ARCADIS Design & Consultancy for natural and built assets

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

CONSTRUCTION COMPLETION REPORT

Soil Vapor Extraction/Sub-Slab Depressurization
Interim Remedial Measure

Former Greener Cleaners Site
809 State Street
Schenectady, New York
Site No. 447041

Work Assignment # D-007618-18

September 2017

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809 State Street
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Site No. 447041

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CONTENTS

FIGURES

TABLES

APPENDICES

1 INTRODUCTION

On behalf of New York State Department of Environmental Conservation (NYSDEC), Arcadis CE, Inc. (Arcadis) has prepared this Construction Completion Report (CCR) to summarize activities associated with the installation of a soil vapor extraction/sub-slab depressurization (SVE/SSD) system as an interim remedial measure (IRM) at the Former Greener Cleaners Site at 809 State Street, Schenectady, New York (site). The objective of the SVE/SSD system is to reduce chlorinated volatile organic compound (CVOC) concentrations present above the groundwater table in the source zone (north of the existing building) while also reducing the potential for vapor intrusion into the building. A pilot test performed at the site in August 2015 indicated that SVE/SSD was a viable approach for achieving remedial objectives, as summarized in the SVE/SSDS Pilot Test Summary Memorandum submitted to NYSDEC in October 2015 (ARCADIS, 2015).

Arcadis prepared a full-scale SVE/SSD system design package and solicited proposals from multiple prospective subcontractors to perform the work. Aztech Environmental Technologies was ultimately selected to subcontract with Arcadis to perform the work. SVE/SSD system (system) installation activities were performed between November 2016 and March 2017, and the system became operational in late March 2017. This CCR summarizes construction activities associated with the system's installation, as well as the performance of the system during the first month of operation.

2 BACKGROUND

The site located at 809 State Street, in the eastern portion of the City of Schenectady (**Figure 1**), and consists of an active retail dry-cleaning facility owned by Best Cleaners, who purchased the property from Greener Cleaners (formerly KEM Cleaners) on July 7, 2010. While Best Cleaners does not currently utilize chlorinated solvents for their operations, tetrachloroethene (PCE) was reportedly used at the site until 2008. Greener Cleaners may have occupied and conducted dry cleaning operations on the site for up to 12 years. King Cadillac reportedly owned the site before Greener Cleaners and utilized the site for automobile retail sales and service. The site is generally flat and the ground surface over the majority of the site is covered with asphalt. The site is located within a mixed residential-commercial neighborhood. Existing structures on the site include a large concrete block and brick building used for retail dry cleaning operations and a garage that was historically used for automobile service. The automobile service infrastructure (hydraulic lifts and floor drains) in the garage are still in place.

3 SYSTEM OVERVIEW

Soil vapors are extracted from a network of four SVE/SSD extraction wells and conveyed via overhead piping to a system enclosure located outside of the existing dry-cleaning building (**Figure 2**). The system enclosure houses the system mechanical and electrical components, including vapor phase treatment media. Treated soil vapors are discharged to the atmosphere above the building roofline.

4 SYSTEM INSTALLATION ACTIVITIES

This section summarizes SVE/SSD system construction activities. Record Drawings are included in **Appendix A**. Construction photos are included in **Appendix B**.

4.1 Extraction Wells

Three extraction wells (SVE-1, SVE-2 and SVE-4) are located within the building, and one extraction well (SVE-3) is located just outside of the building in the vicinity of the likely source area (Drawing G-1). Extraction wells were constructed of 2-inch diameter, schedule 40 polyvinyl chloride (PVC) pipe and wire-wrapped stainless-steel screen with slot sizes of 0.01 inches (i.e., 10 slot), screened from 5 to 15 feet below floor surface (bfs). Well construction included the placement of a sand filter pack around the well screens, followed by a bentonite sealing layer overlaid with non-shrink grout. Expansion fittings (2-inch by 4-inch bushings) and tee fittings (4-inch) were installed on each well to allow below-grade horizontal conveyance piping (4-inch diameter schedule 40 PVC) to connect to the wells. Well pipes (4-inch schedule 40 PVC) installed above the tee fitting were fitted with an expandable plug. Wells were finished with a heavy-duty traffic-rated 12-inch diameter cast iron cover installed flush with grade. Wellhead and well construction details are shown in Drawings M-1 and M-2, respectively. Well construction logs are included in **Appendix C**.

4.2 Conveyance Piping

Conveyance piping was installed to connect each of the extraction wells to the SVE/SSD system enclosure. Conveyance piping installation activities occurred between December 2016 and March 2017. Conveyance pipe routing is shown on Drawing G-1.

Sub-slab conveyance piping was installed for SVE-1, SVE-2 and SVE-4 to connect extraction wells to the location (i.e., nearest interior wall) designated for the transition to overhead piping. The existing concrete slab was saw-cut and removed to allow for pipe (4-inch diameter schedule 40 PVC) placement within a sand pipe bedding layer. Trenches were finished with new concrete, constructed flush with the existing floor surface. For SVE-3, belowground conveyance piping (4-inch diameter schedule 40 PVC) was installed at a depth of approximately 18 inches below grade to connect the extraction well to the building exterior to allow for an above-grade wall penetration. The above-grade, exterior portion of the piping was fitted with 1-inch fiberglass insulation and aluminum jacketing. Drawing M-1 shows wellhead and trenching details associated with extraction wells.

Conveyance piping for each extraction well was fit with a vacuum gauge, vapor sampling point, and butterfly valve, and expanded from 4-inch to 6-inch diameter schedule 40 PVC pipe prior to transitioning to horizontal. Soil vapors from each extraction well combine into a single 6-inch diameter schedule 40 PVC conveyance piping header. Conveyance piping is plumbed to the system enclosure via a building wall penetration and exterior piping fit with 1-inch fiberglass insulation and aluminum jacketing.

Conveyance piping was installed such that there is a minimum downward slope of 1% toward each extraction point to allow water to drain out back into the wells. Vertical wall-mounted piping was supported every 8 linear feet with metal channel and pipe clamps and all horizontal piping was supported every 4 feet.

4.3 Monitoring Points

Vacuum monitoring points (VMP-1 through VMP-5) were installed within the building to allow sub-slab differential pressure to be measured. Points were installed by hammer drilling through the concrete floor slab and several inches into the sub-slab material. Stainless steel VaporPin® probes were installed and finished with flush-mounted stainless steel VaporPin® covers. Monitoring point locations are shown on Drawing G-1.

4.4 System Enclosure

A 20-foot long by 8-foot wide insulated cargo container with double cargo doors on one end and a personnel door on the side was used to house major system components. The container was repurposed from an existing NYSDEC-owned system container. The container is located on asphalt just outside the south side of the dry-cleaning building. It is enclosed by a 6-feet tall galvanized fence with a 6-foot wide double swing gate at one end, and a 3-foot wide single swing gate on the side. Fence posts are encased in 10-inch diameter by 42-inch deep concrete footers. The container is anchored at each corner. The container includes heating, ventilation and lighting components.

4.5 Process Equipment

The SVE/SSD system utilizes a 13.1-horsepower side channel blower (B-200) to apply vacuum to the four extraction wells. The blower is capable of applying a maximum of 60 inches of water (in.W.C.) vacuum and is equipped with a variable frequency drive (VFD). After entering the system container, extracted soil vapors are routed through a knockout tank (KT-100) for removal of any moisture present in the vapor stream. Vapors are then conveyed through an in-line air filter (AF-100) prior to treatment by vapor phase granular activated carbon media within vessel VPGAC-101. A dilution line equipped with a ball valve and air filter/silencer (AFS-100) is located just upstream from the blower to allow manual adjustment of the applied vacuum. With the exception of the dilution line (2-inch schedule 80 PVC) and a short section of steel piping (4-inch diameter schedule 40 carbon steel) before the blower, all system piping on the suction side of the blower is 6-inch diameter schedule 80 PVC.

Downstream from the blower, vapors are conveyed through a silencer (S-200) and discharged to the atmosphere via an insulated/jacketed exhaust stack extending 3 feet above the dry cleaning building roofline. A drain line/valve is installed at the low point of the post-blower piping to allow for removal of any condensate. Post-blower piping is 6-inch diameter schedule 40 PVC, with the exception of the condensate drain line (4-inch diameter schedule 40 PVC) and a short section of steel piping (4-inch diameter schedule 40 carbon steel) after the blower.

A process and instrumentation diagram (P&ID) for the system is provided on Drawing P-1.

4.6 System Control and Monitoring

The SVE/SSD system equipment operation is interlocked and controlled by a programmable logic controller (PLC) which allows the system to operate automatically while checking the status of system process monitoring devices. Monitoring devices interlocked with the PLC include:

- A high liquid level switch (LSHH-101) in the knockout tank.
- A low vacuum switch (VS-101) on the soil vapor influent header.

Should an alarm condition occur, system operators are notified via email. The blower VFD allows system operators to adjust the speed of the blower. Both the PLC and VFD include digital keypads which allow system operators to locally interface. Additionally, the PLC may be connected to via wireless internet connection, allowing system operators to control and monitor the system.

In addition to the process monitoring devices listed above, process monitoring gauges that may be viewed locally include gauges for vacuum, pressure, temperature, and soil vapor extraction flow rate.

All monitoring devices and gauges are shown in the P&ID in Drawing P-1.

4.7 New Electrical Service

New overhead 208/120 volt, 3-phase, 4-wire, 200-amp electrical service from National Grid was installed and provided to power the system container and electrical components. To facilitate the new power drop, a new pole was installed in the asphalt area approximately midway between the system container and the street bordering the site to the south (Chestnut Street). A fused disconnect for the system power was installed on the outside of the dry-cleaning building, and an electric meter panel was installed on the new pole.

4.8 Waste Disposal

All waste generated during the SVE well installation and fence installation was characterized and transported off-site for disposal. Waste included drill cuttings from well installation and fence post installation activities. Waste disposal information is presented in **Appendix D**.

5 PERMITTING

An air discharge permit is not required as the system discharge is considered a trivial activity in accordance with 6 NYCRR 201-3.

Building and electrical permits were obtained from the City of Schenectady for the installation of the chain-link fence around the system container. Copies of both permits are included in **Appendix E**.

6 SYSTEM STARTUP

During startup of the SVE/SSD system on March 30, 2017, system components were inspected and tested to confirm proper operation. Additionally, performance monitoring data were collected including applied vacuum at the system, vapor extraction flow rate, applied vacuum at the extraction wells, and induced vacuum at the vacuum monitoring points. These data were also collected during operation, maintenance and monitoring (OM&M) events performed on a monthly basis following startup. Approximately 1 month following startup, vapor samples were collected from extraction wells and at the system.

Performance monitoring data from system startup through the most recent monthly OM&M event are summarized in **Table 1**. Vapor analytical data are summarized in **Table 2**, and laboratory analytical reports are included in **Appendix F**.

6.1 Vacuum Influence Results

Differential pressures measured at vacuum monitoring points, both during startup and during subsequent OM&M events, indicate that the system has successfully induced a negative differential pressure (i.e., vacuum) in the sub-slab relative to indoor air throughout the building. Sub-slab differential pressures measured during OM&M events (i.e., not including startup) have ranged from -0.018 in.W.C. at VMP-3 to -0.936 in.W.C. at VMP-4.

6.2 System Sampling Results

Tetrachloroethene (PCE) was detected at each extraction well during the sampling event performed approximately 1 month following system startup. PCE concentrations ranged from 180 micrograms per cubic meter (µg/m^3) at SVE-1 to 1,300 µg/m^3 at SVE-3, which is the closest extraction well to the likely source area. It should be noted that the PCE concentration at SVE-1 (180 µg/m^3) decreased from the PCE concentration at the SVE-1 location during the pilot test in 2015 (41,000 µg/m^3). Similarly, the PCE concentration at SVE-2 has declined from 83,000 µg/m^3 during the pilot test to 1,000 µg/m^3 during the 1-month sampling event.

PCE was detected at a concentration of 41 µg/m^3 at the system influent, and not at a concentration greater than the reporting limit at the post-treatment sample location.

7 CERTIFICATION

I, Daniel J. Loewenstein, certify that I am currently a NYS registered professional engineer and that this report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and that all activities were performed in full accordance with the DER-approved work plan and any DER-approved modifications.

I further certify that the IRM construction activities discussed herein were completed in substantial conformance with the DER-approved IRM scope of work.

_____

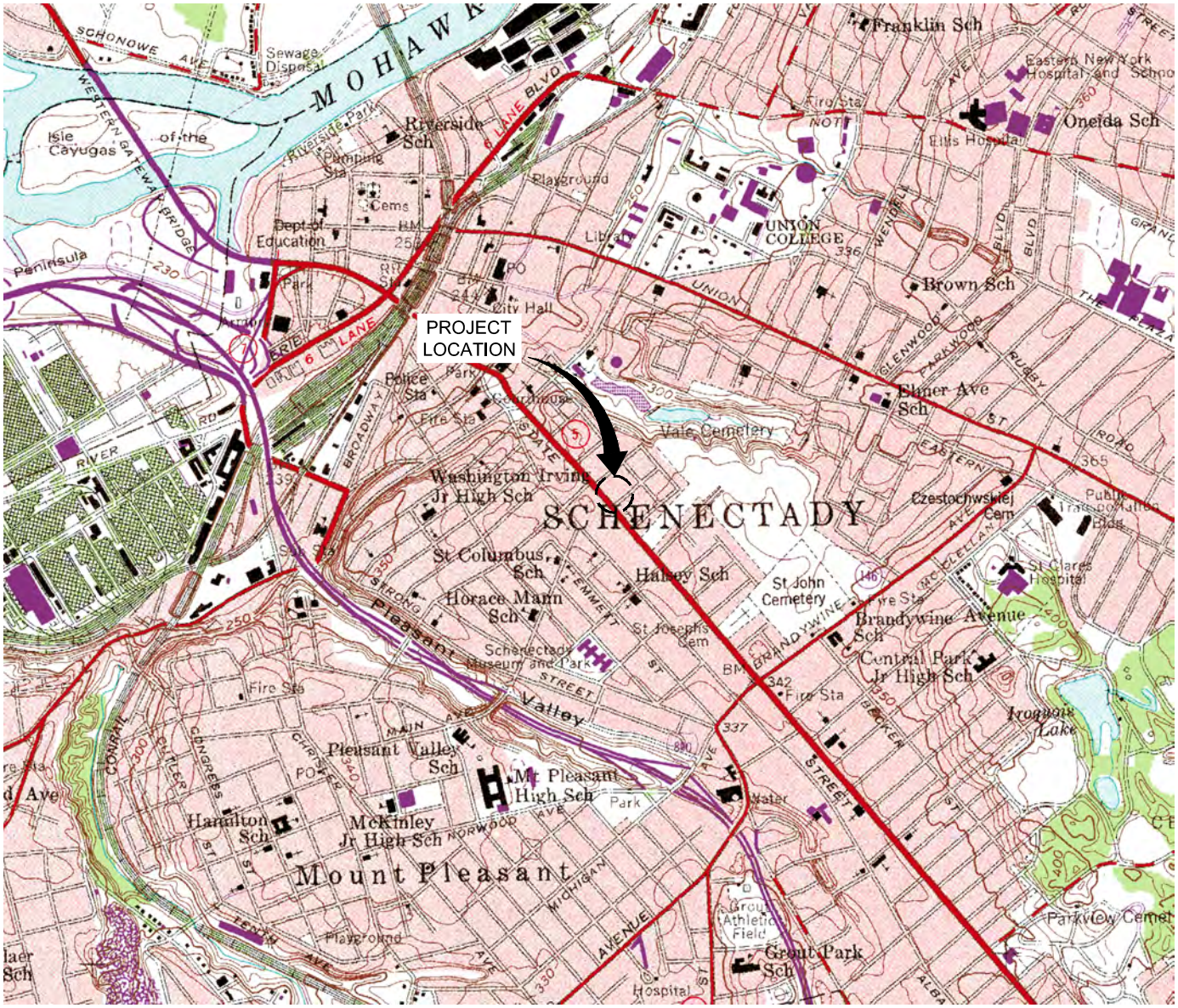
Daniel J. Loewenstein, P.E.

New York #066594

8 REFERENCES

ARCADIS, 2015, SVE/SSDS Pilot Test Summary Memo, Former Greener Cleaners Site, Site #447041, October 2015.

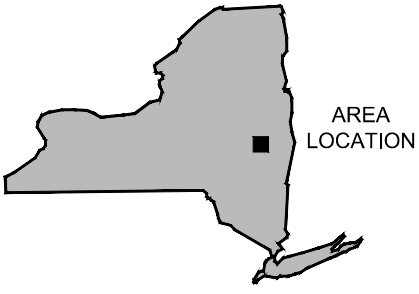
FIGURES



REFERENCE: BASE MAP USGS 7.5 MINUTE QUADRANGLE., SCHENECTADY, NY., 1954, PHOTOREVISED 1980

0 2000' 4000'

GRAPHIC SCALE



FORMER GREENER CLEANERS SITE
809 STATE STREET
SCHENECTADY, NEW YORK
SITE NO. 447041

SITE LOCATION MAP

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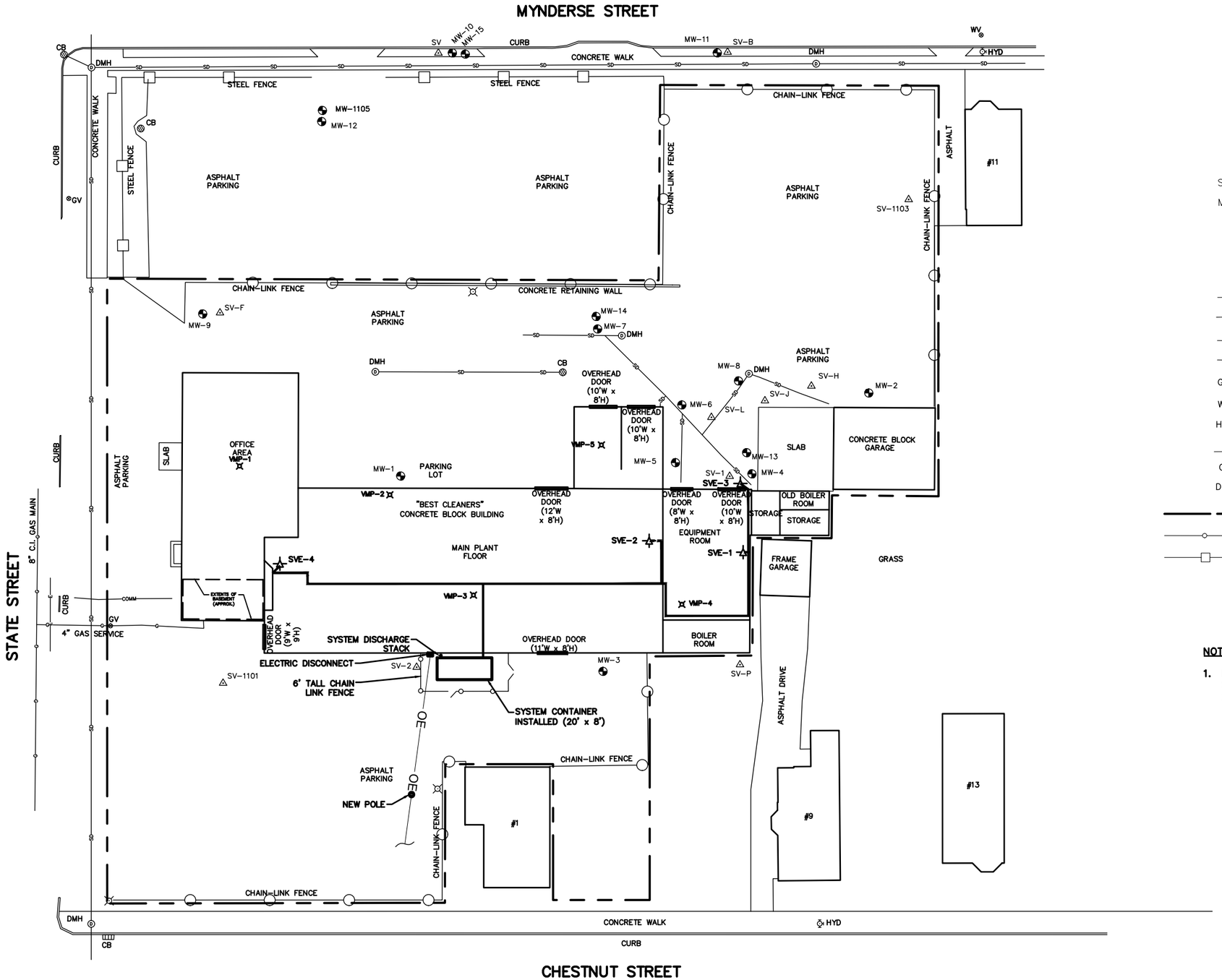
FIGURE 1



LEGEND:

- SV — VAPOR SAMPLE LOCATION W/ELEVATION
- MW — MONITORING WELL
- SVE/SSD EXTRACTION WELL
- VACUUM MONITORING POINT
- LIGHT POLE
- UNDERGROUND ELECTRIC LINE
- UNDERGROUND COMM LINE
- UNDERGROUND GAS LINE
- OVERHEAD ELECTRIC LINE
- GV — GAS VALVE
- WV — WATER VALVE
- HYD — HYDRANT
- UNDERGROUND STORM DRAIN
- CB — CATCH BASIN
- DMH — STORM MANHOLE
- APPROXIMATE PROPERTY BOUNDARY
- CHAIN LINK FENCE
- STEEL FENCE

NOTES:

1. BASE MAP SUPPLIED BY YEC, INC. ENTITLED GREENER CLEANERS SITE SURVEY, DATE OF FIELD SURVEY: OCTOBER 16, 2013; FEBRUARY 12, 2014, AT A SCALE OF 1" = 20'.

0 40' 80'

GRAPHIC SCALE

FORMER GREENER CLEANERS SITE
809 STATE STREET
SCHENECTADY, NEW YORK
SITE NO. 447041

SITE PLAN

ARCADIS Design & Consultancy for natural and built assets

FIGURE 2

TABLES

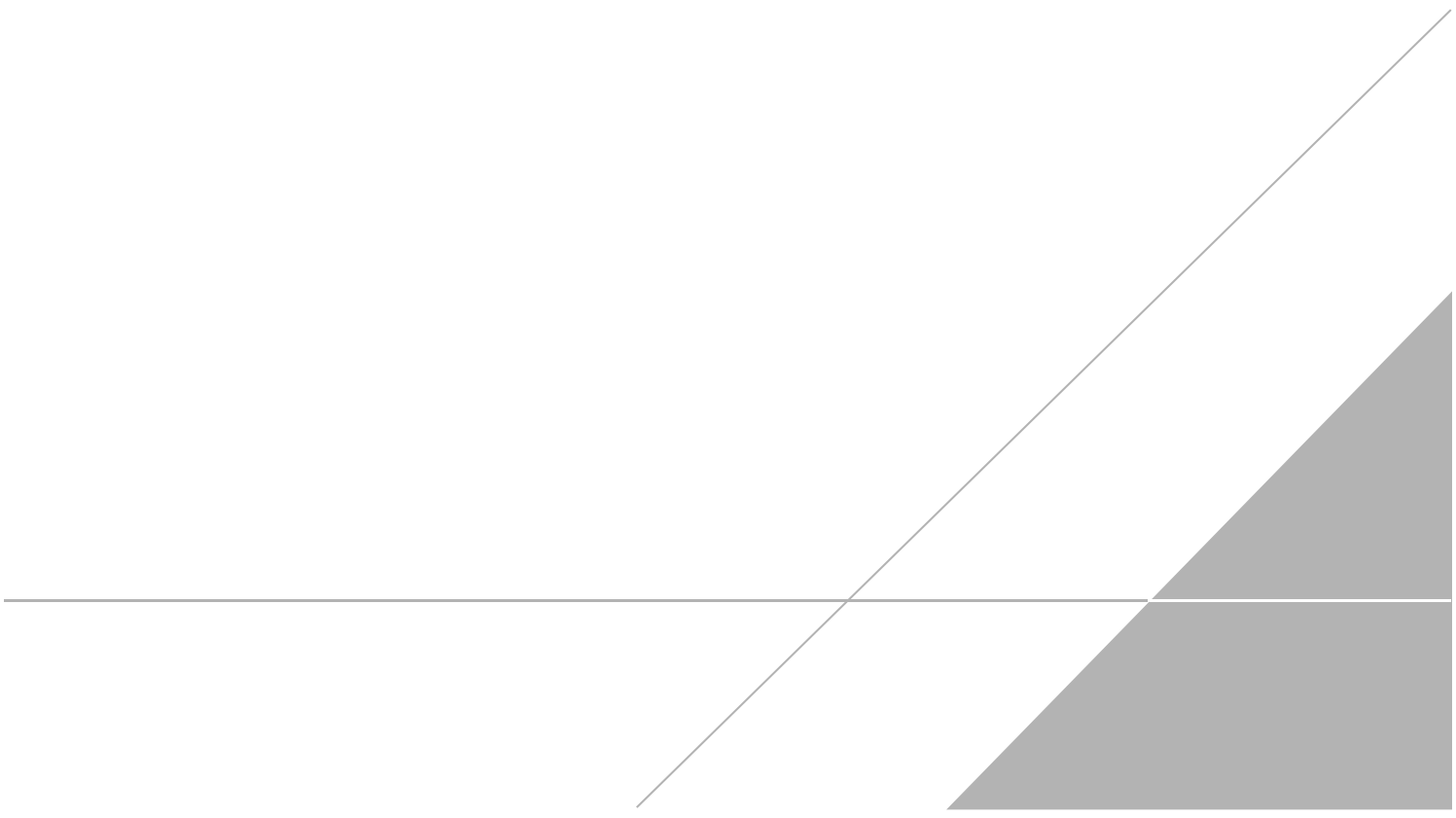


Table 1
System Performance Data
Construction Completion Report - SVE/SSD System Interim Remedial Measure
Former Greener Cleaners Site
809 State Street, Schenectady, New York
Site No. 447041

Date	Applied Vacuum at System (in.W.C.) [b]	Influent Flow Rate (scfm)[c]	Extraction Wells								Induced Vacuum at Vacuum Monitoring Points (in.W.C.)				
			SVE-1		SVE-2		SVE-3		SVE-4		VMP-1	VMP-2	VMP-3	VMP-4	VMP-5
			Applied Vacuum (in.W.C.)	Air Flow (scfm)[d]	Applied Vacuum (in.W.C.)	Air Flow (scfm)[d]	Applied Vacuum (in.W.C.)	Air Flow (scfm)[d]	Applied Vacuum (in.W.C.)	Air Flow (scfm)[d]					
3/30/2017[a]	11	170	7	53	7	46	7	27	7	44	-0.019	-0.032	-0.005	-0.472	-0.029
	18	340	12	92	12	95	12	75	12	78	-0.034	-0.054	-0.007	-0.753	-0.047
	23	442	16	107	16	111	16	112	16	111	-0.049	-0.075	-0.020	-1.013	-0.067
4/4/2017	18	340	12	100	12	78	12	81	12	81	-	-	-	-	-
4/26/2017	21	340	12	87	12	78	12	87	12	88	-0.041	-0.084	-0.029	-0.820	-0.070
5/23/2017	20	340	12	81	12	83	12	86	12	90	-0.041	-0.081	-0.018	-0.825	-
6/19/2017	19	340	12	79	12	88	12	81	12	92	-0.045	-0.086	-0.025	-0.922	-0.102
7/18/2017	20	340	12	78	12	85	12	84	12	93	-0.038	-0.098	-0.027	-0.936	-0.108
8/24/2017	18	340	12	79	12	85	12	84	12	92	-0.038	-0.075	-0.022	-0.878	-0.094

Notes:

a) System startup occurred on 3/30/17. Data shown for this date are for multiple applied vacuum levels, adjusted using the blower VFD. Blower speed set at 75% (45 hertz) after startup.

b) Applied vacuum at system measured at knockout tank.

c) Influent flow rate is per flow indicator FI-101.

d) Extraction well flow rates shown have been adjusted proportionally such that their sum equals the influent flow rate per flow indicator FI-101. Pre-adjustment flow rates obtained by measuring air velocity at extraction wells using anemometer.

Abbreviations:

in.W.C. = inches of water column

scfm = standard cubic feet per minute

VFD = variable frequency drive

Table 2
Vapor Analytical Data
Construction Completion Report - SVE/SSD System Interim Remedial Measure
Former Greener Cleaners Site
809 State Street, Schenectady, New York
Site No. 447041

Location ID:	SVE-1	SVE-2	SVE-3	SVE-4	Pre-VPGAC	Effluent
Date Collected:	04/26/17	04/26/17	04/26/17	04/26/17	04/26/17	04/26/17
Analyte						
Acetone	**30**	<19	<19	**40**	**23**	<19
Benzene	**5.5**	<0.64	**0.79**	**2**	**1.3**	<0.64
Benzyl chloride	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromodichloromethane	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
Bromoform	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1
Bromomethane	<0.78	<0.78	<0.78	<0.78	<0.78	<0.78
1,3-Butadiene	<0.44	<0.44	<0.44	<0.44	<0.44	<0.44
2-Butanone (MEK)	<24	<24	<24	<24	<24	<24
Carbon Disulfide	<6.2	<6.2	<6.2	<6.2	<6.2	<6.2
Carbon Tetrachloride	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
Chlorobenzene	<0.92	<0.92	<0.92	<0.92	<0.92	<0.92
Chloroethane	<0.53	<0.53	<0.53	<0.53	<0.53	<0.53
Chloroform	<0.98	<0.98	**30**	**4**	<0.98	<0.98
Chloromethane	**1.6**	<0.83	<0.83	<0.83	<0.83	<0.83
Cyclohexane	**22**	<1.4	**2.7**	**8.4**	**3.7**	<1.4
Dibromochloromethane	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7
1,2-Dibromoethane (EDB)	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
1,2-Dichlorobenzene	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2
1,3-Dichlorobenzene	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2
1,4-Dichlorobenzene	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2
Dichlorodifluoromethane (Freon 12)	**2.6**	**2.9**	**2.7**	**3.8**	**4.7**	**3.3**
1,1-Dichloroethane	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81
1,2-Dichloroethane	<0.81	<0.81	<0.81	<0.81	<0.81	<0.81
1,1-Dichloroethylene	<0.79	<0.79	<0.79	<0.79	<0.79	<0.79
cis-1,2-Dichloroethylene	<0.79	<0.79	<0.79	<0.79	<0.79	<0.79
trans-1,2-Dichloroethylene	<0.79	<0.79	<0.79	<0.79	<0.79	<0.79
1,2-Dichloropropane	<0.92	<0.92	<0.92	<0.92	<0.92	<0.92
cis-1,3-Dichloropropene	<0.91	<0.91	<0.91	<0.91	<0.91	<0.91
trans-1,3-Dichloropropene	<0.91	<0.91	<0.91	<0.91	<0.91	<0.91
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4
1,4-Dioxane	<7.2	<7.2	<7.2	<7.2	<7.2	<7.2
Ethanol	<15	<15	<15	<15	**40**	<15
Ethyl Acetate	<0.72	<0.72	<0.72	<0.72	<0.72	<0.72
Ethylbenzene	<0.87	<0.87	<0.87	<0.87	<0.87	<0.87
4-Ethyltoluene	<0.98	<0.98	<0.98	<0.98	<0.98	<0.98
Heptane	<0.82	<0.82	<0.82	<0.82	<0.82	<0.82
Hexachlorobutadiene	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1
Hexane	<28	<28	<28	<28	<28	<28
2-Hexanone (MBK)	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6
Isopropanol	<20	<20	<20	<20	<20	<20
Methyl tert-Butyl Ether (MTBE)	<0.72	<0.72	<0.72	<0.72	<0.72	<0.72
Methylene Chloride	<6.9	<6.9	<6.9	<6.9	<6.9	<6.9
4-Methyl-2-pentanone (MIBK)	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6
Naphthalene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Propene	<14	<14	<14	<14	<14	<14
Styrene	<0.85	<0.85	<0.85	<0.85	<0.85	<0.85
1,1,2,2-Tetrachloroethane	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4
Tetrachloroethylene	**180**	**1000**	**1300**	**510**	**41**	<1.4
Tetrahydrofuran	<2.4	<2.4	<2.4	<2.4	<2.4	**5.5**
Toluene	**1.8**	**0.98**	<0.75	**1.1**	**1.1**	**1.3**
1,2,4-Trichlorobenzene	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
1,1,1-Trichloroethane	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1
1,1,2-Trichloroethane	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1
Trichloroethylene	<1.1	**2.5**	**10**	**2.2**	<1.1	<1.1
Trichlorofluoromethane (Freon 11)	<4.5	<4.5	<4.5	<4.5	<4.5	<4.5
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	<6.1	<6.1	<6.1	<6.1	<6.1	<6.1
1,2,4-Trimethylbenzene	<0.98	<0.98	<0.98	<0.98	<0.98	<0.98
1,3,5-Trimethylbenzene	<0.98	<0.98	<0.98	<0.98	<0.98	<0.98
Vinyl Acetate	<14	<14	<14	<14	<14	<14
Vinyl Chloride	<0.51	<0.51	<0.51	<0.51	<0.51	<0.51
m&p-Xylene	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7
o-Xylene	<0.87	<0.87	<0.87	<0.87	<0.87	<0.87

Notes:

- Samples analyzed for VOCs by USEPA Method TO-15. 6 liter canisters and flow controllers calibrated for 5-minute sample durations used for sampling.
- All concentrations are in micrograms per cubic meter ($\mu g/m^3$).

Abbreviations:

< = Indicates the analyte was analyzed for but not detected above the reporting limit. Value shown is the reporting limit.

bold = indicates value exceeds reporting limit.

USEPA = United States Environmental Protection Agency

VOC = volatile organic compound

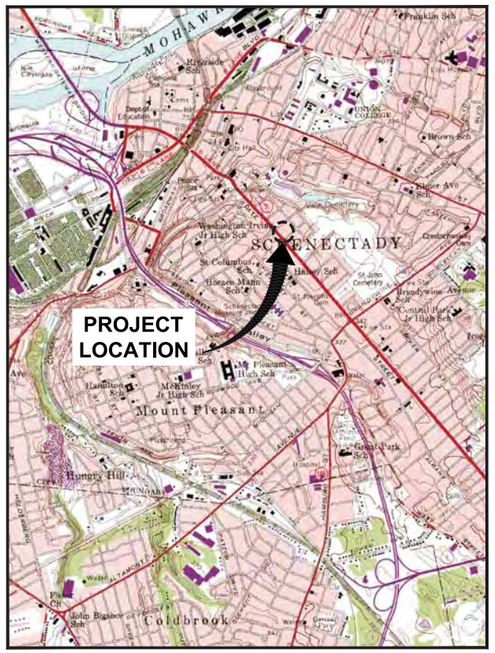
APPENDIX A

Record Drawings

RECORD DRAWINGS

SOIL VAPOR EXTRACTION / SUB-SLAB DEPRESSURIZATION SYSTEM

FORMER GREENER CLEANERS SITE
809 STATE STREET
SCHENECTADY, NEW YORK
SITE NO. 447041



REFERENCE: BASE MAP USGS 7.5 MINUTE QUADRANGLE., SCHENECTADY, NY., 1954, PHOTOREVISED 1980

LOCATION MAP

0 2000' 4000'
GRAPHIC SCALE

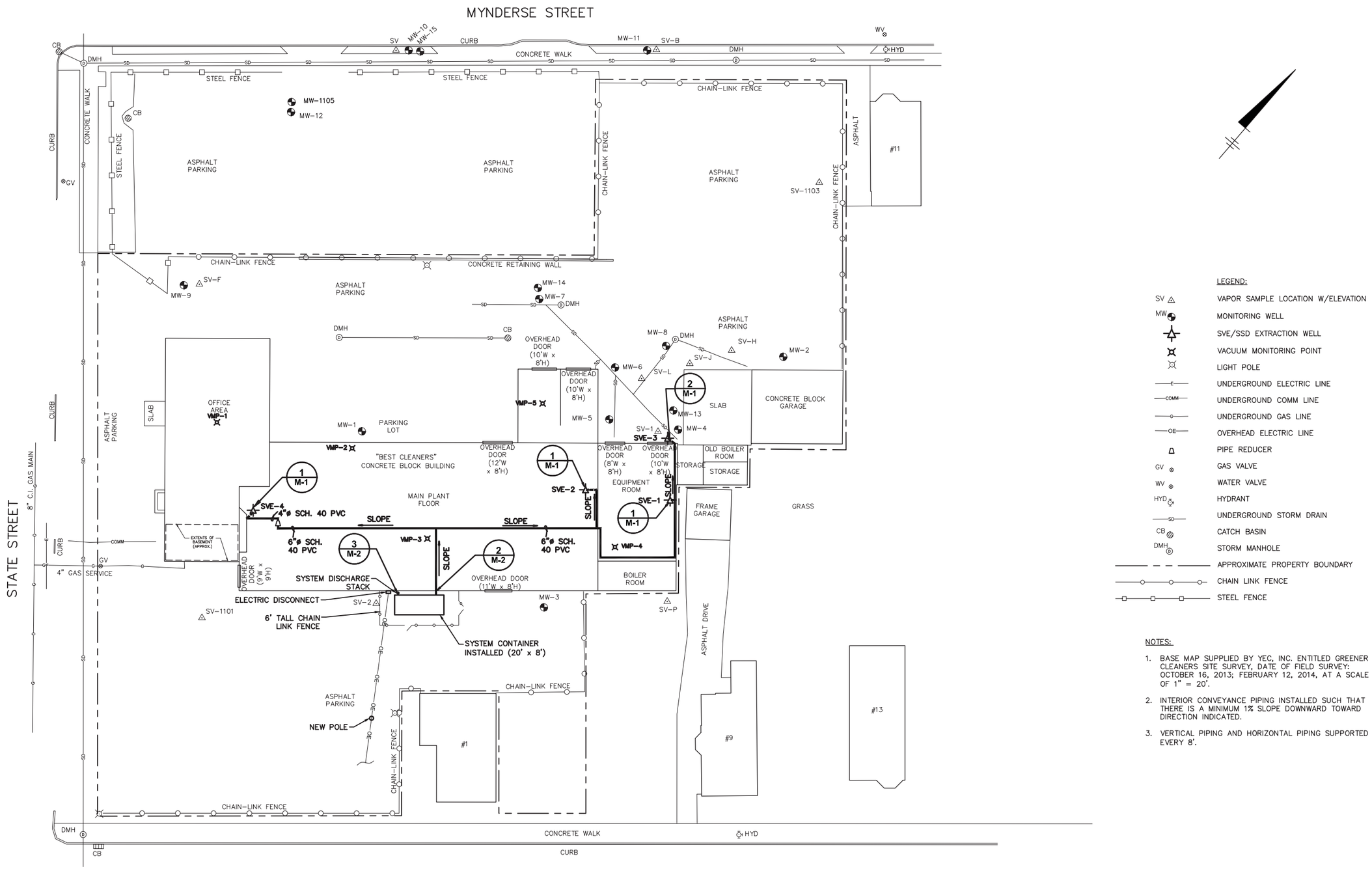
DATE ISSUED
AUGUST 2017

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

ARCADIS Design & Consultancy for natural and built assets

ARCADIS CE, INC.

INDEX TO DRAWINGS



LEGEND:

- SV △ — VAPOR SAMPLE LOCATION W/ELEVATION
- MW — MONITORING WELL
- SVE/SSD EXTRACTION WELL
- VACUUM MONITORING POINT
- LIGHT POLE
- —E— UNDERGROUND ELECTRIC LINE
- —COMM— UNDERGROUND COMM LINE
- —G— UNDERGROUND GAS LINE
- —OE— OVERHEAD ELECTRIC LINE
- PIPE REDUCER
- GV — GAS VALVE
- WV — WATER VALVE
- HYD — HYDRANT
- —SD— UNDERGROUND STORM DRAIN
- CB — CATCH BASIN
- DMH — STORM MANHOLE
- APPROXIMATE PROPERTY BOUNDARY
- CHAIN LINK FENCE
- STEEL FENCE

NOTES:

1. BASE MAP SUPPLIED BY YEC, INC. ENTITLED GREENER CLEANERS SITE SURVEY, DATE OF FIELD SURVEY: OCTOBER 16, 2013; FEBRUARY 12, 2014, AT A SCALE OF 1" = 20'.
2. INTERIOR CONVEYANCE PIPING INSTALLED SUCH THAT THERE IS A MINIMUM 1% SLOPE DOWNWARD TOWARD DIRECTION INDICATED.
3. VERTICAL PIPING AND HORIZONTAL PIPING SUPPORTED EVERY 8'.

CITY:SYRACUSE-NY DIV/GROUP:ENVCAD DB:G.STEINBERGER LD: PIC:D.LOEWENSTEIN PM:A.VITOLINS TM:C.DAVERN LYR:ON=*;OFF=*REF*
G:\ENVCAD\Roseville-CA\RETURN-TO\Syracuse-NY\00266413\0000\00003\DWG\RECORD\00266413G01.dwg LAYOUT: G-1 SAVED: 8/30/2017 1:44 PM ACADVER: 19.1S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: PLTCONT.CTB PLOTTED: 8/30/2017 1:51 PM BY: ROBITAILLE, BEVERLY
XREFS: IMAGES: PROJECTNAME: ---
00266413X00
00266413X01

1"=20' (20' 0 20' 40')

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING:

USE TO VERIFY FIGURE REPRODUCTION SCALE

No.	Date	Revisions	By	Ckd

ARCADIS Design & Consultancy for natural and built assets
ARCADIS CE, INC.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
FORMER GREENER CLEANERS SITE NO. 447041 • SCHENECTADY, NEW YORK
SOIL VAPOR EXTRACTION / SUB-SLAB DEPRESSURIZATION SYSTEM

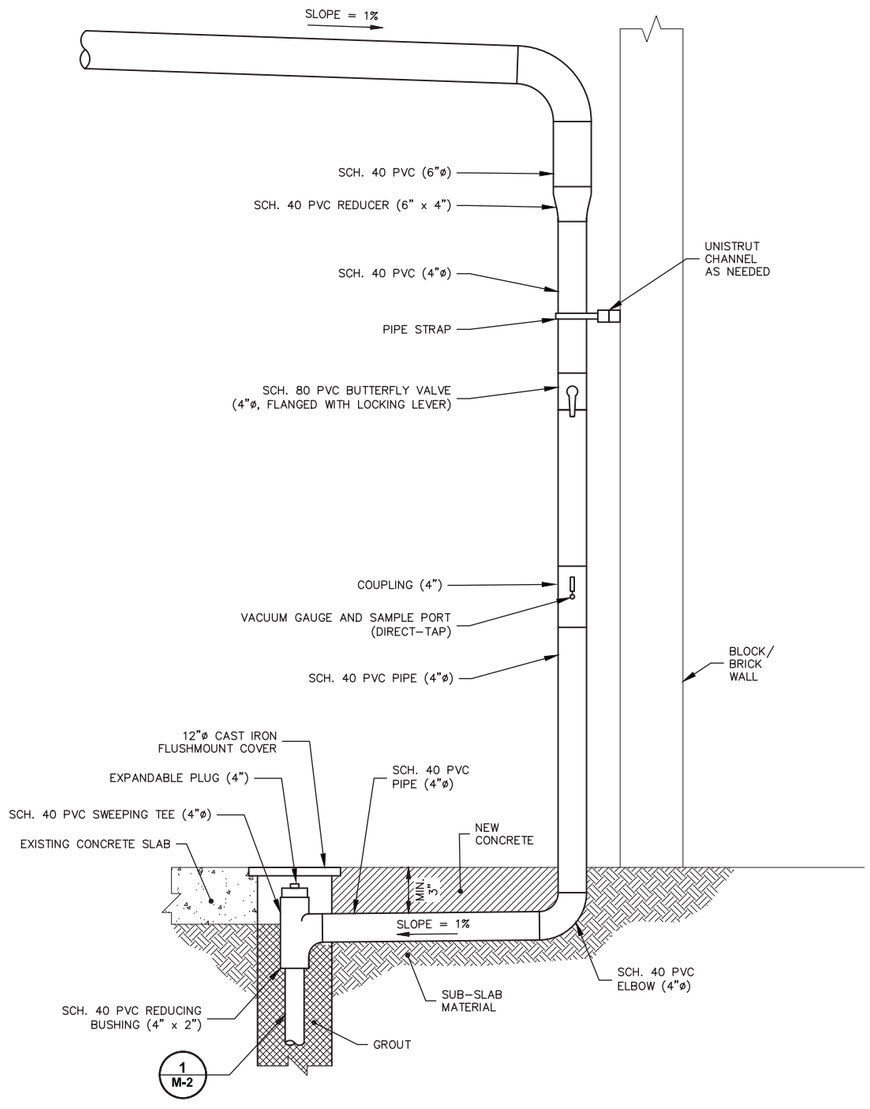
SVE/SSD SYSTEM LAYOUT

ARCADIS Project No.
00266413.0000.00003

Date
AUGUST 2017

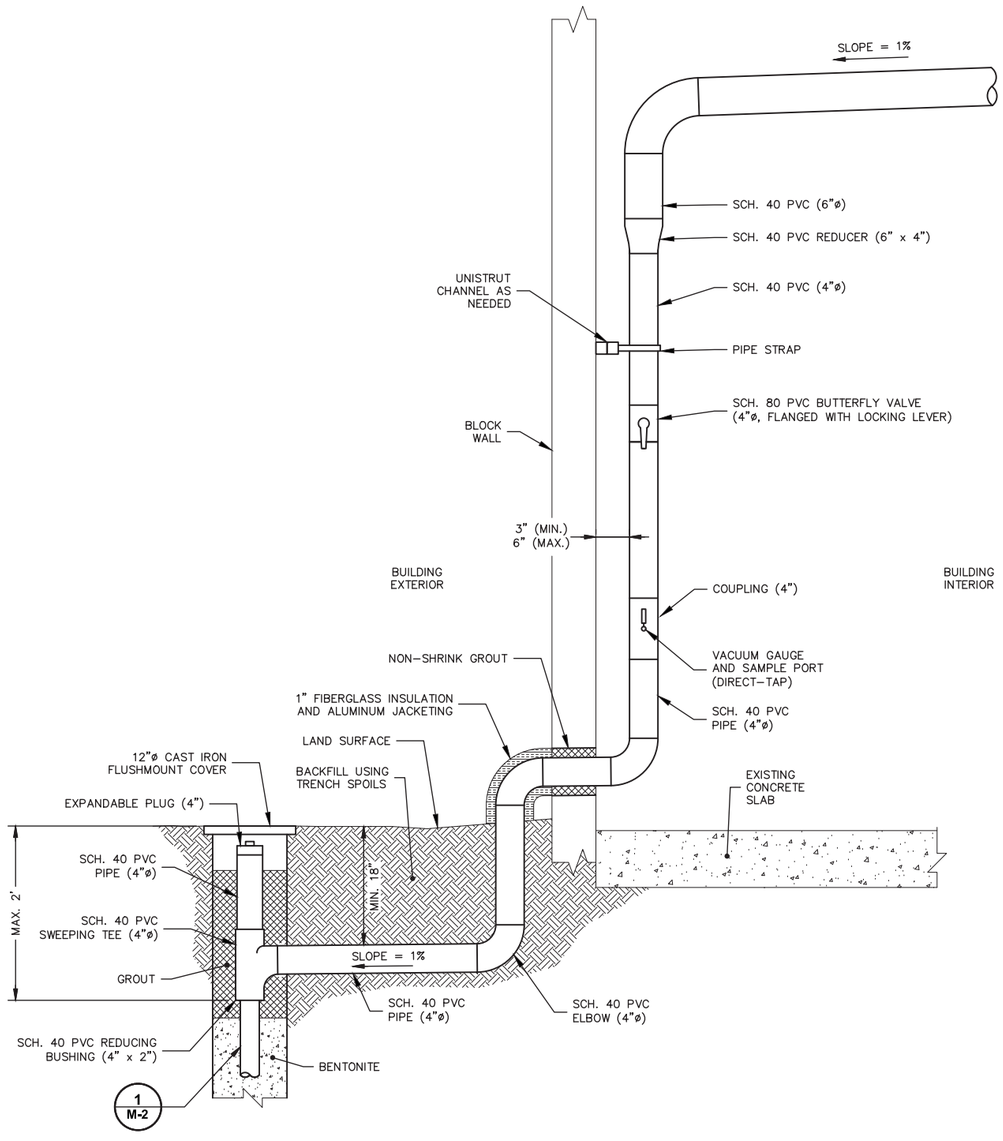
ARCADIS
855 Route 146, Suite 210
Clifton Park, NY 12065
Tel: 518-250-7300

G-1



INTERIOR EXTRACTION WELL TRENCH / WELLHEAD DETAIL 1

NOT TO SCALE



EXTERIOR EXTRACTION WELL TRENCH / WELLHEAD DETAIL 2

NOT TO SCALE

SCALE(S) AS INDICATED

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING: ——— USE TO VERIFY FIGURE REPRODUCTION SCALE

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FORMER GREENER CLEANERS SITE NO. 447041 • SCHENECTADY, NEW YORK
SOIL VAPOR EXTRACTION / SUB-SLAB DEPRESSURIZATION SYSTEM

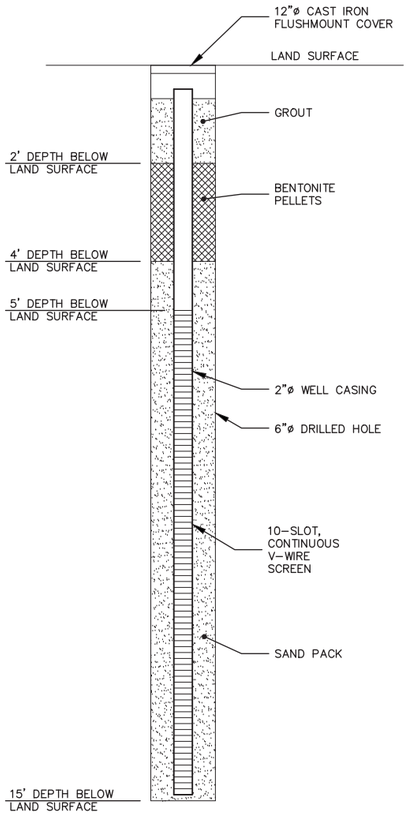
EXTRACTION POINT DETAILS

ARCADIS Project No.
00266413.0000.00003

Date
AUGUST 2017

ARCADIS
855 Route 146, Suite 210
Clifton Park, NY 12065
Tel: 518-250-7300

M-1

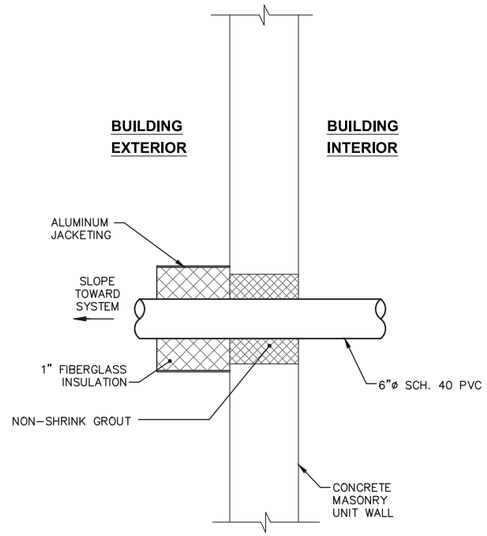


NOTE:

1. SEE DRAWING M-1 FOR WELLHEAD PIPING CONNECTIONS.

SVE WELL CONSTRUCTION DETAIL 1

NOT TO SCALE

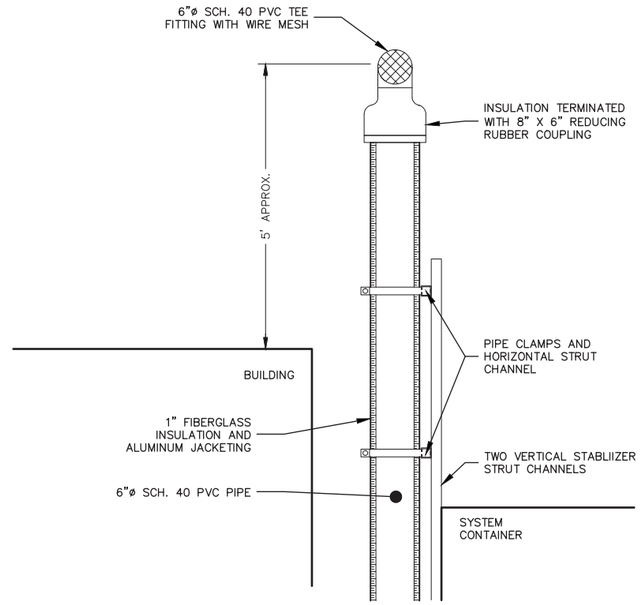


NOTES:

1. ALL EXTERIOR PIPING FITTED WITH 1" FIBERGLASS INSULATION AND ALUMINUM JACKETING.

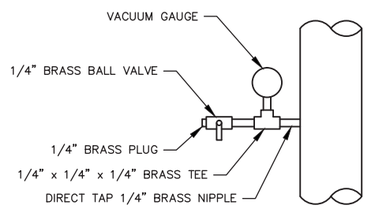
EXTERIOR WALL PENETRATION DETAIL 2

NOT TO SCALE



DISCHARGE STACK DETAIL 3

NOT TO SCALE



VACUUM GAUGE AND SAMPLE PORT DETAIL 4

NOT TO SCALE

CITY:SYRACUSE-NY DIV/GROUP-ENVCAD DB:G.STEINBERGER LD: PIC:D.LOEWENSTEIN PM:A.VITOLINS TM:C.DAVERN LYR:ON='0'OFF='REF'
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XREFS: IMAGES: PROJECTNAME: ---
00266413X00

SCALE(S) AS INDICATED

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No.	Date	Revisions	By	Ckd

ARCADIS Design & Consultancy for natural and built assets

ARCADIS CE, INC.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
FORMER GREENER CLEANERS SITE NO. 447041 • SCHENECTADY, NEW YORK
SOIL VAPOR EXTRACTION / SUB-SLAB DEPRESSURIZATION SYSTEM

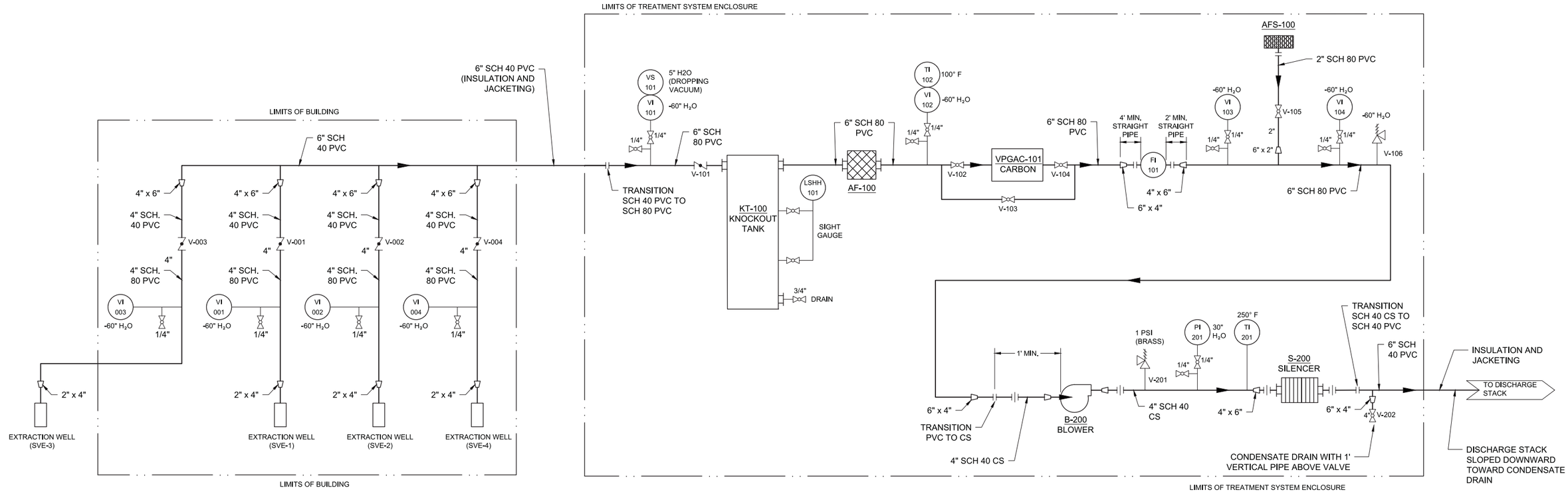
MISCELLANEOUS DETAILS

ARCADIS Project No.
00266413.0000.00003

Date
AUGUST 2017

ARCADIS
855 Route 146, Suite 210
Clifton Park, NY 12065
Tel: 518-250-7300

M-2



LEGEND:

- VAPOR PROCESS PIPING
- BUILDING LIMITS
- FLANGE / TRANSITION
- UNION
- BLOWER
- FLANGED BUTTERFLY VALVE
- BALL VALVE
- PRESSURE RELIEF VALVE
- VACUUM RELIEF VALVE
- REDUCER
- AIR FILTER ONLY
- AIR FILTER / SILENCER
- SILENCER ONLY

ABBREVIATIONS:

CPVC	CHLORINATED POLYVINYL CHLORIDE
CS	CARBON STEEL
FIT	FLOW INDICATING TRANSMITTER
LSH	LEVEL SWITCH HIGH
PI	PRESSURE INDICATOR
PVC	POLYVINYL CHLORIDE
SCH	SCHEDULE
TI	TEMPERATURE INDICATOR
TT	TEMPERATURE TRANSMITTER
VI	VACUUM INDICATOR
VS	VACUUM SWITCH

NOTES:

1. IN-LINE VALVE MATERIALS ARE SAME MATERIAL TYPE AS CONNECTING PROCESS LINE.
2. BLOWER EQUIPPED WITH VARIABLE FREQUENCY DRIVE (VFD). VFD ADJUSTABLE BY LOCAL OPERATOR WITHOUT OPENING PANEL DOOR.
3. ALL EXTERIOR PIPING INSTALLED WITH MINIMUM 1" FIBERGLASS INSULATION AND ALUMINUM JACKETING.

GENERAL PROCESS DESCRIPTION:

THE SYSTEM IS A SOIL VAPOR EXTRACTION (SVE)/SUB-SLAB DEPRESSURIZATION (SSD) SYSTEM DESIGNED TO EXTRACT SOIL VAPORS FROM FOUR (4) EXTRACTION WELLS (SVE-1 THROUGH SVE-4) VIA A COMMON HEADER. SOIL VAPORS ARE CONVEYED TO THE TREATMENT SYSTEM ENCLOSURE LOCATED OUTSIDE THE BUILDING AS INDICATED IN THE DRAWINGS. THE SYSTEM ENCLOSURE INCLUDES A BLOWER (B-200) TO APPLY VACUUM TO THE SVE WELLS. THE BLOWER IS EQUIPPED WITH A VARIABLE FREQUENCY DRIVE TO ALLOW LOCAL OPERATORS TO ADJUST APPLIED VACUUM. THE SUCTION SIDE OF THE BLOWER INCLUDES A KNOCKOUT TANK (KT-100) TO REMOVE ANY MOISTURE PRESENT IN THE VAPOR STREAM, IN-LINE FILTER (AF-100), LOW VACUUM SWITCH (VS-101), 1,000-POUND VAPOR PHASE GRANULAR ACTIVATED CARBON (VPGAC-101), FLOW INDICATOR (FI-101), AND A DILUTION LINE. THE PRESSURE SIDE OF THE BLOWER INCLUDES A SILENCER PRIOR TO VAPORS DISCHARGING TO ATMOSPHERE VIA AN EXHAUST STACK EXTENDING 5' ABOVE THE ROOF LINE.

ALARM NOTIFICATION:

OPERATORS NOTIFIED VIA EMAIL IN THE EVENT ANY ALARM CONDITION (CRITICAL OR NON-CRITICAL) OCCURS.

RELAY LOGIC:

BLOWER B-200 SHALL RUN IF PANEL-MOUNTED HAND-OFF-AUTO SWITCH IS IN HAND, OR IF HAND-OFF-AUTO SWITCH IS IN AUTO AND THERE ARE NO CRITICAL ALARMS PRESENT.

ALARM INTERLOCKS

NO.	INSTRUMENT	ALARM CONDITION	TYPE	ALARM RANGE	DELAY
1	VS-101	LOW VACUUM	NON-CRITICAL	< 5 INWC VACUUM	15 SECONDS
2	LSHH-101	HIGH-HIGH LIQUID LEVEL KNOCKOUT TANK (KT-100)	CRITICAL	RAISED	2 SECONDS

SCALE(S) AS INDICATED

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No.	Date	Revisions	By	Ckd

ARCADIS Design & Consultancy for natural and built assets

ARCADIS CE, INC.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
FORMER GREENER CLEANERS SITE NO. 447041 • SCHENECTADY, NEW YORK
SOIL VAPOR EXTRACTION / SUB-SLAB DEPRESSURIZATION SYSTEM

PROCESS AND INSTRUMENTATION DIAGRAM

ARCADIS Project No.
00266413.0000.00003

Date
AUGUST 2017

ARCADIS
855 Route 146, Suite 210
Clifton Park, NY 12065
Tel: 518-250-7300

P-1

APPENDIX B

Photo Log

Project Photographs

Greener Cleaners
Schenectady, NY

Photo: #1

Date:
11/8/2016

Description:
Soil Vapor Extraction well SVE-1 prior to conveyance piping tie-in

Location:
Inside building

Photo: #2

Date:
11/8/2016

Description:
GPR utility mark-out prior to drilling for SVE-3

Location:
Outside building on north side

Project Photographs

Greener Cleaners
Schenectady, NY

Photo: #3

Date:
11/22/2016

Description:
Removal of concrete slab for SVE-4 prior to drilling

Location:
Inside building

Photo: #4

Date:
11/22/2016

Description:
Temporary sand fill for SVE-3 prior to conveyance piping tie-in

Location:
Outside building on north side

Project Photographs

Greener Cleaners
Schenectady, NY

Photo: #5

Date:
11/29/2016

Description:
Removal of concrete slab for SVE-2 conveyance piping connection

Location:
Inside building

Photo: #6

Date:
11/30/2016

Description:
Temporary barricade of SVE-4 for new concrete to cure

Location:
Inside building

Project Photographs

Greener Cleaners
Schenectady, NY

Photo: #7

Date:
12/14/2016

Description:
Overhead conveyance piping

Location:
Inside building

Photo: #8

Date:
12/20/2016

Description:
Installation of riser pipe at SVE-1

Location:
Inside building

Project Photographs

Greener Cleaners
Schenectady, NY

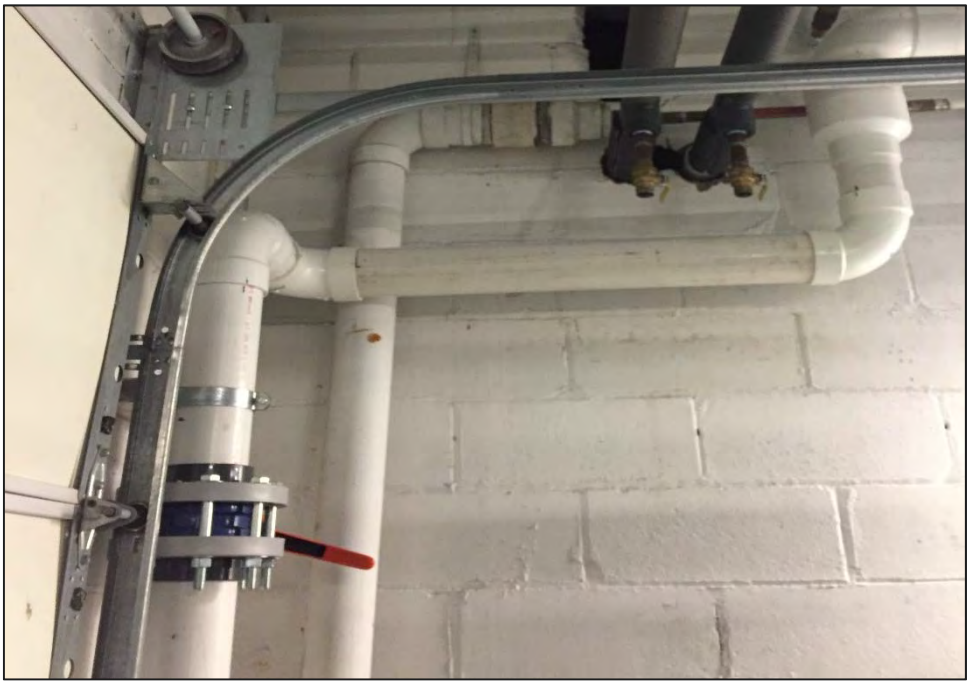


Photo: #9

Date:
12/21/2016

Description:
Conveyance piping to SVE-3

Location:
Inside building

Photo: #10

Date:
2/20/2017

Description:
Vacuum gauge on SVE-2 riser pipe

Location:
Inside building

Project Photographs

Greener Cleaners
Schenectady, NY

Photo: #11

Date:
2/20/2017

Description:
Installation of new electrical pole for service

Location:
Paved area south of building

Photo: #12

Date:
2/20/2017

Description:
Wall penetration for conveyance pipe

Location:
South side of building exterior

Project Photographs

Greener Cleaners
Schenectady, NY

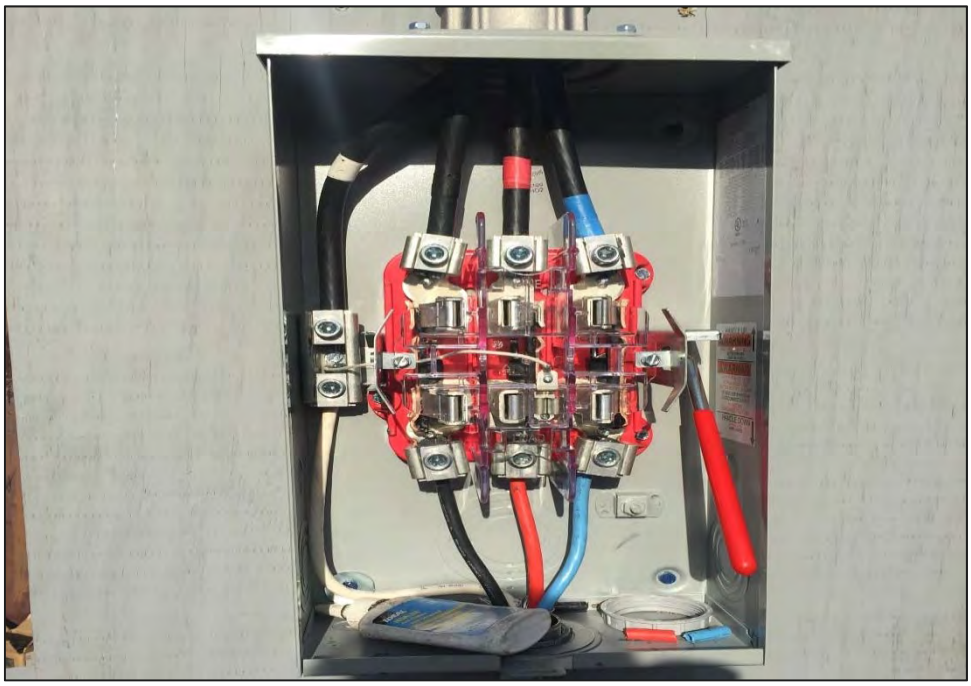


Photo: #13

Date:
2/21/2017

Description:
Internal wiring of new electric meter

Location:
New electric pole in paved area south of building

Photo: #14

Date:
2/21/2017

Description:
Wiring of new Main Disconnect

Location:
Building exterior, south side

Project Photographs

Greener Cleaners
Schenectady, NY

Photo: #15

Date:
3/6/2017

Description:
Installation of vacuum monitoring point VMP-4

Location:
Inside building

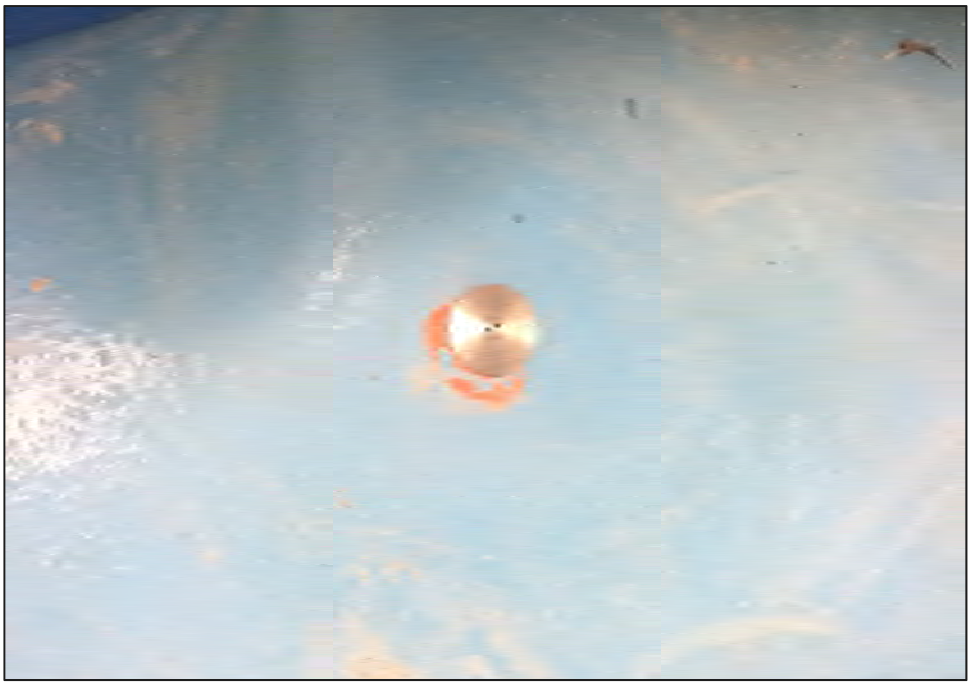


Photo: #16

Date:
3/6/2017

Description:
Vacuum monitoring point VMP-4 with flush-mount cover

Location:
Inside building

Project Photographs

Greener Cleaners
Schenectady, NY

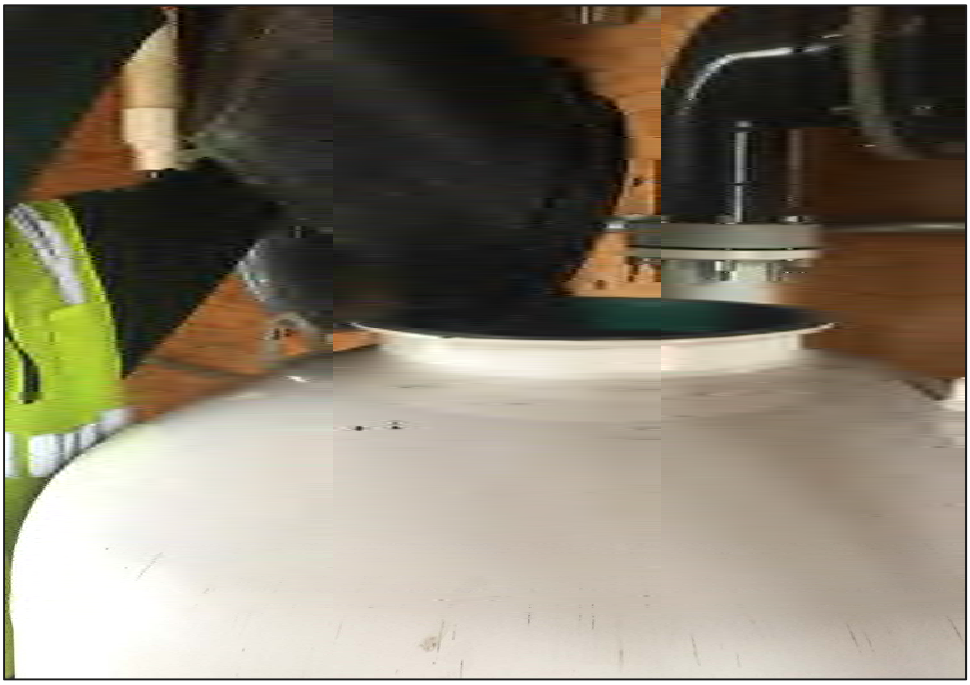


Photo: #17

Date:
3/7/2017

Description:
Installation of virgin granular activated carbon

Location:
SVE/SSD system container

Photo: #18

Date:
3/7/2017

Description:
Discharge stack from system container with insulation and jacketing

Location:
System container area, south of building

Project Photographs

Greener Cleaners
Schenectady, NY

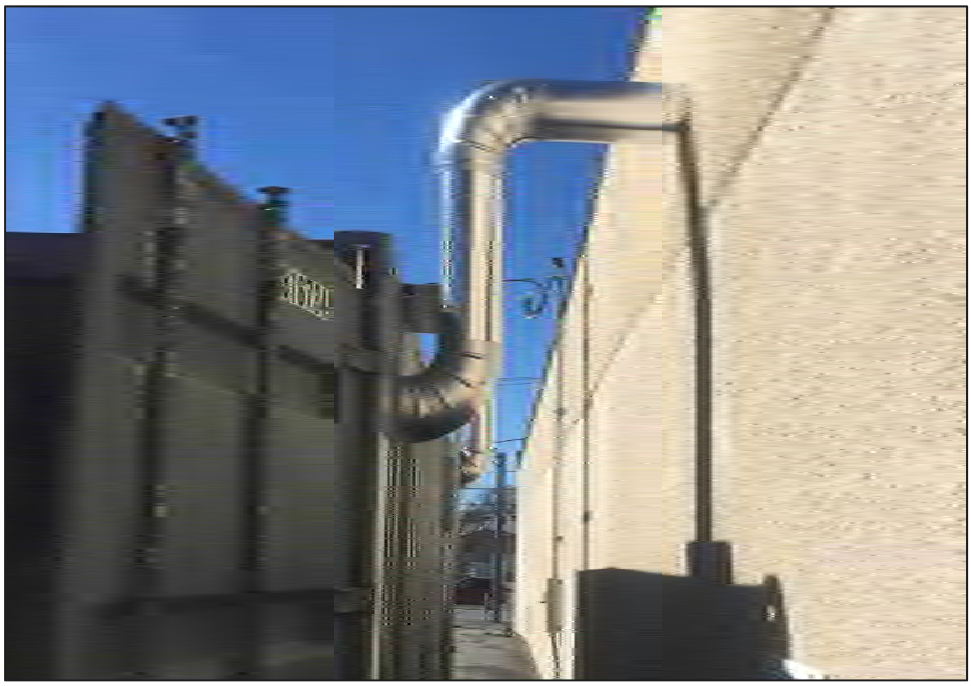


Photo: #19

Date:
3/8/2017

Description:
Conveyance piping connection to system container

Location:
System container area, south of building

Photo: #20

Date:
3/30/2017

Description:
Inside of control panel

Location:
System container

Project Photographs

Greener Cleaners
Schenectady, NY

Photo: #21

Date:
4/3/2017

Description:
Soil removal for fence post installation

Location:
System container area, south of building

Photo: #22

Date:
4/3/2017

Description:
3-foot wide chain-link fence gate, system personnel door

Location:
System container area, south of building

Project Photographs

Greener Cleaners
Schenectady, NY

Photo: #23

Date:
4/3/2017

Description:
System container with 6-foot tall chain-link fence

Location:
System container area, south of building

Photo: #24

Date:
4/4/2017

Description:
Anchoring of system container

Location:
System container

Project Photographs

Greener Cleaners
Schenectady, NY

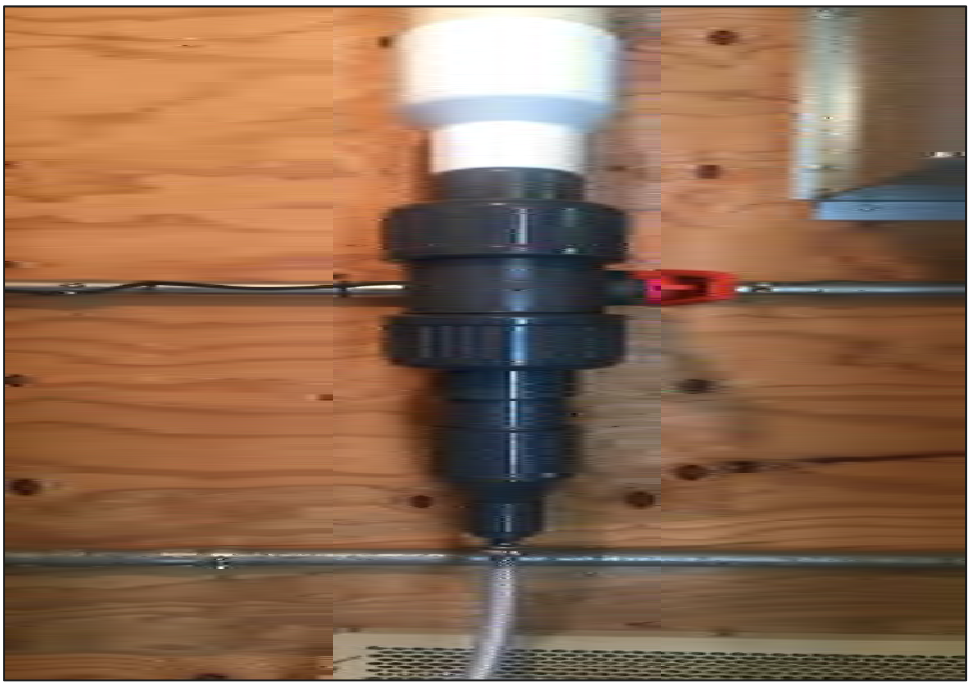


Photo: #25

Date:
4/4/2017

Description:
Condensate drain line on effluent line

Location:
System container

Photo: #26

Date:
4/4/2017

Description:
Control panel, distribution panel, and VFD panel

Location:
System container

Project Photographs

Greener Cleaners
Schenectady, NY

Photo: #27

Date:
4/4/2017

Description:
1,000-pound vapor phase granular activated carbon vessel

Location:
System container

Photo: #28

Date:
4/4/2017

Description:
Side channel blower

Location:
System container

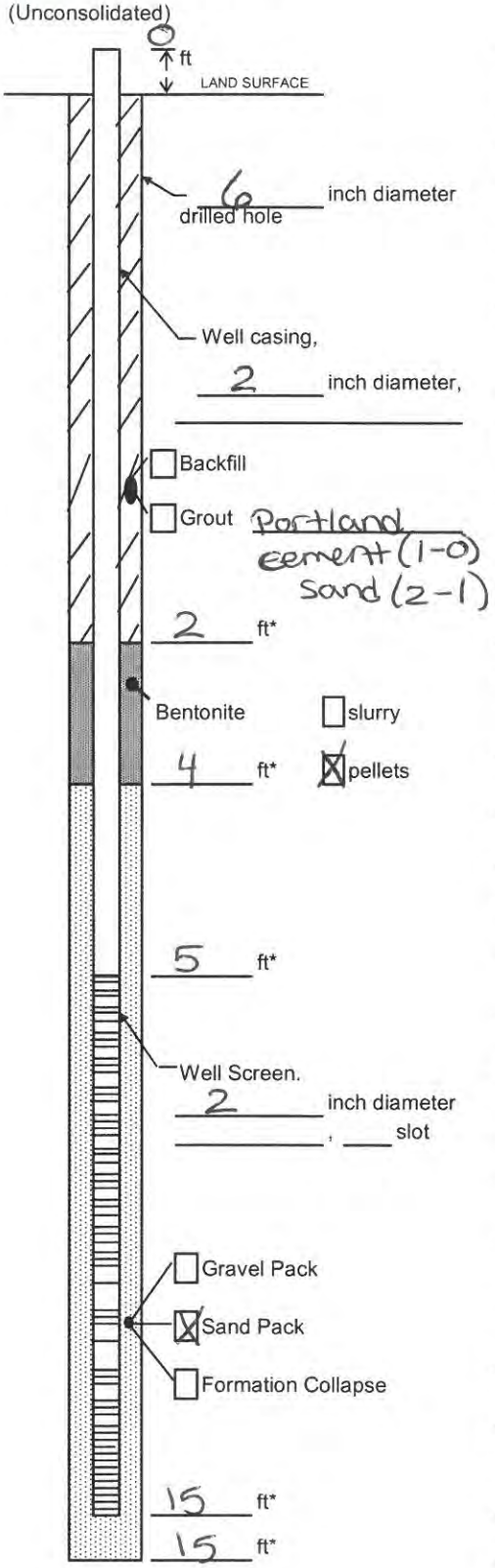
APPENDIX C

Well Construction Logs

ARCADIS

Well Construction Log

(Unconsolidated)



Measuring Point is Top of Well Casing Unless Otherwise Noted.

* Depth Below Land Surface

Project: Greener Cleaners Well SVE-1

Town/City: Schenectady

County: _____ State: NY

Permit No.: _____

Land-Surface Elevation and Datum:

_____ feet ☐ Surveyed ☐ Estimated

Installation Date(s): 7/23/15

Drilling Method: HSA

Drilling Contractor: Aztech

Drilling Fluid: NA

Development Technique(s) and Date(s)

NA

Fluid Loss During Drilling: NA gallons

Water Removed During Development: NA gallons

Static Depth to Water: NA feet below M.P.

Pumping Depth to Water: NA feet below M.P.

Pumping Duration: NA hours

Yield: NA gpm Date: NA

Specific Capacity: NA gpm/ft

Well Purpose: SVE

Remarks: _____

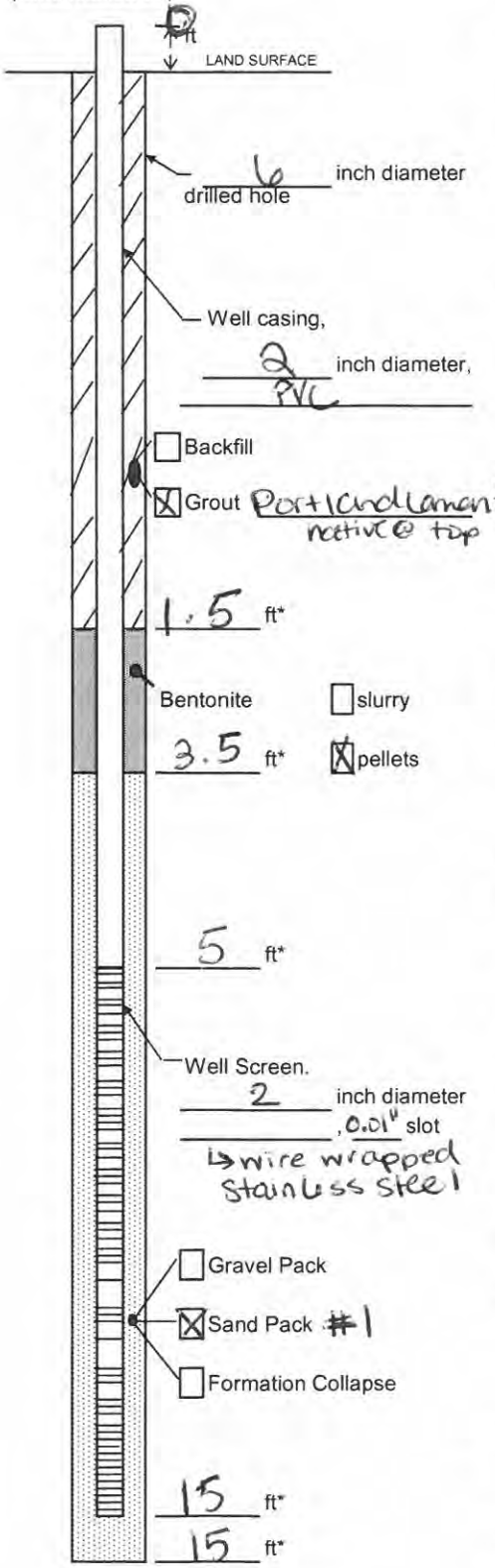
Prepared by: B. Quaglieri

Field Forms-Environmental.xls.xls
Well Constr

ARCADIS

Well Construction Log

(Unconsolidated)



Measuring Point is
Top of Well Casing
Unless Otherwise Noted.

* Depth Below Land Surface

Project Greener Cleaners Well SVE-2

Town/City Schenectady

County Schenectady State NY

Permit No.

Land-Surface Elevation and Datum:

____ feet ☐ Surveyed ☐ Estimated

Installation Date(s) 08/06/15

Drilling Method Hollow Stem Auger

Drilling Contractor Aztech

Drilling Fluid NA

Development Technique(s) and Date(s)

NA

Fluid Loss During Drilling NA gallons

Water Removed During Development NA gallons

Static Depth to Water NA feet below M.P.

Pumping Depth to Water NA feet below M.P.

Pumping Duration NA hours

Yield NA gpm Date NA

Specific Capacity NA gpm/ft

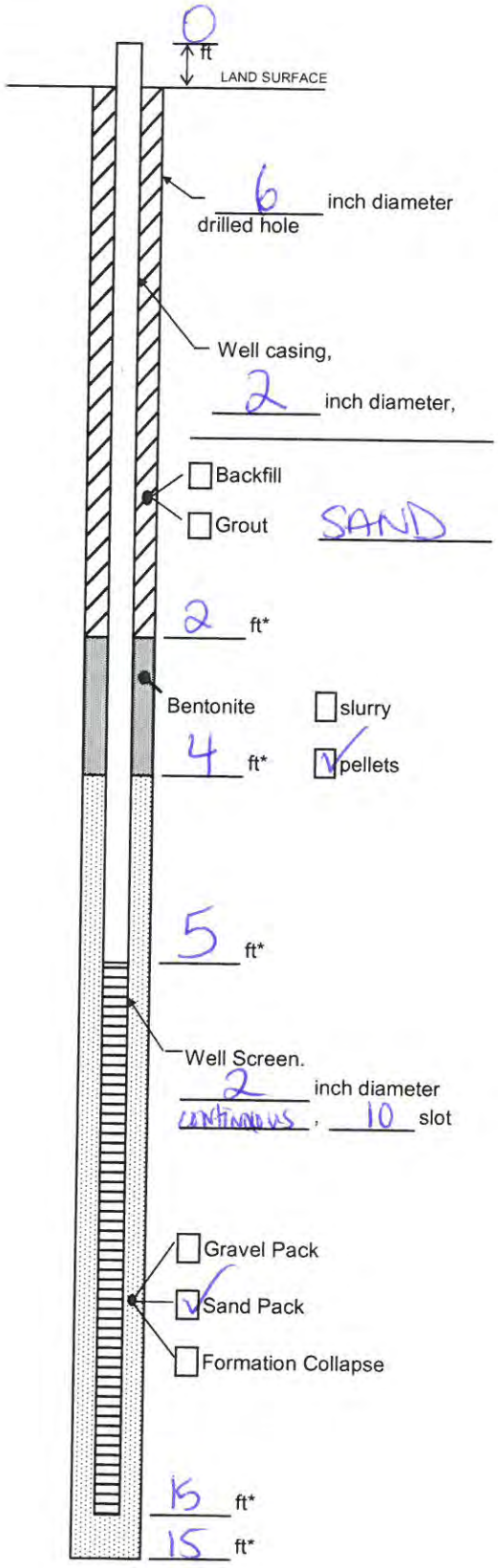
Well Purpose Soil Vapor Extraction

Remarks

Prepared by A. Goodrich

WELL CONSTRUCTION LOG
(Unconsolidated)

ARCADIS Design & Consult for natural and built assets



Measuring Point is
Top of Well Casing
Unless Otherwise Noted.
* Depth Below Land Surface

Project GREENER CLEANERS Well SVE-3

Town/City SCHENECTADY

County SCHENECTADY State NY

Permit No. _____

Land-Surface (LS) Elevation and Datum:

_____ feet ☐ Surveyed ☐ Estimated

Installation Date(s) 11/22/16

Drilling Method HOLLOW AUGER

Drilling Contractor Aztech

Drilling Fluid —

Development Technique(s) and Date(s)

Fluid Loss During Drilling _____ gallons

Water Removed During Development _____ gallons

Static Depth to Water _____ feet below M.P.

Pumping Depth to Water _____ feet below M.P.

Pumping Duration _____ hours

Yield _____ gpm Date _____

Specific Capacity _____ gpm/ft

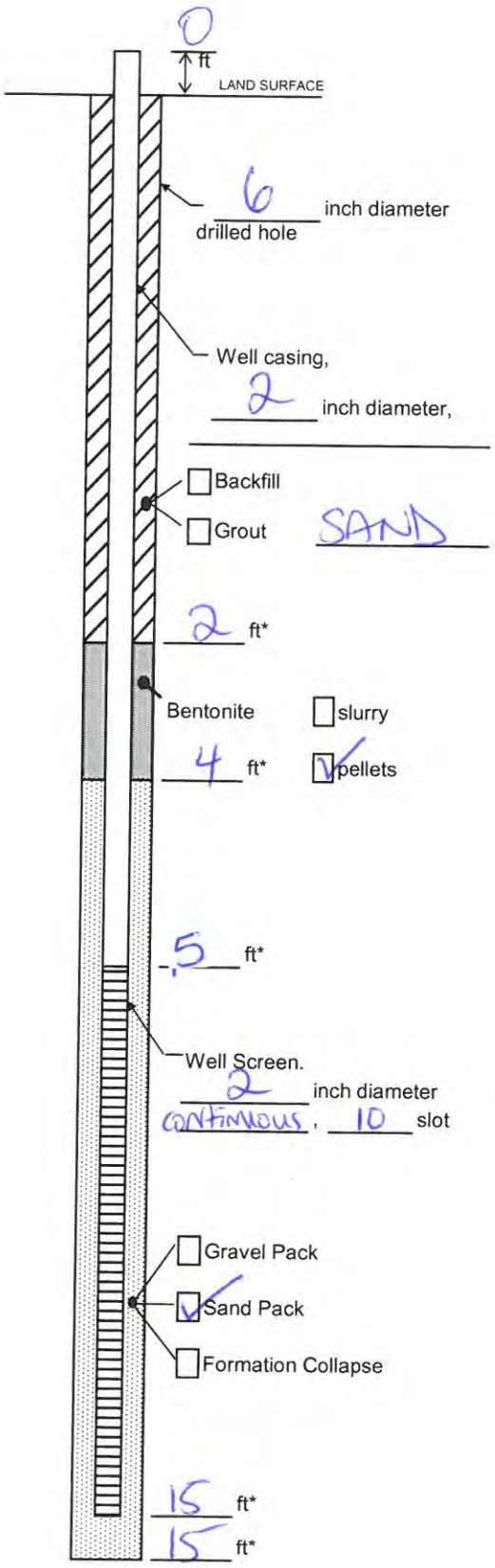
Well Purpose SVE well

Remarks _____

Prepared by Jessica Mullens

WELL CONSTRUCTION LOG
(Unconsolidated)

ARCADIS Design & Consult for natural and built assets



Measuring Point is
Top of Well Casing
Unless Otherwise Noted.
* Depth Below Land Surface

Project GREENER CLEANERS Well SVE-4

Town/City SCHENECTADY

County SCHENECTADY State NY

Permit No. _____

Land-Surface (LS) Elevation and Datum:

_____ feet ☐ Surveyed ☐ Estimated

Installation Date(s) 11/22/16

Drilling Method HOLLOW AUGER

Drilling Contractor Aztech

Drilling Fluid N/A

Development Technique(s) and Date(s)

Fluid Loss During Drilling _____ gallons

Water Removed During Development _____ gallons

Static Depth to Water _____ feet below M.P.

Pumping Depth to Water _____ feet below M.P.

Pumping Duration _____ hours

Yield _____ gpm Date _____

Specific Capacity _____ gpm/ft

Well Purpose SVE well

Remarks _____

Prepared by Jasmine McCollins

APPENDIX D

Waste Disposal Documentation

NON-HAZARDOUS WASTE MANIFEST

MAC-SON INDUSTRIAL SERVICES

105 So. Albany Road • Selkirk, NY 12158
(518) 756-7200

Job Number 20170017

Waste Transport Permit # **4A-579**
EPA ID # **NYR000152397**

GENERATOR

Generator Name NYSDEC
Address 625 Broadway Albany NY 12233
Phone Number (518) 402 7768

Generator Location _____
Address 809 State St. Schec. NY
Phone (518) 402 7768

Description of Waste	Check
Waste Flammable Liquid N.O.S. UN 1993	
Waste Oil	
Oil Soaked Dirt/Debris	
Gasoline Soaked Dirt/Debris	
Other-Explain Drill cuttings	✓

Check Type	
Drums	✓
Gallons	
Tons	
Yards	

Quantity
4

LOT # _____

Jasmine Mullins on behalf of NYSDEC
Generator Authorized Agent Name

TRANSPORTER

Transporter: **Mac-Son Industrial Services, Inc.**
Address: **105 So. Albany Road**
Selkirk, NY 12158
Phone #: **518-756-7200**

Driver Name Bob Buck
Vehicle License No./State NY
Vehicle Box Truck

Bob Buck
Driver's Signature

Shipment Date 3/7/17

DESTINATION

Site Name Industrial Oil Phone Number (315) 736 6080
Address 130 dry rd Oriskany NY

PAGE 1 - TRANSPORTER COPY PAGE 2 - TSD FACILITY COPY PAGE 3 - GENERATOR COPY

2032236

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NON-HAZARDOUS WASTE MANIFEST

GENERATOR

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
n/a	1	[illegible]	[illegible]

5. Generator's Name and Mailing Address

NYS Department of Environmental Conservation
Attn: Robert Filkins, 625 Broadway
Albany, NY 12233

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

909 State Street
Schenectady, NY 12307

Generator's Phone: [illegible]

6. Transporter 1 Company Name: MC Environmental Services, Inc — U.S. EPA ID Number: [illegible]

7. Transporter 2 Company Name: — U.S. EPA ID Number:

8. Designated Facility Name and Site Address

Veolia ES Technical Solutions, LLC
4301 Infirmary Road
West Carrollton, OH 45449 USA

U.S. EPA ID Number: OHD093945293

Facility's Phone: 937 859 2207 169

9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1. Non-Hazardous Non-DOT Regulated None None	3	DM	1500	P
2.				
3.				
4.				

13. Special Handling Instructions and Additional Information

[illegible]

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

Generator's/Offeror's Printed/Typed Name: on behalf of New York State Chris Davera Department of Environmental Conservation — Signature: [signature] — Month 4 Day 11 Y

INT'L

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

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

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: [illegible] — Signature: [signature] — Month Day Y

Transporter 2 Printed/Typed Name — Signature — Month Day Y

DESIGNATED FACILITY

17. Discrepancy

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

Manifest Reference Number:

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

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Y

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

Printed/Typed Name — Signature — Month Day Y

APPENDIX E

Permits

CITY OF SCHENECTADY
BUREAU OF CODE ENFORCEMENT

PERMIT NO 201701170
DATE: 03/29/2017

LOCATION OF BUILDING: 801 STATE ST

S/B/L: 49.25-4-25	OWNER	CONTRACTOR
NAME	KEM PLANT LLC	HALEY BROTHERS INC.
ADDRESS (P.O. BOX NOT ACCEPTED)	16 CORPORATE WOODS ALBANY NY 12211	3561 GUILDERLAND AVENUE SCHENECTADY NY 12306
TELEPHONE NUMBER		518-356-2170

PROPOSED WORK: 801 STATE STREET (809 ON FENCE APPLICATION)
6' CHAINLINK FENCE
TOTAL PERMIT FEE: $50.00

BUILDING PERMIT

***You must call to schedule Inspections please call* the Inspector listed below**

Thomas Verrigni (518) 382-5050 ext. 5376

Officers are available 8:00am-10:00am and 3:00pm – 5:00 pm.

Failure to call for inspections may result in additional fees and/or revocation of permit.

Inspector _____ **Date** _____

FINAL INSPECTION

Approved plans must be retained on the job and this card kept posted until final inspection has been made. Where a Certificate of Occupancy is required, such building shall not be occupied until said certificate has been issued.

SCOPE & DURATION of PERMIT

(a) Work covered by this building permit must begin within (30) thirty days of the effective date of this permit and must be completed within (1) one year of the effective date of this permit unless extended in writing by the Building Inspector.

REVOCATION of PERMITS

The Building Inspector may revoke a building permit theretofore issued and approved in the following instances

(a) Where he finds that there has been any false statement or misrepresentation as to a material fact in the application, plans or specifications on which the building permit was based.

(b) Where he finds that the work performed under the permit is not being prosecuted in accordance with the applicable law.

(c) Where he finds that the work performed under the permit is not being prosecuted in accordance with the provisions of the application plans or specifications.

(d) Where the person to whom a building permit has been issued fails or refuses to comply with a Stop Work Order issued by the Building inspector.

(e) When the work is suspended or abandoned for a period of twelve (12) months or when the walls or structural members are left uncovered or unprotected so that severe or freezing weather may weaken or damage such walls or structural members in the opinion of the Building Inspector.

NOTE: WHEN APPLICABLE, NO CERTIFICATE OF COMPLETION WILL BE ISSUED UNTIL PROOF OF RECEIPT FOR DEBRIS DISPOSAL IS SUBMITTED TO THE ASSIGNED CODE ENFORCEMENT OFFICER.

APPROVED BY: Thomas Verrigni THOMAS VERRIGNI

THIS PERMIT MUST BE VISIBLY POSTED ON WORK SITE

THIS PERMIT EXPIRES ONE YEAR FROM DATE OF ISSUANCE AND A FINAL INSPECTION MUST BE REQUESTED PRIOR TO EXPIRATION OR AN APPLICATION MADE TO COMPLETE THE BALANCE OF THE WORK. FAILURE TO COMPLY MAY RESULT ADDITIONAL FEES.

CITY OF SCHENECTADY
BUREAU OF CODE ENFORCEMENT

PERMIT NO: 201700708
DATE: 02/22/2017

LICENSE NUMBER
81

LOCATION OF BUILDING: 801 STATE ST
S/B/L: 49.25-4-25

	OWNER	CONTRACTOR
NAME	KEM PLANT LLC	A.E. ROSEN ELECTRIC
ADDRESS (P.O. BOX NOT ACCEPTED)	16 CORPORATE WOODS ALBANY NY 12211	883 BROADWAY ALBANY NY 12207
TELEPHONE NUMBER		518-463-4600

PROPOSED WORK: TEMP SERVICE 200 AMP TEMP SERVICE 200 AMP

TOTAL COST OF CONSTRUCTION:0 TOTAL FEE: 239.99

ELECTRICAL PERMIT

BUREAU of CODE ENFORCEMENT, CITY OF SCHENECTADY

***CALL DURING OFFICER HOURS* 8:00 – 10:00 AM & 3:00-4:00 PM**

JOSEPH PANGIONE @ 382-5050

MINIMUM OF TWO CALL INSPECTIONS REQUIRED FOR ALL ELECTRICAL WORK:

	Inspector	Date
1. Rough Inspection (before sheet rocking)		
2. Final Inspection (before occupancy)		

Approved plans must be retained on job and this card kept posted until final inspection has been made. Where a Certificate of Occupancy is required, such building shall not be occupied until said certificate has been issued.

SCOPE & DURATION of PERMIT

(a) Work covered by this electrical permit must begin within 30 days of the effective date of this permit and must be completed within 1 year of the effective date of this permit unless extended in writing by the Building Inspector.

REVOCATION of PERMITS

The Building Inspector may revoke a building permit theretofore issued and approved in the following instances:

(a) Where he finds that there has been any false statement or misrepresentation as to a material fact in the application, plans or specifications on which the building permit was based.
(b) Where he finds that the work performed under the permit is not being prosecuted in accordance with the applicable law.
(c) Where he finds that the work performed under the permit is not being prosecuted in accordance with the provisions of the application plans or specifications.
(d) Where the person to whom a building permit has been issued fails or refuses to comply with a Stop Work Order issued by the Building inspector.
(e) When the work is suspended or abandoned for a period of twelve (12) months or when the walls or structural members are left uncovered or unprotected so that severe or freezing weather may weaken or damage such walls or structural members I the opinion of the Building Inspector.

BY: _____
JOSEPH PANGIONE

APPENDIX F

Laboratory Analytical Data

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

May 8, 2017

Stefan Bagnato
Arcadis US, Inc. - Clifton Park-NY
855 Route 146, Suite 210
Clifton Park, NY 12065

Project Location: Greener Cleaners - Schenectady, NY
Client Job Number:
Project Number: 00266413.0000
Laboratory Work Order Number: 17D1334

Enclosed are results of analyses for samples received by the laboratory on April 27, 2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Aaron L. Benoit
Project Manager

Table of Contents

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Arcadis US, Inc. - Clifton Park-NY
855 Route 146, Suite 210
Clifton Park, NY 12065
ATTN: Stefan Bagnato

REPORT DATE: 5/8/2017

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 00266413.0000

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 17D1334

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Greener Cleaners - Schenectady, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SVE-1	17D1334-01	Air		-	
				EPA TO-15	
SVE-2	17D1334-02	Air		-	
				EPA TO-15	
SVE-3	17D1334-03	Air		-	
				EPA TO-15	
SVE-4	17D1334-04	Air		-	
				EPA TO-15	
Pre-VPAG	17D1334-05	Air		-	
				EPA TO-15	
Post-VPGAC/Blower	17D1334-06	Air		-	
				EPA TO-15	

con-test® ANALYTICAL LABORATORY

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

REVISED REPORT 05/08/2017: Revised report per client request to report the data to the labortaory reporting limit.

EPA TO-15

Qualifications:

Z-01

Compound fails the method requirement of 70-130% recovery for the LCS. Is classified by the lab as a difficult compound and passes the in house limits of 50-150%.

Analyte & Samples(s) Qualified:

Ethanol

17D1334-01[SVE-1], 17D1334-02[SVE-2], 17D1334-03[SVE-3], 17D1334-04[SVE-4], 17D1334-05[Pre-VPAG], 17D1334-06[Post-VPGAC/Blower], B176308-BLK1, B176308-BS1

Naphthalene

B176308-BS1

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Aaron L. Benoit
Project Manager

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Greener Cleaners - Schenectady,
Date Received: 4/27/2017
Field Sample #: SVE-1
Sample ID: 17D1334-01
Sample Matrix: Air
Sampled: 4/26/2017 12:36

Sample Description/Location:
Sub Description/Location:
Canister ID: 1783
Canister Size: 6 liter
Flow Controller ID: 4034
Sample Type: 30 min

Work Order: 17D1334
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -3
Receipt Vacuum(in Hg): -2.3
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv			ug/m3			Date/Time	
Analyte	Results	RL	Flag/Qual	Results	RL	Dilution	Analyzed	Analyst
Acetone	12	8.0		30	19	4	5/4/17 7:20	CMR
Benzene	1.7	0.20		5.5	0.64	4	5/4/17 7:20	CMR
Benzyl chloride	ND	0.20		ND	1.0	4	5/4/17 7:20	CMR
Bromodichloromethane	ND	0.20		ND	1.3	4	5/4/17 7:20	CMR
Bromoform	ND	0.20		ND	2.1	4	5/4/17 7:20	CMR
Bromomethane	ND	0.20		ND	0.78	4	5/4/17 7:20	CMR
1,3-Butadiene	ND	0.20		ND	0.44	4	5/4/17 7:20	CMR
2-Butanone (MEK)	ND	8.0		ND	24	4	5/4/17 7:20	CMR
Carbon Disulfide	ND	2.0		ND	6.2	4	5/4/17 7:20	CMR
Carbon Tetrachloride	ND	0.20		ND	1.3	4	5/4/17 7:20	CMR
Chlorobenzene	ND	0.20		ND	0.92	4	5/4/17 7:20	CMR
Chloroethane	ND	0.20		ND	0.53	4	5/4/17 7:20	CMR
Chloroform	ND	0.20		ND	0.98	4	5/4/17 7:20	CMR
Chloromethane	0.76	0.40		1.6	0.83	4	5/4/17 7:20	CMR
Cyclohexane	6.3	0.40		22	1.4	4	5/4/17 7:20	CMR
Dibromochloromethane	ND	0.20		ND	1.7	4	5/4/17 7:20	CMR
1,2-Dibromoethane (EDB)	ND	0.20		ND	1.5	4	5/4/17 7:20	CMR
1,2-Dichlorobenzene	ND	0.20		ND	1.2	4	5/4/17 7:20	CMR
1,3-Dichlorobenzene	ND	0.20		ND	1.2	4	5/4/17 7:20	CMR
1,4-Dichlorobenzene	ND	0.20		ND	1.2	4	5/4/17 7:20	CMR
Dichlorodifluoromethane (Freon 12)	0.53	0.20		2.6	0.99	4	5/4/17 7:20	CMR
1,1-Dichloroethane	ND	0.20		ND	0.81	4	5/4/17 7:20	CMR
1,2-Dichloroethane	ND	0.20		ND	0.81	4	5/4/17 7:20	CMR
1,1-Dichloroethylene	ND	0.20		ND	0.79	4	5/4/17 7:20	CMR
cis-1,2-Dichloroethylene	ND	0.20		ND	0.79	4	5/4/17 7:20	CMR
trans-1,2-Dichloroethylene	ND	0.20		ND	0.79	4	5/4/17 7:20	CMR
1,2-Dichloropropane	ND	0.20		ND	0.92	4	5/4/17 7:20	CMR
cis-1,3-Dichloropropene	ND	0.20		ND	0.91	4	5/4/17 7:20	CMR
trans-1,3-Dichloropropene	ND	0.20		ND	0.91	4	5/4/17 7:20	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.20		ND	1.4	4	5/4/17 7:20	CMR
1,4-Dioxane	ND	2.0		ND	7.2	4	5/4/17 7:20	CMR
Ethanol	ND	8.0	Z-01	ND	15	4	5/4/17 7:20	CMR
Ethyl Acetate	ND	0.20		ND	0.72	4	5/4/17 7:20	CMR
Ethylbenzene	ND	0.20		ND	0.87	4	5/4/17 7:20	CMR
4-Ethyltoluene	ND	0.20		ND	0.98	4	5/4/17 7:20	CMR
Heptane	ND	0.20		ND	0.82	4	5/4/17 7:20	CMR
Hexachlorobutadiene	ND	0.20		ND	2.1	4	5/4/17 7:20	CMR

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Greener Cleaners - Schenectady,
Date Received: 4/27/2017
Field Sample #: SVE-1
Sample ID: 17D1334-01
Sample Matrix: Air
Sampled: 4/26/2017 12:36

Sample Description/Location:
Sub Description/Location:
Canister ID: 1783
Canister Size: 6 liter
Flow Controller ID: 4034
Sample Type: 30 min

Work Order: 17D1334
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -3
Receipt Vacuum(in Hg): -2.3
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv			ug/m3			Date/Time	
Analyte	**Results**	**RL**	**Flag/Qual**	**Results**	**RL**	**Dilution**	**Analyzed**	**Analyst**
Hexane	ND	8.0		ND	28	4	5/4/17 7:20	CMR
2-Hexanone (MBK)	ND	0.40		ND	1.6	4	5/4/17 7:20	CMR
Isopropanol	ND	8.0		ND	20	4	5/4/17 7:20	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.20		ND	0.72	4	5/4/17 7:20	CMR
Methylene Chloride	ND	2.0		ND	6.9	4	5/4/17 7:20	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.40		ND	1.6	4	5/4/17 7:20	CMR
Naphthalene	ND	0.20		ND	1.0	4	5/4/17 7:20	CMR
Propene	ND	8.0		ND	14	4	5/4/17 7:20	CMR
Styrene	ND	0.20		ND	0.85	4	5/4/17 7:20	CMR
1,1,2,2-Tetrachloroethane	ND	0.20		ND	1.4	4	5/4/17 7:20	CMR
Tetrachloroethylene	26	0.20		180	1.4	4	5/4/17 7:20	CMR
Tetrahydrofuran	ND	0.80		ND	2.4	4	5/4/17 7:20	CMR
Toluene	0.47	0.20		1.8	0.75	4	5/4/17 7:20	CMR
1,2,4-Trichlorobenzene	ND	0.20		ND	1.5	4	5/4/17 7:20	CMR
1,1,1-Trichloroethane	ND	0.20		ND	1.1	4	5/4/17 7:20	CMR
1,1,2-Trichloroethane	ND	0.20		ND	1.1	4	5/4/17 7:20	CMR
Trichloroethylene	ND	0.20		ND	1.1	4	5/4/17 7:20	CMR
Trichlorofluoromethane (Freon 11)	ND	0.80		ND	4.5	4	5/4/17 7:20	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.80		ND	6.1	4	5/4/17 7:20	CMR
1,2,4-Trimethylbenzene	ND	0.20		ND	0.98	4	5/4/17 7:20	CMR
1,3,5-Trimethylbenzene	ND	0.20		ND	0.98	4	5/4/17 7:20	CMR
Vinyl Acetate	ND	4.0		ND	14	4	5/4/17 7:20	CMR
Vinyl Chloride	ND	0.20		ND	0.51	4	5/4/17 7:20	CMR
m&p-Xylene	ND	0.40		ND	1.7	4	5/4/17 7:20	CMR
o-Xylene	ND	0.20		ND	0.87	4	5/4/17 7:20	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	100	70-130	5/4/17 7:20

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Greener Cleaners - Schenectady,
Date Received: 4/27/2017
Field Sample #: SVE-2
Sample ID: 17D1334-02
Sample Matrix: Air
Sampled: 4/26/2017 12:13

Sample Description/Location:
Sub Description/Location:
Canister ID: 1092
Canister Size: 6 liter
Flow Controller ID: 4059
Sample Type: 30 min

Work Order: 17D1334
Initial Vacuum(in Hg): -29.5
Final Vacuum(in Hg): -6
Receipt Vacuum(in Hg): -5.8
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: >20%

EPA TO-15

	ppbv			ug/m3			Date/Time	
Analyte	**Results**	**RL**	**Flag/Qual**	**Results**	**RL**	**Dilution**	**Analyzed**	**Analyst**
Acetone	ND	8.0		ND	19	4	5/4/17 7:58	CMR
Benzene	ND	0.20		ND	0.64	4	5/4/17 7:58	CMR
Benzyl chloride	ND	0.20		ND	1.0	4	5/4/17 7:58	CMR
Bromodichloromethane	ND	0.20		ND	1.3	4	5/4/17 7:58	CMR
Bromoform	ND	0.20		ND	2.1	4	5/4/17 7:58	CMR
Bromomethane	ND	0.20		ND	0.78	4	5/4/17 7:58	CMR
1,3-Butadiene	ND	0.20		ND	0.44	4	5/4/17 7:58	CMR
2-Butanone (MEK)	ND	8.0		ND	24	4	5/4/17 7:58	CMR
Carbon Disulfide	ND	2.0		ND	6.2	4	5/4/17 7:58	CMR
Carbon Tetrachloride	ND	0.20		ND	1.3	4	5/4/17 7:58	CMR
Chlorobenzene	ND	0.20		ND	0.92	4	5/4/17 7:58	CMR
Chloroethane	ND	0.20		ND	0.53	4	5/4/17 7:58	CMR
Chloroform	ND	0.20		ND	0.98	4	5/4/17 7:58	CMR
Chloromethane	ND	0.40		ND	0.83	4	5/4/17 7:58	CMR
Cyclohexane	ND	0.40		ND	1.4	4	5/4/17 7:58	CMR
Dibromochloromethane	ND	0.20		ND	1.7	4	5/4/17 7:58	CMR
1,2-Dibromoethane (EDB)	ND	0.20		ND	1.5	4	5/4/17 7:58	CMR
1,2-Dichlorobenzene	ND	0.20		ND	1.2	4	5/4/17 7:58	CMR
1,3-Dichlorobenzene	ND	0.20		ND	1.2	4	5/4/17 7:58	CMR
1,4-Dichlorobenzene	ND	0.20		ND	1.2	4	5/4/17 7:58	CMR
Dichlorodifluoromethane (Freon 12)	0.58	0.20		2.9	0.99	4	5/4/17 7:58	CMR
1,1-Dichloroethane	ND	0.20		ND	0.81	4	5/4/17 7:58	CMR
1,2-Dichloroethane	ND	0.20		ND	0.81	4	5/4/17 7:58	CMR
1,1-Dichloroethylene	ND	0.20		ND	0.79	4	5/4/17 7:58	CMR
cis-1,2-Dichloroethylene	ND	0.20		ND	0.79	4	5/4/17 7:58	CMR
trans-1,2-Dichloroethylene	ND	0.20		ND	0.79	4	5/4/17 7:58	CMR
1,2-Dichloropropane	ND	0.20		ND	0.92	4	5/4/17 7:58	CMR
cis-1,3-Dichloropropene	ND	0.20		ND	0.91	4	5/4/17 7:58	CMR
trans-1,3-Dichloropropene	ND	0.20		ND	0.91	4	5/4/17 7:58	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.20		ND	1.4	4	5/4/17 7:58	CMR
1,4-Dioxane	ND	2.0		ND	7.2	4	5/4/17 7:58	CMR
Ethanol	ND	8.0	Z-01	ND	15	4	5/4/17 7:58	CMR
Ethyl Acetate	ND	0.20		ND	0.72	4	5/4/17 7:58	CMR
Ethylbenzene	ND	0.20		ND	0.87	4	5/4/17 7:58	CMR
4-Ethyltoluene	ND	0.20		ND	0.98	4	5/4/17 7:58	CMR
Heptane	ND	0.20		ND	0.82	4	5/4/17 7:58	CMR
Hexachlorobutadiene	ND	0.20		ND	2.1	4	5/4/17 7:58	CMR

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Greener Cleaners - Schenectady,
Date Received: 4/27/2017
Field Sample #: SVE-2
Sample ID: 17D1334-02
Sample Matrix: Air
Sampled: 4/26/2017 12:13

Sample Description/Location:
Sub Description/Location:
Canister ID: 1092
Canister Size: 6 liter
Flow Controller ID: 4059
Sample Type: 30 min

Work Order: 17D1334
Initial Vacuum(in Hg): -29.5
Final Vacuum(in Hg): -6
Receipt Vacuum(in Hg): -5.8
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: >20%

EPA TO-15

Analyte	ppbv Results	ppbv RL	Flag/Qual	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
Hexane	ND	8.0		ND	28	4	5/4/17 7:58	CMR
2-Hexanone (MBK)	ND	0.40		ND	1.6	4	5/4/17 7:58	CMR
Isopropanol	ND	8.0		ND	20	4	5/4/17 7:58	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.20		ND	0.72	4	5/4/17 7:58	CMR
Methylene Chloride	ND	2.0		ND	6.9	4	5/4/17 7:58	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.40		ND	1.6	4	5/4/17 7:58	CMR
Naphthalene	ND	0.20		ND	1.0	4	5/4/17 7:58	CMR
Propene	ND	8.0		ND	14	4	5/4/17 7:58	CMR
Styrene	ND	0.20		ND	0.85	4	5/4/17 7:58	CMR
1,1,2,2-Tetrachloroethane	ND	0.20		ND	1.4	4	5/4/17 7:58	CMR
Tetrachloroethylene	150	0.20		1000	1.4	4	5/4/17 7:58	CMR
Tetrahydrofuran	ND	0.80		ND	2.4	4	5/4/17 7:58	CMR
Toluene	0.26	0.20		0.98	0.75	4	5/4/17 7:58	CMR
1,2,4-Trichlorobenzene	ND	0.20		ND	1.5	4	5/4/17 7:58	CMR
1,1,1-Trichloroethane	ND	0.20		ND	1.1	4	5/4/17 7:58	CMR
1,1,2-Trichloroethane	ND	0.20		ND	1.1	4	5/4/17 7:58	CMR
Trichloroethylene	0.46	0.20		2.5	1.1	4	5/4/17 7:58	CMR
Trichlorofluoromethane (Freon 11)	ND	0.80		ND	4.5	4	5/4/17 7:58	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.80		ND	6.1	4	5/4/17 7:58	CMR
1,2,4-Trimethylbenzene	ND	0.20		ND	0.98	4	5/4/17 7:58	CMR
1,3,5-Trimethylbenzene	ND	0.20		ND	0.98	4	5/4/17 7:58	CMR
Vinyl Acetate	ND	4.0		ND	14	4	5/4/17 7:58	CMR
Vinyl Chloride	ND	0.20		ND	0.51	4	5/4/17 7:58	CMR
m&p-Xylene	ND	0.40		ND	1.7	4	5/4/17 7:58	CMR
o-Xylene	ND	0.20		ND	0.87	4	5/4/17 7:58	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	98.2	70-130	5/4/17 7:58

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ANALYTICAL RESULTS

Project Location: Greener Cleaners - Schenectady,
Date Received: 4/27/2017
Field Sample #: SVE-3
Sample ID: 17D1334-03
Sample Matrix: Air
Sampled: 4/26/2017 12:37

Sample Description/Location:
Sub Description/Location:
Canister ID: 1826
Canister Size: 6 liter
Flow Controller ID: 4056
Sample Type: 30 min

Work Order: 17D1334
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -5.5
Receipt Vacuum(in Hg): -5.0
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv			ug/m3			Date/Time	
Analyte	**Results**	**RL**	**Flag/Qual**	**Results**	**RL**	**Dilution**	**Analyzed**	**Analyst**
Acetone	ND	8.0		ND	19	4	5/4/17 9:48	CMR
Benzene	0.25	0.20		0.79	0.64	4	5/4/17 9:48	CMR
Benzyl chloride	ND	0.20		ND	1.0	4	5/4/17 9:48	CMR
Bromodichloromethane	ND	0.20		ND	1.3	4	5/4/17 9:48	CMR
Bromoform	ND	0.20		ND	2.1	4	5/4/17 9:48	CMR
Bromomethane	ND	0.20		ND	0.78	4	5/4/17 9:48	CMR
1,3-Butadiene	ND	0.20		ND	0.44	4	5/4/17 9:48	CMR
2-Butanone (MEK)	ND	8.0		ND	24	4	5/4/17 9:48	CMR
Carbon Disulfide	ND	2.0		ND	6.2	4	5/4/17 9:48	CMR
Carbon Tetrachloride	ND	0.20		ND	1.3	4	5/4/17 9:48	CMR
Chlorobenzene	ND	0.20		ND	0.92	4	5/4/17 9:48	CMR
Chloroethane	ND	0.20		ND	0.53	4	5/4/17 9:48	CMR
Chloroform	6.1	0.20		30	0.98	4	5/4/17 9:48	CMR
Chloromethane	ND	0.40		ND	0.83	4	5/4/17 9:48	CMR
Cyclohexane	0.79	0.40		2.7	1.4	4	5/4/17 9:48	CMR
Dibromochloromethane	ND	0.20		ND	1.7	4	5/4/17 9:48	CMR
1,2-Dibromoethane (EDB)	ND	0.20		ND	1.5	4	5/4/17 9:48	CMR
1,2-Dichlorobenzene	ND	0.20		ND	1.2	4	5/4/17 9:48	CMR
1,3-Dichlorobenzene	ND	0.20		ND	1.2	4	5/4/17 9:48	CMR
1,4-Dichlorobenzene	ND	0.20		ND	1.2	4	5/4/17 9:48	CMR
Dichlorodifluoromethane (Freon 12)	0.54	0.20		2.7	0.99	4	5/4/17 9:48	CMR
1,1-Dichloroethane	ND	0.20		ND	0.81	4	5/4/17 9:48	CMR
1,2-Dichloroethane	ND	0.20		ND	0.81	4	5/4/17 9:48	CMR
1,1-Dichloroethylene	ND	0.20		ND	0.79	4	5/4/17 9:48	CMR
cis-1,2-Dichloroethylene	ND	0.20		ND	0.79	4	5/4/17 9:48	CMR
trans-1,2-Dichloroethylene	ND	0.20		ND	0.79	4	5/4/17 9:48	CMR
1,2-Dichloropropane	ND	0.20		ND	0.92	4	5/4/17 9:48	CMR
cis-1,3-Dichloropropene	ND	0.20		ND	0.91	4	5/4/17 9:48	CMR
trans-1,3-Dichloropropene	ND	0.20		ND	0.91	4	5/4/17 9:48	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.20		ND	1.4	4	5/4/17 9:48	CMR
1,4-Dioxane	ND	2.0		ND	7.2	4	5/4/17 9:48	CMR
Ethanol	ND	8.0	Z-01	ND	15	4	5/4/17 9:48	CMR
Ethyl Acetate	ND	0.20		ND	0.72	4	5/4/17 9:48	CMR
Ethylbenzene	ND	0.20		ND	0.87	4	5/4/17 9:48	CMR
4-Ethyltoluene	ND	0.20		ND	0.98	4	5/4/17 9:48	CMR
Heptane	ND	0.20		ND	0.82	4	5/4/17 9:48	CMR
Hexachlorobutadiene	ND	0.20		ND	2.1	4	5/4/17 9:48	CMR

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ANALYTICAL RESULTS

Project Location: Greener Cleaners - Schenectady,
Date Received: 4/27/2017
Field Sample #: SVE-3
Sample ID: 17D1334-03
Sample Matrix: Air
Sampled: 4/26/2017 12:37

Sample Description/Location:
Sub Description/Location:
Canister ID: 1826
Canister Size: 6 liter
Flow Controller ID: 4056
Sample Type: 30 min

Work Order: 17D1334
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -5.5
Receipt Vacuum(in Hg): -5.0
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv			ug/m3			Date/Time	
Analyte	**Results**	**RL**	**Flag/Qual**	**Results**	**RL**	**Dilution**	**Analyzed**	**Analyst**
Hexane	ND	8.0		ND	28	4	5/4/17 9:48	CMR
2-Hexanone (MBK)	ND	0.40		ND	1.6	4	5/4/17 9:48	CMR
Isopropanol	ND	8.0		ND	20	4	5/4/17 9:48	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.20		ND	0.72	4	5/4/17 9:48	CMR
Methylene Chloride	ND	2.0		ND	6.9	4	5/4/17 9:48	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.40		ND	1.6	4	5/4/17 9:48	CMR
Naphthalene	ND	0.20		ND	1.0	4	5/4/17 9:48	CMR
Propene	ND	8.0		ND	14	4	5/4/17 9:48	CMR
Styrene	ND	0.20		ND	0.85	4	5/4/17 9:48	CMR
1,1,2,2-Tetrachloroethane	ND	0.20		ND	1.4	4	5/4/17 9:48	CMR
Tetrachloroethylene	190	0.20		1300	1.4	4	5/4/17 9:48	CMR
Tetrahydrofuran	ND	0.80		ND	2.4	4	5/4/17 9:48	CMR
Toluene	ND	0.20		ND	0.75	4	5/4/17 9:48	CMR
1,2,4-Trichlorobenzene	ND	0.20		ND	1.5	4	5/4/17 9:48	CMR
1,1,1-Trichloroethane	ND	0.20		ND	1.1	4	5/4/17 9:48	CMR
1,1,2-Trichloroethane	ND	0.20		ND	1.1	4	5/4/17 9:48	CMR
Trichloroethylene	1.9	0.20		10	1.1	4	5/4/17 9:48	CMR
Trichlorofluoromethane (Freon 11)	ND	0.80		ND	4.5	4	5/4/17 9:48	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.80		ND	6.1	4	5/4/17 9:48	CMR
1,2,4-Trimethylbenzene	ND	0.20		ND	0.98	4	5/4/17 9:48	CMR
1,3,5-Trimethylbenzene	ND	0.20		ND	0.98	4	5/4/17 9:48	CMR
Vinyl Acetate	ND	4.0		ND	14	4	5/4/17 9:48	CMR
Vinyl Chloride	ND	0.20		ND	0.51	4	5/4/17 9:48	CMR
m&p-Xylene	ND	0.40		ND	1.7	4	5/4/17 9:48	CMR
o-Xylene	ND	0.20		ND	0.87	4	5/4/17 9:48	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	97.7	70-130	5/4/17 9:48

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ANALYTICAL RESULTS

Project Location: Greener Cleaners - Schenectady,
Date Received: 4/27/2017
Field Sample #: SVE-4
Sample ID: 17D1334-04
Sample Matrix: Air
Sampled: 4/26/2017 11:53

Sample Description/Location:
Sub Description/Location:
Canister ID: 1177
Canister Size: 6 liter
Flow Controller ID: 4040
Sample Type: 30 min

Work Order: 17D1334
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -6
Receipt Vacuum(in Hg): -4.4
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv			ug/m3			Date/Time	
Analyte	**Results**	**RL**	**Flag/Qual**	**Results**	**RL**	**Dilution**	**Analyzed**	**Analyst**
Acetone	17	8.0		40	19	4	5/4/17 9:11	CMR
Benzene	0.63	0.20		2.0	0.64	4	5/4/17 9:11	CMR
Benzyl chloride	ND	0.20		ND	1.0	4	5/4/17 9:11	CMR
Bromodichloromethane	ND	0.20		ND	1.3	4	5/4/17 9:11	CMR
Bromoform	ND	0.20		ND	2.1	4	5/4/17 9:11	CMR
Bromomethane	ND	0.20		ND	0.78	4	5/4/17 9:11	CMR
1,3-Butadiene	ND	0.20		ND	0.44	4	5/4/17 9:11	CMR
2-Butanone (MEK)	ND	8.0		ND	24	4	5/4/17 9:11	CMR
Carbon Disulfide	ND	2.0		ND	6.2	4	5/4/17 9:11	CMR
Carbon Tetrachloride	ND	0.20		ND	1.3	4	5/4/17 9:11	CMR
Chlorobenzene	ND	0.20		ND	0.92	4	5/4/17 9:11	CMR
Chloroethane	ND	0.20		ND	0.53	4	5/4/17 9:11	CMR
Chloroform	0.81	0.20		4.0	0.98	4	5/4/17 9:11	CMR
Chloromethane	ND	0.40		ND	0.83	4	5/4/17 9:11	CMR
Cyclohexane	2.4	0.40		8.4	1.4	4	5/4/17 9:11	CMR
Dibromochloromethane	ND	0.20		ND	1.7	4	5/4/17 9:11	CMR
1,2-Dibromoethane (EDB)	ND	0.20		ND	1.5	4	5/4/17 9:11	CMR
1,2-Dichlorobenzene	ND	0.20		ND	1.2	4	5/4/17 9:11	CMR
1,3-Dichlorobenzene	ND	0.20		ND	1.2	4	5/4/17 9:11	CMR
1,4-Dichlorobenzene	ND	0.20		ND	1.2	4	5/4/17 9:11	CMR
Dichlorodifluoromethane (Freon 12)	0.76	0.20		3.8	0.99	4	5/4/17 9:11	CMR
1,1-Dichloroethane	ND	0.20		ND	0.81	4	5/4/17 9:11	CMR
1,2-Dichloroethane	ND	0.20		ND	0.81	4	5/4/17 9:11	CMR
1,1-Dichloroethylene	ND	0.20		ND	0.79	4	5/4/17 9:11	CMR
cis-1,2-Dichloroethylene	ND	0.20		ND	0.79	4	5/4/17 9:11	CMR
trans-1,2-Dichloroethylene	ND	0.20		ND	0.79	4	5/4/17 9:11	CMR
1,2-Dichloropropane	ND	0.20		ND	0.92	4	5/4/17 9:11	CMR
cis-1,3-Dichloropropene	ND	0.20		ND	0.91	4	5/4/17 9:11	CMR
trans-1,3-Dichloropropene	ND	0.20		ND	0.91	4	5/4/17 9:11	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.20		ND	1.4	4	5/4/17 9:11	CMR
1,4-Dioxane	ND	2.0		ND	7.2	4	5/4/17 9:11	CMR
Ethanol	ND	8.0	Z-01	ND	15	4	5/4/17 9:11	CMR
Ethyl Acetate	ND	0.20		ND	0.72	4	5/4/17 9:11	CMR
Ethylbenzene	ND	0.20		ND	0.87	4	5/4/17 9:11	CMR
4-Ethyltoluene	ND	0.20		ND	0.98	4	5/4/17 9:11	CMR
Heptane	ND	0.20		ND	0.82	4	5/4/17 9:11	CMR
Hexachlorobutadiene	ND	0.20		ND	2.1	4	5/4/17 9:11	CMR

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ANALYTICAL RESULTS

Project Location: Greener Cleaners - Schenectady,
Date Received: 4/27/2017
Field Sample #: SVE-4
Sample ID: 17D1334-04
Sample Matrix: Air
Sampled: 4/26/2017 11:53

Sample Description/Location:
Sub Description/Location:
Canister ID: 1177
Canister Size: 6 liter
Flow Controller ID: 4040
Sample Type: 30 min

Work Order: 17D1334
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -6
Receipt Vacuum(in Hg): -4.4
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv			ug/m3			Date/Time	
Analyte	**Results**	**RL**	**Flag/Qual**	**Results**	**RL**	**Dilution**	**Analyzed**	**Analyst**
Hexane	ND	8.0		ND	28	4	5/4/17 9:11	CMR
2-Hexanone (MBK)	ND	0.40		ND	1.6	4	5/4/17 9:11	CMR
Isopropanol	ND	8.0		ND	20	4	5/4/17 9:11	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.20		ND	0.72	4	5/4/17 9:11	CMR
Methylene Chloride	ND	2.0		ND	6.9	4	5/4/17 9:11	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.40		ND	1.6	4	5/4/17 9:11	CMR
Naphthalene	ND	0.20		ND	1.0	4	5/4/17 9:11	CMR
Propene	ND	8.0		ND	14	4	5/4/17 9:11	CMR
Styrene	ND	0.20		ND	0.85	4	5/4/17 9:11	CMR
1,1,2,2-Tetrachloroethane	ND	0.20		ND	1.4	4	5/4/17 9:11	CMR
Tetrachloroethylene	74	0.20		510	1.4	4	5/4/17 9:11	CMR
Tetrahydrofuran	ND	0.80		ND	2.4	4	5/4/17 9:11	CMR
Toluene	0.28	0.20		1.1	0.75	4	5/4/17 9:11	CMR
1,2,4-Trichlorobenzene	ND	0.20		ND	1.5	4	5/4/17 9:11	CMR
1,1,1-Trichloroethane	ND	0.20		ND	1.1	4	5/4/17 9:11	CMR
1,1,2-Trichloroethane	ND	0.20		ND	1.1	4	5/4/17 9:11	CMR
Trichloroethylene	0.41	0.20		2.2	1.1	4	5/4/17 9:11	CMR
Trichlorofluoromethane (Freon 11)	ND	0.80		ND	4.5	4	5/4/17 9:11	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.80		ND	6.1	4	5/4/17 9:11	CMR
1,2,4-Trimethylbenzene	ND	0.20		ND	0.98	4	5/4/17 9:11	CMR
1,3,5-Trimethylbenzene	ND	0.20		ND	0.98	4	5/4/17 9:11	CMR
Vinyl Acetate	ND	4.0		ND	14	4	5/4/17 9:11	CMR
Vinyl Chloride	ND	0.20		ND	0.51	4	5/4/17 9:11	CMR
m&p-Xylene	ND	0.40		ND	1.7	4	5/4/17 9:11	CMR
o-Xylene	ND	0.20		ND	0.87	4	5/4/17 9:11	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	99.1	70-130	5/4/17 9:11

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ANALYTICAL RESULTS

Project Location: Greener Cleaners - Schenectady,
Date Received: 4/27/2017
Field Sample #: Pre-VPAG
Sample ID: 17D1334-05
Sample Matrix: Air
Sampled: 4/26/2017 13:14

Sample Description/Location:
Sub Description/Location:
Canister ID: 1323
Canister Size: 6 liter
Flow Controller ID: 4063
Sample Type: 30 min

Work Order: 17D1334
Initial Vacuum(in Hg): -29.5
Final Vacuum(in Hg): -4
Receipt Vacuum(in Hg): -9.6
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv			ug/m3			Date/Time	
Analyte	**Results**	**RL**	**Flag/Qual**	**Results**	**RL**	**Dilution**	**Analyzed**	**Analyst**
Acetone	9.7	8.0		23	19	4	5/4/17 6:43	CMR
Benzene	0.41	0.20		1.3	0.64	4	5/4/17 6:43	CMR
Benzyl chloride	ND	0.20		ND	1.0	4	5/4/17 6:43	CMR
Bromodichloromethane	ND	0.20		ND	1.3	4	5/4/17 6:43	CMR
Bromoform	ND	0.20		ND	2.1	4	5/4/17 6:43	CMR
Bromomethane	ND	0.20		ND	0.78	4	5/4/17 6:43	CMR
1,3-Butadiene	ND	0.20		ND	0.44	4	5/4/17 6:43	CMR
2-Butanone (MEK)	ND	8.0		ND	24	4	5/4/17 6:43	CMR
Carbon Disulfide	ND	2.0		ND	6.2	4	5/4/17 6:43	CMR
Carbon Tetrachloride	ND	0.20		ND	1.3	4	5/4/17 6:43	CMR
Chlorobenzene	ND	0.20		ND	0.92	4	5/4/17 6:43	CMR
Chloroethane	ND	0.20		ND	0.53	4	5/4/17 6:43	CMR
Chloroform	ND	0.20		ND	0.98	4	5/4/17 6:43	CMR
Chloromethane	ND	0.40		ND	0.83	4	5/4/17 6:43	CMR
Cyclohexane	1.1	0.40		3.7	1.4	4	5/4/17 6:43	CMR
Dibromochloromethane	ND	0.20		ND	1.7	4	5/4/17 6:43	CMR
1,2-Dibromoethane (EDB)	ND	0.20		ND	1.5	4	5/4/17 6:43	CMR
1,2-Dichlorobenzene	ND	0.20		ND	1.2	4	5/4/17 6:43	CMR
1,3-Dichlorobenzene	ND	0.20		ND	1.2	4	5/4/17 6:43	CMR
1,4-Dichlorobenzene	ND	0.20		ND	1.2	4	5/4/17 6:43	CMR
Dichlorodifluoromethane (Freon 12)	0.96	0.20		4.7	0.99	4	5/4/17 6:43	CMR
1,1-Dichloroethane	ND	0.20		ND	0.81	4	5/4/17 6:43	CMR
1,2-Dichloroethane	ND	0.20		ND	0.81	4	5/4/17 6:43	CMR
1,1-Dichloroethylene	ND	0.20		ND	0.79	4	5/4/17 6:43	CMR
cis-1,2-Dichloroethylene	ND	0.20		ND	0.79	4	5/4/17 6:43	CMR
trans-1,2-Dichloroethylene	ND	0.20		ND	0.79	4	5/4/17 6:43	CMR
1,2-Dichloropropane	ND	0.20		ND	0.92	4	5/4/17 6:43	CMR
cis-1,3-Dichloropropene	ND	0.20		ND	0.91	4	5/4/17 6:43	CMR
trans-1,3-Dichloropropene	ND	0.20		ND	0.91	4	5/4/17 6:43	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.20		ND	1.4	4	5/4/17 6:43	CMR
1,4-Dioxane	ND	2.0		ND	7.2	4	5/4/17 6:43	CMR
Ethanol	21	8.0	Z-01	40	15	4	5/4/17 6:43	CMR
Ethyl Acetate	ND	0.20		ND	0.72	4	5/4/17 6:43	CMR
Ethylbenzene	ND	0.20		ND	0.87	4	5/4/17 6:43	CMR
4-Ethyltoluene	ND	0.20		ND	0.98	4	5/4/17 6:43	CMR
Heptane	ND	0.20		ND	0.82	4	5/4/17 6:43	CMR
Hexachlorobutadiene	ND	0.20		ND	2.1	4	5/4/17 6:43	CMR

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Greener Cleaners - Schenectady,
Date Received: 4/27/2017
Field Sample #: Pre-VPAG
Sample ID: 17D1334-05
Sample Matrix: Air
Sampled: 4/26/2017 13:14

Sample Description/Location:
Sub Description/Location:
Canister ID: 1323
Canister Size: 6 liter
Flow Controller ID: 4063
Sample Type: 30 min

Work Order: 17D1334
Initial Vacuum(in Hg): -29.5
Final Vacuum(in Hg): -4
Receipt Vacuum(in Hg): -9.6
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv			ug/m3			Date/Time	
Analyte	**Results**	**RL**	**Flag/Qual**	**Results**	**RL**	**Dilution**	**Analyzed**	**Analyst**
Hexane	ND	8.0		ND	28	4	5/4/17 6:43	CMR
2-Hexanone (MBK)	ND	0.40		ND	1.6	4	5/4/17 6:43	CMR
Isopropanol	ND	8.0		ND	20	4	5/4/17 6:43	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.20		ND	0.72	4	5/4/17 6:43	CMR
Methylene Chloride	ND	2.0		ND	6.9	4	5/4/17 6:43	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.40		ND	1.6	4	5/4/17 6:43	CMR
Naphthalene	ND	0.20		ND	1.0	4	5/4/17 6:43	CMR
Propene	ND	8.0		ND	14	4	5/4/17 6:43	CMR
Styrene	ND	0.20		ND	0.85	4	5/4/17 6:43	CMR
1,1,2,2-Tetrachloroethane	ND	0.20		ND	1.4	4	5/4/17 6:43	CMR
Tetrachloroethylene	6.0	0.20		41	1.4	4	5/4/17 6:43	CMR
Tetrahydrofuran	ND	0.80		ND	2.4	4	5/4/17 6:43	CMR
Toluene	0.29	0.20		1.1	0.75	4	5/4/17 6:43	CMR
1,2,4-Trichlorobenzene	ND	0.20		ND	1.5	4	5/4/17 6:43	CMR
1,1,1-Trichloroethane	ND	0.20		ND	1.1	4	5/4/17 6:43	CMR
1,1,2-Trichloroethane	ND	0.20		ND	1.1	4	5/4/17 6:43	CMR
Trichloroethylene	ND	0.20		ND	1.1	4	5/4/17 6:43	CMR
Trichlorofluoromethane (Freon 11)	ND	0.80		ND	4.5	4	5/4/17 6:43	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.80		ND	6.1	4	5/4/17 6:43	CMR
1,2,4-Trimethylbenzene	ND	0.20		ND	0.98	4	5/4/17 6:43	CMR
1,3,5-Trimethylbenzene	ND	0.20		ND	0.98	4	5/4/17 6:43	CMR
Vinyl Acetate	ND	4.0		ND	14	4	5/4/17 6:43	CMR
Vinyl Chloride	ND	0.20		ND	0.51	4	5/4/17 6:43	CMR
m&p-Xylene	ND	0.40		ND	1.7	4	5/4/17 6:43	CMR
o-Xylene	ND	0.20		ND	0.87	4	5/4/17 6:43	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	100	70-130	5/4/17 6:43

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Greener Cleaners - Schenectady,
Date Received: 4/27/2017
Field Sample #: Post-VPGAC/Blower
Sample ID: 17D1334-06
Sample Matrix: Air
Sampled: 4/26/2017 13:13

Sample Description/Location:
Sub Description/Location:
Canister ID: 1020
Canister Size: 6 liter
Flow Controller ID: 4054
Sample Type: 30 min

Work Order: 17D1334
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -4
Receipt Vacuum(in Hg): -3.0
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv			ug/m3			Date/Time	
Analyte	**Results**	**RL**	**Flag/Qual**	**Results**	**RL**	**Dilution**	**Analyzed**	**Analyst**
Acetone	ND	8.0		ND	19	4	5/4/17 6:05	CMR
Benzene	ND	0.20		ND	0.64	4	5/4/17 6:05	CMR
Benzyl chloride	ND	0.20		ND	1.0	4	5/4/17 6:05	CMR
Bromodichloromethane	ND	0.20		ND	1.3	4	5/4/17 6:05	CMR
Bromoform	ND	0.20		ND	2.1	4	5/4/17 6:05	CMR
Bromomethane	ND	0.20		ND	0.78	4	5/4/17 6:05	CMR
1,3-Butadiene	ND	0.20		ND	0.44	4	5/4/17 6:05	CMR
2-Butanone (MEK)	ND	8.0		ND	24	4	5/4/17 6:05	CMR
Carbon Disulfide	ND	2.0		ND	6.2	4	5/4/17 6:05	CMR
Carbon Tetrachloride	ND	0.20		ND	1.3	4	5/4/17 6:05	CMR
Chlorobenzene	ND	0.20		ND	0.92	4	5/4/17 6:05	CMR
Chloroethane	ND	0.20		ND	0.53	4	5/4/17 6:05	CMR
Chloroform	ND	0.20		ND	0.98	4	5/4/17 6:05	CMR
Chloromethane	ND	0.40		ND	0.83	4	5/4/17 6:05	CMR
Cyclohexane	ND	0.40		ND	1.4	4	5/4/17 6:05	CMR
Dibromochloromethane	ND	0.20		ND	1.7	4	5/4/17 6:05	CMR
1,2-Dibromoethane (EDB)	ND	0.20		ND	1.5	4	5/4/17 6:05	CMR
1,2-Dichlorobenzene	ND	0.20		ND	1.2	4	5/4/17 6:05	CMR
1,3-Dichlorobenzene	ND	0.20		ND	1.2	4	5/4/17 6:05	CMR
1,4-Dichlorobenzene	ND	0.20		ND	1.2	4	5/4/17 6:05	CMR
Dichlorodifluoromethane (Freon 12)	0.68	0.20		3.3	0.99	4	5/4/17 6:05	CMR
1,1-Dichloroethane	ND	0.20		ND	0.81	4	5/4/17 6:05	CMR
1,2-Dichloroethane	ND	0.20		ND	0.81	4	5/4/17 6:05	CMR
1,1-Dichloroethylene	ND	0.20		ND	0.79	4	5/4/17 6:05	CMR
cis-1,2-Dichloroethylene	ND	0.20		ND	0.79	4	5/4/17 6:05	CMR
trans-1,2-Dichloroethylene	ND	0.20		ND	0.79	4	5/4/17 6:05	CMR
1,2-Dichloropropane	ND	0.20		ND	0.92	4	5/4/17 6:05	CMR
cis-1,3-Dichloropropene	ND	0.20		ND	0.91	4	5/4/17 6:05	CMR
trans-1,3-Dichloropropene	ND	0.20		ND	0.91	4	5/4/17 6:05	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.20		ND	1.4	4	5/4/17 6:05	CMR
1,4-Dioxane	ND	2.0		ND	7.2	4	5/4/17 6:05	CMR
Ethanol	ND	8.0	Z-01	ND	15	4	5/4/17 6:05	CMR
Ethyl Acetate	ND	0.20		ND	0.72	4	5/4/17 6:05	CMR
Ethylbenzene	ND	0.20		ND	0.87	4	5/4/17 6:05	CMR
4-Ethyltoluene	ND	0.20		ND	0.98	4	5/4/17 6:05	CMR
Heptane	ND	0.20		ND	0.82	4	5/4/17 6:05	CMR
Hexachlorobutadiene	ND	0.20		ND	2.1	4	5/4/17 6:05	CMR

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Greener Cleaners - Schenectady,
Date Received: 4/27/2017
Field Sample #: Post-VPGAC/Blower
Sample ID: 17D1334-06
Sample Matrix: Air
Sampled: 4/26/2017 13:13

Sample Description/Location:
Sub Description/Location:
Canister ID: 1020
Canister Size: 6 liter
Flow Controller ID: 4054
Sample Type: 30 min

Work Order: 17D1334
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -4
Receipt Vacuum(in Hg): -3.0
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv			ug/m3			Date/Time	
Analyte	**Results**	**RL**	**Flag/Qual**	**Results**	**RL**	**Dilution**	**Analyzed**	**Analyst**
Hexane	ND	8.0		ND	28	4	5/4/17 6:05	CMR
2-Hexanone (MBK)	ND	0.40		ND	1.6	4	5/4/17 6:05	CMR
Isopropanol	ND	8.0		ND	20	4	5/4/17 6:05	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.20		ND	0.72	4	5/4/17 6:05	CMR
Methylene Chloride	ND	2.0		ND	6.9	4	5/4/17 6:05	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.40		ND	1.6	4	5/4/17 6:05	CMR
Naphthalene	ND	0.20		ND	1.0	4	5/4/17 6:05	CMR
Propene	ND	8.0		ND	14	4	5/4/17 6:05	CMR
Styrene	ND	0.20		ND	0.85	4	5/4/17 6:05	CMR
1,1,2,2-Tetrachloroethane	ND	0.20		ND	1.4	4	5/4/17 6:05	CMR
Tetrachloroethylene	ND	0.20		ND	1.4	4	5/4/17 6:05	CMR
Tetrahydrofuran	1.9	0.80		5.5	2.4	4	5/4/17 6:05	CMR
Toluene	0.35	0.20		1.3	0.75	4	5/4/17 6:05	CMR
1,2,4-Trichlorobenzene	ND	0.20		ND	1.5	4	5/4/17 6:05	CMR
1,1,1-Trichloroethane	ND	0.20		ND	1.1	4	5/4/17 6:05	CMR
1,1,2-Trichloroethane	ND	0.20		ND	1.1	4	5/4/17 6:05	CMR
Trichloroethylene	ND	0.20		ND	1.1	4	5/4/17 6:05	CMR
Trichlorofluoromethane (Freon 11)	ND	0.80		ND	4.5	4	5/4/17 6:05	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.80		ND	6.1	4	5/4/17 6:05	CMR
1,2,4-Trimethylbenzene	ND	0.20		ND	0.98	4	5/4/17 6:05	CMR
1,3,5-Trimethylbenzene	ND	0.20		ND	0.98	4	5/4/17 6:05	CMR
Vinyl Acetate	ND	4.0		ND	14	4	5/4/17 6:05	CMR
Vinyl Chloride	ND	0.20		ND	0.51	4	5/4/17 6:05	CMR
m&p-Xylene	ND	0.40		ND	1.7	4	5/4/17 6:05	CMR
o-Xylene	ND	0.20		ND	0.87	4	5/4/17 6:05	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	98.2	70-130	5/4/17 6:05

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: TO-15 Prep-EPA TO-15

Lab Number [Field ID]	Batch	Pressure Dilution	Pre Dilution	Pre-Dil Initial mL	Pre-Dil Final mL	Default Injection mL	Actual Injection mL	Date
17D1334-01 [SVE-1]	B176308	1.5	1	N/A	1000	400	150	05/03/17
17D1334-02 [SVE-2]	B176308	1.5	1	N/A	1000	400	150	05/03/17
17D1334-03 [SVE-3]	B176308	1.5	1	N/A	1000	400	150	05/03/17
17D1334-04 [SVE-4]	B176308	1.5	1	N/A	1000	400	150	05/03/17
17D1334-05 [Pre-VPAG]	B176308	1.5	1	N/A	1000	400	150	05/03/17
17D1334-06 [Post-VPGAC/Blower]	B176308	1.5	1	N/A	1000	400	150	05/03/17

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B176308 - TO-15 Prep											
Blank (B176308-BLK1)					Prepared & Analyzed: 05/03/17						
Acetone	ND	1.4									
Benzene	ND	0.034									
Benzyl chloride	ND	0.034									
Bromodichloromethane	ND	0.034									
Bromoform	ND	0.034									
Bromomethane	ND	0.034									
1,3-Butadiene	ND	0.034									
2-Butanone (MEK)	ND	1.4									
Carbon Disulfide	ND	0.34									
Carbon Tetrachloride	ND	0.034									
Chlorobenzene	ND	0.034									
Chloroethane	ND	0.034									
Chloroform	ND	0.034									
Chloromethane	ND	0.068									
Cyclohexane	ND	0.034									
Dibromochloromethane	ND	0.034									
1,2-Dibromoethane (EDB)	ND	0.034									
1,2-Dichlorobenzene	ND	0.034									
1,3-Dichlorobenzene	ND	0.034									
1,4-Dichlorobenzene	ND	0.034									
Dichlorodifluoromethane (Freon 12)	ND	0.034									
1,1-Dichloroethane	ND	0.034									
1,2-Dichloroethane	ND	0.034									
1,1-Dichloroethylene	ND	0.034									
cis-1,2-Dichloroethylene	ND	0.034									
trans-1,2-Dichloroethylene	ND	0.034									
1,2-Dichloropropane	ND	0.034									
cis-1,3-Dichloropropene	ND	0.034									
trans-1,3-Dichloropropene	ND	0.034									
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.034									
1,4-Dioxane	ND	0.34									
Ethanol	ND	1.4									Z-01
Ethyl Acetate	ND	0.034									
Ethylbenzene	ND	0.034									
4-Ethyltoluene	ND	0.034									
Heptane	ND	0.034									
Hexachlorobutadiene	ND	0.034									
Hexane	ND	1.4									
2-Hexanone (MBK)	ND	0.034									
Isopropanol	ND	1.4									
Methyl tert-Butyl Ether (MTBE)	ND	0.034									
Methylene Chloride	ND	0.34									
4-Methyl-2-pentanone (MIBK)	ND	0.034									
Naphthalene	ND	0.034									
Propene	ND	1.4									
Styrene	ND	0.034									

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B176308 - TO-15 Prep											
Blank (B176308-BLK1)					Prepared & Analyzed: 05/03/17						
1,1,2,2-Tetrachloroethane	ND	0.034									
Tetrachloroethylene	ND	0.034									
Tetrahydrofuran	ND	0.034									
Toluene	ND	0.034									
1,2,4-Trichlorobenzene	ND	0.034									
1,1,1-Trichloroethane	ND	0.034									
1,1,2-Trichloroethane	ND	0.034									
Trichloroethylene	ND	0.034									
Trichlorofluoromethane (Freon 11)	ND	0.14									
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14									
1,2,4-Trimethylbenzene	ND	0.034									
1,3,5-Trimethylbenzene	ND	0.034									
Vinyl Acetate	ND	0.68									
Vinyl Chloride	ND	0.034									
m&p-Xylene	ND	0.068									
o-Xylene	ND	0.034									
Surrogate: 4-Bromofluorobenzene (1)	*7.83*				*8.00*		*97.9*	*70-130*			
LCS (B176308-BS1)					Prepared & Analyzed: 05/03/17						
Acetone	4.31				5.00		86.2	70-130			
Benzene	5.12				5.00		102	70-130			
Benzyl chloride	5.44				5.00		109	70-130			
Bromodichloromethane	5.59				5.00		112	70-130			
Bromoform	5.87				5.00		117	70-130			
Bromomethane	4.33				5.00		86.5	70-130			
1,3-Butadiene	3.81				5.00		76.2	70-130			
2-Butanone (MEK)	5.20				5.00		104	70-130			
Carbon Disulfide	4.91				5.00		98.2	70-130			
Carbon Tetrachloride	5.11				5.00		102	70-130			
Chlorobenzene	5.80				5.00		116	70-130			
Chloroethane	4.08				5.00		81.7	70-130			
Chloroform	5.19				5.00		104	70-130			
Chloromethane	4.74				5.00		94.8	70-130			
Cyclohexane	5.00				5.00		100	70-130			
Dibromochloromethane	6.26				5.00		125	70-130			
1,2-Dibromoethane (EDB)	6.19				5.00		124	70-130			
1,2-Dichlorobenzene	4.32				5.00		86.3	70-130			
1,3-Dichlorobenzene	4.86				5.00		97.3	70-130			
1,4-Dichlorobenzene	4.76				5.00		95.3	70-130			
Dichlorodifluoromethane (Freon 12)	5.46				5.00		109	70-130			
1,1-Dichloroethane	4.83				5.00		96.6	70-130			
1,2-Dichloroethane	5.26				5.00		105	70-130			
1,1-Dichloroethylene	4.86				5.00		97.1	70-130			
cis-1,2-Dichloroethylene	4.98				5.00		99.7	70-130			
trans-1,2-Dichloroethylene	4.77				5.00		95.4	70-130			
1,2-Dichloropropane	5.13				5.00		103	70-130			

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC		%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B176308 - TO-15 Prep												
LCS (B176308-BS1)					Prepared & Analyzed: 05/03/17							
cis-1,3-Dichloropropene	5.68				5.00		114		70-130			
trans-1,3-Dichloropropene	5.89				5.00		118		70-130			
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	4.52				5.00		90.4		70-130			
1,4-Dioxane	4.51				5.00		90.2		70-130			
Ethanol	3.16				5.00		**63.2**	*	70-130			Z-01
Ethyl Acetate	5.42				5.00		108		70-130			
Ethylbenzene	5.60				5.00		112		70-130			
4-Ethyltoluene	4.90				5.00		97.9		70-130			
Heptane	5.04				5.00		101		70-130			
Hexachlorobutadiene	5.41				5.00		108		70-130			
Hexane	4.27				5.00		85.4		70-130			
2-Hexanone (MBK)	5.78				5.00		116		70-130			
Isopropanol	3.96				5.00		79.2		70-130			
Methyl tert-Butyl Ether (MTBE)	5.00				5.00		100		70-130			
Methylene Chloride	4.71				5.00		94.2		70-130			
4-Methyl-2-pentanone (MIBK)	5.42				5.00		108		70-130			
Naphthalene	7.30				5.00		**146**	*	70-130			Z-01
Propene	5.13				5.00		103		70-130			
Styrene	5.57				5.00		111		70-130			
1,1,2,2-Tetrachloroethane	5.24				5.00		105		70-130			
Tetrachloroethylene	5.57				5.00		111		70-130			
Tetrahydrofuran	4.68				5.00		93.6		70-130			
Toluene	6.09				5.00		122		70-130			
1,2,4-Trichlorobenzene	6.02				5.00		120		70-130			
1,1,1-Trichloroethane	5.04				5.00		101		70-130			
1,1,2-Trichloroethane	5.76				5.00		115		70-130			
Trichloroethylene	5.06				5.00		101		70-130			
Trichlorofluoromethane (Freon 11)	4.89				5.00		97.8		70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	5.08				5.00		102		70-130			
1,2,4-Trimethylbenzene	4.72				5.00		94.4		70-130			
1,3,5-Trimethylbenzene	4.78				5.00		95.6		70-130			
Vinyl Acetate	4.38				5.00		87.5		70-130			
Vinyl Chloride	4.70				5.00		94.1		70-130			
m&p-Xylene	10.8				10.0		108		70-130			
o-Xylene	5.76				5.00		115		70-130			
Surrogate: 4-Bromofluorobenzene (1)	*7.80*				*8.00*		*97.5*		*70-130*			

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit
DL	Method Detection Limit
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
Z-01	Compound fails the method requirement of 70-130% recovery for the LCS. Is classified by the lab as a difficult compound and passes the in house limits of 50-150%.

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INTERNAL STANDARD AREA AND RT SUMMARY

EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (S013764-ICV1)			Lab File ID: G033115.D			Analyzed: 03/31/17 20:16			
Bromochloromethane (1)	161501	8.899	165942	8.899	97	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	618675	10.813	632917	10.813	98	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	469954	15.613	476893	15.613	99	60 - 140	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (S014048-CCV1)			Lab File ID: G050304.D			Analyzed: 05/03/17 13:48			
Bromochloromethane (1)	143453	8.899	165942	8.899	86	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	524057	10.813	632917	10.813	83	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	394516	15.613	476893	15.613	83	60 - 140	0.0000	+/-0.50	
LCS (B176308-BS1)			Lab File ID: G050305.D			Analyzed: 05/03/17 14:25			
Bromochloromethane (1)	136771	8.899	143453	8.899	95	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	474007	10.813	524057	10.813	90	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	348509	15.613	394516	15.613	88	60 - 140	0.0000	+/-0.50	
Blank (B176308-BLK1)			Lab File ID: G050309.D			Analyzed: 05/03/17 17:02			
Bromochloromethane (1)	131661	8.899	143453	8.899	92	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	471961	10.813	524057	10.813	90	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	332330	15.613	394516	15.613	84	60 - 140	0.0000	+/-0.50	
Post-VPGAC/Blower (17D1334-06)			Lab File ID: G050327.D			Analyzed: 05/04/17 06:05			
Bromochloromethane (1)	141270	8.908	143453	8.899	98	60 - 140	0.0090	+/-0.50	
1,4-Difluorobenzene (1)	509465	10.813	524057	10.813	97	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	380834	15.613	394516	15.613	97	60 - 140	0.0000	+/-0.50	
Pre-VPAG (17D1334-05)			Lab File ID: G050328.D			Analyzed: 05/04/17 06:43			
Bromochloromethane (1)	136763	8.899	143453	8.899	95	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	500519	10.813	524057	10.813	96	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	372009	15.613	394516	15.613	94	60 - 140	0.0000	+/-0.50	
SVE-1 (17D1334-01)			Lab File ID: G050329.D			Analyzed: 05/04/17 07:20			
Bromochloromethane (1)	145215	8.899	143453	8.899	101	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	506792	10.813	524057	10.813	97	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	374948	15.613	394516	15.613	95	60 - 140	0.0000	+/-0.50	
SVE-2 (17D1334-02)			Lab File ID: G050330.D			Analyzed: 05/04/17 07:58			
Bromochloromethane (1)	141794	8.899	143453	8.899	99	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	513489	10.813	524057	10.813	98	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	388366	15.613	394516	15.613	98	60 - 140	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
SVE-4 (17D1334-04)			Lab File ID: G050332.D			Analyzed: 05/04/17 09:11			
Bromochloromethane (1)	140221	8.899	143453	8.899	98	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	496772	10.813	524057	10.813	95	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	366669	15.613	394516	15.613	93	60 - 140	0.0000	+/-0.50	
SVE-3 (17D1334-03)			Lab File ID: G050333.D			Analyzed: 05/04/17 09:48			
Bromochloromethane (1)	141471	8.899	143453	8.899	99	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	501619	10.804	524057	10.813	96	60 - 140	-0.0090	+/-0.50	
Chlorobenzene-d5 (1)	379498	15.604	394516	15.613	96	60 - 140	-0.0090	+/-0.50	

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CONTINUING CALIBRATION CHECK

EPA TO-15

S014048-CCV1

COMPOUND	TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.00	4.63	0.9844946	0.9111946		-7.4	30
Benzene	A	5.00	4.95	0.6254584	0.6193342		-1.0	30
Benzyl chloride	A	5.00	5.22	0.7157975	0.7477638		4.5	30
Bromodichloromethane	A	5.00	5.33	0.4197382	0.4472582		6.6	30
Bromoform	A	5.00	5.67	0.5109749	0.5790143		13.3	30
Bromomethane	A	5.00	4.24	0.7775734	0.6601186		-15.1	30
1,3-Butadiene	A	5.00	4.32	0.5256821	0.4538462		-13.7	30
2-Butanone (MEK)	A	5.00	5.12	1.302932	1.334023		2.4	30
Carbon Disulfide	A	5.00	4.90	1.984097	1.943025		-2.1	30
Carbon Tetrachloride	A	5.00	5.10	0.4492047	0.4581395		2.0	30
Chlorobenzene	A	5.00	5.66	0.6928189	0.7840534		13.2	30
Chloroethane	A	5.00	4.13	0.3722768	0.3075126		-17.4	30
Chloroform	A	5.00	5.40	1.520523	1.643443		8.1	30
Chloromethane	A	5.00	4.96	0.5348565	0.5301918		-0.9	30
Cyclohexane	A	5.00	4.92	0.2754507	0.2707889		-1.7	30
Dibromochloromethane	A	5.00	6.03	0.5324403	0.6420018		20.6	30
1,2-Dibromoethane (EDB)	A	5.00	6.02	0.4421367	0.5328169		20.5	30
1,2-Dichlorobenzene	A	5.00	4.29	0.6568525	0.5637977		-14.2	30
1,3-Dichlorobenzene	A	5.00	4.73	0.6637058	0.6283264		-5.3	30
1,4-Dichlorobenzene	A	5.00	4.62	0.6347745	0.5858804		-7.7	30
Dichlorodifluoromethane (Freon 12)	A	5.00	5.68	1.628415	1.848723		13.5	30
1,1-Dichloroethane	A	5.00	4.89	1.291908	1.263511		-2.2	30
1,2-Dichloroethane	A	5.00	5.45	0.8699659	0.9477669		8.9	30
1,1-Dichloroethylene	A	5.00	4.80	1.046757	1.004783		-4.0	30
cis-1,2-Dichloroethylene	A	5.00	5.17	0.8852668	0.9149868		3.4	30
trans-1,2-Dichloroethylene	A	5.00	5.04	0.9409373	0.9491387		0.9	30
1,2-Dichloropropane	A	5.00	4.99	0.2211588	0.220663		-0.2	30
cis-1,3-Dichloropropene	A	5.00	5.62	0.3155136	0.3547217		12.4	30
trans-1,3-Dichloropropene	A	5.00	5.71	0.2768497	0.3161244		14.2	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 1	A	5.00	5.33	1.717863	1.832728		6.7	30
1,4-Dioxane	A	5.00	5.12	0.1339406	0.1371729		2.4	30
Ethanol	A	5.00	3.53	0.2781015	0.1963681		-29.4	30
Ethyl Acetate	A	5.00	5.59	0.2139299	0.2391529		11.8	30
Ethylbenzene	A	5.00	5.46	1.10381	1.204676		9.1	30
4-Ethyltoluene	A	5.00	4.71	1.192982	1.12386		-5.8	30
Heptane	A	5.00	5.08	0.1891749	0.1921837		1.6	30
Hexachlorobutadiene	A	5.00	4.90	0.6920556	0.6784495		-2.0	30
Hexane	A	5.00	4.56	0.8443942	0.76959		-8.9	30

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CONTINUING CALIBRATION CHECK

EPA TO-15

S014048-CCV1

COMPOUND	TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
2-Hexanone (MBK)	A	5.00	5.27	0.5492914	0.5792252		5.4	30
Isopropanol	A	5.00	4.18	1.155894	0.9668728		-16.4	30
Methyl tert-Butyl Ether (MTBE)	A	5.00	5.17	1.838879	1.901267		3.4	30
Methylene Chloride	A	5.00	4.80	0.7251174	0.696044		-4.0	30
4-Methyl-2-pentanone (MIBK)	A	5.00	5.20	0.4432058	0.4608201		4.0	30
Naphthalene	A	5.00	6.00	1.09064	1.30957		20.1	30
Propene	A	5.00	5.12	0.5374104	0.5500561		2.4	30
Styrene	A	5.00	5.06	0.6179438	0.62597		1.3	30
1,1,2,2-Tetrachloroethane	A	5.00	5.03	0.6717721	0.6760851		0.6	30
Tetrachloroethylene	A	5.00	5.35	0.4945172	0.5289073		7.0	30
Tetrahydrofuran	A	5.00	5.19	0.3170199	0.3290165		3.8	30
Toluene	A	5.00	5.72	0.876899	1.003393		14.4	30
1,2,4-Trichlorobenzene	A	5.00	5.56	0.543706	0.6044916		11.2	30
1,1,1-Trichloroethane	A	5.00	5.21	0.4446662	0.463055		4.1	30
1,1,2-Trichloroethane	A	5.00	5.71	0.2246675	0.2564033		14.1	30
Trichloroethylene	A	5.00	4.99	0.2697337	0.2690394		-0.3	30
Trichlorofluoromethane (Freon 11)	A	5.00	4.99	1.818865	1.815809		-0.2	30
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113	A	5.00	5.00	1.433679	1.434917		0.09	30
1,2,4-Trimethylbenzene	A	5.00	4.58	0.9644819	0.8831115		-8.4	30
1,3,5-Trimethylbenzene	A	5.00	4.71	1.016334	0.9577589		-5.8	30
Vinyl Acetate	A	5.00	4.68	1.952611	1.827074		-6.4	30
Vinyl Chloride	A	5.00	4.79	0.6555204	0.6280747		-4.2	30
m&p-Xylene	A	10.0	10.8	0.7864213	0.8531608		8.5	30
o-Xylene	A	5.00	5.57	0.8374321	0.9321924		11.3	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA TO-15 in Air	
Acetone	AIHA,NY,ME
Benzene	AIHA,FL,NJ,NY,VA,ME
Benzyl chloride	AIHA,FL,NJ,NY,VA,ME
Bromodichloromethane	AIHA,NJ,NY,VA,ME
Bromoform	AIHA,NJ,NY,VA,ME
Bromomethane	AIHA,FL,NJ,NY,ME
1,3-Butadiene	AIHA,NJ,NY,VA,ME
2-Butanone (MEK)	AIHA,FL,NJ,NY,VA,ME
Carbon Disulfide	AIHA,NJ,NY,VA,ME
Carbon Tetrachloride	AIHA,FL,NJ,NY,VA,ME
Chlorobenzene	AIHA,FL,NJ,NY,VA,ME
Chloroethane	AIHA,FL,NJ,NY,VA,ME
Chloroform	AIHA,FL,NJ,NY,VA,ME
Chloromethane	AIHA,FL,NJ,NY,VA,ME
Cyclohexane	AIHA,NJ,NY,VA,ME
Dibromochloromethane	AIHA,NY,ME
1,2-Dibromoethane (EDB)	AIHA,NJ,NY,ME
1,2-Dichlorobenzene	AIHA,FL,NJ,NY,VA,ME
1,3-Dichlorobenzene	AIHA,NJ,NY,ME
1,4-Dichlorobenzene	AIHA,FL,NJ,NY,VA,ME
Dichlorodifluoromethane (Freon 12)	AIHA,NY,ME
1,1-Dichloroethane	AIHA,FL,NJ,NY,VA,ME
1,2-Dichloroethane	AIHA,FL,NJ,NY,VA,ME
1,1-Dichloroethylene	AIHA,FL,NJ,NY,VA,ME
cis-1,2-Dichloroethylene	AIHA,FL,NY,VA,ME
trans-1,2-Dichloroethylene	AIHA,NJ,NY,VA,ME
1,2-Dichloropropane	AIHA,FL,NJ,NY,VA,ME
cis-1,3-Dichloropropene	AIHA,FL,NJ,NY,VA,ME
trans-1,3-Dichloropropene	AIHA,NY,ME
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	AIHA,NJ,NY,VA,ME
1,4-Dioxane	AIHA,NJ,NY,VA,ME
Ethanol	AIHA
Ethyl Acetate	AIHA
Ethylbenzene	AIHA,FL,NJ,NY,VA,ME
4-Ethyltoluene	AIHA,NJ
Heptane	AIHA,NJ,NY,VA,ME
Hexachlorobutadiene	AIHA,NJ,NY,VA,ME
Hexane	AIHA,FL,NJ,NY,VA,ME
2-Hexanone (MBK)	AIHA
Isopropanol	AIHA,NY,ME
Methyl tert-Butyl Ether (MTBE)	AIHA,FL,NJ,NY,VA,ME
Methylene Chloride	AIHA,FL,NJ,NY,VA,ME
4-Methyl-2-pentanone (MIBK)	AIHA,FL,NJ,NY,ME
Naphthalene	NY,ME
Propene	AIHA
Styrene	AIHA,FL,NJ,NY,VA,ME
1,1,2,2-Tetrachloroethane	AIHA,FL,NJ,NY,VA,ME

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA TO-15 in Air	
Tetrachloroethylene	AIHA,FL,NJ,NY,VA,ME
Tetrahydrofuran	AIHA
Toluene	AIHA,FL,NJ,NY,VA,ME
1,2,4-Trichlorobenzene	AIHA,NJ,NY,VA,ME
1,1,1-Trichloroethane	AIHA,FL,NJ,NY,VA,ME
1,1,2-Trichloroethane	AIHA,FL,NJ,NY,VA,ME
Trichloroethylene	AIHA,FL,NJ,NY,VA,ME
Trichlorofluoromethane (Freon 11)	AIHA,NY,ME
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	AIHA,NJ,NY,VA,ME
1,2,4-Trimethylbenzene	AIHA,NJ,NY,ME
1,3,5-Trimethylbenzene	AIHA,NJ,NY,ME
Vinyl Acetate	AIHA,FL,NJ,NY,VA,ME
Vinyl Chloride	AIHA,FL,NJ,NY,VA,ME
m&p-Xylene	AIHA,FL,NJ,NY,VA,ME
o-Xylene	AIHA,FL,NJ,NY,VA,ME

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	02/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2017
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2017
NY	New York State Department of Health	10899 NELAP	04/1/2018
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2018
RI	Rhode Island Department of Health	LAO00112	12/30/2017
NC	North Carolina Div. of Water Quality	652	12/31/2017
NJ	New Jersey DEP	MA007 NELAP	06/30/2017
FL	Florida Department of Health	E871027 NELAP	06/30/2017
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2017
ME	State of Maine	2011028	06/9/2017
VA	Commonwealth of Virginia	460217	12/14/2017
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2017

17D1334

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CHAIN OF CUSTODY RECORD (AIR)

Doc #378 Rev 0 5/8/15

39 Spruce Street
East Longmeadow, MA 01028

Company Name:	ARCADIS
Address:	855 Route 146 Suite 210
Phone:	518-250-7306
Project Name:	GREENER CLEANERS
Project Location:	SCHENECTADY, NY
Project Number:	00266413.0000
Project Manager:	ANDY VITOLINS
Con-Test Bid:	
Invoice Recipient:	
Sampled By:	J MULLINS / C. DAVERN

Requested Turnaround Time
7-Day ☐ 10-Day ☐
Other: STANDARD

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other:
Enhanced Data Package Required: ☐
Email To: CHRISTOPHER.DAVERN@ARCADIS.COM
Fax To #:

ANALYSIS REQUESTED

Lab Use	Client Use	Collection Data		Duration	Flow Rate	Matrix	Volume					" Hg				
Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Total Minutes Sampled	☐ m³/min ☑ L/min	Code	☑ Liters ☐ m³					Initial Pressure	Final Pressure	Lab Receipt Pressure	Summa Can ID	Flow Controller ID
1	SVE-1	4/26/17 1202	4/26/17 1236	34	0.176	O	6					30	3.0	-23	1783	4034
2	SVE-2	4/26/17 1148	4/26/17 1213	25	0.240	O	6					25	6	-5.9	1092	4059
3	SVE-3	4/26/17 1219	4/26/17 1237	18	0.333	O	6					30	5.5	-5.0	1826	4056
4	SVE-4	4/26/17 1138	4/26/17 1153	15	0.400	O	6					28	6	-4.4	1177	4040
5	PRE-VPGAC	4/26/17 1255	4/26/17 1314	19	0.316	O	6					29.5	4	-2.6	1323	4063
6	POST-VPGAC/BLOWER	4/26/17 1248	4/26/17 1313	25	0.24	O	6					30	4	-3.0	1020	4054

Please fill out completely, sign, date and retain the yellow copy for your records

Summa canisters and flow controllers must be returned within 15 days of receipt or rental fees will apply

For summa canister and flow controller information please refer to Con-Test's Air Media Agreement

Comments:

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Matrix Codes:
SG = SOIL GAS
IA = INDOOR AIR
AMB = AMBIENT
SS = SUB SLAB
D = DUP
BL = BLANK
O = Other SYSTEM

Relinquished by: (signature)	Date/Time: 4/26/17 1432
Received by: (signature)	Date/Time: 4-26-17 4:55 pm
Relinquished by: (signature)	Date/Time: 4-27-17 12:15pm
Received by: (signature)	Date/Time: 4-27-17 12:15
Relinquished by: (signature)	Date/Time: 4:02
Received by: (signature)	Date/Time: 4/27/17 16:00

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
☐ CT RCP Required
☐ Enhanced Data Package Required

NELAC and AIHA-LAP, LLC Accredited

TURNAROUND TIME (BUSINESS DAYS) STARTS AT 9:00 AM THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON THIS CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME CANNOT START UNTIL ALL QUESTIONS HAVE BEEN ANSWERED.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

Table of Contents

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con-test ANALYTICAL LABORATORY

AIR Only Receipt Checklist

39 Spruce St.
East Longmeadow, MA.
01028
P: 413-525-2332
F: 413-525-6405

CLIENT NAME Arcadis RECEIVED BY: RJM DATE: 4/27/17

1) Was the chain(s) of custody relinquished and signed? Yes X No ____

2) Does the chain agree with the samples? Yes X No ____
If not, explain:

3) Are all the samples in good condition? Yes X No ____
If not, explain:

4) Are there any samples "On Hold"? Yes ____ No X Stored where: ____

5) Are there any RUSH or SHORT HOLDING TIME samples? Yes ____ No X
Who was notified ____ Date ____ Time ____

6) Location where samples are stored: Air Lab

Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature: ____

7) Number of cans Individually Certified or Batch Certified? 0

Containers received at Con-Test

	# of Containers	Types (Size, Duration)
Summa Cans (TO-14/TO-15/APH)	6	6L
Tedlar Bags		
TO-17 Tubes		
Regulators	6	15 min
Restrictors		
Hg/Hopcalite Tube (NIOSH 6009)		
(TO-4A/ TO-10A/TO-13) PUFs		
PCB Florisil Tubes (NIOSH 5503)		
Air cassette		
PM 2.5/PM 10		
TO-11A Cartridges		
Other		

Unused Summas/PUF Media:

Unused Regulators:

25 ft teflon
6 swagelok

1) Was all media (used & unused) checked into the WASP?

2) Were all returned summa cans, Restrictors & Regulators and PUF's documented as returned in the Air Lab Inbound/Outbound Excel Spreadsheet?

Laboratory Comments:																			
						1177	1783		4034	4063									
						1020	1092		4059	4054									
							1826		4056										
							1323		4040										

Login Sample Receipt Checklist

(Rejection Criteria Listing - Using Sample Acceptance Policy)

Any False statement will be brought to the attention of Client

Question	Answer (True/False) T/F/NA	Comment
1) The coolers'/boxes' custody seal, if present, is intact.	NA	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	NA	
4) Cooler Temperature is acceptable.	NA	
5) Cooler Temperature is recorded.	NA	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) Samples are received within Holding Time.	T	
10) Sample containers have legible labels.	T	
11) Containers/media are not broken or leaking and valves and caps are closed tightly.	T	
12) Sample collection date/times are provided.	T	
13) Appropriate sample/media containers are used.	T	
14) There is sufficient volume for all requsted analyses, including any requested MS/MSDs.	T	
15) Trip blanks provided if applicable.	NA	

Who notified of False statements? **Date/Time:**

Doc #278 Rev. 5 October 2014 **Log-In Technician Initials:** RJM **Date/Time:** 4/27/17 1602

Air Sampling Media Certificate of Analysis

Date Analyzed: 4/19/2017 **Batch #:** 17CC266

Certification Type: *Batch Certified* ☑ *Individual Certified* ☐

Media Type: *Summa Canister* ☑ *Flow Controllers* ☐

Media IDs: BC1783 BC117

Note:Two ID's grouped together, for example BC2136/BC3145, represents matched pairs of certified summa canisters and flow controllers.

Units: PPBv

<0.80	Propene	<0.04	Vinyl acetate	<0.02	Dibromchloromethane
<0.02	Dichlorodifluoromethane	<0.20	Hexane	<0.02	1,2-Dibromomethane
<0.04	Chloromethane	<0.02	Ethyl acetate	<0.02	Tetrachloroethylene
<0.02	Freon 114	<0.02	Chloroform	<0.02	Chlorobenzene
<0.02	Vinyl chloride	<0.02	Tetrahydrofuran	<0.02	Ethylbenzene
<0.02	1.3-Butadiene	<0.02	1,2-Dichloroethane	<0.04	m,p-Xylenes
<0.02	Bromomethane	<0.02	1,1,1-Trichloroethane	<0.02	Bromoform
<0.02	Chloroethane	<0.02	Benzene	<0.02	Styrene
<0.08	Acrolein	<0.02	Carbon Tetrachloride	<0.02	o-Xylene
<0.80	Acetone	<0.02	Cyclohexane	<0.02	1,1,2,2-Tetrachloroethane
<0.20	Trichlorofluoromethane	<0.02	1,2-Dichloropropane	<0.02	4-Ethyltoluene
<0.80	Ethanol	<0.02	Bromodichloromethane	<0.02	1,3,5-Trimethylbenzene
<0.02	1,1-Dichloroethylene	<0.02	Trichloroethylene	<0.02	1,2,4-Trimethylbenzene
<0.20	Methylene chloride	<0.02	1,4-Dioxane	<0.02	1,3-Dichlorobenzene
<0.20	Freon 113	<0.02	Methylmethacrylate	<0.02	Benzyl chloride
<0.02	Carbon disulfide	<0.02	Heptane	<0.02	1,4-Dichlorobenzene
<0.02	t-1,2-Dichloroethylene	<0.02	MIBK	<0.02	1,2-Dichlorobenzene
<0.02	1,1-Dichloroethane	<0.02	c-1,3-Dichloropropylene	<0.04	1,2,4-Trichlorobenzene
<0.02	MTBE	<0.02	t-1,3-Dichloropropylene	<0.02	Naphthalene
<0.80	IPA	<0.02	1,1,2-Trichloroethylene	<0.02	Hexachlorobutadiene
<0.20	2-Butanone (MEK)	<0.02	Toluene		
<0.02	c-1,2-Dichloroethylene	<0.02	2-Hexanone (MBK)		

Special Notes:

Analyst Initials/Date: CMR 5/8/17

Air Sampling Media Certificate of Analysis

Date Analyzed: 4/19/2017 **Batch #:** 17CC270

Certification Type: *Batch Certified* ☑ *Individual Certified* ☐

Media Type: *Summa Canister* ☑ *Flow Controllers* ☐

Media IDs: BC1092 BC1323

Note:Two ID's grouped together, for example BC2136/BC3145, represents matched pairs of certified summa canisters and flow controllers.

Units: PPBv

<0.80	Propene	<0.04	Vinyl acetate	<0.02	Dibromchloromethane
<0.02	Dichlorodifluoromethane	<0.20	Hexane	<0.02	1,2-Dibromomethane
<0.04	Chloromethane	<0.02	Ethyl acetate	<0.02	Tetrachloroethylene
<0.02	Freon 114	<0.02	Chloroform	<0.02	Chlorobenzene
<0.02	Vinyl chloride	<0.02	Tetrahydrofuran	<0.02	Ethylbenzene
<0.02	1.3-Butadiene	<0.02	1,2-Dichloroethane	<0.04	m,p-Xylenes
<0.02	Bromomethane	<0.02	1,1,1-Trichloroethane	<0.02	Bromoform
<0.02	Chloroethane	<0.02	Benzene	<0.02	Styrene
<0.08	Acrolein	<0.02	Carbon Tetrachloride	<0.02	o-Xylene
<0.80	Acetone	<0.02	Cyclohexane	<0.02	1,1,2,2-Tetrachloroethane
<0.20	Trichlorofluoromethane	<0.02	1,2-Dichloropropane	<0.02	4-Ethyltoluene
<0.80	Ethanol	<0.02	Bromodichloromethane	<0.02	1,3,5-Trimethylbenzene
<0.02	1,1-Dichloroethylene	<0.02	Trichloroethylene	<0.02	1,2,4-Trimethylbenzene
<0.20	Methylene chloride	<0.02	1,4-Dioxane	<0.02	1,3-Dichlorobenzene
<0.20	Freon 113	<0.02	Methylmethacrylate	<0.02	Benzyl chloride
<0.02	Carbon disulfide	<0.02	Heptane	<0.02	1,4-Dichlorobenzene
<0.02	t-1,2-Dichloroethylene	<0.02	MIBK	<0.02	1,2-Dichlorobenzene
<0.02	1,1-Dichloroethane	<0.02	c-1,3-Dichloropropylene	<0.04	1,2,4-Trichlorobenzene
<0.02	MTBE	<0.02	t-1,3-Dichloropropylene	<0.02	Naphthalene
<0.80	IPA	<0.02	1,1,2-Trichloroethylene	<0.02	Hexachlorobutadiene
<0.20	2-Butanone (MEK)	<0.02	Toluene		
<0.02	c-1,2-Dichloroethylene	<0.02	2-Hexanone (MBK)		

Special Notes:

Analyst Initials/Date: CMR 5/8/17

Air Sampling Media Certificate of Analysis

Date Analyzed: 4/20/2017 **Batch #:** 17CC275

Certification Type: *Batch Certified* ☑ *Individual Certified* ☐

Media Type: *Summa Canister* ☑ *Flow Controllers* ☐

Media IDs: BC1826 BC1020

Note:Two ID's grouped together, for example BC2136/BC3145, represents matched pairs of certified summa canisters and flow controllers.

Units: PPBv

<0.80	Propene	<0.04	Vinyl acetate	<0.02	Dibromchloromethane
<0.02	Dichlorodifluoromethane	<0.20	Hexane	<0.02	1,2-Dibromomethane
<0.04	Chloromethane	<0.02	Ethyl acetate	<0.02	Tetrachloroethylene
<0.02	Freon 114	<0.02	Chloroform	<0.02	Chlorobenzene
<0.02	Vinyl chloride	<0.02	Tetrahydrofuran	<0.02	Ethylbenzene
<0.02	1.3-Butadiene	<0.02	1,2-Dichloroethane	<0.04	m,p-Xylenes
<0.02	Bromomethane	<0.02	1,1,1-Trichloroethane	<0.02	Bromoform
<0.02	Chloroethane	<0.02	Benzene	<0.02	Styrene
<0.08	Acrolein	<0.02	Carbon Tetrachloride	<0.02	o-Xylene
<0.80	Acetone	<0.02	Cyclohexane	<0.02	1,1,2,2-Tetrachloroethane
<0.20	Trichlorofluoromethane	<0.02	1,2-Dichloropropane	<0.02	4-Ethyltoluene
<0.80	Ethanol	<0.02	Bromodichloromethane	<0.02	1,3,5-Trimethylbenzene
<0.02	1,1-Dichloroethylene	<0.02	Trichloroethylene	<0.02	1,2,4-Trimethylbenzene
<0.20	Methylene chloride	<0.02	1,4-Dioxane	<0.02	1,3-Dichlorobenzene
<0.20	Freon 113	<0.02	Methylmethacrylate	<0.02	Benzyl chloride
<0.02	Carbon disulfide	<0.02	Heptane	<0.02	1,4-Dichlorobenzene
<0.02	t-1,2-Dichloroethylene	<0.02	MIBK	<0.02	1,2-Dichlorobenzene
<0.02	1,1-Dichloroethane	<0.02	c-1,3-Dichloropropylene	<0.04	1,2,4-Trichlorobenzene
<0.02	MTBE	<0.02	t-1,3-Dichloropropylene	<0.02	Naphthalene
<0.80	IPA	<0.02	1,1,2-Trichloroethylene	<0.02	Hexachlorobutadiene
<0.20	2-Butanone (MEK)	<0.02	Toluene		
<0.02	c-1,2-Dichloroethylene	<0.02	2-Hexanone (MBK)		

Special Notes:

Analyst Initials/Date: CMR 5/8/17

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