PERIODIC REVIEW REPORT
JANUARY 2020 – DECEMBER 2020

KLIEGMAN BROTHERS SITE
GLENDALE, QUEENS, NEW YORK 11385

NYSDEC Site No. 241031
Work Assignment No. D009812-04

Prepared for:

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, New York 12233

Prepared by:

TRC Engineers, Inc.
1430 Broadway, 10th Floor
New York, New York 10018

JULY 2021

TRC Project No. 386554

TABLE OF CONTENTS

TABLE OF CONTENTS (CONT.)

LIST OF FIGURES

LIST OF TABLES

LIST OF ATTACHMENTS

Executive Summary

Category	Summary/Results
Engineering Control	• Cover system consisting of concrete sidewalks, asphalt, and concrete building slabs • Site fencing to minimalize the public's interaction with contamination • Soil vapor extraction (SVE) Systems
Institutional Control	• Record of Decision (ROD) – Operable Unit (OU)-1 (2006) • ROD – OU-2 (2008) • Site Management Plan (SMP) – OU-1 (2014) • SMP – OU-2 (2016) • Environmental Easement (EE) • Groundwater-Use Restriction
Site Classification	Class 2
Site Management Plan	SMP OU-1 – May 2014 SMP OU-2 – October 2016
Certification/Reporting Period	The Certification Period is defined as one year in the SMP. The SMP requires a Periodic Review Report (PRR) to be completed every year.
Inspection	**Frequency**
1. Site Inspection 2. SVE System Inspection	Annually Monthly
Monitoring	**Frequency**
1. SVE System 2. Groundwater	Monthly Annually
Prior PRR Recommendations	Consideration for in-situ chemical injection as means of additional VOC remediation in soil and continue SVE system monitoring.
Site Management Activities	Six operation, maintenance, and monitoring (OM&M) inspections, one site inspection, one round of groundwater level measurements, and one groundwater sampling event • 1/10/20 – OM&M inspection performed, SVE system not operating • 2/3/20 – OM&M inspection performed, SVE system not operating • 7/14/20 – OM&M inspection, SVE system restarted • 10/21/20 – Groundwater level measurements • 10/28/20 – OM&M inspection performed • 11/16/20 – Collect groundwater samples from 15 wells. All samples collected were submitted to TestAmerica Labs for analysis of TCL VOCs + 10 via EPA Method 8260. Groundwater level measurements collected. • 11/25/20 – OM&M inspection performed • 12/14/20 – OM&M inspection performed • 12/30/20 – Site Inspection
Significant Findings or Concerns	1. The SVE system continues to remove significant PCE mass from the subsurface.
Recommendations	1. Reduce SVE system monitoring frequency to once every two months. 2. Reduce sample collection and analysis from SVE wells to annual basis. 3. Reduce groundwater monitoring to once every two years.

	4. Perform an indoor air quality (IAQ) investigation to determine if the SVE system is providing vapor intrusion control.
Cost Evaluation	The total cost of site management activities this reporting period was $23,796. This cost includes engineering (e.g., labor and expense) costs. It should be noted that this total does not include any direct costs incurred by the NYSDEC.
Green Remediation Metrics	Presented in **Appendix A**.

1.0 Introduction

This PRR has been prepared for the Kliegman Brothers Site, located at 76-01 77th Avenue, Glendale, Queens County, NY (the Site), and covers the period between January 2020 through December 2020. This PRR was prepared in accordance with the New York State Department of Environmental Conservation (NYSDEC) Department of Environmental Remediation (DER) Work Assignment (WA) No. D009812-04 Notice to Proceed dated February 27, 2020, the NYSDEC-approved amended Scope of Work dated July 20, 2020 (WA No. D009812-04.30) and NYSDEC DER-10, Technical Guidance for Site Investigation and Remediation (NYSDEC DER-10). This PRR discusses the site management activities performed by TRC and others during the referenced reporting period. A Site summary and applicable remedial program information are summarized below.

Site Information			
Site Name:	Kliegman Brothers	**NYSDEC Site No:**	241031
Site Location:	76-01 77th Avenue, Glendale, Queens County, NY	**Remedial Program:**	Inactive Hazardous Waste Disposal
Site Type:	Dry Cleaning Supply	**Classification:**	02
Parcel Identification(s):	Block 3803 and Lot 91 and 92 on the Queens Tax Map	**Parcel Acreage / EE Acreage:**	0.85
Selected Remedy:	Excavation and cover system, Soil vapor extraction system, groundwater monitoring	**Site COC(s):**	• VOCs (primarily tetrachloroethene)
Current Remedial Program Phase:	Post Remedial Action Site Monitoring; Site Management	**Institutional Controls:**	• EE (2012) • SMP – OU-1 (2014) • SMP – OU-2 (2016) • Groundwater use restriction
Post-Remediation Monitoring and Sampling Frequency:	Annual	**Engineering Controls:**	Low permeability Site cover, site access controls, SVE system monitoring wells
Monitoring Locations:	13 Monitoring Wells	**Required Reporting:**	PRR – Annual

1.1 Site Location, Ownership, and Description

The Site is located at 76-01 77th Avenue in Glendale, Queens County, New York and is 0.85 acres in size. The Site is recognized as Block 3803 and Lot 91 and 92 on the Queens Tax Map. The Site is currently owned and operated by Arimax Realty LLC. The Site features include a building that is currently being used as a bakery and a brewery, and an asphalt parking lot.

The Site is bounded by 77th Avenue to the south, 76th Street to the west, commercial properties to the east, and Long Island Rail Road property to the north. A Site Location Map and Site Plan are shown on **Figure 1** and **Figure 2**, respectively.

1.2 Investigation/Remedial History

The Kliegman Brothers Site, operated by Kliegman Brothers, Inc., was utilized as a suppling and distribution center for dry cleaning supplies and related chemicals between the 1950s and 1999. The operations utilized two 6,000 gallon above ground storage tanks (ASTs) on Site to store tetrachloroethene (PCE). It has been historically documented that releases from the ASTs were the sources of PCE impacts at the Site. Kliegman Brothers, Inc. ceased operations in 1999 and the ASTs were removed from the property. The property was purchased by The Gourmet Factory in 2000 and utilized as a food storage warehouse.

The first Site investigations were performed between 1997 and 2002, by Tradewinds Environmental Restoration, Inc., Advanced Cleanup Technologies (ACT), and URS. A soil gas investigation of the area where the ASTs were located was performed 1997 and 1998. These investigations, and an additional soil gas sampling event performed after the Site was purchased by the Gourmet Factory in 2000, confirmed the presence of PCE in concentrations of significant concern. This led to the addition of the Site to the Registry of Inactive Hazardous Waste Disposal Sites in New York (the Registry) as a Class 2a site in June 2000, as insufficient data was present for further classification. The Site was reclassified as a Class 2 site in November 2000 after additional investigation confirmed PCE contamination in soil, soil vapor, and groundwater.

The Gourmet Factory entered into a Voluntary Cleanup Program with NYSDEC and performed an investigation as part of a Focused Remedial Investigation/ Interim Remedial Measure (FRI/IRM) study. The FRI/IRM study included soil and groundwater sampling to further delineate the on-Site soil contamination and support the design of an SVE system to address soil contamination. The FRI/IRM study included the completion of nine soil borings and the collection of 26 soil samples collected from under the sub slab of the building. Results of the investigation were documented in the November 2001 Focused Remedial Investigation/Preliminary Remedial Measures Report and indicated elevated levels of PCE, benzene, toluene, ethylbenzene, xylene (BTEX), and 1,2-dichloroethene present on-Site. Indoor air sampling of nearby residences was completed additionally by the New York Department of Health (NYSDOH) from October 2000 to August 2001. PCE was detected in sixteen of the seventeen homes sampled.

Gourmet Factory discontinued their participation with the VCP in September 2002. Therefore, NYSDEC assumed responsibility for remediation of the Site. Due to detected concentrations of PCE in indoor air NYSDEC implemented an on-Site IRM consisting of an SVE system, which began operating in 2004. As documented in the OU-1 SMP, sub-slab depressurization systems (SSDSs) have been installed at all residences above the off-Site groundwater plume whose residents consented to indoor air sampling and accepted SSDSs when contaminant concentrations in vapor exceeded applicable criteria in NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH Guidance). Additionally, the OU-1 SMP indicates these SSDSs are managed under NYSDEC's state-wide operation and maintenance program. Site management activities regarding the off-Site vapor intrusion control program are not addressed by either the OU-1 or OU-2 SMP. Therefore, details regarding the vapor intrusion control program are not addressed in this PRR.

The initial phase of the Remedial Investigation (RI) was completed between April 2002 and April 2003 and included a geophysical survey, soil boring installation, indoor air sampling, monitoring well installation, and groundwater sampling. The second phase was completed between February 2003 and April 2003 and included additional soil boring installation, monitoring well installation, and sampling. The RI Report was completed in February 2004 and identified PCE as the primary contaminant of concern (COC), although other VOCs were detected on-Site as well. Eight additional monitoring wells were installed and sampled to delineate the off-Site groundwater plume and an RI Report Addendum was issued in 2005.

In March 2006 the NYSDEC approved the ROD for OU-1. The primary elements of the selected remedy included an expanded SVE system, continued operation of the IRM SVE system, an Environmental Easement, and development and implementation of an SMP. In 2007, installation of the full-scale SVE system, that included six new SVE wells, and additional blower and vapor treatment [via granular activated carbon GAC)] was completed, and operation began. In 2013, an air quality impact analysis concluded that vapor treatment could be removed by raising the SVE discharge stack to approximately 26 feet above ground surface. The SVE system was modified accordingly and VGAC vessels were removed from the Site in January 2014. Aboveground components of the IRM SVE system that was installed in 2004 were demolished in 2017 and the IRM SVE wells were connected to the blower installed as part of implementing the ROD. A process flow diagram depicting the current SVE system configuration is presented in **Appendix B**.

In March 2008 the ROD for OU-2 was approved. The primary elements of the selected remedy included in-situ chemical oxidation (ISCO), groundwater extraction and treatment, and development and implementation of a SMP. A total of three ISCO injections via permanent injection wells were performed in July 2014, November 2015, and June 2015. An Explanation of Significant Difference was issued in 2015 eliminating groundwater extraction and treatment from the selected remedy.

A Site history, including the dates and descriptions of significant events and a Custodial Record detailing known and available Site reports, are included in **Appendix C.** Additional details are presented in the OU-1 and OU-2 SMPs as well as historic Site documents.

1.3 Remaining Contamination

Remedial actions for OU-1 and OU-2 are complete but chlorinated VOCs (primarily PCE) remain on-Site in soil and groundwater at concentrations greater than cleanup goals. As such, Site management activities consisting of inspections, OM&M of the SVE system, and groundwater monitoring are ongoing. A membrane interface probe (MIP) survey performed in 2009 identified VOCs in vadose zone soils between 20 and 35 feet bgs on-Site near the loading dock. Impacted soils continue to act as a source of soil vapor impacts. Chlorinated VOCs in groundwater at concentrations greater than cleanup goals extend from the northern boundary of the Site approximately 1,000 feet to the south. Residual contamination in soil is managed under the Kliegman Brothers OU-1 SMP and residual groundwater contamination is managed under the Kliegman Brothers OU-2 SMP.

1.4 Regulatory Requirements/Cleanup Goals

The remediation goals included in the OU-1 and OU-2 RODs are as follows:

- To eliminate or reduce to the extent practicable:
  - Exposures of persons at or around the Site to PCE and its degradation products [trichloroethene (TCE), 1,2-dichloroethene (DCE), and vinyl chloride] in contaminated soils;
  - The release of contaminants from soil into groundwater that may create exceedances of groundwater quality standards;
  - The release of contaminants from soil vapor into indoor air through vapor intrusion;
  - Exposures of persons around the Site to PCE and its degradation products TCE, DCE, and vinyl chloride in contaminated groundwater;

Furthermore, the cleanup goals for the Site include attaining to the extent practicable the following standards, criteria, and guidance (SCGs):

- 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (SCOs); and
- NYSDEC "Ambient Water Quality Standards and Guidance Values" (Class GA Values) and Part 5 of the New York State Sanitary Code.

2.0 Institutional and Engineering Control Plan Compliance

2.1 Institutional Controls

Site Institutional Controls include listing of the Site on the Registry of Inactive Hazardous Waste Disposal Sites, Site RODs, an Environmental Easement, and the SMPs.

The 2014 SMP OU-1 and 2016 SMP OU-2 require the following ICs for the Site:

- Compliance with the Environmental Easement and the SMP by the Grantor and the Grantor's successors and assigns;
- All Engineering Controls must be operated and maintained as specified in the SMP;
- All Engineering Controls on the Controlled Property must be inspected and certified at a frequency and in a manner defined in the SMP;
- Soil vapor and other environmental or public health monitoring must be performed as defined in this SMP;
- Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP; and
- On and off-Site environmental monitoring devices, including but not limited to groundwater monitoring wells, will be protected, and replaced and necessary by the NYSDEC to ensure the devices function in the manner specified in the SMP.

The Site has a series of Institutional Controls in the form of Site use restrictions. Adherence to the Institutional Controls is required by the Environmental Easement. Applicable Site restrictions to the Controlled Property are:

- Vegetable gardens and farming, including cattle and dairy farming, on the property are prohibited
- The use of groundwater underlying the property is prohibited without treatment rendering it safe for intended purpose
- All future activities on the property that will encounter remaining contaminated groundwater are prohibited unless they are conducted in accordance with the SMP, because the remedy results in contamination remaining at the Site that does not allow for unrestricted use, the SM included a monitoring plan to assess the performance and effectiveness of the remedy
- The potential for vapor intrusion must be evaluated for any buildings developed on the Site, and any potential impacts that are identified must be mitigated
- The property may only be used for commercial or industrial uses provided that the long-term ECs and ICs included in the SMP are employed
- The property may not be used for a less restrictive use, such as unrestricted residential, without additional remediation and amendment of the Environmental Easement by the Commissioner of the NYSDEC
- The Site owner or remedial party will submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous

certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow and will be made by an expert that the NYSDEC finds acceptable.

Institutional controls may not be discontinued without an amendment or extinguishment of the Environmental Easement.

2.2 Engineering Controls

Since remaining contaminated soil, groundwater, and soil vapor exists beneath the Site, Engineering Controls are required to protect human health and the environment. The Engineering Controls for the Site include the asphalt and concrete cover systems, which consists of a two to four-inch cover placed over the Site and the SVE system. The SVE system consists of nine SVE wells, underground piping, two regenerative blowers, blower effluent discharge piping, and five VMPs. A Site Plan is presented as **Figure 2**.

2.2.1 Criteria for Completion of Remediation/Termination of Engineering Controls

In accordance with the OU-1 SMP, the composite cover system is a permanent control and the quality and integrity of this system will be inspected at defined, regular intervals in perpetuity. Additionally, the SVE systems operation will not be discontinued unless prior written approval is granted by the NYSDEC. In the event that monitoring data indicates that the SVE systems are no longer required, a proposal to discontinue the system will be submitted to NYSDEC. Conditions that warrant discontinuing the SVE system include contaminant concentrations in soils that: (1) reach levels that are consistently below SCGs, (2) have become asymptotic to a low level over an extended period of time as accepted by the NYSDEC, or (3) the NYSDEC has determined that the SVE system has reached the limit of its effectiveness. This assessment will be based in part on post-remediation contaminant levels in subsurface soil samples collected from throughout the Site. Systems will remain in place and operational until permission to discontinue their use is granted in writing by the NYSDEC.

3.0 Monitoring and Sampling Plan Compliance

The OU-1 and OU-2 SMPs were prepared to manage remaining on-Site contamination and ensure that the remedy remains effective by restricting Site use, Site development and soil movement on the property. The table below shows the SMP-specified monitoring and sampling activities for the Site and the dates those activities were completed:

Summary of SMPs Site Monitoring and Sampling Plan				
Site Management Activity	**Frequency**	**Location**	**Analytical Method**	**Completion Date(s)**
Site Inspection	Annual	Site properties	Not Applicable	12/28/20
SVE Systems Effluent Sampling	Monthly	SVE System	EPA Method TO-15[1]	1/10/20, 2/3/20, 7/14/20, 10/28/20, 11/25/20, and 12/14/20
SVE Systems Monitoring including SVE wells	Semi-Annually (Jan & July)	SVE System	EPA Method TO-15[1]	Not applicable[2]
Systems Monitoring, SVE well and VMP monitoring	Monthly	SVE System	Field Instrumentation for VOC and Air Flow	1/10/20, 2/3/20, 7/14/20, 10/28/20, 11/25/20, and 12/14/20
Groundwater Sampling	Annual	• MW-03D • MW-04D • MW-05D • MW-10H[3] • MW-10D[3] • MW-12H • MW-14DR • MW-14H • MW-23D • MW-24D • MW-24H • MW-30M • MW-31D • MW-32D • MW-33D	USEPA Method 8260C for VOCs.	11/16/20
PRR	Annual	Not Applicable	Not Applicable	May 2021

Notes:
[1] Sampling and analysis of the SVE system effluent for VOCs via USEPA Method 8260 was discontinued in 2017 and resumed in October 2020.
[2] Sampling and analysis of the SVE wells was not performed during the reporting period.
[3] Monitoring wells MW-10D and MW-10H were added to the monitoring well network in consultation with NYSDEC.
USEPA – United States Environmental Protection Agency
VOCs – Volatile organic compounds

3.1 Site Inspection

CDM Smith, Preferred Environmental Services, TRC, and Environmental Assessments and Remediation, Inc. (EAR) conducted Site inspections during 2020 in accordance with the SMP. The Site inspections were conducted to document the status of the SVE System components, condition of the monitoring wells, and overall Site conditions.

A summary of the Site inspection is presented below:

Summary of Site Activities and Site Monitoring and Sampling

January 2020 to December 2020

Site Management Activity	Summary of Results	Maintenance/Corrective Measure
Site and Monitoring Well Network Inspection	The Site inspection was performed on December 28, 2020. The SVE system was operating. The integrity of the Site cover system was found to be acceptable. Fencing, with the exception of a gate, was installed around the SVE system. Vapor monitoring point VMP-7 could not be accessed due to bakery material staged over the location.	Installation of fence gate was completed in January 2020. VMP-7 has not been able to be accessed.
OM&M Inspections	OM&M inspections were performed January 10, February 3, July 14, October 28, November 25, and December 14, 2020.	
Groundwater gauging and sampling	PDBs were deployed in 15 groundwater monitoring wells on October 21, 2020. Prior to deployment groundwater measurements were collected. PDBs were collected on November 16, 2020 and groundwater samples were collected. Samples were submitted to Eurofins/TestAmerica Laboratories for analysis of VOCs+10 Tentatively Identified Compounds (TICs) by USEPA Method 8260.	No routine maintenance or corrective measures needed at this time.

3.2 Operation, Maintenance, and Monitoring Plan Compliance

Due to a power supply issue the SVE system did not operate between January 1 and July 14, 2020. CDM Smith and Preferred Environmental Services performed OM&M inspections on January 10 and February 3, 2020, respectively. TRC restarted the SVE system on July 14, 2020 and EAR began monthly OM&M inspections on October 28, 2020. OM&M inspection reports, including performance data collected by EAR, are presented in

Appendix C. In consultation with the Department it was determined that EAR would resume collection of SVE blower effluent vapor samples for laboratory analysis of VOCs in October 2020.

The table below summarizes compliance with respect to performance objectives and standards established in the OU-1 SMP and SVE system OM&M manual, with modifications described above (i.e., removal of SVE blower treatment).

Summary of Operation, Maintenance, and Monitoring Plan Compliance

Performance Objective/Standard	Compliance Summary	Comments
Extract soil gas containing VOC vapors	The SVE system has operated with 100% uptime since restart on July 14, 2021. A total of 53.8 pounds of PCE and 55 pounds of total VOCs were removed between October and December 2020.	The system did not operate between January 1 and July 13 due to a suspected phase failure of the incoming power service. The issue was resolved by the utility provider on an unknown date.
Process and maintain a minimum of 260 standard cubic feet per meter (SCFM) of soil gas	An average extraction rate of 188 SCFM was achieved during the reporting period.	EAR opened all SVE well valves to 100% to increase extracted air flow in December 2020. However, a consistent flow rate of 260 SCFM has not been achieved. Since all wells are open 100%, it is not likely that a consistent flow rate of 260 SCFM can be achieved without more substantial system modifications.
Produce and maintain a minimum vacuum of 10 inches of water column at each extraction well head	Beginning in November 2020 vacuum of 10 inches of water column was achieved at each SVE well, except for SVE-6S.	EAR modified operation of the SVE system to increase extracted air flow in December 2020. Target vacuum has subsequently been consistently achieved at each SVE well location.
Emit less than 0.5 pounds of total VOCs per hour	Emission rates of total VOCs have not exceeded the limit of 0.5 pounds of total VOCs per hour.	
Water (condensate) generated by the SVE system shall be properly disposed of in accordance with the Waste Disposal Plan (included in the SMP).	No condensate was transported off-Site for disposal during the reporting month.	

3.3 SVE System Performance Summary

The SVE system did not operate between January 1 and July 13, 2020 due to a suspected phase failure of the incoming power service to the system. The issue was resolved by the utility provider, Consolidated Edison, Inc. (ConEd), on an unknown date. TRC and EAR restarted the SVE system on July 14, 2020 without performing any repairs. The SVE system operated for 171 days, beginning on July 14, 2020 during the reporting period without any downtime. No major repairs or improvements to the SVE system were performed during the reporting period, other than installation of fencing around the aboveground components of the system. Concentrations of PCE detected in extracted soil vapor ranged from 30 micrograms per cubic meter ($\mu g/m^3$) (October 2020) to 140,000 $\mu g/m^3$ (November 2020). An estimated 53.8 pounds of PCE was removed from soil vapor between October 2020 and December 2020. A chart presenting PCE recovery trends is presented in **Appendix E**. Historic PCE recovery data is presented in **Appendix F**.

While the SVE system was successfully operated to achieve the target vacuum at each SVE well head vacuum was not be consistently measured at VMP locations. EAR inspected the VMPs on December 14, 2021 and was able to open to four of the seven VMPs to measure total depth. A blockage was encountered at VMP-5 approximately two feet below top of casing. In consultation with NYSDEC it was determined that additional evaluation of indoor air quality would be performed before further investigation, repair, or replacement of VMPs.

3.4 Groundwater Monitoring Summary

3.4.1 Groundwater Gauging

On October 21st, 2020 prior to groundwater sample collection, all wells were gauged for depth to groundwater to evaluate potential groundwater flow directions. The Site monitoring wells are all screened in the overburden hydrogeologic unit. The potentiometric surface contours with an interpretation of groundwater flow direction for the overburden wells is presented on **Figure 3**. The groundwater gauging and elevation measurements can be found on **Table 1**. A summary of the hydrogeologic information is presented below:

October 2020 Hydrogeologic Summary			
Number of Gauged Wells	**Hydrogeologic Units**	**Hydrogeologic Strata**	**Monitoring Wells**
15	1	Overburden	MW-03D, MW-04D, MW-05D, MW-10D, MW-10H, MW-12H, MW-14DR, MW-14H, MW-23D, MW-24D, MW-24H, MW-30M, MW-31D, MW-32D, MW-33D
Overburden Groundwater Elevation Range			
Lowest groundwater elevation: 17.00 feet NAVD88 (MW-30M) Highest groundwater elevation: 18.28 feet NAVD88 (MW-04D)			
Inferred Overburden Groundwater Flow Direction			
South			

Note:
NAVD88 – North American Vertical Datum 1988

3.4.2 Groundwater Sampling

TRC collected groundwater samples from 15 on and off-Site monitoring wells utilizing passive diffusion bags (PDBs). The PDBs were deployed on October 21, 2020 and collected and sampled on November 16, 2020. All groundwater samples, in addition to QA/QC samples collected at the frequencies specified in TRC's July 2020 Generic QAPP, were submitted to Eurofins/TestAmerica Laboratories for analysis of Target Compound List (TCL) Volatile Organic Compounds (VOCs) + 10 TICS via USEPA Method 8260 (low level).

A summary of the groundwater sampling information and pertinent well details for each well is presented below:

Summary of Groundwater Monitoring and Sampling Activities
October 2020

Well ID	Monitoring Well Details				2020 Groundwater Sampling Event		
	Northing[1]	Easting[1]	Screen Zone (ft. bgs)	Unit Screened	DTW (ft. below TOC)	Analytes	Notes
MW-03D	196749.41	1019146.31	66.50 – 76.50	Overburden	62.73	VOCs	
MW-04D	196622.72	1019197.44	65.00 – 75.00	Overburden	62.28	VOCs	
MW-05D	196677.45	1019126.68	65.00 – 75.00	Overburden	62.40	VOCs	
MW-10H[2]	NA	NA	115.00 – 125.00	Overburden	62.18	VOCs	
MW-10D[2]	NA	NA	52.00 – 62.00	Overburden	62.26	VOCs	
MW-12H	196625.89	1019204.53	95.00 – 105.00	Overburden	62.45	VOCs	
MW-14DR	196483.57	1019189.37	64.50 – 74.50	Overburden	63.10	VOCs	
MW-14H	196486.72	1019188.60	96.00 – 111.00	Overburden	63.53	VOCs	
MW-23D	196031.94	1019331.28	64.00 – 74.00	Overburden	66.32	VOCs	
MW-24D	196382.81	1019218.34	59.00 – 69.00	Overburden	66.32	VOCs	
MW-24H	196378.93	1019223.11	70.00 – 80.00	Overburden	64.04	VOCs	
MW-30M	195764.51	1019414.54	78.00 – 88.00	Overburden	69.53	VOCs	
MW-31D	196158.39	1019289.26	65.00 – 80.00	Overburden	65.49	VOCs	
MW-32D	196265.90	1019300.76	65.00 – 80.00	Overburden	64.51	VOCs	
MW-33D	196134.19	1019342.66	65.00 – 80.00	Overburden	65.78	VOCs	

Notes:

[1]Northing and Easting coordinates are presented in North American Datum 1983 New York State Plane, Long Island Zone, US Foot
[2]Monitoring wells MW-10H and MW-10D are not included in the monitoring well network included in the OU-2 SMP. However, in consultation with NYSDEC it was determined that on-Site groundwater conditions should be monitored during the 2020 groundwater sampling event.
DTW – Depth to water.
ft. bgs – Feet below ground surface.
TOC – Top of casing.

A complete table with well construction details is in included in **Appendix C**.

3.4.3 Groundwater Sample Results

Groundwater analytical data for VOCs can be found in **Table 2**. The Data Usability Summary Reports (DUSR) can be found in **Appendix G**. PCE was detected at concentrations greater than the applicable SCG in groundwater samples collected from all wells sampled. Additionally, TCE was detected at concentrations greater than the applicable SCG in groundwater samples collected from two monitoring wells (MW-30M and MW-31D). Detected compounds exceeding their respective SCGs for each well are illustrated on **Figure 4**. A summary of the November 2020 groundwater analytical results is presented below:

Exceedance Summary of Laboratory Analytical Results in Groundwater
November 2020

Constituent	SCG	Concentration Range (µg/L)	Location with Highest Detection	Frequency Exceeding SCG
VOCs				
Tetrachloroethene	5	7.0 – 7,000	MW-14DR	15/15
Trichloroethene	5	ND – 8.0	MW-30M	2/15

Notes:
ND - Not detected.

Groundwater concentration trend graphs for four monitoring wells MW-04D, MW-10D, MW-14DR, and MW-23D are presented in **Figure 5**. Monitoring well MW-10D is located on-Site. MW-04D is located approximately 40 feet down gradient of the Site. MW-14DR is located approximately 180 feet downgradient of the Site and is the most impacted well. MW-23D is located approximately 630 feet downgradient of the Site.

4.0 Cost Summary

The total estimated cost of TRC's management activities for 2020 (January 2020 through December 2020) is approximately $23,796. Site management activities during the reporting period included a Site inspection, monthly OM&M inspections by EAR (beginning in October 2020), sampling of 15 monitoring wells, and analysis of 15 samples for VOCs. The total includes TRC labor and expenses associated with the project. It should be noted that the total does not include costs incurred by NYSDEC for site management activities performed by others prior to issuance of TRC's WA, laboratory analysis performed by NYSDEC's call-out laboratory, electricity, OM&M of the SVE system, or project support. A summary of TRC's 2020 site management costs is presented below:

Summary of TRC's Site Management Costs January 1, 2020 through December 31, 2020		
Cost Item	**Amount Expended (January 1, 2020 through December 31, 2020)**	**Percent of Total Cost**
Engineering Support		
TRC	$21,942	92%
Expenses		
TRC	$1,854	8%
Total Cost	**$23,796**	----

The following provides a review of each cost item:

- Engineering support includes labor costs associated with project management (e.g., WA Package preparation, monthly invoicing, project scheduling and coordination, etc.), Site inspections, groundwater sampling, and reporting (i.e., Site inspection report and DUSR).
- Expense costs include travel, equipment, and supplies in support of the Site inspection, groundwater sampling event and routine Site maintenance activities.

Since the SVE system removed approximately 53.8 pounds of PCE during the reporting month the estimated cost per pound removed (excluding direct costs to NYSDEC) is approximately $442. It should be noted that this cost is biased high due to non-recurring costs associated with WA Package preparation and initial coordination with EAR during this reporting period. Additionally, PCE removal rates were not monitored between July 14 and October 28, 2020.

5.0 Conclusions and Recommendations

5.1 Conclusions

- The integrity of the Site cover system is acceptable.
- The SVE system is being operated in accordance with the SMP. The SVE system operated without downtime upon restart on July 14, 2020. An estimated 53.8 pounds of PCE was removed between October 2020 and December 2020. The estimated cost (excluding direct costs to NYSDEC) to remove a pound of PCE from soil vapor was $442.
- Based on groundwater elevations measured in October 2020, groundwater flow in overburden hydrogeologic unit is to the south. This observation is consistent with historical observations.
- PCE, the primary Site COC, was detected at concentrations exceeding the applicable SCG in all 15 groundwater samples collected from the Site. Overall, detections of PCE were low (below 100 µg/L) except for an area approximately 200 to 300 feet south and hydraulically downgradient of the Site. The highest PCE concentration (7,000 µg/L) was detected in MW-14DR. This data is consistent with historical results and indicates the groundwater plume is stable.
- Site and groundwater use are consistent with the restrictions set forth in the ROD, the SMPs and EE. Groundwater monitoring activities were completed in November 2020. A Site inspection and a Site inspection report were also completed. The ICs operated as intended this reporting period.
- The remedy continued to be protective of human health and the environment this reporting period. Vapor intrusion evaluation and control at off-Site properties is being managed under a separate administrative program.

5.2 Recommendations

- Annual Site inspections should continue to verify the ICs and ECs are in-place and effective and to observe any future development of the Site. One Site inspection report should also be completed following the inspection event.
- The SVE system should continue to be operated on a continuous full-time basis. SVE system O&M inspection and reporting frequency should be reduced to once every two months.
- Frequency of sample collection and analysis from individual SVE wells should be reduced from semi-annual to an annual basis.
- Monitoring wells MW-10D and MW-10H should be included in the groundwater monitoring program. Groundwater monitoring frequency at the Site should be reduced to a biannual basis.
- An indoor air quality investigation of the Site building should be performed.
- The Certification Period should remain at one year with a PRR frequency of one report every year. The certification period should begin January 2021 and end December 31st, 2021, with the next PRR covering the reporting period beginning January 1st 2021 and end December 31st 2021.
- Water level measurements should continue to be collected at 15 Site monitoring wells sampled during groundwater sampling events.

6.0 Certification of Engineering and Institutional Controls

For each institutional or engineering control identified for the Site, I certify that all the following statements are true:

- The inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;
- The institutional control and/or engineering control employed at this site is unchanged from the date the control was put in place, or last approved by the Department;
- Nothing has occurred that would impair the ability of the control to protect the publichealth and environment;
- Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;
- Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;
- If a financial assurance mechanism is required under the oversight document for the site, the mechanism remains valid and sufficient for the intended purpose under the document;
- Use of the site is compliant with the environmental easement;
- The engineering control systems are performing as designed and are effective;
- To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program [and generally accepted engineering practices]; and
- The information presented in this report is accurate and complete.

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, Kevin Boger, of TRC Engineers, Inc., am certifying as Owner's/Remedial Party's Designated Site Representative for the site.

_____ 096717

Signature NYS Professional Engineer No.

_____

Date

7.0 Future Site Activities

Based on the recommendations in Section 4, the following site management activities will be completed during the next PRR reporting period (January 2021 to December 2021):

- Indoor Air Quality Investigation – (completed: March 2021)
- OM&M Inspections – Every other month (next scheduled: August 2021)
- Site Inspections – Annual (next scheduled: Q4 2021)
- Groundwater – Every other year (next scheduled: Q4 2022)
- PRR – Every year (next scheduled: Q1 2022)

Figures

SCALE: 1:2400

1 0.5 0 KILOMETERS 1 2

1000 500 0 METERS 1000 2000

1 0.5 0 MILES 1

1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000 FEET

QUADRANGLE LOCATION

MAP INCLUDES INFORMATION FROM THE FOLLOWING MAP SHEET(S):
TP, JAMAICA, NY, 7.5 MINUTE DATED 2019,
W, BROOKLYN, NY, 7.5 MINUTE DATED 2019.

MAP OBTAINED THROUGH USE OF TOPOVIEW WITH THE INTERFACE CREATED BY THE NATIONAL GEOLOGIC MAP DATABASE PROJECT (NGMDB), IN SUPPORT OF THE TOPOGRAPHIC MAPPING PROGRAM, MANAGED BY THE USGS NATIONAL GEOSPATIAL PROGRAM (NGP).

TRC
1430 Broadway, 10th Floor
New York, NY 10018
Phone: 212.221.7822
www.TRCcompanies.com

PROJECT:
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SITE MANAGEMENT PORTFOLIO B
TASK NO. 19 - KLEIGMAN BROTHERS - SITE NO. 241031
76-01 77TH AVENUE, GLENDALE, QUEENS COUNTY, NEW YORK

TITLE:

SITE LOCATION MAP

DRAWN BY:	H. DELGADO
CHECKED BY:	D. WARREN
APPROVED BY:	C. GUDER
DATE:	MAY 2021
PROJ. NO.:	386554.0000.0000
FILE:	Figure 1 - Site Location Map (KB).dwg

FIGURE 1

8.5x11 --- ATTACHED XREF'S: --- ATTACHED IMAGES: NY_Brooklyn_20190925_TM; NY_Jamaica_20190919_TM;
DRAWING NAME: B:\NYSDEC\D009812\Work Assignments\D009812-04 Site Management Portfolio B\19_Kliegman Brothers 241031\Figures\CAD\TRC Working Drawings\ Figure 1 - Site Location Map (KB).dwg --- PLOT DATE: May 05, 2021 - 2:27AM --- LAYOUT: 8.5x11P

LEGEND

- MONITORING WELL LOCATION
- SOIL VAPOR EXTRACTION WELL LOCATION
- VAPOR MONITORING POINT LOCATION

NOTES:

1. BASE MAP IMAGERY RETREIVED FROM ESRI AND NEW YORK STATE GIS CLEARING HOUSE.

2. LOCATIONS AND DIMENSIONS OF PHYSICAL FEATURES ARE APPROXIMATE, UNLESS STATED OTHERWISE.

3. MONITORING LOCATIONS TAKEN FROM THE OCTOBER 2016 SITE MANAGEMENT PLAN, PREPARED BY URS CORPORATION.

4. PCE RESULTS SHOWN ARE FROM SAMPLES COLLECTED ON NOVEMBER 16, 2020.

1:1,675
1" = 140'
0 140 280 FEET

PROJECT:
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SITE MANAGEMENT PORTFOLIO B
TASK NO. 19 - KLIEGMAN BROTHERS
76-01 77TH AVENUE, GLENDALE, QUEENS CO., NEW YORK

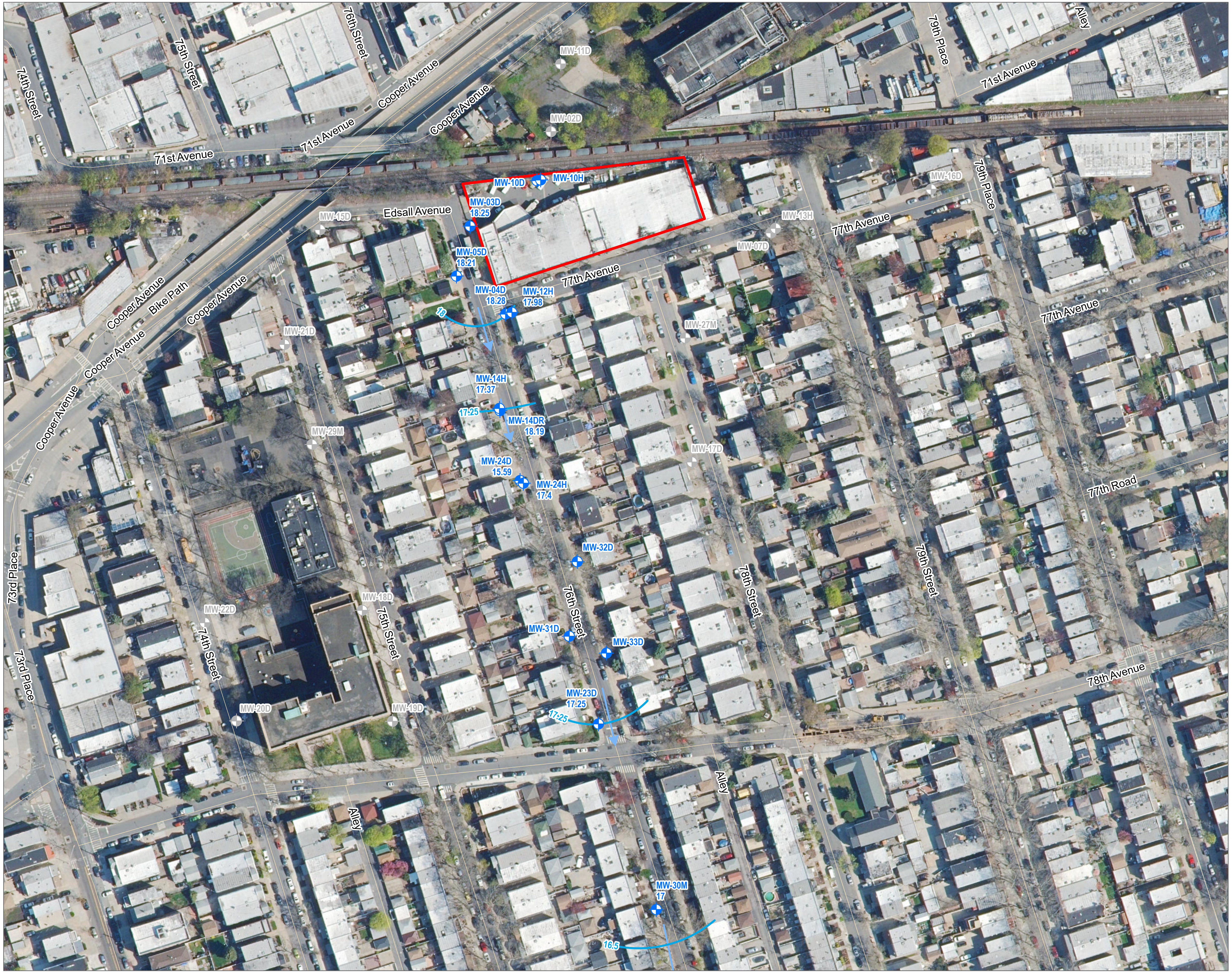
TITLE:
SITE PLAN

DRAWN BY:	L. LILL	PROJ. NO.:	386554 PHASE 19
CHECKED BY:	D. WARREN		**FIGURE 2**
APPROVED BY:	C. GUDER		
DATE:	MAY 2021		

TRC
1430 Broadway, 10th Floor
New York, NY 10018
Phone: 212-221-7822

FILE: 2-APRX.aprx

Coordinate System: NAD 1983 StatePlane New York Long Island FIPS 3104 Feet, Map Rotation: 0
Saved By: LLILL on 5/5/2021 1:43:31 PM, File Path: T:\1 PROJECTS\NYSDEC\386554_19_KliegmanBrothers\2-APRX\2-APRX.aprx, Layout Name: siteplan



LEGEND

- MONITORING WELL LOCATION
- MONITORING WELL LOCATION NOT INCLUDED IN ANNUAL MONITORING WELL NETWORK
- GROUNDWATER ELEVATION CONTOUR (0.75' INTERVALS)
- INFERRED GROUNDWATER FLOW DIRECTION

NOTES:

1. BASE MAP IMAGERY RETRIEVED FROM ESRI AND NEW YORK STATE GIS CLEARING HOUSE.
2. LOCATIONS AND DIMENSIONS OF PHYSICAL FEATURES ARE APPROXIMATE, UNLESS STATED OTHERWISE.
3. MONITORING LOCATIONS TAKEN FROM THE OCTOBER 2016 SITE MANAGEMENT PLAN, PREPARED BY URS CORPORATION.
4. SURVEYED ELEVATIONS FOR MW-10D, MW-10H, MW-31D, MW-32D, AND MW-33D ARE NOT AVAILABLE.
5. GROUNDWATER SURFACE ELEVATION CONTOURS WERE GENERATED USING MEASUREMENTS COLLECTED FROM MW-03D, MW-04D, MW-05D, MW-12H, MW-14H, MW-23D, MW-24H, AND MW-30M ON OCTOBER 21, 2020.

N

1:1,675

1" = 140'

0 140 280 FEET

PROJECT:
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SITE MANAGEMENT PORTFOLIO B
TASK NO. 19 - KLIEGMAN BROTHERS
76-01 77TH AVENUE, GLENDALE, QUEENS CO., NEW YORK

TITLE:
GROUNDWATER SURFACE ELEVATIONS AND FLOW MAP - OCTOBER 2020

DRAWN BY:	L. LILL	PROJ. NO.:	386554 PHASE 19
CHECKED BY:	D. WARREN	FIGURE 3	
APPROVED BY:	C. GUDER		
DATE:	MAY 2021		

TRC

1430 Broadway, 10th Floor
New York, NY 10018
Phone: 212-221-7822

FILE: gw_elevations.aprx

Coordinate System: NAD 1983 StatePlane New York Long Island FIPS 3104 Feet; Map Rotation: 0
-- Saved By: LLILL on 5/6/2021, 11:43:40 AM; File Path: T:\1-PROJECTS\NYSDEC\386554_19_KliegmanBrothers\2-APRX\gw_elevations\gw_elevations.aprx; Layout Name: 11x17L_2.7

MW-03D

10/17/2002 -	25,000
4/30/2003 -	22,000
6/16/2005 -	43,000
2/2009 -	490
3/2009 -	580
3/2010 -	290
2/16/2011 -	200
2/8/2012 -	48
6/28/2012 -	54
6/24/2014 -	47
10/7/2014 -	37
2/2/2015 -	53
9/9/2015 -	31
6/12/2018 -	38
11/16/2020 -	20

MW-10H

4/30/2003 -	24,800
2/1/2009 -	14
3/1/2010 -	69
2/16/2011 -	5
2/08/2012 -	8.6
11/16/2020 -	48

MW-10D

4/30/2003 -	55,000
12/1/2003 -	NS
6/1/2005 -	NS
2/2009 -	170
3/2009 -	150
3/2010 -	130
2/16/2011 -	51
2/8/2012 -	44
11/16/2020 -	11

MW-12H

4/29/2003 -	51,200
2/1/2009 -	13
3/1/2009 -	17
3/2010 -	5
2/16/2011 -	9.8
2/08/2012 -	21
6/28/2012 -	ND
6/25/2014 -	5.9
10/7/2014 -	5.4
2/4/2015 -	7.6
9/9/2015 -	5.2
6/12/2018 -	10
11/16/2020 -	7.0

MW-05D

10/15/2002 -	17,000
4/30/2003 -	15,000
12/16/2003 -	15,000
6/16/2005 -	31,000
2/2009 -	270
3/2009 -	360
3/2010 -	140
2/16/2011 -	44
2/8/2012 -	7.3
6/28/2012 -	4.1
6/25/2014 -	53
10/7/2014 -	45
2/2/2015 -	60
9/9/2015 -	40
6/13/2018 -	34
11/16/2020 -	18

MW-14H

3/1/2010 -	12
2/16/2011 -	46
2/16/2011 -	54
6/23/2014 -	22
10/07/2014 -	22
3/30/2015 -	16
9/10/2015 -	12
6/13/2018 -	24
11/16/2020 -	15

MW-14DR

6/28/2012 -	5,300
6/23/2014 -	6,500
10/7/2014 -	52,000
3/30/2015 -	9,200
9/10/2015 -	8,900
6/13/2018 -	8,200
11/16/2020 -	7,000

MW-04D

10/15/2002 -	49,000
4/29/2003 -	69,000
12/16/2003 -	45,000
6/16/2005 -	75,000
2/2009 -	680
3/2009 -	700
3/2010 -	370
2/16/2011 -	8,200
2/8/2012 -	14,000
6/28/2012 -	460
6/24/2014 -	82
10/7/2014 -	77
2/3/2015 -	95
9/9/2015 -	78
6/12/2018 -	9,000
11/16/2020 -	46

MW-24D

6/16/2005 -	21,000
3/1/2009 -	6,600
3/1/2010 -	1,400
2/16/2011 -	15,000
2/08/2012 -	340
6/28/2012 -	890
6/25/2014 -	20,000
10/8/2014 -	14,000
2/11/2015 -	12,000
9/10/2015 -	1,600
6/14/2018 -	540
11/16/2020 -	320

MW-31D

6/26/2014 -	74
10/8/2014 -	61
9/11/2015 -	67
6/13/2018 -	41
11/16/2020 -	35

MW-23D

6/15/2005 -	3,400
2/1/2009 -	2,400
3/1/2010 -	410
2/16/2011 -	380
2/08/2012 -	170
6/28/2012 -	48
6/26/2014 -	77
2/4/2015 -	77
9/11/2015 -	45
6/14/2018 -	56
11/16/2020 -	19

MW-32D

6/26/2014 -	36
10/8/2014 -	41
2/4/2015 -	37
9/11/2015 -	36
6/14/2018 -	42
11/16/2020 -	9.9

MW-33D

6/25/2014 -	120
10/8/2014 -	100
9/11/2015 -	72
6/13/2018 -	61
11/16/2020 -	12

MW-24H

3/1/2010 -	1,400
2/16/2011 -	2,500
2/8/2012 -	86
6/28/2012 -	160
6/23/2014 -	9,600
10/08/2014 -	5,300
2/11/2015 -	1,600
9/10/2015 -	210
6/14/2018 -	110
11/16/2020 -	67

MW-30M

3/1/2010 -	310
2/16/2011 -	570
2/8/2012 -	200
6/28/2012 -	140
6/26/2014 -	140
10/08/2014 -	120
2/03/2015 -	150
9/11/2015 -	74
11/16/2020 -	30

LEGEND

- MONITORING WELL LOCATION
- MONITORING WELL LOCATION NOT INCLUDED IN ANNUAL MONITORING NETWORK
- SOIL VAPOR EXTRACTION WELL LOCATION
- VAPOR MONITORING POINT LOCATION

NOTES:

1. BASE MAP IMAGERY RETRIEVED FROM ESRI AND NEW YORK STATE GIS CLEARING HOUSE.
2. LOCATIONS AND DIMENSIONS OF PHYSICAL FEATURES ARE APPROXIMATE, UNLESS STATED OTHERWISE.
3. MONITORING LOCATIONS TAKEN FROM THE OCTOBER 2016 SITE MANAGEMENT PLAN, PREPARED BY URS CORPORATION.
4. HISTORIC PCE CONCENTRATIONS SHOWN ARE FROM FIGURE 1-1 OF THE EC FORM 1 PREPARED FOR THE SITE IN JANUARY 2019.
5. PCE: TETRACHLOROETHENE

1:1,675
1" = 140'
0 140 280 FEET

PROJECT:
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SITE MANAGEMENT PORTFOLIO B
TASK NO. 19 - KLIEGMAN BROTHERS
76-01 77TH AVENUE, GLENDALE, QUEENS CO., NEW YORK

TITLE:
PCE IN GROUNDWAYER

DRAWN BY:	L. LILL	PROJ. NO.:	386554 PHASE 19
CHECKED BY:	D. WARREN		**FIGURE 4**
APPROVED BY:	C. GUDER		
DATE:	MAY 2021		

TRC
1430 Broadway, 10th Floor
New York, NY 10018
Phone: 212-221-7822

FILE: pce_gw.aprx

Coordinate System: NAD 1983 StatePlane New York Long Island FIPS 3104 Feet. Map Rotation: 0
Saved By LILL on 5/5/2021 1:41:37 PM. File Path: T:\PROJECTS\NYSDEC\386554_19_KliegmanBrothers\2-APRX\pce_gw\pce_gw.aprx Layout Name: pcelngw

LEGEND

- MONITORING WELL LOCATION
- MONITORING WELL LOCATION NOT INCLUDED IN ANNUAL MONITORING NETWORK

PCE (ug/L)

- ND - 10
- 11 - 100
- 101 - 1,000
- 1,000 +

NOTES:

1. BASE MAP IMAGERY RETRIEVED FROM ESRI AND NEW YORK STATE GIS CLEARING HOUSE.
2. LOCATIONS AND DIMENSIONS OF PHYSICAL FEATURES ARE APPROXIMATE, UNLESS STATED OTHERWISE.
3. MONITORING LOCATIONS TAKEN FROM THE OCTOBER 2016 SITE MANAGEMENT PLAN, PREPARED BY URS CORPORATION.
4. PCE: TETRACHLOROETHENE
5. PCE CONCENTRATION CONTOURS WERE GENERATED USING CONCENTRATIONS FROM MW-03D, MW-04D, MW-10H, MW-14DR, MW-23D, MW-24D, MW-30M, MW-31D, MW-32D, AND MW-33D.

1:1,675
1" = 140'

0 140 280 FEET

PROJECT:
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SITE MANAGEMENT PORTFOLIO B
TASK NO. 19 - KLIEGMAN BROTHERS
76-01 77TH AVENUE, GLENDALE, QUEENS CO., NEW YORK

TITLE:
PCE IN GROUNDWATER CONCENTRATION CONTOURS

DRAWN BY:	L. LILL	PROJ. NO.:	386554 PHASE 19
CHECKED BY:	D. WARREN		FIGURE 5
APPROVED BY:	C. GUDER		
DATE:	JULY 2021		

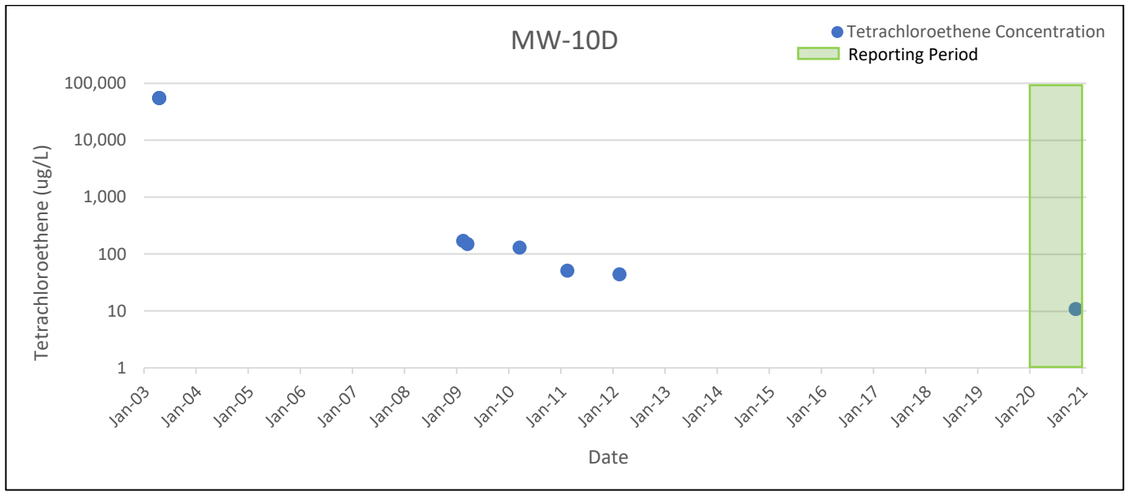
TRC
1430 Broadway, 10th Floor
New York, NY 10018
Phone: 212-221-7822

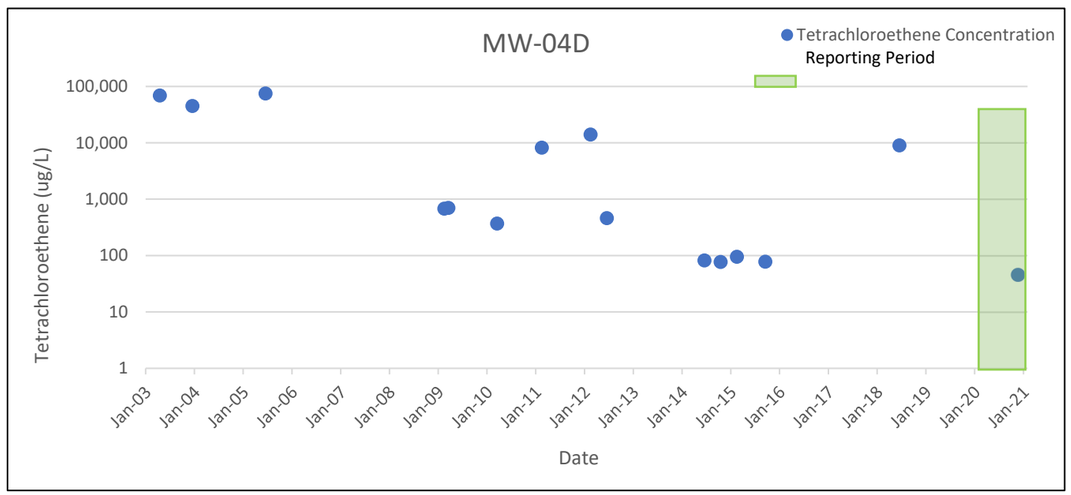
FILE: pce_gw.aprx

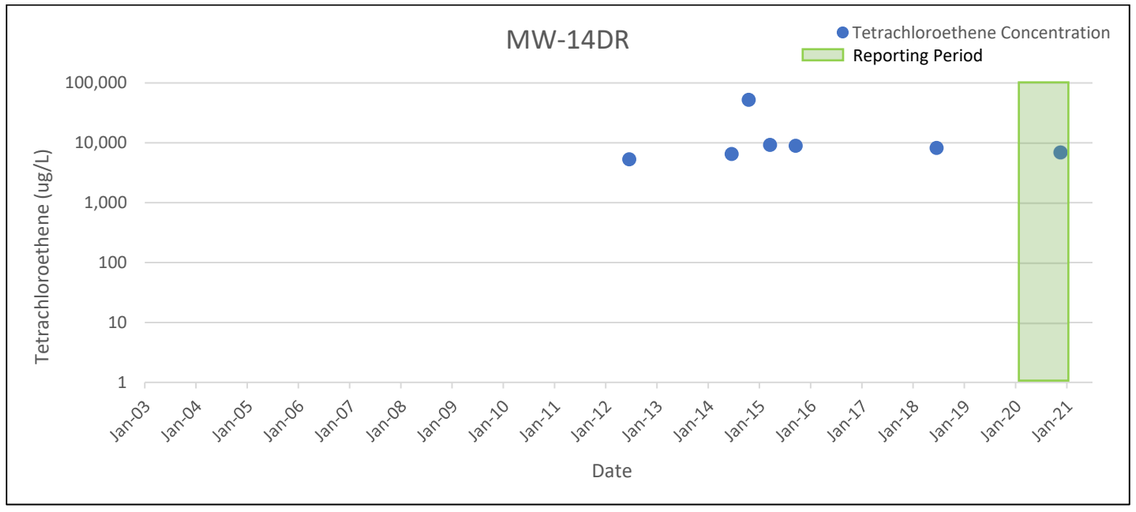
Coordinate System: NAD 1983 StatePlane New York Long Island FIPS 3104 Feet. Map Rotation: 0
Saved By: LLILL on 7/22/2021 - 15:13:19 PM - File Path: T:\PROJECTS\SYRACUSE\386554_19_KliegmanBrothers\2-APRX\pce_gw\pce_gw.aprx - Layout Name: Figure 5 - Kliegman Brothers PCE in GW Contours Map

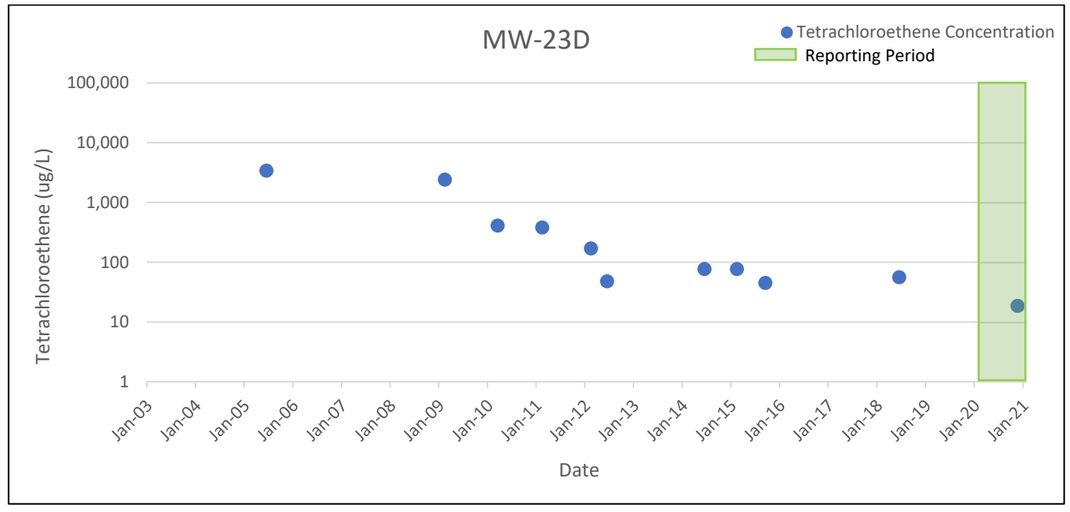
Figure 6

New York State Department of Environmental Conservation
SMP B - Kliegman Brothers - Site No. 241031
Periodic Review Report
Glendale, Queens, New York
PCE in Groundwater Trend Charts









Notes:
PCE – Tetrachloroethene
µg/L – Micrograms per Liter

Tables

Table 1
New York State Department of Environmental Conservation
SMP B - Kliegman Brothers - Site No. 241031
Periodic Review Report
Glendale, Queens, New York
Summary of Depth to Water Measurements and Groundwater Elevations

Well ID	Screened Formation	Casing Elevation[1] (feet)	Gauge Date	Depth to Water (feet below TOC)	Depth to Bottom (feet below TOC)	Groundwater Elevation[1] (feet)
MW-03D	Overburden	80.98	10/21/2021	62.73	76.85	18.25
MW-04D	Overburden	80.56	10/21/2021	62.28	75.62	18.28
MW-05D	Overburden	80.61	10/21/2021	62.40	74.61	18.21
MW-10D	Overburden	N/A	10/21/2021	62.26	73.45	N/A
MW-10H	Overburden	N/A	10/21/2021	62.19	135.67	N/A
MW-12H	Overburden	80.43	10/21/2021	62.45	106.50	17.98
MW-14DR	Overburden	81.29	10/21/2021	63.10	75.90	N/A
MW-14H	Overburden	80.90	10/21/2021	63.53	111.6	17.37
MW-23D	Overburden	83.57	10/21/2021	66.32	74.95	17.25
MW-24D	Overburden	81.91	10/21/2021	66.32	70.03	15.59
MW-24H	Overburden	81.44	10/21/2021	64.04	80.90	17.40
MW-30M	Overburden	86.53	10/21/2021	69.53	89.48	17.00
MW-31D	Overburden	N/A	10/21/2021	65.49	80.76	N/A
MW-32D	Overburden	N/A	10/21/2021	64.51	74.95	N/A
MW-33S	Overburden	N/A	10/21/2021	65.78	80.49	N/A

Notes:
[1] Elevations are North American Vertical Datum 1988.
ID - Identification
TOC - Top of Casing
N/A - Not Available

Table 2
New York State Department of Environmental Conservation
SMP B - Kliegman Brothers - Site No. 241031
Periodic Review Report
Glendale, Queens, New York
Summary of VOCs in Groundwater

Sample Location:			MW-03D		MW-04D		MW-05D		MW-10D		MW-10H		MW-12H		MW-14DR		MW-14H		MW-23D		MW-24D		MW-24H		MW-30M		MW-31D		MW-32D		MW-33D	
Sample Name:			KB-MW-03D-WG-20201116		KB-MW-04D-WG-20201116		KB-MW-05D-WG-20201116		KB-MW-10D-WG-20201116		KB-MW-10H-WG-20201116		KB-MW-12H-WG-20201116		KB-MW-14DR-WG-20201116		KB-MW-14H-WG-20201116		KB-MW-23D-WG-20201116		KB-MW-24D-WG-20201116		KB-MW-24H-WG-20201116		KB-MW-30M-WG-20201116		KB-MW-31D-WG-20201116		KB-MW-32D-WG-20201116		KB-MW-33D-WG-20201116	
Sample Date:			11/16/2020		11/16/2020		11/16/2020		11/16/2020		11/16/2020		11/16/2020		11/16/2020		11/16/2020		11/16/2020		11/16/2020		11/16/2020		11/16/2020		11/16/2020		11/16/2020		11/16/2020	
VOCs	Unit	Guidance Value*	Results		Results		Results		Results		Results		Results		Results		Results		Results		Results		Results		Results		Results		Results		Results	
1,1,1-Trichloroethane	ug/L	5	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2,2-Tetrachloroethane	ug/L	5	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2-Trichloroethane	ug/L	1	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2-Trichloro- 1,2,2-trifluoroethane	ug/L	5	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethane	ug/L	5	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethene	ug/L	5	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2,4-Trichlorobenzene	ug/L	5	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dibromo-3-chloropropane	ug/L	0.04	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichlorobenzene	ug/L	3	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloroethane	ug/L	0.6	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloropropane	ug/L	1	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,3-Dichlorobenzene	ug/L	3	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,4-Dichlorobenzene	ug/L	3	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
2-Butanone (MEK)	ug/L	50	10	U	10	U	10	U	10	U	10	U	10	U	2,000	U	10	U	10	U	100	U	20	U	10	U	10	U	10	U	10	U
2-Hexanone	ug/L	50	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	1,000	U	5.0	U	5.0	U	50	U	10	U	5.0	U	5.0	U	5.0	U	5.0	U
4-Methyl-2-pentanone	ug/L	NC	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	1,000	U	5.0	U	5.0	U	50	U	10	U	5.0	U	5.0	U	5.0	U	5.0	U
Acetone	ug/L	50	10	U	10	U	**5.1**	**J**	**9.3**	**J**	10	U	**7.0**	**J**	2,000	U	**6.7**	**J**	**7.8**	**J**	100	U	20	U	**6.4**	**J**	**5.8**	**J**	**9.6**	**J**	10	U
Benzene	ug/L	1	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromodichloromethane	ug/L	50	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromoform	ug/L	50	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromomethane	ug/L	5	1.0	UJ	1.0	UJ	1.0	UJ	1.0	UJ	1.0	UJ	1.0	UJ	200	UJ	1.0	UJ	1.0	UJ	10	UJ	2.0	UJ	1.0	UJ	1.0	UJ	1.0	UJ	1.0	UJ
Carbon disulfide	ug/L	60	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Carbon tetrachloride	ug/L	5	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chlorobenzene	ug/L	5	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloroethane	ug/L	5	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloroform	ug/L	7	**2.8**		**1.6**		**1.2**		**0.51**	**J**	1.0	U	**0.97**	**J**	200	U	**0.99**	**J**	1.0	U	10	U	**1.0**	**J**	**0.98**	**J**	**0.92**	**J**	**0.89**	**J**	**1.2**	
Chloromethane	ug/L	5	1.0	UJ	1.0	UJ	1.0	UJ	**1.6**	**J**	1.0	UJ	1.0	UJ	200	UJ	1.0	UJ	1.0	UJ	10	UJ	2.0	UJ	1.0	UJ	1.0	UJ	1.0	UJ	1.0	UJ
cis-1,2-Dichloroethene	ug/L	5	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	**2.0**		**2.1**		**0.86**	**J**
cis-1,3-Dichloropropene	ug/L	0.4	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Cyclohexane	ug/L	NC	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Dibromochloromethane	ug/L	50	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Dichlorodifluoromethane	ug/L	5	1.0	UJ	1.0	UJ	1.0	UJ	1.0	UJ	1.0	UJ	1.0	UJ	200	UJ	1.0	UJ	1.0	UJ	10	UJ	2.0	UJ	1.0	UJ	1.0	UJ	1.0	UJ	1.0	UJ
Ethylbenzene	ug/L	5	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.0006	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Isopropylbenzene	ug/L	5	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Methyl acetate	ug/L	NC	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	500	U	2.5	U	2.5	U	25	U	5.0	U	2.5	U	2.5	U	2.5	U	2.5	U
Methyl tert-butyl ether	ug/L	10	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Methylcyclohexane	ug/L	NC	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Methylene chloride	ug/L	5	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Styrene	ug/L	5	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Tetrachloroethene	ug/L	5	**20**		**46**		**18**		**11**		**48**		**7.0**		**7,000**		**15**		**19**		**320**		**67**		**30**		**35**		**9.9**		**12**	
Toluene	ug/L	5	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,2-Dichloroethene	ug/L	5	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,3-Dichloropropene	ug/L	0.4	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Trichloroethene	ug/L	5	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	**2.9**		10	U	2.0	U	**8.0**		**6.3**		**3.0**		**3.9**	
Trichlorofluoromethane	ug/L	5	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Vinyl chloride	ug/L	2	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	200	U	1.0	U	1.0	U	10	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Xylenes, total	ug/L	5	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	400	U	2.0	U	2.0	U	20	U	4.0	U	2.0	U	2.0	U	2.0	U	2.0	U
TICs	Unit	Guidance Value*	Results		Results		Results		Results		Results		Results		Results		Results		Results		Results		Results		Results		Results		Results		Results	
Unknown Volatile Organic With 1st Highest Conc.	ug/L	NC	**2.9**	**J**	**3.0**	**J**	**3.6**	**J**	**3.0**	**J**	**4.1**	**J**	**6.9**	**J**	NA		**3.0**	**J**	**3.5**	**J**	NA		NA		**3.0**	**J**	**5.4**	**J**	**3.6**	**J**	**4.9**	**J**
Unknown Volatile Organic With 2nd Highest Conc.	ug/L	NC	**2.9**	**J**	NA		NA		**2.8**	**J**	NA		NA		NA		NA		**3.1**	**J**	NA		NA		NA		NA		NA		NA	
Unknown Volatile Organic With 3rd Highest Conc.	ug/L	NC	NA		NA		NA		**2.7**	**J**	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	

Notes:

ug/L - micrograms per liter.

J - Estimated value.

NA - Sample not analyzed for the listed analyte.

NC - No NYSDEC standards exist for this analyte.

U - Analyte was not detected at specified quantitation limit.

UJ - Estimated non-detect.

Values in bold indicate the analyte was detected.

Values shown in bold and shaded type exceed the listed NYSDEC standards.

VOCs - Volatile Organic Compounds.

TICs- Tentatively Identified Compounds.

* - NYSDEC Ambient Water Quality Standards and Guidance Values for Class GA water, June 1998 with the April 2000 Addendum.

Appendix A

Form A
Summary of Green Remediation Metrics

Site Name: Kliegman Brothers Site Code: 241031 Operable Unit: 1 and 2
Address: 76-01 77th Avenue City: New York
State: NY Zip: 11385 County: Queens

Reporting Period
Contract Period From: To:
Reporting Period From: 1/1/2020 To: 12/31/2020 Is this a Final Report? Yes ☐ No ☐

Contact Information
Preparer's Name: Daniel Warren Phone No.: 917-232-9837
Preparer's Affiliation: TRC Engineers, Inc. Company Code:

Waste Generation: Quantify the management of waste generated on-site.

	Current Reporting Period (Tons)	Total to Date (Tons)
Total waste generated on-site		
• Remedy generated waste	0	0
• Contractor generated waste	0	0
Of that total amount, provide quantity:	0	0
• Transported off-site to landfills	0	0
• Transported off-site to other disposal facilities	0	0
• Transported off-site for recycling/reuse	0	0
• Reused on-site	0	0

Provide a description of any implemented waste reduction programs appropriate for this project in the space provided on Page 3.

Energy Usage: Quantify the amount of energy used on-site and portion of that voluntarily derived from renewable energy sources.

	Current Reporting Period (KWh)	Total to Date (KWh)
Total electricity usage	Not available	Not available
Of that total amount, provide quantity:		
• Derived from renewable source (i.e. solar, wind)	Not available	Not available

Provide a description in the space provided on Page 3 of all reported energy usage reduction programs appropriate to this project, including usage of electricity derived from renewable sources.

Emissions: Quantify the distance traveled for delivery of supplies and removal of waste.

	Current Reporting Period (Miles)	Total to Date (Miles)
Off-site mobile fuel combustion	1,150	1,150

Provide a description in the space provided on Page 3 of practices such as use of local vendors within 150 miles of the site and on-site stationary fuel usage reduction programs.

Quantify the number of hours that diesel and other equipment with the potential to emit hazardous air pollutants (HAPs) or greenhouse gas (GHG) emissions was operated on-site.

	Current Reporting Period (Hours)	Total to Date (Hours)
On-site diesel excavation/construction equipment usage	0	0
Other on-site processes potentially generating emissions	4,092	4,092

Provide a description in the space provided on Page 3 of the type of excavation/construction equipment used, rating, emission control devices used and other means to reduce emissions, such as use of biodiesel. Also, include a description of other onsite processes that may result in emissions of HAPs or GHG emissions and any emission control devices that are utilized to reduce emissions.

Water Usage: Quantify the volume of water used on-site from difference sources

	Current Reporting Period (Gallons)	Total to Date (Gallons)
Total quantity of water used on-site	0	0
Of that total amount, provide the quantity obtained from:		
• Public potable water supply usage	0	0
• Surface water usage	0	0
• On-site groundwater usage	0	0
• Reclaimed water usage	0	0
• Collected or diverted storm water usage	0	0

Provide a description in the space provided on Page 3 of any reported water usage reduction programs appropriate for this project.

Land and Ecosystem: Provide a description of the amount of land and/or ecosystems disturbed construction and the area of land and/or ecosystems restored to a natural condition.

	Current Reporting Period (Acres)	Total to Date (Acres)
Land Disturbed	Not applicable	Not applicable
Land Restored	Not applicable	Not applicable

Provide a description of the amount of land and/or ecosystems remediated.

	Current Reporting Period (Acres)	Total to Date (Acres)
Total area of land impacted by contamination	Approximately 8	Approximately 8
Of the total acres provide the:		
Area of Land Remediated	0	0

Other: *Provide a description in the space provided on page 3 of any other green remediation practices performed during the project.*

Description of green remediation programs reported above (Attach additional sheet if needed)

Waste Generation:

Not applicable.

Energy Usage:

Site electricity usage is limited to full-time operation of a soil vapor extraction system designed to remediate contaminated soil and provide vapor intrusion control. Since full-time operation of the system is necessary to protect the health of Site occupants no energy reduction program has been implemented.

Emissions:

Site emissions are limited to volatile organic compounds, primarily tetrachloroethene, from the soil vapor extraction system, which is operated without vapor treatment. Emission rates are calculated monthly and are significantly below the established limit of 0.5 pounds per hour. Therefore no emission reduction program has been implemented.

Water Usage:

Not applicable.

Land and Ecosystem:

Not applicable.

Other:

Generally, local staff are utilized to perform work at the site. Staff primarily utilized at the site are located between 10 and 50 miles from the site.

CERTIFICATION BY CONTRACTOR

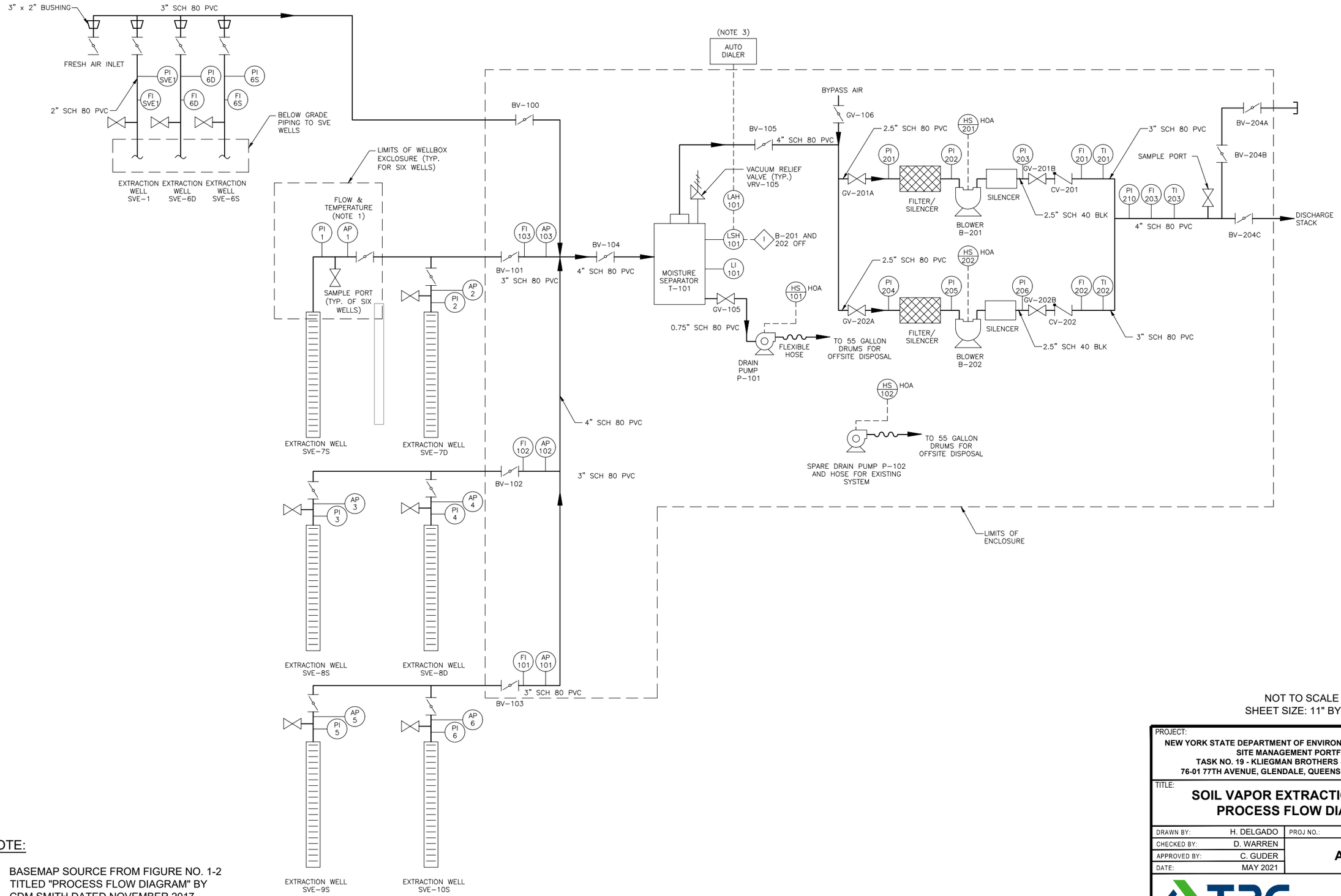
I, _____ (**Name**) do hereby certify that I am _____ (**Title**) of the Company/Corporation herein referenced and contractor for the work described in the foregoing application for payment. According to my knowledge and belief, all items and amounts shown on the face of this application for payment are correct, all work has been performed and/or materials supplied, the foregoing is a true and correct statement of the contract account up to and including the last day of the period covered by this application.

_____ _____

Date **Contractor**

THIS PAGE WAS LEFT INTENTIONALLY BLANK

Appendix B



NOTE:

1. BASEMAP SOURCE FROM FIGURE NO. 1-2 TITLED "PROCESS FLOW DIAGRAM" BY CDM SMITH DATED NOVEMBER 2017.

SOIL VAPOR EXTRACTION (SVE) SYSTEM PROCESS FLOW DIAGRAM

NOT TO SCALE

NOT TO SCALE
SHEET SIZE: 11" BY 17"

PROJECT:
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SITE MANAGEMENT PORTFOLIO B
TASK NO. 19 - KLIEGMAN BROTHERS - SITE NO. 241031
76-01 77TH AVENUE, GLENDALE, QUEENS COUNTY, NEW YORK

TITLE:
SOIL VAPOR EXTRACTION SYSTEM PROCESS FLOW DIAGRAM

DRAWN BY:	H. DELGADO	PROJ NO.:	386554.0000.0000
CHECKED BY:	D. WARREN		**APPENDIX B**
APPROVED BY:	C. GUDER		
DATE:	MAY 2021		

TRC
1430 Broadway, 10th Floor
New York, NY 10018
Phone: 212.221.7822
www.TRCcompanies.com

FILE NO.: Appendix A - SVE System Process Flow Diagram (KB).dwg

Appendix C

SITE HISTORY

KLIEGMAN BROTHERS SITE (NYSDEC SITE NO. 241031)

Date	Description
1950s – 1999	A laundry and dry-cleaning supply business was operated by Kliegman Brothers, Inc, in Glendale, New York. The business functioned as a warehouse and distribution center for cleaning chemicals and related supplies. Tetrachloroethene (PCE) was stored in two 6,000 gallon above ground storage tanks (ASTs) on Site. It is presumed that the tanks were the source of the on-Site contamination, although the exact means of the PCE contamination is unknown. The Site ceased operations in 1999 (Camp Dresser & Mckee 2014).
1997 – 2002	Initial on-Site investigations included soil vapor sample collection and analysis in the area where the ASTs were located. Ultimately six investigations were completed during this time, all of which confirming high concentrations of PCE on Site by Tradewinds Environmental Restoration, Inc., Advanced Cleanup Technologies (ACT), and URS (URS 2016).
2000	The site was purchased by Arimax Realty, LLC and became utilized as a commercial food warehouse by The Gourmet Factory in 2000. Additional soil vapor sampling was conducted and by June 2000 the Site was added to the Registry of Inactive Hazardous Waste Disposal Sites in New York (the Registry) as a Class 2a site. In November 2000 the site was reclassified as a Class 2 site as the hazardous waste present posed a significant threat to public and environmental health (Camp Dresser & Mckee 2014).
October 2000 – August 2001	The NYSDOH conducted ambient air sampling at residences located east, west, and south of the facility. PCE was detected in indoor air samples collected from 16 of the 17 homes sampled (Camp Dresser & Mckee 2014).
2001	An investigation was conducted, as part of the voluntary cleanup program (VCP) agreement with the NYSDEC, in 2001 by Environscience Consultants, Inc. Soil and groundwater sampling was performed as part of a Focused Remedial Investigation and Interim Remedial Measure (FRI/IRM). The purpose of the FRI/IRM was to delineate on-site soil contamination to support implementation of soil vapor extraction (SVE) to remediate soil. The investigation included the advancement of nine soil borings and collection of 26 soil samples from the building sub-floor. The results indicated elevated levels of PCE, benzene, toluene, ethylbenzene, xylene (BTEX), and1,2-dichloroethene (DCE), with the PCE detected most frequently and at the highest concentration (Camp Dresser & Mckee 2014; URS 2016).
November 2001	The Focused Remedial Investigation/Preliminary Remedial Measures Report was finalized (Camp Dresser & Mckee 2014; URS 2016).

September 2002	The owner of the Site chose to discontinue the VCP agreement. Due to the urgency of concern regarding the continued PCE vapor exposures to neighboring structures the NYSDEC hired URS to design and construct an SVE-system on-Site. This was completed as part of an IRM and the system became operable in 2004 (Camp Dresser & Mckee 2014).
April 2002 – April 2003	The initial phase of the remedial investigation was performed on site. Remedial activities included a geophysical survey, installation of nine soil borings and four monitoring wells, and the collection of 35 indoor air samples form 17 neighboring residences (Camp Dresser & Mckee 2014).
February 2003 – April 2003	The second phase of the remedial investigation was completed. This comprised of installing five soil borings, five monitoring wells, and sampling the nine wells.
February 2004	The Remedial Investigation Report was completed in February 2004. The RI determined that VOCs were one of the main categories of contamination that exceeded standards, criteria, and guidance (SCGs). Other than PCE, the primary VOC contaminant of concern, additional on-site contaminates were degradation products of PCE: trichloroethene (TCE), cis-l,2 dichloroethane (DCE), and vinyl chloride, and additional compounds such as carbon tetrachloride, 1,1,1 -trichloroethane (1,1,1- TCA) and chloroform (Camp Dresser & Mckee 2014).
August 2004	Operation of the SVE system design by the URS corporation and installed by Envirotrac Environmental Services (Envirotrac) begins.
September 2005	URS issued an RI Addendum Report after installing eight monitoring wells and sampling 16 of the 18 previously existing wells (URS 2016).
March 2006	NYSDEC issues the ROD for OU-1 (on-site soil). The selected remedy consisted of SVE; components of which were the inclusion of a remedial design program, continuation of the existing operable URS SVE system, construction of an additional SVE system, imposition of an Environmental Easement, and development of an SMP (Camp Dresser & Mckee 2014).
2006	URS presents their findings from the residential air sampling program, conducted as part of the RI, in the Soil Vapor Intrusion Investigation Report.
April 2007	NYSDEC approves the remedial design for Kliegman Brothers OU1.
January 2008	Remedial construction activities completed for OU-1 (Camp Dresser & Mckee 2014).
March 2008	The NYSDEC approves the ROD for OU-2. Remedial Action Objectives (RAOs) for the site included limiting exposures of PCE and degradation products to persons and reduce to the extent possible the release of contaminants from soil vapor to indoor air (URS 2016).
December 2009	CDM Smith performed a subsurface investigation utilizing membrane interface probe (MIP) technology to determine if an additional PCE source was located in soil. The

	investigation focused on the areas near extraction wells SVE-7S and SVE-7D and the loading dock area, and the areas closest to these locations inside the building. The investigation confirmed the primary source of on-site PCE impacts is located near the loading dock (Camp Dresser & Mckee 2014; Camp Dresser Mckee & Smith 2020).
May 2014	The Site Management Plan for Operable Unit No.1 was prepared for the NYSDEC by Camp Dresser & Mckee.
July 2014 – June 2015	After the installation of 12 injection wells, three rounds of permanganate injection occurred on site in July 2014, November 2014, and June 2015.
October 2016	The Site Management Plan for Operable Unit No.2 was prepared for the NYSDEC by the URS Corporation.
February 2017	Due to the level of deterioration and equipment operation failures, the URS SVE system was demolished. SVE wells installed as part of the IRM were connected to the blowers installed in 2008 (Camp Dresser Mckee & Smith 2020).

CUSTODIAL RECORD

KLIEGMAN BROTHERS SITE (NYSDEC SITE NO. 241031)

URS Corporate Group Consultants, *"Remedial Investigation/Feasibility Study Work Plan"*, February 2003

URS Corporation, "*Final Remedial Investigation Report, Kliegman Brothers Site*," February 2004

URS Corporation, *"Remedial Investigation Report Addendum, Kliegman Brothers Site"*, September 2005

URS Corporation, *"Remedial Investigation/Feasibility Study Project*" October 2005

NYSDEC, *Proposed Remedial Action Plan for the Kliegman Brothers site, Operable Unit No. 1*, February 2006

NYSDEC, *"Record of Decision: Kliegman Brothers Site Operable Unit No. 1",* March 2006

URS Corporation, *Soil Vapor Intrusion Investigation Report, Kliegman Brothers Site,* July 2006

URS Corporation, *Feasibility Study, Kliegman Brothers Site,* November 2006

URS Corporation*, "Design Engineering Report OU1",* April 2007

Camp, Dresser & McKee, "*Construction Completion Report, Kliegman Brothers OU1, Site #2-41-031, Remedial Construction Contract No. D006547",* 2008

NYSDEC, *"Record of Decision: Kliegman Brothers Site Operable Unit No. 2",* March 2008

URS Corporation, "*Feasibility Study OU2"* February 2008

URS Corporation, *"Operable Unit NO. 2 Design Analysis Report"* November 2012

Camp, Dresser & McKee, "*Site Management Plan OU1",* May 2014

URS Corporation,*" Kliegman Brothers Site Final Engineering Report OU2"*, March 2016

URS Corporation, *"Site Management Plan OU2",* October 2016

New York State Department of Environmental Conservation
Kliegam Brothers Site - Site No. 241031
Glendale, Queens County, New York
Monitoring Well Construction Summary

Monitoring Well	Installation Date	Well Diameter (inches)	Well Material	Total Depth (feet bgs)	Screened Formation	Screen			Elevation (feet AMSL)			Location (STD UTM)	
						Top (feet bgs)	Bottom (feet bgs)	Length (feet)	PVC Casing Top	Screen Top	Screen Bottom	Northing	Easting
MW-03D	8/24/2002	2	PVC	76.5	Overburden	66.50	76.50	10.00	80.98	14.48	4.48	196749.41	1019146.31
MW-04D	8/26/2002	2	PVC	75.0	Overburden	65.00	75.00	10.00	80.56	15.56	5.56	196622.72	1019197.44
MW-05D	8/27/2002	2	PVC	75.0	Overburden	65.00	75.00	10.00	80.61	15.61	5.61	196677.45	1019126.68
MW-10H	4/16/2003	2	PVC	125.0	Overburden	115.00	125.00	10.00	N/A	N/A	N/A	N/A	N/A
MW-10D	4/18/2003	2	PVC	62.0	Overburden	52.00	62.00	10.00	N/A	N/A	N/A	N/A	N/A
MW-12H	4/4/2003	2	PVC	118.0	Overburden	95.00	105.00	10.00	80.43	-14.57	-24.57	196625.89	1019204.53
MW-14DR	3/26/2003	2	PVC	75.0	Overburden	64.50	74.50	10.00	81.29	16.79	6.79	196483.57	1019189.37
MW-14H	12/17/2009	2	PVC	111.0	Overburden	96.00	111.00	15.00	80.90	-15.10	-30.10	196486.72	1019188.60
MW-23D	6/1/2005	2	PVC	74.0	Overburden	64.00	74.00	10.00	83.57	19.57	9.57	196031.94	1019331.28
MW-24D	6/2/2005	2	PVC	69.0	Overburden	59.00	69.00	10.00	81.91	22.91	12.91	196382.81	1019218.34
MW-24H	12/9/2009	2	PVC	80.0	Overburden	70.00	80.00	10.00	81.44	11.44	1.44	196378.93	1019223.11
MW-30M	11/20/2009	2	PVC	88.0	Overburden	78.00	88.00	10.00	86.53	8.53	-1.47	195764.51	1019414.54
MW-31D	8/22/2013	2	PVC	80.0	Overburden	65.00	80.00	15.00	N/A	N/A	N/A	196158.39	1019289.26
MW-32D	9/24/2013	2	PVC	80.0	Overburden	65.00	80.00	15.00	N/A	N/A	N/A	196265.90	1019300.76
MW-33D	9/25/2019	2	PVC	80.0	Overburden	65.00	80.00	15.00	N/A	N/A	N/A	196134.19	1019342.66

Notes

AMSL : Above Mean Sea Level
feet bgs : Feet Below Ground Surface
PVC : Polyvinyl Chloride
N/A : Not Avaliable

Appendix D

Project: Kliegman Brother's Site OU1 - Site Management
Contractors: Camp Dresser McKee & Smith, Preferred Environmental Services, and Innovative Recycling
CDM Job No: D-007621-4
Site No: 2-41-031
CDM Project Manager: Amy Picunas

CDM SMITH
11 British American Boulevard
Latham, NY 12110
Telephone: 518.782.4500
Fax: 518.786.3810

DAILY REPORT

Day:	S	M	T	W	TH	F	S

Date: 10-Jan-20
REPORT No. 228
PAGE No. 1

PREPARED BY: Edward Combs TITLE: Site Rep.

WEATHER	Bright Sun	Partly Cloudy	Overcast	Rain	Snow
TEMP	To 32	32-50	50-70	70-85	85 and up
WIND	Light	Moderate	High		
HUMIDITY	Dry	Moderate	Humid		
WIND DIR	NE	NW	SE	SW	
	N	S	E	W	

AVERAGE FIELD FORCE

Name of Contractor	Title	Hours Worked	Remarks
Sean Igoe	Technician	8:15-12:15	Preferred

VISITORS

Name	Time (From - To)	Representing	Remarks

EQUIPMENT AT THE SITE

I = Idle W = Working

1. Camera - W	3. Pressure Gauges - W	5. VelociCalc - W
2. PID - W	4. Velocity & Temperature Meter - W	

OPERATION & MAINTENANCE ACTIVITIES

CDM/Preferred Site Representative: Sean Igoe

DESCRIPTION OF WORK PERFORMED AND OBSERVED

8:15- Preferred (SI) arrived onsite. System offline upon arrival; B-201 set to "Auto" and B-202 set to "Off". Begin monthly O&M activities which included, collection of passive readings, repair of damaged SVE piping, and troubleshooting of system to possibly restart.

9:45- SVE Piping repairs completed. Troubleshooting was not successful in getting the blower to restart. This is likely due to the system being offline for an extended time, thus allowing oxidation to accumulate. Further inspection/repairs to the blower will have to be coordinated.

10:30 - Collect outdoor SVE and VMP readings with PID and Velocicalc. Vacuum and Velocity readings not collected due to system being offline. Location SVE-7S was unable to be monitored due to obstruction during the time of the O&M.

11:20 -Collected readings from indoor VMP and SS locations with PID and VelociCalc. As per previous O&M events, various locations were obstructed with bakery equipment, and VMP-7R was observed to be patched over with concrete.

12:15- Monthly O&M activites completed. B-201 set to "Auto". Preferred (SI) offsite.

X - Designates report is continued on additional pages

CDM/Preferred Site Representative: Edward Combs Project Manager: **Amy Picunas**

11 British American Boulevard - Suite 200 - Latham, NY 12110 tel: (518) 782-4500 fax: (518) 786-3810

KLIEGMAN BROTHERS OU #1
Contract No. D007921, Site No. 2-41-031
Monitoring Table: January 10, 2020

DATE: January 10, 2020 **DAY: Friday** **TECHNICIAN: Sean Igoe**

Weather: Partly Cloudy 32°F

SYSTEM EQUIPMENT INFORMATION

SYSTEM STATUS: ON OFF **CUMULATIVE SYSTEM HOURS: 87,399.42**

B-201 STATUS: ON OFF **METER HOURS: 10,524.10 - Ran 6.9 days since last monitoring - Decmeber 12, 2019** **BLOWER HOURS: 11,796.10**

TIME	PI 201 in w.c.	PI 202 in. w.c.	PI 203 in. w.c.	FI 201 scfm	TI 201 deg F	FI 101 cf/min	FI 102 cf/min	FI 103 cf/min	AP 101		AP 102		AP 103		Comments
									Velocity ft/min	Temp deg F	Velocity ft/min	Temp deg F	Velocity ft/min	Temp deg F	
10:00	0	*	6*	0	30	*	*	*	*	40.7	*	43.2	*	46.7	*Reading not collected due to system being offline

B-202 STATUS: ON **OFF** **METER HOURS: 0.00 - Ran 0.0 days since last monitoring - December 12, 2019** **BLOWER HOURS: 183.20**

TIME	PI 204 in w.c.	PI 205 in. w.c.	PI 206 in. w.c.	FI 202 scfm	TI 202 deg F	FI 101 cf/min	FI 102 cf/min	FI 103 cf/min	AP 101		AP 102		AP 103		Comments
									Velocity ft/min	Temp deg F	Velocity ft/min	Temp deg F	Velocity ft/min	Temp deg F	
10:00	*	60	0	0	30	*	*	*	*	40.7	*	43.2	*	46.7	*Reading not collected due to system being offline

DATE: January 10, 2020 **DAY: Friday** **TECHNICIAN: Sean Igoe**

Weather: Partly Cloudy 32°F

VMP WELL INFORMATION

VMP-1

TIME	WH VOC ppm	WH VAC. In. w.c.
11:20	0.0	0.003

VMP-2

TIME	WH VOC ppm	WH VAC. In. w.c.
11:25	2.9	0.001

VMP-3

TIME	WH VOC ppm	WH VAC. In. w.c.
11:32	0.0	0.002

VMP-4

TIME	WH VOC ppm	WH VAC. In. w.c.
11:42	0.2	0.003

VMP-5

TIME	WH VOC ppm	WH VAC. In. w.c.
11:45	0.2	0.001

SS-1

TIME	WH VOC	WH VAC In. W.C.
11:50	0.0	0.000

SS-2

TIME	WH VOC	WH VAC In. W.C.
12:02	*	*

SS-3

TIME	WH VOC	WH VAC In. W.C.
12:05	*	*

VMP-6

TIME	WH VOC	WH VAC In. W.C.
12:00	0.0	0.005

VMP-7R

TIME	WH VOC	WH VAC In. W.C.
12:03	*	*

*= Unable to access during O&M, obstructed by bakery/storage equipment.
VMP-7R observed to be patched over with concrete

DATE: January 10, 2020 **DAY: Friday** **TECHNICIAN: Sean Igoe**

Weather: Partly Cloudy 32°F

NEW SVE WELL INFORMATION

SVE-7S

TIME	WH VOC ppm	WH VAC in. w.c.	Relative Humidity %RH	Dewpoint deg F	WH AP	
					VELOCITY ft/min	TEMP deg F
10:20	N/A	N/A	N/A	N/A	N/A	N/A

Comments: Valve at well head is open 100%. VOC screening conducted utilizing Zefon diaphragm sampling pump.
No Access to Vault during O&M - Trailer used for storage was observed to be parked over.

SVE-7D

TIME	WH VOC ppm	WH VAC in. w.c.	Relative Humidity %RH	Dewpoint deg F	WH AP	
					VELOCITY ft/min	TEMP deg F
10:26	0.0	**	83.9	42.1	**	44.0

Comments: Valve at well head is open 100%. VOC screening conducted utilizing Zefon diaphragm sampling pump.
** VAC and VELOCITY readings not collected due to system being offline.

SVE-8S

TIME	WH VOC ppm	WH VAC in. w.c.	Relative Humidity %RH	Dewpoint deg F	WH AP	
					VELOCITY ft/min	TEMP deg F
10:31	0.0	**	94.2	42.8	**	44.8

Comments: Valve at well head is open 100%. VOC screening conducted utilizing Zefon diaphragm sampling pump.
** VAC and VELOCITY readings not collected due to system being offline.

SVE-8D

TIME	WH VOC ppm	WH VAC in. w.c.	Relative Humidity %RH	Dewpoint deg F	WH AP	
					VELOCITY ft/min	TEMP deg F
10:37	0.0	**	56.7	47.6	**	51.3

Comments: Valve at well head is open 100%. VOC screening conducted utilizing Zefon diaphragm sampling pump.
** VAC and VELOCITY readings not collected due to system being offline.

SVE-9S

TIME	WH VOC ppm	WH VAC in. w.c.	Relative Humidity %RH	Dewpoint deg F	WH AP	
					VELOCITY ft/min	TEMP deg F
10:42	0.0	**	73.2	37.1	**	42.9

Comments: Valve at well head is open 100%. VOC screening conducted utilizing Zefon diaphragm sampling pump.
** VAC and VELOCITY readings not collected due to system being offline.

SVE-10S

TIME	WH VOC ppm	WH VAC in. w.c.	Relative Humidity %RH	Dewpoint deg F	WH AP	
					VELOCITY ft/min	TEMP deg F
10:48	0.1	**	71.7	35.6	**	46.2

Comments: Valve at well head is open 100%. VOC screening conducted utilizing Zefon diaphragm sampling pump.
** VAC and VELOCITY readings not collected due to system being offline.

URS SVE-1

TIME	WH VOC ppm	WH VAC in. w.c.	Relative Humidity %RH	Dewpoint deg F	WH AP	
					VELOCITY ft/min	TEMP deg F
10:55	0.0	**	55.3	45.2	**	52.2

Comments: Valve at well head is open 100%. VOC screening conducted utilizing Zefon diaphragm sampling pump.
** VAC and VELOCITY readings not collected due to system being offline.

URS SVE-6D

TIME	WH VOC ppm	WH VAC in. w.c.	Relative Humidity %RH	Dewpoint deg F	WH AP	
					VELOCITY ft/min	TEMP deg F
11:00	0.0	**	72.2	47.5	**	48.6

Comments: Valve at well head is open 100%. VOC screening conducted utilizing Zefon diaphragm sampling pump.
** VAC and VELOCITY readings not collected due to system being offline.

URS SVE-6S

TIME	WH VOC ppm	WH VAC in. w.c.	Relative Humidity %RH	Dewpoint deg F	WH AP	
					VELOCITY ft/min	TEMP deg F
11:05	0.0	**	74.5	38.2	**	44.1

Comments: Valve at well head is open 100%. VOC screening conducted utilizing Zefon diaphragm sampling pump.
** VAC and VELOCITY readings not collected due to system being offline.

DATE: January 10, 2020 **DAY: Friday** **TECHNICIAN: Sean Igoe**

Weather: Partly Cloudy 32°F

AIR SAMPLING INFORMATION

Was sampling completed today: Yes ***No***

Begin Time	End Time	Canister ID	Sample ID	Canister Size (Liters)	Regulator ID	Start Pressure ("HG)	End Pressure ("HG)

Comments:

DATE: January 10, 2020 **DAY: Friday** **TECHNICIAN: Sean Igoe**

Weather: Partly Cloudy 32°F

EFFLUENT

GWTT System

TIME	TI 203 deg F	FI 203 cf/min	PI 210 in. w.c.	System Effluent ppm	Effluent Stack ppm	Comments:
11:10				N/A	*	Readings taken directly from sample port
11:10				N/A	*	Readings taken from Tedlar air Bag
						*Former "System Effluent" and "Effluent Stack" now referred to "Combined Effluent"

System Notes

Autodialer Call Received	Response Date	System Counter Reading	Alarm Mode	Restart Time

Condensate in K/O Drum: 0 Gallons

Dilution: Open or Closed ##%

Amount Condensate Collected in 55 gallon drums to date: 16 Gallons

Drums currently onsite for condensate collection: 1

Drums in Use: 1

Overall Log Notes/Comments

Blower Test Data for B-201	
Date	**Test Length**

Blower Lubrication Data for B-201		
DATE	**No. Pumps from Grease Gun**	**Was Noise Alleviated?**

During Testing, Filters and KO Drums are checked on Both Systems

One pump from the grease gun delivers approximately 1 milliliter of grease

Blower Test Data for B-202	
Date	**Test Length**

Blower Lubrication Data for B-202		
DATE	**No. Pumps from Grease Gun**	**Was Noise Alleviated?**

During Testing, Filters and KO Drums are checked on Both Systems

One pump from the grease gun delivers approximately 1 milliliter of grease

Legend	
WH: Well Head	INF: Influent
WH VAC: Well Head Vacuum	EFF: Effluent
WH AP: Well Head Anemometer Point (Velocity)	GAC: Granular Activated Carbon
VOC: Volatile Organic Compound concentration	cf/min: Cubic Feet Per Minute (flow rate)
in. w.c.: inches of water column	ft/min: Feet per Minute (velocity)
ppm: parts per million	deg F: degrees Fahrenheit
SVE: Soil Vapor Extraction	AP: Anemometer Point (at manifold)
VMP: Vapor Monitoring Point	

PHOTOGRAPHIC LOG
Date: January 10, 2020
Contract No. D-007621-4
KLIEGMAN BROTHERS OU#1
SITE No. 2-41-031

PHOTO	DATE	TIME	DESCRIPTION	COMMENTS
DSCF2448	1/10/2020	8:56 AM	The meter hours were found to read 10,524.1 hours, indicated that the blower had been in operation for a total 6.9 days since the last O&M event on December 12, 2019.	
DSCF2466	1/10/2020	10:59 AM	View of the trailer which was observed to be parked on top of SVE-7S.	

Photos (1/10/2020)

DSCF2448- The meter hours were found to read 10,524.1 hours, indicated that the blower had been in operation for a total 6.9 days since the last O&M event on December 12, 2019.

DSCF2466- View of the trailer which was observed to be parked on top of SVE-7S.

Warren, Daniel

From: dpriscobuxbaum@preferredenv.com
Sent: Monday, February 3, 2020 1:52 PM
To: picunasae@cdmsmith.com
Cc: lawrence@enviro-asmnt.com; Brianna Scharf; Sarah Saucier; Edward Combs; Michael Otton; Bill Schlageter
Subject: RE: Kliegman Brothers Site Visit 2-3-20

Amy,

As I indicated over the phone earlier this morning, Preferred was on-site today to complete an inspection (relative to the fence installation) with EAR (Jennifer and Don were onsite) and to perform initial troubleshooting of the system. Regarding the fence, the tenant (Mr. Podedworny who owns the bakery) had no issues with the proposed location and indicated they would remove all of the wooden pallets and refuse around the system in the coming weeks prior to the installation of the fence.

Regarding the system, Don from EAR (who has worked on the system in the past) checked the fan blades and claimed they appeared to spin normally (which means seizing due to oxidation is unlikely). He confirmed that there was power going to the system, but that the control knobs were not actually pulling in the contacts for the equipment. Further, when he manually pulled in the contacts, he claimed he could hear an electric hum from the motor, but noted the motor would not engage. Upon investigating the electric meter for the system, we found the display was blank. Don's instinct is that a phase failure may have occurred from electricity entering the site (on ConEd's end) and that while the system has power, it is not receiving all 3 phases necessary to power the motors. Further, he indicated that this could also cause the issue of the contactors not pulling in from the control knobs, if the phase that failed also provides power to the control circuit.

At this time, the next steps should be to contact ConEd and get them to investigate the potential power issue. Once power is restored (or if ConEd does not identify an issue on their end) we can attempt to restart the system again. If that fails, the motor(s) may have been damaged by whatever power fluctuation caused the phase failure, in which case EAR would need to re-mobilize to test the motors once full power is restored.

Please feel free to contact me with any questions or concerns.

Thank you,

Dan

Daniel Prisco-Buxbaum
Technical Director / Hydrogeologist
PREFERRED ENVIRONMENTAL SERVICES
NYS, NYC, PANY/NJ, New York City School Construction Authority- certified WBE
323 Merrick Avenue
North Merrick, New York 11566
mobile: 516 987 2472 office: 516 546 1100 fax: 1 516 213 8186

MONTHLY PROGRESS REPORT
SITE OPERATION & MAINTENANCE

76-01 77TH AVENUE

GLENDALE, NEW YORK

SITE#: 241031

Prepared For:

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

New York State - Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233

Prepared By:

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Environmental Assessment & Remediations
225 Atlantic Avenue
Patchogue, NY 11772

TABLE OF CONTENTS

1.0 INTRODUCTION

This document represents the monthly progress report for the operation and maintenance (O&M) activities at Kliegman Brothers, New York State Department of Environmental Conservation (NYSDEC) Site No. 241031. The site is located at 76-01 77th Avenue in the Town of Glendale, Queens County, New York. The project site is located at the intersection of 77th Avenue and 76th Street and was a former dry-cleaner/laundry warehouse supplier. The site property is currently still operating a commercial facility as a Bakery on the western portion of the building and a Brewery to the east. The surrounding area is primarily residential, mixed with commercial. A site location map is provided as Figure 1.

This report summarizes the October and November 2020 operation and maintenance (O&M) activities conducted at this site to summarize the current Soil Vapor Extraction (SVE) System. A site map of the system location is provided as Figure 2 which was generated by Camp Dresser McKee & Smith (CDM Smith).

1.1 SYSTEM DESCRIPTION: SVE

The SVE system compound is located within the parking lot in the northwest corner of the site property. The current SVE system in operation is comprised of extraction wells from two former SVE Systems: Ground/Water Treatment & Technology (GWTT) and URS Corporation (URS). The SVE system is currently operating four header lines which are connected to the following well pairs Trunk Line 1 (A-103): SVE-7S/SVE-7D, Trunk Line 2 (A-102): SVE-8S/SVE-8D, and Trunk Line 3 (A-101): SVE-9S/SVE-10S. The fourth header line was previously reconfigured and is connected to the former URS system wells: Trunk Line 4: 3 SVE wells (SVE-1, SVE-6S and SVE-6D).

All extraction wells are located in the parking area north of the building (well locations are shown in Figure 2). The treatment system is housed in a hot box which contains the blowers, moisture separator drum, and four main trunk lines. The wells connected to Trunk Line 4 are piped to an outside manifold which allows for independent well readings and controls. The treatment system consists of a two 10.0 horsepower regenerative blower that are connected to the piping manifold. Blower B-201 is currently operational and conveys soil vapor from the nine extraction wells, blower B-202 is functional and on standby as a spare. Currently, after passing through the manifold, moisture separator and blower, the SVE effluent airstream is discharged to the atmosphere. An as-built system diagram previously made available to EAR has been marked up with current notes/configuration and is provided as Appendix A.

For monitoring of system performance, vapor monitoring (VMP) wells are located surrounding and within the property building. VMP well locations are presented on Figure 2.

2.0 O&M ACTIVITIES

2.1 SVE

EAR began O&M activities at this site starting in October 2020 with the first monthly system check conducted on October 28, 2020. Monthly O&M activities include, but are not limited to:

- General inspection and observations of all system components.
- Recording of hour meter readings on blowers.
- Draining the moisture separator tank, as necessary.
- Recordings air flow, vacuum, and temperature readings from 3 trunk lines, 3 independent well lines on outside manifold (4th trunk line), and SVE effluent line.
- Screening of all trunk lines/wells, and effluent for VOCs using a photo-ionization detector (PID).
- Recording vacuum/influence from VMP locations.
- Collection of SVE effluent air sample and individual SVE points, per schedule.
- Routine maintenance of blowers and filters, as needed.

Based on review of prior reporting, the system is operating normally. System uptime for October and November 2020 is estimated at 100%.

2.1.1 O&M ACTIVITIES

- On October 28, 2020 and November 25, 2020, the system was operating upon arrival to and departure from the site.
- System operating parameters were monitored, recorded, and tabulated in a system data log. No adjustments were made to air flow rates at each of the extraction wells. Monitoring data collected during the site visit detailed in this report is provided as Table 1 and submitted separately in spreadsheet format.
- The vacuum blower was inspected for proper operation and any potential maintenance issues.
- The moisture separator tank was inspected, and any collected condensation water discharged to the pavement adjacent to the system enclosure.
- The control panel and electrical distribution panel were found to be working as specified.
- General site conditions were inspected and found to be in working condition. General housekeeping tasks were completed.
- Vacuum/influence monitoring at VMP wells were conducted at VMP-1, 2, 3, 4, 5, 6, and 7. VMP-1, 6, and 7 locations were not recorded during the October 2020 event as wells were inaccessible and/or could not be identified.

3.0 SYSTEM AIR SAMPLING

During the monthly site visit, SVE trunk lines/manifolds and effluent air stream were screened in the field for Total VOCs using a PID. Prior to use, the PID was calibrated using a 100 ppm isobutylene standard and ambient air.

On October 28, 2020 and November 25, 2020, a monthly air sample for laboratory analysis was collected from the SVE effluent air stream. The SVE effluent air samples were submitted to Eurofins TestAmerica Laboratories, Inc. of Knoxville, Tennessee (TAL – Knoxville) for analysis of VOCs via EPA method TO-15 with 10-day turnaround time and Category A deliverables requested. Field screening results for Total VOCs are summarized in Tables 1 and air analytical results are summarized in Table 3.

TABLES

76-01 77th Avenue
Glendale, NY
Site No. 241031

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Soil Vapor Extraction System Data Log

System Evaluation Date			**10/28/2020**	**11/25/2020**
SVE System Status on Arrival			on	on
SVE System Status on Departure			on	on
SVE Blower B-201 Status			on	on
SVE Blower B-201 Hour Meter Readings			130671.00	13738.40
Hour Readings - Time Recorded			10/28/2020 9:00	11/25/2020 9:00
Hours Since Last Site Visit			-	672.00
SVE Blower B-202 Status			off	off
SVE Blower B-202 Hour Meter Readings			1439.50	1439.50
Technician(s)			MF	MF
In-Line Filter Status			ok	ok
Moisture Separator Water Level			empty	empty
Manifold Legs / Wells				
Trunk Line 1 (SVE-7S/7D)	**A-103**	**Vacuum ("WC)**	-12.5	-16.8
		Airflow (SCFM)	140.0	145.0
		PID (PPM)	28.3	38.3
		Valve (% open)	50%	50%
Trunk Line 2 (SVE-8S/8D)	**A-102**	**Vacuum ("WC)**	-13.0	-17.8
		Airflow (SCFM)	100.0	152.0
		PID (PPM)	6.2	6.2
		Valve (% open)	50%	50%
Trunk Line 3 (SVE-9S/10S)	**A-101**	**Vacuum ("WC)**	-11.7	-16.4
		Airflow (SCFM)	90.0	100.0
		PID (PPM)	3.3	4.1
		Valve (% open)	100%	100%
Trunk 4	**URS SVE-1**	**Vacuum ("WC)**	-7.5	-12.9
		Airflow (SCFM)	43.0	84.0
		Temperature (°F)	64.0	66.0
		PID (PPM)	6.5	1.8
		Valve (% open)	100%	100%
	URS SVE-6D	**Vacuum ("WC)**	-7.0	-13.4
		Airflow (SCFM)	14.0	38.0
		Temperature (°F)	64.0	57.0
		PID (PPM)	2.3	*
		Valve (% open)	100%	100%
	URS SVE-6S	**Vacuum ("WC)**	-4.2	-8.8
		Airflow (SCFM)	64.0	81.0
		Temperature (°F)	65.0	61.0
		PID (PPM)	3.7	0.7
		Valve (% open)	50%	50%
Air Filter	**Pre Filter**	**Vacuum ("WC)**	-26.1	-29.5
	Post Filter	**Vacuum ("WC)**	-52.7	-55.6
Discharge				
SVE EFFLUENT		**Airflow (SCFM)**	115.0	225.0
		Temperature (°F)	126.0	122.0
		PID (PPM)	5.9	21.9
Vapor Monitoring Points (VMPs)				
VMP-1		**Vacuum ("WC)**	-	0.0
		PID (PPM)	-	4.6
VMP-2		**Vacuum ("WC)**	0.0	0.0
		PID (PPM)	0.9	1.2
VMP-3		**Vacuum ("WC)**	0.0	0.0
		PID (PPM)	1.7	0.8
VMP-4		**Vacuum ("WC)**	0.0	0.0
		PID (PPM)	0.2	1.8
VMP-5		**Vacuum ("WC)**	0.0	0.0
		PID (PPM)	0.0	0.7
VMP-6		**Vacuum ("WC)**	-	0.0
		PID (PPM)	-	1.1
VMP-7		**Vacuum ("WC)**	-	0.0
		PID (PPM)	-	0.8

Notes:
- Reading not collected
*Water detected in lines

76-01 77th Avenue
Glendale, NY
Site No. 241031

Soil Vapor Extraction System Maintenance Log

Date	Purpose	SVE Operation upon arrival	SVE Operation upon departure	SVE Blower B-201 in operation	SVE Blower B-202 in operation	Air Sampling conducted	Checked SVE Filter	Emptied Moisture Separator Tank	Approximate volume in knockout tank (gal)	Notes
10/28/19	M	X	X	X		X	X		0	Filter was clean upon inspection.
11/08/19	M	X	X	X		X	X			Filter was clean upon inspection.

M - Monthly O&M Visit
R - Modifications/Repair/Troubleshooting/Emergency Response
O - Other

76-01 77th Avenue
Glendale, NY
Site No. 241031

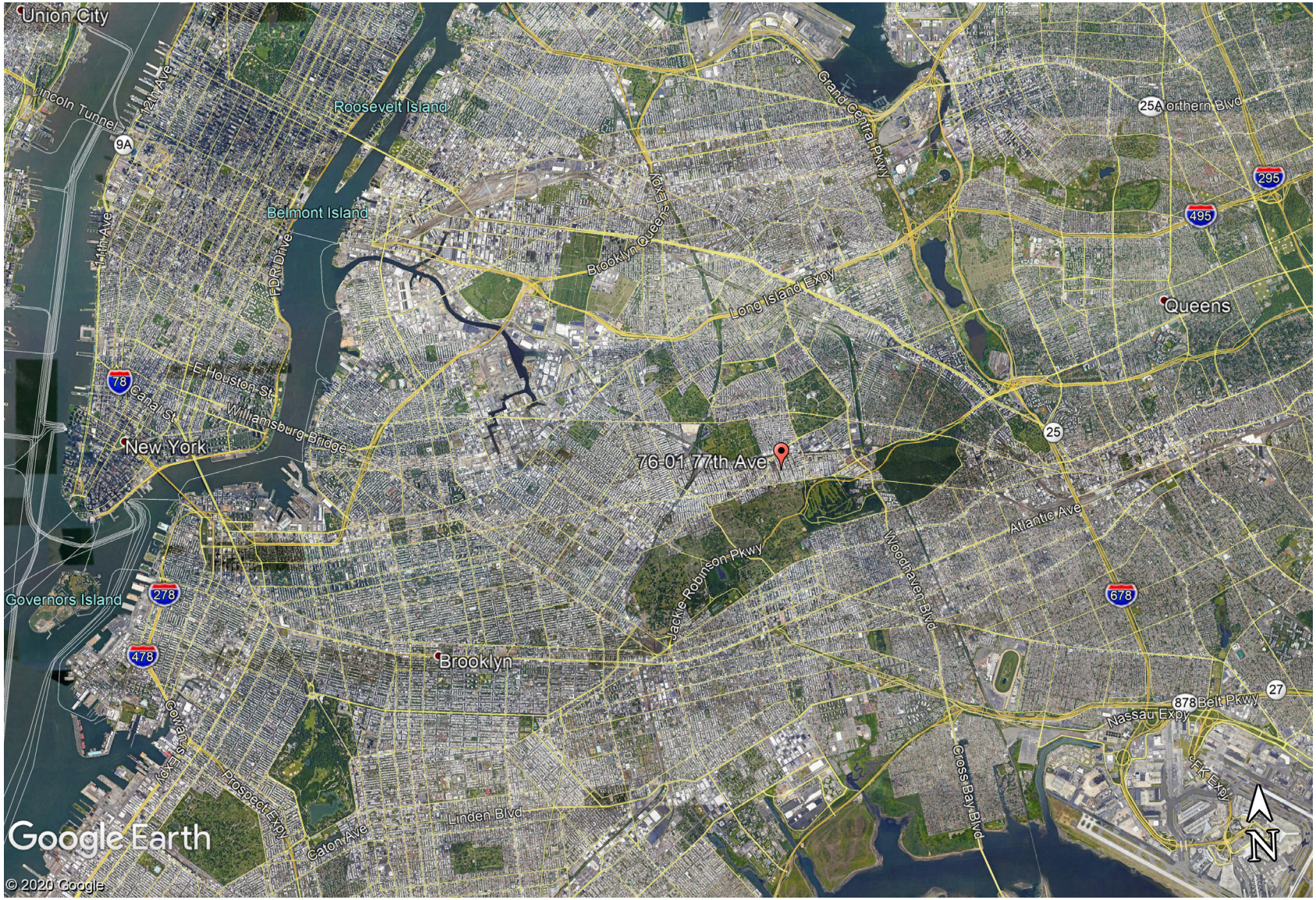
Air Samples Analyzed by EPA Method TO-15 (µg/m^3)

Sample Location	Date Collected	1,1 Dichloroethene	1,2,4 Trimethylbenzene	1,3 Dichlorobenzene	1,3,5 Trimethylbenzene	2,2,4-Trimethylpentane	Benzene	Carbon Tetrachloride	Chloromethane	cis-1,2-Dichloroethene	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m + p Xylene	Methyl Ethyl Ketone	o-Xylene	Styrene	Tetrachloroethene	Toluene	Total BTEX	Trichloroethylene	Trichlorofluoromethane
SVE_EFFLUENT	10/28/2020	<0.16	**3.3**	**14**	**1**	**1.7**	**1.5**	**0.55**	**0.97**	**0.18**	**0.76**	**2**	**56**	**1.9**	**6.9**	**460**	**2.5**	**0.66**	**30**	**8.6**	**21**	**0.65**	**1.4**
SVE_EFFLUENT	11/25/2020	**320**	<780	<950	<780	<1,800	<500	<400	<810	**600**	<1,400	<780	<7,400	<690	<690	<1,900	<690	<670	**140,000**	<890	<3,460	**1,400**	<890

Laboratory Analysis by Eurofins TestAmerica
The chemicals listed below were reported below the LRL:

1,1 Dichloroethane	1,4-Dioxane	Dibromochloromethane	trans-1,2-Dichloroethene
1,1,1 Trichloroethane	4-Methyl-2-Pentanone	Freon 113	Vinyl Chloride
1,1,2 Trichloroethane	Benzyl Chloride	Freon 114	
1,1,2,2 Tetrachloroethane	Bromodichloromethane	Hexachlorobutadiene	
1,2 Dibromoethane	Bromoform	Hexane	
1,2 Dichlorobenzene	Bromomethane	Methylene Chloride	
1,2 Dichloroethane	c 1,3 Dichloropropene	MTBE	
1,2 Dichloropropane	Chlorobenzene	Naphthalene	
1,2,4 Trichlorobenzene	Chloroethane	t 1,3 Dichloropropene	
1,4 Dichlorobenzene	Chloroform	Tert-Butyl Alcohol	

FIGURES



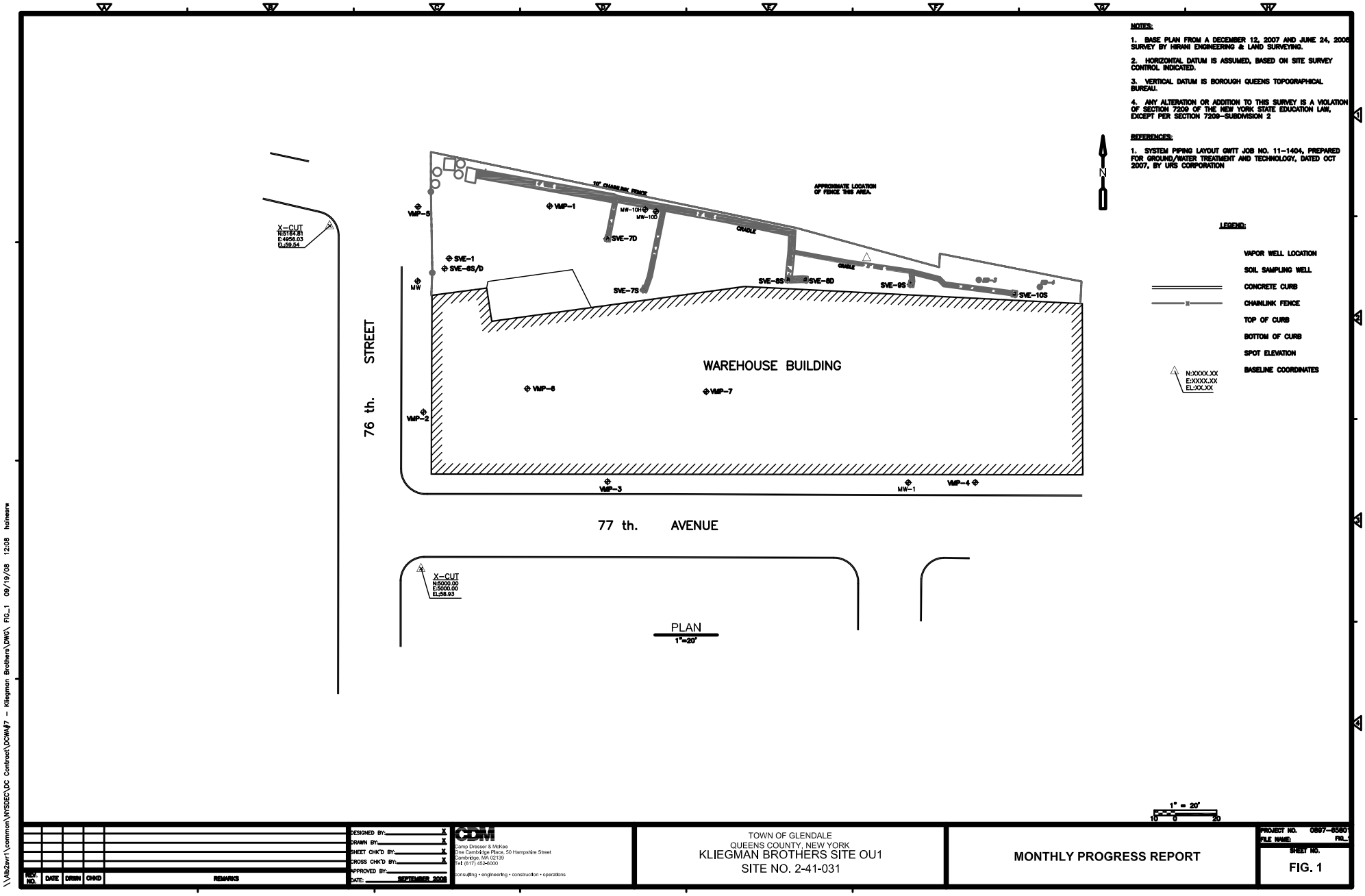
ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Figure 1
Site Location Map

(Map not to scale)

Kliegman Brothers
76-01 77th Avenue
Glendale, NY
NYSDEC Site #241031

Figure 2

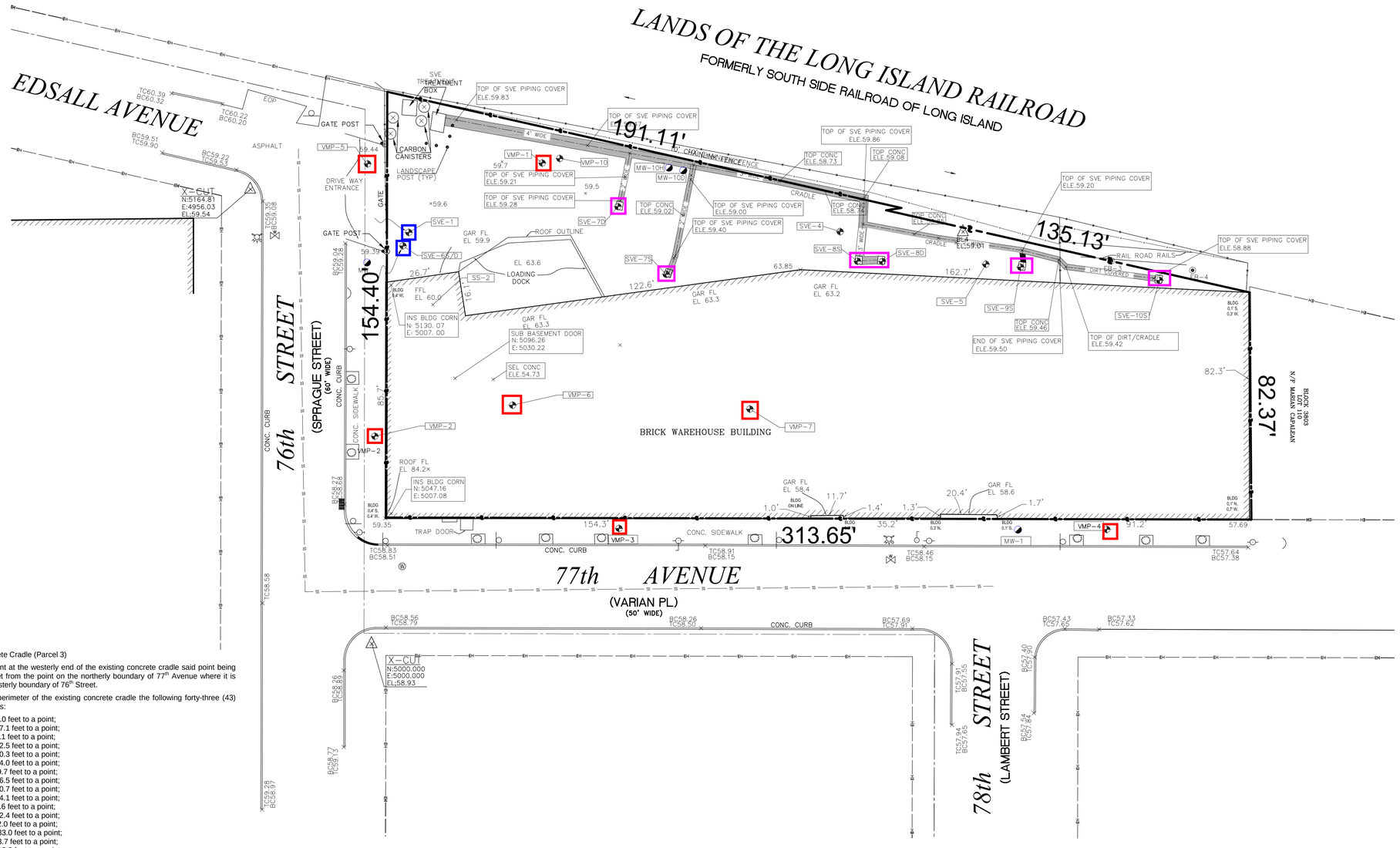

NOTES:
1. BASE PLAN FROM A DECEMBER 12, 2007 AND JUNE 24, 2008 SURVEY BY HIRANI ENGINEERING & LAND SURVEYING.
2. HORIZONTAL DATUM IS ASSUMED, BASED ON SITE SURVEY CONTROL INDICATED.
3. VERTICAL DATUM IS BOROUGH QUEENS TOPOGRAPHICAL BUREAU.
4. ANY ALTERATION OR ADDITION TO THIS SURVEY IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW, EXCEPT PER SECTION 7209-SUBDIVISION 2
REFERENCES:
1. SYSTEM PIPING LAYOUT GWTT JOB NO. 11-1404, PREPARED FOR GROUND/WATER TREATMENT AND TECHNOLOGY, DATED OCT 2007, BY URS CORPORATION
LEGEND:
VAPOR WELL LOCATION
SOIL SAMPLING WELL
CONCRETE CURB
CHAINLINK FENCE
TOP OF CURB
BOTTOM OF CURB
SPOT ELEVATION
BASELINE COORDINATES
N:XXXX.XX
E:XXXX.XX
EL:XX.XX
APPROXIMATE LOCATION OF FENCE THIS AREA.
WAREHOUSE BUILDING
76 th. STREET
77 th. AVENUE
X-CUT
N:5164.81
E:4956.03
EL:59.54
X-CUT
N:5000.00
E:5000.00
EL:58.93
VMP-1
VMP-2
VMP-3
VMP-4
VMP-5
VMP-6
VMP-7
MW-1
MW-10H
MW-10D
SVE-1
SVE-6S/D
SVE-7D
SVE-7S
SVE-8S
SVE-8D
SVE-9S
SVE-10S
PLAN
1"=20'
1" = 20'
10 0 20
DESIGNED BY:
DRAWN BY:
SHEET CHK'D BY:
CROSS CHK'D BY:
APPROVED BY:
DATE: SEPTEMBER 2008
REV. NO. DATE DRWN CHKD REMARKS
CDM
Camp Dresser & McKee
One Cambridge Place, 50 Hampshire Street
Cambridge, MA 02139
Tel (617) 452-6000
consulting • engineering • construction • operations
TOWN OF GLENDALE
QUEENS COUNTY, NEW YORK
KLIEGMAN BROTHERS SITE OU1
SITE NO. 2-41-031
MONTHLY PROGRESS REPORT
PROJECT NO. 0807-8560
FILE NAME: FIG_1
SHEET NO.
FIG. 1
\\Alb2wr1\common\NYSDEC\DC Contract\DCW#7 - Kliegman Brothers\DWG\ FIG_1 09/19/08 12:08 holnesrw

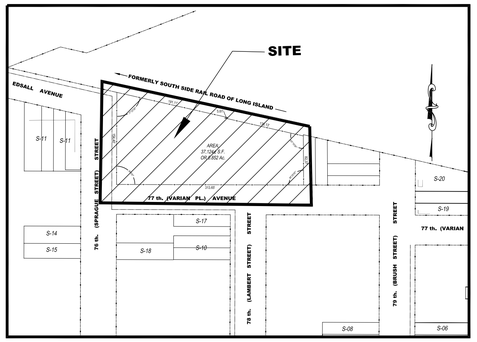
76-01 77th Avenue
Glendale, NY
Site No. 241031

Soil Vapor Extraction System Data Log

System Evaluation Date			**10/28/2020**	**11/25/2020**	**12/14/2020**			
SVE System Status on Arrival			on	on	on			
SVE System Status on Departure			on	on	on			
SVE Blower B-201 Status			on	on	on			
SVE Blower B-201 Hour Meter Readings			130671.00	13738.40	14194.50			
Hour Readings - Time Recorded			10/28/2020 9:00	11/25/2020 9:00	12/14/2020 9:00			
Hours Since Last Site Visit			-	672.00	456.00			
SVE Blower B-202 Status			off	off	off			
SVE Blower B-202 Hour Meter Readings			1439.50	1439.50	1439.50			
Technician(s)			MF	MF	MF			
In-Line Filter Status			ok	ok	ok			
Moisture Separator Water Level			empty	empty	15-20 gal	**@ wellhead**	**@ wellhead**	**@ wellhead**
Manifold Legs / Wells						**SVE Well**	**Vacuum ("WC)**	**Valve (% open)**
Trunk Line 1 (SVE-7S/7D)	**A-103**	**Vacuum ("WC)**	-12.5	-16.8	-17.4	SVE-7S	-12.4	50.0
		Airflow (SCFM)	140.0	145.0	85.0	SVE-7D	-0.68	100.0
		PID (PPM)	28.3	38.3	8.2			
		Valve (% open)	50%	50%	50%			
Trunk Line 2 (SVE-8S/8D)	**A-102**	**Vacuum ("WC)**	-13.0	-17.8	-17.9	SVE-8S	-13.2	100.0
		Airflow (SCFM)	100.0	152.0	140.0	SVE-8D	-2.07	100.0
		PID (PPM)	6.2	6.2	3.3			
		Valve (% open)	50%	50%	50%			
Trunk Line 3 (SVE-9S/10S)	**A-101**	**Vacuum ("WC)**	-11.7	-16.4	-16.8	SVE-9S	-36.2	100.0
		Airflow (SCFM)	90.0	100.0	105.0	SVE-10S	-3.87	100.0
		PID (PPM)	3.3	4.1	1.4			
		Valve (% open)	100%	100%	100%			
Trunk 4	**URS SVE-1**	**Vacuum ("WC)**	-7.5	-12.9	-13.6			
		Airflow (SCFM)	43.0	84.0	56.0			
		Temperature (°F)	64.0	66.0	-			
		PID (PPM)	6.5	1.8	1.1			
		Valve (% open)	100%	100%	100%			
	URS SVE-6D	**Vacuum ("WC)**	-7.0	-13.4	-15.8			
		Airflow (SCFM)	14.0	38.0	68.0			
		Temperature (°F)	64.0	57.0	-			
		PID (PPM)	2.3	*	0.0			
		Valve (% open)	100%	100%	100%			
	URS SVE-6S	**Vacuum ("WC)**	-4.2	-8.8	-8.1	**opened to 100% & vac reading was >10"WC prior to departure**		
		Airflow (SCFM)	64.0	81.0	*			
		Temperature (°F)	65.0	61.0	-			
		PID (PPM)	3.7	0.7	*			
		Valve (% open)	50%	50%	50%			
Air Filter	**Pre Filter**	**Vacuum ("WC)**	-26.1	-29.5	-30.4			
	Post Filter	**Vacuum ("WC)**	-52.7	-55.6	-55.5			
Discharge								
SVE EFFLUENT		**Airflow (SCFM)**	115.0	225.0	225.0			
		Temperature (°F)	126.0	122.0	116.0			
		PID (PPM)	5.9	21.9	12.6			
Vapor Monitoring Points (VMPs)						**TWD @install**	**TWD 12/14/20**	**Notes from 12/14/20**
VMP-1		**Vacuum ("WC)**	-	0.0	0.0	27.0	-	Covered by car, could not get TWD.
		PID (PPM)	-	4.6	0.0	feet	feet	
VMP-2		**Vacuum ("WC)**	0.0	0.0	0.0	30.0	30.1	
		PID (PPM)	0.9	1.2	0.0	feet	feet	
VMP-3		**Vacuum ("WC)**	0.0	0.0	0.0	30.0	30.0	
		PID (PPM)	1.7	0.8	0.3	feet	feet	
VMP-4		**Vacuum ("WC)**	0.0	0.0	0.0	11.0	10.1	Weeds growing into/out of. Blockage during TWD.
		PID (PPM)	0.2	1.8	0.0	feet	feet	
VMP-5		**Vacuum ("WC)**	0.0	0.0	-0.6	24.0	2.0	Weeds growing into/out of. Blockage during TWD.
		PID (PPM)	0.0	0.7	0.4	feet	feet	
VMP-6		**Vacuum ("WC)**	-	0.0	0.0	5	-	Could not open to access TWD
		PID (PPM)	-	1.1	0.2	feet	feet	
VMP-7		**Vacuum ("WC)**	-	0.0	0.0	5	-	Could not open to access TWD
		PID (PPM)	-	0.8	1.4	feet	feet	

Notes:
- Reading not collected
*Water detected in lines





VICINITY MAP

LEGEND:

INV.=FWD	FILLED WITH DIRT		DROP CURB
INV.=N/A	NOT ACCESSIBLE		CATCH BASIN
MH	UNKNOWN MANHOLE	S	SANITARY MANHOLE
E	ELECTRIC MANHOLE		FIRE HYDRANT
	GAS VALVE	X	SPOT ELEVATION
W	WATER VALVE	W	WATER MANHOLE
S S S	SANITARY LINE		UTILITY POLE
HB	HIGHWAY BOUNDARY		GUY WIRE
	PROPERTY LINE	X X	CHAIN LINK FENCE
F.F. XXX.XX	FINISH FLOOR ELEV.	BL	BASE LINE
TCXXX.XX / BCXXX.XX	TOP OF CURB / BOTTOM OF CURB		CONCRETE WALL
× 17.875	SPOT ELEVATION		CONCRETE CURB
	GUARD RAIL		UTILITY POLE WITH LIGHT
	SIGN	S	SEWER MANHOLE
T	TRAFFIC SIGNAL BOX	0.127 mm	TREE
	UTILITY POLE		POLE WITH SIGN
	VAPOR WELL LOCATION		MONUMENT
	MONITORING WELL		DROP CURB
			SOIL SAMPLING WELL

Description of Concrete Cradle (Parcel 3)

BEGINNING at a point at the westerly end of the existing concrete cradle said point being N. 8°26'E. 143.7 feet from the point on the northerly boundary of 77th Avenue where it is intersected by the easterly boundary of 76th Street.

THENCE along the perimeter of the existing concrete cradle the following forty-three (43) courses and distances:

1. N. 07°53'E. 4.0 feet to a point;
2. S. 79°47'E. 67.1 feet to a point;
3. S. 65°28'E. 2.1 feet to a point;
4. S. 79°32'E. 22.5 feet to a point;
5. S. 79°32'E. 30.3 feet to a point;
6. S. 78°11'E. 34.0 feet to a point;
7. S. 02°35'W. 9.7 feet to a point;
8. S. 79°31'E. 26.5 feet to a point;
9. S. 81°41'E. 30.7 feet to a point;
10. S. 75°44'E. 14.1 feet to a point;
11. S. 44°38'E. 3.6 feet to a point;
12. S. 82°28'E. 32.4 feet to a point;
13. S. 07°32'W. 2.0 feet to a point;
14. N. 82°28'W. 33.0 feet to a point;
15. N. 44°38'W. 3.7 feet to a point;
16. N. 75°44'W. 12.0 feet to a point;
17. S. 4°37'E. 3.2 feet to a point;
18. N. 80°47'W. 2.0 feet to a point;
19. N. 05°10'W. 3.3 feet to a point;
20. N. 81°46'W. 29.9 feet to a point;
21. N. 79°25'W. 26.3 feet to a point;
22. S. 06°03'W. 9.6 feet to a point;
23. S. 03°59'E. 0.9 feet to a point;
24. N. 88°01'E. 5.1 feet to a point;
25. S. 5°2'W. 2.9 feet to a point;
26. S. 87°53'W. 5.6 feet to a point;
27. N. 03°27'E. 2.9 feet to a point;
28. N. 84°32'W. 2.4 feet to a point;
29. N. 3°3'W. 0.9 feet to a point;
30. N. 06°03'E. 10.9 feet to a point;
31. N. 02°34'E. 7.9 feet to a point;
32. N. 78°11'W. 31.4 feet to a point;
33. N. 79°32'W. 29.3 feet to a point;
34. S. 11°30'W. 32.3 feet to a point;
35. S. 20°34'W. 8.0 feet to a point;
36. N. 83°43'W. 1.9 feet to a point;
37. N. 19°27'E. 8.3 feet to a point;
38. N. 11°29'E. 32.1 feet to a point;
39. N. 79°32'W. 21.5 feet to a point;
40. S. 11°7'W. 16.5 feet to a point;
41. N. 79°45'W. 2.0 feet to a point;
42. N. 11°7'E. 16.0 feet to a point; and
43. N. 79°47'W. 66.9 feet to the point or place of beginning.

Containing 945± s.f. or 0.022 Ac. more or less.

Description of Existing Warehouse Building (Parcel 1)

BEGINNING at a point at the southwesterly corner of the existing building, said point being S. 45°22'W. 0.6 feet from the point on the northerly boundary of 77th Avenue where it is intersected by the easterly boundary of 76th Street.

THENCE along the perimeter of the existing building the following fifteen (15) courses and distances:

1. N. 00°07'E. 85.7 feet to a point;
2. N. 81°45'E. 26.7 feet to a point;
3. S. 8°55'E. 16.1 feet to a point;
4. N. 82°10'E. 122.6 feet to a point;
5. S. 87°6'E. 162.7 feet to a point;
6. S. 0°12'E. 82.3 feet to a point;
7. N. 89°58'W. 91.2 feet to a point;
8. N. 15°18'W. 1.7 feet to a point;
9. N. 89°28'W. 20.4 feet to a point;
10. S. 01°55'E. 1.3 feet to a point;
11. S. 89°54'W. 35.1 feet to a point;
12. N. 10°30'W. 1.0 feet to a point;
13. S. 89°13'W. 11.7 feet to a point;
14. S. 46°15'W. 1.5 feet to a point; and
15. S. 90°0'W. 153.2 feet to the point or place of beginning

Containing 26456± s.f. or 0.607 ac. more or less

Description of Loading Dock (Parcel 2)

BEGINNING at a point on the northerly edge of the existing building where it is intersected by the existing loading dock said point being N. 16°23'E. 92.9 feet from the point on the northerly boundary of 77th Avenue where it is intersected by the easterly boundary of 76th Street.

THENCE along the perimeter of the existing loading dock the following four (4) courses and distances:

1. N. 10°24'E. 3.3 feet to a point;
2. N. 67°35'E. 18.8 feet to a point;
3. N. 86°41'E. 22.7 feet to a point; and
4. S. 28°55'E. 23.8 feet to a point on the existing building.

THENCE along the last mentioned boundary the following two (2) courses and distances:

1. S. 82°10'W. 50.1 feet to a point; and
2. N. 8°55'W. 16.1 feet to the point or place of beginning.

Containing 1026± s.f. or 0.024 Ac. more or less.

C. RICHARD MORAVEC, L.S. NYS LIC. #49917 DATE

NO.	DATE	DESCRIPTION	APPR'D.
3	12/22/2010	REVISED PER NYSDEC COMMENTS	E.A.B.
2	12/17/2010	REVISED PER NYSDEC COMMENTS	E.A.B.
1	10/29/2010	REVISED PER NYSDEC COMMENTS	E.A.B.

REVISIONS

DRAWN BY: IGK

CHECK BY: E.A.B.

SCALE: *1= 20'*

HIRANI ENGINEERING & LAND SURVEYING, P.C.
30 JERICHO EXECUTIVE PLAZA, SUITE 200C
JERICHO, NY 11753
T (516) 248-1010 F (516) 248-9018
Hirani Group

OWNER: ARIMAX REALTY, LLC

CLIENT: CAMP DRESSER & McKEE

PROJECT: KLIEGMAN BROTHERS OPERABLE UNIT 1
NYSDEC SITE 2-41-031
76-01 77th Ave., Glendale, NY

SUBJECT: ALTA/ACSM LAND TITLE SURVEY (TOPOGRAPHY)

DATE DRAWN: 01/27/2009
DATE SURVEYED: 11/19/2008
JOB #: SU 08-2423A
SHEET NO: 2 OF 2

APPENDIX A

EAR Note: No autodialer was observed during November 2016 inspection.

(NOTE 4) AUTO DIALER

CONNECT TO EXTRACTION HEADER FROM EXISTING SVE SYSTEM

BV100 3"S80PVC

LIMITS OF WELLBOX EXCLOSURE (TYP. FOR SIX WELLS)

FLOW & TEMPERATURE (NOTE 1) PI 1 AP 1

SAMPLE PORT (TYP. OF SIX WELLS)

PI 2 AP 2

BV101 FI 101 AP 101 3"S80PVC

BV104 4"S80PVC

MOISTURE SEPARATOR T-101

VRV105 BV105 4"S80PVC

LAH 101 LSH 101 LI 101 B-201 AND 202 OFF

HS 101 HOA

GV105 0.75"S80PVC

DRAIN PUMP FLEXIBLE HOSE TO 55 GALLON DRUMS FOR OFFSITE DISPOSAL

4"S80PVC

EXTRACTION WELL SVE-7S

EXTRACTION WELL SVE-7D

BV102 FI 102 AP 102 3"S80PVC

PI 3 AP 3

PI 4 AP 4

EXTRACTION WELL SVE-8S

EXTRACTION WELL SVE-8D

BV103 FI 103 AP 103 3"S80PVC

PI 5 AP 5

PI 6 AP 6

EXTRACTION WELL SVE-9S

EXTRACTION WELL SVE-10S

SYPASS AIR GV106

HS 201 HOA

PI 201 GV201 2.5"S80PVC PI 202 FILTER/ SILENCER

BLOWER B-201

PI 203 SILENCER GV201 2.5"S40BLK CV201 FI 201 TI 201 3"S80CPVC

HS 202 HOA

PI 204 GV202 2.5"S80PVC PI 205 FILTER/ SILENCER

BLOWER B-202

PI 206 SILENCER GV202 2.5"S40BLK CV202 FI 202 TI 202 3"S80CPVC

HS 102 HOA

TO 55 GALLON DRUMS FOR OFFSITE DISPOSAL

SPARE DRAIN PUMP AND HOSE FOR EXISTING SYSTEM

CONNECT TO DISCHARGE HEADER FROM EXISTING SVE SYSTEM

CV204 4"S80CPVC BV204

TO EXISTING VAPOR PHASE CARBON (NOTE 3)

SAMPLE PORT BV204

PI 210 FI 203 TI 203 4"S80CPVC

SAMPLE PORTS

DISCHARGE TO ATMOSPHERE

VPC 301 VPC 302

VAPOR PHASE CARBON

EAR Note: During November 2016 site inspection noted no carbon vessels on-site; direct discharge to atmosphere.

LIMITS OF NEW ENCLOSURE PROVIDED BY PLC

SOIL VAPOR EXTRACTION (SVE) SYSTEM

REVISIONS

NO	DATE	BY	COMMENTS
0			
1			
2			
3			
4			

DESIGNED BY: DMc
DRAWN BY: RAL
CHECKED BY: CWP
PROJ. ENGR. DMc

URS Corporation
Group Consultants
77 Goodell Street, Buffalo, New York 14203
(716)856-5636 - (716)856-2545 fax

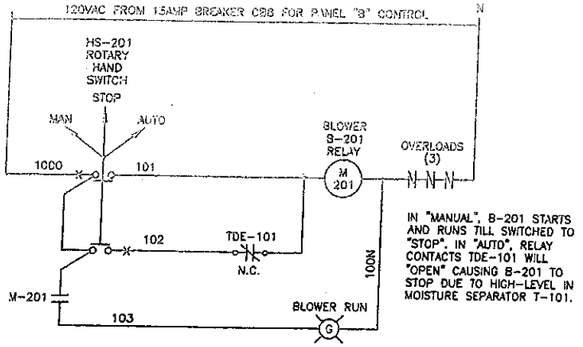
JOB No. 11171964.00000

NYSDEC SITE 2-41-031
GLENDALE, QUEENS
KLIEGMAN BROTHERS SITE
OPERABLE UNIT NO. 1
GLENDALE, QUEENS NEW YORK

CONTRACT D006547
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
625 BROADWAY, ALBANY, NEW YORK

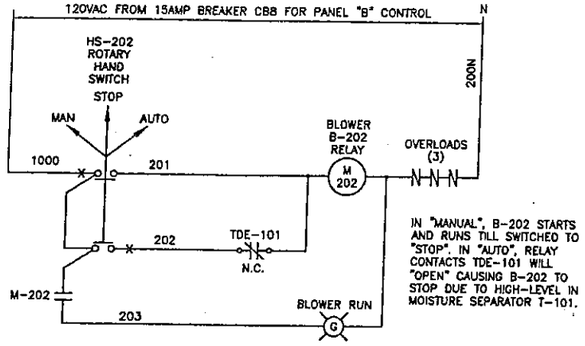
PRODUCT LEVEL CONTROL, INC.
ENVIRONMENTAL EQUIPMENT & CONTROLS
11929 Portland Ave S.
Burnsville, MN 55377
Phone: 952-707-9101
Fax: 952-707-1075

Customer	GWTT
Site Reference	KLIEGMAN BROTHERS UNIT 1
	GLENDALE, QUEENS
Cust. No.	PLC Job No. 07-050
Tolerance NA	Rev. 0
Drawing No.	PID
Sheet No. Sheet 1 of 1	Scale NA
Drawn By BGG	Drawn Date 9-21-07
Title	PID



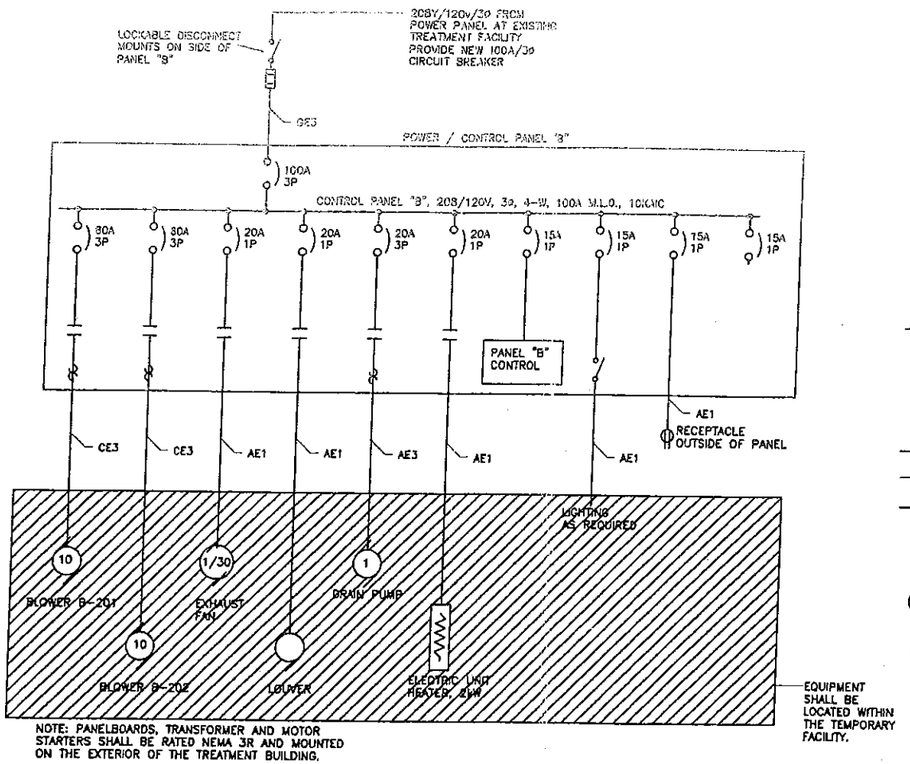
BLOWER B-201 CONTROL CIRCUITS

NOT TO SCALE



BLOWER B-202 CONTROL CIRCUITS

NOT TO SCALE



NOTE: PANELBOARDS, TRANSFORMER AND MOTOR STARTERS SHALL BE RATED NEMA 3R AND MOUNTED ON THE EXTERIOR OF THE TREATMENT BUILDING.

SINGLE LINE DIAGRAM

NO SCALE

LEGEND

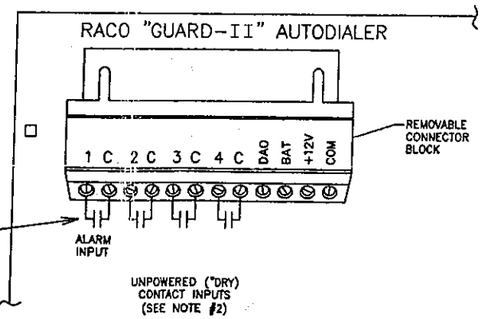
- ELECTRIC METER
- TRANSFORMER
- GROUND
- CIRCUIT BREAKER
- NODE
- PILOT LIGHT (R- RED)
- SWITCH/DISCONNECT
- FUSE
- CONTACT, N.O.
- CONTACT, N.C.
- COIL, MOTOR STARTER
- THERMAL MOTOR OVERLOAD
- MOTOR LOAD, # INDICATES H.P.
- FIELD TERMINAL BLOCKS

FEEDER SCHEDULE

	OVERCURRENT DEVICE RATING	CONDUCTORS +NEUTRAL **75°C	EGC (E)	EGC (THWN) (S)	CONDUIT 1 PHASE (1)	CONDUIT 1 PHASE (3)
A	20	#12	#12	-	1/2"	1/2"
B	30	#10	#10	-	1/2"	1/2"
C	50	#8	#10	-	3/4"	1"
D	70	#6	#8	-	1"	1"
E	80	#4	#8	-	1 1/2	1 1/2"
F	90	#4	#8	-	1 1/2"	1 1/2"
G	100	#2	#8	#8	1 1/2"	1 1/2
H	125	#2	#6	#8	1 1/2"	1 1/2
I	150	#1/0	#6	#6	1 1/2"	2"
J	175	#2/0	#6	#4	2"	2"
K	200	#3/0	#6	#4	2"	2 1/2"
L	225	#3/0	#4	#4	2"	2 1/2"

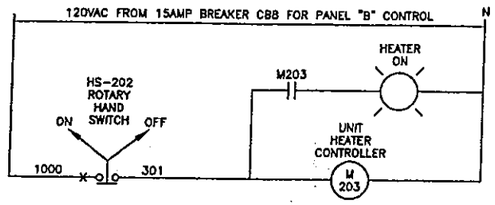
NOTES:

1. MOUNT RED ALARM BEACON IN A CONSPICUOUS LOCATION OUTSIDE TRAILER.
2. THE INPUT SIGNALS TO THE AUTODIALER CAN BE "DRY" CONTACTS, ANALOG, OR DIGITAL LOGIC. "DRY" CONTACTS ARE SHOWN IN WIRING SCHEMATIC. THE WIRING CONNECTIONS SHOWN ARE FOR A RACO "GUARD-II" AUTODIALER.
3. PURCHASE AUTODIALER WITH A.C. TO D.C. TRANSFORMER OR D.C. POWER SUPPLY.



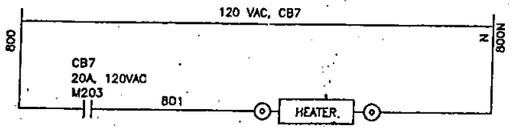
AUTODIALER DETAIL (EXISTING)

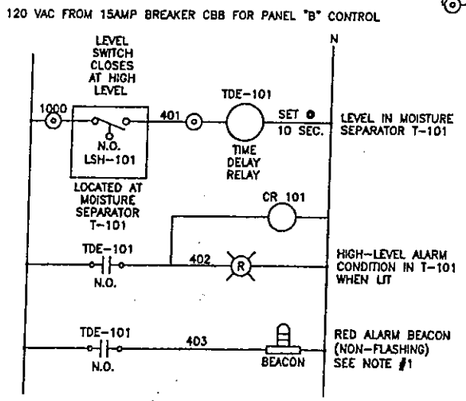
NOT TO SCALE



ELECTRIC UNIT HEATER

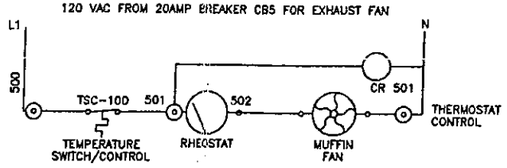
NOT TO SCALE

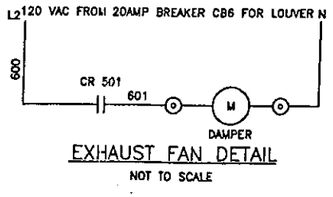




CONTROL PANEL "B" ALARM CIRCUITS

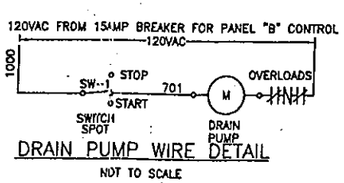
NOT TO SCALE





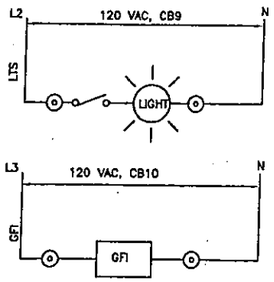
EXHAUST FAN DETAIL

NOT TO SCALE



DRAIN PUMP WIRE DETAIL

NOT TO SCALE



REVISIONS

Rev	Date	By	Description
0			
1			
2			
3			
4			

DESIGNED BY:	DML
DRAWN BY:	DML
CHECKED BY:	CWP
PROJ. ENGR.	DMC

URS Corporation
Group Consultants
77 Goodell Street, Buffalo, New York 14203
(716)856-5636 - (716)856-2545 fax

JOB No. 11171964.00000

NYSDEC SITE 2-41-031
GLENDALE, QUEENS

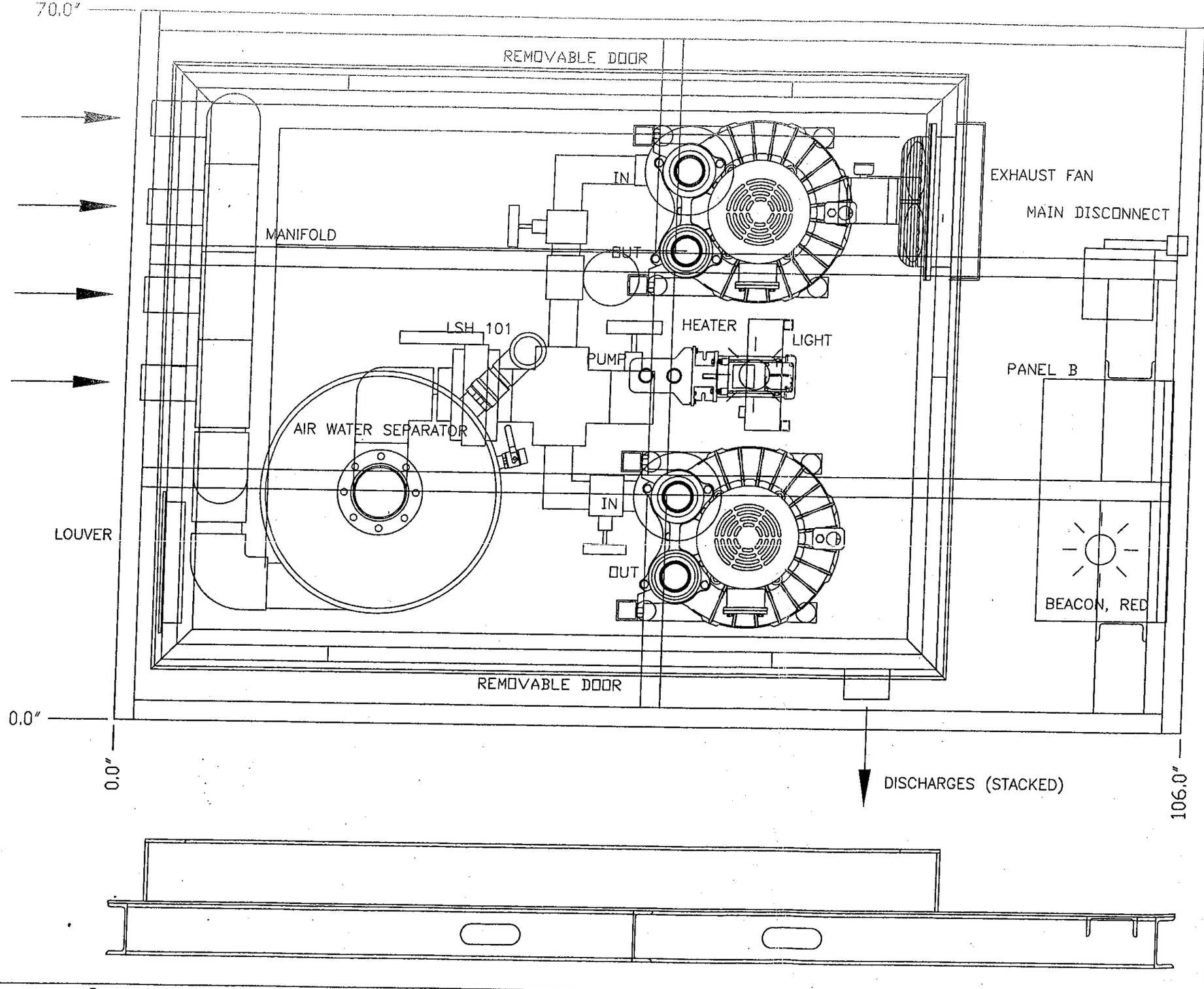
KLIEGMAN BROTHERS SITE
OPERABLE UNIT NO. 1

GLENDALE, QUEENS NEW YORK

CONTRACT D006547
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
625 BROADWAY, ALBANY, NEW YORK

PRODUCT LEVEL CONTROL, INC.
ENVIRONMENTAL EQUIPMENT & CONTROLS
11929 Portland Ave S.
Burnsville, MN 55377
Phone: 952-707-9101
Fax: 952-707-1075

Customer	GWTT
Site Reference	KLIEGMAN BROTHERS UNIT 1
	GLENDALE, QUEENS
Cust. No.	PLC Job No. 07-050
Tolerance NA	Rev. 0
Drawing No.	ELECTRICAL SCHEMATICS
Sheet No.	Sheet 1 of 1
Scale	NA
Drawn By	BGG
Drawn Date	9-26-07
Title	Electrical Schematics



REVISIONS			
Rev	Date	By	Description
3			
1			
2			
3			
4			

NOTES
-PLACE VIBRATION DAMPENERS UNDER BLOWERS
-INSTALL $\frac{1}{4}$" ISOLATION VALVES AT ALL PIs
-INSTALL EQUIPMENT TO ALLOW FOR REMOVAL OF HOTBOX ENCLOSURE
-INSTALL HOTBOX ON 6" HIGH CURB FROM SKID
-ALLOW FOR POSSIBLE INSTALLATION OF ACOUSTIC HOODS ON EXHAUST FAN AND PASSIVE VENT
-HEATER AND LIGHT MOUNTED TO FLOOR BRACKET
-BOLT ALL MOUNTING BRACKETS TO FLOOR TO ALLOW FOR EASY REMOVAL
--VERIFY ADEQUATE MAINTENANCE CLEARANCES (GREASE)
--MAXIMIZE MANIFOLD HEADER HEIGHT (MANIFOLD HEADER IS HIGHER THAN AWS INLET)
--NOISE LIMITATION: 70 dBA AT 3' FROM ENCLOSURE
--TAKE NOISE READINGS AT PLC
--NON CLASSIFIED SYSTEM
--USE RIGID CONDUIT

PRODUCT LEVEL CONTROL, INC.
ENVIRONMENTAL EQUIPMENT & CONTROLS
11929 Portland Ave S.
Burnsville, MN 55377
Phone: 952-707-9101
Fax: 952-707-1075

Customer	GWTT
Site Reference	KLIEGMAN BROTHERS UNIT 1
	GLENDALE, QUEENS
Cust. No.	PLC Job No. 07-050
Tolerance ±4'	Rev. 0
Drawing No.	Plan
Sheet No.	Sheet 1 of 1
Scale	1:10
Drawn By	BGG
Drawn Date	9-26-07
Title	Plan

MONTHLY PROGRESS REPORT
SITE OPERATION & MAINTENANCE

76-01 77TH AVENUE

GLENDALE, NEW YORK

SITE#: 241031

Prepared For:

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

New York State - Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233

Prepared By:

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Environmental Assessment & Remediations
225 Atlantic Avenue
Patchogue, NY 11772

TABLE OF CONTENTS

1.0 INTRODUCTION

This document represents the monthly progress report for the operation and maintenance (O&M) activities at Kliegman Brothers, New York State Department of Environmental Conservation (NYSDEC) Site No. 241031. The site is located at 76-01 77th Avenue in the Town of Glendale, Queens County, New York. The project site is located at the intersection of 77th Avenue and 76th Street and was a former dry-cleaner/laundry warehouse supplier. The site property is currently still operating a commercial facility as a Bakery on the western portion of the building and a Brewery to the east. The surrounding area is primarily residential, mixed with commercial. A site location map is provided as Figure 1.

This report summarizes the December 2020 operation and maintenance (O&M) activities of the Soil Vapor Extraction (SVE) System at this site. A site map of the system location is provided as Figure 2 which was generated by Camp Dresser McKee & Smith (CDM Smith).

1.1 SYSTEM DESCRIPTION: SVE

The SVE system compound is located within the parking lot in the northwest corner of the site property. The current SVE system in operation is comprised of extraction wells from two former SVE Systems: Ground/Water Treatment & Technology (GWTT) and URS Corporation (URS). The SVE system is currently operating four header lines which are connected to the following well pairs Trunk Line 1 (A-103): SVE-7S/SVE-7D, Trunk Line 2 (A-102): SVE-8S/SVE-8D, and Trunk Line 3 (A-101): SVE-9S/SVE-10S. The fourth header line was previously reconfigured and is connected to the former URS system wells: Trunk Line 4: 3 SVE wells (SVE-1, SVE-6S and SVE-6D).

All extraction wells are located in the parking area north of the building (well locations are shown in Figure 2). The treatment system is housed in a hot box which contains the blowers, moisture separator drum, and four main trunk lines. The wells connected to Trunk Line 4 are piped to an outside manifold which allows for independent well readings and controls. The treatment system consists of two 10.0 horsepower regenerative blower that are connected to the piping manifold. Blower B-201 is currently operational and conveys soil vapor from the nine extraction wells, blower B-202 is functional and on standby as a spare. Currently, after passing through the manifold, moisture separator and blower, the SVE effluent airstream is discharged to the atmosphere. An as-built system diagram previously made available to EAR has been marked up with current notes/configuration and is provided as Appendix A.

For monitoring of system performance, vapor monitoring (VMP) wells are located surrounding and within the property building. VMP well locations are presented on Figure 2.

2.0 O&M ACTIVITIES

2.1 SVE

EAR began O&M activities at this site starting in October 2020 with the first monthly system check conducted on October 28, 2020. Monthly O&M activities include, but are not limited to:

- General inspection and observations of all system components.
- Recording of hour meter readings on blowers.
- Draining the moisture separator tank, as necessary.
- Recordings air flow, vacuum, and temperature readings from 3 trunk lines, 3 independent well lines on outside manifold (4th trunk line), and SVE effluent line.
- Screening of all trunk lines/wells, and effluent for VOCs using a photo-ionization detector (PID).
- Recording vacuum/influence from VMP locations.
- Collection of SVE effluent air sample and individual SVE points, per schedule.
- Routine maintenance of blowers and filters, as needed.

Based on review of prior reporting, the system is operating normally. System uptime for December 2020 is estimated at 100%.

2.1.1 O&M ACTIVITIES

- December 14, 2020:
  - The system was operating upon arrival to and departure from the site.
  - System operating parameters were monitored, recorded, and tabulated in a system data log. As directed by engineers (TRC Companies, Inc.), adjustments were made to URS SVE-6S since vacuum readings were less than 10”WC at the system manifold during system monitoring. The manifold valve at URS SVE-6S was opened from 50% to 100% prior to site departure which increased readings to greater than 10"WC post-adjustment. No other adjustments were made to air flow rates at each of the extraction well locations.
  - As directed by the engineers, additional readings were collected to measure the system influence including extraction well head readings and current VMP well conditions. These additional readings were submitted to the engineers and NYSDEC on 12/21/2020. Monitoring data collected during the site visit detailed in this report is provided as Table 1 and submitted separately in spreadsheet format.
  - The vacuum blower was inspected for proper operation and any potential maintenance issues.
  - The moisture separator tank was inspected, and any collected condensation water discharged to the pavement adjacent to the system enclosure.
  - The control panel and electrical distribution panel were found to be working as specified.
  - General site conditions were inspected and found to be in working condition. General housekeeping tasks were completed.
  - Vacuum/influence monitoring at VMP wells were conducted at VMP-1, 2, 3, 4, 5, 6, and 7.
- December 21, 22, and 23, 2020:
  - Compound fence installation took place to secure system and components.

3.0 SYSTEM AIR SAMPLING

During the monthly site visit, SVE trunk lines/manifolds and effluent air stream were screened in the field for Total VOCs using a PID. Prior to use, the PID was calibrated using a 100 ppm isobutylene standard and ambient air. PID utilized during the system evaluation is equipped with a sensor with standard 10.6 eV UV lamp.

On December 14, 2020, a monthly air sample for laboratory analysis was collected from the SVE effluent air stream. The SVE effluent air samples were submitted to Eurofins TestAmerica Laboratories, Inc. of Knoxville, Tennessee (TAL – Knoxville) for analysis of VOCs via EPA method TO-15 with 10-day turnaround time and Category A deliverables requested. Field screening results for Total VOCs are summarized in Tables 1, air analytical results are summarized in Table 3, and SVE effluent recovery data are summarized in Table 4.

TABLES

76-01 77th Avenue
Glendale, NY
Site No. 241031

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Soil Vapor Extraction System Data Log

System Evaluation Date			10/28/2020	11/25/2020	12/14/2020
SVE System Status on Arrival			on	on	on
SVE System Status on Departure			on	on	on
SVE Blower B-201 Status			on	on	on
SVE Blower B-201 Hour Meter Readings			130671.00	13738.40	14194.50
Hour Readings - Time Recorded			10/28/2020 9:00	11/25/2020 9:00	12/14/2020 9:00
Hours Since Last Site Visit			-	672.00	456.00
SVE Blower B-202 Status			off	off	off
SVE Blower B-202 Hour Meter Readings			1439.50	1439.50	1439.50
Technician(s)			MF	MF	MF
In-Line Filter Status			ok	ok	ok
Moisture Separator Water Level			empty	empty	15-20 gal
Manifold Legs / Wells					
Trunk Line 1 (SVE-7S/7D)	A-103	Vacuum ("WC)	-12.5	-16.8	-17.4
		Airflow (SCFM)	140.0	145.0	85.0
		PID (PPM)	28.3	38.3	8.2
		Valve (% open)	50%	50%	50%
Trunk Line 2 (SVE-8S/8D)	A-102	Vacuum ("WC)	-13.0	-17.8	-17.9
		Airflow (SCFM)	100.0	152.0	140.0
		PID (PPM)	6.2	6.2	3.3
		Valve (% open)	50%	50%	50%
Trunk Line 3 (SVE-9S/10S)	A-101	Vacuum ("WC)	-11.7	-16.4	-16.8
		Airflow (SCFM)	90.0	100.0	105.0
		PID (PPM)	3.3	4.1	1.4
		Valve (% open)	100%	100%	100%
Trunk 4	URS SVE-1	Vacuum ("WC)	-7.5	-12.9	-13.6
		Airflow (SCFM)	43.0	84.0	56.0
		Temperature (°F)	64.0	66.0	-
		PID (PPM)	6.5	1.8	1.1
		Valve (% open)	100%	100%	100%
	URS SVE-6D	Vacuum ("WC)	-7.0	-13.4	-15.8
		Airflow (SCFM)	14.0	38.0	68.0
		Temperature (°F)	64.0	57.0	-
		PID (PPM)	2.3	*	0.0
		Valve (% open)	100%	100%	100%
	URS SVE-6S	Vacuum ("WC)	-4.2	-8.8	-8.1[1]
		Airflow (SCFM)	64.0	81.0	*
		Temperature (°F)	65.0	61.0	-
		PID (PPM)	3.7	0.7	*
		Valve (% open)	50%	50%	50%
Air Filter	Pre Filter	Vacuum ("WC)	-26.1	-29.5	-30.4
	Post Filter	Vacuum ("WC)	-52.7	-55.6	-55.5
Discharge					
SVE EFFLUENT		Airflow (SCFM)	115.0	225.0	225.0
		Temperature (°F)	126.0	122.0	116.0
		PID (PPM)	5.9	21.9	12.6
Vapor Monitoring Points (VMPs)					
VMP-1		Vacuum ("WC)	-	0.0	0.0
		PID (PPM)	-	4.6	0.0
VMP-2		Vacuum ("WC)	0.0	0.0	0.0
		PID (PPM)	0.9	1.2	0.0
VMP-3		Vacuum ("WC)	0.0	0.0	0.0
		PID (PPM)	1.7	0.8	0.3
VMP-4		Vacuum ("WC)	0.0	0.0	0.0
		PID (PPM)	0.2	1.8	0.0
VMP-5		Vacuum ("WC)	0.0	0.0	-0.6
		PID (PPM)	0.0	0.7	0.4
VMP-6		Vacuum ("WC)	-	0.0	0.0
		PID (PPM)	-	1.1	0.2
VMP-7		Vacuum ("WC)	-	0.0	0.0
		PID (PPM)	-	0.8	1.4

Notes:
- Reading not collected
*Water detected in lines
[1]Opened valve from 50% to 100% prior to departure. Vac reading was >10"WC after opening.

76-01 77th Avenue
Glendale, NY
Site No. 241031

Soil Vapor Extraction System Maintenance Log

Date	Purpose	SVE Operation upon arrival	SVE Operation upon departure	SVE Blower B-201 in operation	SVE Blower B-202 in operation	Air Sampling conducted	Checked SVE Filter	Emptied Moisture Separator Tank	Approximate volume in knockout tank (gal)	Notes
10/28/19	M	X	X	X		X	X		0	Filter was clean upon inspection.
11/08/19	M	X	X	X		X	X		0	Filter was clean upon inspection.
12/14/20	M	X	X	X		X	X	X	15-20	Filter was clean upon inspection. Additional readings collected to measure the system influence.

M - Monthly O&M Visit
R - Modifications/Repair/Troubleshooting/Emergency Response
O - Other

76-01 77th Avenue
Glendale, NY
Site No. 241031

Air Samples Analyzed by EPA Method TO-15 (µg/m^3)

Sample Location	Date Collected	1,1 Dichloroethene	1,1,1 Trichloroethane	1,2,4 Trimethylbenzene	1,3 Dichlorobenzene	1,3,5 Trimethylbenzene	2,2,4-Trimethylpentane	Benzene	Carbon Tetrachloride	Chloromethane	cis-1,2-Dichloroethene	Cyclohexane	Dichlorodifluoromethane	Ethanol	Ethylbenzene	m + p Xylene	Methyl Ethyl Ketone	o-Xylene	Styrene	Tetrachloroethene	Toluene	Total BTEX	Trichloroethylene	Trichlorofluoromethane
SVE_EFFLUENT	10/28/2020	<0.16	<0.44	**3.3**	**14**	**1**	**1.7**	**1.5**	**0.55**	**0.97**	**0.18**	**0.76**	**2**	**56**	**1.9**	**6.9**	**460**	**2.5**	**0.66**	**30**	**8.6**	**21**	**0.65**	**1.4**
SVE_EFFLUENT	11/25/2020	**320**	<860	<780	<950	<780	<1,800	<500	<400	<810	**600**	<1,400	<780	<7,400	<690	<690	<1,900	<690	<670	**140,000**	<890	<3,460	**1,400**	<890
SVE_EFFLUENT	12/14/2020	**190**	**350**	<280	<340	<280	<660	<180	<140	<290	**360**	<490	<280	<2,700	<250	<250	<670	<250	<240	**91,000**	<320	<1,250	**1,000**	<320

Laboratory Analysis by Eurofins TestAmerica
The chemicals listed below were reported below the LRL:

1,1 Dichloroethane
1,1,2 Trichloroethane
1,1,2,2 Tetrachloroethane
1,2 Dibromoethane
1,2 Dichlorobenzene
1,2 Dichloroethane
1,2 Dichloropropane
1,2,4 Trichlorobenzene
1,4 Dichlorobenzene
1,4-Dioxane
4-Methyl-2-Pentanone
Benzyl Chloride
Bromodichloromethane
Bromoform
Bromomethane
c 1,3 Dichloropropene
Chlorobenzene
Chloroethane
Chloroform
Dibromochloromethane
Freon 113
Freon 114
Hexachlorobutadiene
Hexane
Methylene Chloride
MTBE
Naphthalene
t 1,3 Dichloropropene
Tert-Butyl Alcohol
trans-1,2-Dichloroethene
Vinyl Chloride

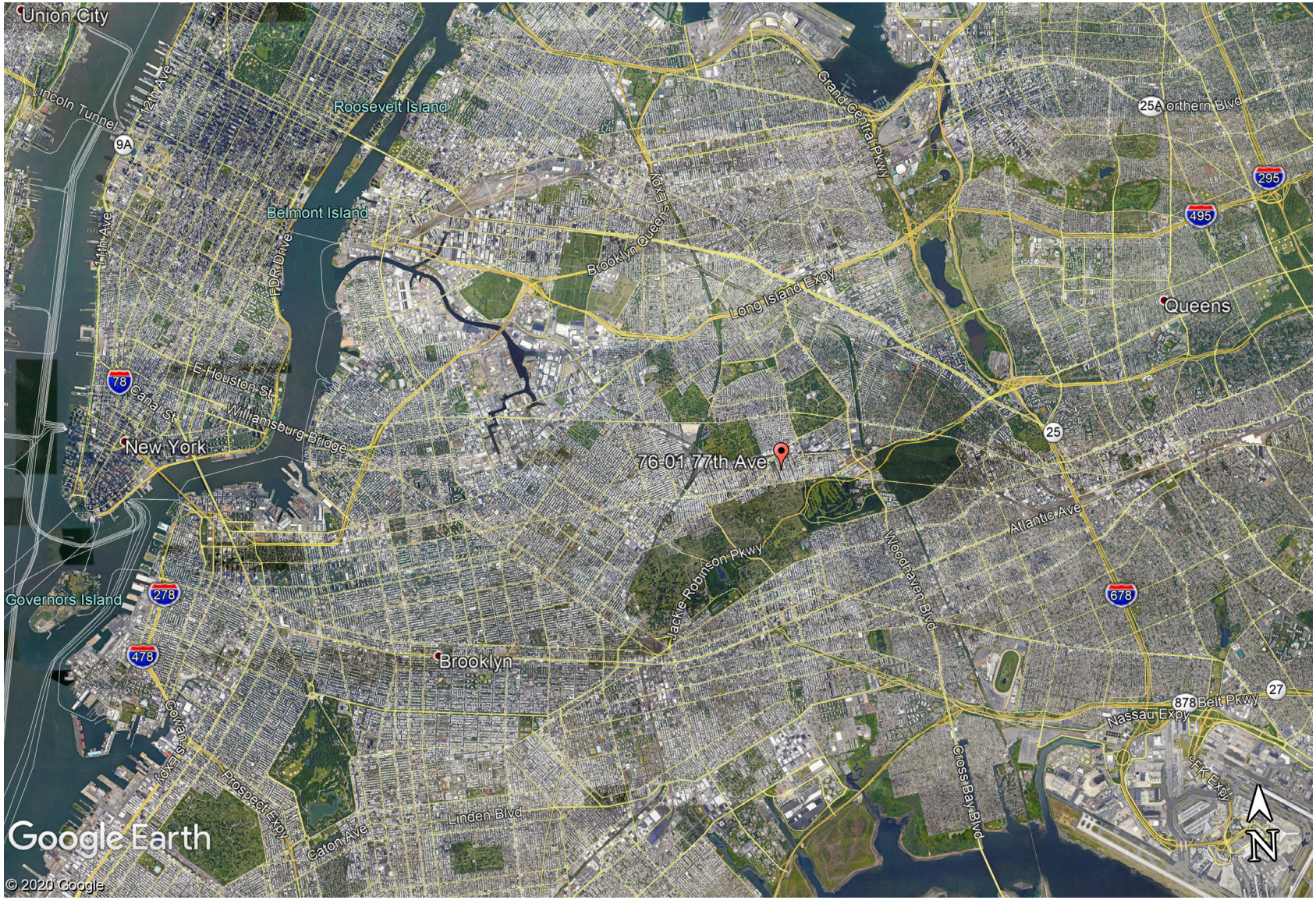
Soil Vapor Extraction
76-01 77th Avenue
Glendale, NY
Site No. 241031

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

SVE Effluent Recovery - Tetrachloroethene
Test America, Inc. (EPA Method TO-15)

Date/Time	Flow Rate (CFM)	PID (ppm)	SVE Effluent Tetrachloroethene Recovery (µg/m3)	(lbs/hr)	(lbs/day)	Cumulative (lbs)
10/28/20 12:30 PM	115.0	5.9	30	1.29E-05	3.10E-04	0
11/25/20 9:40 AM	225.0	21.9	140,000	0.118	2.8	0.008
12/14/20 9:50 AM	225.0	12.6	91,000	0.077	1.8	53.8
AVERAGE:	**188**					

FIGURES



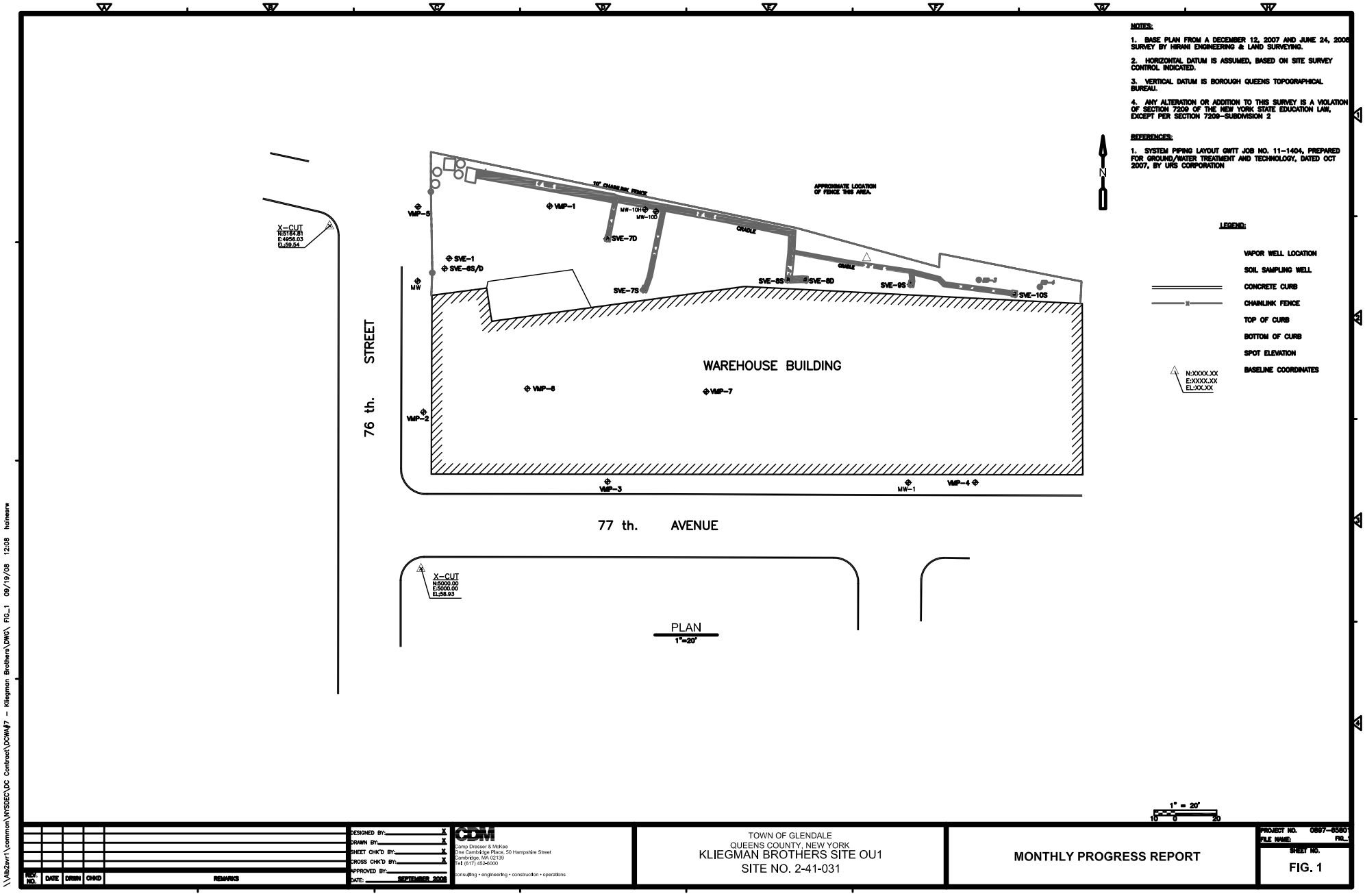
ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Figure 1
Site Location Map

(Map not to scale)

Kliegman Brothers
76-01 77th Avenue
Glendale, NY
NYSDEC Site #241031

Figure 2


NOTES:
1. BASE PLAN FROM A DECEMBER 12, 2007 AND JUNE 24, 2008 SURVEY BY HIRANI ENGINEERING & LAND SURVEYING.
2. HORIZONTAL DATUM IS ASSUMED, BASED ON SITE SURVEY CONTROL INDICATED.
3. VERTICAL DATUM IS BOROUGH QUEENS TOPOGRAPHICAL BUREAU.
4. ANY ALTERATION OR ADDITION TO THIS SURVEY IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW, EXCEPT PER SECTION 7209-SUBDIVISION 2
REFERENCES:
1. SYSTEM PIPING LAYOUT GWTT JOB NO. 11-1404, PREPARED FOR GROUND/WATER TREATMENT AND TECHNOLOGY, DATED OCT 2007, BY URS CORPORATION
LEGEND:
VAPOR WELL LOCATION
SOIL SAMPLING WELL
CONCRETE CURB
CHAINLINK FENCE
TOP OF CURB
BOTTOM OF CURB
SPOT ELEVATION
BASELINE COORDINATES
N:XXXX.XX
E:XXXX.XX
EL:XX.XX
APPROXIMATE LOCATION OF FENCE THIS AREA.
WAREHOUSE BUILDING
76 th. STREET
77 th. AVENUE
X-CUT
N:5164.81
E:4956.03
EL:59.54
X-CUT
N:5000.00
E:5000.00
EL:58.93
VMP-1
VMP-2
VMP-3
VMP-4
VMP-5
VMP-6
VMP-7
MW-1
MW-10H
MW-10D
SVE-1
SVE-6S/D
SVE-7D
SVE-7S
SVE-8S
SVE-8D
SVE-9S
SVE-10S
PLAN
1"=20'
1" = 20'
10 0 20
DESIGNED BY:
DRAWN BY:
SHEET CHK'D BY:
CROSS CHK'D BY:
APPROVED BY:
DATE: SEPTEMBER 2008
REV. NO. DATE DRWN CHKD REMARKS
CDM
Camp Dresser & McKee
One Cambridge Place, 50 Hampshire Street
Cambridge, MA 02139
Tel (617) 452-6000
consulting • engineering • construction • operations
TOWN OF GLENDALE
QUEENS COUNTY, NEW YORK
KLIEGMAN BROTHERS SITE OU1
SITE NO. 2-41-031
MONTHLY PROGRESS REPORT
PROJECT NO. 0807-8560
FILE NAME: FIG_1
SHEET NO.
FIG. 1
\\Alb2wr1\common\NYSDEC\DC Contract\DCW#7 - Kliegman Brothers\DWG\ FIG_1 09/19/08 12:08 holnesrw

APPENDIX A

EAR Note: No autodialer was observed during November 2016 inspection.

(NOTE 4) AUTO DIALER

CONNECT TO EXTRACTION HEADER FROM EXISTING SVE SYSTEM

BV100 3"S80PVC

LIMITS OF WELLBOX EXCLOSURE (TYP. FOR SIX WELLS)

FLOW & TEMPERATURE (NOTE 1) PI 1 AP 1

SAMPLE PORT (TYP. OF SIX WELLS)

PI 2 AP 2

BV101 FI 101 AP 101 3"S80PVC

BV104 4"S80PVC

MOISTURE SEPARATOR T-101

VRV105 BV105 4"S80PVC

LAH 101 LSH 101 LI 101 B-201 AND 202 OFF

HS 101 HOA

GV105 0.75"S80PVC

DRAIN PUMP FLEXIBLE HOSE TO 55 GALLON DRUMS FOR OFFSITE DISPOSAL

4"S80PVC

EXTRACTION WELL SVE-7S

EXTRACTION WELL SVE-7D

BV102 FI 102 AP 102 3"S80PVC

PI 3 AP 3

PI 4 AP 4

EXTRACTION WELL SVE-8S

EXTRACTION WELL SVE-8D

BV103 FI 103 AP 103 3"S80PVC

PI 5 AP 5

PI 6 AP 6

EXTRACTION WELL SVE-9S

EXTRACTION WELL SVE-10S

SYPASS AIR GV106

HS 201 HOA

PI 201 GV201 2.5"S80PVC PI 202 FILTER/ SILENCER

BLOWER B-201

PI 203 SILENCER GV201 2.5"S40BLK CV201 FI 201 TI 201 3"S80CPVC

HS 202 HOA

PI 204 GV202 2.5"S80PVC PI 205 FILTER/ SILENCER

BLOWER B-202

PI 206 SILENCER GV202 2.5"S40BLK CV202 FI 202 TI 202 3"S80CPVC

HS 102 HOA

TO 55 GALLON DRUMS FOR OFFSITE DISPOSAL

SPARE DRAIN PUMP AND HOSE FOR EXISTING SYSTEM

CONNECT TO DISCHARGE HEADER FROM EXISTING SVE SYSTEM

CV204 4"S80CPVC BV204

TO EXISTING VAPOR PHASE CARBON (NOTE 3)

SAMPLE PORT BV204

PI 210 FI 203 TI 203 4"S80CPVC

SAMPLE PORTS

DISCHARGE TO ATMOSPHERE

VPC 301 VPC 302

VAPOR PHASE CARBON

EAR Note: During November 2016 site inspection noted no carbon vessels on-site; direct discharge to atmosphere.

LIMITS OF NEW ENCLOSURE PROVIDED BY PLC

SOIL VAPOR EXTRACTION (SVE) SYSTEM

REVISIONS

NO	DATE	BY	COMMENTS
0			
1			
2			
3			
4			

DESIGNED BY: DMc
DRAWN BY: RAL
CHECKED BY: CWP
PROJ. ENGR. DMc

URS Corporation
Group Consultants
77 Goodell Street, Buffalo, New York 14203
(716)856-5636 - (716)856-2545 fax

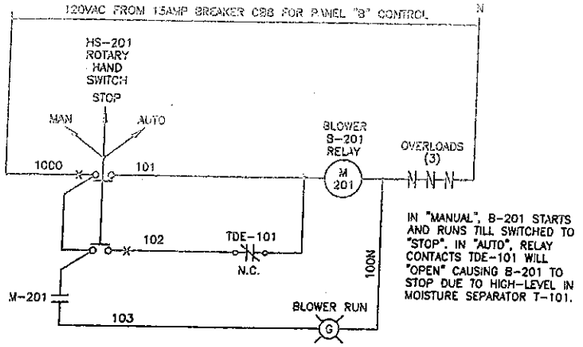
JOB No. 11171964.00000

NYSDEC SITE 2-41-031
GLENDALE, QUEENS
KLIEGMAN BROTHERS SITE
OPERABLE UNIT NO. 1
GLENDALE, QUEENS NEW YORK

CONTRACT D006547
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
625 BROADWAY, ALBANY, NEW YORK

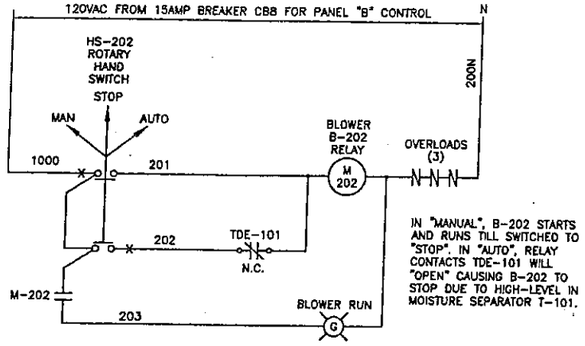
PRODUCT LEVEL CONTROL, INC.
ENVIRONMENTAL EQUIPMENT & CONTROLS
11929 Portland Ave S.
Burnsville, MN 55377
Phone: 952-707-9101
Fax: 952-707-1075

Customer	GWTT
Site Reference	KLIEGMAN BROTHERS UNIT 1
	GLENDALE, QUEENS
Cust. No.	PLC Job No. 07-050
Tolerance NA	Rev. 0
Drawing No.	PID
Sheet No. Sheet 1 of 1	Scale NA
Drawn By BGG	Drawn Date 9-21-07
Title	PID



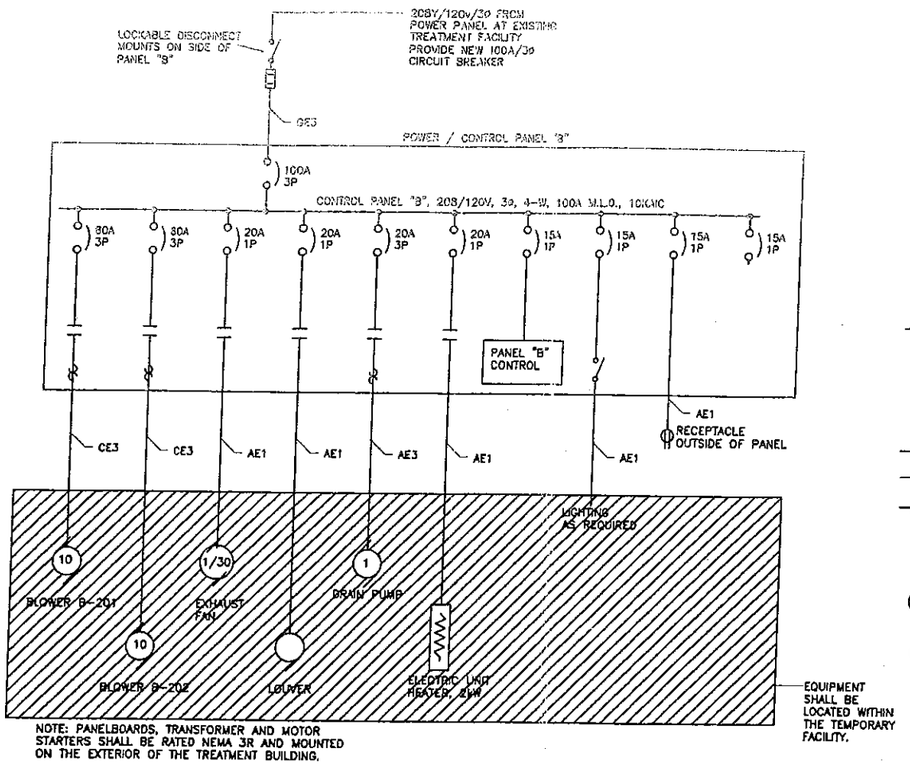
BLOWER B-201 CONTROL CIRCUITS

NOT TO SCALE



BLOWER B-202 CONTROL CIRCUITS

NOT TO SCALE



NOTE: PANELBOARDS, TRANSFORMER AND MOTOR STARTERS SHALL BE RATED NEMA 3R AND MOUNTED ON THE EXTERIOR OF THE TREATMENT BUILDING.

SINGLE LINE DIAGRAM

NO SCALE

LEGEND

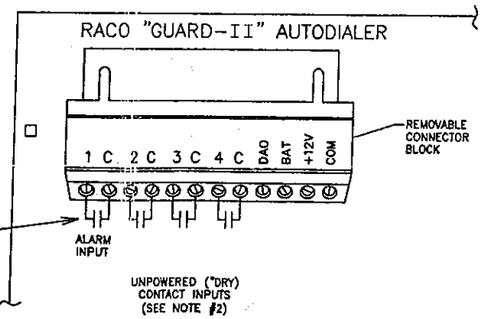
- ELECTRIC METER
- TRANSFORMER
- GROUND
- CIRCUIT BREAKER
- NODE
- PILOT LIGHT (R- RED)
- SWITCH/DISCONNECT
- FUSE
- CONTACT, N.O.
- CONTACT, N.C.
- COIL, MOTOR STARTER
- THERMAL MOTOR OVERLOAD
- MOTOR LOAD, # INDICATES H.P.
- FIELD TERMINAL BLOCKS

FEEDER SCHEDULE

	OVERCURRENT DEVICE RATING	CONDUCTORS +NEUTRAL **75°C	EGC (E)	EGC (THWN) (S)	CONDUIT 1 PHASE (1)	CONDUIT 1 PHASE (3)
A	20	#12	#12	-	1/2"	1/2"
B	30	#10	#10	-	1/2"	1/2"
C	50	#8	#10	-	3/4"	1"
D	70	#6	#8	-	1"	1"
E	80	#4	#8	-	1 1/2	1 1/2"
F	90	#4	#8	-	1 1/2"	1 1/2"
G	100	#2	#8	#8	1 1/2"	1 1/2
H	125	#2	#6	#8	1 1/2"	1 1/2
I	150	#1/0	#6	#6	1 1/2"	2"
J	175	#2/0	#6	#4	2"	2"
K	200	#3/0	#6	#4	2"	2 1/2"
L	225	#3/0	#4	#4	2"	2 1/2"

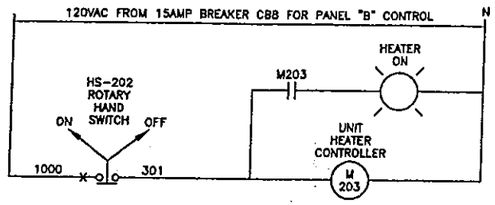
NOTES:

1. MOUNT RED ALARM BEACON IN A CONSPICUOUS LOCATION OUTSIDE TRAILER.
2. THE INPUT SIGNALS TO THE AUTODIALER CAN BE "DRY" CONTACTS, ANALOG, OR DIGITAL LOGIC. "DRY" CONTACTS ARE SHOWN IN WIRING SCHEMATIC. THE WIRING CONNECTIONS SHOWN ARE FOR A RACO "GUARD-II" AUTODIALER.
3. PURCHASE AUTODIALER WITH A.C. TO D.C. TRANSFORMER OR D.C. POWER SUPPLY.



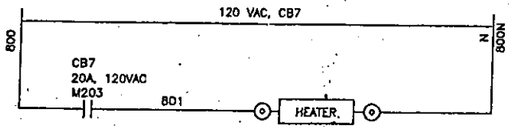
AUTODIALER DETAIL (EXISTING)

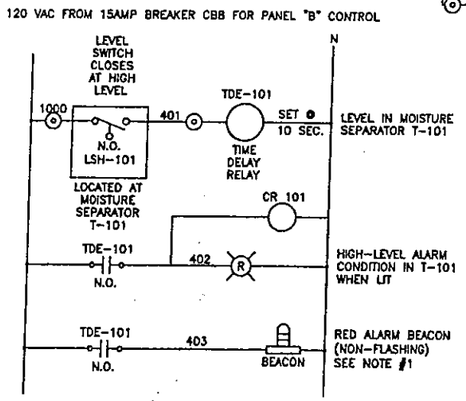
NOT TO SCALE



ELECTRIC UNIT HEATER

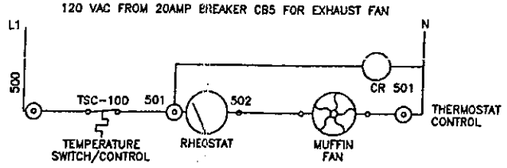
NOT TO SCALE

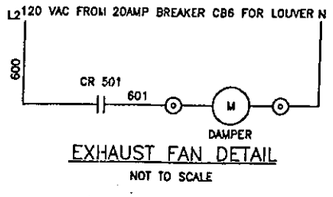




CONTROL PANEL "B" ALARM CIRCUITS

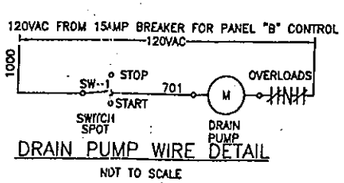
NOT TO SCALE





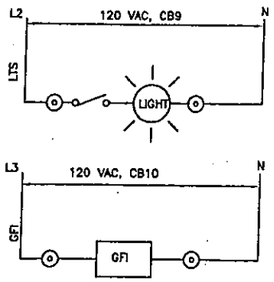
EXHAUST FAN DETAIL

NOT TO SCALE



DRAIN PUMP WIRE DETAIL

NOT TO SCALE



REVISIONS

Rev	Date	By	Description
0			
1			
2			
3			
4			

DESIGNED BY:	DML
DRAWN BY:	DML
CHECKED BY:	CWP
PROJ. ENGR.	DMC

URS Corporation
Group Consultants
77 Goodell Street, Buffalo, New York 14203
(716)856-5636 - (716)856-2545 fax

JOB No. 11171964.00000

NYSDEC SITE 2-41-031
GLENDALE, QUEENS

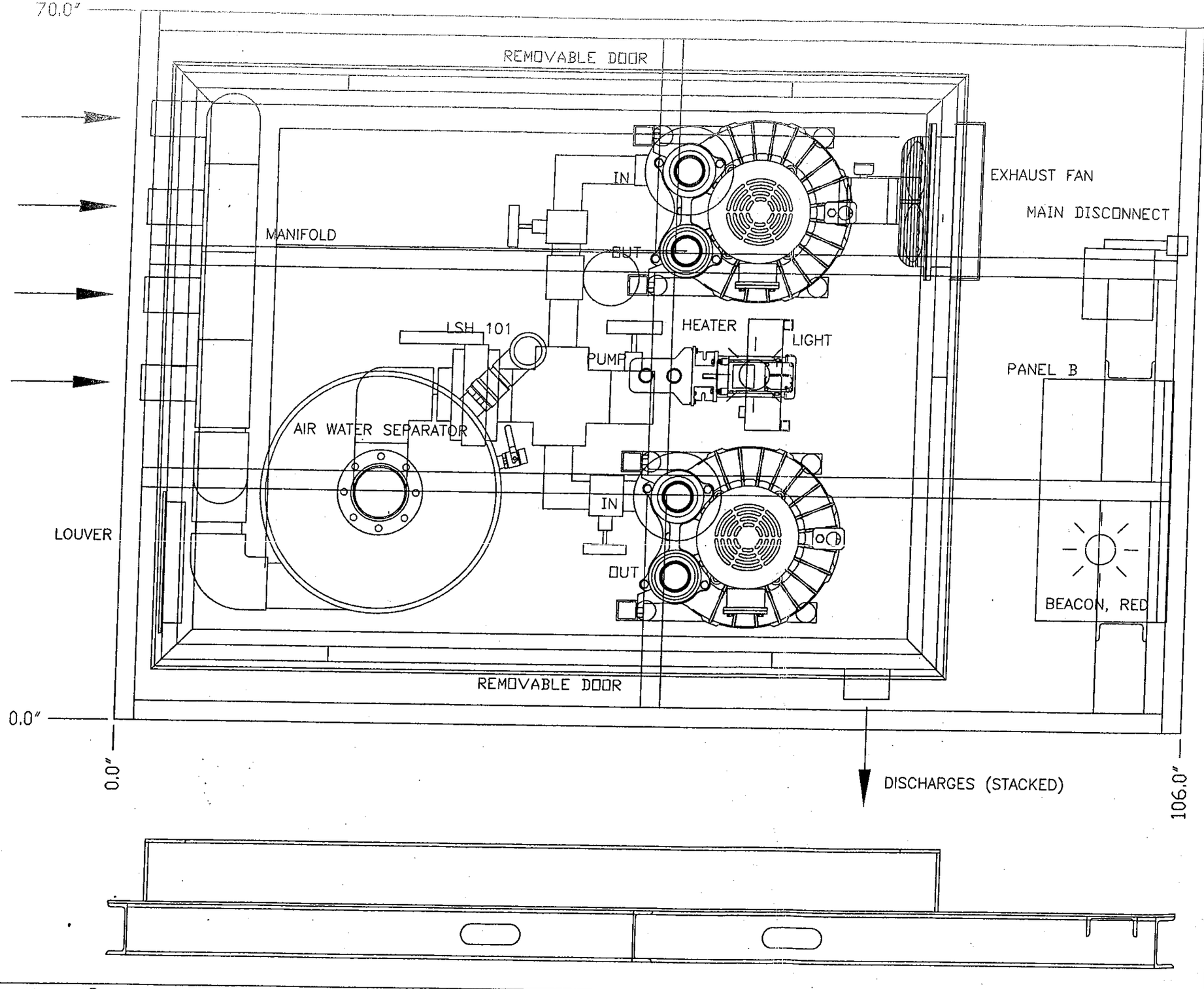
KLIEGMAN BROTHERS SITE
OPERABLE UNIT NO. 1

GLENDALE, QUEENS NEW YORK

CONTRACT D006547
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
625 BROADWAY, ALBANY, NEW YORK

PRODUCT LEVEL CONTROL, INC.
ENVIRONMENTAL EQUIPMENT & CONTROLS
11929 Portland Ave S.
Burnsville, MN 55377
Phone: 952-707-9101
Fax: 952-707-1075

Customer	GWTT
Site Reference	KLIEGMAN BROTHERS UNIT 1
	GLENDALE, QUEENS
Cust. No.	PLC Job No. 07-050
Tolerance NA	Rev. 0
Drawing No.	ELECTRICAL SCHEMATICS
Sheet No.	Sheet 1 of 1
Scale	NA
Drawn By	BGG
Drawn Date	9-26-07
Title	Electrical Schematics



REVISIONS			
Rev	Date	By	Description
3			
1			
2			
3			
4			

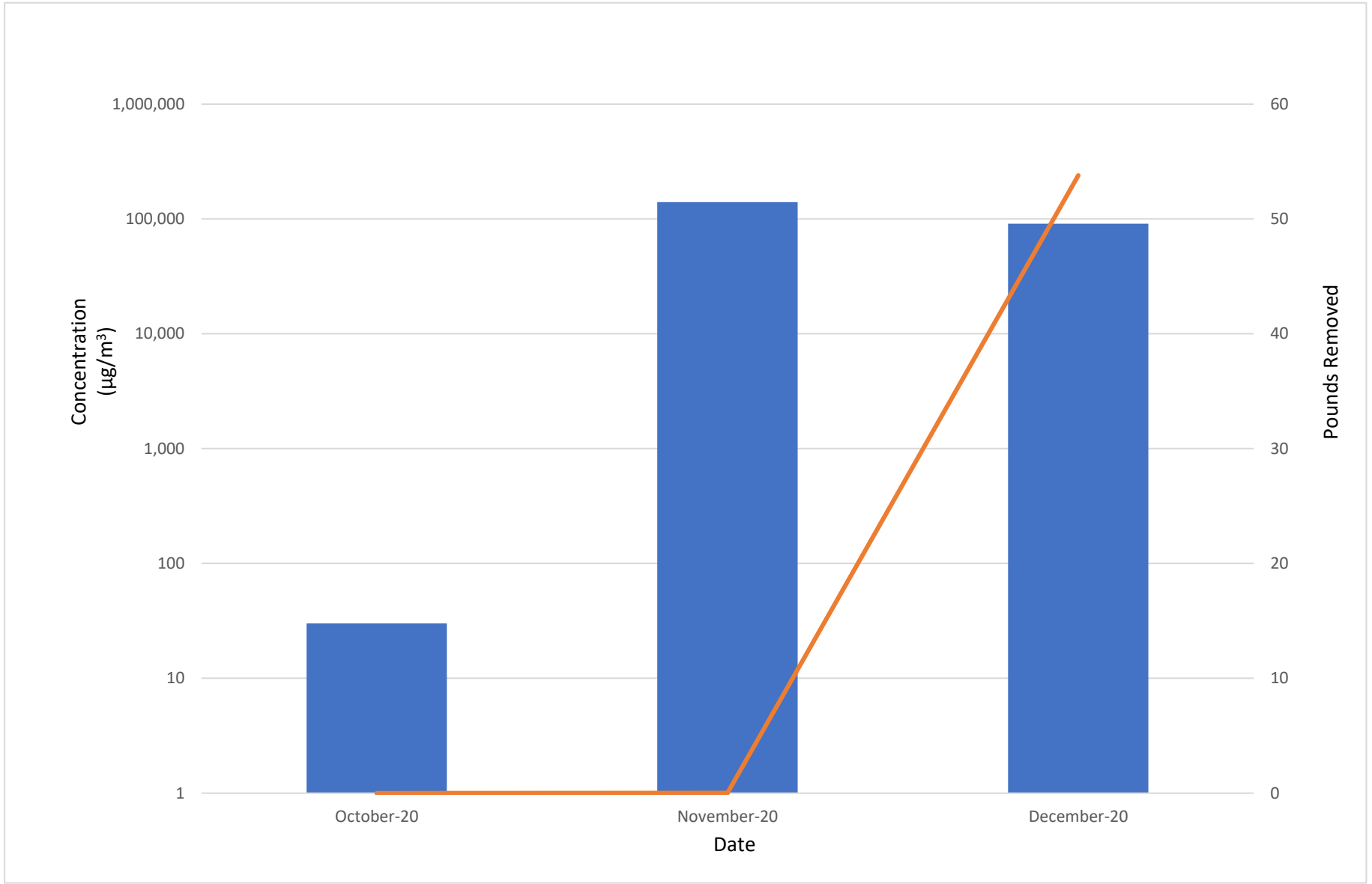
NOTES
-PLACE VIBRATION DAMPENERS UNDER BLOWERS
-INSTALL $\frac{1}{4}$" ISOLATION VALVES AT ALL PIs
-INSTALL EQUIPMENT TO ALLOW FOR REMOVAL OF HOTBOX ENCLOSURE
-INSTALL HOTBOX ON 6" HIGH CURB FROM SKID
-ALLOW FOR POSSIBLE INSTALLATION OF ACOUSTIC HOODS ON EXHAUST FAN AND PASSIVE VENT
-HEATER AND LIGHT MOUNTED TO FLOOR BRACKET
-BOLT ALL MOUNTING BRACKETS TO FLOOR TO ALLOW FOR EASY REMOVAL
--VERIFY ADEQUATE MAINTENANCE CLEARANCES (GREASE)
--MAXIMIZE MANIFOLD HEADER HEIGHT (MANIFOLD HEADER IS HIGHER THAN AWS INLET)
--NOISE LIMITATION: 70 dBA AT 3' FROM ENCLOSURE
--TAKE NOISE READINGS AT PLC
--NON CLASSIFIED SYSTEM
--USE RIGID CONDUIT

PRODUCT LEVEL CONTROL, INC.
ENVIRONMENTAL EQUIPMENT & CONTROLS
11929 Portland Ave S.
Burnsville, MN 55377
Phone: 952-707-9101
Fax: 952-707-1075

Customer	GWTT
Site Reference	KLIEGMAN BROTHERS UNIT 1
	GLENDALE, QUEENS
Cust. No.	PLC Job No. 07-050
Tolerance ±4'	Rev. 0
Drawing No.	Plan
Sheet No.	Sheet 1 of 1
Scale	1:10
Drawn By	BGG
Drawn Date	9-26-07
Title	Plan

Appendix E

Appendix E
New York State Department of Environmental Conservation
SMP B - Kliegman Brothers - Site No. 241031
Periodic Review Report
Glendale, Queens, New York
Summary of SVE System PCE Recovery



Appendix F

Appendix F
New York State Department of Environmental Conservation
SMP B - Kliegman Brothers - Site No. 241031
Periodic Review Report
Glendale, Queens, New York
Summary of SVE System PCE Recovery 2004 to 2017

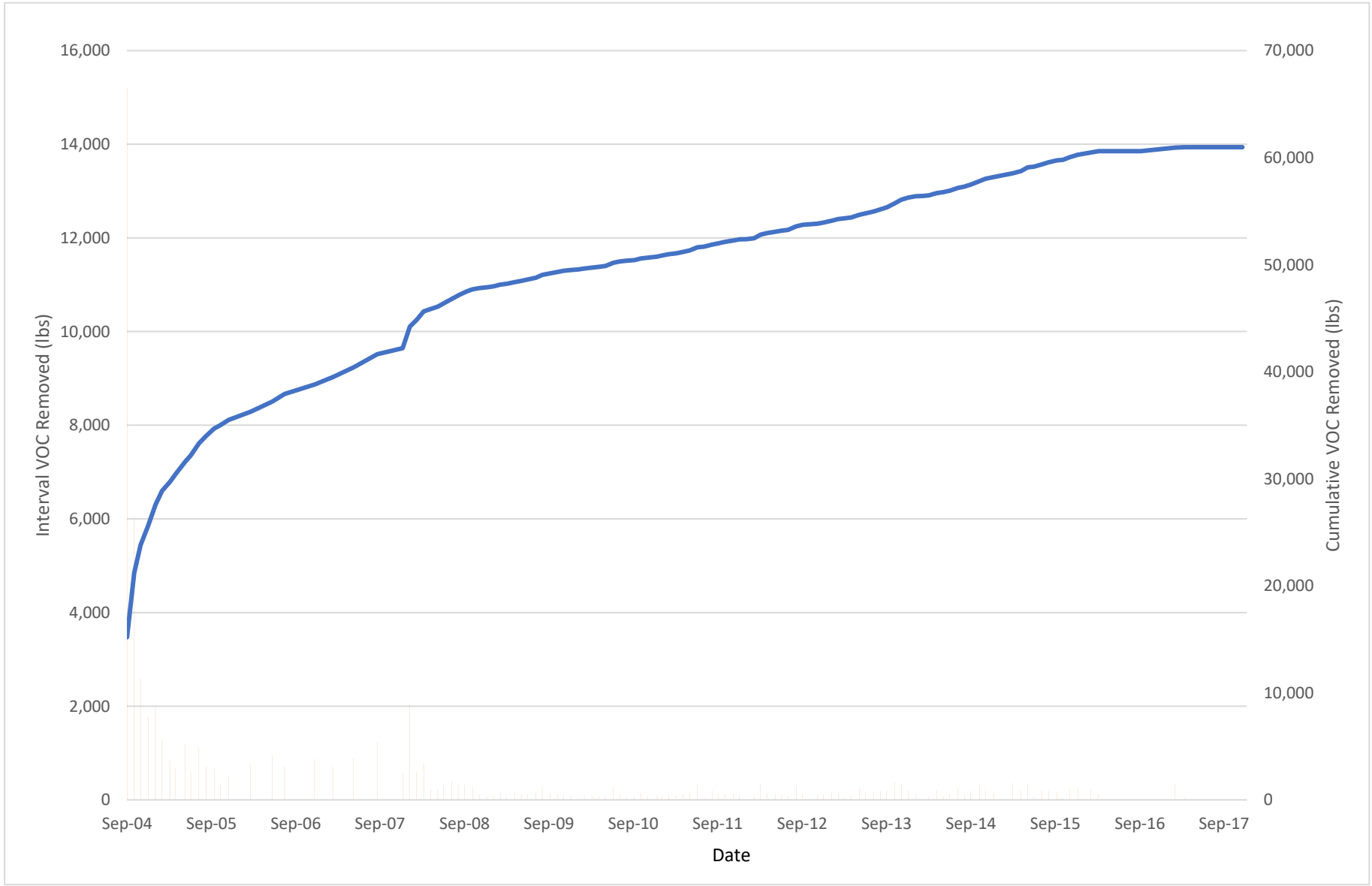


Table 5 VOC Removal Calculations
September 2015
Periodic Review Report No. 4
October 2015 to December 2017
Kliegman Brothers Site OU1 - Site No. 2-41-031
NYSDEC Work Assignment #D007621

			URS EFFLUENT		GWTT EFFLUENT	
			System Run Time Interval	647.00	System Run Time Interval	647.0
10/28/2015			Flow Rate (cfm)	168	Flow Rate (cfm)	280
Compounds	Cummulative Mass Extracted (lbs.)	Cummulative Mass Extracted (ug/m3)	Conc. (ug/m3)	Mass (lbs.) Extracted	Conc. (ug/m3)	Mass (lbs.) Extracted
1,1,1-Trichloroethane	0.0487	77.00	13.0	0.0	64	0.04
1,1,2,2-Tetrachloroethane	0.0000	0.00		0.0		0.00
1,1,2-trichloro-1,2,2-trifluoroethane (Freon 113)	0.0000	0.00		0.0		0.00
1,1,2-Trichloroethane	0.0000	0.00		0.0		0.00
1,1-Dichloroethane	0.0000	0.00		0.0		0.00
1,1-Dichloroethylene	0.0176	26.00		0.0	26	0.02
1,2,4-Trichlorobenzene	0.0000	0.00		0.0		0.00
1,2,4-Trimethylbenzene	0.0000	0.00		0.0		0.00
1,2-Dichloroethane	0.0000	0.00		0.0		0.00
1,3,5-Trimethylbenzene	0.0000	0.00		0.0		0.00
1,3-Dichlorobenzene	0.0000	0.00		0.0		0.00
1,4-Dichlorobenzene	0.0000	0.00		0.0		0.00
2-Butanone (Methyl ethyl ketone)	0.0000	0.00		0.0		0.00
2-Hexanone	0.0000	0.00		0.0		0.00
4-Ethyl Toluene	0.0000	0.00		0.0		0.00
4-Methyl-2-Pentanone (MIBK)	0.0000	0.00		0.0		0.00
Acetone	0.0000	0.00		0.0		0.00
Benzene	0.0000	0.00		0.0		0.00
Bromodichlorobenzene	0.00	0.00		0.00		0.00
Carbon Disulfide	0.0000	0.00		0.0		0.00
Carbon Tetrachloride	0.0000	0.00		0.0		0.00
Chlorobenzene	0.0000	0.00		0.0		0.00
Chloroethane	0.0000	0.00		0.0		0.00
Chloroform	0.0094	23.00	23.0	0.0		0.00
Chloromethane	0.0000	0.00		0.0		0.00
cis-1,2-Dichloroethylene	0.0404	70.00	26.0	0.0	44	0.03
Cyclohexane	0.0000	0.00		0.0		0.00
Dichlorodifluoromethane (Freon 12)	0.0208	35.00	11.0	0.0	24	0.02
Ethanol	0.3392	500.00		0.0	500.0	0.34
Ethyl Acetate	0.0000	0.00		0.0		0.00
Ethylbenzene	0.0088	13.00		0.0	13.0	0.01
Heptane	0.0000	0.00		0.0		0.00
Hexane	0.0000	0.00		0.0		0.00
Isopropyl Alcohol	0.0000	0.00		0.0		0.00
m,p-Xylene	0.0923	160.00	60.0	0.0	100.0	0.07
Methyl tert-Butyl Ether (MTBE)	0.0000	0.00		0.0		0.00
Methylene Chloride	0.0000	0.00		0.0		0.00
Napthalene	0.0000	0.00		0.0		0.00
o-Xylene	0.0284	49.00	18.0	0.0	31.0	0.02
Propylene	0.0000	0.00		0.0		0.00
Styrene	0.0000	0.00		0.0		0.00
Tetrachloroethylene (Tetrachloroethene)	52.3766	112,000.00	87,000	35	25,000	16.96
Tetrahydrofuran	0.0000	0.00		0.0		0.00
Toluene	0.0000	0.00		0.0		0.00
trans 1,2-Dichloroethylene	0.0000	0.00		0.0		0.00
Trichloroethylene (Trichloroethene)	0.1737	320.00	160	0	160	0.11
Trichlorofluoromethane (Freon 11)	0.0000	0.00		0.0		0.00
Vinyl Acetate	0.0000	0.00		0.0		0.00
Vinyl Chloride	0.0000	0.00		0.0		0.00
TOTAL VOC REMOVAL (Interval Total)	53.2					
TOTAL VOC REMOVAL FROM SEPTEMBER 2015	18,367					
TOTAL VOC REMOVAL (OVERALL TOTAL)	18,420					

Table 5 VOC Removal Calculations
September 2015
Periodic Review Report No. 4
October 2015 to December 2017
Kliegman Brothers Site OU1 - Site No. 2-41-031
NYSDEC Work Assignment #D007621

			URS EFFLUENT		GWTT EFFLUENT	
			System Run Time Interval	673.00	System Run Time Interval	673.0
11/25/2015			Flow Rate (cfm)	168	Flow Rate (cfm)	280
Compounds	Cummulative Mass Extracted (lbs.)	Cummulative Mass Extracted (ug/m3)	Conc. (ug/m3)	Mass (lbs.) Extracted	Conc. (ug/m3)	Mass (lbs.) Extracted
1,1,1-Trichloroethane	0.4464	641.00	21.0	0.0	620	0.44
1,1,2,2-Tetrachloroethane	0.0000	0.00		0.0		0.00
1,1,2-trichloro-1,2,2-trifluoroethane (Freon 113)	0.0000	0.00		0.0		0.00
1,1,2-Trichloroethane	0.0000	0.00		0.0		0.00
1,1-Dichloroethane	0.0416	59.00		0.0	59	0.04
1,1-Dichloroethylene	0.1482	210.00		0.0	210	0.15
1,2,4-Trichlorobenzene	0.0000	0.00		0.0		0.00
1,2,4-Trimethylbenzene	0.0000	0.00		0.0		0.00
1,2-Dichloroethane	0.0000	0.00		0.0		0.00
1,3,5-Trimethylbenzene	0.0000	0.00		0.0		0.00
1,3-Dichlorobenzene	0.0000	0.00		0.0		0.00
1,4-Dichlorobenzene	0.0000	0.00		0.0		0.00
2-Butanone (Methyl ethyl ketone)	0.0000	0.00		0.0		0.00
2-Hexanone	0.0000	0.00		0.0		0.00
4-Ethyl Toluene	0.0000	0.00		0.0		0.00
4-Methyl-2-Pentanone (MIBK)	0.0000	0.00		0.0		0.00
Acetone	0.0000	0.00		0.0		0.00
Benzene	0.0000	0.00		0.0		0.00
Bromodichlorobenzene	0.00	0.00		0.0		0.00
Carbon Disulfide	0.0000	0.00		0.0		0.00
Carbon Tetrachloride	0.0480	68.00		0.0	68	0.05
Chlorobenzene	0.0000	0.00		0.0		0.00
Chloroethane	0.0065	9.20		0.0	9	0.01
Chloroform	0.0769	123.00	35.0	0.0	88	0.06
Chloromethane	0.0000	0.00		0.0		0.00
cis-1,2-Dichloroethylene	0.2762	399.00	19.0	0.0	380	0.27
Cyclohexane	0.0000	0.00		0.0		0.00
Dichlorodifluoromethane (Freon 12)	0.1059	150.00		0.0	150	0.11
Ethanol	0.0000	0.00		0.0		0.00
Ethyl Acetate	0.0000	0.00		0.0		0.00
Ethylbenzene	0.0000	0.00		0.0		0.00
Heptane	0.0000	0.00		0.0		0.00
Hexane	0.0000	0.00		0.0		0.00
Isopropyl Alcohol	0.0000	0.00		0.0		0.00
m,p-Xylene	0.0000	0.00		0.0		0.00
Methyl tert-Butyl Ether (MTBE)	0.0000	0.00		0.0		0.00
Methylene Chloride	0.0000	0.00		0.0		0.00
Napthalene	0.0000	0.00		0.0		0.00
o-Xylene	0.0000	0.00		0.0		0.00
Propylene	0.0000	0.00		0.0		0.00
Styrene	0.0000	0.00		0.0		0.00
Tetrachloroethylene (Tetrachloroethene)	230.0638	370,000.00	110,000	46.6	260,000	183.49
Tetrahydrofuran	0.0000	0.00		0.0		0.00
Toluene	0.0000	0.00		0.0		0.00
trans 1,2-Dichloroethylene	0.0000	0.00		0.0		0.00
Trichloroethylene (Trichloroethene)	0.9104	1,350.00	150	0.1	1,200	0.85
Trichlorofluoromethane (Freon 11)	0.0000	0.00		0.0		0.00
Vinyl Acetate	0.0000	0.00		0.0		0.00
Vinyl Chloride	0.0000	0.00		0.0		0.00
TOTAL VOC REMOVAL (Interval Total)	232.1					
TOTAL VOC REMOVAL FROM OCTOBER 2015	18,420					
TOTAL VOC REMOVAL (OVERALL TOTAL)	18,652					

Table 5 VOC Removal Calculations
September 2015
Periodic Review Report No. 4
October 2015 to December 2017
Kliegman Brothers Site OU1 - Site No. 2-41-031
NYSDEC Work Assignment #D007621

			URS EFFLUENT		GWTT EFFLUENT	
			System Run Time Interval	864.00	System Run Time Interval	863.0
12/31/2015			Flow Rate (cfm)	200	Flow Rate (cfm)	285
Compounds	Cummulative Mass Extracted (lbs.)	Cummulative Mass Extracted (ug/m3)	Conc. (ug/m3)	Mass (lbs.) Extracted	Conc. (ug/m3)	Mass (lbs.) Extracted
1,1,1-Trichloroethane	0.0136	21.00	21.0	0.0		0.00
1,1,2,2-Tetrachloroethane	0.0000	0.00		0.0		0.00
1,1,2-trichloro-1,2,2-trifluoroethane (Freon 113)	0.0000	0.00		0.0		0.00
1,1,2-Trichloroethane	0.7737	840.00		0.0	840.0	0.77
1,1-Dichloroethane	0.1013	110.00		0.0	110	0.10
1,1-Dichloroethylene	0.3592	390.00		0.0	390	0.36
1,2,4-Trichlorobenzene	0.0000	0.00		0.0		0.00
1,2,4-Trimethylbenzene	0.0000	0.00		0.0		0.00
1,2-Dichloroethane	0.0000	0.00		0.0		0.00
1,3,5-Trimethylbenzene	0.0000	0.00		0.0		0.00
1,3-Dichlorobenzene	0.0000	0.00		0.0		0.00
1,4-Dichlorobenzene	0.0000	0.00		0.0		0.00
2-Butanone (Methyl ethyl ketone)	0.0000	0.00		0.0		0.00
2-Hexanone	0.0000	0.00		0.0		0.00
4-Ethyl Toluene	0.0000	0.00		0.0		0.00
4-Methyl-2-Pentanone (MIBK)	0.0000	0.00		0.0		0.00
Acetone	0.0000	0.00		0.0		0.00
Benzene	0.0000	0.00		0.0		0.00
Bromodichlorobenzene	0.00	0.00		0.00		0.00
Carbon Disulfide	0.0000	0.00		0.0		0.00
Carbon Tetrachloride	0.0875	95.00		0.0	95	0.09
Chlorobenzene	0.0000	0.00		0.0		0.00
Chloroethane	0.0129	14.00		0.0	14	0.01
Chloroform	0.1351	158.00	38.0	0.0	120	0.11
Chloromethane	0.0000	0.00		0.0		0.00
cis-1,2-Dichloroethylene	0.5267	581.00	31.0	0.0	550	0.51
Cyclohexane	0.0000	0.00		0.0		0.00
Dichlorodifluoromethane (Freon 12)	0.2671	290.00		0.0	290	0.27
Ethanol	0.0000	0.00		0.0		0.00
Ethyl Acetate	0.0000	0.00		0.0		0.00
Ethylbenzene	0.0164	20.70	9.7	0.0	11.0	0.01
Heptane	0.0000	0.00		0.0		0.00
Hexane	0.0000	0.00		0.0		0.00
Isopropyl Alcohol	0.0000	0.00		0.0		0.00
m,p-Xylene	0.1304	163.00	72.0	0.0	91.0	0.08
Methyl tert-Butyl Ether (MTBE)	0.0000	0.00		0.0		0.00
Methylene Chloride	0.0000	0.00		0.0		0.00
Napthalene	0.0000	0.00		0.0		0.00
o-Xylene	0.0416	52.00	23.0	0.0	29.0	0.03
Propylene	0.0000	0.00		0.0		0.00
Styrene	0.0000	0.00		0.0		0.00
Tetrachloroethylene (Tetrachloroethene)	239.7260	290,000.00	100,000	65	190,000	175.01
Tetrahydrofuran	0.0000	0.00		0.0		0.00
Toluene	0.0000	0.00		0.0		0.00
trans 1,2-Dichloroethylene	0.0000	0.00		0.0		0.00
Trichloroethylene (Trichloroethene)	1.7745	1,980.00	180	0	1,800	1.66
Trichlorofluoromethane (Freon 11)	0.0636	69.00		0.0	69	0.06
Vinyl Acetate	0.0000	0.00		0.0		0.00
Vinyl Chloride	0.0000	0.00		0.0		0.00
TOTAL VOC REMOVAL (Interval Total)	244.0					
TOTAL VOC REMOVAL FROM NOVEMBER 2015	18,652					
TOTAL VOC REMOVAL (OVERALL TOTAL)	18,896					

Table 5 VOC Removal Calculations
September 2015
Periodic Review Report No. 4
October 2015 to December 2017
Kliegman Brothers Site OU1 - Site No. 2-41-031
NYSDEC Work Assignment #D007621

			URS EFFLUENT		GWTT EFFLUENT	
			System Run Time Interval	1369.00	System Run Time Interval	390.0
2/26/2016			Flow Rate (cfm)	14	Flow Rate (cfm)	285
Compounds	Cummulative Mass Extracted (lbs.)	Cummulative Mass Extracted (ug/m3)	Conc. (ug/m3)	Mass (lbs.) Extracted	Conc. (ug/m3)	Mass (lbs.) Extracted
1,1,1-Trichloroethane	0.0294	410.00	410.0	0.0		0.00
1,1,2,2-Tetrachloroethane	0.0000	0.00		0.0		0.00
1,1,2-trichloro-1,2,2-trifluoroethane (Freon 113)	0.0000	0.00		0.0		0.00
1,1,2-Trichloroethane	0.0000	0.00		0.0		0.00
1,1-Dichloroethane	0.0020	28.00	28.0	0.0		0.00
1,1-Dichloroethylene	0.0079	110.00	110.0	0.0		0.00
1,2,4-Trichlorobenzene	0.0000	0.00		0.0		0.00
1,2,4-Trimethylbenzene	0.0000	0.00		0.0		0.00
1,2-Dichloroethane	0.0000	0.00		0.0		0.00
1,3,5-Trimethylbenzene	0.0000	0.00		0.0		0.00
1,3-Dichlorobenzene	0.0000	0.00		0.0		0.00
1,4-Dichlorobenzene	0.0000	0.00		0.0		0.00
2-Butanone (Methyl ethyl ketone)	0.0000	0.00		0.0		0.00
2-Hexanone	0.0000	0.00		0.0		0.00
4-Ethyl Toluene	0.0000	0.00		0.0		0.00
4-Methyl-2-Pentanone (MIBK)	0.0000	0.00		0.0		0.00
Acetone	0.0000	0.00		0.0		0.00
Benzene	0.0000	0.00		0.0		0.00
Bromodichlorobenzene	0.00	0.00		0.00		0.00
Carbon Disulfide	0.0000	0.00		0.0		0.00
Carbon Tetrachloride	0.0033	46.00	46.0	0.0		0.00
Chlorobenzene	0.0000	0.00		0.0		0.00
Chloroethane	0.0000	0.00		0.0		0.00
Chloroform	0.0055	77.00	77.0	0.0		0.00
Chloromethane	0.0000	0.00		0.0		0.00
cis-1,2-Dichloroethylene	0.0144	200.00	200.0	0.0		0.00
Cyclohexane	0.0000	0.00		0.0		0.00
Dichlorodifluoromethane (Freon 12)	0.0086	120.00	120.0	0.0		0.00
Ethanol	0.0000	0.00		0.0		0.00
Ethyl Acetate	0.0000	0.00		0.0		0.00
Ethylbenzene	0.0000	0.00		0.0		0.00
Heptane	0.0000	0.00		0.0		0.00
Hexane	0.0000	0.00		0.0		0.00
Isopropyl Alcohol	0.0000	0.00		0.0		0.00
m,p-Xylene	0.0000	0.00		0.0		0.00
Methyl tert-Butyl Ether (MTBE)	0.0000	0.00		0.0		0.00
Methylene Chloride	0.0000	0.00		0.0		0.00
Napthalene	0.0000	0.00		0.0		0.00
o-Xylene	0.0000	0.00		0.0		0.00
Propylene	0.0000	0.00		0.0		0.00
Styrene	0.0000	0.00		0.0		0.00
Tetrachloroethylene (Tetrachloroethene)	212.1593	1,420,000.00	1,100,000	79	320,000	133.20
Tetrahydrofuran	0.0000	0.00		0.0		0.00
Toluene	0.0000	0.00		0.0		0.00
trans 1,2-Dichloroethylene	0.0000	0.00		0.0		0.00
Trichloroethylene (Trichloroethene)	0.0502	700.00	700	0		0.00
Trichlorofluoromethane (Freon 11)	0.0000	0.00		0.0		0.00
Vinyl Acetate	0.0000	0.00		0.0		0.00
Vinyl Chloride	0.0000	0.00		0.0		0.00
TOTAL VOC REMOVAL (Interval Total)	212.3					
TOTAL VOC REMOVAL FROM DECEMBER 2015	18,896					
TOTAL VOC REMOVAL (OVERALL TOTAL)	19,109					

Table 5 VOC Removal Calculations
September 2015
Periodic Review Report No. 4
October 2015 to December 2017
Kliegman Brothers Site OU1 - Site No. 2-41-031
NYSDEC Work Assignment #D007621

			URS EFFLUENT		GWTT EFFLUENT	
			System Run Time Interval	790.00	System Run Time Interval	792.0
3/30/2016			Flow Rate (cfm)	0	Flow Rate (cfm)	285
Compounds	Cummulative Mass Extracted (lbs.)	Cummulative Mass Extracted (ug/m3)	Conc. (ug/m3)	Mass (lbs.) Extracted	Conc. (ug/m3)	Mass (lbs.) Extracted
1,1,1-Trichloroethane	0.3973	489.00	19.0	0.0	470	0.40
1,1,2,2-Tetrachloroethane	0.0000	0.00		0.0		0.00
1,1,2-trichloro-1,2,2-trifluoroethane (Freon 113)	0.0000	0.00		0.0		0.00
1,1,2-Trichloroethane	0.0000	0.00		0.0		0.00
1,1-Dichloroethane	0.0626	74.00		0.0	74	0.06
1,1-Dichloroethylene	0.1691	200.00		0.0	200	0.17
1,2,4-Trichlorobenzene	0.0000	0.00		0.0		0.00
1,2,4-Trimethylbenzene	0.0000	0.00		0.0		0.00
1,2-Dichloroethane	0.0000	0.00		0.0		0.00
1,3,5-Trimethylbenzene	0.0000	0.00		0.0		0.00
1,3-Dichlorobenzene	0.0000	0.00		0.0		0.00
1,4-Dichlorobenzene	0.0000	0.00		0.0		0.00
2-Butanone (Methyl ethyl ketone)	0.0000	0.00		0.0		0.00
2-Hexanone	0.0000	0.00		0.0		0.00
4-Ethyl Toluene	0.0000	0.00		0.0		0.00
4-Methyl-2-Pentanone (MIBK)	0.0000	0.00		0.0		0.00
Acetone	0.0000	0.00		0.0		0.00
Benzene	0.0000	0.00		0.0		0.00
Bromodichlorobenzene	0.00	0.00		0.00		0.00
Carbon Disulfide	0.0000	0.00		0.0		0.00
Carbon Tetrachloride	0.0558	66.00		0.0	66	0.06
Chlorobenzene	0.0000	0.00		0.0		0.00
Chloroethane	0.0070	8.30		0.0	8	0.01
Chloroform	0.0820	126.00	29.0	0.0	97	0.08
Chloromethane	0.0000	0.00		0.0		0.00
cis-1,2-Dichloroethylene	0.7439	901.00	21.0	0.0	880	0.74
Cyclohexane	0.0000	0.00		0.0		0.00
Dichlorodifluoromethane (Freon 12)	0.1522	180.00		0.0	180	0.15
Ethanol	0.0000	0.00		0.0		0.00
Ethyl Acetate	0.0000	0.00		0.0		0.00
Ethylbenzene	0.0000	0.00		0.0		0.00
Heptane	0.0000	0.00		0.0		0.00
Hexane	0.0000	0.00		0.0		0.00
Isopropyl Alcohol	0.0000	0.00		0.0		0.00
m,p-Xylene	0.0000	26.00	26.0	0.0		0.00
Methyl tert-Butyl Ether (MTBE)	0.0000	0.00		0.0		0.00
Methylene Chloride	0.0000	0.00		0.0		0.00
Napthalene	0.0000	0.00		0.0		0.00
o-Xylene	0.0000	0.00		0.0		0.00
Propylene	0.0000	0.00		0.0		0.00
Styrene	0.0000	0.00		0.0		0.00
Tetrachloroethylene (Tetrachloroethene)	118.3465	240,000.00	100,000	0	140,000	118.35
Tetrahydrofuran	0.0000	0.00		0.0		0.00
Toluene	0.0000	0.00		0.0		0.00
trans 1,2-Dichloroethylene	0.0000	0.00		0.0		0.00
Trichloroethylene (Trichloroethene)	1.0989	1,450.00	150	0	1,300	1.10
Trichlorofluoromethane (Freon 11)	0.0000	0.00		0.0		0.00
Vinyl Acetate	0.0000	0.00		0.0		0.00
Vinyl Chloride	0.0000	0.00		0.0		0.00
TOTAL VOC REMOVAL (Interval Total)	121.1					
TOTAL VOC REMOVAL FROM FEBRUARY 2016	19,109					
TOTAL VOC REMOVAL (OVERALL TOTAL)	19,230					

Table 5 VOC Removal Calculations
September 2015
Periodic Review Report No. 4
October 2015 to December 2017
Kliegman Brothers Site OU1 - Site No. 2-41-031
NYSDEC Work Assignment #D007621

	EFFLUENT COMBINED	
	System Run Time Interval	741.00
2/22/2017	Flow Rate (cfm)	255
Compounds	Mass (lbs.) Extracted	Conc. (ug/m3)
1,1,1-Trichloroethane	0.0	
1,1,2,2-Tetrachloroethane	0.0	
1,1,2-trichloro-1,2,2-trifluoroethane (Freon 113)	0.0	
1,1,2-Trichloroethane	0.0	
1,1-Dichloroethane	0.0	
1,1-Dichloroethylene	0.0	
1,2,4-Trichlorobenzene	0.0	
1,2,4-Trimethylbenzene	0.0	
1,2-Dichloroethane	0.0	
1,3,5-Trimethylbenzene	0.0	
1,3-Dichlorobenzene	0.0	
1,4-Dichlorobenzene	0.0	
2-Butanone (Methyl ethyl ketone)	0.0	
2-Hexanone	0.0	
4-Ethyl Toluene	0.0	
4-Methyl-2-Pentanone (MIBK)	0.0	
Acetone	0.0	
Benzene	0.0	
Bromodichlorobenzene	0.00	
Carbon Disulfide	0.0	
Carbon Tetrachloride	0.0	
Chlorobenzene	0.0	
Chloroethane	0.0	
Chloroform	0.0	
Chloromethane	0.0	
cis-1,2-Dichloroethylene	0.6	810.0
Cyclohexane	0.0	
Dichlorodifluoromethane (Freon 12)	0.0	
Ethanol	0.0	
Ethyl Acetate	0.0	
Ethylbenzene	0.0	
Heptane	0.0	
Hexane	0.0	
Isopropyl Alcohol	0.0	
m,p-Xylene	0.0	
Methyl tert-Butyl Ether (MTBE)	0.0	
Methylene Chloride	0.0	
Napthalene	0.0	
o-Xylene	0.0	
Propylene	0.0	
Styrene	0.0	
Tetrachloroethylene (Tetrachloroethene)	326	460,000
Tetrahydrofuran	0.0	
Toluene	0.0	
trans 1,2-Dichloroethylene	0.0	
Trichloroethylene (Trichloroethene)	0	
Trichlorofluoromethane (Freon 11)	0.0	
Vinyl Acetate	0.0	
Vinyl Chloride	0.0	
TOTAL VOC REMOVAL (Interval Total)	326.1	
TOTAL VOC REMOVAL FROM MARCH 2016	19,230	
TOTAL VOC REMOVAL (OVERALL TOTAL)	19,556	

Table 5 VOC Removal Calculations
September 2015
Periodic Review Report No. 4
October 2015 to December 2017
Kliegman Brothers Site OU1 - Site No. 2-41-031
NYSDEC Work Assignment #D007621

	EFFLUENT COMBINED	
	System Run Time Interval	225.00
4/5/2017	Flow Rate (cfm)	228
Compounds	Mass (lbs.) Extracted	Conc. (ug/m3)
1,1,1-Trichloroethane	0.0	
1,1,2,2-Tetrachloroethane	0.0	
1,1,2-trichloro-1,2,2-trifluoroethane (Freon 113)	0.0	
1,1,2-Trichloroethane	0.0	
1,1-Dichloroethane	0.0	
1,1-Dichloroethylene	0.0	
1,2,4-Trichlorobenzene	0.0	
1,2,4-Trimethylbenzene	0.0	
1,2-Dichloroethane	0.0	
1,3,5-Trimethylbenzene	0.0	
1,3-Dichlorobenzene	0.0	
1,4-Dichlorobenzene	0.0	
2-Butanone (Methyl ethyl ketone)	0.0	
2-Hexanone	0.0	
4-Ethyl Toluene	0.0	
4-Methyl-2-Pentanone (MIBK)	0.0	
Acetone	0.0	
Benzene	0.0	
Bromodichlorobenzene	0.00	
Carbon Disulfide	0.0	
Carbon Tetrachloride	0.0	
Chlorobenzene	0.0	
Chloroethane	0.0	
Chloroform	0.0	
Chloromethane	0.0	
cis-1,2-Dichloroethylene	0.0	140.0
Cyclohexane	0.0	
Dichlorodifluoromethane (Freon 12)	0.0	
Ethanol	0.0	
Ethyl Acetate	0.0	
Ethylbenzene	0.0	
Heptane	0.0	
Hexane	0.0	
Isopropyl Alcohol	0.0	
m,p-Xylene	0.0	
Methyl tert-Butyl Ether (MTBE)	0.0	
Methylene Chloride	0.0	
Napthalene	0.0	
o-Xylene	0.0	
Propylene	0.0	
Styrene	0.0	
Tetrachloroethylene (Tetrachloroethene)	46	240,000
Tetrahydrofuran	0.0	
Toluene	0.0	
trans 1,2-Dichloroethylene	0.0	
Trichloroethylene (Trichloroethene)	0	330
Trichlorofluoromethane (Freon 11)	0.0	
Vinyl Acetate	0.0	
Vinyl Chloride	0.0	
TOTAL VOC REMOVAL (Interval Total)	46.2	
TOTAL VOC REMOVAL FROM FEBRUARY 2017	19,556	
TOTAL VOC REMOVAL (OVERALL TOTAL)	19,602	

Table 6 VOC Removal Summary by Month
Periodic Review Report No. 6
December 2007 to December 2019
Kliegman Brothers Site OU1 - Site No. 2-41-031
NYSDEC Work Assignment #D007621

Date	GWTT Run Interval (hours)	GWTT Run Time (cumulative hours)	URS Run Interval (hours)	URS Run Time (cumulative hours)	Interval VOC Removal (pounds)	VOC Removal (cumulative pounds)
12/13/2007	20	20	20	20	75.76	76
12/20/2007	66.6	87	66.6	86.6	482.96	559
1/4/2008	76.8	163	76.3	162.9	502.34	1061
1/9/2008	120	283	117	279.9	720.83	1782
1/23/2008	311.5	595	333.3	613.2	795.6	2578
2/6/2008	285.3	880	260	873.2	638.05	3216
2/20/2008	235.5	1116	235	1108.2	852.87	4069
3/6/2008	355	1471	360	1468.2	479.86	4549
3/20/2008	332.5	1803	336	1804.2	136.15	4685
5/1/2008	980.9	2784	978	2782.0	-	-
5/28/2008	591.6	3376	647.5	3429.5	224.39	4909
6/25/2008	502.8	3879	502.7	3932.2	320.29	5229
7/30/2008	669.1	4548	838.3	4770.5	393.97	5623
8/27/2008	669.7	5217	669	5439.5	320.42	5944
9/24/2008	504	5721	669.8	6109.3	320.42	6264
10/15/2008	727.3	6449	732.3	6841.6	270.7	6535
11/26/2008	670	7119	669.7	7511.3	108	6643
12/24/2008	738.8	7857	669.6	8180.9	73	6716
1/21/2009	471.9	8329	612.8	8793.7	91	6807
2/18/2009	666.6	8996	645.2	9438.9	164	6971
3/18/2009	665.9	9662	641.6	10080.5	74	7045
4/15/2009	834.6	10496	835.4	10915.9	156	7201
5/13/2009	669.4	11166	670.9	11586.8	119	7320
6/10/2009	667.5	11833	668.4	12255.2	127	7447
7/8/2009	835	12668	838.9	13094.1	159	7606
8/5/2009	670	13338	670.5	13764.6	267	7873
9/2/2009	834.6	14173	836.3	14600.9	147	8020
10/30/2009	717.7	14891	718.7	15319.6	123	8143
11/25/2009	620.9	15512	622.3	15941.9	119	8262
12/24/2009	584.1	16096	612.7	16554.6	77	8339
1/20/2010	500.1	16596	446	17000.6	42	8381
2/24/2010	669.4	17265	586.6	17587.2	89	8470
3/31/2010	861.3	18126	836.1	18423.3	86	8556
4/21/2010	668.2	18795	670.1	19093.4	77	8633

Table 6 VOC Removal Summary by Month
Periodic Review Report No. 6
December 2007 to December 2019
Kliegman Brothers Site OU1 - Site No. 2-41-031
NYSDEC Work Assignment #D007621

Date	GWTT Run Interval (hours)	GWTT Run Time (cumulative hours)	URS Run Interval (hours)	URS Run Time (cumulative hours)	Interval VOC Removal (pounds)	VOC Removal (cumulative pounds)
5/26/2010	666.4	19461	667	19760.4	73	8706
6/30/2010	839	20300	840.9	20601.3	148	8854
7/28/2010	664.4	20964	670.1	21271.4	133	8987
8/25/2010	670	21634	671.7	21943.1	60	9047
9/29/2010	831.3	22466	834.5	22777.6	63	9110
10/27/2010	667.9	23134	668.1	23445.7	154	9264
11/24/2010	671.3	23805	672	24117.7	70	9334
1/5/2011	860.8	24666	290.7	24408.4	97	9431
1/26/2011	504.9	25171	290.7	24699.1	96	9527
2/23/2011	662.9	25834	584.8	25283.9	126	9653
3/30/2011	521.7	26355	837.8	26121.7	90	9743
4/27/2011	669	27024	671.5	26793.2	130	9873
5/25/2011	670.7	27695	670.9	27464.1	129	10002
6/29/2011	838.1	28533	839.9	28304.0	300	10302
7/27/2011	666	29199	664.4	28968.4	62	10364
8/31/2011	835.3	30034	840	29808.4	190	10554
9/28/2011	669.9	30704	670.2	30478.6	117	10671
10/26/2011	668	31372	672	31150.6	135	10806
11/30/2011	837	32209	838.4	31989.0	133	10939
12/28/2011	670.7	32880	647.1	32636.1	110	11049
1/25/2012	649.4	33529	572.6	33208.7	13	11062
2/29/2012	818.1	34347	716.4	33925.1	90	11152
3/28/2012	669.6	35017	669.5	34594.6	333	11485
4/25/2012	670.6	35688	672.7	35267.3	149	11634
5/30/2012	837.2	36525	837.6	36104.9	118	11752
6/27/2012	670.4	37195	670.3	36775.2	104	11856
7/25/2012	669	37864	668.7	37443.9	79	11935
8/29/2012	833.9	38698	564.1	38008.0	320	12255
9/26/2012	668.8	39367	671.4	38679.4	146	12401
11/28/2012	1,503.9	40871	1,047.9	39727.3	101	12502
12/26/2012	676.6	41547	667.3	40394.6	116	12618
1/30/2013	836.6	42384	610.9	41005.5	167	12785
2/27/2013	675.6	43060	447.2	41452.7	155	12940
3/27/2013	667.8	43727	555.3	42008.0	70	13010

Table 6 VOC Removal Summary by Month
Periodic Review Report No. 6
December 2007 to December 2019
Kliegman Brothers Site OU1 - Site No. 2-41-031
NYSDEC Work Assignment #D007621

Date	GWTT Run Interval (hours)	GWTT Run Time (cumulative hours)	URS Run Interval (hours)	URS Run Time (cumulative hours)	Interval VOC Removal (pounds)	VOC Removal (cumulative pounds)
4/24/2013	667.4	44395	668.5	42676.5	84	13094
5/29/2013	836.9	45232	835.1	43511.6	246	13340
6/25/2013	649.9	45882	649.6	44161.2	133	13473
7/31/2013	863	46745	863.3	45024.5	174	13647
8/28/2013	672.6	47417	672.5	45697.0	193	13840
9/25/2013	670.5	48088	669.9	46366.9	192	14032
10/30/2013	840.6	48928	841.6	47208.5	383	14415
11/27/2013	673.3	49602	673	47881.5	333	14748
12/26/2013	696.2	50298	696.4	48577.9	198	14946
1/29/2014	729.4	51027	817	49394.9	133	15079
2/27/2014	232.7	51260	693.6	50088.5	14	15093
3/26/2014	647.5	51907	647.8	50736.3	66	15159
4/30/2014	840.7	52748	840.8	51577.1	213	15372
5/28/2014	671.2	53419	671.7	52248.8	86	15458
6/25/2014	670.6	54090	670.1	52918.9	128	15586
7/30/2014	843.6	54934	843.5	53762.4	259	15845
8/27/2014	670.0	55604	670.1	54432.5	123	15968
9/24/2014	671.8	56275	671.7	55104.2	192	16160
10/31/2014	889.7	57165	889.7	55993.9	315	16475
11/26/2014	582.6	57748	623.8	56617.7	233	16708
12/31/2014	467.2	58215	838.1	57455.8	155	16863
3/25/2015	273.3	58488	1952.8	59408.6	360	17223
4/29/2015	839.4	59328	840.4	60249.0	197	17420
5/28/2015	697	60025	696.8	60945.8	344	17764
6/24/2015	647.6	60672	649.0	61594.8	89	17853
7/29/2015	840.2	61512	840	62434.8	211	18064
8/26/2015	675.5	62188	674.3	63109.1	194	18258
10/1/2015	859.5	63047	860	63969.1	183	18441
10/28/2015	647.2	63695	646.9	64616.0	53	18494
11/25/2015	673.1	64368	672.9	65288.9	232	18726
12/31/2015	863.36	65231	863.8	66152.7	244	18970
2/26/2016	389.64	65621	1369.2	67521.9	212	19182
3/30/2016	791	66412	789.9	68311.8	121	19303
8/24/2016	1085	67497	0	68311.8	0	19303

Table 6 VOC Removal Summary by Month
Periodic Review Report No. 6
December 2007 to December 2019
Kliegman Brothers Site OU1 - Site No. 2-41-031
NYSDEC Work Assignment #D007621

Date	GWTT Run Interval (hours)	GWTT Run Time (cumulative hours)	URS Run Interval (hours)	URS Run Time (cumulative hours)	Interval VOC Removal (pounds)	VOC Removal (cumulative pounds)
9/28/2016	840.6	68337	0	68311.8	0	19303
2/22/2017	741	69078	0	68311.8	326	19629
4/5/2017	224.5	69303	0	68311.8	46	19675
4/26/2017	0	69303	0	68311.8	0	19675
5/24/2017	670.8	69974	0	68311.8	0	19675
6/23/2017	60.6	70034	0	68311.8	0	19675
7/27/2017	815.1	70849	0	68311.8	0	19675
8/29/2017	792.2	71641	0	68311.8	0	19675
9/29/2017	744.5	72386	0	68311.8	0	19675
10/27/2017	671.4	73057	0	68311.8	0	19675
11/28/2017	769.4	73827	0	68311.8	0	19675
12/12/2017	336.6	74163	0	68311.8	0	19675
1/24/2018	221.0	74384	0	68311.8	0	19675
2/23/2018	719.8	75104	0	68311.8	0	19675
3/29/2018	9.8	75114	0	68311.8	0	19675
6/29/2018	0.0	75114	0	68311.8	0	19675
7/30/2018	0.0	75114	0	68311.8	0	19675
9/7/2018	666.9	75781	0	68311.8	0	19675
9/28/2018	506.1	76287	0	68311.8	0	19675
10/30/2018	651.5	76938	0	68311.8	0	19675
12/5/2018	828.2	77767	0	68311.8	0	19675
1/3/2019	647.6	78414	0	68311.8	0	19675
2/8/2019	818.7	79233	0	68311.8	0	19675
2/26/2019	355.7	79589	0	68311.8	0	19675
3/29/2019	673.2	80262	0	68311.8	0	19675
5/2/2019	29.4	80291	0	68311.8	0	19675
6/5/2019	780.8	81072	0	68311.8	0	19675
6/24/2019	443.0	81515	0	68311.8	0	19675
8/2/2019	935.9	82451	0	68311.8	0	19675
9/4/2019	789.0	83240	0	68311.8	0	19675
10/2/2019	674.0	83914	0	68311.8	0	19675
10/29/2019	648.8	84563	0	68311.8	0	19675
11/21/2019	552.5	85115	0	68311.8	0	19675
12/12/2019	357.8	85473	0	68311.8	0	19675

Table 7 Overall VOC Removal Summary
Periodic Review Report No. 4
October 2015 to December 2017
Kliegman Brothers Site OU1 - Site No. 2-41-031
NYSDEC Work Assignment #D007621

Month	Operational Period		Run Time (hr)		Run Time %		Carbon Saturated	VOCs Removed	VOCs Removed
	Start Date	End Date	GWTT	URS	GWTT	URS	(1000 lb)	(lbs)	(lbs/hr)
1	8/23/2004	9/24/2004		537		70%	13	15,200	28.305
2	9/24/2004	10/25/2004		669		89%	11	6,023	9.003
3	10/25/2004	11/22/2004		443		66%	5	2,587	5.840
4	11/22/2004	12/24/2004		444		59%	6	1,779	4.007
5	12/24/2004	1/25/2005		498		63%	3	1,986	3.988
6	1/25/2005	2/23/2005		419		58%	2	1,300	3.103
7	2/23/2005	3/29/2005		466		57%	2	843	1.809
8	3/29/2005	4/21/2005		390		72%	2	681	1.746
9	4/21/2005	6/3/2005		696		67%	2	1,199	1.723
10	6/3/2005	6/27/2005		287		67%	1	582	2.028
11	6/27/2005	8/1/2005		774		78%	2	1,114	1.439
12	8/1/2005	9/2/2005		485		63%	2	720	1.485
13	9/2/2005	10/6/2005		579		71%	2	671	1.159
14	10/6/2005	11/1/2005		362		58%	1	307	0.848
15	11/1/2005	12/8/2005		736		83%	2	508	0.690
16-18	12/8/2005	3/13/2006		1,340		59%	2	756	0.564
19-21	3/13/2006	6/14/2006		1,561		73%	3	942	0.603
22-24	6/14/2006	8/7/2006		1,176		100%	2	719	0.611
25-27	8/7/2006	12/14/2006		1,278		40%	3	878	0.687
28-30	12/14/2006	3/5/2007		1,767		91%	3	706	0.400
31-33	3/5/2007	6/1/2007		1,869		88%	3	903	0.483
34-36	6/1/2007	9/12/2007		1,801		73%	3	1,231	0.684
37*	9/12/2007	12/31/2007	99	99	4%	4%	2	559	2.822
38	12/31/2007	1/31/2008	675	688	91%	92%	5	2,019	1.481
39	1/31/2008	2/29/2008	552	537	79%	77%	5	616	0.566
40	2/29/2008	3/31/2008	741	744	100%	100%	5	796	0.536
41	3/31/2008	4/30/2008	717	714	100%	99%	2	224	0.157
42	4/30/2008	5/31/2008	591	648	79%	87%	2	224	0.181
43	5/31/2008	6/25/2008	503	503	84%	84%	3	320	0.318
44	6/25/2008	7/30/2008	669	838	80%	100%	10	394	0.261
45	7/30/2008	8/27/2008	670	669	100%	100%	5	320	0.239
46	8/27/2008	9/24/2008	504	670	75%	100%	5	320	0.273
47	9/24/2008	10/29/2008	727	732	87%	87%	5	271	0.185
48	10/29/2008	11/26/2008	670	670	100%	100%	5	108	0.081
49	11/26/2008	12/31/2008	739	670	88%	80%	7	73	0.052
50	12/31/2008	1/28/2009	472	613	70%	91%	5	91	0.084
51	1/28/2009	2/25/2009	667	645	99%	96%	5	164	0.125
52	2/25/2009	3/25/2009	666	642	99%	95%	5	74	0.057
53	3/25/2009	4/29/2009	835	835	99%	99%	5	156	0.094
54	4/29/2009	5/27/2009	669	671	100%	100%	5	119	0.089
55	5/27/2009	6/24/2009	668	668	99%	99%	5	127	0.095
56	6/24/2009	7/29/2009	835	839	99%	100%	8	159	0.095
57	7/29/2009	8/26/2009	670	671	100%	100%	5	267	0.200
58	8/26/2009	9/30/2009	835	836	99%	100%	5	147	0.088
59	9/30/2009	10/30/2009	0	0	0%	0%	5	123	0.000
60	10/30/2009	11/25/2009	621	622	100%	100%	5	119	0.096

Table 7 Overall VOC Removal Summary
Periodic Review Report No. 4
October 2015 to December 2017
Kliegman Brothers Site OU1 - Site No. 2-41-031
NYSDEC Work Assignment #D007621

Month	Operational Period		Run Time (hr)		Run Time %		Carbon Saturated	VOCs Removed	VOCs Removed
	Start Date	End Date	GWTT	URS	GWTT	URS	(1000 lb)	(lbs)	(lbs/hr)
61	11/25/2009	12/30/2009	584	613	70%	73%	5	77	0.065
62	12/30/2009	1/27/2010	500	446	74%	66%	5	42	0.044
63	1/27/2010	2/24/2010	669	587	100%	87%	5	89	0.070
64	2/24/2010	3/31/2010	861	836	103%	100%	5	86	0.051
65	3/31/2010	4/28/2010	668	670	99%	100%	5	77	0.058
66	4/28/2010	5/26/2010	666	667	99%	99%	5	73	0.055
67	5/26/2010	6/30/2010	839	841	100%	100%	8	300	0.179
68	6/30/2010	7/28/2010	664	670	99%	100%	5	133	0.100
69	7/28/2010	8/25/2010	670	672	100%	100%	5	60	0.045
70	8/25/2010	9/29/2010	831	835	99%	99%	5	63	0.038
71	9/29/2010	10/27/2010	668	668	99%	99%	6	154	0.115
72	10/27/2010	11/24/2010	671	672	100%	100%	2	70	0.052
73**	11/24/2010	1/5/2011	861	1,142	85%	113%	4	97	0.048
74	1/5/2011	1/26/2011	505	291	100%	58%	2	96	0.121
75	1/26/2011	2/23/2011	663	585	99%	87%	3	126	0.101
76	2/23/2011	3/30/2011	522	838	62%	100%	2	90	0.067
77	3/30/2011	4/27/2011	669	672	100%	100%	3	130	0.097
78	4/27/2011	5/25/2011	671	671	100%	100%	2	129	0.097
79	5/25/2011	6/29/2011	838	840	100%	100%	3	300	0.179
80	6/29/2011	7/27/2011	666	664	99%	99%	2	62	0.046
81	7/27/2011	8/31/2011	835	840	99%	100%	3	190	0.113
82	8/31/2011	9/28/2011	670	670	100%	100%	2	117	0.087
83	9/28/2011	10/26/2011	668	672	99%	100%	3	135	0.101
84	10/26/2011	11/30/2011	837	838	100%	100%	2	133	0.079
85	11/30/2011	12/28/2011	671	647	100%	96%	4	110	0.084
86	12/28/2011	1/25/2012	649	573	97%	85%	2	13	0.011
87	1/25/2012	2/29/2012	818	716	97%	85%	3	90	0.059
88	2/29/2012	3/28/2012	670	670	100%	100%	2	333	0.248
89	3/28/2012	4/25/2012	671	673	100%	100%	3	149	0.111
90	4/25/2012	5/30/2012	837	838	100%	100%	4	118	0.070
91	5/30/2012	6/27/2012	670	670	100%	100%	2	104	0.078
92	6/27/2012	7/25/2012	669	669	100%	100%	3	79	0.059
93	7/25/2012	8/29/2012	834	564	99%	67%	2	320	0.229
94	8/29/2012	9/26/2012	669	671	100%	100%	3	146	0.109
95	9/26/2012	11/28/2012	1,504	1,048	99%	69%	2	101	0.040
96	11/28/2012	12/26/2012	677	667	101%	99%	2	116	0.086
97	12/26/2012	1/30/2013	837	611	100%	73%	3	167	0.116
98	1/30/2013	2/27/2013	676	447	101%	67%	0	155	0.138
99	2/27/2013	3/27/2013	668	555	99%	83%	0	70	0.057
100	3/27/2013	4/24/2013	667	669	99%	99%	11	84	0.063
101	4/24/2013	5/29/2013	837	835	100%	99%	0	246	0.147
102	5/29/2013	6/25/2013	650	650	100%	100%	0	133	0.102
103	6/25/2013	7/31/2013	863	863	100%	100%	0	174	0.101
104	7/31/2013	8/28/2013	673	673	100%	100%	0	193	0.143
105	8/28/2013	9/25/2013	671	670	100%	100%	0	192	0.143
106	9/25/2013	10/30/2013	841	842	100%	100%	0	383	0.228

Table 7 Overall VOC Removal Summary
Periodic Review Report No. 4
October 2015 to December 2017
Kliegman Brothers Site OU1 - Site No. 2-41-031
NYSDEC Work Assignment #D007621

Month	Operational Period		Run Time (hr)		Run Time %		Carbon Saturated	VOCs Removed	VOCs Removed
	Start Date	End Date	GWTT	URS	GWTT	URS	(1000 lb)	(lbs)	(lbs/hr)
107	10/30/2013	11/27/2013	673	673	100%	100%	0	333	0.248
108	11/27/2013	12/26/2013	696	696	100%	100%	0	198	0.142
109	12/26/2013	1/29/2014	429	817	53%	100%	0	133	0.107
110	1/29/2014	2/27/2014	233	694	33%	100%	0	14	0.015
111	2/27/2014	3/26/2014	648	648	100%	100%	0	66	0.051
112	3/26/2014	4/30/2014	841	841	100%	100%	0	213	0.127
113	4/30/2014	5/28/2014	671	672	100%	100%	0	86	0.064
114	5/28/2014	6/25/2014	671	670	100%	100%	0	128	0.095
115	6/25/2014	7/30/2014	844	844	100%	100%	0	259	0.154
116	7/30/2014	8/27/2014	670	670	100%	100%	0	123	0.092
117	8/27/2014	9/24/2014	672	672	100%	100%	0	192	0.143
118	9/24/2014	10/31/2014	890	890	100%	100%	0	315	0.177
119	10/31/2014	11/26/2014	583	624	93%	100%	0	233	0.193
120	11/26/2014	12/31/2014	467	838	56%	100%	0	155	0.118
121-123	12/31/2014	3/25/2015	273	1,953	14%	97%	0	360	0.162
124	3/25/2015	4/29/2015	839	840	100%	100%	0	197	0.117
125	4/29/2015	5/28/2015	697	697	100%	100%	0	344	0.247
126	5/28/2015	6/24/2015	648	649	100%	100%	0	69	0.053
127	6/24/2015	7/29/2015	840	840	100%	100%	0	211	0.125
128	7/29/2015	8/26/2015	676	674	101%	100%	0	194	0.144
129	8/26/2015	10/1/2015	860	860	99%	100%	0	183	0.107
130	10/1/2015	10/28/2015	647	647	100%	100%	0	53	0.041
131	10/25/2015	11/25/2015	673	673	90%	90%	0	232	0.172
132	11/25/2015	12/31/2015	863	864	100%	100%	0	244	0.141
133-134	12/31/2015	2/26/2016	390	1,369	28%	100%	0	212	0.121
135	2/26/2016	3/30/2016	791	790	100%	100%	0	121	0.077
136-140***	3/30/2016	8/24/2016	1085	0	31%	0%	0	0	0.000
141	8/24/2016	9/28/2016	841	0	100%	0%	0	0	0.000
142-146	9/28/2016	2/22/2017	741	0	21%	0%	0	326	0.440
147	2/22/2017	4/5/2017	225	0	22%	0%	0	46	0.205
148	4/5/2017	4/26/2017	0	0	0%	0%	0	0	0.000
149	4/26/2017	5/24/2017	671	0	100%	0%	0	0	0.000
150	5/24/2017	6/23/2017	61	0	8%	0%	0	0	0.000
151	6/23/2017	7/27/2017	815	0	100%	0%	0	0	0.000
152	7/27/2017	8/29/2017	792	0	100%	0%	0	0	0.000
153	8/29/2017	9/29/2017	745	0	100%	0%	0	0	0.000
154	9/29/2017	10/27/2017	671	0	100%	0%	0	0	0.000
155	10/27/2017	11/28/2017	769	0	100%	0%	0	0	0.000
156	11/28/2017	12/12/2017	337	0	100%	0%	0	0	0.000
		TOTALS:	337	87,021			332	60,974	

Note:
*Data is absent from 9/12/07 to 12/13/07 due to construction that took place for the new system.
**Data is absent from 12/2010 due to a later reading in January from snow issues.
***VOC removal data is absent intermittently since March 30, 2016 because sampling was suspended at the site.

Appendix G

Data Usability Summary Report

Site: SMP B - Kliegman Brothers
Laboratory: Eurofins TestAmerica Buffalo – Amherst, NY
SDG No.: 480-178389-1
Parameter: Volatile Organic Compounds (VOCs)
Data Reviewer: Amy Bass/TRC
Peer Reviewer: Liz Denly/TRC
Date: January 12, 2021

Samples Reviewed and Evaluation Summary

15 / Groundwater: KB-MW-12H-WG-20201116, KB-MW-14DR-WG-20201116, KB-MW-30M-WG-20201116, KB-MW-31D-WG-20201116, KB-MW-33D-WG-20201116, KB-MW-24D-WG-20201116, KB-MW-32D-WG-20201116, KB-MW-23D-WG-20201116, KB-MW-24H-WG-20201116, KB-MW-03D-WG-20201116, KB-MW-04D-WG-20201116, KB-MW-14H-WG-20201116, KB-MW-10D-WG-20201116, KB-MW-10H-WG-20201116, KB-MW-05D-WG-20201116

1 / Trip Blank: TRIP BLANK-20201116

The above-listed trip blank and groundwater samples were collected on November 16, 2020 and were analyzed for VOCs by SW-846 Method 8260C. The data validation was performed in accordance with *USEPA National Functional Guidelines for Organic Superfund Methods Data Review (EPA-540-R-017-002),* January 2017, modified for the SW-846 methodology utilized.

The data were evaluated based on the following parameters:

	•	Overall Evaluation of Data and Potential Usability Issues
	•	Data Completeness
	•	Holding Times and Sample Preservation
*	•	Gas Chromatography/Mass Spectrometry (GC/MS) Tunes
	•	Initial and Continuing Calibrations
*	•	Blanks
*	•	Surrogate Recoveries
*	•	Laboratory Control Sample (LCS) Results
*	•	Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
*	•	Internal Standards
NA	•	Field Duplicate Results
	•	Sample Results and Reported Quantitation Limits (QLs)
*	•	Target Compound Identification
	•	Tentatively Identified Compounds (TICs)

*	-	All criteria were met.
NA	-	A field duplicate pair was not associated with this sample set.

Overall Evaluation of Data and Potential Usability Issues

All results are usable for project objectives. No qualifications were required due to sampling error. Qualifications applied to the data due to analytical error are discussed below.

- Potential uncertainty exists for select VOC results that were detected between the method detection limit (MDL) and QL. These results were qualified as estimated (J) by the laboratory. These results can be used for project objectives as estimated values, which may have a minor impact on the data usability.

- The positive result for chloromethane in sample KB-MW-10D-WG-20201116 was qualified as estimated (J), and the nondetect results for select VOCs in all samples were qualified as estimated (UJ) due to continuing calibration nonconformances. These results can be used for project objectives as an estimated value or as nondetects with estimated QLs, which may have a minor impact on the data usability.

Data Completeness

The data package was a complete Level IV data deliverable package, with the following exceptions.

- The laboratory did not report LCS and MS/MSD percent recoveries (%Rs) and relative percent differences (RPDs) for total xylenes on the summary forms. The %Rs and RPDs were calculated during validation and were within the laboratory acceptance criteria; no validation actions were required on this basis.
- It was noted that the laboratory did not identify one TIC in three samples; upon request during validation, the laboratory reported the TIC.

Holding Times and Sample Preservation

All holding time and sample preservation method criteria were met, with the following exceptions.

- The narrative noted that the pH measurements for four samples were outside the required criteria of pH < 2 when verified by the laboratory. Elevated pH measurements decrease the acceptable holding time from 14 days (for properly preserved samples) to 7 days. The affected samples (KB-MW-30M-WG-20201116 KB-MW-32D-WG-20201116, KB-MW-24H-WG-20201116, and KB-MW-14H-WG-20201116) were analyzed approximately 13-16 hours outside of the 7-day holding time. Professional judgment was used to not qualify sample results based on this slight holding time exceedance.

GC/MS Tunes

All criteria were met.

Initial and Continuing Calibrations

The percent relative standard deviations, coefficients of determination, and relative response factors were within the acceptance criteria in the initial calibration (IC) associated with the samples in this data set. The following table summarizes the percent differences or percent drifts (%Ds) that did not meet the method acceptance criteria in the continuing calibration (CC) standard, the associated samples, and the resulting validation actions. The relative response factors were within criteria in the CC standard.

CC	Analyte	%D	Validation Actions
	Dichlorodifluoromethane	-28.4	

CC	Analyte	%D	Validation Actions
CCVIS 480-560595/2 11/23/2020 @19:56	Bromomethane	-21.4	The nondetect results for the noted VOCs in the associated samples were qualified as estimated (UJ).
	Chloromethane	-22.1	The positive result for chloromethane in sample KB-MW-10D-WG-20201116 was qualified as estimated (J), and the nondetect results for chloromethane in the remaining associated samples were qualified as estimated (UJ).
Associated samples: KB-MW-12H-WG-20201116, KB-MW-14DR-WG-20201116, KB-MW-30M-WG-20201116, KB-MW-31D-WG-20201116, KB-MW-33D-WG-20201116, KB-MW-24D-WG-20201116, KB-MW-32D-WG-20201116, KB-MW-23D-WG-20201116, KB-MW-24H-WG-20201116, KB-MW-03D-WG-20201116, KB-MW-04D-WG-20201116, KB-MW-14H-WG-20201116, KB-MW-10D-WG-20201116, KB-MW-10H-WG-20201116, KB-MW-05D-WG-20201116, TRIP BLANK-20201116			

Blanks

Target analytes were not detected in the laboratory method blank or in the trip blank.

Surrogate Recoveries

The surrogate %Rs were within the laboratory acceptance criteria.

LCS Results

The LCS %Rs were within the laboratory acceptance criteria.

Note that the laboratory did not report LCS %Rs for total xylenes. The %Rs were calculated during validation and were within the laboratory's acceptance criteria (76-122%).

MS/MSD Results

MS/MSD analyses were performed on sample KB-MW-12H-WG-20201116. The following table summarizes the MS/MSD %Rs that did not meet the laboratory acceptance criteria, the parent sample for the MS/MSD analysis, and the resulting validation action. All MS/MSD RPDs met the laboratory acceptance criteria (RPD ≤30%).

MS/MSD Parent Sample ID	Analyte	MS %R	MSD %R	MS/MSD %R QC Limits	Validation Action
KB-MW-12H-WG-20201116	2-Butanone	164	162	57-140	Qualification was not required since 2-butanone was not detected in sample KB-MW-12H-WG-20201116.

Note that the laboratory did not report MS/MSD %Rs and RPDs for total xylenes. The %Rs and RPDs were calculated during validation and were within the laboratory's acceptance criteria (76-122% for %R; 30% for RPD).

Internal Standards

All internal standard criteria were met.

Field Duplicate Results

A field duplicate pair was not submitted with this data set.

Sample Results and Reported Quantitation Limits

Select VOC results were reported between the MDL and QL. These results were qualified as estimated (J) by the laboratory.

Sample calculations were spot-checked; there were no errors noted.

The following table summarizes the dilutions performed.

Parameter	Sample ID	Dilution	Reason for Dilution
VOCs	KB-MW-14DR-WG-20201116	200-fold	Samples were diluted to bring the concentration of tetrachloroethene which would have exceeded the calibration range if analyzed undiluted.
	KB-MW-24D-WG-20201116	10-fold	
	KB-MW-24H-WG-20201116	2-fold	Sample was likely diluted due to the concentration of tetrachloroethene which was close to the upper limit of the calibration range.

Target Compound Identification

All criteria were met.

TICs

There were no TICs identified in the associated VOC method blank, but one unknown TIC was noted in the trip blank associated with this sample set; this unknown TIC was not identified in any of the groundwater samples. There was one TIC in samples KB-MW-31D-WG-20201116, KB-MW-33D-WG-20201116, and KB-MW-32D-WG-20201116 that was not initially identified by the laboratory; upon request during validation, the laboratory reported this TIC.

QUALIFIED FORM 1s

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-12H-WG-20201116 Lab Sample ID: 480-178389-1

Matrix: Water Lab File ID: S4613.D

Analysis Method: 8260C Date Collected: 11/16/2020 10:00

Sample wt/vol: 5(mL) Date Analyzed: 11/23/2020 22:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND	~~F1~~	10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	7.0	J	10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND	UJ	1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	ND		1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	0.97	J	1.0	0.34
74-87-3	Chloromethane	ND	UJ	1.0	0.35
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
75-71-8	Dichlorodifluoromethane	ND	UJ	1.0	0.68
100-41-4	Ethylbenzene	ND		1.0	0.74
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
98-82-8	Isopropylbenzene	ND		1.0	0.79

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-12H-WG-20201116 Lab Sample ID: 480-178389-1

Matrix: Water Lab File ID: S4613.D

Analysis Method: 8260C Date Collected: 11/16/2020 10:00

Sample wt/vol: 5(mL) Date Analyzed: 11/23/2020 22:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	7.0		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	ND		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	104		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		77-120
460-00-4	4-Bromofluorobenzene (Surr)	99		73-120
1868-53-7	Dibromofluoromethane (Surr)	99		75-123

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-12H-WG-20201116 Lab Sample ID: 480-178389-1

Matrix: Water Lab File ID: S4613.D

Analysis Method: 8260C Date Collected: 11/16/2020 10:00

Sample wt/vol: 5(mL) Date Analyzed: 11/23/2020 22:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

Number TICs Found: 1 TIC Result Total: 6.9

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
	Unknown	4.37	6.9	T J	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: TRIP BLANK-20201116 Lab Sample ID: 480-178389-2

Matrix: Water Lab File ID: S4614.D

Analysis Method: 8260C Date Collected: 11/16/2020 00:00

Sample wt/vol: 5(mL) Date Analyzed: 11/23/2020 22:33

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	ND		10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND	UJ	1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	ND		1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	ND		1.0	0.34
74-87-3	Chloromethane	ND	UJ	1.0	0.35
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
75-71-8	Dichlorodifluoromethane	ND	UJ	1.0	0.68
100-41-4	Ethylbenzene	ND		1.0	0.74
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
98-82-8	Isopropylbenzene	ND		1.0	0.79

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: TRIP BLANK-20201116 Lab Sample ID: 480-178389-2

Matrix: Water Lab File ID: S4614.D

Analysis Method: 8260C Date Collected: 11/16/2020 00:00

Sample wt/vol: 5(mL) Date Analyzed: 11/23/2020 22:33

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	ND		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	ND		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	98		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		77-120
460-00-4	4-Bromofluorobenzene (Surr)	93		73-120
1868-53-7	Dibromofluoromethane (Surr)	100		75-123

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: TRIP BLANK-20201116 Lab Sample ID: 480-178389-2

Matrix: Water Lab File ID: S4614.D

Analysis Method: 8260C Date Collected: 11/16/2020 00:00

Sample wt/vol: 5(mL) Date Analyzed: 11/23/2020 22:33

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

Number TICs Found: 1 TIC Result Total: 3

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
	Unknown	10.97	3.0	T J	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-14DR-WG-20201116 Lab Sample ID: 480-178389-3

Matrix: Water Lab File ID: S4615.D

Analysis Method: 8260C Date Collected: 11/16/2020 10:05

Sample wt/vol: 5(mL) Date Analyzed: 11/23/2020 22:56

Soil Aliquot Vol: Dilution Factor: 200

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		200	160
79-34-5	1,1,2,2-Tetrachloroethane	ND		200	42
79-00-5	1,1,2-Trichloroethane	ND		200	46
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		200	62
75-34-3	1,1-Dichloroethane	ND		200	76
75-35-4	1,1-Dichloroethene	ND		200	58
120-82-1	1,2,4-Trichlorobenzene	ND		200	82
96-12-8	1,2-Dibromo-3-Chloropropane	ND		200	78
95-50-1	1,2-Dichlorobenzene	ND		200	160
107-06-2	1,2-Dichloroethane	ND		200	42
78-87-5	1,2-Dichloropropane	ND		200	140
541-73-1	1,3-Dichlorobenzene	ND		200	160
106-46-7	1,4-Dichlorobenzene	ND		200	170
78-93-3	2-Butanone (MEK)	ND		2000	260
591-78-6	2-Hexanone	ND		1000	250
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1000	420
67-64-1	Acetone	ND		2000	600
71-43-2	Benzene	ND		200	82
75-27-4	Bromodichloromethane	ND		200	78
75-25-2	Bromoform	ND		200	52
74-83-9	Bromomethane	ND	UJ	200	140
75-15-0	Carbon disulfide	ND		200	38
56-23-5	Carbon tetrachloride	ND		200	54
108-90-7	Chlorobenzene	ND		200	150
124-48-1	Dibromochloromethane	ND		200	64
75-00-3	Chloroethane	ND		200	64
67-66-3	Chloroform	ND		200	68
74-87-3	Chloromethane	ND	UJ	200	70
156-59-2	cis-1,2-Dichloroethene	ND		200	160
10061-01-5	cis-1,3-Dichloropropene	ND		200	72
110-82-7	Cyclohexane	ND		200	36
75-71-8	Dichlorodifluoromethane	ND	UJ	200	140
100-41-4	Ethylbenzene	ND		200	150
106-93-4	1,2-Dibromoethane	ND		200	150
98-82-8	Isopropylbenzene	ND		200	160

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-14DR-WG-20201116 Lab Sample ID: 480-178389-3

Matrix: Water Lab File ID: S4615.D

Analysis Method: 8260C Date Collected: 11/16/2020 10:05

Sample wt/vol: 5(mL) Date Analyzed: 11/23/2020 22:56

Soil Aliquot Vol: Dilution Factor: 200

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		500	260
1634-04-4	Methyl tert-butyl ether	ND		200	32
108-87-2	Methylcyclohexane	ND		200	32
75-09-2	Methylene Chloride	ND		200	88
100-42-5	Styrene	ND		200	150
127-18-4	Tetrachloroethene	7000		200	72
108-88-3	Toluene	ND		200	100
156-60-5	trans-1,2-Dichloroethene	ND		200	180
10061-02-6	trans-1,3-Dichloropropene	ND		200	74
79-01-6	Trichloroethene	ND		200	92
75-69-4	Trichlorofluoromethane	ND		200	180
75-01-4	Vinyl chloride	ND		200	180
1330-20-7	Xylenes, Total	ND		400	130

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	94		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		77-120
460-00-4	4-Bromofluorobenzene (Surr)	96		73-120
1868-53-7	Dibromofluoromethane (Surr)	101		75-123

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-14DR-WG-20201116 Lab Sample ID: 480-178389-3

Matrix: Water Lab File ID: S4615.D

Analysis Method: 8260C Date Collected: 11/16/2020 10:05

Sample wt/vol: 5(mL) Date Analyzed: 11/23/2020 22:56

Soil Aliquot Vol: Dilution Factor: 200

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
	Tentatively Identified Compound		None		

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-30M-WG-20201116 Lab Sample ID: 480-178389-4

Matrix: Water Lab File ID: S4616.D

Analysis Method: 8260C Date Collected: 11/16/2020 10:10

Sample wt/vol: 5(mL) Date Analyzed: 11/23/2020 23:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	6.4	J	10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND	UJ	1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	ND		1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	0.98	J	1.0	0.34
74-87-3	Chloromethane	ND	UJ	1.0	0.35
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
75-71-8	Dichlorodifluoromethane	ND	UJ	1.0	0.68
100-41-4	Ethylbenzene	ND		1.0	0.74
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
98-82-8	Isopropylbenzene	ND		1.0	0.79

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-30M-WG-20201116 Lab Sample ID: 480-178389-4

Matrix: Water Lab File ID: S4616.D

Analysis Method: 8260C Date Collected: 11/16/2020 10:10

Sample wt/vol: 5(mL) Date Analyzed: 11/23/2020 23:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	30		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	8.0		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	100		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	110		77-120
460-00-4	4-Bromofluorobenzene (Surr)	94		73-120
1868-53-7	Dibromofluoromethane (Surr)	103		75-123

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-30M-WG-20201116 Lab Sample ID: 480-178389-4

Matrix: Water Lab File ID: S4616.D

Analysis Method: 8260C Date Collected: 11/16/2020 10:10

Sample wt/vol: 5(mL) Date Analyzed: 11/23/2020 23:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

Number TICs Found: 1 TIC Result Total: 3

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
	Unknown	4.37	3.0	T J	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-31D-WG-20201116 Lab Sample ID: 480-178389-5

Matrix: Water Lab File ID: S4617.D

Analysis Method: 8260C Date Collected: 11/16/2020 10:25

Sample wt/vol: 5(mL) Date Analyzed: 11/23/2020 23:43

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	5.8	J	10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND	UJ	1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	ND		1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	0.92	J	1.0	0.34
74-87-3	Chloromethane	ND	UJ	1.0	0.35
156-59-2	cis-1,2-Dichloroethene	2.0		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
75-71-8	Dichlorodifluoromethane	ND	UJ	1.0	0.68
100-41-4	Ethylbenzene	ND		1.0	0.74
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
98-82-8	Isopropylbenzene	ND		1.0	0.79

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-31D-WG-20201116 Lab Sample ID: 480-178389-5

Matrix: Water Lab File ID: S4617.D

Analysis Method: 8260C Date Collected: 11/16/2020 10:25

Sample wt/vol: 5(mL) Date Analyzed: 11/23/2020 23:43

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	35		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	6.3		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	99		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		77-120
460-00-4	4-Bromofluorobenzene (Surr)	97		73-120
1868-53-7	Dibromofluoromethane (Surr)	98		75-123

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-31D-WG-20201116 Lab Sample ID: 480-178389-5

Matrix: Water Lab File ID: S4617.D

Analysis Method: 8260C Date Collected: 11/16/2020 10:25

Sample wt/vol: 5(mL) Date Analyzed: 11/23/2020 23:43

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

Number TICs Found: 1 TIC Result Total: 5.4

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
	Unknown	4.37	5.4	T J	

FORM I-TIC 8260C

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-33D-WG-20201116 Lab Sample ID: 480-178389-6

Matrix: Water Lab File ID: S4618.D

Analysis Method: 8260C Date Collected: 11/16/2020 10:30

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 00:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	ND		10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND	UJ	1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	ND		1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	1.2		1.0	0.34
74-87-3	Chloromethane	ND	UJ	1.0	0.35
156-59-2	cis-1,2-Dichloroethene	0.86	J	1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
75-71-8	Dichlorodifluoromethane	ND	UJ	1.0	0.68
100-41-4	Ethylbenzene	ND		1.0	0.74
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
98-82-8	Isopropylbenzene	ND		1.0	0.79

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-33D-WG-20201116 Lab Sample ID: 480-178389-6

Matrix: Water Lab File ID: S4618.D

Analysis Method: 8260C Date Collected: 11/16/2020 10:30

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 00:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	12		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	3.9		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	100		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	116		77-120
460-00-4	4-Bromofluorobenzene (Surr)	98		73-120
1868-53-7	Dibromofluoromethane (Surr)	107		75-123

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-33D-WG-20201116 Lab Sample ID: 480-178389-6

Matrix: Water Lab File ID: S4618.D

Analysis Method: 8260C Date Collected: 11/16/2020 10:30

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 00:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

Number TICs Found: 1 TIC Result Total: 4.9

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
	Unknown	4.37	4.9	T J	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-24D-WG-20201116 Lab Sample ID: 480-178389-7

Matrix: Water Lab File ID: S4619.D

Analysis Method: 8260C Date Collected: 11/16/2020 10:40

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 00:29

Soil Aliquot Vol: Dilution Factor: 10

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		10	8.2
79-34-5	1,1,2,2-Tetrachloroethane	ND		10	2.1
79-00-5	1,1,2-Trichloroethane	ND		10	2.3
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10	3.1
75-34-3	1,1-Dichloroethane	ND		10	3.8
75-35-4	1,1-Dichloroethene	ND		10	2.9
120-82-1	1,2,4-Trichlorobenzene	ND		10	4.1
96-12-8	1,2-Dibromo-3-Chloropropane	ND		10	3.9
95-50-1	1,2-Dichlorobenzene	ND		10	7.9
107-06-2	1,2-Dichloroethane	ND		10	2.1
78-87-5	1,2-Dichloropropane	ND		10	7.2
541-73-1	1,3-Dichlorobenzene	ND		10	7.8
106-46-7	1,4-Dichlorobenzene	ND		10	8.4
78-93-3	2-Butanone (MEK)	ND		100	13
591-78-6	2-Hexanone	ND		50	12
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		50	21
67-64-1	Acetone	ND		100	30
71-43-2	Benzene	ND		10	4.1
75-27-4	Bromodichloromethane	ND		10	3.9
75-25-2	Bromoform	ND		10	2.6
74-83-9	Bromomethane	ND	UJ	10	6.9
75-15-0	Carbon disulfide	ND		10	1.9
56-23-5	Carbon tetrachloride	ND		10	2.7
108-90-7	Chlorobenzene	ND		10	7.5
124-48-1	Dibromochloromethane	ND		10	3.2
75-00-3	Chloroethane	ND		10	3.2
67-66-3	Chloroform	ND		10	3.4
74-87-3	Chloromethane	ND	UJ	10	3.5
156-59-2	cis-1,2-Dichloroethene	ND		10	8.1
10061-01-5	cis-1,3-Dichloropropene	ND		10	3.6
110-82-7	Cyclohexane	ND		10	1.8
75-71-8	Dichlorodifluoromethane	ND	UJ	10	6.8
100-41-4	Ethylbenzene	ND		10	7.4
106-93-4	1,2-Dibromoethane	ND		10	7.3
98-82-8	Isopropylbenzene	ND		10	7.9

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-24D-WG-20201116 Lab Sample ID: 480-178389-7

Matrix: Water Lab File ID: S4619.D

Analysis Method: 8260C Date Collected: 11/16/2020 10:40

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 00:29

Soil Aliquot Vol: Dilution Factor: 10

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		25	13
1634-04-4	Methyl tert-butyl ether	ND		10	1.6
108-87-2	Methylcyclohexane	ND		10	1.6
75-09-2	Methylene Chloride	ND		10	4.4
100-42-5	Styrene	ND		10	7.3
127-18-4	Tetrachloroethene	320		10	3.6
108-88-3	Toluene	ND		10	5.1
156-60-5	trans-1,2-Dichloroethene	ND		10	9.0
10061-02-6	trans-1,3-Dichloropropene	ND		10	3.7
79-01-6	Trichloroethene	ND		10	4.6
75-69-4	Trichlorofluoromethane	ND		10	8.8
75-01-4	Vinyl chloride	ND		10	9.0
1330-20-7	Xylenes, Total	ND		20	6.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	100		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	112		77-120
460-00-4	4-Bromofluorobenzene (Surr)	97		73-120
1868-53-7	Dibromofluoromethane (Surr)	104		75-123

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-24D-WG-20201116 Lab Sample ID: 480-178389-7

Matrix: Water Lab File ID: S4619.D

Analysis Method: 8260C Date Collected: 11/16/2020 10:40

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 00:29

Soil Aliquot Vol: Dilution Factor: 10

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
	Tentatively Identified Compound		None		

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-32D-WG-20201116 Lab Sample ID: 480-178389-8

Matrix: Water Lab File ID: S4620.D

Analysis Method: 8260C Date Collected: 11/16/2020 10:45

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 00:52

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	9.6	J	10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND	UJ	1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	ND		1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	0.89	J	1.0	0.34
74-87-3	Chloromethane	ND	UJ	1.0	0.35
156-59-2	cis-1,2-Dichloroethene	2.1		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
75-71-8	Dichlorodifluoromethane	ND	UJ	1.0	0.68
100-41-4	Ethylbenzene	ND		1.0	0.74
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
98-82-8	Isopropylbenzene	ND		1.0	0.79

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-32D-WG-20201116 Lab Sample ID: 480-178389-8

Matrix: Water Lab File ID: S4620.D

Analysis Method: 8260C Date Collected: 11/16/2020 10:45

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 00:52

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	9.9		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	3.0		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	99		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		77-120
460-00-4	4-Bromofluorobenzene (Surr)	97		73-120
1868-53-7	Dibromofluoromethane (Surr)	98		75-123

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-32D-WG-20201116 Lab Sample ID: 480-178389-8

Matrix: Water Lab File ID: S4620.D

Analysis Method: 8260C Date Collected: 11/16/2020 10:45

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 00:52

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

Number TICs Found: 1 TIC Result Total: 3.6

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
	Unknown	4.37	3.6	T J	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-23D-WG-20201116 Lab Sample ID: 480-178389-9

Matrix: Water Lab File ID: S4621.D

Analysis Method: 8260C Date Collected: 11/16/2020 10:50

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 01:15

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	7.8	J	10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND	UJ	1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	ND		1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	ND		1.0	0.34
74-87-3	Chloromethane	ND	UJ	1.0	0.35
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
75-71-8	Dichlorodifluoromethane	ND	UJ	1.0	0.68
100-41-4	Ethylbenzene	ND		1.0	0.74
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
98-82-8	Isopropylbenzene	ND		1.0	0.79

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-23D-WG-20201116 Lab Sample ID: 480-178389-9

Matrix: Water Lab File ID: S4621.D

Analysis Method: 8260C Date Collected: 11/16/2020 10:50

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 01:15

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	19		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	2.9		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	94		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		77-120
460-00-4	4-Bromofluorobenzene (Surr)	93		73-120
1868-53-7	Dibromofluoromethane (Surr)	103		75-123

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-23D-WG-20201116 Lab Sample ID: 480-178389-9

Matrix: Water Lab File ID: S4621.D

Analysis Method: 8260C Date Collected: 11/16/2020 10:50

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 01:15

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

Number TICs Found: 2 TIC Result Total: 6.6

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
	Unknown	2.89	3.1	T J	
	Unknown	4.37	3.5	T J	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-24H-WG-20201116 Lab Sample ID: 480-178389-10

Matrix: Water Lab File ID: S4622.D

Analysis Method: 8260C Date Collected: 11/16/2020 11:00

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 01:38

Soil Aliquot Vol: Dilution Factor: 2

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		2.0	1.6
79-34-5	1,1,2,2-Tetrachloroethane	ND		2.0	0.42
79-00-5	1,1,2-Trichloroethane	ND		2.0	0.46
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2.0	0.62
75-34-3	1,1-Dichloroethane	ND		2.0	0.76
75-35-4	1,1-Dichloroethene	ND		2.0	0.58
120-82-1	1,2,4-Trichlorobenzene	ND		2.0	0.82
96-12-8	1,2-Dibromo-3-Chloropropane	ND		2.0	0.78
95-50-1	1,2-Dichlorobenzene	ND		2.0	1.6
107-06-2	1,2-Dichloroethane	ND		2.0	0.42
78-87-5	1,2-Dichloropropane	ND		2.0	1.4
541-73-1	1,3-Dichlorobenzene	ND		2.0	1.6
106-46-7	1,4-Dichlorobenzene	ND		2.0	1.7
78-93-3	2-Butanone (MEK)	ND		20	2.6
591-78-6	2-Hexanone	ND		10	2.5
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		10	4.2
67-64-1	Acetone	ND		20	6.0
71-43-2	Benzene	ND		2.0	0.82
75-27-4	Bromodichloromethane	ND		2.0	0.78
75-25-2	Bromoform	ND		2.0	0.52
74-83-9	Bromomethane	ND	UJ	2.0	1.4
75-15-0	Carbon disulfide	ND		2.0	0.38
56-23-5	Carbon tetrachloride	ND		2.0	0.54
108-90-7	Chlorobenzene	ND		2.0	1.5
124-48-1	Dibromochloromethane	ND		2.0	0.64
75-00-3	Chloroethane	ND		2.0	0.64
67-66-3	Chloroform	1.0	J	2.0	0.68
74-87-3	Chloromethane	ND	UJ	2.0	0.70
156-59-2	cis-1,2-Dichloroethene	ND		2.0	1.6
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.72
110-82-7	Cyclohexane	ND		2.0	0.36
75-71-8	Dichlorodifluoromethane	ND	UJ	2.0	1.4
100-41-4	Ethylbenzene	ND		2.0	1.5
106-93-4	1,2-Dibromoethane	ND		2.0	1.5
98-82-8	Isopropylbenzene	ND		2.0	1.6

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-24H-WG-20201116 Lab Sample ID: 480-178389-10

Matrix: Water Lab File ID: S4622.D

Analysis Method: 8260C Date Collected: 11/16/2020 11:00

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 01:38

Soil Aliquot Vol: Dilution Factor: 2

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		5.0	2.6
1634-04-4	Methyl tert-butyl ether	ND		2.0	0.32
108-87-2	Methylcyclohexane	ND		2.0	0.32
75-09-2	Methylene Chloride	ND		2.0	0.88
100-42-5	Styrene	ND		2.0	1.5
127-18-4	Tetrachloroethene	67		2.0	0.72
108-88-3	Toluene	ND		2.0	1.0
156-60-5	trans-1,2-Dichloroethene	ND		2.0	1.8
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.74
79-01-6	Trichloroethene	ND		2.0	0.92
75-69-4	Trichlorofluoromethane	ND		2.0	1.8
75-01-4	Vinyl chloride	ND		2.0	1.8
1330-20-7	Xylenes, Total	ND		4.0	1.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	93		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		77-120
460-00-4	4-Bromofluorobenzene (Surr)	97		73-120
1868-53-7	Dibromofluoromethane (Surr)	97		75-123

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-24H-WG-20201116 Lab Sample ID: 480-178389-10

Matrix: Water Lab File ID: S4622.D

Analysis Method: 8260C Date Collected: 11/16/2020 11:00

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 01:38

Soil Aliquot Vol: Dilution Factor: 2

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
	Tentatively Identified Compound		None		

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-03D-WG-20201116 Lab Sample ID: 480-178389-11

Matrix: Water Lab File ID: S4623.D

Analysis Method: 8260C Date Collected: 11/16/2020 11:05

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 02:01

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	ND		10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND	UJ	1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	ND		1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	2.8		1.0	0.34
74-87-3	Chloromethane	ND	UJ	1.0	0.35
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
75-71-8	Dichlorodifluoromethane	ND	UJ	1.0	0.68
100-41-4	Ethylbenzene	ND		1.0	0.74
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
98-82-8	Isopropylbenzene	ND		1.0	0.79

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-03D-WG-20201116 Lab Sample ID: 480-178389-11

Matrix: Water Lab File ID: S4623.D

Analysis Method: 8260C Date Collected: 11/16/2020 11:05

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 02:01

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	20		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	ND		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	97		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	109		77-120
460-00-4	4-Bromofluorobenzene (Surr)	94		73-120
1868-53-7	Dibromofluoromethane (Surr)	102		75-123

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-03D-WG-20201116 Lab Sample ID: 480-178389-11

Matrix: Water Lab File ID: S4623.D

Analysis Method: 8260C Date Collected: 11/16/2020 11:05

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 02:01

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

Number TICs Found: 2 TIC Result Total: 5.8

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
	Unknown	2.90	2.9	T J	
	Unknown	4.37	2.9	T J	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-04D-WG-20201116 Lab Sample ID: 480-178389-12

Matrix: Water Lab File ID: S4624.D

Analysis Method: 8260C Date Collected: 11/16/2020 11:10

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 02:24

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	ND		10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND	UJ	1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	ND		1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	1.6		1.0	0.34
74-87-3	Chloromethane	ND	UJ	1.0	0.35
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
75-71-8	Dichlorodifluoromethane	ND	UJ	1.0	0.68
100-41-4	Ethylbenzene	ND		1.0	0.74
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
98-82-8	Isopropylbenzene	ND		1.0	0.79

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-04D-WG-20201116 Lab Sample ID: 480-178389-12

Matrix: Water Lab File ID: S4624.D

Analysis Method: 8260C Date Collected: 11/16/2020 11:10

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 02:24

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	46		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	ND		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	95		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	108		77-120
460-00-4	4-Bromofluorobenzene (Surr)	91		73-120
1868-53-7	Dibromofluoromethane (Surr)	104		75-123

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-04D-WG-20201116 Lab Sample ID: 480-178389-12

Matrix: Water Lab File ID: S4624.D

Analysis Method: 8260C Date Collected: 11/16/2020 11:10

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 02:24

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

Number TICs Found: 1 TIC Result Total: 3

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
	Unknown	4.37	3.0	T J	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-14H-WG-20201116 Lab Sample ID: 480-178389-13

Matrix: Water Lab File ID: S4625.D

Analysis Method: 8260C Date Collected: 11/16/2020 11:15

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 02:47

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	6.7	J	10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND	UJ	1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	ND		1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	0.99	J	1.0	0.34
74-87-3	Chloromethane	ND	UJ	1.0	0.35
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
75-71-8	Dichlorodifluoromethane	ND	UJ	1.0	0.68
100-41-4	Ethylbenzene	ND		1.0	0.74
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
98-82-8	Isopropylbenzene	ND		1.0	0.79

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-14H-WG-20201116 Lab Sample ID: 480-178389-13

Matrix: Water Lab File ID: S4625.D

Analysis Method: 8260C Date Collected: 11/16/2020 11:15

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 02:47

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	15		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	ND		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	97		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	108		77-120
460-00-4	4-Bromofluorobenzene (Surr)	93		73-120
1868-53-7	Dibromofluoromethane (Surr)	99		75-123

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-14H-WG-20201116 Lab Sample ID: 480-178389-13

Matrix: Water Lab File ID: S4625.D

Analysis Method: 8260C Date Collected: 11/16/2020 11:15

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 02:47

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

Number TICs Found: 1 TIC Result Total: 3

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
	Unknown	4.37	3.0	T J	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-10D-WG-20201116 Lab Sample ID: 480-178389-14

Matrix: Water Lab File ID: S4626.D

Analysis Method: 8260C Date Collected: 11/16/2020 11:25

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 03:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	9.3	J	10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND	UJ	1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	ND		1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	0.51	J	1.0	0.34
74-87-3	Chloromethane	1.6	J	1.0	0.35
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
75-71-8	Dichlorodifluoromethane	ND	UJ	1.0	0.68
100-41-4	Ethylbenzene	ND		1.0	0.74
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
98-82-8	Isopropylbenzene	ND		1.0	0.79

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-10D-WG-20201116 Lab Sample ID: 480-178389-14

Matrix: Water Lab File ID: S4626.D

Analysis Method: 8260C Date Collected: 11/16/2020 11:25

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 03:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	11		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	ND		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	94		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	110		77-120
460-00-4	4-Bromofluorobenzene (Surr)	93		73-120
1868-53-7	Dibromofluoromethane (Surr)	111		75-123

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-10D-WG-20201116 Lab Sample ID: 480-178389-14

Matrix: Water Lab File ID: S4626.D

Analysis Method: 8260C Date Collected: 11/16/2020 11:25

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 03:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

Number TICs Found: 3 TIC Result Total: 8.5

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
	Unknown	2.89	2.8	T J	
	Unknown	4.37	3.0	T J	
	Unknown	14.39	2.7	T J	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-10H-WG-20201116 Lab Sample ID: 480-178389-15

Matrix: Water Lab File ID: S4627.D

Analysis Method: 8260C Date Collected: 11/16/2020 11:35

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 03:34

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	ND		10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND	UJ	1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	ND		1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	ND		1.0	0.34
74-87-3	Chloromethane	ND	UJ	1.0	0.35
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
75-71-8	Dichlorodifluoromethane	ND	UJ	1.0	0.68
100-41-4	Ethylbenzene	ND		1.0	0.74
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
98-82-8	Isopropylbenzene	ND		1.0	0.79

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-10H-WG-20201116 Lab Sample ID: 480-178389-15

Matrix: Water Lab File ID: S4627.D

Analysis Method: 8260C Date Collected: 11/16/2020 11:35

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 03:34

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	48		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	ND		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	99		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	112		77-120
460-00-4	4-Bromofluorobenzene (Surr)	98		73-120
1868-53-7	Dibromofluoromethane (Surr)	102		75-123

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-10H-WG-20201116 Lab Sample ID: 480-178389-15

Matrix: Water Lab File ID: S4627.D

Analysis Method: 8260C Date Collected: 11/16/2020 11:35

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 03:34

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

Number TICs Found: 1 TIC Result Total: 4.1

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
	Unknown	4.37	4.1	T J	

FORM I-TIC 8260C

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-05D-WG-20201116 Lab Sample ID: 480-178389-16

Matrix: Water Lab File ID: S4628.D

Analysis Method: 8260C Date Collected: 11/16/2020 11:40

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 03:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	5.1	J	10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND	UJ	1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	ND		1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	1.2		1.0	0.34
74-87-3	Chloromethane	ND	UJ	1.0	0.35
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
75-71-8	Dichlorodifluoromethane	ND	UJ	1.0	0.68
100-41-4	Ethylbenzene	ND		1.0	0.74
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
98-82-8	Isopropylbenzene	ND		1.0	0.79

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-05D-WG-20201116 Lab Sample ID: 480-178389-16

Matrix: Water Lab File ID: S4628.D

Analysis Method: 8260C Date Collected: 11/16/2020 11:40

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 03:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	18		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	ND		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	96		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		77-120
460-00-4	4-Bromofluorobenzene (Surr)	93		73-120
1868-53-7	Dibromofluoromethane (Surr)	104		75-123

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Client Sample ID: KB-MW-05D-WG-20201116 Lab Sample ID: 480-178389-16

Matrix: Water Lab File ID: S4628.D

Analysis Method: 8260C Date Collected: 11/16/2020 11:40

Sample wt/vol: 5(mL) Date Analyzed: 11/24/2020 03:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 560595 Units: ug/L

Number TICs Found: 1 TIC Result Total: 3.6

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
	Unknown	4.37	3.6	T J	

QC NONCONFORMANCE DOCUMENTATION

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Lab Sample ID: CCVIS 480-560595/2 Calibration Date: 11/23/2020 19:56

Instrument ID: HP5973S Calib Start Date: 11/19/2020 15:09

GC Column: ZB-624 (20) ID: 0.18(mm) Calib End Date: 11/19/2020 17:50

Lab File ID: S4608.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	1.635	1.170	0.1000	17.9	25.0	-28.4	50.0
Chloromethane	Ave	2.254	1.757	0.1000	19.5	25.0	-22.1*	20.0
Butadiene	Ave	2.198	2.183		24.8	25.0	-0.7	20.0
Vinyl chloride	Ave	1.944	1.592	0.1000	20.5	25.0	-18.1	20.0
Bromomethane	Ave	1.158	0.9100	0.1000	19.6	25.0	-21.4	50.0
Chloroethane	Ave	1.178	0.9789	0.1000	20.8	25.0	-16.9	50.0
Dichlorofluoromethane	Ave	2.522	2.377		23.6	25.0	-5.8	20.0
Trichlorofluoromethane	Ave	2.261	2.267	0.1000	25.1	25.0	0.3	20.0
Ethyl ether	Ave	1.547	1.502		24.3	25.0	-2.9	20.0
Acrolein	Ave	0.1467	0.1478		126	125	0.7	50.0
1,1-Dichloroethene	Ave	1.406	1.363	0.1000	24.2	25.0	-3.0	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	1.429	1.374	0.1000	24.0	25.0	-3.8	20.0
Acetone	Ave	0.6773	0.7219	0.1000	133	125	6.6	50.0
Iodomethane	Ave	2.540	2.321		22.8	25.0	-8.6	20.0
Carbon disulfide	Ave	4.212	4.074	0.1000	24.2	25.0	-3.3	20.0
Allyl chloride	Ave	2.649	2.710		25.6	25.0	2.3	20.0
Methyl acetate	Ave	1.595	1.611	0.1000	50.5	50.0	1.0	50.0
Methylene Chloride	Lin1		1.556	0.1000	23.3	25.0	-6.8	20.0
2-Methyl-2-propanol	Ave	0.1889	0.2088		276	250	10.5	50.0
Methyl tert-butyl ether	Ave	4.902	4.705	0.1000	24.0	25.0	-4.0	20.0
trans-1,2-Dichloroethene	Ave	1.702	1.547	0.1000	22.7	25.0	-9.1	20.0
Acrylonitrile	Ave	0.8538	0.8421		247	250	-1.4	20.0
Hexane	Ave	2.646	2.753		26.0	25.0	4.1	20.0
1,1-Dichloroethane	Ave	2.988	2.810	0.2000	23.5	25.0	-6.0	20.0
Vinyl acetate	Ave	4.288	4.340		50.6	50.0	1.2	20.0
2,2-Dichloropropane	Ave	1.821	1.790		24.6	25.0	-1.7	20.0
cis-1,2-Dichloroethene	Ave	1.809	1.707	0.1000	23.6	25.0	-5.6	20.0
2-Butanone (MEK)	Ave	0.9896	1.103	0.1000	139	125	11.4	20.0
Chlorobromomethane	Ave	0.8731	0.8705		24.9	25.0	-0.3	20.0
Tetrahydrofuran	Ave	0.7140	0.7038		49.3	50.0	-1.4	20.0
Chloroform	Ave	3.007	2.798	0.2000	23.3	25.0	-7.0	20.0
1,1,1-Trichloroethane	Ave	2.360	2.425	0.1000	25.7	25.0	2.7	20.0
Cyclohexane	Ave	3.186	3.145	0.1000	24.7	25.0	-1.3	20.0
Carbon tetrachloride	Ave	1.969	1.981	0.1000	25.2	25.0	0.6	20.0
1,1-Dichloropropene	Ave	2.204	2.140		24.3	25.0	-2.9	20.0
Benzene	Ave	6.441	6.337	0.5000	24.6	25.0	-1.6	20.0
Isobutyl alcohol	Ave	0.0868	0.0895		644	625	3.0	50.0
1,2-Dichloroethane	Ave	2.480	2.466	0.1000	24.9	25.0	-0.6	20.0
n-Heptane	Ave	2.942	3.159		26.8	25.0	7.4	20.0
Trichloroethene	Ave	1.669	1.685	0.2000	25.2	25.0	0.9	20.0

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Matrix: Water Level: Low Lab File ID: S4629.D

Lab ID: 480-178389-1 MS Client ID: KB-MW-12H-WG-20201116 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1-Trichloroethane	25.0	ND	27.8	111	73-126	
1,1,2,2-Tetrachloroethane	25.0	ND	25.6	102	76-120	
1,1,2-Trichloroethane	25.0	ND	26.6	106	76-122	
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	ND	27.5	110	61-148	
1,1-Dichloroethane	25.0	ND	27.3	109	77-120	
1,1-Dichloroethene	25.0	ND	26.9	108	66-127	
1,2,4-Trichlorobenzene	25.0	ND	23.4	94	79-122	
1,2-Dibromo-3-Chloropropane	25.0	ND	23.9	96	56-134	
1,2-Dichlorobenzene	25.0	ND	25.9	104	80-124	
1,2-Dichloroethane	25.0	ND	27.2	109	75-120	
1,2-Dichloropropane	25.0	ND	25.4	102	76-120	
1,3-Dichlorobenzene	25.0	ND	24.9	99	77-120	
1,4-Dichlorobenzene	25.0	ND	25.4	102	78-124	
2-Butanone (MEK)	125	ND	204	164	57-140	F1
2-Hexanone	125	ND	133	106	65-127	
4-Methyl-2-pentanone (MIBK)	125	ND	135	108	71-125	
Acetone	125	7.0 J	147	112	56-142	
Benzene	25.0	ND	26.4	105	71-124	
Bromodichloromethane	25.0	ND	26.0	104	80-122	
Bromoform	25.0	ND	18.8	75	61-132	
Bromomethane	25.0	ND	21.5	86	55-144	
Carbon disulfide	25.0	ND	24.3	97	59-134	
Carbon tetrachloride	25.0	ND	26.9	108	72-134	
Chlorobenzene	25.0	ND	25.3	101	80-120	
Dibromochloromethane	25.0	ND	23.0	92	75-125	
Chloroethane	25.0	ND	21.7	87	69-136	
Chloroform	25.0	0.97 J	26.9	104	73-127	
Chloromethane	25.0	ND	21.0	84	68-124	
cis-1,2-Dichloroethene	25.0	ND	27.2	109	74-124	
cis-1,3-Dichloropropene	25.0	ND	24.5	98	74-124	
Cyclohexane	25.0	ND	26.9	108	59-135	
Dichlorodifluoromethane	25.0	ND	17.9	71	59-135	
Ethylbenzene	25.0	ND	25.7	103	77-123	
1,2-Dibromoethane	25.0	ND	24.3	97	77-120	
Isopropylbenzene	25.0	ND	26.0	104	77-122	
Methyl acetate	50.0	ND	56.0	112	74-133	
Methyl tert-butyl ether	25.0	ND	25.7	103	77-120	
Methylcyclohexane	25.0	ND	25.9	103	68-134	
Methylene Chloride	25.0	ND	26.3	105	75-124	
Styrene	25.0	ND	26.1	104	80-120	
Tetrachloroethene	25.0	7.0	31.7	98	74-122	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-178389-1

SDG No.:

Matrix: Water Level: Low Lab File ID: S4630.D

Lab ID: 480-178389-1 MSD Client ID: KB-MW-12H-WG-20201116 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1-Trichloroethane	25.0	27.9	112	0	15	73-126	
1,1,2,2-Tetrachloroethane	25.0	25.3	101	1	15	76-120	
1,1,2-Trichloroethane	25.0	26.0	104	2	15	76-122	
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	24.1	96	13	20	61-148	
1,1-Dichloroethane	25.0	25.7	103	6	20	77-120	
1,1-Dichloroethene	25.0	25.3	101	6	16	66-127	
1,2,4-Trichlorobenzene	25.0	23.3	93	1	20	79-122	
1,2-Dibromo-3-Chloropropane	25.0	25.3	101	6	15	56-134	
1,2-Dichlorobenzene	25.0	25.3	101	2	20	80-124	
1,2-Dichloroethane	25.0	26.5	106	3	20	75-120	
1,2-Dichloropropane	25.0	26.4	106	4	20	76-120	
1,3-Dichlorobenzene	25.0	24.2	97	3	20	77-120	
1,4-Dichlorobenzene	25.0	24.3	97	4	20	78-124	
2-Butanone (MEK)	125	203	162	1	20	57-140	F1
2-Hexanone	125	140	112	5	15	65-127	
4-Methyl-2-pentanone (MIBK)	125	142	114	5	35	71-125	
Acetone	125	139	106	5	15	56-142	
Benzene	25.0	26.4	105	0	13	71-124	
Bromodichloromethane	25.0	26.0	104	0	15	80-122	
Bromoform	25.0	19.3	77	3	15	61-132	
Bromomethane	25.0	22.6	90	5	15	55-144	
Carbon disulfide	25.0	23.9	95	2	15	59-134	
Carbon tetrachloride	25.0	26.9	108	0	15	72-134	
Chlorobenzene	25.0	26.0	104	3	25	80-120	
Dibromochloromethane	25.0	24.4	97	6	15	75-125	
Chloroethane	25.0	22.4	90	3	15	69-136	
Chloroform	25.0	25.8	99	4	20	73-127	
Chloromethane	25.0	21.6	86	3	15	68-124	
cis-1,2-Dichloroethene	25.0	26.0	104	4	15	74-124	
cis-1,3-Dichloropropene	25.0	24.9	99	1	15	74-124	
Cyclohexane	25.0	22.5	90	18	20	59-135	
Dichlorodifluoromethane	25.0	17.4	70	3	20	59-135	
Ethylbenzene	25.0	25.7	103	0	15	77-123	
1,2-Dibromoethane	25.0	25.5	102	5	15	77-120	
Isopropylbenzene	25.0	25.0	100	4	20	77-122	
Methyl acetate	50.0	54.5	109	3	20	74-133	
Methyl tert-butyl ether	25.0	25.5	102	1	37	77-120	
Methylcyclohexane	25.0	23.2	93	11	20	68-134	
Methylene Chloride	25.0	24.6	98	7	15	75-124	
Styrene	25.0	26.8	107	2	20	80-120	
Tetrachloroethene	25.0	32.1	100	1	20	74-122	

Column to be used to flag recovery and RPD values

FORM III 8260C