	4.4 J	0.085 J		
bis(2-Ethylhexyl)phthalate	MG/KG	50	435	-			0.066 J	0.063 J	
Carbazole	MG/KG	-	-	-		1.0 J			
Chrysene	MG/KG	1	1	110	1.0 J	9.1	0.16 J		
Dibenz(a,h)anthracene	MG/KG	0.33	1000	1.1		1.5 J			
Di-n-octylphthalate	MG/KG	100	120	-		5.4	0.059 J		
Fluoranthene	MG/KG	100	1000	1000	1.8 J	18	0.27 J	0.047 J	
Fluorene	MG/KG	30	386	1000					
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	11	0.58 J	4.7	0.10 J	0.030 J	
Phenanthrene	MG/KG	100	1000	1000	0.77 J	8.0	0.092 J		

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA - Not Analyzed

J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.

J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4A
SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-14	MW-15	MW-16	MW-16	MW-17
Sample ID					MW-14-SS (0-2)"	MW-15-SS	MW-16-SS	MW-66-SS	MW-17-SS
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2
Date Sampled					02/27/17	02/28/17	02/28/17	02/28/17	02/28/17
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**				Field Duplicate (1-1)	
Semivolatile Organic Compounds									
Pyrene	MG/KG	100	1000	1000	1.6 J	15	0.24 J	0.040 J	
Pesticide Organic Compounds									
4,4'-DDD	MG/KG	0.0033	14	180					
4,4'-DDE	MG/KG	0.0033	17	120	0.0027 J				
4,4'-DDT	MG/KG	0.0033	136	94	0.0047 J		0.00071 J		
alpha-BHC	MG/KG	0.02	0.02	6.8					
gamma-BHC (Lindane)	MG/KG	0.1	0.1	23		0.023 J			
Metals									
Aluminum	MG/KG	10000	-	-	7,790	6,000	2,980	3,030	2,770
Antimony	MG/KG	12	-	-		0.94 J			
Arsenic	MG/KG	13	16	16	3.7	2.8	4.6	4.0	4.4
Barium	MG/KG	350	820	10000	54.3	50.2	12.0 J	25.7 J	9.1
Beryllium	MG/KG	7.2	47	2700	0.38	0.27 J	0.17 J	0.18 J	0.16 J
Cadmium	MG/KG	2.5	7.5	60	0.26	1.1	0.057 J	0.23	
Calcium	MG/KG	10000	-	-	17,900	86,600 J	169,000	169,000	163,000
Chromium	MG/KG	30	NS	6800	10.6	13.7	4.7	5.3	5.0
Cobalt	MG/KG	20	-	-	4.2	3.8	2.0	1.9	1.7
Copper	MG/KG	50	1720	10000	24.7	42.9	7.9	7.6	6.4
Iron	MG/KG	2000	-	-	12,100	15,300 J	8,800	7,010	6,200

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA - Not Analyzed

J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.

J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

Advanced Selection: amk-tem
J:\Projects\Small_Chemistry_Jobs\DB\Program\EDMS.md
Printed: 5/30/2018 10:20:38 AM
[SITE KEY] = 22 AND [MATRIX] = 'SO' AND ([SBD] = '0' AND [SED] = '0.16') AND [LOCID] NOT LIKE 'I

TABLE 4A
SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-14	MW-15	MW-16	MW-16	MW-17
Sample ID					MW-14-SS (0-2)"	MW-15-SS	MW-16-SS	MW-66-SS	MW-17-SS
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2
Date Sampled					02/27/17	02/28/17	02/28/17	02/28/17	02/28/17
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**				Field Duplicate (1-1)	
Metals									
Lead	MG/KG	63	450	3900	65.1	28.2	26.4	18.0	17.1
Magnesium	MG/KG	-	-	-	9,480	26,800	102,000	105,000	102,000
Manganese	MG/KG	1600	2000	10000	280	328 J	461	480	433
Mercury	MG/KG	0.18	0.73	5.7	0.040	0.024 J			
Nickel	MG/KG	30	130	10000	10.4	12.4	4.7 J	4.7 J	3.6 J
Potassium	MG/KG	-	-	-	1,400	1,000	1,630	1,590	1,500
Selenium	MG/KG	3.9	4	6800	1.9 J				
Silver	MG/KG	2	8.3	6800			0.24 J		
Sodium	MG/KG	-	-	-	156 J	206	188	202	202
Thallium	MG/KG	5	-	-	0.41 J				
Vanadium	MG/KG	39	-	-	16.8	14.5	5.2	5.5	5.1
Zinc	MG/KG	109	2480	10000	67.9	132 J	19.8 J	53.3 J	16.0

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA - Not Analyzed

J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.

J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4A
SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-18	MW-19	MW-20	SB-05	SB-06
Sample ID					MW-18-SS (0-2)	MW-19-SS (0-2)"	MW-20-SS	SB-05-SS	SB-06-SS (0-2)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2
Date Sampled					03/01/17	02/27/17	02/28/17	02/28/17	03/01/17
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
Tetrachloroethene	MG/KG	1.3	1.3	300					
Semivolatile Organic Compounds									
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	1000					
Acenaphthene	MG/KG	20	98	1000					
Anthracene	MG/KG	100	1000	1000					
Benzo(a)anthracene	MG/KG	1	1	11		0.88 J		0.54 J	0.92 J
Benzo(a)pyrene	MG/KG	1	22	1.1		0.90 J		0.62 J	0.93 J
Benzo(b)fluoranthene	MG/KG	1	1.7	11		1.3		0.68 J	1.1 J
Benzo(g,h,i)perylene	MG/KG	100	1000	1000		0.76 J		0.62 J	0.78 J
Benzo(k)fluoranthene	MG/KG	0.8	1.7	110		0.55 J			0.70 J
bis(2-Ethylhexyl)phthalate	MG/KG	50	435	-					
Carbazole	MG/KG	-	-	-		0.14 J			
Chrysene	MG/KG	1	1	110		1.1			1.2 J
Dibenz(a,h)anthracene	MG/KG	0.33	1000	1.1					
Di-n-octylphthalate	MG/KG	100	120	-					
Fluoranthene	MG/KG	100	1000	1000	0.44 J	2.5		1.3 J	2.5
Fluorene	MG/KG	30	386	1000					
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	11		0.64 J		0.53 J	0.66 J
Phenanthrene	MG/KG	100	1000	1000		1.4			1.3 J

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA - Not Analyzed

J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.

J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4A
SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-18	MW-19	MW-20	SB-05	SB-06
Sample ID					MW-18-SS (0-2)	MW-19-SS (0-2)"	MW-20-SS	SB-05-SS	SB-06-SS (0-2)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2
Date Sampled					03/01/17	02/27/17	02/28/17	02/28/17	03/01/17
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Pyrene	MG/KG	100	1000	1000		2.1		1.1 J	2.0 J
Pesticide Organic Compounds									
4,4'-DDD	MG/KG	0.0033	14	180		0.0044 J			
4,4'-DDE	MG/KG	0.0033	17	120	0.14 J	0.0026 J		0.0012 J	0.0046 J
4,4'-DDT	MG/KG	0.0033	136	94	0.032 J	0.021 J	0.00049 J	0.0026 J	0.0063 J
alpha-BHC	MG/KG	0.02	0.02	6.8				0.0014 J	
gamma-BHC (Lindane)	MG/KG	0.1	0.1	23					
Metals									
Aluminum	MG/KG	10000	-	-	5,030	13,500	2,380	6,080	13,800
Antimony	MG/KG	12	-	-					
Arsenic	MG/KG	13	16	16	6.8	7.6	3.5	2.5	3.3
Barium	MG/KG	350	820	10000	28.7 J	76.9	8.4	41.2	47.6
Beryllium	MG/KG	7.2	47	2700	0.21 J	0.51	0.13 J	0.27	0.35
Cadmium	MG/KG	2.5	7.5	60	0.51 J	0.41	0.068 J	0.19 J	0.19 J
Calcium	MG/KG	10000	-	-	109,000	5,270	180,000	17,600	4,600
Chromium	MG/KG	30	NS	6800	8.2	15.0	3.7	7.5	13.3
Cobalt	MG/KG	20	-	-	2.7	6.1	1.6	4.6	4.9
Copper	MG/KG	50	1720	10000	43.4 J	48.5		19.9	32.6
Iron	MG/KG	2000	-	-	9,870	21,000	6,030	10,500	13,600

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA - Not Analyzed

J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.

J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

Advanced Selection: amk-tem
J:\Projects\Small_Chemistry_Jobs\DB\Program\EDMS.md
Printed: 5/30/2018 10:20:38 AM
[SITE KEY] = 22 AND [MATRIX] = 'SO' AND ([SBD] = '0' AND [SED] = '0.16') AND [LOCID] NOT LIKE '%D

TABLE 4A
SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-18	MW-19	MW-20	SB-05	SB-06
Sample ID					MW-18-SS (0-2)	MW-19-SS (0-2)"	MW-20-SS	SB-05-SS	SB-06-SS (0-2)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2
Date Sampled					03/01/17	02/27/17	02/28/17	02/28/17	03/01/17
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Lead	MG/KG	63	450	3900	81.7 J	32.6	18.6	15.2	20.9
Magnesium	MG/KG	-	-	-	66,900	3,210	114,000	4,780	3,410
Manganese	MG/KG	1600	2000	10000	716 J-	787	556	514	253
Mercury	MG/KG	0.18	0.73	5.7	0.046	0.050		0.18	0.056
Nickel	MG/KG	30	130	10000	6.9 J	13.4	3.3 J	8.6	11.7
Potassium	MG/KG	-	-	-	1,350	1,510	1,340	862	1,240
Selenium	MG/KG	3.9	4	6800		0.83 J			1.2 J
Silver	MG/KG	2	8.3	6800					
Sodium	MG/KG	-	-	-	171 J	83.4 J	199		76.2 J
Thallium	MG/KG	5	-	-					
Vanadium	MG/KG	39	-	-	12.1	26.1	4.2	15.5	23.7
Zinc	MG/KG	109	2480	10000	77.5 J	93.0	20.7	48.0	64.5

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA - Not Analyzed

J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.

J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4A
SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					SB-07	SB-08	SS-01	SS-01	SS-02
Sample ID					SB-07-SS (0-2)"	SB-08-SS (0-2)"	SS-01	SS-51	SS-02
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2
Date Sampled					02/27/17	02/27/17	03/08/17	03/08/17	03/08/17
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**				Field Duplicate (1-1)	
Volatile Organic Compounds									
Tetrachloroethene	MG/KG	1.3	1.3	300	0.0012 J				
Semivolatile Organic Compounds									
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	1000					
Acenaphthene	MG/KG	20	98	1000					
Anthracene	MG/KG	100	1000	1000			1.8 J	2.2 J	
Benzo(a)anthracene	MG/KG	1	1	11	0.61 J	0.37 J	9.3	10	2.3 J
Benzo(a)pyrene	MG/KG	1	22	1.1	0.68 J	0.40 J	9.3	10	2.5 J
Benzo(b)fluoranthene	MG/KG	1	1.7	11		0.49 J	13	15	3.5 J
Benzo(g,h,i)perylene	MG/KG	100	1000	1000	0.55 J	0.33 J	7.2	8.1	2.1 J
Benzo(k)fluoranthene	MG/KG	0.8	1.7	110			4.9 J	5.0 J	1.7 J
bis(2-Ethylhexyl)phthalate	MG/KG	50	435	-	3.0 J				
Carbazole	MG/KG	-	-	-			0.82 J	0.99 J	
Chrysene	MG/KG	1	1	110			10	12	3.0 J
Dibenz(a,h)anthracene	MG/KG	0.33	1000	1.1					
Di-n-octylphthalate	MG/KG	100	120	-					
Fluoranthene	MG/KG	100	1000	1000	1.1 J	0.79 J	26	30	6.0
Fluorene	MG/KG	30	386	1000				0.66 J	
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	11		0.31 J	5.7	6.9	1.8 J
Phenanthrene	MG/KG	100	1000	1000			12	14	2.6 J

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA - Not Analyzed

J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.

J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4A
SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					SB-07	SB-08	SS-01	SS-01	SS-02
Sample ID					SB-07-SS (0-2)"	SB-08-SS (0-2)"	SS-01	SS-51	SS-02
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2
Date Sampled					02/27/17	02/27/17	03/08/17	03/08/17	03/08/17
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**				Field Duplicate (1-1)	
Semivolatile Organic Compounds									
Pyrene	MG/KG	100	1000	1000	0.86 J	0.64 J	18	21	4.9 J
Pesticide Organic Compounds									
4,4'-DDD	MG/KG	0.0033	14	180					
4,4'-DDE	MG/KG	0.0033	17	120		0.0040 J			
4,4'-DDT	MG/KG	0.0033	136	94		0.0029 J			
alpha-BHC	MG/KG	0.02	0.02	6.8					
gamma-BHC (Lindane)	MG/KG	0.1	0.1	23					
Metals									
Aluminum	MG/KG	10000	-	-	12,000	11,000	5,800	6,230	9,670
Antimony	MG/KG	12	-	-					
Arsenic	MG/KG	13	16	16	4.8	5.4 J	3.0 J	2.9 J	4.7
Barium	MG/KG	350	820	10000	59.3	69.6	37.0	37.0	71.2
Beryllium	MG/KG	7.2	47	2700	0.44	0.42 J	0.28 J	0.36	0.44
Cadmium	MG/KG	2.5	7.5	60	0.32	0.40 J	0.46	0.35	0.29 J
Calcium	MG/KG	10000	-	-	8,730	23,500	64,800	54,300	12,600
Chromium	MG/KG	30	NS	6800	13.3	13.8 J	7.9	11.8	11.3
Cobalt	MG/KG	20	-	-	5.4	5.2	3.0	3.7	4.5
Copper	MG/KG	50	1720	10000	27.8	22.1 J	26.2	27.7	33.5
Iron	MG/KG	2000	-	-	13,700	13,900	9,310	9,640	11,800

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA - Not Analyzed

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J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

Advanced Selection: amk-tem
J:\Projects\Small_Chemistry_Jobs\DB\Program\EDMS.md
Printed: 5/30/2018 10:20:39 AM
[SITE KEY] = 22 AND [MATRIX] = 'SO' AND ([SBD] = '0' AND [SED] = '0.16') AND [LOCID] NOT LIKE '%D

TABLE 4A
SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					SB-07	SB-08	SS-01	SS-01	SS-02
Sample ID					SB-07-SS (0-2)"	SB-08-SS (0-2)"	SS-01	SS-51	SS-02
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2
Date Sampled					02/27/17	02/27/17	03/08/17	03/08/17	03/08/17
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**				Field Duplicate (1-1)	
Metals									
Lead	MG/KG	63	450	3900	39.3	80.3 J	29.7	46.9	69.6
Magnesium	MG/KG	-	-	-	5,200	14,600	28,100 J	11,600 J	5,120
Manganese	MG/KG	1600	2000	10000	424	434	367	306	261
Mercury	MG/KG	0.18	0.73	5.7	0.090	0.12	0.032	0.031 J	0.043
Nickel	MG/KG	30	130	10000	12.7	11.2	8.7	9.9	11.7
Potassium	MG/KG	-	-	-	1,700	1,480	1,000	1,080	913
Selenium	MG/KG	3.9	4	6800	0.63 J				
Silver	MG/KG	2	8.3	6800					
Sodium	MG/KG	-	-	-	68.4 J	86.1 J			
Thallium	MG/KG	5	-	-					
Vanadium	MG/KG	39	-	-	21.0	20.5	12.7	15.3	17.5
Zinc	MG/KG	109	2480	10000	103	107 J	91.2	81.6	95.1 J

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA - Not Analyzed

J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.

J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4A
SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					SS-03	SS-04	SS-05	SS-06	SS-07
Sample ID					SS-03	SS-04-0-2_040618	SS-05-0-2_040618	SS-06-0-2_040618	SS-07-0-2_040618
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2
Date Sampled					03/29/17	04/06/18	04/06/18	04/06/18	04/06/18
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
Tetrachloroethene	MG/KG	1.3	1.3	300		NA	NA	NA	NA
Semivolatile Organic Compounds									
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	1000					
Acenaphthene	MG/KG	20	98	1000	0.56 J				
Anthracene	MG/KG	100	1000	1000	1.2 J				
Benzo(a)anthracene	MG/KG	1	1	11	6.4	0.21 J	0.26 J	0.21 J	0.88 J
Benzo(a)pyrene	MG/KG	1	22	1.1	7.5	0.3 J	0.33 J		0.99 J
Benzo(b)fluoranthene	MG/KG	1	1.7	11	11	0.37 J	0.37 J	0.27 J	1.4
Benzo(g,h,i)perylene	MG/KG	100	1000	1000	6.0		0.25 J	0.17 J	0.75 J
Benzo(k)fluoranthene	MG/KG	0.8	1.7	110	5.4	0.21 J	0.23 J		0.72 J
bis(2-Ethylhexyl)phthalate	MG/KG	50	435	-					
Carbazole	MG/KG	-	-	-	1.9 J				0.18 J
Chrysene	MG/KG	1	1	110	9.5	0.31 J	0.3 J		1.3
Dibenz(a,h)anthracene	MG/KG	0.33	1000	1.1					
Di-n-octylphthalate	MG/KG	100	120	-					
Fluoranthene	MG/KG	100	1000	1000	26	0.63 J	0.7 J	0.54 J	2.6
Fluorene	MG/KG	30	386	1000	0.59 J				
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	11	5.0	0.24 J			0.7 J
Phenanthrene	MG/KG	100	1000	1000	14	0.28 J	0.27 J	0.23 J	1.1 J

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA - Not Analyzed

J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.

J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4A
SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					SS-03	SS-04	SS-05	SS-06	SS-07
Sample ID					SS-03	SS-04-0-2_040618	SS-05-0-2_040618	SS-06-0-2_040618	SS-07-0-2_040618
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2
Date Sampled					03/29/17	04/06/18	04/06/18	04/06/18	04/06/18
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Pyrene	MG/KG	100	1000	1000	18	0.47 J	0.46 J	0.37 J	2.1
Pesticide Organic Compounds									
4,4'-DDD	MG/KG	0.0033	14	180		NA	NA	NA	NA
4,4'-DDE	MG/KG	0.0033	17	120		NA	NA	NA	NA
4,4'-DDT	MG/KG	0.0033	136	94	0.012 J	NA	NA	NA	NA
alpha-BHC	MG/KG	0.02	0.02	6.8		NA	NA	NA	NA
gamma-BHC (Lindane)	MG/KG	0.1	0.1	23		NA	NA	NA	NA
Metals									
Aluminum	MG/KG	10000	-	-	10,200	NA	NA	NA	NA
Antimony	MG/KG	12	-	-		NA	NA	NA	NA
Arsenic	MG/KG	13	16	16	3.6	NA	NA	NA	NA
Barium	MG/KG	350	820	10000	40.0 J+	NA	NA	NA	NA
Beryllium	MG/KG	7.2	47	2700	0.28 J	NA	NA	NA	NA
Cadmium	MG/KG	2.5	7.5	60	0.78	NA	NA	NA	NA
Calcium	MG/KG	10000	-	-	28,700	NA	NA	NA	NA
Chromium	MG/KG	30	NS	6800	12.3	NA	NA	NA	NA
Cobalt	MG/KG	20	-	-	2.8	NA	NA	NA	NA
Copper	MG/KG	50	1720	10000	15.7	NA	NA	NA	NA
Iron	MG/KG	2000	-	-	11,700	NA	NA	NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA - Not Analyzed

J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.

J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4A
SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					SS-03	SS-04	SS-05	SS-06	SS-07
Sample ID					SS-03	SS-04-0-2_040618	SS-05-0-2_040618	SS-06-0-2_040618	SS-07-0-2_040618
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2
Date Sampled					03/29/17	04/06/18	04/06/18	04/06/18	04/06/18
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Lead	MG/KG	63	450	3900	30.2	NA	NA	NA	NA
Magnesium	MG/KG	-	-	-	14,800	NA	NA	NA	NA
Manganese	MG/KG	1600	2000	10000	262	NA	NA	NA	NA
Mercury	MG/KG	0.18	0.73	5.7	0.051	NA	NA	NA	NA
Nickel	MG/KG	30	130	10000	7.3 J	NA	NA	NA	NA
Potassium	MG/KG	-	-	-	1,080	NA	NA	NA	NA
Selenium	MG/KG	3.9	4	6800		NA	NA	NA	NA
Silver	MG/KG	2	8.3	6800		NA	NA	NA	NA
Sodium	MG/KG	-	-	-	107 J	NA	NA	NA	NA
Thallium	MG/KG	5	-	-		NA	NA	NA	NA
Vanadium	MG/KG	39	-	-	19.7	NA	NA	NA	NA
Zinc	MG/KG	109	2480	10000	77.4	NA	NA	NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA - Not Analyzed

J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.

J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-01	MW-01	MW-02	MW-02	MW-02
Sample ID					MW01 (0-2)	MW01 (11-12)	FD-20141020	MW-02 (0-2)	MW-02 (11-12)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					0.0-2.0	11.0-12.0	0.0-2.0	0.0-2.0	11.0-12.0
Date Sampled					10/21/14	10/21/14	10/20/14	10/20/14	10/20/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**			Field Duplicate (1-1)		
Volatile Organic Compounds									
1,1,1-Trichloroethane	MG/KG	0.68	0.68	1000					
1,1-Dichloroethane	MG/KG	0.27	0.27	480					
1,2-Dichloroethene (cis)	MG/KG	0.25	0.25	1000		0.00036 J			
1,2-Dichloroethene (trans)	MG/KG	0.19	0.19	1000					
Acetone	MG/KG	0.05	0.05	1000	0.0051 J	0.0049	0.0049 J		0.0015 J
Benzene	MG/KG	0.06	0.06	89					
Carbon disulfide	MG/KG	2.7	2.7	-		0.00025 J			
Chloroform	MG/KG	0.37	0.37	700					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	0.12	1000		0.00040 J			
Methyl tert-butyl ether	MG/KG	0.93	0.93	1000					
Methylcyclohexane	MG/KG	-	-	-		8.10E-05 J			
Styrene	MG/KG	300	-	-					
Tetrachloroethene	MG/KG	1.3	1.3	300					
Toluene	MG/KG	0.7	0.7	1000					
Trichloroethene	MG/KG	0.47	0.47	400					0.00019 J
Semivolatile Organic Compounds									
2-Methylnaphthalene	MG/KG	0.41	36.4	-	NA	NA	NA	NA	NA
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	1000	NA	NA	NA	NA	NA
Benzo(a)anthracene	MG/KG	1	1	11	NA	NA	NA	NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA-Not Analyzed

J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.

J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-01	MW-01	MW-02	MW-02	MW-02
Sample ID					MW01 (0-2)	MW01 (11-12)	FD-20141020	MW-02 (0-2)	MW-02 (11-12)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					0.0-2.0	11.0-12.0	0.0-2.0	0.0-2.0	11.0-12.0
Date Sampled					10/21/14	10/21/14	10/20/14	10/20/14	10/20/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**			Field Duplicate (1-1)		
Semivolatile Organic Compounds									
Benzo(a)pyrene	MG/KG	1	22	1.1	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	MG/KG	1	1.7	11	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	MG/KG	100	1000	1000	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	MG/KG	0.8	1.7	110	NA	NA	NA	NA	NA
Chrysene	MG/KG	1	1	110	NA	NA	NA	NA	NA
Di-n-butylphthalate	MG/KG	0.014	8.1	-	NA	NA	NA	NA	NA
Di-n-octylphthalate	MG/KG	100	120	-	NA	NA	NA	NA	NA
Fluoranthene	MG/KG	100	1000	1000	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	11	NA	NA	NA	NA	NA
Naphthalene	MG/KG	12	12	1000	NA	NA	NA	NA	NA
Phenanthrene	MG/KG	100	1000	1000	NA	NA	NA	NA	NA
Pyrene	MG/KG	100	1000	1000	NA	NA	NA	NA	NA
Pesticide Organic Compounds									
4,4'-DDD	MG/KG	0.0033	14	180	NA	NA	NA	NA	NA
4,4'-DDE	MG/KG	0.0033	17	120	NA	NA	NA	NA	NA
4,4'-DDT	MG/KG	0.0033	136	94	NA	NA	NA	NA	NA
alpha-BHC	MG/KG	0.02	0.02	6.8	NA	NA	NA	NA	NA
alpha-Chlordane	MG/KG	0.094	2.9	47	NA	NA	NA	NA	NA
delta-BHC	MG/KG	0.04	0.25	1000	NA	NA	NA	NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA-Not Analyzed

J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.

J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-01	MW-01	MW-02	MW-02	MW-02
Sample ID					MW01 (0-2)	MW01 (11-12)	FD-20141020	MW-02 (0-2)	MW-02 (11-12)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					0.0-2.0	11.0-12.0	0.0-2.0	0.0-2.0	11.0-12.0
Date Sampled					10/21/14	10/21/14	10/20/14	10/20/14	10/20/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**			Field Duplicate (1-1)		
Metals									
Aluminum	MG/KG	10000	-	-	NA	NA	NA	NA	NA
Arsenic	MG/KG	13	16	16	NA	NA	NA	NA	NA
Barium	MG/KG	350	820	10000	NA	NA	NA	NA	NA
Beryllium	MG/KG	7.2	47	2700	NA	NA	NA	NA	NA
Cadmium	MG/KG	2.5	7.5	60	NA	NA	NA	NA	NA
Calcium	MG/KG	10000	-	-	NA	NA	NA	NA	NA
Chromium	MG/KG	30	NS	6800	NA	NA	NA	NA	NA
Cobalt	MG/KG	20	-	-	NA	NA	NA	NA	NA
Copper	MG/KG	50	1720	10000	NA	NA	NA	NA	NA
Iron	MG/KG	2000	-	-	NA	NA	NA	NA	NA
Lead	MG/KG	63	450	3900	NA	NA	NA	NA	NA
Magnesium	MG/KG	-	-	-	NA	NA	NA	NA	NA
Manganese	MG/KG	1600	2000	10000	NA	NA	NA	NA	NA
Mercury	MG/KG	0.18	0.73	5.7	NA	NA	NA	NA	NA
Nickel	MG/KG	30	130	10000	NA	NA	NA	NA	NA
Potassium	MG/KG	-	-	-	NA	NA	NA	NA	NA
Selenium	MG/KG	3.9	4	6800	NA	NA	NA	NA	NA
Sodium	MG/KG	-	-	-	NA	NA	NA	NA	NA
Thallium	MG/KG	5	-	-	NA	NA	NA	NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA-Not Analyzed

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J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-01	MW-01	MW-02	MW-02	MW-02
Sample ID					MW01 (0-2)	MW01 (11-12)	FD-20141020	MW-02 (0-2)	MW-02 (11-12)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					0.0-2.0	11.0-12.0	0.0-2.0	0.0-2.0	11.0-12.0
Date Sampled					10/21/14	10/21/14	10/20/14	10/20/14	10/20/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**			Field Duplicate (1-1)		
Metals									
Vanadium	MG/KG	39	-	-	NA	NA	NA	NA	NA
Zinc	MG/KG	109	2480	10000	NA	NA	NA	NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA-Not Analyzed

J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.

J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-03	MW-03	MW-04	MW-04	MW-05
Sample ID					MW-03 (0-2)	MW03 (11-11.5)	MW-04 (0-2)	MW-04 (10-11)	MW05 (0-2)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					0.0-2.0	11.0-11.5	0.0-2.0	10.0-11.0	0.0-2.0
Date Sampled					10/21/14	10/21/14	10/20/14	10/20/14	10/21/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
1,1,1-Trichloroethane	MG/KG	0.68	0.68	1000					
1,1-Dichloroethane	MG/KG	0.27	0.27	480					
1,2-Dichloroethene (cis)	MG/KG	0.25	0.25	1000					
1,2-Dichloroethene (trans)	MG/KG	0.19	0.19	1000					
Acetone	MG/KG	0.05	0.05	1000	0.0024 J	0.0051 J			0.018
Benzene	MG/KG	0.06	0.06	89					
Carbon disulfide	MG/KG	2.7	2.7	-					
Chloroform	MG/KG	0.37	0.37	700					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	0.12	1000					0.0024 J
Methyl tert-butyl ether	MG/KG	0.93	0.93	1000					
Methylcyclohexane	MG/KG	-	-	-					
Styrene	MG/KG	300	-	-					
Tetrachloroethene	MG/KG	1.3	1.3	300					0.0077
Toluene	MG/KG	0.7	0.7	1000					0.00030 J
Trichloroethene	MG/KG	0.47	0.47	400				0.00017 J	0.00039 J
Semivolatile Organic Compounds									
2-Methylnaphthalene	MG/KG	0.41	36.4	-	NA	NA	NA	NA	NA
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	1000	NA	NA	NA	NA	NA
Benzo(a)anthracene	MG/KG	1	1	11	NA	NA	NA	NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA-Not Analyzed

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B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-03	MW-03	MW-04	MW-04	MW-05
Sample ID					MW-03 (0-2)	MW03 (11-11.5)	MW-04 (0-2)	MW-04 (10-11)	MW05 (0-2)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					0.0-2.0	11.0-11.5	0.0-2.0	10.0-11.0	0.0-2.0
Date Sampled					10/21/14	10/21/14	10/20/14	10/20/14	10/21/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Benzo(a)pyrene	MG/KG	1	22	1.1	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	MG/KG	1	1.7	11	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	MG/KG	100	1000	1000	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	MG/KG	0.8	1.7	110	NA	NA	NA	NA	NA
Chrysene	MG/KG	1	1	110	NA	NA	NA	NA	NA
Di-n-butylphthalate	MG/KG	0.014	8.1	-	NA	NA	NA	NA	NA
Di-n-octylphthalate	MG/KG	100	120	-	NA	NA	NA	NA	NA
Fluoranthene	MG/KG	100	1000	1000	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	11	NA	NA	NA	NA	NA
Naphthalene	MG/KG	12	12	1000	NA	NA	NA	NA	NA
Phenanthrene	MG/KG	100	1000	1000	NA	NA	NA	NA	NA
Pyrene	MG/KG	100	1000	1000	NA	NA	NA	NA	NA
Pesticide Organic Compounds									
4,4'-DDD	MG/KG	0.0033	14	180	NA	NA	NA	NA	NA
4,4'-DDE	MG/KG	0.0033	17	120	NA	NA	NA	NA	NA
4,4'-DDT	MG/KG	0.0033	136	94	NA	NA	NA	NA	NA
alpha-BHC	MG/KG	0.02	0.02	6.8	NA	NA	NA	NA	NA
alpha-Chlordane	MG/KG	0.094	2.9	47	NA	NA	NA	NA	NA
delta-BHC	MG/KG	0.04	0.25	1000	NA	NA	NA	NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA-Not Analyzed

J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.

J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-03	MW-03	MW-04	MW-04	MW-05
Sample ID					MW-03 (0-2)	MW03 (11-11.5)	MW-04 (0-2)	MW-04 (10-11)	MW05 (0-2)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					0.0-2.0	11.0-11.5	0.0-2.0	10.0-11.0	0.0-2.0
Date Sampled					10/21/14	10/21/14	10/20/14	10/20/14	10/21/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Aluminum	MG/KG	10000	-	-	NA	NA	NA	NA	NA
Arsenic	MG/KG	13	16	16	NA	NA	NA	NA	NA
Barium	MG/KG	350	820	10000	NA	NA	NA	NA	NA
Beryllium	MG/KG	7.2	47	2700	NA	NA	NA	NA	NA
Cadmium	MG/KG	2.5	7.5	60	NA	NA	NA	NA	NA
Calcium	MG/KG	10000	-	-	NA	NA	NA	NA	NA
Chromium	MG/KG	30	NS	6800	NA	NA	NA	NA	NA
Cobalt	MG/KG	20	-	-	NA	NA	NA	NA	NA
Copper	MG/KG	50	1720	10000	NA	NA	NA	NA	NA
Iron	MG/KG	2000	-	-	NA	NA	NA	NA	NA
Lead	MG/KG	63	450	3900	NA	NA	NA	NA	NA
Magnesium	MG/KG	-	-	-	NA	NA	NA	NA	NA
Manganese	MG/KG	1600	2000	10000	NA	NA	NA	NA	NA
Mercury	MG/KG	0.18	0.73	5.7	NA	NA	NA	NA	NA
Nickel	MG/KG	30	130	10000	NA	NA	NA	NA	NA
Potassium	MG/KG	-	-	-	NA	NA	NA	NA	NA
Selenium	MG/KG	3.9	4	6800	NA	NA	NA	NA	NA
Sodium	MG/KG	-	-	-	NA	NA	NA	NA	NA
Thallium	MG/KG	5	-	-	NA	NA	NA	NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA-Not Analyzed

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J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-03	MW-03	MW-04	MW-04	MW-05
Sample ID					MW-03 (0-2)	MW03 (11-11.5)	MW-04 (0-2)	MW-04 (10-11)	MW05 (0-2)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					0.0-2.0	11.0-11.5	0.0-2.0	10.0-11.0	0.0-2.0
Date Sampled					10/21/14	10/21/14	10/20/14	10/20/14	10/21/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Vanadium	MG/KG	39	-	-	NA	NA	NA	NA	NA
Zinc	MG/KG	109	2480	10000	NA	NA	NA	NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Only Detected Results Reported.

Advanced Selection: AMK-TEMP1
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[SITE KEY] = 22 AND [MATRIX] = 'SO' AND [SED] <> '0.16' AND [LOCID] NOT LIKE 'ID

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-06	MW-06	MW-07	MW-07	MW-07
Sample ID					MW-06 (0-2)	MW-06 (8-9)	MW-07 (0-2)	FD-20141022	MW-07 (8-9)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					0.0-2.0	8.0-9.0	0.0-2.0	8.0-9.0	8.0-9.0
Date Sampled					10/22/14	10/22/14	10/22/14	10/22/14	10/22/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**				Field Duplicate (1-1)	
Volatile Organic Compounds									
1,1,1-Trichloroethane	MG/KG	0.68	0.68	1000					
1,1-Dichloroethane	MG/KG	0.27	0.27	480					0.00014 J
1,2-Dichloroethene (cis)	MG/KG	0.25	0.25	1000		0.0086		0.00032 J	0.00050 J
1,2-Dichloroethene (trans)	MG/KG	0.19	0.19	1000		0.00026 J			
Acetone	MG/KG	0.05	0.05	1000		0.0048 JB*	0.0037 JB*	0.0039 JB*	0.0032 JB*
Benzene	MG/KG	0.06	0.06	89					
Carbon disulfide	MG/KG	2.7	2.7	-					
Chloroform	MG/KG	0.37	0.37	700	0.00017 J				
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	0.12	1000			0.00071 J	0.00065 J	
Methyl tert-butyl ether	MG/KG	0.93	0.93	1000					
Methylcyclohexane	MG/KG	-	-	-	0.00017 J				
Styrene	MG/KG	300	-	-					
Tetrachloroethene	MG/KG	1.3	1.3	300	0.0019	0.0067		0.0018	0.0027
Toluene	MG/KG	0.7	0.7	1000					
Trichloroethene	MG/KG	0.47	0.47	400	0.00029 J	0.0049		0.0020	0.0030
Semivolatile Organic Compounds									
2-Methylnaphthalene	MG/KG	0.41	36.4	-	NA	NA	NA	NA	NA
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	1000	NA	NA	NA	NA	NA
Benzo(a)anthracene	MG/KG	1	1	11	NA	NA	NA	NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Advanced Selection: AMK-TEMP1
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[SITE KEY] = 22 AND [MATRIX] = 'SO' AND [SED] <> '0.16' AND [LOCID] NOT LIKE 'ID

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-06	MW-06	MW-07	MW-07	MW-07
Sample ID					MW-06 (0-2)	MW-06 (8-9)	MW-07 (0-2)	FD-20141022	MW-07 (8-9)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					0.0-2.0	8.0-9.0	0.0-2.0	8.0-9.0	8.0-9.0
Date Sampled					10/22/14	10/22/14	10/22/14	10/22/14	10/22/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**				Field Duplicate (1-1)	
Semivolatile Organic Compounds									
Benzo(a)pyrene	MG/KG	1	22	1.1	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	MG/KG	1	1.7	11	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	MG/KG	100	1000	1000	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	MG/KG	0.8	1.7	110	NA	NA	NA	NA	NA
Chrysene	MG/KG	1	1	110	NA	NA	NA	NA	NA
Di-n-butylphthalate	MG/KG	0.014	8.1	-	NA	NA	NA	NA	NA
Di-n-octylphthalate	MG/KG	100	120	-	NA	NA	NA	NA	NA
Fluoranthene	MG/KG	100	1000	1000	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	11	NA	NA	NA	NA	NA
Naphthalene	MG/KG	12	12	1000	NA	NA	NA	NA	NA
Phenanthrene	MG/KG	100	1000	1000	NA	NA	NA	NA	NA
Pyrene	MG/KG	100	1000	1000	NA	NA	NA	NA	NA
Pesticide Organic Compounds									
4,4'-DDD	MG/KG	0.0033	14	180	NA	NA	NA	NA	NA
4,4'-DDE	MG/KG	0.0033	17	120	NA	NA	NA	NA	NA
4,4'-DDT	MG/KG	0.0033	136	94	NA	NA	NA	NA	NA
alpha-BHC	MG/KG	0.02	0.02	6.8	NA	NA	NA	NA	NA
alpha-Chlordane	MG/KG	0.094	2.9	47	NA	NA	NA	NA	NA
delta-BHC	MG/KG	0.04	0.25	1000	NA	NA	NA	NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

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Only Detected Results Reported.

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-06	MW-06	MW-07	MW-07	MW-07
Sample ID					MW-06 (0-2)	MW-06 (8-9)	MW-07 (0-2)	FD-20141022	MW-07 (8-9)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					0.0-2.0	8.0-9.0	0.0-2.0	8.0-9.0	8.0-9.0
Date Sampled					10/22/14	10/22/14	10/22/14	10/22/14	10/22/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**				Field Duplicate (1-1)	
Metals									
Aluminum	MG/KG	10000	-	-	NA	NA	NA	NA	NA
Arsenic	MG/KG	13	16	16	NA	NA	NA	NA	NA
Barium	MG/KG	350	820	10000	NA	NA	NA	NA	NA
Beryllium	MG/KG	7.2	47	2700	NA	NA	NA	NA	NA
Cadmium	MG/KG	2.5	7.5	60	NA	NA	NA	NA	NA
Calcium	MG/KG	10000	-	-	NA	NA	NA	NA	NA
Chromium	MG/KG	30	NS	6800	NA	NA	NA	NA	NA
Cobalt	MG/KG	20	-	-	NA	NA	NA	NA	NA
Copper	MG/KG	50	1720	10000	NA	NA	NA	NA	NA
Iron	MG/KG	2000	-	-	NA	NA	NA	NA	NA
Lead	MG/KG	63	450	3900	NA	NA	NA	NA	NA
Magnesium	MG/KG	-	-	-	NA	NA	NA	NA	NA
Manganese	MG/KG	1600	2000	10000	NA	NA	NA	NA	NA
Mercury	MG/KG	0.18	0.73	5.7	NA	NA	NA	NA	NA
Nickel	MG/KG	30	130	10000	NA	NA	NA	NA	NA
Potassium	MG/KG	-	-	-	NA	NA	NA	NA	NA
Selenium	MG/KG	3.9	4	6800	NA	NA	NA	NA	NA
Sodium	MG/KG	-	-	-	NA	NA	NA	NA	NA
Thallium	MG/KG	5	-	-	NA	NA	NA	NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

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Concentration Exceeds Criteria 1

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Border Concentration Exceeds Criteria (3)

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Only Detected Results Reported.

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-06	MW-06	MW-07	MW-07	MW-07
Sample ID					MW-06 (0-2)	MW-06 (8-9)	MW-07 (0-2)	FD-20141022	MW-07 (8-9)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					0.0-2.0	8.0-9.0	0.0-2.0	8.0-9.0	8.0-9.0
Date Sampled					10/22/14	10/22/14	10/22/14	10/22/14	10/22/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**				Field Duplicate (1-1)	
Metals									
Vanadium	MG/KG	39	-	-	NA	NA	NA	NA	NA
Zinc	MG/KG	109	2480	10000	NA	NA	NA	NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

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Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Only Detected Results Reported.

Advanced Selection: AMK-TEMP1
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[SITE KEY] = 22 AND [MATRIX] = 'SO' AND [SED] <> '0.16' AND [LOCID] NOT LIKE 'ID

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-08	MW-09	MW-10	MW-11	MW-11
Sample ID					MW-08 (8-9)	MW-09 (8-9)	MW-10 (9-10)	FD-20150203	MW-11 (8-9)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					8.0-9.0	8.0-9.0	9.0-10.0	8.0-9.0	8.0-9.0
Date Sampled					02/03/15	02/03/15	02/05/15	02/03/15	02/03/15
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**				Field Duplicate (1-1)	
Volatile Organic Compounds									
1,1,1-Trichloroethane	MG/KG	0.68	0.68	1000				0.00031 J	0.00023 J
1,1-Dichloroethane	MG/KG	0.27	0.27	480					
1,2-Dichloroethene (cis)	MG/KG	0.25	0.25	1000	0.00065 J			0.00038 J	0.00054 J
1,2-Dichloroethene (trans)	MG/KG	0.19	0.19	1000					
Acetone	MG/KG	0.05	0.05	1000	0.0049 J	0.0017 J		0.0036 J	0.0022 J
Benzene	MG/KG	0.06	0.06	89		0.00014 J			0.00015 J
Carbon disulfide	MG/KG	2.7	2.7	-					
Chloroform	MG/KG	0.37	0.37	700					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	0.12	1000					
Methyl tert-butyl ether	MG/KG	0.93	0.93	1000					
Methylcyclohexane	MG/KG	-	-	-					0.00035 J
Styrene	MG/KG	300	-	-					
Tetrachloroethene	MG/KG	1.3	1.3	300	0.0030		0.050	0.00038 J	0.00078 J
Toluene	MG/KG	0.7	0.7	1000		0.00014 J			0.00025 J
Trichloroethene	MG/KG	0.47	0.47	400	0.0012 J		0.024	0.0045	0.0038
Semivolatile Organic Compounds									
2-Methylnaphthalene	MG/KG	0.41	36.4	-	NA	NA	NA	NA	NA
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	1000	NA	NA	NA	NA	NA
Benzo(a)anthracene	MG/KG	1	1	11	NA	NA	NA	NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

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Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

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Advanced Selection: AMK-TEMP1
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[SITE KEY] = 22 AND [MATRIX] = 'SO' AND [SED] <> '0.16' AND [LOCID] NOT LIKE 'ID

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-08	MW-09	MW-10	MW-11	MW-11
Sample ID					MW-08 (8-9)	MW-09 (8-9)	MW-10 (9-10)	FD-20150203	MW-11 (8-9)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					8.0-9.0	8.0-9.0	9.0-10.0	8.0-9.0	8.0-9.0
Date Sampled					02/03/15	02/03/15	02/05/15	02/03/15	02/03/15
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**				Field Duplicate (1-1)	
Semivolatile Organic Compounds									
Benzo(a)pyrene	MG/KG	1	22	1.1	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	MG/KG	1	1.7	11	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	MG/KG	100	1000	1000	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	MG/KG	0.8	1.7	110	NA	NA	NA	NA	NA
Chrysene	MG/KG	1	1	110	NA	NA	NA	NA	NA
Di-n-butylphthalate	MG/KG	0.014	8.1	-	NA	NA	NA	NA	NA
Di-n-octylphthalate	MG/KG	100	120	-	NA	NA	NA	NA	NA
Fluoranthene	MG/KG	100	1000	1000	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	11	NA	NA	NA	NA	NA
Naphthalene	MG/KG	12	12	1000	NA	NA	NA	NA	NA
Phenanthrene	MG/KG	100	1000	1000	NA	NA	NA	NA	NA
Pyrene	MG/KG	100	1000	1000	NA	NA	NA	NA	NA
Pesticide Organic Compounds									
4,4'-DDD	MG/KG	0.0033	14	180	NA	NA	NA	NA	NA
4,4'-DDE	MG/KG	0.0033	17	120	NA	NA	NA	NA	NA
4,4'-DDT	MG/KG	0.0033	136	94	NA	NA	NA	NA	NA
alpha-BHC	MG/KG	0.02	0.02	6.8	NA	NA	NA	NA	NA
alpha-Chlordane	MG/KG	0.094	2.9	47	NA	NA	NA	NA	NA
delta-BHC	MG/KG	0.04	0.25	1000	NA	NA	NA	NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA-Not Analyzed

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J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-08	MW-09	MW-10	MW-11	MW-11
Sample ID					MW-08 (8-9)	MW-09 (8-9)	MW-10 (9-10)	FD-20150203	MW-11 (8-9)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					8.0-9.0	8.0-9.0	9.0-10.0	8.0-9.0	8.0-9.0
Date Sampled					02/03/15	02/03/15	02/05/15	02/03/15	02/03/15
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**				Field Duplicate (1-1)	
Metals									
Aluminum	MG/KG	10000	-	-	NA	NA	NA	NA	NA
Arsenic	MG/KG	13	16	16	NA	NA	NA	NA	NA
Barium	MG/KG	350	820	10000	NA	NA	NA	NA	NA
Beryllium	MG/KG	7.2	47	2700	NA	NA	NA	NA	NA
Cadmium	MG/KG	2.5	7.5	60	NA	NA	NA	NA	NA
Calcium	MG/KG	10000	-	-	NA	NA	NA	NA	NA
Chromium	MG/KG	30	NS	6800	NA	NA	NA	NA	NA
Cobalt	MG/KG	20	-	-	NA	NA	NA	NA	NA
Copper	MG/KG	50	1720	10000	NA	NA	NA	NA	NA
Iron	MG/KG	2000	-	-	NA	NA	NA	NA	NA
Lead	MG/KG	63	450	3900	NA	NA	NA	NA	NA
Magnesium	MG/KG	-	-	-	NA	NA	NA	NA	NA
Manganese	MG/KG	1600	2000	10000	NA	NA	NA	NA	NA
Mercury	MG/KG	0.18	0.73	5.7	NA	NA	NA	NA	NA
Nickel	MG/KG	30	130	10000	NA	NA	NA	NA	NA
Potassium	MG/KG	-	-	-	NA	NA	NA	NA	NA
Selenium	MG/KG	3.9	4	6800	NA	NA	NA	NA	NA
Sodium	MG/KG	-	-	-	NA	NA	NA	NA	NA
Thallium	MG/KG	5	-	-	NA	NA	NA	NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA-Not Analyzed

J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.

J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-08	MW-09	MW-10	MW-11	MW-11
Sample ID					MW-08 (8-9)	MW-09 (8-9)	MW-10 (9-10)	FD-20150203	MW-11 (8-9)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					8.0-9.0	8.0-9.0	9.0-10.0	8.0-9.0	8.0-9.0
Date Sampled					02/03/15	02/03/15	02/05/15	02/03/15	02/03/15
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**				Field Duplicate (1-1)	
Metals									
Vanadium	MG/KG	39	-	-	NA	NA	NA	NA	NA
Zinc	MG/KG	109	2480	10000	NA	NA	NA	NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA-Not Analyzed

J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.

J+ - The reported concentration is an estimated value, biased high.

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Only Detected Results Reported.

Advanced Selection: AMK-TEMP1
J:\Projects\Small_Chemistry_Jobs\DB\Program\EDMS.md
Printed: 5/30/2018 2:14:09 PM
[SITE KEY] = 22 AND [MATRIX] = 'SO' AND [SED] <> '0.16' AND [LOCID] NOT LIKE 'ID

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-12	MW-13	MW-14	MW-15	MW-16
Sample ID					MW-12 (11-12)	MW-13 (2-3)	MW-14-0102	MW-15-03	MW-16-0405
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					11.0-12.0	2.0-3.0	1.0-2.0	2.5-3.0	4.0-5.0
Date Sampled					02/05/15	02/06/15	02/27/17	02/28/17	02/28/17
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
1,1,1-Trichloroethane	MG/KG	0.68	0.68	1000					
1,1-Dichloroethane	MG/KG	0.27	0.27	480					
1,2-Dichloroethene (cis)	MG/KG	0.25	0.25	1000					
1,2-Dichloroethene (trans)	MG/KG	0.19	0.19	1000					
Acetone	MG/KG	0.05	0.05	1000		0.063			0.031
Benzene	MG/KG	0.06	0.06	89					
Carbon disulfide	MG/KG	2.7	2.7	-					
Chloroform	MG/KG	0.37	0.37	700					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	0.12	1000		0.010 J			
Methyl tert-butyl ether	MG/KG	0.93	0.93	1000					
Methylcyclohexane	MG/KG	-	-	-		0.00086 J			
Styrene	MG/KG	300	-	-					
Tetrachloroethene	MG/KG	1.3	1.3	300					
Toluene	MG/KG	0.7	0.7	1000					
Trichloroethene	MG/KG	0.47	0.47	400					
Semivolatile Organic Compounds									
2-Methylnaphthalene	MG/KG	0.41	36.4	-	NA	NA			
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	1000	NA	NA			
Benzo(a)anthracene	MG/KG	1	1	11	NA	NA	0.24 J	0.19 J	

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA-Not Analyzed

J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.

J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-12	MW-13	MW-14	MW-15	MW-16
Sample ID					MW-12 (11-12)	MW-13 (2-3)	MW-14-0102	MW-15-03	MW-16-0405
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					11.0-12.0	2.0-3.0	1.0-2.0	2.5-3.0	4.0-5.0
Date Sampled					02/05/15	02/06/15	02/27/17	02/28/17	02/28/17
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Benzo(a)pyrene	MG/KG	1	22	1.1	NA	NA	0.23 J	0.21 J	
Benzo(b)fluoranthene	MG/KG	1	1.7	11	NA	NA	0.24 J	0.24 J	
Benzo(g,h,i)perylene	MG/KG	100	1000	1000	NA	NA	0.17 J	0.21 J	
Benzo(k)fluoranthene	MG/KG	0.8	1.7	110	NA	NA	0.14 J		
Chrysene	MG/KG	1	1	110	NA	NA	0.24 J	0.22 J	
Di-n-butylphthalate	MG/KG	0.014	8.1	-	NA	NA			
Di-n-octylphthalate	MG/KG	100	120	-	NA	NA			
Fluoranthene	MG/KG	100	1000	1000	NA	NA	0.42 J	0.42 J	
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	11	NA	NA	0.15 J	0.17 J	
Naphthalene	MG/KG	12	12	1000	NA	NA			
Phenanthrene	MG/KG	100	1000	1000	NA	NA	0.32 J		
Pyrene	MG/KG	100	1000	1000	NA	NA	0.43 J	0.32 J	
Pesticide Organic Compounds									
4,4'-DDD	MG/KG	0.0033	14	180	NA	NA			
4,4'-DDE	MG/KG	0.0033	17	120	NA	NA			
4,4'-DDT	MG/KG	0.0033	136	94	NA	NA	0.0079 J	0.025 J	0.00076 J
alpha-BHC	MG/KG	0.02	0.02	6.8	NA	NA			0.00064 J
alpha-Chlordane	MG/KG	0.094	2.9	47	NA	NA			
delta-BHC	MG/KG	0.04	0.25	1000	NA	NA			

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Only Detected Results Reported.

Advanced Selection: AMK-TEMP1
J:\Projects\Small_Chemistry_Jobs\DB\Program\EDMS.md
Printed: 5/30/2018 2:14:09 PM
[SITE KEY] = 22 AND [MATRIX] = 'SO' AND [SED] <> '0.16' AND [LOCID] NOT LIKE 'ID

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-12	MW-13	MW-14	MW-15	MW-16
Sample ID					MW-12 (11-12)	MW-13 (2-3)	MW-14-0102	MW-15-03	MW-16-0405
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					11.0-12.0	2.0-3.0	1.0-2.0	2.5-3.0	4.0-5.0
Date Sampled					02/05/15	02/06/15	02/27/17	02/28/17	02/28/17
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Aluminum	MG/KG	10000	-	-	NA	NA	7,310	8,420	6,490
Arsenic	MG/KG	13	16	16	NA	NA	4.4	3.3	2.6
Barium	MG/KG	350	820	10000	NA	NA	70.7	37.5	59.5
Beryllium	MG/KG	7.2	47	2700	NA	NA	0.33	0.35	0.26
Cadmium	MG/KG	2.5	7.5	60	NA	NA	0.20 J	0.098 J	0.16 J
Calcium	MG/KG	10000	-	-	NA	NA	12,100	4,960	5,130
Chromium	MG/KG	30	NS	6800	NA	NA	8.6	10.5	8.8
Cobalt	MG/KG	20	-	-	NA	NA	3.7	7.4	5.3
Copper	MG/KG	50	1720	10000	NA	NA	30.9	31.7	41.0
Iron	MG/KG	2000	-	-	NA	NA	14,000	14,100	11,000
Lead	MG/KG	63	450	3900	NA	NA	92.9	5.7	5.8
Magnesium	MG/KG	-	-	-	NA	NA	6,200	3,770	3,220
Manganese	MG/KG	1600	2000	10000	NA	NA	235	720	348
Mercury	MG/KG	0.18	0.73	5.7	NA	NA	0.032		
Nickel	MG/KG	30	130	10000	NA	NA	8.4	15.4	10.9
Potassium	MG/KG	-	-	-	NA	NA	845	1,480	1,120
Selenium	MG/KG	3.9	4	6800	NA	NA	1.1 J		
Sodium	MG/KG	-	-	-	NA	NA	84.7 J		207
Thallium	MG/KG	5	-	-	NA	NA			

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

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Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

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Advanced Selection: AMK-TEMP1
J:\Projects\Small_Chemistry_Jobs\DB\Program\EDMS.md
Printed: 5/30/2018 2:14:09 PM
[SITE KEY] = 22 AND [MATRIX] = 'SO' AND [SED] <> '0.16' AND [LOCID] NOT LIKE 'ID

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-12	MW-13	MW-14	MW-15	MW-16
Sample ID					MW-12 (11-12)	MW-13 (2-3)	MW-14-0102	MW-15-03	MW-16-0405
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					11.0-12.0	2.0-3.0	1.0-2.0	2.5-3.0	4.0-5.0
Date Sampled					02/05/15	02/06/15	02/27/17	02/28/17	02/28/17
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Vanadium	MG/KG	39	-	-	NA	NA	16.9	17.5	14.6
Zinc	MG/KG	109	2480	10000	NA	NA	65.2	38.0	70.4

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

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Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-17	MW-18	MW-19	MW-20	MW-21
Sample ID					MW-17-05	MW-18-04-05	MW-19-0203	MW-20-02	MW-21-02.8-03.8
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					4.5-5.0	4.0-5.0	2.0-3.0	1.5-2.0	2.8-3.8
Date Sampled					02/28/17	03/01/17	02/27/17	02/28/17	03/01/17
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
1,1,1-Trichloroethane	MG/KG	0.68	0.68	1000					
1,1-Dichloroethane	MG/KG	0.27	0.27	480					
1,2-Dichloroethene (cis)	MG/KG	0.25	0.25	1000					
1,2-Dichloroethene (trans)	MG/KG	0.19	0.19	1000					
Acetone	MG/KG	0.05	0.05	1000	0.041	0.044			
Benzene	MG/KG	0.06	0.06	89					
Carbon disulfide	MG/KG	2.7	2.7	-					
Chloroform	MG/KG	0.37	0.37	700					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	0.12	1000	0.0063 J	0.0045 J			
Methyl tert-butyl ether	MG/KG	0.93	0.93	1000					
Methylcyclohexane	MG/KG	-	-	-					
Styrene	MG/KG	300	-	-					
Tetrachloroethene	MG/KG	1.3	1.3	300					
Toluene	MG/KG	0.7	0.7	1000	0.00037 J				
Trichloroethene	MG/KG	0.47	0.47	400					
Semivolatile Organic Compounds									
2-Methylnaphthalene	MG/KG	0.41	36.4	-	0.054 J				
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	1000					
Benzo(a)anthracene	MG/KG	1	1	11			0.12 J		

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-17	MW-18	MW-19	MW-20	MW-21
Sample ID					MW-17-05	MW-18-04-05	MW-19-0203	MW-20-02	MW-21-02.8-03.8
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					4.5-5.0	4.0-5.0	2.0-3.0	1.5-2.0	2.8-3.8
Date Sampled					02/28/17	03/01/17	02/27/17	02/28/17	03/01/17
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Benzo(a)pyrene	MG/KG	1	22	1.1					
Benzo(b)fluoranthene	MG/KG	1	1.7	11					
Benzo(g,h,i)perylene	MG/KG	100	1000	1000	0.021 J		0.11 J		
Benzo(k)fluoranthene	MG/KG	0.8	1.7	110					
Chrysene	MG/KG	1	1	110					
Di-n-butylphthalate	MG/KG	0.014	8.1	-				0.045 J	
Di-n-octylphthalate	MG/KG	100	120	-					
Fluoranthene	MG/KG	100	1000	1000	0.024 J		0.27 J		
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	11					
Naphthalene	MG/KG	12	12	1000	0.034 J				
Phenanthrene	MG/KG	100	1000	1000	0.034 J				
Pyrene	MG/KG	100	1000	1000			0.21 J		
Pesticide Organic Compounds									
4,4'-DDD	MG/KG	0.0033	14	180	0.00072 J				
4,4'-DDE	MG/KG	0.0033	17	120	0.00062 J				
4,4'-DDT	MG/KG	0.0033	136	94	0.0020			0.00052 J	
alpha-BHC	MG/KG	0.02	0.02	6.8					
alpha-Chlordane	MG/KG	0.094	2.9	47			0.0037 J		
delta-BHC	MG/KG	0.04	0.25	1000		0.00041 J			

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA-Not Analyzed

J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.

J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

Advanced Selection: AMK-TEMP1
J:\Projects\Small_Chemistry_Jobs\DB\Program\EDMS.md
Printed: 5/30/2018 2:14:10 PM
[SITE KEY] = 22 AND [MATRIX] = 'SO' AND [SED] <> '0.16' AND [LOCID] NOT LIKE 'ID

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-17	MW-18	MW-19	MW-20	MW-21
Sample ID					MW-17-05	MW-18-04-05	MW-19-0203	MW-20-02	MW-21-02.8-03.8
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					4.5-5.0	4.0-5.0	2.0-3.0	1.5-2.0	2.8-3.8
Date Sampled					02/28/17	03/01/17	02/27/17	02/28/17	03/01/17
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Aluminum	MG/KG	10000	-	-	7,020	12,200	9,840	13,200	5,340
Arsenic	MG/KG	13	16	16	3.5	2.4 J	2.9	3.8	2.2
Barium	MG/KG	350	820	10000	34.7	106	34.7	55.9	45.8
Beryllium	MG/KG	7.2	47	2700	0.29	0.37	0.28	0.38	0.20 J
Cadmium	MG/KG	2.5	7.5	60	0.17 J	0.067 J	0.12 J	0.17 J	0.15 J
Calcium	MG/KG	10000	-	-	16,500	1,980	3,330	3,470	30,100
Chromium	MG/KG	30	NS	6800	10.0	13.8	9.6	13.9	7.3
Cobalt	MG/KG	20	-	-	4.8	5.6	3.5	6.8	3.9
Copper	MG/KG	50	1720	10000	42.2	41.7	20.2	14.5	11.5
Iron	MG/KG	2000	-	-	9,310	10,700	9,530	14,400	9,170
Lead	MG/KG	63	450	3900	24.6	6.8	12.0	12.1	4.3
Magnesium	MG/KG	-	-	-	7,890	2,060	1,990	3,900	6,010
Manganese	MG/KG	1600	2000	10000	245	185	158	567	431
Mercury	MG/KG	0.18	0.73	5.7	0.014 J	0.048	0.037	0.022 J	
Nickel	MG/KG	30	130	10000	9.5	12.2	7.7	13.7	8.1
Potassium	MG/KG	-	-	-	1,160	1,170	869	1,160	1,410
Selenium	MG/KG	3.9	4	6800		1.3 J	0.56 J		
Sodium	MG/KG	-	-	-	120 J	146 J	84.2 J		360
Thallium	MG/KG	5	-	-					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA-Not Analyzed

J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.

J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

Advanced Selection: AMK-TEMP1
J:\Projects\Small_Chemistry_Jobs\DB\Program\EDMS.md
Printed: 5/30/2018 2:14:10 PM
[SITE KEY] = 22 AND [MATRIX] = 'SO' AND [SED] <> '0.16' AND [LOCID] NOT LIKE 'ID

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					MW-17	MW-18	MW-19	MW-20	MW-21
Sample ID					MW-17-05	MW-18-04-05	MW-19-0203	MW-20-02	MW-21-02.8-03.8
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					4.5-5.0	4.0-5.0	2.0-3.0	1.5-2.0	2.8-3.8
Date Sampled					02/28/17	03/01/17	02/27/17	02/28/17	03/01/17
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Vanadium	MG/KG	39	-	-	13.2	22.5	17.0	21.6	13.7
Zinc	MG/KG	109	2480	10000	75.7	36.7	38.5	41.2	23.6

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA-Not Analyzed

J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.

J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					SB-01	SB-01	SB-02	SB-02	SB-03
Sample ID					SB01 (4-5)	SB01 (8-10)	SB02 (0.4-1)	SB02 (4-5)	SB03 (0.4-1)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					4.0-5.0	8.0-10.0	0.4-1.0	4.0-5.0	0.4-1.0
Date Sampled					05/27/14	05/27/14	05/27/14	05/27/14	05/27/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
1,1,1-Trichloroethane	MG/KG	0.68	0.68	1000					
1,1-Dichloroethane	MG/KG	0.27	0.27	480					
1,2-Dichloroethene (cis)	MG/KG	0.25	0.25	1000					
1,2-Dichloroethene (trans)	MG/KG	0.19	0.19	1000					
Acetone	MG/KG	0.05	0.05	1000		0.0023	0.0039	0.0021	
Benzene	MG/KG	0.06	0.06	89					
Carbon disulfide	MG/KG	2.7	2.7	-					
Chloroform	MG/KG	0.37	0.37	700					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	0.12	1000					
Methyl tert-butyl ether	MG/KG	0.93	0.93	1000					
Methylcyclohexane	MG/KG	-	-	-					
Styrene	MG/KG	300	-	-					
Tetrachloroethene	MG/KG	1.3	1.3	300		0.0019	0.0087		
Toluene	MG/KG	0.7	0.7	1000					
Trichloroethene	MG/KG	0.47	0.47	400					
Semivolatile Organic Compounds									
2-Methylnaphthalene	MG/KG	0.41	36.4	-					
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	1000	NA	NA	NA	NA	NA
Benzo(a)anthracene	MG/KG	1	1	11					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA-Not Analyzed

J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.

J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					SB-01	SB-01	SB-02	SB-02	SB-03
Sample ID					SB01 (4-5)	SB01 (8-10)	SB02 (0.4-1)	SB02 (4-5)	SB03 (0.4-1)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					4.0-5.0	8.0-10.0	0.4-1.0	4.0-5.0	0.4-1.0
Date Sampled					05/27/14	05/27/14	05/27/14	05/27/14	05/27/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Benzo(a)pyrene	MG/KG	1	22	1.1					
Benzo(b)fluoranthene	MG/KG	1	1.7	11					
Benzo(g,h,i)perylene	MG/KG	100	1000	1000					
Benzo(k)fluoranthene	MG/KG	0.8	1.7	110					
Chrysene	MG/KG	1	1	110					
Di-n-butylphthalate	MG/KG	0.014	8.1	-					
Di-n-octylphthalate	MG/KG	100	120	-					
Fluoranthene	MG/KG	100	1000	1000					
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	11					
Naphthalene	MG/KG	12	12	1000					
Phenanthrene	MG/KG	100	1000	1000					
Pyrene	MG/KG	100	1000	1000					
Pesticide Organic Compounds									
4,4'-DDD	MG/KG	0.0033	14	180	NA	NA	NA	NA	NA
4,4'-DDE	MG/KG	0.0033	17	120	NA	NA	NA	NA	NA
4,4'-DDT	MG/KG	0.0033	136	94	NA	NA	NA	NA	NA
alpha-BHC	MG/KG	0.02	0.02	6.8	NA	NA	NA	NA	NA
alpha-Chlordane	MG/KG	0.094	2.9	47	NA	NA	NA	NA	NA
delta-BHC	MG/KG	0.04	0.25	1000	NA	NA	NA	NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA-Not Analyzed

J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.

J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					SB-01	SB-01	SB-02	SB-02	SB-03
Sample ID					SB01 (4-5)	SB01 (8-10)	SB02 (0.4-1)	SB02 (4-5)	SB03 (0.4-1)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					4.0-5.0	8.0-10.0	0.4-1.0	4.0-5.0	0.4-1.0
Date Sampled					05/27/14	05/27/14	05/27/14	05/27/14	05/27/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Aluminum	MG/KG	10000	-	-	NA	NA	NA	NA	NA
Arsenic	MG/KG	13	16	16	1.2		1.9	3.1	2.4
Barium	MG/KG	350	820	10000	24.4	16.0	43.3	255	50.6
Beryllium	MG/KG	7.2	47	2700	NA	NA	NA	NA	NA
Cadmium	MG/KG	2.5	7.5	60					
Calcium	MG/KG	10000	-	-	NA	NA	NA	NA	NA
Chromium	MG/KG	30	NS	6800	4.5	7.9	9.1	25.8	9.8
Cobalt	MG/KG	20	-	-	NA	NA	NA	NA	NA
Copper	MG/KG	50	1720	10000	NA	NA	NA	NA	NA
Iron	MG/KG	2000	-	-	NA	NA	NA	NA	NA
Lead	MG/KG	63	450	3900			6.3	11.9	27.3
Magnesium	MG/KG	-	-	-	NA	NA	NA	NA	NA
Manganese	MG/KG	1600	2000	10000	NA	NA	NA	NA	NA
Mercury	MG/KG	0.18	0.73	5.7					0.048
Nickel	MG/KG	30	130	10000	NA	NA	NA	NA	NA
Potassium	MG/KG	-	-	-	NA	NA	NA	NA	NA
Selenium	MG/KG	3.9	4	6800					
Sodium	MG/KG	-	-	-	NA	NA	NA	NA	NA
Thallium	MG/KG	5	-	-	NA	NA	NA	NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA-Not Analyzed

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J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

Advanced Selection: AMK-TEMP1
J:\Projects\Small_Chemistry_Jobs\DB\Program\EDMS.md
Printed: 5/30/2018 2:14:11 PM
[SITE KEY] = 22 AND [MATRIX] = 'SO' AND [SED] <> '0.16' AND [LOCID] NOT LIKE 'ID

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					SB-01	SB-01	SB-02	SB-02	SB-03
Sample ID					SB01 (4-5)	SB01 (8-10)	SB02 (0.4-1)	SB02 (4-5)	SB03 (0.4-1)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					4.0-5.0	8.0-10.0	0.4-1.0	4.0-5.0	0.4-1.0
Date Sampled					05/27/14	05/27/14	05/27/14	05/27/14	05/27/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Vanadium	MG/KG	39	-	-	NA	NA	NA	NA	NA
Zinc	MG/KG	109	2480	10000	NA	NA	NA	NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					SB-03	SB-04	SB-04	SB-05A	SB-06
Sample ID					SB03 (4-5)	SB04 (0.4-1)	SB04 (7-8)	SB-05A	SB-06-02.8-03.8
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					4.0-5.0	0.4-1.0	7.0-8.0	4.0-5.0	2.8-3.8
Date Sampled					05/27/14	05/27/14	05/27/14	03/29/17	03/01/17
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
1,1,1-Trichloroethane	MG/KG	0.68	0.68	1000					
1,1-Dichloroethane	MG/KG	0.27	0.27	480					
1,2-Dichloroethene (cis)	MG/KG	0.25	0.25	1000			0.0020		
1,2-Dichloroethene (trans)	MG/KG	0.19	0.19	1000					
Acetone	MG/KG	0.05	0.05	1000			0.0033		
Benzene	MG/KG	0.06	0.06	89					
Carbon disulfide	MG/KG	2.7	2.7	-					
Chloroform	MG/KG	0.37	0.37	700					
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	0.12	1000					
Methyl tert-butyl ether	MG/KG	0.93	0.93	1000					
Methylcyclohexane	MG/KG	-	-	-					
Styrene	MG/KG	300	-	-					
Tetrachloroethene	MG/KG	1.3	1.3	300	0.0021	0.0066	0.0084		
Toluene	MG/KG	0.7	0.7	1000					
Trichloroethene	MG/KG	0.47	0.47	400			0.0061		
Semivolatile Organic Compounds									
2-Methylnaphthalene	MG/KG	0.41	36.4	-					
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	1000	NA	NA	NA		
Benzo(a)anthracene	MG/KG	1	1	11					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA-Not Analyzed

J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.

J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					SB-03	SB-04	SB-04	SB-05A	SB-06
Sample ID					SB03 (4-5)	SB04 (0.4-1)	SB04 (7-8)	SB-05A	SB-06-02.8-03.8
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					4.0-5.0	0.4-1.0	7.0-8.0	4.0-5.0	2.8-3.8
Date Sampled					05/27/14	05/27/14	05/27/14	03/29/17	03/01/17
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Benzo(a)pyrene	MG/KG	1	22	1.1					
Benzo(b)fluoranthene	MG/KG	1	1.7	11					
Benzo(g,h,i)perylene	MG/KG	100	1000	1000					
Benzo(k)fluoranthene	MG/KG	0.8	1.7	110					
Chrysene	MG/KG	1	1	110					
Di-n-butylphthalate	MG/KG	0.014	8.1	-					
Di-n-octylphthalate	MG/KG	100	120	-					
Fluoranthene	MG/KG	100	1000	1000					
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	11					
Naphthalene	MG/KG	12	12	1000					
Phenanthrene	MG/KG	100	1000	1000					
Pyrene	MG/KG	100	1000	1000					
Pesticide Organic Compounds									
4,4'-DDD	MG/KG	0.0033	14	180	NA	NA	NA		
4,4'-DDE	MG/KG	0.0033	17	120	NA	NA	NA		
4,4'-DDT	MG/KG	0.0033	136	94	NA	NA	NA		
alpha-BHC	MG/KG	0.02	0.02	6.8	NA	NA	NA		
alpha-Chlordane	MG/KG	0.094	2.9	47	NA	NA	NA		
delta-BHC	MG/KG	0.04	0.25	1000	NA	NA	NA		

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA-Not Analyzed

J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.

J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					SB-03	SB-04	SB-04	SB-05A	SB-06
Sample ID					SB03 (4-5)	SB04 (0.4-1)	SB04 (7-8)	SB-05A	SB-06-02.8-03.8
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					4.0-5.0	0.4-1.0	7.0-8.0	4.0-5.0	2.8-3.8
Date Sampled					05/27/14	05/27/14	05/27/14	03/29/17	03/01/17
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Aluminum	MG/KG	10000	-	-	NA	NA	NA	4,350	5,440
Arsenic	MG/KG	13	16	16	2.4	2.4	2.8	1.9 J	2.4
Barium	MG/KG	350	820	10000	30.4	91.9	28.6	27.2 J+	38.4
Beryllium	MG/KG	7.2	47	2700	NA	NA	NA	0.22 J	0.24
Cadmium	MG/KG	2.5	7.5	60				0.18 J	0.038 J
Calcium	MG/KG	10000	-	-	NA	NA	NA	21,200	7,180
Chromium	MG/KG	30	NS	6800	6.8	11.9	5.0	7.0	7.4
Cobalt	MG/KG	20	-	-	NA	NA	NA	3.3	4.6
Copper	MG/KG	50	1720	10000	NA	NA	NA	6.0	18.9
Iron	MG/KG	2000	-	-	NA	NA	NA	8,360	9,910
Lead	MG/KG	63	450	3900				3.4	3.5
Magnesium	MG/KG	-	-	-	NA	NA	NA	2,380	2,910
Manganese	MG/KG	1600	2000	10000	NA	NA	NA	368	348
Mercury	MG/KG	0.18	0.73	5.7		0.041			0.010 J
Nickel	MG/KG	30	130	10000	NA	NA	NA	6.7	9.4
Potassium	MG/KG	-	-	-	NA	NA	NA	1,110	1,430
Selenium	MG/KG	3.9	4	6800					
Sodium	MG/KG	-	-	-	NA	NA	NA	123 J	106 J
Thallium	MG/KG	5	-	-	NA	NA	NA		

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA-Not Analyzed

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J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

Advanced Selection: AMK-TEMP1
J:\Projects\Small_Chemistry_Jobs\DB\Program\EDMS.md
Printed: 5/30/2018 2:14:11 PM
[SITE KEY] = 22 AND [MATRIX] = 'SO' AND [SED] <> '0.16' AND [LOCID] NOT LIKE 'ID

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					SB-03	SB-04	SB-04	SB-05A	SB-06
Sample ID					SB03 (4-5)	SB04 (0.4-1)	SB04 (7-8)	SB-05A	SB-06-02.8-03.8
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					4.0-5.0	0.4-1.0	7.0-8.0	4.0-5.0	2.8-3.8
Date Sampled					05/27/14	05/27/14	05/27/14	03/29/17	03/01/17
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Vanadium	MG/KG	39	-	-	NA	NA	NA	12.9	13.1
Zinc	MG/KG	109	2480	10000	NA	NA	NA	27.8	22.2

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Only Detected Results Reported.

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					SB-07	SB-08	SB-09	SS-01	SS-02
Sample ID					SB-07-0304	SB-08-0304	SB-09-0102	SS-01-2-12_040618	SS-02-2-12_040618
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					3.0-4.0	3.0-4.0	1.0-2.0	0.2-1.0	0.2-1.0
Date Sampled					02/27/17	02/27/17	02/27/17	04/06/18	04/06/18
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
1,1,1-Trichloroethane	MG/KG	0.68	0.68	1000				NA	NA
1,1-Dichloroethane	MG/KG	0.27	0.27	480				NA	NA
1,2-Dichloroethene (cis)	MG/KG	0.25	0.25	1000				NA	NA
1,2-Dichloroethene (trans)	MG/KG	0.19	0.19	1000				NA	NA
Acetone	MG/KG	0.05	0.05	1000				NA	NA
Benzene	MG/KG	0.06	0.06	89				NA	NA
Carbon disulfide	MG/KG	2.7	2.7	-				NA	NA
Chloroform	MG/KG	0.37	0.37	700				NA	NA
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	0.12	1000			0.0046 J	NA	NA
Methyl tert-butyl ether	MG/KG	0.93	0.93	1000		0.00045 J		NA	NA
Methylcyclohexane	MG/KG	-	-	-				NA	NA
Styrene	MG/KG	300	-	-		0.00037 J		NA	NA
Tetrachloroethene	MG/KG	1.3	1.3	300				NA	NA
Toluene	MG/KG	0.7	0.7	1000				NA	NA
Trichloroethene	MG/KG	0.47	0.47	400				NA	NA
Semivolatile Organic Compounds									
2-Methylnaphthalene	MG/KG	0.41	36.4	-					
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	1000					0.08 J
Benzo(a)anthracene	MG/KG	1	1	11	0.15 J			0.15 J	0.024 J

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					SB-07	SB-08	SB-09	SS-01	SS-02
Sample ID					SB-07-0304	SB-08-0304	SB-09-0102	SS-01-2-12_040618	SS-02-2-12_040618
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					3.0-4.0	3.0-4.0	1.0-2.0	0.2-1.0	0.2-1.0
Date Sampled					02/27/17	02/27/17	02/27/17	04/06/18	04/06/18
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Benzo(a)pyrene	MG/KG	1	22	1.1	0.20 J			0.17 J	
Benzo(b)fluoranthene	MG/KG	1	1.7	11	0.19 J			0.17 J	
Benzo(g,h,i)perylene	MG/KG	100	1000	1000	0.18 J			0.11 J	
Benzo(k)fluoranthene	MG/KG	0.8	1.7	110				0.14 J	
Chrysene	MG/KG	1	1	110					
Di-n-butylphthalate	MG/KG	0.014	8.1	-					
Di-n-octylphthalate	MG/KG	100	120	-			0.057 J		
Fluoranthene	MG/KG	100	1000	1000	0.11 J		0.026 J	0.38 J	0.049 J
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	11	0.17 J				
Naphthalene	MG/KG	12	12	1000					
Phenanthrene	MG/KG	100	1000	1000				0.16 J	
Pyrene	MG/KG	100	1000	1000				0.24 J	
Pesticide Organic Compounds									
4,4'-DDD	MG/KG	0.0033	14	180	0.0023			NA	NA
4,4'-DDE	MG/KG	0.0033	17	120	0.00046 NJ	0.00046 NJ	0.00080 NJ	NA	NA
4,4'-DDT	MG/KG	0.0033	136	94				NA	NA
alpha-BHC	MG/KG	0.02	0.02	6.8				NA	NA
alpha-Chlordane	MG/KG	0.094	2.9	47	0.0055 J		0.0030	NA	NA
delta-BHC	MG/KG	0.04	0.25	1000				NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA-Not Analyzed

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B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					SB-07	SB-08	SB-09	SS-01	SS-02
Sample ID					SB-07-0304	SB-08-0304	SB-09-0102	SS-01-2-12_040618	SS-02-2-12_040618
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					3.0-4.0	3.0-4.0	1.0-2.0	0.2-1.0	0.2-1.0
Date Sampled					02/27/17	02/27/17	02/27/17	04/06/18	04/06/18
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Aluminum	MG/KG	10000	-	-	11,600	21,500	5,560	NA	NA
Arsenic	MG/KG	13	16	16	2.8	1.8 J	3.2	NA	NA
Barium	MG/KG	350	820	10000	59.3	58.2	36.3	NA	NA
Beryllium	MG/KG	7.2	47	2700	0.36	0.48	0.36	NA	NA
Cadmium	MG/KG	2.5	7.5	60	0.24 J	0.082 J	0.15 J	NA	NA
Calcium	MG/KG	10000	-	-	7,900	1,440	17,200	NA	NA
Chromium	MG/KG	30	NS	6800	11.1	20.5	7.4	NA	NA
Cobalt	MG/KG	20	-	-	4.6	7.0	4.0	NA	NA
Copper	MG/KG	50	1720	10000	22.1	33.1	9.5	NA	NA
Iron	MG/KG	2000	-	-	10,900	15,700	9,560	NA	NA
Lead	MG/KG	63	450	3900	44.6	4.9	13.5	NA	NA
Magnesium	MG/KG	-	-	-	2,200	2,750	3,770	NA	NA
Manganese	MG/KG	1600	2000	10000	222	203	304	NA	NA
Mercury	MG/KG	0.18	0.73	5.7	0.049	0.011 J		NA	NA
Nickel	MG/KG	30	130	10000	10.5	14.3	7.4	NA	NA
Potassium	MG/KG	-	-	-	1,150	2,830	1,370	NA	NA
Selenium	MG/KG	3.9	4	6800		1.0 J	0.58 J	NA	NA
Sodium	MG/KG	-	-	-	71.7 J	65.6 J	152 J	NA	NA
Thallium	MG/KG	5	-	-		0.47 J		NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

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Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

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Advanced Selection: AMK-TEMP1
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Printed: 5/30/2018 2:14:12 PM
[SITE KEY] = 22 AND [MATRIX] = 'SO' AND [SED] <> '0.16' AND [LOCID] NOT LIKE 'ID

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					SB-07	SB-08	SB-09	SS-01	SS-02
Sample ID					SB-07-0304	SB-08-0304	SB-09-0102	SS-01-2-12_040618	SS-02-2-12_040618
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					3.0-4.0	3.0-4.0	1.0-2.0	0.2-1.0	0.2-1.0
Date Sampled					02/27/17	02/27/17	02/27/17	04/06/18	04/06/18
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Vanadium	MG/KG	39	-	-	20.1	32.0	16.0	NA	NA
Zinc	MG/KG	109	2480	10000	63.0	33.9	26.7	NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

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Advanced Selection: AMK-TEMP1
J:\Projects\Small_Chemistry_Jobs\DB\Program\EDMS.md
Printed: 5/30/2018 2:14:12 PM
[SITE KEY] = 22 AND [MATRIX] = 'SO' AND [SED] <> '0.16' AND [LOCID] NOT LIKE 'ID

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					SS-03	SS-04	SS-05	SS-06	SS-06
Sample ID					SS-03-2-12_040618	SS-04-2-12_040618	SS-05-2-12_040618	SS-06-2-12_040618	SS-56-2-12_040618
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					0.2-1.0	0.2-1.0	0.2-1.0	0.2-1.0	0.2-1.0
Date Sampled					04/06/18	04/06/18	04/06/18	04/06/18	04/06/18
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					Field Duplicate (1-1)
Volatile Organic Compounds									
1,1,1-Trichloroethane	MG/KG	0.68	0.68	1000	NA	NA	NA	NA	NA
1,1-Dichloroethane	MG/KG	0.27	0.27	480	NA	NA	NA	NA	NA
1,2-Dichloroethene (cis)	MG/KG	0.25	0.25	1000	NA	NA	NA	NA	NA
1,2-Dichloroethene (trans)	MG/KG	0.19	0.19	1000	NA	NA	NA	NA	NA
Acetone	MG/KG	0.05	0.05	1000	NA	NA	NA	NA	NA
Benzene	MG/KG	0.06	0.06	89	NA	NA	NA	NA	NA
Carbon disulfide	MG/KG	2.7	2.7	-	NA	NA	NA	NA	NA
Chloroform	MG/KG	0.37	0.37	700	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	0.12	1000	NA	NA	NA	NA	NA
Methyl tert-butyl ether	MG/KG	0.93	0.93	1000	NA	NA	NA	NA	NA
Methylcyclohexane	MG/KG	-	-	-	NA	NA	NA	NA	NA
Styrene	MG/KG	300	-	-	NA	NA	NA	NA	NA
Tetrachloroethene	MG/KG	1.3	1.3	300	NA	NA	NA	NA	NA
Toluene	MG/KG	0.7	0.7	1000	NA	NA	NA	NA	NA
Trichloroethene	MG/KG	0.47	0.47	400	NA	NA	NA	NA	NA
Semivolatile Organic Compounds									
2-Methylnaphthalene	MG/KG	0.41	36.4	-					
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	1000					
Benzo(a)anthracene	MG/KG	1	1	11	0.48 J		0.14 J		

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

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Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

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TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					SS-03	SS-04	SS-05	SS-06	SS-06
Sample ID					SS-03-2-12_040618	SS-04-2-12_040618	SS-05-2-12_040618	SS-06-2-12_040618	SS-56-2-12_040618
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					0.2-1.0	0.2-1.0	0.2-1.0	0.2-1.0	0.2-1.0
Date Sampled					04/06/18	04/06/18	04/06/18	04/06/18	04/06/18
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					Field Duplicate (1-1)
Semivolatile Organic Compounds									
Benzo(a)pyrene	MG/KG	1	22	1.1	0.5 J		0.17 J		
Benzo(b)fluoranthene	MG/KG	1	1.7	11	0.51 J		0.2 J		
Benzo(g,h,i)perylene	MG/KG	100	1000	1000	0.39 J				
Benzo(k)fluoranthene	MG/KG	0.8	1.7	110	0.51 J				
Chrysene	MG/KG	1	1	110	0.55 J				
Di-n-butylphthalate	MG/KG	0.014	8.1	-					
Di-n-octylphthalate	MG/KG	100	120	-					
Fluoranthene	MG/KG	100	1000	1000	1.2 J		0.29 J		
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	11	0.39 J				
Naphthalene	MG/KG	12	12	1000					
Phenanthrene	MG/KG	100	1000	1000	0.53 J				
Pyrene	MG/KG	100	1000	1000	1 J		0.17 J		
Pesticide Organic Compounds									
4,4'-DDD	MG/KG	0.0033	14	180	NA	NA	NA	NA	NA
4,4'-DDE	MG/KG	0.0033	17	120	NA	NA	NA	NA	NA
4,4'-DDT	MG/KG	0.0033	136	94	NA	NA	NA	NA	NA
alpha-BHC	MG/KG	0.02	0.02	6.8	NA	NA	NA	NA	NA
alpha-Chlordane	MG/KG	0.094	2.9	47	NA	NA	NA	NA	NA
delta-BHC	MG/KG	0.04	0.25	1000	NA	NA	NA	NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

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Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Printed: 5/30/2018 2:14:13 PM
[SITE KEY] = 22 AND [MATRIX] = 'SO' AND [SED] <> '0.16' AND [LOCID] NOT LIKE 'ID

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					SS-03	SS-04	SS-05	SS-06	SS-06
Sample ID					SS-03-2-12_040618	SS-04-2-12_040618	SS-05-2-12_040618	SS-06-2-12_040618	SS-56-2-12_040618
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					0.2-1.0	0.2-1.0	0.2-1.0	0.2-1.0	0.2-1.0
Date Sampled					04/06/18	04/06/18	04/06/18	04/06/18	04/06/18
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					Field Duplicate (1-1)
Metals									
Aluminum	MG/KG	10000	-	-	NA	NA	NA	NA	NA
Arsenic	MG/KG	13	16	16	NA	NA	NA	NA	NA
Barium	MG/KG	350	820	10000	NA	NA	NA	NA	NA
Beryllium	MG/KG	7.2	47	2700	NA	NA	NA	NA	NA
Cadmium	MG/KG	2.5	7.5	60	NA	NA	NA	NA	NA
Calcium	MG/KG	10000	-	-	NA	NA	NA	NA	NA
Chromium	MG/KG	30	NS	6800	NA	NA	NA	NA	NA
Cobalt	MG/KG	20	-	-	NA	NA	NA	NA	NA
Copper	MG/KG	50	1720	10000	NA	NA	NA	NA	NA
Iron	MG/KG	2000	-	-	NA	NA	NA	NA	NA
Lead	MG/KG	63	450	3900	NA	NA	NA	NA	NA
Magnesium	MG/KG	-	-	-	NA	NA	NA	NA	NA
Manganese	MG/KG	1600	2000	10000	NA	NA	NA	NA	NA
Mercury	MG/KG	0.18	0.73	5.7	NA	NA	NA	NA	NA
Nickel	MG/KG	30	130	10000	NA	NA	NA	NA	NA
Potassium	MG/KG	-	-	-	NA	NA	NA	NA	NA
Selenium	MG/KG	3.9	4	6800	NA	NA	NA	NA	NA
Sodium	MG/KG	-	-	-	NA	NA	NA	NA	NA
Thallium	MG/KG	5	-	-	NA	NA	NA	NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA-Not Analyzed

J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.

J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

Advanced Selection: AMK-TEMP1
J:\Projects\Small_Chemistry_Jobs\DB\Program\EDMS.md
Printed: 5/30/2018 2:14:13 PM
[SITE KEY] = 22 AND [MATRIX] = 'SO' AND [SED] <> '0.16' AND [LOCID] NOT LIKE 'ID

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					SS-03	SS-04	SS-05	SS-06	SS-06
Sample ID					SS-03-2-12_040618	SS-04-2-12_040618	SS-05-2-12_040618	SS-06-2-12_040618	SS-56-2-12_040618
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					0.2-1.0	0.2-1.0	0.2-1.0	0.2-1.0	0.2-1.0
Date Sampled					04/06/18	04/06/18	04/06/18	04/06/18	04/06/18
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					Field Duplicate (1-1)
Metals									
Vanadium	MG/KG	39	-	-	NA	NA	NA	NA	NA
Zinc	MG/KG	109	2480	10000	NA	NA	NA	NA	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA-Not Analyzed

J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.

J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					SS-07
Sample ID					SS-07-2-12_040618
Matrix					Soil
Depth Interval (ft)					0.2-1.0
Date Sampled					04/06/18
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**	
Volatile Organic Compounds					
1,1,1-Trichloroethane	MG/KG	0.68	0.68	1000	NA
1,1-Dichloroethane	MG/KG	0.27	0.27	480	NA
1,2-Dichloroethene (cis)	MG/KG	0.25	0.25	1000	NA
1,2-Dichloroethene (trans)	MG/KG	0.19	0.19	1000	NA
Acetone	MG/KG	0.05	0.05	1000	NA
Benzene	MG/KG	0.06	0.06	89	NA
Carbon disulfide	MG/KG	2.7	2.7	-	NA
Chloroform	MG/KG	0.37	0.37	700	NA
Methyl ethyl ketone (2-Butanone)	MG/KG	0.12	0.12	1000	NA
Methyl tert-butyl ether	MG/KG	0.93	0.93	1000	NA
Methylcyclohexane	MG/KG	-	-	-	NA
Styrene	MG/KG	300	-	-	NA
Tetrachloroethene	MG/KG	1.3	1.3	300	NA
Toluene	MG/KG	0.7	0.7	1000	NA
Trichloroethene	MG/KG	0.47	0.47	400	NA
Semivolatile Organic Compounds					
2-Methylnaphthalene	MG/KG	0.41	36.4	-	
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	1000	
Benzo(a)anthracene	MG/KG	1	1	11	0.24 J

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.

J+ - The reported concentration is an estimated value, biased high.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					SS-07
Sample ID					SS-07-2-12_040618
Matrix					Soil
Depth Interval (ft)					0.2-1.0
Date Sampled					04/06/18
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**	
Semivolatile Organic Compounds					
Benzo(a)pyrene	MG/KG	1	22	1.1	0.26 J
Benzo(b)fluoranthene	MG/KG	1	1.7	11	0.3 J
Benzo(g,h,i)perylene	MG/KG	100	1000	1000	0.17 J
Benzo(k)fluoranthene	MG/KG	0.8	1.7	110	0.2 J
Chrysene	MG/KG	1	1	110	0.32 J
Di-n-butylphthalate	MG/KG	0.014	8.1	-	
Di-n-octylphthalate	MG/KG	100	120	-	
Fluoranthene	MG/KG	100	1000	1000	0.54 J
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	11	
Naphthalene	MG/KG	12	12	1000	
Phenanthrene	MG/KG	100	1000	1000	0.29 J
Pyrene	MG/KG	100	1000	1000	0.42 J
Pesticide Organic Compounds					
4,4'-DDD	MG/KG	0.0033	14	180	NA
4,4'-DDE	MG/KG	0.0033	17	120	NA
4,4'-DDT	MG/KG	0.0033	136	94	NA
alpha-BHC	MG/KG	0.02	0.02	6.8	NA
alpha-Chlordane	MG/KG	0.094	2.9	47	NA
delta-BHC	MG/KG	0.04	0.25	1000	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

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Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Only Detected Results Reported.

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					SS-07
Sample ID					SS-07-2-12_040618
Matrix					Soil
Depth Interval (ft)					0.2-1.0
Date Sampled					04/06/18
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**	
Metals					
Aluminum	MG/KG	10000	-	-	NA
Arsenic	MG/KG	13	16	16	NA
Barium	MG/KG	350	820	10000	NA
Beryllium	MG/KG	7.2	47	2700	NA
Cadmium	MG/KG	2.5	7.5	60	NA
Calcium	MG/KG	10000	-	-	NA
Chromium	MG/KG	30	NS	6800	NA
Cobalt	MG/KG	20	-	-	NA
Copper	MG/KG	50	1720	10000	NA
Iron	MG/KG	2000	-	-	NA
Lead	MG/KG	63	450	3900	NA
Magnesium	MG/KG	-	-	-	NA
Manganese	MG/KG	1600	2000	10000	NA
Mercury	MG/KG	0.18	0.73	5.7	NA
Nickel	MG/KG	30	130	10000	NA
Potassium	MG/KG	-	-	-	NA
Selenium	MG/KG	3.9	4	6800	NA
Sodium	MG/KG	-	-	-	NA
Thallium	MG/KG	5	-	-	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

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Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Only Detected Results Reported.

TABLE 4B
SUB-SURFACE SOIL ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
FORMER BERNZOMATIC FACILITY

Location ID					SS-07
Sample ID					SS-07-2-12_040618
Matrix					Soil
Depth Interval (ft)					0.2-1.0
Date Sampled					04/06/18
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**	
Metals					
Vanadium	MG/KG	39	-	-	NA
Zinc	MG/KG	109	2480	10000	NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- or NS - No criteria. Empty cell - Not detected. NA-Not Analyzed

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Only Detected Results Reported.

TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			CIST	GSP-01	GSP-02	GSP-03	GSP-04
Sample ID			CIST	GSP-1	GSP-2	GSP-3	GSP-4
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/29/14	03/31/15	03/31/15	03/31/15	03/31/15
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	5					
1,1-Dichloroethane	UG/L	5					
1,1-Dichloroethene	UG/L	5					
1,2-Dichloroethene (cis)	UG/L	5		2.6			72
1,2-Dichloroethene (trans)	UG/L	5					1.4
1,2-Dichloropropane	UG/L	1					
Acetone	UG/L	50		3.1 J	6.0 J	5.4 J	6.7 J
Benzene	UG/L	1					0.63 J
Bromodichloromethane	UG/L	50					
Carbon disulfide	UG/L	60					
Carbon tetrachloride	UG/L	5		2.7	0.50 J	2.1	1.4
Chloroethane	UG/L	5					
Chloroform	UG/L	7		50	1.9	1.7	1.4
Cyclohexane	UG/L	-					9.0
Ethylbenzene	UG/L	5					
Isopropylbenzene (Cumene)	UG/L	5					4.9
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methylcyclohexane	UG/L	-					9.8
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5		15	9.9	4.2	1.3
Toluene	UG/L	5					
Trichloroethene	UG/L	5		14		1.3	3.8
Trichlorofluoromethane	UG/L	5	0.54 J				

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			CIST	GSP-01	GSP-02	GSP-03	GSP-04
Sample ID			CIST	GSP-1	GSP-2	GSP-3	GSP-4
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/29/14	03/31/15	03/31/15	03/31/15	03/31/15
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Vinyl chloride	UG/L	2					
Xylene (total)	UG/L	5					4.5
Semivolatile Organic Compounds							
4-Methylphenol (p-cresol)	UG/L	1	NA	NA	NA	NA	NA
Di-n-butylphthalate	UG/L	50	NA	NA	NA	NA	NA
Metals							
Aluminum	UG/L	-	NA	NA	NA	NA	NA
Arsenic	UG/L	25	NA	NA	NA	NA	NA
Barium	UG/L	1000	NA	NA	NA	NA	NA
Cadmium	UG/L	5	NA	NA	NA	NA	NA
Calcium	UG/L	-	NA	NA	NA	NA	NA
Chromium	UG/L	50	NA	NA	NA	NA	NA
Cobalt	UG/L	-	NA	NA	NA	NA	NA
Copper	UG/L	200	NA	NA	NA	NA	NA
Iron	UG/L	300	NA	NA	NA	NA	NA
Lead	UG/L	25	NA	NA	NA	NA	NA
Magnesium	UG/L	35000	NA	NA	NA	NA	NA
Manganese	UG/L	300	NA	NA	NA	NA	NA
Nickel	UG/L	100	NA	NA	NA	NA	NA
Potassium	UG/L	-	NA	NA	NA	NA	NA
Sodium	UG/L	20000	NA	NA	NA	NA	NA
Vanadium	UG/L	-	NA	NA	NA	NA	NA
Zinc	UG/L	2000	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			CIST	GSP-01	GSP-02	GSP-03	GSP-04
Sample ID			CIST	GSP-1	GSP-2	GSP-3	GSP-4
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/29/14	03/31/15	03/31/15	03/31/15	03/31/15
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Arsenic	UG/L	25	NA	NA	NA	NA	NA
Barium	UG/L	1000	NA	NA	NA	NA	NA
Cadmium	UG/L	5	NA	NA	NA	NA	NA
Chromium	UG/L	50	NA	NA	NA	NA	NA
Lead	UG/L	25	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Total Organic Carbon (TOC)	MG/L	-	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			GSP-05	GSP-06	GSP-07	GSP-08	GSP-09
Sample ID			GSP-5	GSP-6	GSP-7	GSP-8	GSP-9
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			03/31/15	03/31/15	03/31/15	03/31/15	03/31/15
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5				3.3	
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	5				6.2	
1,1-Dichloroethane	UG/L	5				3.9	
1,1-Dichloroethene	UG/L	5				0.71 J	
1,2-Dichloroethene (cis)	UG/L	5				6.5	
1,2-Dichloroethene (trans)	UG/L	5					
1,2-Dichloropropane	UG/L	1					
Acetone	UG/L	50			3.8 J	9.4 J	4.4 J
Benzene	UG/L	1					
Bromodichloromethane	UG/L	50					
Carbon disulfide	UG/L	60					
Carbon tetrachloride	UG/L	5	1.7		3.8	0.66 J	0.35 J
Chloroethane	UG/L	5					
Chloroform	UG/L	7	0.44 J		0.60 J	1.1	0.42 J
Cyclohexane	UG/L	-	0.27 J				
Ethylbenzene	UG/L	5					
Isopropylbenzene (Cumene)	UG/L	5					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5				3.6	2.3
Toluene	UG/L	5					
Trichloroethene	UG/L	5				15	2.9
Trichlorofluoromethane	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.


Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			GSP-05	GSP-06	GSP-07	GSP-08	GSP-09
Sample ID			GSP-5	GSP-6	GSP-7	GSP-8	GSP-9
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			03/31/15	03/31/15	03/31/15	03/31/15	03/31/15
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Vinyl chloride	UG/L	2					
Xylene (total)	UG/L	5					
Semivolatile Organic Compounds							
4-Methylphenol (p-cresol)	UG/L	1	NA	NA	NA	NA	NA
Di-n-butylphthalate	UG/L	50	NA	NA	NA	NA	NA
Metals							
Aluminum	UG/L	-	NA	NA	NA	NA	NA
Arsenic	UG/L	25	NA	NA	NA	NA	NA
Barium	UG/L	1000	NA	NA	NA	NA	NA
Cadmium	UG/L	5	NA	NA	NA	NA	NA
Calcium	UG/L	-	NA	NA	NA	NA	NA
Chromium	UG/L	50	NA	NA	NA	NA	NA
Cobalt	UG/L	-	NA	NA	NA	NA	NA
Copper	UG/L	200	NA	NA	NA	NA	NA
Iron	UG/L	300	NA	NA	NA	NA	NA
Lead	UG/L	25	NA	NA	NA	NA	NA
Magnesium	UG/L	35000	NA	NA	NA	NA	NA
Manganese	UG/L	300	NA	NA	NA	NA	NA
Nickel	UG/L	100	NA	NA	NA	NA	NA
Potassium	UG/L	-	NA	NA	NA	NA	NA
Sodium	UG/L	20000	NA	NA	NA	NA	NA
Vanadium	UG/L	-	NA	NA	NA	NA	NA
Zinc	UG/L	2000	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			GSP-05	GSP-06	GSP-07	GSP-08	GSP-09
Sample ID			GSP-5	GSP-6	GSP-7	GSP-8	GSP-9
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			03/31/15	03/31/15	03/31/15	03/31/15	03/31/15
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Arsenic	UG/L	25	NA	NA	NA	NA	NA
Barium	UG/L	1000	NA	NA	NA	NA	NA
Cadmium	UG/L	5	NA	NA	NA	NA	NA
Chromium	UG/L	50	NA	NA	NA	NA	NA
Lead	UG/L	25	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Total Organic Carbon (TOC)	MG/L	-	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

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Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

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TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			GSP-10	GSP-11	GSP-12	GSP-13	GSP-14
Sample ID			GSP-10	GSP-11	GSP-12	GSP-13	GSP-14
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			03/31/15	03/31/15	03/31/15	03/31/15	04/13/15
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5	1.4			4.4	
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	5	1.7	1.2		1.7	
1,1-Dichloroethane	UG/L	5	1.3	1.0		11	0.85 J
1,1-Dichloroethene	UG/L	5				3.4	
1,2-Dichloroethene (cis)	UG/L	5	2.0	1.8		53	35
1,2-Dichloroethene (trans)	UG/L	5					
1,2-Dichloropropane	UG/L	1					
Acetone	UG/L	50	3.4 J	5.4 J	6.6 J	4.7 J	4.1 J
Benzene	UG/L	1					
Bromodichloromethane	UG/L	50					
Carbon disulfide	UG/L	60					
Carbon tetrachloride	UG/L	5	0.89 J	1.3	1.7	0.50 J	
Chloroethane	UG/L	5					
Chloroform	UG/L	7	0.34 J	0.45 J		0.51 J	
Cyclohexane	UG/L	-					
Ethylbenzene	UG/L	5					
Isopropylbenzene (Cumene)	UG/L	5					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5	0.84 J			18	
Toluene	UG/L	5					
Trichloroethene	UG/L	5	6.7	5.0		72	11
Trichlorofluoromethane	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

B - Compound detected in an associated laboratory method blank.

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TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			GSP-10	GSP-11	GSP-12	GSP-13	GSP-14
Sample ID			GSP-10	GSP-11	GSP-12	GSP-13	GSP-14
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			03/31/15	03/31/15	03/31/15	03/31/15	04/13/15
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Vinyl chloride	UG/L	2				3.3	8.1 J
Xylene (total)	UG/L	5					
Semivolatile Organic Compounds							
4-Methylphenol (p-cresol)	UG/L	1	NA	NA	NA	NA	NA
Di-n-butylphthalate	UG/L	50	NA	NA	NA	NA	NA
Metals							
Aluminum	UG/L	-	NA	NA	NA	NA	NA
Arsenic	UG/L	25	NA	NA	NA	NA	NA
Barium	UG/L	1000	NA	NA	NA	NA	NA
Cadmium	UG/L	5	NA	NA	NA	NA	NA
Calcium	UG/L	-	NA	NA	NA	NA	NA
Chromium	UG/L	50	NA	NA	NA	NA	NA
Cobalt	UG/L	-	NA	NA	NA	NA	NA
Copper	UG/L	200	NA	NA	NA	NA	NA
Iron	UG/L	300	NA	NA	NA	NA	NA
Lead	UG/L	25	NA	NA	NA	NA	NA
Magnesium	UG/L	35000	NA	NA	NA	NA	NA
Manganese	UG/L	300	NA	NA	NA	NA	NA
Nickel	UG/L	100	NA	NA	NA	NA	NA
Potassium	UG/L	-	NA	NA	NA	NA	NA
Sodium	UG/L	20000	NA	NA	NA	NA	NA
Vanadium	UG/L	-	NA	NA	NA	NA	NA
Zinc	UG/L	2000	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

B - Compound detected in an associated laboratory method blank.

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TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			GSP-10	GSP-11	GSP-12	GSP-13	GSP-14
Sample ID			GSP-10	GSP-11	GSP-12	GSP-13	GSP-14
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			03/31/15	03/31/15	03/31/15	03/31/15	04/13/15
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Arsenic	UG/L	25	NA	NA	NA	NA	NA
Barium	UG/L	1000	NA	NA	NA	NA	NA
Cadmium	UG/L	5	NA	NA	NA	NA	NA
Chromium	UG/L	50	NA	NA	NA	NA	NA
Lead	UG/L	25	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Total Organic Carbon (TOC)	MG/L	-	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

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Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

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TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			GSP-15	GSP-16	GSP-17	GSP-18	GSP-19
Sample ID			GSP-15	GSP-16	GSP-17	GSP-18	GSP-19
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/13/15	04/13/15	04/13/15	04/13/15	04/13/15
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	5					0.53 J
1,1-Dichloroethane	UG/L	5					0.44 J
1,1-Dichloroethene	UG/L	5					
1,2-Dichloroethene (cis)	UG/L	5					11
1,2-Dichloroethene (trans)	UG/L	5					
1,2-Dichloropropane	UG/L	1					
Acetone	UG/L	50	4.9 J	4.5 J		4.7 J	3.0 J
Benzene	UG/L	1		0.52 J			
Bromodichloromethane	UG/L	50					
Carbon disulfide	UG/L	60					
Carbon tetrachloride	UG/L	5					
Chloroethane	UG/L	5					
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Ethylbenzene	UG/L	5					
Isopropylbenzene (Cumene)	UG/L	5					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methylcyclohexane	UG/L	-	0.24 J	0.23 J			
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5					22
Toluene	UG/L	5					
Trichloroethene	UG/L	5					7.7
Trichlorofluoromethane	UG/L	5					

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TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			GSP-15	GSP-16	GSP-17	GSP-18	GSP-19
Sample ID			GSP-15	GSP-16	GSP-17	GSP-18	GSP-19
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/13/15	04/13/15	04/13/15	04/13/15	04/13/15
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Vinyl chloride	UG/L	2					
Xylene (total)	UG/L	5					
Semivolatile Organic Compounds							
4-Methylphenol (p-cresol)	UG/L	1	NA	NA	NA	NA	NA
Di-n-butylphthalate	UG/L	50	NA	NA	NA	NA	NA
Metals							
Aluminum	UG/L	-	NA	NA	NA	NA	NA
Arsenic	UG/L	25	NA	NA	NA	NA	NA
Barium	UG/L	1000	NA	NA	NA	NA	NA
Cadmium	UG/L	5	NA	NA	NA	NA	NA
Calcium	UG/L	-	NA	NA	NA	NA	NA
Chromium	UG/L	50	NA	NA	NA	NA	NA
Cobalt	UG/L	-	NA	NA	NA	NA	NA
Copper	UG/L	200	NA	NA	NA	NA	NA
Iron	UG/L	300	NA	NA	NA	NA	NA
Lead	UG/L	25	NA	NA	NA	NA	NA
Magnesium	UG/L	35000	NA	NA	NA	NA	NA
Manganese	UG/L	300	NA	NA	NA	NA	NA
Nickel	UG/L	100	NA	NA	NA	NA	NA
Potassium	UG/L	-	NA	NA	NA	NA	NA
Sodium	UG/L	20000	NA	NA	NA	NA	NA
Vanadium	UG/L	-	NA	NA	NA	NA	NA
Zinc	UG/L	2000	NA	NA	NA	NA	NA

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TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			GSP-15	GSP-16	GSP-17	GSP-18	GSP-19
Sample ID			GSP-15	GSP-16	GSP-17	GSP-18	GSP-19
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/13/15	04/13/15	04/13/15	04/13/15	04/13/15
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Arsenic	UG/L	25	NA	NA	NA	NA	NA
Barium	UG/L	1000	NA	NA	NA	NA	NA
Cadmium	UG/L	5	NA	NA	NA	NA	NA
Chromium	UG/L	50	NA	NA	NA	NA	NA
Lead	UG/L	25	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Total Organic Carbon (TOC)	MG/L	-	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

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TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			GSP-20	GSP-21	GSP-22	GSP-23	GSP-24
Sample ID			GSP-20	GSP-21	GSP-22	GSP-23	GSP-24
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/13/15	04/13/15	04/13/15	04/13/15	04/13/15
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					21
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	5			0.54 J		
1,1-Dichloroethane	UG/L	5			2.8		87
1,1-Dichloroethene	UG/L	5			0.77 J		8.8
1,2-Dichloroethene (cis)	UG/L	5		5.3	170 D	2.8	440 D
1,2-Dichloroethene (trans)	UG/L	5			2.0		4.9
1,2-Dichloropropane	UG/L	1					
Acetone	UG/L	50					4.2 J
Benzene	UG/L	1			0.45 J		
Bromodichloromethane	UG/L	50					
Carbon disulfide	UG/L	60					
Carbon tetrachloride	UG/L	5					
Chloroethane	UG/L	5					2.9
Chloroform	UG/L	7				1.1	
Cyclohexane	UG/L	-					
Ethylbenzene	UG/L	5					2.8
Isopropylbenzene (Cumene)	UG/L	5					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methylcyclohexane	UG/L	-			0.24 J		
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5			6.5	1.1	7.1
Toluene	UG/L	5					0.78 J
Trichloroethene	UG/L	5			28	2.0	11
Trichlorofluoromethane	UG/L	5					

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TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			GSP-20	GSP-21	GSP-22	GSP-23	GSP-24
Sample ID			GSP-20	GSP-21	GSP-22	GSP-23	GSP-24
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/13/15	04/13/15	04/13/15	04/13/15	04/13/15
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Vinyl chloride	UG/L	2			7.5 J		3.6 J
Xylene (total)	UG/L	5					9.4
Semivolatile Organic Compounds							
4-Methylphenol (p-cresol)	UG/L	1	NA	NA	NA	NA	NA
Di-n-butylphthalate	UG/L	50	NA	NA	NA	NA	NA
Metals							
Aluminum	UG/L	-	NA	NA	NA	NA	NA
Arsenic	UG/L	25	NA	NA	NA	NA	NA
Barium	UG/L	1000	NA	NA	NA	NA	NA
Cadmium	UG/L	5	NA	NA	NA	NA	NA
Calcium	UG/L	-	NA	NA	NA	NA	NA
Chromium	UG/L	50	NA	NA	NA	NA	NA
Cobalt	UG/L	-	NA	NA	NA	NA	NA
Copper	UG/L	200	NA	NA	NA	NA	NA
Iron	UG/L	300	NA	NA	NA	NA	NA
Lead	UG/L	25	NA	NA	NA	NA	NA
Magnesium	UG/L	35000	NA	NA	NA	NA	NA
Manganese	UG/L	300	NA	NA	NA	NA	NA
Nickel	UG/L	100	NA	NA	NA	NA	NA
Potassium	UG/L	-	NA	NA	NA	NA	NA
Sodium	UG/L	20000	NA	NA	NA	NA	NA
Vanadium	UG/L	-	NA	NA	NA	NA	NA
Zinc	UG/L	2000	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

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TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			GSP-20	GSP-21	GSP-22	GSP-23	GSP-24
Sample ID			GSP-20	GSP-21	GSP-22	GSP-23	GSP-24
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/13/15	04/13/15	04/13/15	04/13/15	04/13/15
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Arsenic	UG/L	25	NA	NA	NA	NA	NA
Barium	UG/L	1000	NA	NA	NA	NA	NA
Cadmium	UG/L	5	NA	NA	NA	NA	NA
Chromium	UG/L	50	NA	NA	NA	NA	NA
Lead	UG/L	25	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Total Organic Carbon (TOC)	MG/L	-	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			GSP-25	GSP-26	GSP-27	GSP-28	GSP-29
Sample ID			GSP-25	GSP-26	GSP-27	GSP-28	GSP-29
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/13/15	06/05/15	06/05/15	06/05/15	06/05/15
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	5					
1,1-Dichloroethane	UG/L	5	1.3	0.97 J			
1,1-Dichloroethene	UG/L	5		0.31 J			
1,2-Dichloroethene (cis)	UG/L	5	32	4.8			
1,2-Dichloroethene (trans)	UG/L	5					
1,2-Dichloropropane	UG/L	1					
Acetone	UG/L	50		5.6 J	5.7 J	12	34
Benzene	UG/L	1	0.51 J				
Bromodichloromethane	UG/L	50					
Carbon disulfide	UG/L	60					
Carbon tetrachloride	UG/L	5					
Chloroethane	UG/L	5					
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Ethylbenzene	UG/L	5					
Isopropylbenzene (Cumene)	UG/L	5					
Methyl ethyl ketone (2-Butanone)	UG/L	50					1.5 J
Methylcyclohexane	UG/L	-	0.17 J				
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5	8.8	0.83 J			
Toluene	UG/L	5	0.52 J				0.77 J
Trichloroethene	UG/L	5	7.7	13	0.71 J		
Trichlorofluoromethane	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			GSP-25	GSP-26	GSP-27	GSP-28	GSP-29
Sample ID			GSP-25	GSP-26	GSP-27	GSP-28	GSP-29
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/13/15	06/05/15	06/05/15	06/05/15	06/05/15
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Vinyl chloride	UG/L	2					
Xylene (total)	UG/L	5					0.72 J
Semivolatile Organic Compounds							
4-Methylphenol (p-cresol)	UG/L	1	NA	NA	NA	NA	NA
Di-n-butylphthalate	UG/L	50	NA	NA	NA	NA	NA
Metals							
Aluminum	UG/L	-	NA	NA	NA	NA	NA
Arsenic	UG/L	25	NA	NA	NA	NA	NA
Barium	UG/L	1000	NA	NA	NA	NA	NA
Cadmium	UG/L	5	NA	NA	NA	NA	NA
Calcium	UG/L	-	NA	NA	NA	NA	NA
Chromium	UG/L	50	NA	NA	NA	NA	NA
Cobalt	UG/L	-	NA	NA	NA	NA	NA
Copper	UG/L	200	NA	NA	NA	NA	NA
Iron	UG/L	300	NA	NA	NA	NA	NA
Lead	UG/L	25	NA	NA	NA	NA	NA
Magnesium	UG/L	35000	NA	NA	NA	NA	NA
Manganese	UG/L	300	NA	NA	NA	NA	NA
Nickel	UG/L	100	NA	NA	NA	NA	NA
Potassium	UG/L	-	NA	NA	NA	NA	NA
Sodium	UG/L	20000	NA	NA	NA	NA	NA
Vanadium	UG/L	-	NA	NA	NA	NA	NA
Zinc	UG/L	2000	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			GSP-25	GSP-26	GSP-27	GSP-28	GSP-29
Sample ID			GSP-25	GSP-26	GSP-27	GSP-28	GSP-29
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/13/15	06/05/15	06/05/15	06/05/15	06/05/15
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Arsenic	UG/L	25	NA	NA	NA	NA	NA
Barium	UG/L	1000	NA	NA	NA	NA	NA
Cadmium	UG/L	5	NA	NA	NA	NA	NA
Chromium	UG/L	50	NA	NA	NA	NA	NA
Lead	UG/L	25	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Total Organic Carbon (TOC)	MG/L	-	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			GSP-30	GSP-31	GSP-32	GSP-33	GSP-34
Sample ID			GSP-30	GSP-31	GSP-32	GSP-33	GSP-34
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/05/15	06/05/15	06/05/15	06/05/15	06/05/15
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	5					1.8
1,1-Dichloroethane	UG/L	5		22			
1,1-Dichloroethene	UG/L	5		1.3			0.40 J
1,2-Dichloroethene (cis)	UG/L	5		390 D	0.99 J	1.6	2.7
1,2-Dichloroethene (trans)	UG/L	5		2.1			
1,2-Dichloropropane	UG/L	1		2.0			
Acetone	UG/L	50	19	5.6 J	7.0 J	14	36
Benzene	UG/L	1					
Bromodichloromethane	UG/L	50					
Carbon disulfide	UG/L	60			0.43 J		
Carbon tetrachloride	UG/L	5					
Chloroethane	UG/L	5					
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Ethylbenzene	UG/L	5					
Isopropylbenzene (Cumene)	UG/L	5					
Methyl ethyl ketone (2-Butanone)	UG/L	50	3.1 J				
Methylcyclohexane	UG/L	-	0.24 J				
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5		3.3		0.54 J	
Toluene	UG/L	5	0.51 J	1.5	0.93 J	0.54 J	0.56 J
Trichloroethene	UG/L	5		13		7.5	16
Trichlorofluoromethane	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			GSP-30	GSP-31	GSP-32	GSP-33	GSP-34
Sample ID			GSP-30	GSP-31	GSP-32	GSP-33	GSP-34
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/05/15	06/05/15	06/05/15	06/05/15	06/05/15
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Vinyl chloride	UG/L	2		2.8			
Xylene (total)	UG/L	5		1.0 J			
Semivolatile Organic Compounds							
4-Methylphenol (p-cresol)	UG/L	1	NA	NA	NA	NA	NA
Di-n-butylphthalate	UG/L	50	NA	NA	NA	NA	NA
Metals							
Aluminum	UG/L	-	NA	NA	NA	NA	NA
Arsenic	UG/L	25	NA	NA	NA	NA	NA
Barium	UG/L	1000	NA	NA	NA	NA	NA
Cadmium	UG/L	5	NA	NA	NA	NA	NA
Calcium	UG/L	-	NA	NA	NA	NA	NA
Chromium	UG/L	50	NA	NA	NA	NA	NA
Cobalt	UG/L	-	NA	NA	NA	NA	NA
Copper	UG/L	200	NA	NA	NA	NA	NA
Iron	UG/L	300	NA	NA	NA	NA	NA
Lead	UG/L	25	NA	NA	NA	NA	NA
Magnesium	UG/L	35000	NA	NA	NA	NA	NA
Manganese	UG/L	300	NA	NA	NA	NA	NA
Nickel	UG/L	100	NA	NA	NA	NA	NA
Potassium	UG/L	-	NA	NA	NA	NA	NA
Sodium	UG/L	20000	NA	NA	NA	NA	NA
Vanadium	UG/L	-	NA	NA	NA	NA	NA
Zinc	UG/L	2000	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			GSP-30	GSP-31	GSP-32	GSP-33	GSP-34
Sample ID			GSP-30	GSP-31	GSP-32	GSP-33	GSP-34
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/05/15	06/05/15	06/05/15	06/05/15	06/05/15
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Arsenic	UG/L	25	NA	NA	NA	NA	NA
Barium	UG/L	1000	NA	NA	NA	NA	NA
Cadmium	UG/L	5	NA	NA	NA	NA	NA
Chromium	UG/L	50	NA	NA	NA	NA	NA
Lead	UG/L	25	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Total Organic Carbon (TOC)	MG/L	-	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

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TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			GSP-35	GSP-36	MW-01	MW-01	MW-02
Sample ID			GSP-35	GSP-36	MW-01	MW-01	MW-02
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/05/15	06/05/15	10/28/14	03/29/17	10/28/14
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	5					
1,1-Dichloroethane	UG/L	5					
1,1-Dichloroethene	UG/L	5					
1,2-Dichloroethene (cis)	UG/L	5			13	15	0.69 J
1,2-Dichloroethene (trans)	UG/L	5			0.91 J	2.0	
1,2-Dichloropropane	UG/L	1					
Acetone	UG/L	50	8.8 J	9.0 J			8.3 J
Benzene	UG/L	1					0.40 J
Bromodichloromethane	UG/L	50					
Carbon disulfide	UG/L	60			0.93 J		5.9
Carbon tetrachloride	UG/L	5					
Chloroethane	UG/L	5					
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Ethylbenzene	UG/L	5					
Isopropylbenzene (Cumene)	UG/L	5					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methylcyclohexane	UG/L	-		0.17 J			
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5					
Toluene	UG/L	5					0.34 J
Trichloroethene	UG/L	5			0.23 J		2.2
Trichlorofluoromethane	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

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Only Detected Results Reported.

TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			GSP-35	GSP-36	MW-01	MW-01	MW-02
Sample ID			GSP-35	GSP-36	MW-01	MW-01	MW-02
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/05/15	06/05/15	10/28/14	03/29/17	10/28/14
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Vinyl chloride	UG/L	2			1.0	15	
Xylene (total)	UG/L	5					
Semivolatile Organic Compounds							
4-Methylphenol (p-cresol)	UG/L	1	NA	NA	NA		NA
Di-n-butylphthalate	UG/L	50	NA	NA	NA		NA
Metals							
Aluminum	UG/L	-	NA	NA	NA		NA
Arsenic	UG/L	25	NA	NA	NA		NA
Barium	UG/L	1000	NA	NA	NA	500	NA
Cadmium	UG/L	5	NA	NA	NA		NA
Calcium	UG/L	-	NA	NA	NA	213,000	NA
Chromium	UG/L	50	NA	NA	NA		NA
Cobalt	UG/L	-	NA	NA	NA		NA
Copper	UG/L	200	NA	NA	NA		NA
Iron	UG/L	300	NA	NA	NA	13,400	NA
Lead	UG/L	25	NA	NA	NA	4.4 J	NA
Magnesium	UG/L	35000	NA	NA	NA	40,500	NA
Manganese	UG/L	300	NA	NA	NA	2,200	NA
Nickel	UG/L	100	NA	NA	NA		NA
Potassium	UG/L	-	NA	NA	NA	10,600	NA
Sodium	UG/L	20000	NA	NA	NA	294,000	NA
Vanadium	UG/L	-	NA	NA	NA		NA
Zinc	UG/L	2000	NA	NA	NA	7.7 J	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

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Concentration Exceeds Criteria

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J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

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TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			GSP-35	GSP-36	MW-01	MW-01	MW-02
Sample ID			GSP-35	GSP-36	MW-01	MW-01	MW-02
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			06/05/15	06/05/15	10/28/14	03/29/17	10/28/14
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Arsenic	UG/L	25	NA	NA	NA	NA	NA
Barium	UG/L	1000	NA	NA	NA	NA	NA
Cadmium	UG/L	5	NA	NA	NA	NA	NA
Chromium	UG/L	50	NA	NA	NA	NA	NA
Lead	UG/L	25	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Total Organic Carbon (TOC)	MG/L	-	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			MW-03	MW-04	MW-04	MW-05	MW-06
Sample ID			MW-03	MW-04	MW-04	MW-05	FD-20141028
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/28/14	10/29/14	03/29/17	10/28/14	10/28/14
Parameter	**Units**	**Criteria***					Field Duplicate (1-1)
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	5					
1,1-Dichloroethane	UG/L	5	0.28 J				
1,1-Dichloroethene	UG/L	5					
1,2-Dichloroethene (cis)	UG/L	5	0.44 J	2.9	20	0.25 J	63
1,2-Dichloroethene (trans)	UG/L	5		0.32 J	2.2		7.1
1,2-Dichloropropane	UG/L	1					
Acetone	UG/L	50	8.3 J	8.7 J			
Benzene	UG/L	1		0.27 J			
Bromodichloromethane	UG/L	50					
Carbon disulfide	UG/L	60	10	9.0		1.2	11
Carbon tetrachloride	UG/L	5					
Chloroethane	UG/L	5					
Chloroform	UG/L	7	0.45 J				
Cyclohexane	UG/L	-					
Ethylbenzene	UG/L	5					
Isopropylbenzene (Cumene)	UG/L	5					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					1.6 JB
Tetrachloroethene	UG/L	5				3.9	18
Toluene	UG/L	5					
Trichloroethene	UG/L	5		2.8	15	2.3	25
Trichlorofluoromethane	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			MW-03	MW-04	MW-04	MW-05	MW-06
Sample ID			MW-03	MW-04	MW-04	MW-05	FD-20141028
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/28/14	10/29/14	03/29/17	10/28/14	10/28/14
Parameter	**Units**	**Criteria***					Field Duplicate (1-1)
Volatile Organic Compounds							
Vinyl chloride	UG/L	2		0.84 J	3.8		
Xylene (total)	UG/L	5					
Semivolatile Organic Compounds							
4-Methylphenol (p-cresol)	UG/L	1	NA	NA		NA	NA
Di-n-butylphthalate	UG/L	50	NA	NA		NA	NA
Metals							
Aluminum	UG/L	-	NA	NA	120 J	NA	NA
Arsenic	UG/L	25	NA	NA		NA	NA
Barium	UG/L	1000	NA	NA	610	NA	NA
Cadmium	UG/L	5	NA	NA		NA	NA
Calcium	UG/L	-	NA	NA	189,000	NA	NA
Chromium	UG/L	50	NA	NA	1.1 J	NA	NA
Cobalt	UG/L	-	NA	NA	3.6 J	NA	NA
Copper	UG/L	200	NA	NA		NA	NA
Iron	UG/L	300	NA	NA	1,500	NA	NA
Lead	UG/L	25	NA	NA	6.2 J	NA	NA
Magnesium	UG/L	35000	NA	NA	37,300	NA	NA
Manganese	UG/L	300	NA	NA	2,100	NA	NA
Nickel	UG/L	100	NA	NA	3.3 J	NA	NA
Potassium	UG/L	-	NA	NA	18,600	NA	NA
Sodium	UG/L	20000	NA	NA	278,000	NA	NA
Vanadium	UG/L	-	NA	NA		NA	NA
Zinc	UG/L	2000	NA	NA	12	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			MW-03	MW-04	MW-04	MW-05	MW-06
Sample ID			MW-03	MW-04	MW-04	MW-05	FD-20141028
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/28/14	10/29/14	03/29/17	10/28/14	10/28/14
Parameter	**Units**	**Criteria***					Field Duplicate (1-1)
Dissolved Metals							
Arsenic	UG/L	25	NA	NA	NA	NA	NA
Barium	UG/L	1000	NA	NA	NA	NA	NA
Cadmium	UG/L	5	NA	NA	NA	NA	NA
Chromium	UG/L	50	NA	NA	NA	NA	NA
Lead	UG/L	25	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Total Organic Carbon (TOC)	MG/L	-	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			MW-06	MW-06	MW-07	MW-08	MW-09
Sample ID			MW-06	MW-06	MW-07	MW-08	FD-02150212
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/28/14	03/24/17	10/28/14	02/12/15	02/12/15
Parameter	**Units**	**Criteria***					Field Duplicate (1-1)
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	5			0.70 J		
1,1-Dichloroethane	UG/L	5			0.47 J		
1,1-Dichloroethene	UG/L	5					
1,2-Dichloroethene (cis)	UG/L	5	57		3.0		0.98 J
1,2-Dichloroethene (trans)	UG/L	5	6.9				
1,2-Dichloropropane	UG/L	1					
Acetone	UG/L	50	8.0 J	3.0 J	3.6 J	28	10
Benzene	UG/L	1					
Bromodichloromethane	UG/L	50					
Carbon disulfide	UG/L	60	11		1.3		3.2
Carbon tetrachloride	UG/L	5					
Chloroethane	UG/L	5					
Chloroform	UG/L	7			2.5	0.27 J	
Cyclohexane	UG/L	-					
Ethylbenzene	UG/L	5					
Isopropylbenzene (Cumene)	UG/L	5					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5	0.86 JB		0.33 JB		
Tetrachloroethene	UG/L	5	16	1.5	10		0.87 J
Toluene	UG/L	5					
Trichloroethene	UG/L	5	23	1.4	13		1.2
Trichlorofluoromethane	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			MW-06	MW-06	MW-07	MW-08	MW-09
Sample ID			MW-06	MW-06	MW-07	MW-08	FD-02150212
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/28/14	03/24/17	10/28/14	02/12/15	02/12/15
Parameter	**Units**	**Criteria***					Field Duplicate (1-1)
Volatile Organic Compounds							
Vinyl chloride	UG/L	2					
Xylene (total)	UG/L	5					
Semivolatile Organic Compounds							
4-Methylphenol (p-cresol)	UG/L	1	NA		NA	NA	NA
Di-n-butylphthalate	UG/L	50	NA	0.35 J	NA	NA	NA
Metals							
Aluminum	UG/L	-	NA	71 J	NA	NA	NA
Arsenic	UG/L	25	NA		NA	NA	NA
Barium	UG/L	1000	NA	33	NA	NA	NA
Cadmium	UG/L	5	NA		NA	NA	NA
Calcium	UG/L	-	NA	53,000	NA	NA	NA
Chromium	UG/L	50	NA		NA	NA	NA
Cobalt	UG/L	-	NA		NA	NA	NA
Copper	UG/L	200	NA		NA	NA	NA
Iron	UG/L	300	NA	260	NA	NA	NA
Lead	UG/L	25	NA	4.6 J	NA	NA	NA
Magnesium	UG/L	35000	NA	2,900	NA	NA	NA
Manganese	UG/L	300	NA	30	NA	NA	NA
Nickel	UG/L	100	NA		NA	NA	NA
Potassium	UG/L	-	NA	3,700	NA	NA	NA
Sodium	UG/L	20000	NA	8,700	NA	NA	NA
Vanadium	UG/L	-	NA		NA	NA	NA
Zinc	UG/L	2000	NA	4.8 J	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			MW-06	MW-06	MW-07	MW-08	MW-09
Sample ID			MW-06	MW-06	MW-07	MW-08	FD-02150212
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/28/14	03/24/17	10/28/14	02/12/15	02/12/15
Parameter	**Units**	**Criteria***					Field Duplicate (1-1)
Dissolved Metals							
Arsenic	UG/L	25	NA	NA	NA	NA	NA
Barium	UG/L	1000	NA	NA	NA	NA	NA
Cadmium	UG/L	5	NA	NA	NA	NA	NA
Chromium	UG/L	50	NA	NA	NA	NA	NA
Lead	UG/L	25	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Total Organic Carbon (TOC)	MG/L	-	NA	1.5	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

B - Compound detected in an associated laboratory method blank.

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TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			MW-09	MW-10	MW-11	MW-11	MW-12
Sample ID			MW-09	MW-10	MW-11	MW-11	MW-12
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/12/15	02/12/15	02/12/15	03/24/17	02/12/15
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5			2.1	1.5	
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	5			1.4	0.68 J	
1,1-Dichloroethane	UG/L	5			2.5	0.63 J	
1,1-Dichloroethene	UG/L	5			0.72 J	0.35 J	
1,2-Dichloroethene (cis)	UG/L	5	0.94 J	2.8	8.2	2.1	0.32 J
1,2-Dichloroethene (trans)	UG/L	5					
1,2-Dichloropropane	UG/L	1					
Acetone	UG/L	50	12	80	6.1 J	3.3 J	45
Benzene	UG/L	1					0.25 J
Bromodichloromethane	UG/L	50		0.17 J			0.24 J
Carbon disulfide	UG/L	60	3.6	4.4			0.95 J
Carbon tetrachloride	UG/L	5					
Chloroethane	UG/L	5					
Chloroform	UG/L	7		2.5			1.3
Cyclohexane	UG/L	-					
Ethylbenzene	UG/L	5					
Isopropylbenzene (Cumene)	UG/L	5					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5	0.81 J	3.2	3.7	4.3	
Toluene	UG/L	5					0.25 J
Trichloroethene	UG/L	5	1.2	3.3	18	13	2.3
Trichlorofluoromethane	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			MW-09	MW-10	MW-11	MW-11	MW-12
Sample ID			MW-09	MW-10	MW-11	MW-11	MW-12
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/12/15	02/12/15	02/12/15	03/24/17	02/12/15
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Vinyl chloride	UG/L	2			0.37 J		
Xylene (total)	UG/L	5					
Semivolatile Organic Compounds							
4-Methylphenol (p-cresol)	UG/L	1	NA	NA	NA		NA
Di-n-butylphthalate	UG/L	50	NA	NA	NA	0.35 J	NA
Metals							
Aluminum	UG/L	-	NA	NA	NA		NA
Arsenic	UG/L	25	NA	NA	NA		NA
Barium	UG/L	1000	NA	NA	NA	120	NA
Cadmium	UG/L	5	NA	NA	NA		NA
Calcium	UG/L	-	NA	NA	NA	123,000	NA
Chromium	UG/L	50	NA	NA	NA		NA
Cobalt	UG/L	-	NA	NA	NA		NA
Copper	UG/L	200	NA	NA	NA	2.1 J	NA
Iron	UG/L	300	NA	NA	NA		NA
Lead	UG/L	25	NA	NA	NA	5.0 J	NA
Magnesium	UG/L	35000	NA	NA	NA	13,300	NA
Manganese	UG/L	300	NA	NA	NA	1,300	NA
Nickel	UG/L	100	NA	NA	NA		NA
Potassium	UG/L	-	NA	NA	NA	7,500	NA
Sodium	UG/L	20000	NA	NA	NA	37,100	NA
Vanadium	UG/L	-	NA	NA	NA		NA
Zinc	UG/L	2000	NA	NA	NA	1.6 J	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

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Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

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TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			MW-09	MW-10	MW-11	MW-11	MW-12
Sample ID			MW-09	MW-10	MW-11	MW-11	MW-12
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/12/15	02/12/15	02/12/15	03/24/17	02/12/15
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Arsenic	UG/L	25	NA	NA	NA	NA	NA
Barium	UG/L	1000	NA	NA	NA	NA	NA
Cadmium	UG/L	5	NA	NA	NA	NA	NA
Chromium	UG/L	50	NA	NA	NA	NA	NA
Lead	UG/L	25	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Total Organic Carbon (TOC)	MG/L	-	NA	NA	NA	2.6	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

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J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

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TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			MW-13	MW-14	MW-15	MW-16	MW-17
Sample ID			MW-13	MW-14	MW-15	MW-16	MW-17
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/12/15	03/23/17	03/23/17	03/23/17	03/23/17
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	5					
1,1-Dichloroethane	UG/L	5					
1,1-Dichloroethene	UG/L	5					
1,2-Dichloroethene (cis)	UG/L	5	3.0				
1,2-Dichloroethene (trans)	UG/L	5					
1,2-Dichloropropane	UG/L	1					
Acetone	UG/L	50	10	4.9 J	4.7 J	3.2 J	
Benzene	UG/L	1					
Bromodichloromethane	UG/L	50					
Carbon disulfide	UG/L	60			0.32 J		
Carbon tetrachloride	UG/L	5					
Chloroethane	UG/L	5					
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Ethylbenzene	UG/L	5					
Isopropylbenzene (Cumene)	UG/L	5					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5					
Toluene	UG/L	5					
Trichloroethene	UG/L	5					
Trichlorofluoromethane	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

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TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			MW-13	MW-14	MW-15	MW-16	MW-17
Sample ID			MW-13	MW-14	MW-15	MW-16	MW-17
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/12/15	03/23/17	03/23/17	03/23/17	03/23/17
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Vinyl chloride	UG/L	2					
Xylene (total)	UG/L	5					
Semivolatile Organic Compounds							
4-Methylphenol (p-cresol)	UG/L	1	NA		0.67 J		
Di-n-butylphthalate	UG/L	50	NA	0.31 J	0.34 J		0.43 J
Metals							
Aluminum	UG/L	-	NA		370		110 J
Arsenic	UG/L	25	NA				
Barium	UG/L	1000	NA	85	40	200 J	110
Cadmium	UG/L	5	NA		0.64 J	0.86 J	0.91 J
Calcium	UG/L	-	NA	142,000	66,500	80,500	262,000
Chromium	UG/L	50	NA				
Cobalt	UG/L	-	NA	1.0 J	10	61	5.2
Copper	UG/L	200	NA		19	120 J	9.4 J
Iron	UG/L	300	NA	1,300	360	950	2,700
Lead	UG/L	25	NA	3.2 J	5.1 J	3.5 J	3.5 J
Magnesium	UG/L	35000	NA	20,700	8,600	14,700	47,300
Manganese	UG/L	300	NA	570	1,200	7,400	2,400
Nickel	UG/L	100	NA		2.7 J	12	5.3 J
Potassium	UG/L	-	NA	12,500	1,400	5,500	8,500
Sodium	UG/L	20000	NA	103,000	81,400	332,000	67,200
Vanadium	UG/L	-	NA				
Zinc	UG/L	2000	NA	6.7 J	26	50	15

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Concentration Exceeds Criteria

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TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			MW-13	MW-14	MW-15	MW-16	MW-17
Sample ID			MW-13	MW-14	MW-15	MW-16	MW-17
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/12/15	03/23/17	03/23/17	03/23/17	03/23/17
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Arsenic	UG/L	25	NA	NA	NA	NA	NA
Barium	UG/L	1000	NA	NA	NA	NA	NA
Cadmium	UG/L	5	NA	NA	NA	NA	NA
Chromium	UG/L	50	NA	NA	NA	NA	NA
Lead	UG/L	25	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Total Organic Carbon (TOC)	MG/L	-	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

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TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			MW-18	MW-19	MW-20	MW-21	MW-21
Sample ID			MW-18	MW-19	MW-20	DUP-032417	MW-21
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			03/29/17	03/24/17	03/24/17	03/24/17	03/24/17
Parameter	**Units**	**Criteria***				Field Duplicate (1-1)	
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5					
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	5					
1,1-Dichloroethane	UG/L	5				3.3	3.1
1,1-Dichloroethene	UG/L	5				0.86 J	0.95 J
1,2-Dichloroethene (cis)	UG/L	5			3.1	23	21
1,2-Dichloroethene (trans)	UG/L	5					
1,2-Dichloropropane	UG/L	1					
Acetone	UG/L	50		3.3 J		3.2 J	
Benzene	UG/L	1					
Bromodichloromethane	UG/L	50					
Carbon disulfide	UG/L	60					
Carbon tetrachloride	UG/L	5					
Chloroethane	UG/L	5					
Chloroform	UG/L	7					
Cyclohexane	UG/L	-					
Ethylbenzene	UG/L	5					
Isopropylbenzene (Cumene)	UG/L	5					
Methyl ethyl ketone (2-Butanone)	UG/L	50					
Methylcyclohexane	UG/L	-					
Methylene chloride	UG/L	5					
Tetrachloroethene	UG/L	5					
Toluene	UG/L	5					
Trichloroethene	UG/L	5			8.6	11	11
Trichlorofluoromethane	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			MW-18	MW-19	MW-20	MW-21	MW-21
Sample ID			MW-18	MW-19	MW-20	DUP-032417	MW-21
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			03/29/17	03/24/17	03/24/17	03/24/17	03/24/17
Parameter	**Units**	**Criteria***				Field Duplicate (1-1)	
Volatile Organic Compounds							
Vinyl chloride	UG/L	2					
Xylene (total)	UG/L	5					
Semivolatile Organic Compounds							
4-Methylphenol (p-cresol)	UG/L	1		0.95 J			
Di-n-butylphthalate	UG/L	50		0.35 J	0.31 J	0.46 J	0.48 J
Metals							
Aluminum	UG/L	-	91 J	620	680	2,000	1,200
Arsenic	UG/L	25					
Barium	UG/L	1000	170	110	48	14 J	60 J
Cadmium	UG/L	5		0.56 J	0.54 J	0.92 J	
Calcium	UG/L	-	190,000	61,400	101,000	97,600 J	31,500 J
Chromium	UG/L	50			1.1 J	2.3 J	1.2 J
Cobalt	UG/L	-	1.4 J	3.7 J	0.68 J		
Copper	UG/L	200			13		4.0 J
Iron	UG/L	300	6,000	21,000	580	1,500	1,100
Lead	UG/L	25		4.0 J		4.8 J	
Magnesium	UG/L	35000	30,800	12,400	27,300	82,700 J	6,200 J
Manganese	UG/L	300	4,000	8,600	67	28	250
Nickel	UG/L	100	1.3 J	1.3 J		1.4 J	
Potassium	UG/L	-	2,900	6,800	5,100	9,900 J	1,800 J
Sodium	UG/L	20000	147,000	34,200	7,200	1,900,000 J	143,000 J
Vanadium	UG/L	-				4.5 J	2.2 J
Zinc	UG/L	2000	11	7.0 J	11	7.9 J	5.2 J

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			MW-18	MW-19	MW-20	MW-21	MW-21
Sample ID			MW-18	MW-19	MW-20	DUP-032417	MW-21
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			03/29/17	03/24/17	03/24/17	03/24/17	03/24/17
Parameter	**Units**	**Criteria***				Field Duplicate (1-1)	
Dissolved Metals							
Arsenic	UG/L	25	NA	NA	NA	NA	NA
Barium	UG/L	1000	NA	NA	NA	NA	NA
Cadmium	UG/L	5	NA	NA	NA	NA	NA
Chromium	UG/L	50	NA	NA	NA	NA	NA
Lead	UG/L	25	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Total Organic Carbon (TOC)	MG/L	-	NA	15.7		7.0	6.9

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

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Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

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Only Detected Results Reported.

TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			SB-01	SB-02	SB-03	SB-04
Sample ID			SB01	SB02	SB03	SB04
Matrix			Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-
Date Sampled			05/27/14	05/27/14	05/27/14	05/27/14
Parameter	**Units**	**Criteria***				
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/L	5				
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	5				
1,1-Dichloroethane	UG/L	5				
1,1-Dichloroethene	UG/L	5				
1,2-Dichloroethene (cis)	UG/L	5	1.4	1.4		14
1,2-Dichloroethene (trans)	UG/L	5				
1,2-Dichloropropane	UG/L	1				
Acetone	UG/L	50	5.9	18	6.0	
Benzene	UG/L	1				
Bromodichloromethane	UG/L	50				
Carbon disulfide	UG/L	60				
Carbon tetrachloride	UG/L	5				
Chloroethane	UG/L	5				
Chloroform	UG/L	7				
Cyclohexane	UG/L	-				
Ethylbenzene	UG/L	5				
Isopropylbenzene (Cumene)	UG/L	5				
Methyl ethyl ketone (2-Butanone)	UG/L	50				
Methylcyclohexane	UG/L	-				
Methylene chloride	UG/L	5				
Tetrachloroethene	UG/L	5	6.8	3.1	1.4	36
Toluene	UG/L	5				
Trichloroethene	UG/L	5	5.4	2.0	2.4	24
Trichlorofluoromethane	UG/L	5				

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			SB-01	SB-02	SB-03	SB-04
Sample ID			SB01	SB02	SB03	SB04
Matrix			Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-
Date Sampled			05/27/14	05/27/14	05/27/14	05/27/14
Parameter	**Units**	**Criteria***				
Volatile Organic Compounds						
Vinyl chloride	UG/L	2				
Xylene (total)	UG/L	5	NA	NA	NA	NA
Semivolatile Organic Compounds						
4-Methylphenol (p-cresol)	UG/L	1	NA	NA	NA	NA
Di-n-butylphthalate	UG/L	50				
Metals						
Aluminum	UG/L	-	NA	NA	NA	NA
Arsenic	UG/L	25	172	68	121	48
Barium	UG/L	1000	1,850	2,700	2,600	900
Cadmium	UG/L	5	25.6	22.6	32.2	
Calcium	UG/L	-	NA	NA	NA	NA
Chromium	UG/L	50	462	429	528	122
Cobalt	UG/L	-	NA	NA	NA	NA
Copper	UG/L	200	NA	NA	NA	NA
Iron	UG/L	300	NA	NA	NA	NA
Lead	UG/L	25	224	208	430	63
Magnesium	UG/L	35000	NA	NA	NA	NA
Manganese	UG/L	300	NA	NA	NA	NA
Nickel	UG/L	100	NA	NA	NA	NA
Potassium	UG/L	-	NA	NA	NA	NA
Sodium	UG/L	20000	NA	NA	NA	NA
Vanadium	UG/L	-	NA	NA	NA	NA
Zinc	UG/L	2000	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 5
GROUNDWATER ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			SB-01	SB-02	SB-03	SB-04
Sample ID			SB01	SB02	SB03	SB04
Matrix			Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-
Date Sampled			05/27/14	05/27/14	05/27/14	05/27/14
Parameter	**Units**	**Criteria***				
Dissolved Metals						
Arsenic	UG/L	25		11	122	
Barium	UG/L	1000	72	297	2,680	171
Cadmium	UG/L	5			32.1	
Chromium	UG/L	50		35	535	
Lead	UG/L	25			450	
Miscellaneous Parameters						
Total Organic Carbon (TOC)	MG/L	-	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.


Concentration Exceeds Criteria

- - No standard or guidance value. UG/L - Micrograms per liter. MG/L - Milligrams per liter. Empty cell - Not detected. NA - Not analyzed.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.

B - Compound detected in an associated laboratory method blank.

Only Detected Results Reported.

TABLE 6
GROUNDWATER ANALYTICAL RESULTS – BACTERIA AND FUNCTIONAL GENES
FORMER BERNZOMATIC FACILITY

Location ID		MW-06	MW-11	MW-19	MW-20	MW-21
Sample ID		MW-06	MW-11	MW-19	MW-20	Dup-032417
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		03/24/17	03/24/17	03/24/17	03/24/17	03/24/17
Parameter	Units					Field Duplicate (1-1)
Miscellaneous Parameters						
Dehalococcoides	cells/mL	0.4 J	0.5 U	2.4	0.5 U	0.5 U
Dehalobacter	cells/mL	985	4.9	18,000	3.9 J	8
tceA Reductase	cells/mL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BAV1 Vinyl Chloride Reductase	cells/mL	0.1 J	0.5 U	2	0.5 U	0.5 U
Vinyl Chloride Reductase	cells/mL	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Flags assigned during chemistry validation are shown.

cells/mL = cells per milliliter
J - The reported concentration is an estimated value.
U - Not detected above the reported quantitation limit.

Detection Limits shown are PQL

TABLE 6
GROUNDWATER ANALYTICAL RESULTS – BACTERIA AND FUNCTIONAL GENES
FORMER BERNZOMATIC FACILITY

Location ID		MW-21
Sample ID		MW-21
Matrix		Groundwater
Depth Interval (ft)		-
Date Sampled		03/24/17
Parameter	**Units**	
Miscellaneous Parameters		
Dehalococcoides	cells/mL	0.5 U
Dehalobacter	cells/mL	20.1
tceA Reductase	cells/mL	0.5 U
BAV1 Vinyl Chloride Reductase	cells/mL	0.5 U
Vinyl Chloride Reductase	cells/mL	0.5 U

Flags assigned during chemistry validation are shown.

cells/mL = cells per milliliter
J - The reported concentration is an estimated value.
U - Not detected above the reported quantitation limit.

Detection Limits shown are PQL

TABLE 7
FIELD GROUNDWATER QUALITY MEASUREMENTS
FORMER BERNZOMATIC FACILITY

Location	Date	pH	TEMP °C	COND. (mS/cm)	DISS. O2 (mg/l)	TURB. (NTU)	ORP (mV)	Ferrous Iron (mg/L)
MW-01	10/28/2014	6.59	20.23	2.03	0.00	0.0	-118	NA
	3/29/2017	7.11	17.49	2.74	0.00	6.3	-101	NA
MW-02	10/28/2014	6.75	20.40	1.52	0.00	0.0	-159	NA
MW-03	10/28/2014	6.55	20.35	1.48	0.00	0.0	51	NA
MW-04	10/29/2018	6.67	20.44	1.52	0.00	0.0	-55	NA
	3/29/2017	7.22	19.04	2.38	0.00	3.3	-60	NA
MW-05	10/28/2014	7.16	17.26	0.43	0.00	0.0	-170	NA
MW-06	10/28/2014	6.48	17.51	0.70	0.00	0.0	183	NA
	3/24/2017	6.98	7.81	0.22	0.00	5.1	120	0.10
MW-07	10/28/2018	6.92	10.06	0.75	0.00	32.8	-99	NA
MW-08	2/12/2015	6.89	9.34	0.56	0.00	43.3	-135	NA
MW-09	2/12/2015	6.30	5.68	0.69	0.15	5.9	30	NA
MW-10	2/12/2015	6.30	5.57	0.80	0.00	65.6	10	NA
MW-11	2/12/2015	6.55	6.12	0.98	0.00	0.24	-3	NA
	3/24/2017	6.90	8.65	0.56	0.00	6.1	123	0.08
MW-12	2/12/2015	6.76	6.56	2.25	0.00	16.3	-14	NA
MW-13	2/12/2015	6.59	15.7	1.22	0.00	0.0	-141	NA
MW-14	3/23/2017	6.99	5.84	0.90	0.00	7.0	-14	NA
MW-15	3/23/2017	7.29	4.54	0.51	0.00	15.3	122	NA
MW-16	3/23/2017	7.07	6.55	1.28	0.00	1.1	59	NA
MW-17	3/23/2017	6.93	7.71	1.22	0.00	19.7	35	NA
MW-18	3/29/2017	6.87	7.03	1.22	0.00	15.1	-15	NA
MW-19	3/24/2017	6.81	8.39	0.40	0.00	58.3	-58	2.01
MW-20	3/24/2017	6.84	5.19	0.44	0.00	13.7	199	0.08
MW-21	3/24/2017	7.65	5.81	0.58	0.00	19.2	153	0.10
SW-01	3/23/2017	7.85	5.15	NA	3.95	1.8	NA	NA
SW-02	3/23/2017	7.90	4.08	NA	2.46	3.8	NA	NA
CISTERN	4/6/2018	8.32	15.9	0.06	8.00	NA	60.6	NA

Notes:
NA - Not analyzed

TABLE 8
SURFACE WATER AND CISTERN ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			CIST	CIST	CIST	SW-01	SW-01
Sample ID			CIST	SW-C1S_040618	SW-C1S-50_040618	SW-01-032317	SW-51-032317
Matrix			Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
Depth Interval (ft)			-	-	-	-	-
Date Sampled			10/29/14	04/06/18	04/06/18	03/23/17	03/23/17
Parameter	**Units**	**Criteria***			Field Duplicate (1-1)		Field Duplicate (1-1)
Volatile Organic Compounds							
Acetone	UG/L	50	10 U	NA	NA	10 U	10 U
Methylcyclohexane	UG/L	-	1.0 U	NA	NA	2.8 J	1.0 UJ
Trichlorofluoromethane	UG/L	5	0.54 J	NA	NA	1.0 U	1.0 U
Metals							
Barium	MG/L	1	NA	0.0060	0.0059	0.0052	0.0060
Calcium	MG/L	-	NA	9.4	9.5	12.1	12.1
Chromium	MG/L	0.05 H(WS)	NA	0.0040 U	0.0040 U	0.0040 UJ	0.0057 J
Copper	MG/L	0.2 H(WS)	NA	0.0053 J	0.0042 J	0.010 U	0.0016 J
Iron	MG/L	0.3	NA	0.30 J-	0.11 J	0.060	0.063
Magnesium	MG/L	35	NA	0.89	0.90	2.6	2.7
Manganese	MG/L	0.3	NA	0.0017 J	0.00065 J	0.0044	0.0045
Nickel	MG/L	0.1 H(WS)	NA	0.010 U	0.010 U	0.010 U	0.0034 J
Potassium	MG/L	-	NA	4.7 J+	4.5 J+	0.41 J	0.40 J
Sodium	MG/L	-	NA	3.2	3.1	5.9	6.0
Zinc	MG/L	2 H(WS)	NA	0.066	0.066	0.031	0.031
Miscellaneous Parameters							
Total Organic Carbon (TOC)	MG/L	-	NA	NA	NA	2.6	2.5

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. April 2000, Class A.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.

J+ - The reported concentration is an estimated value, high bias

NA - Not analyzed.

Only Detected Results Reported.

Detection Limits shown are PQL

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TABLE 8
SURFACE WATER AND CISTERN ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID			SW-02
Sample ID			SW-02-032317
Matrix			Surface Water
Depth Interval (ft)			-
Date Sampled			03/23/17
Parameter	**Units**	**Criteria***	
Volatile Organic Compounds			
Acetone	UG/L	50	3.5 J
Methylcyclohexane	UG/L	-	1.0 U
Trichlorofluoromethane	UG/L	5	1.0 U
Metals			
Barium	MG/L	1	0.0053
Calcium	MG/L	-	12.2
Chromium	MG/L	0.05 H(WS)	0.0040 U
Copper	MG/L	0.2 H(WS)	0.0025 J
Iron	MG/L	0.3	0.082
Magnesium	MG/L	35	2.7
Manganese	MG/L	0.3	0.0044
Nickel	MG/L	0.1 H(WS)	0.010 U
Potassium	MG/L	-	0.42 J
Sodium	MG/L	-	6.0
Zinc	MG/L	2 H(WS)	0.037
Miscellaneous Parameters			
Total Organic Carbon (TOC)	MG/L	-	2.3

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. April 2000, Class A.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

J - The reported concentration is an estimated value. J- - The reported concentration is an estimated value, low bias.
J+ - The reported concentration is an estimated value, high bias
NA - Not analyzed.

Only Detected Results Reported.

Detection Limits shown are PQL

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[SITE KEY] = 22 AND [MATRIX] = 'WS'

TABLE 9A
SEDIMENT ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID		SED-01			SED-02			SED-02			SED-03			SED-03			SED-04			SED-04			SED-05			SED-05			SED-05		
Sample ID		SED-01-032317			SED-02-032317			SED-52-032317			SED-03 0"-6" 040618			SED-03 6"-12"			SED-04 0"-6" 040618			SED-04 6"-12"			SED-05 0"-6" 040618			SED-55 0"-6" 040618			SED-05 6"-12"		
Matrix		Sediment			Sediment			Sediment			Sediment			Sediment			Sediment			Sediment			Sediment			Sediment			Sediment		
Date Sampled		03/23/17			03/23/17			03/23/17			04/06/18			04/06/18			04/06/18			04/06/18			04/06/18			04/06/18			04/06/18		
Parameter	Units	Criteria (1)	Criteria (2)		Criteria (1)	Criteria (2)		Criteria (1)	Criteria (2)	Field Duplicate	Criteria (1)	Criteria (2)		Criteria (1)	Criteria (2)		Criteria (1)	Criteria (2)		Criteria (1)	Criteria (2)		Criteria (1)	Criteria (2)		Criteria (1)	Criteria (2)	Field Duplicate	Criteria (1)	Criteria (2)	
Volatile Organic Compounds (VOCs)																															
Acetone	UG/KG	-	-	82 J	-	-	83 J	-	-	40 J	-	-		-	-		-	-		-	-		-	-		-	-		-	-	
Semivolatile Organic Compounds (SVOCs)																															
Benzo(a)anthracene	UG/KG	-	-		-	-		-	-	200 J	-	-	670 J	-	-		-	-		-	-		-	-	380 J	-	-	140 J	-	-	
Benzo(a)pyrene	UG/KG	-	-		-	-		-	-	220 J	-	-	990 J	-	-		-	-		-	-		-	-	550 J	-	-	230 J	-	-	
Benzo(b)fluoranthene	UG/KG	-	-		-	-	320 J	-	-	410 J	-	-	1,600 J	-	-	290 J	-	-	440 J	-	-		-	-	740 J	-	-	380 J	-	-	
Benzo(g,h,i)perylene	UG/KG	-	-		-	-		-	-	210 J	-	-	710 J	-	-		-	-		-	-		-	-	480 J	-	-		-	-	
Benzo(k)fluoranthene	UG/KG	-	-		-	-		-	-	140 J	-	-	680 J	-	-		-	-		-	-		-	-	520 J	-	-		-	-	
Chrysene	UG/KG	-	-		-	-		-	-	310 J	-	-	1,400 J	-	-		-	-		-	-		-	-	610 J	-	-		-	-	
Fluoranthene	UG/KG	-	-		-	-	450 J	-	-	730 J	-	-	2,500 J	-	-	550 J	-	-	590 J	-	-		-	-	1,100 J	-	-	490 J	-	-	
Indeno(1,2,3-cd)pyrene	UG/KG	-	-		-	-		-	-	180 J	-	-	800 J	-	-		-	-		-	-		-	-	470 J	-	-	200 J	-	-	
Phenanthrene	UG/KG	-	-		-	-		-	-	420 J	-	-	1,100 J	-	-	310 J	-	-		-	-		-	-	350 J	-	-		-	-	
Pyrene	UG/KG	-	-		-	-	300 J	-	-	490 J	-	-	2,000 J	-	-	310 J	-	-	340 J	-	-		-	-	890 J	-	-	330 J	-	-	
Total Polynuclear Aromatic Hydrocarbons (PAHs)	UG/KG	8,220	71,925	ND	7,740	67,725	1,070	1,844	16,135	3,310	7,320	64,050	12,450	3,360	29,400	1,460	2,800	24,500	1,370	746	6,528	ND	9,460	82,775	6,090	6,080	53,200	1,770	4,220	36,925	ND
Metals																															
Aluminum	MG/KG	-	-	29,200	-	-	8,170 J	-	-	6,620	-	-	25,300 J	-	-	15,200 J	-	-	20,400 J	-	-	21,700	-	-	5,230 J	-	-	9,170 J	-	-	12,500
Arsenic	MG/KG	10	33	16.8 J-	10	33	4.4 J	10	33	2.6 J	10	33	6.7 J	10	33	3.4 J	10	33	5.0 J	10	33	3.2	10	33	2.0 J	10	33	4.0	10	33	2.7
Barium	MG/KG	-	-	184 J-	-	-	64.0 J	-	-	43.8	-	-	166 J	-	-	88.5 J	-	-	357 J+	-	-	179 J+	-	-	31.9 J+	-	-	65.0 J+	-	-	60.0 J+
Beryllium	MG/KG	-	-	1.3 J-	-	-	0.37 J	-	-	0.32	-	-	1.1 J	-	-	0.56 J	-	-	1.1 J+	-	-	0.73 J+	-	-	0.23 J+	-	-	0.38 J+	-	-	0.38 J+
Cadmium	MG/KG	1	5	0.65 J-	1	5	0.52 J	1	5	0.23 J	1	5	0.68 J	1	5	0.25 J	1	5	0.55 J	1	5	0.25 J	1.0	5	0.35 J	1.0	5	0.30 J	1	5	0.19 J
Calcium	MG/KG	-	-	46,000	-	-	6,030 J	-	-	7,840	-	-	36,800 J	-	-	3,860 J	-	-	3,890 J	-	-	4,090	-	-	3,290 J	-	-	24,600 J	-	-	2,920
Chromium	MG/KG	43	110	151 J-	43	110	11.5 J	43	110	10	43	110	31.0 J	43	110	15.8 J	43	110	24.3 J	43	110	21.6	43	110	6.6 J	43	110	11.1 J	43	110	12.0
Cobalt	MG/KG	-	-	21.4 J-	-	-	3.3 J	-	-	5.3	-	-	13.5 J	-	-	6.0 J	-	-	8.1 J	-	-	6.8	-	-	2.4 J	-	-	5.1 J	-	-	4.5
Copper	MG/KG	32	150	574 J-	32	150	43.1 J	32	150	33.2	32	150	111 J	32	150	42.5 J	32	150	60.6 J	32	150	46.2	32	150	23.1 J	32	150	84.4 J	32	150	19.4
Iron	MG/KG	-	-	121,000	-	-	9,320 J	-	-	9,210	-	-	28,200 J	-	-	14,100 J	-	-	22,200 J+	-	-	15,400 J+	-	-	6,020 J+	-	-	11,300 J+	-	-	10,400 J+
Lead	MG/KG	36	130	41.3 J+	36	130	13.4 J	36	130	8.7	36	130	24.3 J	36	130	12.3 J	36	130	14.1 J	36	130	15.8	36	130	9.3 J	36	130	7.8	36	130	12.6
Magnesium	MG/KG	-	-	21,200	-	-	2,790 J	-	-	3,350	-	-	18,700 J	-	-	3,550 J	-	-	4,010 J	-	-	3,660	-	-	1,400 J	-	-	12,800 J	-	-	2,070
Manganese	MG/KG	-	-	1,350	-	-	190 J	-	-	237	-	-	499 J	-	-	150 J	-	-	156 J	-	-	315	-	-	86.5 J	-	-	296 J	-	-	127
Mercury	MG/KG	0.2	1	0.062 J	0.2	1	0.037 J	0.2	1	0.00035	0.2	1		0.2	1	0.033 J	0.2	1	0.067 J	0.2	1	0.078	0.2	1		0.2	1		0.2	1	0.040
Nickel	MG/KG	23	49	102 J-	23	49	9.3 J	23	49	11.3	23	49	34.3 J	23	49	15.9 J	23	49	24.1 J	23	49	19.7	23	49	5.6 J	23	49	12.4	23	49	9.2
Potassium	MG/KG	-	-	5,260	-	-	797 J	-	-	967	-	-	4,920 J	-	-	1,840 J	-	-	2,010 J+	-	-	2,000 J+	-	-	723 J+	-	-	1,300 J+	-	-	840 J+
Selenium	MG/KG	-	-		-	-		-	-		-	-		-	-		-	-		-	-	0.84 J-	-	-		-	-		-	-	
Sodium	MG/KG	-	-	300 J	-	-	144 J	-	-	97.0 J	-	-		-	-		-	-		-	-		-	-		-	-	264	-	-	
Vanadium	MG/KG	-	-	69.7 J-	-	-	16.0 J	-	-	12.0	-	-	49.7 J	-	-	24.5 J	-	-	70.6 J	-	-	35.6	-	-	13.0 J	-	-	18.8	-	-	21.9
Zinc	MG/KG	120	460	1,090	120	460	277 J	120	460	143 J	120	460	276 J	120	460	153 J	120	460	161 J+	120	460	122 J	120	460	108 J	120	460	134 J	120	460	56.2 J
Miscellaneous Parameters																															
Total Organic Carbon (TOC)	MG/KG	-	-	41,100 J	-	-	38,700 J	-	-	9,220 J	-	-	36,600	-	-	16,800	-	-	14,000	-	-	3,730	-	-	47,300	-	-	30,400	-	-	21,100

Notes:
Criteria (1)- NYSDEC Screening and Assessment of Contaminated Sediments, Class A (based on sample TOC), June 24, 2014.
Criteria (2)- NYSDEC Screening and Assessment of Contaminated Sediments, Class C (based on sample TOC), June 24, 2014.
Criteria for volatile organic compounds and semivolatile organic compounds calculated using sample-specific TOC concentrations.
Flags assigned during chemistry validation are shown.

(oval) Concentration Exceeds Criteria (1)
(rectangle) Concentration Exceeds Criteria (2)
- - No criteria. UG/KG - Micrograms per kilogram. MG/KG - Milligrams per kilogram. Empty cell - Not detected.
J - Reported concentration is an estimated value. J- - Reported concentration is an estimated value, biased low. J+ - Reported concentration is an estimated value, biased high.

TABLE 9B
SEDIMENT ANALYTICAL RESULTS COMPARED TO SOIL SCOs - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID					SED-01	SED-02	SED-02	SED-03	SED-03
Sample ID					SED-01-032317	SED-02-032317	SED-52-032317	SED-03-0-6-040618	SED-03-6-12-040618
Matrix					Sediment	Sediment	Sediment	Sediment	Sediment
Depth Interval (ft)					-	-	-	0.0-0.5	0.5-1.0
Date Sampled					03/23/17	03/23/17	03/23/17	04/06/18	04/06/18
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**			Field Duplicate (1-1)		
Volatile Organic Compounds									
Acetone	UG/KG	50	50	1.00E+06	82 J	83 J	40 J	NA	NA
Semivolatile Organic Compounds									
Benzo(a)anthracene	UG/KG	1000	1000	11000			200 J	670 J	
Benzo(a)pyrene	UG/KG	1000	22000	1100			220 J	990 J	
Benzo(b)fluoranthene	UG/KG	1000	1700	11000		320 J	410 J	1,600 J	290 J
Benzo(g,h,i)perylene	UG/KG	100000	1.00E+06	1.00E+06			210 J	710 J	
Benzo(k)fluoranthene	UG/KG	800	1700	1.10E+05			140 J	680 J	
Chrysene	UG/KG	1000	1000	1.10E+05			310 J	1,400 J	
Fluoranthene	UG/KG	100000	1.00E+06	1.00E+06		450 J	730 J	2,500 J	550 J
Indeno(1,2,3-cd)pyrene	UG/KG	500	8200	11000			180 J	800 J	
Phenanthrene	UG/KG	100000	1.00E+06	1.00E+06			420 J	1,100 J	310 J
Pyrene	UG/KG	100000	1.00E+06	1.00E+06		300 J	490 J	2,000 J	310 J
Metals									
Aluminum	MG/KG	10000	-	-	29,200	8,170 J	6,620	25,300 J	15,200 J
Arsenic	MG/KG	13	16	16	16.8 J-	4.4 J	2.6 J	6.7 J	3.4 J
Barium	MG/KG	350	820	10000	184 J-	64.0 J	43.8	166 J	88.5 J
Beryllium	MG/KG	7.2	47	2700	1.3 J-	0.37 J	0.32	1.1 J	0.56 J
Cadmium	MG/KG	2.5	7.5	60	0.65 J-	0.52 J	0.23 J	0.68 J	0.25 J
Calcium	MG/KG	10000	-	-	46,000	6,030 J	7,840	36,800 J	3,860 J

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- - No criteria. Empty cell - Not detected.

J - The reported concentration is an estimated value. J- - Estimated value, low bias. J+ - Estimated value, high bias.

Only Detected Results Reported.

TABLE 9B
SEDIMENT ANALYTICAL RESULTS COMPARED TO SOIL SCOs - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID					SED-01	SED-02	SED-02	SED-03	SED-03
Sample ID					SED-01-032317	SED-02-032317	SED-52-032317	SED-03-0-6-040618	SED-03-6-12-040618
Matrix					Sediment	Sediment	Sediment	Sediment	Sediment
Depth Interval (ft)					-	-	-	0.0-0.5	0.5-1.0
Date Sampled					03/23/17	03/23/17	03/23/17	04/06/18	04/06/18
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**			Field Duplicate (1-1)		
Metals									
Chromium	MG/KG	30	NS	6800	151 J-	11.5 J	10	31.0 J	15.8 J
Cobalt	MG/KG	20	-	-	21.4 J-	3.3 J	5.3	13.5 J	6.0 J
Copper	MG/KG	50	1720	10000	574 J-	43.1 J	33.2	111 J	42.5 J
Iron	MG/KG	2000	-	-	121,000	9,320 J	9,210	28,200 J	14,100 J
Lead	MG/KG	63	450	3900	41.3 J+	13.4 J	8.7	24.3 J	12.3 J
Magnesium	MG/KG	-	-	-	21,200	2,790 J	3,350	18,700 J	3,550 J
Manganese	MG/KG	1600	2000	10000	1,350	190 J	237	499 J	150 J
Mercury	MG/KG	0.18	0.73	5.7	0.062 J	0.037 J	0.00035		0.033 J
Nickel	MG/KG	30	130	10000	102 J-	9.3 J	11.3	34.3 J	15.9 J
Potassium	MG/KG	-	-	-	5,260	797 J	967	4,920 J	1,840 J
Selenium	MG/KG	3.9	4	6800					
Sodium	MG/KG	-	-	-	300 J	144 J	97.0 J		
Vanadium	MG/KG	39	-	-	69.7 J-	16.0 J	12.0	49.7 J	24.5 J
Zinc	MG/KG	109	2480	10000	1,090	277 J	143 J	276 J	153 J
Miscellaneous Parameters									
Total Organic Carbon (TOC)	MG/KG	-	-	-	41,100 J	38,700 J	9,220 J	36,600	16,800

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- - No criteria. Empty cell - Not detected.

J - The reported concentration is an estimated value. J- - Estimated value, low bias. J+ - Estimated value, high bias.

Only Detected Results Reported.

TABLE 9B
SEDIMENT ANALYTICAL RESULTS COMPARED TO SOIL SCOs - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID					SED-04	SED-04	SED-05	SED-05	SED-05
Sample ID					SED-04-0-6-040618	SED-04-6-12-040618	SED-05-0-6-040618	SED-55-0-6-040618	SED-05-6-12-040618
Matrix					Sediment	Sediment	Sediment	Sediment	Sediment
Depth Interval (ft)					0.0-0.5	0.5-1.0	0.0-0.5	0.0-0.5	0.5-1.0
Date Sampled					04/06/18	04/06/18	04/06/18	04/06/18	04/06/18
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**				Field Duplicate (1-1)	
Volatile Organic Compounds									
Acetone	UG/KG	50	50	1.00E+06	NA	NA	NA	NA	NA
Semivolatile Organic Compounds									
Benzo(a)anthracene	UG/KG	1000	1000	11000			380 J	140 J	
Benzo(a)pyrene	UG/KG	1000	22000	1100			550 J	230 J	
Benzo(b)fluoranthene	UG/KG	1000	1700	11000	440 J		740 J	380 J	
Benzo(g,h,i)perylene	UG/KG	100000	1.00E+06	1.00E+06			480 J		
Benzo(k)fluoranthene	UG/KG	800	1700	1.10E+05			520 J		
Chrysene	UG/KG	1000	1000	1.10E+05			610 J		
Fluoranthene	UG/KG	100000	1.00E+06	1.00E+06	590 J		1,100 J	490 J	
Indeno(1,2,3-cd)pyrene	UG/KG	500	8200	11000			470 J	200 J	
Phenanthrene	UG/KG	100000	1.00E+06	1.00E+06			350 J		
Pyrene	UG/KG	100000	1.00E+06	1.00E+06	340 J		890 J	330 J	
Metals									
Aluminum	MG/KG	10000	-	-	20,400 J	21,700	5,230 J	9,170 J	12,500
Arsenic	MG/KG	13	16	16	5.0 J	3.2	2.0 J	4.0	2.7
Barium	MG/KG	350	820	10000	357 J+	179 J+	31.9 J+	65.0 J+	60.0 J+
Beryllium	MG/KG	7.2	47	2700	1.1 J+	0.73 J+	0.23 J+	0.38 J+	0.38 J+
Cadmium	MG/KG	2.5	7.5	60	0.55 J	0.25 J	0.35 J	0.30 J	0.19 J
Calcium	MG/KG	10000	-	-	3,890 J	4,090	3,290 J	24,600 J	2,920

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- - No criteria. Empty cell - Not detected.

J - The reported concentration is an estimated value. J- - Estimated value, low bias. J+ - Estimated value, high bias.

Only Detected Results Reported.

TABLE 9B
SEDIMENT ANALYTICAL RESULTS COMPARED TO SOIL SCOs - DETECTED COMPOUNDS ONLY
FORMER BERNZOMATIC FACILITY

Location ID					SED-04	SED-04	SED-05	SED-05	SED-05
Sample ID					SED-04-0-6-040618	SED-04-6-12-040618	SED-05-0-6-040618	SED-55-0-6-040618	SED-05-6-12-040618
Matrix					Sediment	Sediment	Sediment	Sediment	Sediment
Depth Interval (ft)					0.0-0.5	0.5-1.0	0.0-0.5	0.0-0.5	0.5-1.0
Date Sampled					04/06/18	04/06/18	04/06/18	04/06/18	04/06/18
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**				Field Duplicate (1-1)	
Metals									
Chromium	MG/KG	30	NS	6800	24.3 J	21.6	6.6 J	11.1 J	12.0
Cobalt	MG/KG	20	-	-	8.1 J	6.8	2.4 J	5.1 J	4.5
Copper	MG/KG	50	1720	10000	60.6 J	46.2	23.1 J	84.4 J	19.4
Iron	MG/KG	2000	-	-	22,200 J+	15,400 J+	6,020 J+	11,300 J+	10,400 J+
Lead	MG/KG	63	450	3900	14.1 J	15.8	9.3 J	7.8	12.6
Magnesium	MG/KG	-	-	-	4,010 J	3,660	1,400 J	12,800 J	2,070
Manganese	MG/KG	1600	2000	10000	156 J	315	86.5 J	296 J	127
Mercury	MG/KG	0.18	0.73	5.7	0.067 J	0.078			0.040
Nickel	MG/KG	30	130	10000	24.1 J	19.7	5.6 J	12.4	9.2
Potassium	MG/KG	-	-	-	2,010 J+	2,000 J+	723 J+	1,300 J+	840 J+
Selenium	MG/KG	3.9	4	6800		0.84 J-			
Sodium	MG/KG	-	-	-				264	
Vanadium	MG/KG	39	-	-	70.6 J	35.6	13.0 J	18.8	21.9
Zinc	MG/KG	109	2480	10000	161 J+	122 J+	108 J+	134 J+	56.2 J+
Miscellaneous Parameters									
Total Organic Carbon (TOC)	MG/KG	-	-	-	14,000	3,730	47,300	30,400	21,100

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- - No criteria. Empty cell - Not detected.

J - The reported concentration is an estimated value. J- - Estimated value, low bias. J+ - Estimated value, high bias.

Only Detected Results Reported.

TABLE 10
VAPOR INTRUSION ANALYTICAL RESULTS
FORMER BERNZOMATIC FACILITY

Location ID		OA-01	SSV-01	SSV-01	SSV-01	SSV-02
Sample ID		OA-01	DUP-01	IA-01	SSV-01	IA-02
Matrix		Ambient Air	Indoor Air	Indoor Air	Sub-slab Vapor	Indoor Air
Depth Interval (ft)		-	-	-	-	-
Date Sampled		03/08/17	03/08/17	03/08/17	03/08/17	03/08/17
Parameter	Units		Field Duplicate (1-1)			
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/M3				5.7 J	
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3	0.76 J	1.6	0.56 J	43	0.54 J
1,2,4-Trimethylbenzene	UG/M3				350	
1,2-Dichloroethene (cis)	UG/M3		0.62 J	0.67 J		0.59 J
1,3,5-Trimethylbenzene (Mesitylene)	UG/M3				100	
1,4-Dichlorobenzene	UG/M3					0.44 J
Acetone	UG/M3	4.2 J	4.6 J	6.4 J	98	8.4 J
Benzene	UG/M3	0.27 J	0.31 J	0.34 J	32	0.39 J
Carbon disulfide	UG/M3				7.8 J	
Carbon tetrachloride	UG/M3	0.41 J	0.42 J	0.36 J		0.44 J
Chloromethane	UG/M3	0.98 J	1.0	1.1		1.3
Cyclohexane	UG/M3			0.28 J	560	
Dichlorodifluoromethane	UG/M3	2.3 J	2.9	2.6	4.9 J	3.2
Ethylbenzene	UG/M3		0.11 J	0.14 J	75	0.13 J
Hexane	UG/M3		0.75 J	0.94 J	870	1.4 J
Isopropyl alcohol	UG/M3	0.39 J	0.41 J		5.2 J	0.77 J
Isopropylbenzene (Cumene)	UG/M3				21 J	
m&p-Xylene	UG/M3		0.32 J	0.40 J	400	0.41 J
Methyl ethyl ketone (2-Butanone)	UG/M3	0.85 J	0.56 J	1.1 J	5.3 J	0.92 J
Methyl tert-butyl ether	UG/M3					
Methylene chloride	UG/M3		0.71 J	0.87 J		1.3 J
Naphthalene	UG/M3				4.9 J	
o-Xylene	UG/M3				140	0.079 J

Flags assigned during chemistry validation are shown.

UG/M3 - Micrograms per cubic meter. Empty cell - Not detected. J - The reported concentration is an estimated value.

Only Detected Results Reported.

TABLE 10
VAPOR INTRUSION ANALYTICAL RESULTS
FORMER BERNZOMATIC FACILITY

Location ID		OA-01	SSV-01	SSV-01	SSV-01	SSV-02
Sample ID		OA-01	DUP-01	IA-01	SSV-01	IA-02
Matrix		Ambient Air	Indoor Air	Indoor Air	Sub-slab Vapor	Indoor Air
Depth Interval (ft)		-	-	-	-	-
Date Sampled		03/08/17	03/08/17	03/08/17	03/08/17	03/08/17
Parameter	Units		Field Duplicate (1-1)			
Volatile Organic Compounds						
Tetrachloroethene	UG/M3		1.3 J	1.0 J	1,200	0.32 J
Toluene	UG/M3	0.14 J	0.43 J	0.61 J	160	0.52 J
Trichloroethene	UG/M3				1.3 J	
Trichlorofluoromethane	UG/M3	1.4 J	150	150	120	210

Flags assigned during chemistry validation are shown.

UG/M3 - Micrograms per cubic meter. Empty cell - Not detected. J - The reported concentration is an estimated value.

Only Detected Results Reported.

TABLE 10
VAPOR INTRUSION ANALYTICAL RESULTS
FORMER BERNZOMATIC FACILITY

Location ID		SSV-02
Sample ID		SSV-02
Matrix		Sub-slab Vapor
Depth Interval (ft)		-
Date Sampled		03/08/17
Parameter	**Units**	
Volatile Organic Compounds		
1,1,1-Trichloroethane	UG/M3	
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3	76
1,2,4-Trimethylbenzene	UG/M3	93
1,2-Dichloroethene (cis)	UG/M3	
1,3,5-Trimethylbenzene (Mesitylene)	UG/M3	33
1,4-Dichlorobenzene	UG/M3	
Acetone	UG/M3	130
Benzene	UG/M3	27
Carbon disulfide	UG/M3	9.3 J
Carbon tetrachloride	UG/M3	
Chloromethane	UG/M3	
Cyclohexane	UG/M3	150
Dichlorodifluoromethane	UG/M3	
Ethylbenzene	UG/M3	580
Hexane	UG/M3	190
Isopropyl alcohol	UG/M3	8.4 J
Isopropylbenzene (Cumene)	UG/M3	
m&p-Xylene	UG/M3	2,200
Methyl ethyl ketone (2-Butanone)	UG/M3	9.8 J
Methyl tert-butyl ether	UG/M3	1.7 J
Methylene chloride	UG/M3	
Naphthalene	UG/M3	
o-Xylene	UG/M3	390

Flags assigned during chemistry validation are shown.

UG/M3 - Micrograms per cubic meter. Empty cell - Not detected. J - The reported concentration is an estimated value.

Only Detected Results Reported.

TABLE 10
VAPOR INTRUSION ANALYTICAL RESULTS
FORMER BERNZOMATIC FACILITY

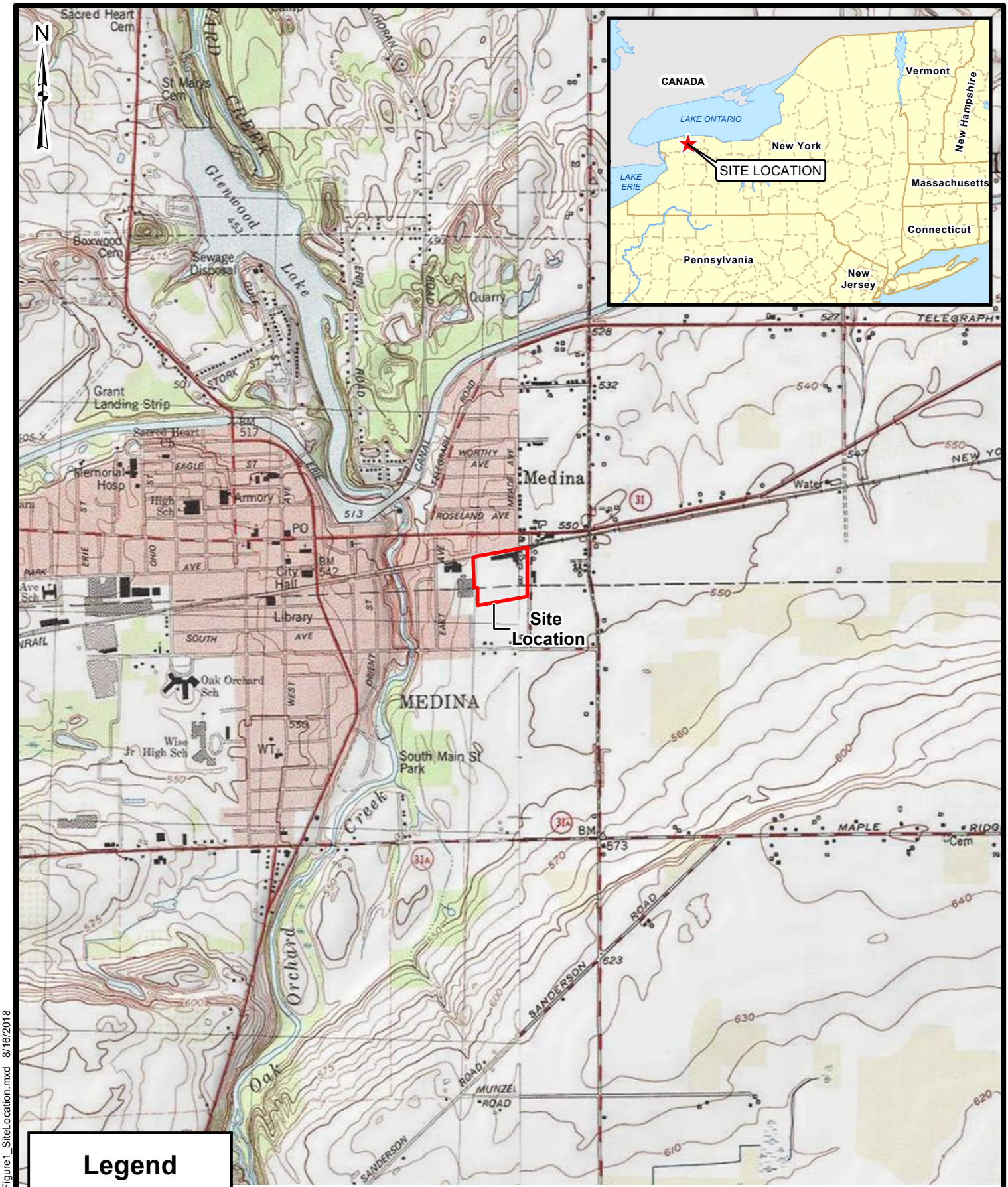
Location ID		SSV-02
Sample ID		SSV-02
Matrix		Sub-slab Vapor
Depth Interval (ft)		-
Date Sampled		03/08/17
Parameter	**Units**	
Volatile Organic Compounds		
Tetrachloroethene	UG/M3	35
Toluene	UG/M3	190
Trichloroethene	UG/M3	
Trichlorofluoromethane	UG/M3	220

Flags assigned during chemistry validation are shown.

UG/M3 - Micrograms per cubic meter. Empty cell - Not detected. J - The reported concentration is an estimated value.

Only Detected Results Reported.

FIGURES



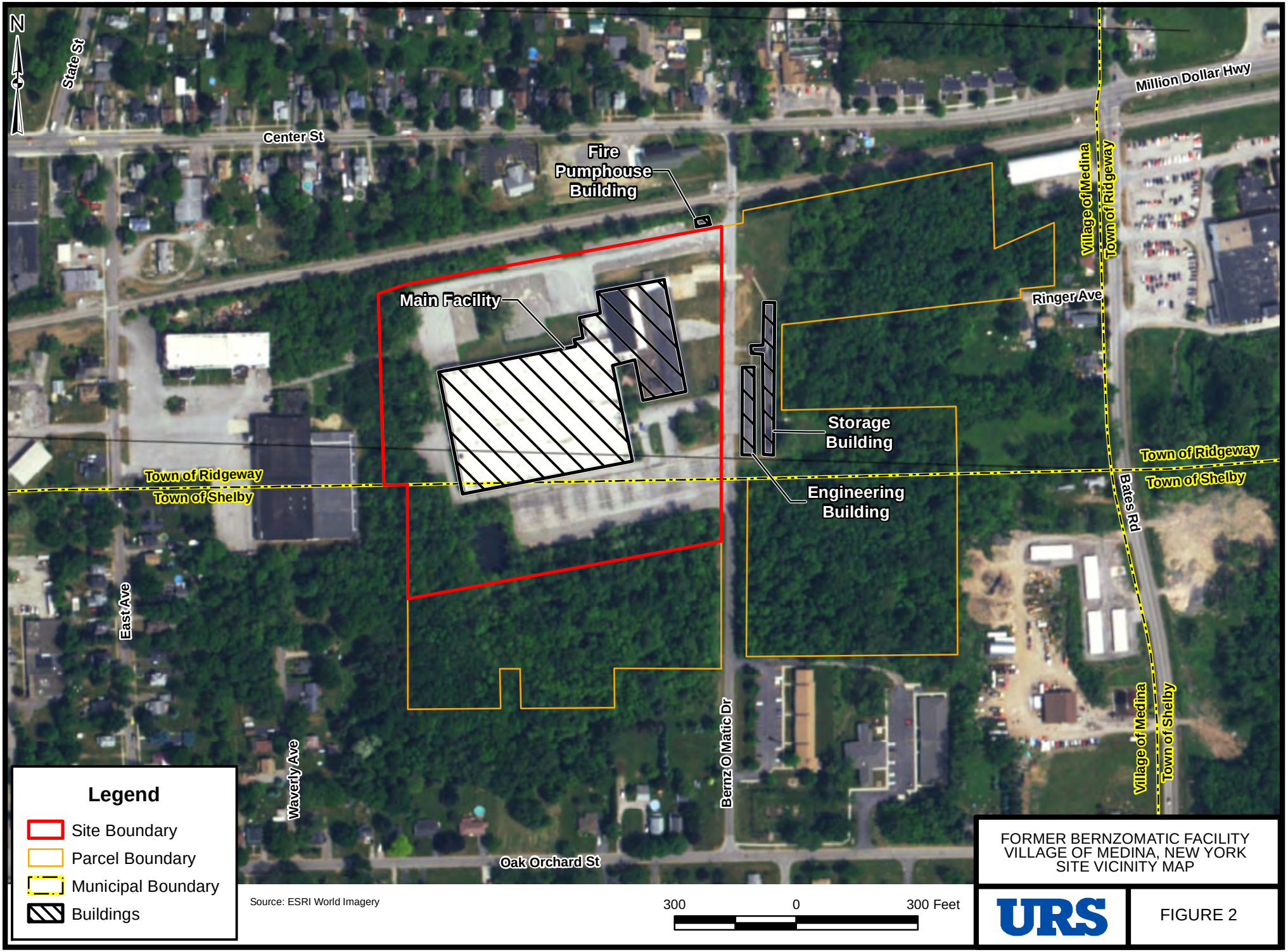
URS

FORMER BERNZOMATIC FACILITY
VILLAGE OF MEDINA, NEW YORK
SITE LOCATION MAP

FIGURE 1

J:\Projects\25369237\GIS\Maps\Figure1_SiteLocation.mxd 8/16/2018

J:\Projects\25369237\GIS\Maps\Figure2_SiteVicinity.mxd 6/8/2017



N

METAL SHAVINGS STAGING TRAILER
SEALED SUMP
STORAGE OF METAL WASTE
WC
STORAGE OF RAW MATERIALS
EXTERNAL STORAGE OF EQUIP. (TEMPORARY)
LOADING DOCK
TRENCH DRAIN
SUMP
MACHINING
VIRGIN OIL SUPPLY
USED OIL STORAGE TANKS AND BERM
LOADING DOCK
WAREHOUSE STORAGE
WAREHOUSE STORAGE
WAREHOUSE STORAGE
ASSEMBLY AREA
PACKING AREA
PRINTING AREA
CAFETERIA
550-GAL. DIESEL AST
OFFICE AREA (2 FLOORS)
PARTS WASHING AREA
ACTIVE FLOOR DRAIN
FLAMMABLE PRODUCTS STORAGE (CLOSETS)
SEALED TRENCH DRAIN
MAINT. DEPT.
ELECTRIC SWITCHBOARD

50 0 50 Feet

FORMER BERNZOMATIC FACILITY
VILLAGE OF MEDINA, NEW YORK
BUILDING FLOOR PLAN
(2014)

URS

FIGURE 3

J:\Projects\25369237\GIS\Maps\Figure3_SITEPLAN.mxd 8/16/2018

Legend

- Air
- Soil Gas
- Soil Boring
- Monitoring Well
- Surface Soil
- DPT Temporary Well
- Surface Water/Sediment

Source: NYS Digital Ortho-Imagery Program, Orleans County, 2015

100 0 100 Feet

FORMER BERNZOMATIC FACILITY INVESTIGATION LOCATION MAP

URS

FIGURE 4

J:\Projects\25369237\GIS\Maps\ALL LOCATIONS.mxd 5/22/2018

N

MW-17, 542.37
MW-18, 542.26
MW-16, 539.86
MW-09, 542.71
MW-06, 542.98
MW-08, 540.30
MW-10, 542.35
MW-15, 540.42
MW-05, 543.18
MW-07, 543.01
MW-21, 541.01
MW-11, 543.27
MW-20, 541.10
MW-19, 543.65
MW-02, 542.91
MW-04, 542.61
MW-12, 544.09
MW-03, 543.39
MW-01, 543.83
MW-14, 544.32
MW-13, 543.83

540.0
540.5
541.0
541.5
542.0
542.5
543.0
543.5
544.0

Legend

- Monitoring Well
- Groundwater Flow Direction
- Groundwater Contour (FT AMSL)
- PH I ESA REC
- Cistern

FT AMSL = Feet Above Mean Sea Level

Note: Monitoring well, MW-08, is a bedrock well; therefore, it was not used for generating groundwater contours.
Source: NYS Digital Ortho-Imagery Program, Orleans County, 2015

100 0 100 Feet

FORMER BERNZOMATIC FACILITY
VILLAGE OF MEDINA, NEW YORK
GROUNDWATER ELEVATION CONTOURS
MARCH 23, 2017

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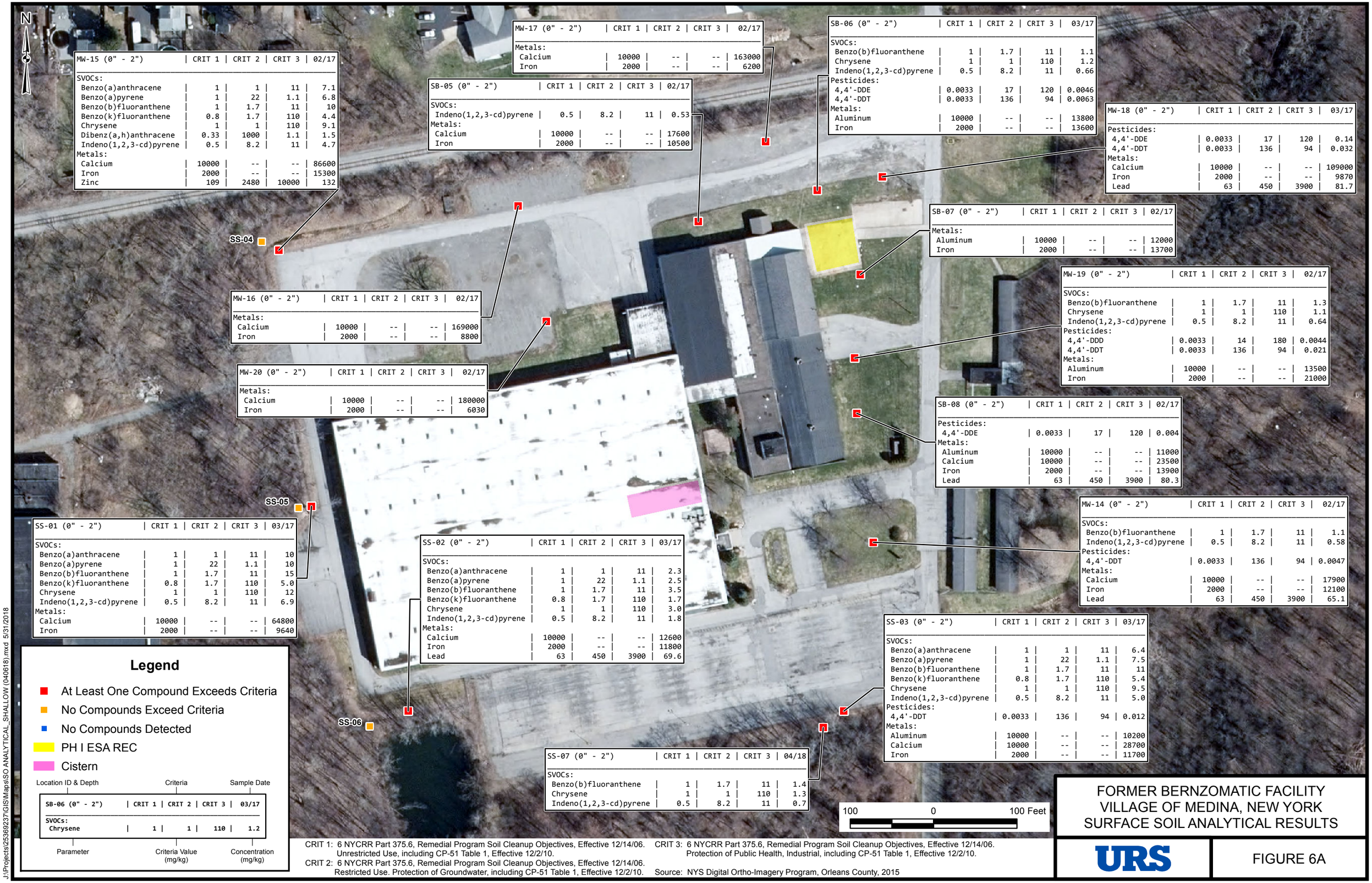
FIGURE 5

J:\Projects\25369237\GIS\Maps\GW CONTOURS (032317).mxd 7/13/2017



MW-15 (0" - 2")	CRIT 1	CRIT 2	CRIT 3	02/17
SVOCs:				
Benzo(a)anthracene	1	1	11	7.1
Benzo(a)pyrene	1	22	1.1	6.8
Benzo(b)fluoranthene	1	1.7	11	10
Benzo(k)fluoranthene	0.8	1.7	110	4.4
Chrysene	1	1	110	9.1
Dibenz(a,h)anthracene	0.33	1000	1.1	1.5
Indeno(1,2,3-cd)pyrene	0.5	8.2	11	4.7
Metals:				
Calcium	10000	--	--	86600
Iron	2000	--	--	15300
Zinc	109	2480	10000	132

MW-17 (0" - 2")	CRIT 1	CRIT 2	CRIT 3	02/17
Metals:				
Calcium	10000	--	--	163000
Iron	2000	--	--	6200

SB-05 (0" - 2")	CRIT 1	CRIT 2	CRIT 3	02/17
SVOCs:				
Indeno(1,2,3-cd)pyrene	0.5	8.2	11	0.53
Metals:				
Calcium	10000	--	--	17600
Iron	2000	--	--	10500

SB-06 (0" - 2")	CRIT 1	CRIT 2	CRIT 3	03/17
SVOCs:				
Benzo(b)fluoranthene	1	1.7	11	1.1
Chrysene	1	1	110	1.2
Indeno(1,2,3-cd)pyrene	0.5	8.2	11	0.66
Pesticides:				
4,4'-DDE	0.0033	17	120	0.0046
4,4'-DDT	0.0033	136	94	0.0063
Metals:				
Aluminum	10000	--	--	13800
Iron	2000	--	--	13600

MW-18 (0" - 2")	CRIT 1	CRIT 2	CRIT 3	03/17
Pesticides:				
4,4'-DDE	0.0033	17	120	0.14
4,4'-DDT	0.0033	136	94	0.032
Metals:				
Calcium	10000	--	--	109000
Iron	2000	--	--	9870
Lead	63	450	3900	81.7

SB-07 (0" - 2")	CRIT 1	CRIT 2	CRIT 3	02/17
Metals:				
Aluminum	10000	--	--	12000
Iron	2000	--	--	13700

MW-16 (0" - 2")	CRIT 1	CRIT 2	CRIT 3	02/17
Metals:				
Calcium	10000	--	--	169000
Iron	2000	--	--	8800

MW-19 (0" - 2")	CRIT 1	CRIT 2	CRIT 3	02/17
SVOCs:				
Benzo(b)fluoranthene	1	1.7	11	1.3
Chrysene	1	1	110	1.1
Indeno(1,2,3-cd)pyrene	0.5	8.2	11	0.64
Pesticides:				
4,4'-DDD	0.0033	14	180	0.0044
4,4'-DDT	0.0033	136	94	0.021
Metals:				
Aluminum	10000	--	--	13500
Iron	2000	--	--	21000

MW-20 (0" - 2")	CRIT 1	CRIT 2	CRIT 3	02/17
Metals:				
Calcium	10000	--	--	180000
Iron	2000	--	--	6030

SB-08 (0" - 2")	CRIT 1	CRIT 2	CRIT 3	02/17
Pesticides:				
4,4'-DDE	0.0033	17	120	0.004
Metals:				
Aluminum	10000	--	--	11000
Calcium	10000	--	--	23500
Iron	2000	--	--	13900
Lead	63	450	3900	80.3

SS-01 (0" - 2")	CRIT 1	CRIT 2	CRIT 3	03/17
SVOCs:				
Benzo(a)anthracene	1	1	11	10
Benzo(a)pyrene	1	22	1.1	10
Benzo(b)fluoranthene	1	1.7	11	15
Benzo(k)fluoranthene	0.8	1.7	110	5.0
Chrysene	1	1	110	12
Indeno(1,2,3-cd)pyrene	0.5	8.2	11	6.9
Metals:				
Calcium	10000	--	--	64800
Iron	2000	--	--	9640

SS-02 (0" - 2")	CRIT 1	CRIT 2	CRIT 3	03/17
SVOCs:				
Benzo(a)anthracene	1	1	11	2.3
Benzo(a)pyrene	1	22	1.1	2.5
Benzo(b)fluoranthene	1	1.7	11	3.5
Benzo(k)fluoranthene	0.8	1.7	110	1.7
Chrysene	1	1	110	3.0
Indeno(1,2,3-cd)pyrene	0.5	8.2	11	1.8
Metals:				
Calcium	10000	--	--	12600
Iron	2000	--	--	11800
Lead	63	450	3900	69.6

MW-14 (0" - 2")	CRIT 1	CRIT 2	CRIT 3	02/17
SVOCs:				
Benzo(b)fluoranthene	1	1.7	11	1.1
Indeno(1,2,3-cd)pyrene	0.5	8.2	11	0.58
Pesticides:				
4,4'-DDT	0.0033	136	94	0.0047
Metals:				
Calcium	10000	--	--	17900
Iron	2000	--	--	12100
Lead	63	450	3900	65.1

SS-03 (0" - 2")	CRIT 1	CRIT 2	CRIT 3	03/17
SVOCs:				
Benzo(a)anthracene	1	1	11	6.4
Benzo(a)pyrene	1	22	1.1	7.5
Benzo(b)fluoranthene	1	1.7	11	11
Benzo(k)fluoranthene	0.8	1.7	110	5.4
Chrysene	1	1	110	9.5
Indeno(1,2,3-cd)pyrene	0.5	8.2	11	5.0
Pesticides:				
4,4'-DDT	0.0033	136	94	0.012
Metals:				
Aluminum	10000	--	--	10200
Calcium	10000	--	--	28700
Iron	2000	--	--	11700

SS-07 (0" - 2")	CRIT 1	CRIT 2	CRIT 3	04/18
SVOCs:				
Benzo(b)fluoranthene	1	1.7	11	1.4
Chrysene	1	1	110	1.3
Indeno(1,2,3-cd)pyrene	0.5	8.2	11	0.7

Legend

- At Least One Compound Exceeds Criteria
- No Compounds Exceed Criteria
- No Compounds Detected
- PH I ESA REC
- Cistern

Location ID & Depth | Criteria | Sample Date

SB-06 (0" - 2")	CRIT 1	CRIT 2	CRIT 3	03/17
SVOCs:				
Chrysene	1	1	110	1.2

Parameter | Criteria Value (mg/kg) | Concentration (mg/kg)

100 0 100 Feet

CRIT 1: 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

CRIT 2: 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

CRIT 3: 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.

Source: NYS Digital Ortho-Imagery Program, Orleans County, 2015

FORMER BERNZOMATIC FACILITY
VILLAGE OF MEDINA, NEW YORK
SURFACE SOIL ANALYTICAL RESULTS

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FIGURE 6A

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N

SB-05A (48" - 60")	CRIT 1	CRIT 2	CRIT 3	03/17
Metals:				
Calcium	10000	--	--	21200
Iron	2000	--	--	8360

MW-17 (54" - 60")	CRIT 1	CRIT 2	CRIT 3	02/17
Metals:				
Calcium	10000	--	--	16500
Iron	2000	--	--	9310

SB-06 (34" - 46")	CRIT 1	CRIT 2	CRIT 3	03/17
Metals:				
Iron	2000	--	--	9910

MW-16 (48" - 60")	CRIT 1	CRIT 2	CRIT 3	02/17
Metals:				
Iron	2000	--	--	11000

MW-18 (48" - 60")	CRIT 1	CRIT 2	CRIT 3	03/17
Metals:				
Aluminum	10000	--	--	12200
Iron	2000	--	--	10700

MW-21 (34" - 46")	CRIT 1	CRIT 2	CRIT 3	03/17
Metals:				
Calcium	10000	--	--	30100
Iron	2000	--	--	9170

MW-15 (30" - 36")	CRIT 1	CRIT 2	CRIT 3	02/17
Pesticides:				
4,4'-DDT	0.0033	136	94	0.025
Metals:				
Iron	2000	--	--	14100

SB-07 (36" - 48")	CRIT 1	CRIT 2	CRIT 3	02/17
Metals:				
Aluminum	10000	--	--	11600
Iron	2000	--	--	10900

MW-20 (18" - 24")	CRIT 1	CRIT 2	CRIT 3	02/17
SVOCs:				
Di-n-butylphthalate	0.014	8.1	--	0.045
Metals:				
Aluminum	10000	--	--	13200
Iron	2000	--	--	14400

MW-19 (24" - 36")	CRIT 1	CRIT 2	CRIT 3	02/17
Metals:				
Iron	2000	--	--	9530

SB-08 (36" - 48")	CRIT 1	CRIT 2	CRIT 3	02/17
Metals:				
Aluminum	10000	--	--	21500
Iron	2000	--	--	15700

MW-14 (12" - 24")	CRIT 1	CRIT 2	CRIT 3	02/17
Pesticides:				
4,4'-DDT	0.0033	136	94	0.0079
Metals:				
Calcium	10000	--	--	12100
Iron	2000	--	--	14000
Lead	63	450	3900	92.9

SB-09 (12" - 24")	CRIT 1	CRIT 2	CRIT 3	02/17
Metals:				
Calcium	10000	--	--	17200
Iron	2000	--	--	9560

MW-13 (24" - 36")	CRIT 1	CRIT 2	CRIT 3	02/15
VOCs:				
Acetone	0.05	0.05	1000	0.063

SS-04
SS-05
SS-01
SS-02
SS-06
SS-03
SS-07
MW-01
MW-02
MW-03
MW-04
MW-05
MW-06
MW-07
MW-08
MW-09
MW-10
MW-11
MW-12
SB-01
SB-02
SB-03
SB-04

Legend

- At Least One Compound Exceeds Criteria
- No Compounds Exceed Criteria
- No Compounds Detected
- PH I ESA REC
- Cistern

Location ID & Depth | Criteria | Sample Date

SB-06 (24" - 36")	CRIT 1	CRIT 2	CRIT 3	03/17
VOCs:				
Acetone	0.05	0.05	1000	0.063

Parameter | Criteria Value (mg/kg) | Concentration (mg/kg)

100 0 100 Feet

CRIT 1: 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.
CRIT 2: 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.
CRIT 3: 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.
Source: NYS Digital Ortho-Imagery Program, Orleans County, 2015

FORMER BERNZOMATIC FACILITY
VILLAGE OF MEDINA, NEW YORK
SUBSURFACE SOIL ANALYTICAL RESULTS

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FIGURE 6B

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N

GSP-19	CRIT	04/15
VOCs:		
1,2-Dichloroethene (cis)	5	11
Tetrachloroethene	5	22
Trichloroethene	5	7.7

GSP-22	CRIT	04/15
VOCs:		
1,2-Dichloroethene (cis)	5	170
Tetrachloroethene	5	6.5
Trichloroethene	5	28
Vinyl chloride	2	7.5

GSP-01	CRIT	03/15
VOCs:		
Chloroform	7	50
Tetrachloroethene	5	15
Trichloroethene	5	14

SB-03	CRIT	05/14
Metals:		
Arsenic	25	121
Barium	1000	2600
Cadmium	5	32.2
Chromium	50	528
Lead	25	430
Dissolved Metals:		
Arsenic	25	122
Barium	1000	2680
Cadmium	5	32.1
Chromium	50	535
Lead	25	450

GSP-04	CRIT	03/15
VOCs:		
1,2-Dichloroethene (cis)	5	72

GSP-31	CRIT	06/15
VOCs:		
1,1-Dichloroethane	5	22
1,2-Dichloroethene (cis)	5	390
1,2-Dichloropropane	1	2
Trichloroethene	5	13
Vinyl chloride	2	2.8

GSP-02	CRIT	03/15
VOCs:		
Tetrachloroethene	5	9.9

SB-04	CRIT	05/14
VOCs:		
1,2-Dichloroethene (cis)	5	14
Tetrachloroethene	5	36
Trichloroethene	5	24
Metals:		
Arsenic	25	48
Chromium	50	122
Lead	25	63

MW-21	CRIT	03/17
VOCs:		
1,2-Dichloroethene (cis)	5	23
Trichloroethene	5	11

GSP-14	CRIT	04/15
VOCs:		
1,2-Dichloroethene (cis)	5	35
Trichloroethene	5	11
Vinyl chloride	2	8.1

MW-06	CRIT	10/14
VOCs:		
1,2-Dichloroethene (cis)	5	63
1,2-Dichloroethene (trans)	5	7.1
Tetrachloroethene	5	18
Trichloroethene	5	25

GSP-24	CRIT	04/15
VOCs:		
1,1,1-Trichloroethane	5	21
1,1-Dichloroethane	5	87
1,1-Dichloroethene	5	8.8
1,2-Dichloroethene (cis)	5	440
Tetrachloroethene	5	7.1
Trichloroethene	5	11
Vinyl chloride	2	3.6
Xylene (total)	5	9.4

MW-10	CRIT	02/15
VOCs:		
Acetone	50	80

MW-20	CRIT	03/17
VOCs:		
Trichloroethene	5	8.6

MW-07	CRIT	10/14
VOCs:		
Tetrachloroethene	5	10
Trichloroethene	5	13

GSP-08	CRIT	03/15
VOCs:		
1,1,2-Trichloro-1,2,2-trifluoroethane	5	6.2
1,2-Dichloroethene (cis)	5	6.5
Trichloroethene	5	15

GSP-26	CRIT	06/15
VOCs:		
Trichloroethene	5	13

GSP-10	CRIT	03/15
VOCs:		
Trichloroethene	5	6.7

GSP-33	CRIT	06/15
VOCs:		
Trichloroethene	5	7.5

SB-01	CRIT	05/14
VOCs:		
Tetrachloroethene	5	6.8
Trichloroethene	5	5.4
Metals:		
Arsenic	25	172
Barium	1000	1850
Cadmium	5	25.6
Chromium	50	462
Lead	25	224

GSP-34	CRIT	06/15
VOCs:		
Trichloroethene	5	16

MW-11	CRIT	02/15	03/17
VOCs:			
1,2-Dichloroethene (cis)	5	8.2	NA
Trichloroethene	5	18	13

MW-04	CRIT	03/17
VOCs:		
1,2-Dichloroethene (cis)	5	20
Trichloroethene	5	15
Vinyl chloride	2	3.8

GSP-13	CRIT	03/15
VOCs:		
1,1-Dichloroethane	5	11
1,2-Dichloroethene (cis)	5	53
Tetrachloroethene	5	18
Trichloroethene	5	72
Vinyl chloride	2	3.3

MW-01	CRIT	10/14	03/17
VOCs:			
1,2-Dichloroethene (cis)	5	13	15
Vinyl chloride	2	NA	15

GSP-25	CRIT	04/15
VOCs:		
1,2-Dichloroethene (cis)	5	32
Tetrachloroethene	5	8.8
Trichloroethene	5	7.7

SB-02	CRIT	05/14
Metals:		
Arsenic	25	68
Barium	1000	2700
Cadmium	5	22.6
Chromium	50	429
Lead	25	208

GSP-21	CRIT	04/15
VOCs:		
1,2-Dichloroethene (cis)	5	5.3

GSP-18 GSP-17 MW-17 GSP-16 GSP-15 MW-16 GSP-30 MW-15 GSP-29 GSP-28 GSP-27 GSP-35 GSP-36 MW-02 MW-12 MW-03 MW-13 GSP-32 MW-14 MW-18 GSP-03 GSP-05 GSP-06 MW-09 MW-08 MW-05 GSP-09 GSP-07 GSP-23 GSP-20 GSP-11 GSP-12 MW-19

Legend

- At Least One Compound Exceeds Criteria
- No Compounds Exceed Criteria
- No Compounds Detected
- PH I ESA REC
- Cistern

Location ID — Criteria — Sample Date

SB-04	CRIT	05/14
VOCs:		
Trichloroethene	5	24

Parameter — Criteria Value (µg/L) — Concentration (µg/L)

Criteria: NYSDEC TOGS (1.1.1), Ambient water quality standards and guidance values and groundwater effluent limitations
Source: NYS Digital Ortho-Imagery Program, Orleans County, 2015

100 0 100 Feet

FORMER BERNZOMATIC FACILITY
VILLAGE OF MEDINA, NEW YORK
GROUNDWATER ANALYTICAL RESULTS

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FIGURE 7

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SED-01 (0" - 6")	CRIT 1	CRIT 2	03/17
Metals:			
Arsenic	10	33	16.8
Chromium	43	110	151
Copper	32	150	574
Lead	36	130	41.3
Nickel	23	49	102
Zinc	120	460	1090
Miscellaneous:			
Total Organic Carbon (TOC)	--	--	41100

SED-04 (0" - 6")	CRIT 1	CRIT 2	04/18
Metals:			
Copper	32	150	60.6
Nickel	23	49	24.1
Zinc	120	460	161
Miscellaneous:			
Total Organic Carbon (TOC)	--	--	14000

SED-04 (6" - 12")	CRIT 1	CRIT 2	04/18
Metals:			
Copper	32	150	46.2
Zinc	120	460	122
Miscellaneous:			
Total Organic Carbon (TOC)	--	--	3730

SED-05 (0" - 6")	CRIT 1	CRIT 2	04/18
Metals:			
Copper	32	150	84.4
Zinc	120	460	134
Miscellaneous:			
Total Organic Carbon (TOC)	--	--	47300

SED-02 (0" - 6")	CRIT 1	CRIT 2	03/17
SVOCs:			
Total PAHs	1844	16135	3310
Metals:			
Copper	32	150	43.1
Zinc	120	460	277
Miscellaneous:			
Total Organic Carbon (TOC)	--	--	38700

SED-03 (0" - 6")	CRIT 1	CRIT 2	04/18
SVOCs:			
Total PAHs	7320	64050	12450
Metals:			
Copper	32	150	111
Nickel	23	49	34.3
Zinc	120	460	276
Miscellaneous:			
Total Organic Carbon (TOC)	--	--	36600

SED-03 (6" - 12")	CRIT 1	CRIT 2	04/18
Metals:			
Copper	32	150	42.5
Zinc	120	460	153
Miscellaneous:			
Total Organic Carbon (TOC)	--	--	16800

Legend

- Surface Water - No Compounds Exceed Criteria
- Sediment - At Least One Compound Exceeds Criteria

Location ID & Sample Depth — Sample Date

SED-03 (0" - 6")	CRIT 1	CRIT 2	04/18
SVOCs:			
Total PAHs	7320	64050	12450
Metals:			
Copper	32	150	111
Nickel	23	49	34.3
Zinc	120	460	276
Miscellaneous:			
Total Organic Carbon (TOC)	--	--	36600

Parameter — Concentration (mg/kg) for Metals and Misc. (ug/kg) for SVOCs

Note: Metal and SVOC results shown are in exceedance of NYSDEC Screening and Assessment of Contaminated Sediments, Class A (CRIT 1) or Class C (CRIT 1) (based on Sample TOC), June 24, 2014 . Please refer to Table 9A for further information

Source: NYS Digital Ortho-Imagery Program, Orleans County, 2015

100 0 100 Feet

FORMER BERNZOMATIC FACILITY
VILLAGE OF MEDINA, NEW YORK
SURFACE WATER, CISTERN, AND SEDIMENT
(CLASS A & C CRITERIA) ANALYTICAL RESULTS

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FIGURE 8A

J:\Projects\25369237\GIS\Maps\WS and SED ANALYTICAL (040618)_REV_A.mxd 8/16/2018

SED-01 (0" - 6")	CRIT 1	CRIT 2	CRIT 3	03/17
VOCs:				
Acetone	50	50	1000000	82
Metals:				
Aluminum	10000	--	--	29200
Arsenic	13	16	16	16.8
Calcium	10000	--	--	46000
Chromium	30	--	6800	151
Cobalt	20	--	--	21.4
Copper	50	1720	10000	574
Iron	2000	--	--	121000
Nickel	30	130	10000	102
Vanadium	39	--	--	69.7
Zinc	109	2480	10000	1090
Miscellaneous:				
Total Organic Carbon (TOC)	--	--	--	41100

SED-04 (0" - 6")	CRIT 1	CRIT 2	CRIT 3	04/18
Metals:				
Aluminum	10000	--	--	20400
Barium	350	820	10000	357
Copper	50	1720	10000	60.6
Iron	2000	--	--	22200
Vanadium	39	--	--	70.6
Zinc	109	2480	10000	161
Miscellaneous:				
Total Organic Carbon (TOC)	--	--	--	14000

SED-04 (6" - 12")	CRIT 1	CRIT 2	CRIT 3	04/18
Metals:				
Aluminum	10000	--	--	21700
Iron	2000	--	--	15400
Zinc	109	2480	10000	122
Miscellaneous:				
Total Organic Carbon (TOC)	--	--	--	3730

SED-05 (0" - 6")	CRIT 1	CRIT 2	CRIT 3	04/18
Metals:				
Calcium	10000	--	--	24600
Copper	50	1720	10000	84.4
Iron	2000	--	--	11300
Zinc	109	2480	10000	134
Miscellaneous:				
Total Organic Carbon (TOC)	--	--	--	47300

SED-05 (6" - 12")	CRIT 1	CRIT 2	CRIT 3	04/18
Metals:				
Aluminum	10000	--	--	12500
Iron	2000	--	--	10400
Miscellaneous:				
Total Organic Carbon (TOC)	--	--	--	21100

SED-02 (0" - 6")	CRIT 1	CRIT 2	CRIT 3	03/17
VOCs:				
Acetone	50	50	1000000	83
Metals:				
Iron	2000	--	--	9320
Zinc	109	2480	10000	277
Miscellaneous:				
Total Organic Carbon (TOC)	--	--	--	38700

SED-03 (0" - 6")	CRIT 1	CRIT 2	CRIT 3	04/18
SVOCs:				
Benzo(b)fluoranthene	1000	1700	11000	1600
Chrysene	1000	1000	110000	1400
Indeno(1,2,3-cd)pyrene	500	8200	11000	800
Metals:				
Aluminum	10000	--	--	25300
Calcium	10000	--	--	36800
Chromium	30	--	6800	31
Copper	50	1720	10000	111
Iron	2000	--	--	28200
Nickel	30	130	10000	34.3
Vanadium	39	--	--	49.7
Zinc	109	2480	10000	276
Miscellaneous:				
Total Organic Carbon (TOC)	--	--	--	36600

SED-03 (6" - 12")	CRIT 1	CRIT 2	CRIT 3	04/18
Metals:				
Aluminum	10000	--	--	15200
Iron	2000	--	--	14100
Zinc	109	2480	10000	153
Miscellaneous:				
Total Organic Carbon (TOC)	--	--	--	16800

Legend

Surface Water -
No Compounds Exceed Criteria

Sediment -
At Least One Compound Exceeds Criteria

Location ID & Sample Depth — Sample Date

SED-03 (6" - 12")	CRIT 1	CRIT 2	CRIT 3	04/18
Metals:				
Aluminum	10000	--	--	15200
Iron	2000	--	--	14100
Zinc	109	2480	10000	153
Miscellaneous:				
Total Organic Carbon (TOC)	--	--	--	16800

Parameter — Concentration (mg/kg)

100 0 100 Feet

CRIT 1: 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.
CRIT 2: 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.
CRIT 3: 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Industrial, including CP-51 Table 1, Effective 12/2/10.
Source: NYS Digital Ortho-Imagery Program, Orleans County, 2015

FORMER BERNZOMATIC FACILITY
VILLAGE OF MEDINA, NEW YORK
SURFACE WATER, CISTERN, AND SEDIMENT (SOIL SCO CRITERIA) ANALYTICAL RESULTS

URS

FIGURE 8B

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SSV-01 (IA)	03/17
VOCs:	
1,1,2-Trichloro-1,2,2-trifluoroethane	1.6
1,2-Dichloroethene (cis)	0.67
Acetone	6.4
Benzene	0.34
Carbon tetrachloride	0.42
Chloromethane	1.1
Cyclohexane	0.28
Dichlorodifluoromethane	2.9
Ethylbenzene	0.14
Hexane	0.94
Isopropyl alcohol	0.41
m&p-Xylene	0.4
Methyl ethyl ketone (2-Butanone)	1.1
Methylene chloride	0.87
Tetrachloroethene	1.3
Toluene	0.61
Trichlorofluoromethane	150

SSV-01 (VI)	03/17
VOCs:	
1,1,1-Trichloroethane	5.7
1,1,2-Trichloro-1,2,2-trifluoroethane	43
1,2,4-Trimethylbenzene	350
1,3,5-Trimethylbenzene (Mesitylene)	100
Acetone	98
Benzene	32
Carbon disulfide	7.8
Cyclohexane	560
Dichlorodifluoromethane	4.9
Ethylbenzene	75
Hexane	870
Isopropyl alcohol	5.2
Isopropylbenzene (Cumene)	21
m&p-Xylene	400
Methyl ethyl ketone (2-Butanone)	5.3
Naphthalene	4.9
o-Xylene	140
Tetrachloroethene	1200
Toluene	160
Trichloroethene	1.3
Trichlorofluoromethane	120

SSV-02 (IA)	03/17
VOCs:	
m&p-Xylene	0.41
Methyl ethyl ketone (2-Butanone)	0.92
Methylene chloride	1.3
o-Xylene	0.079
Tetrachloroethene	0.32
Toluene	0.52
Trichlorofluoromethane	210
1,1,2-Trichloro-1,2,2-trifluoroethane	0.54
1,2-Dichloroethene (cis)	0.59
1,4-Dichlorobenzene	0.44
Acetone	8.4
Benzene	0.39
Carbon tetrachloride	0.44
Chloromethane	1.3
Dichlorodifluoromethane	3.2
Ethylbenzene	0.13
Hexane	1.4
Isopropyl alcohol	0.77

SSV-02 (VI)	03/17
VOCs:	
1,1,2-Trichloro-1,2,2-trifluoroethane	76
1,2,4-Trimethylbenzene	93
1,3,5-Trimethylbenzene (Mesitylene)	33
Acetone	130
Benzene	27
Carbon disulfide	9.3
Cyclohexane	150
Ethylbenzene	580
Hexane	190
Isopropyl alcohol	8.4
m&p-Xylene	2200
Methyl ethyl ketone (2-Butanone)	9.8
Methyl tert-butyl ether	1.7
o-Xylene	390
Tetrachloroethene	35
Toluene	190
Trichlorofluoromethane	220

OA-01	03/17
VOCs:	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.76
Acetone	4.2
Benzene	0.27
Carbon tetrachloride	0.41
Chloromethane	0.98
Dichlorodifluoromethane	2.3
Isopropyl alcohol	0.39
Methyl ethyl ketone (2-Butanone)	0.85
Toluene	0.14
Trichlorofluoromethane	1.4

Legend

- ▲ Vapor Intrusion Sample Location
- ▽ Air Sample Location

Location ID | Sample Date

SSV-01 | 3/17

VOCs:
Acetone | 63

Parameter | Concentration (µg/kg)

Source: ESRI World Imagery

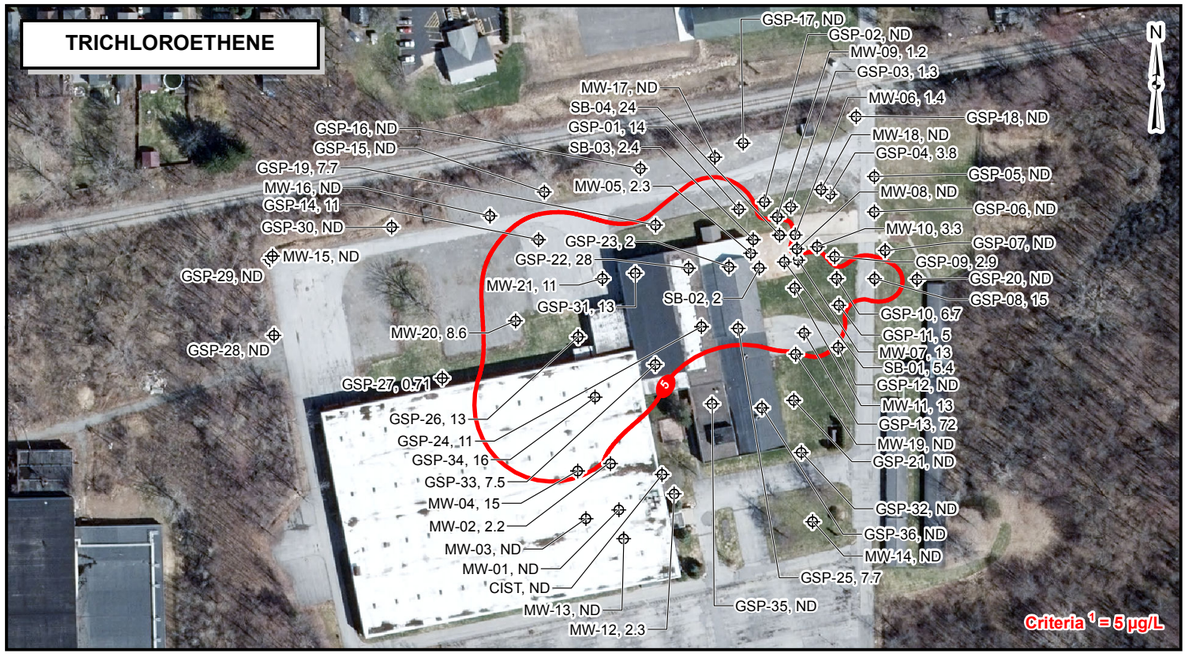
100 0 100 Feet

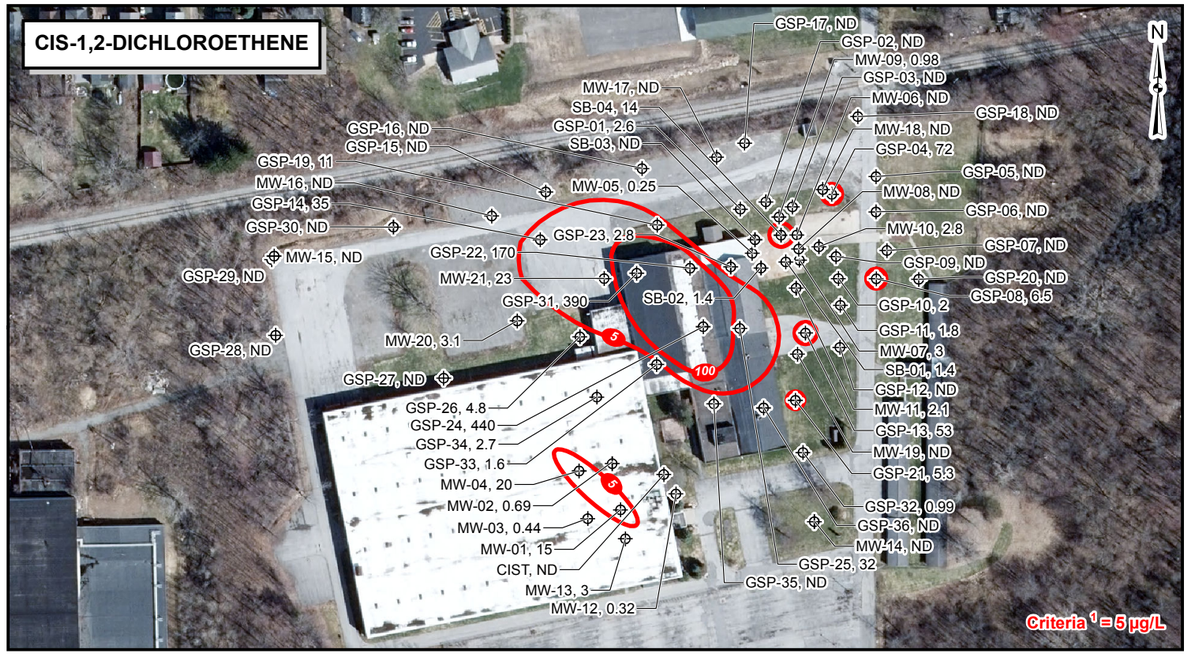
J:\Projects\25369237\GIS\Maps\VI Intrusion ANALYTICAL (032017).mxd 7/7/2017

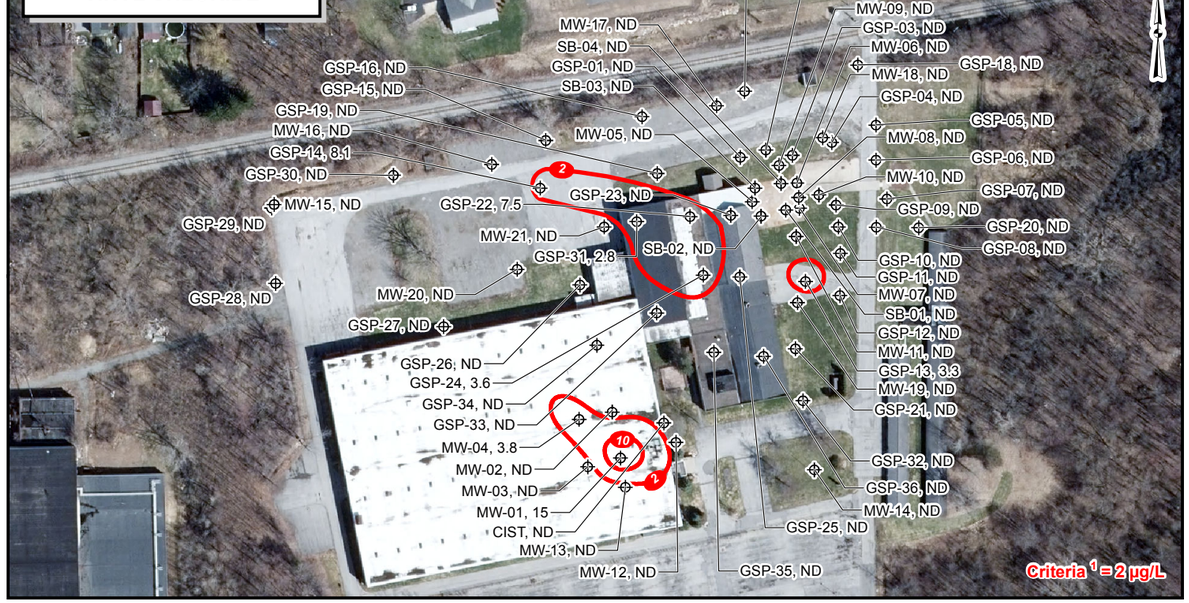
FORMER BERNZOMATIC FACILITY
VILLAGE OF MEDINA, NEW YORK
VAPOR INTRUSION ANALYTICAL RESULTS

URS

FIGURE 9







Legend

- Monitoring Well
- Isoconcentration Contour

Notes:
1. Criteria = NYSDEC TOGS 1.1.1 Ambient Water Quality Standards, Class GA
2. Units are shown in µg/L
3. ND = Not Detected
4. Date presented represents direct-push and monitoring well results from Oct. 2014 through Mar. 2017
5. Direct-push results may not represent true dissolved-phase groundwater conditions due to the likely presence of fines in the samples.

Source:
NYS Digital Ortho-Imagery Program, Orleans County, 2015

200 0 200 Feet

FORMER BERNZOMATIC FACILITY
VILLAGE OF MEDINA, NEW YORK
GROUNDWATER VOC ISOCONTOURS

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FIGURE 10

\\URSBuffalo.us.ie.urs\Buffalo\Projects\25369237\GIS\Maps\Groundwater VOC Plume (032017).mxd 7/18/2017

Appendix A

Field Notes

Appendix B

Site Photographs

Appendix C

Geophysical Survey

Appendix D

Boring Logs, Cistern, Surface Water,

and Sediment Sampling Forms

Appendix E

Well Construction Logs

Appendix F

Well Development Logs

Appendix G

Hydraulic Conductivity Test Results

Appendix H

Well Purge Logs

Appendix I

Vapor Intrusion Sample Forms

Appendix J

Data Usability Summary Reports

(Included on CD)

Appendix K

Laboratory Analytical Reports

(Included on CD)

Appendix L

Fish and Wildlife Resource Impact Analysis