Former JML Optical, Inc.

690 Portland Avenue

ROCHESTER, NEW YORK

Interim Remedial Measure

Construction Completion Report
Sump Cleanup and LNAPL Recovery

NYSDEC Site Number: C828151

Prepared for:

690 Portland Avenue Company

Prepared by:

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1 Background and site description

Ravi Engineering and Land Surveying, P.C. (RE&LS) is submitting this Interim Remedial Measure (IRM) Construction Completion Report (CCR) to document the IRM actions implemented on December 14, 2016 and December 15, 2016 at the Former JML Optical, Inc. (the "Site"), in the City of Rochester, New York: (1) in relation to contaminated sump sediment conditions and (2) light non-aqueous petroleum liquid (LNAPL) in the vicinity of the former UST. IRM remedial activities completed at the Site were conducted in accordance with Interim Remedial Measure Work Plan (IRMWP) (RE&LS, 2016) and the Letter of Conditional Approval (NYSDEC, 2016).

1.1 Site Location and Description

690 Portland Avenue Company entered into a Brownfield Cleanup Agreement (BCA), with the New York State Department of Environmental Conservation (NYSDEC) in December 2007 to investigate and remediate an approximately 1.565-acre property located in the City of Rochester, New York. Interim Remedial Measures (IRMs) were performed to address conditions identified during our Remedial Investigation (RI).

The site is bounded by Ilex Place and the 702 Portland Avenue property to the north, the 674 Portland Avenue and 76 Fernwood Avenue properties to the south, Portland Avenue and the 702-720 Portland Avenue properties to the east, and the 29 Ilex Place and 100 Fernwood Avenue properties to the west (Figure 1).

The Site is almost entirely covered with buildings or paved surfaces, except for a mowed grass area along the Portland Avenue entrance to the Site, and a strip of grass along the eastern Site boundary (rear side of building). ILEX Optical constructed the first buildings on the Site circa 1930 and the south addition to the building was constructed circa 1970.

The on-site buildings are currently unoccupied. The Site is located within a New York State "En-Zone" pursuant to Tax Law § 21(b)(6). There are no known easements on the Site, and there are currently no environmental permits associated with the Site.

The Site and neighboring properties are currently located in an industrial (M-1) zoning district according to the City of Rochester Department of Community Development, Bureau of Building and Zoning. The parcel immediately south of the Site (76 Fernwood Avenue) is zoned Low Density Residential (R-1).

1.2 Site Operational History

The Site was undeveloped until circa 1930 when ILEX Optical constructed the original portion of the building for lens manufacturing operations. 690 Portland Avenue Company purchased the property in December of 1979, and JML Optical, Inc. operated at the Site until they relocated operations to the Town of Pittsford, New York in November 2005. The Site has remained vacant since 2005.

As previously noted, adjacent properties have also had a long history of industrial use. The parcel located at 42 Fernwood Avenue (south of the Site, also known as Preferred Electric Motors) has been identified as a potential source of chlorinated solvents migrating onto the southern portion of the Site. The parcel located at 100 Fernwood Avenue (east of the Site, also known as Vogt Manufacturing) has been identified as a source of petroleum-related compounds (diesel fuel) migrating onto the eastern portion of the Site.

1.3 Previous Environmental Work

Phase I ESA, Labella Associates, P. C. (Labella), February 2005

Labella identified several recognized environmental conditions (RECs) as a result of this Phase I ESA;

- An open NYSDEC spill file (spill no. 9870600) was identified, which was associated with subsurface petroleum contamination identified during the removal of a 5,000-gallon No. 2 fuel oil underground storage tank (UST) from the Site. While contaminated soils were reportedly excavated and disposed of offsite, no analytical data had been provided to

the NYSDEC to confirm that the release had been addressed to an extent deemed acceptable to the NYSDEC.

- Historical research indicated that the Site had a long history of chlorinated solvent use, particularly trichloroethene (TCE), in association with the manufacturing of specialty optical lenses.

- The on-site building once had a number of individual floor drains and trench drains, and a sump of unknown origin was identified in the storage area of the main manufacturing building.

Phase II ESA-Preliminary Site Characterization (PSC), Labella Associates, P.C., June 2005

Labella performed a Phase II Investigation in June of 2005 to investigate the RECs that they had previously identified. Soil samples collected in the vicinity of the sump were identified as having elevated levels of TCE above the Part 375 Unrestricted Soil Cleanup Objectives (SCO). A groundwater sample collected from existing well MW-3, which was installed in the historic tank pit exhibited levels of chlorinated- and petroleum-related volatile organic compounds (VOC) and semivolatile organic compounds (SVOC) above New York State Part 703 groundwater standards. Two floor drains inside the maintenance shop were determined to discharge to the sump; the discharge location of the sump could not be determined. Labella concluded that the sump was the source of solvent-related soil and groundwater impairment.

Phase II Supplemental Site Characterization (SSC), Labella Associates, P.C., June 2006

Laboratory results of soil samples that Labella collected in the vicinity of the sump indicated that no VOC or SVOC concentrations above Part 375 Unrestricted SCOs were present in soils. They stated that the contamination associated with the former 5,000-gallon UST was limited to petroleum compounds.

Laboratory results of groundwater samples collected in the vicinity of the sump and the former UST indicated that several chlorinated-solvent compounds were present at levels exceeding Part 703 groundwater standards; however, the concentrations were significantly lower in the sample collected from the former UST area. The results of the former UST sample also indicated that several petroleum-related VOCs and SVOCs were present above Part 703 groundwater standards.

Remedial Investigation Report (RIR), Clough Harbor Associates (CHA), May 2011

CHA performed an RI in 2016. They identified the following environmental media as sources of contaminants of concern at the Site:

- Subsurface soils located **in proximity to the sump**, the former UST, degreaser areas, and along the southern side of the main building are sources of VOCs, SVOCs and metals.

- Groundwater throughout the Site is a source of chlorinated VOCs; however, **the highest levels are present in the former sump area**.

1.4 Interim Remedial Measures

Sump Area Background

On March 30, 2016, RE&LS collected a water sample from the residual water in the sump with a bailer and submitted it to Paradigm Environmental Services Inc. (Paradigm) for Target Compound List (TCL) VOC analysis by United States Environmental Protection Agency (USEPA) Method 8260. The results indicated a concentration of 64,900 µg/L TCE. The sump sediments were subsequently sampled and submitted for laboratory analysis of TCL VOCs, and Toxicity Characteristic Leaching Procedure (TCLP) VOCs. VOC analysis identified a concentration of 404 mg/Kg toluene and

18,400 mg/Kg TCE. The TCLP analysis indicated 59,300 µg/L of TCE, well above the regulatory limit of 500 µg/L.

Recovery Well Area Background

As part of our groundwater sampling event on May 12, 2016, RE&LS attempted to sample an existing monitoring well in the vicinity of an historic fuel oil tank. Approximately 12 inches of LNAPL was measured on top of the groundwater. A sample of the product was collected and submitted to the laboratory for TCL VOCs, and Total Petroleum Hydrocarbon (TPH) fingerprinting by New York State Department of Health (NYSDOH) Method 310.13. The LNAPL was identified as "medium weight petroleum hydrocarbon (PHC) #4 fuel oil."

Governing Documents

RE&LS proposed to conduct an IRM in two phases: (1) to address the sump conditions and (2) the LNAPL in the vicinity of the former UST. IRM remedial activities completed at the Site were conducted in accordance with Interim Remedial Measure Work Plan (IRMWP) (RE&LS, 2016) and the Letter of Conditional Approval (NYSDEC, 2016).

Health and Safety Plan (HASP)

The RE&LS site-specific HASP was updated to reflect the nature of the field work to be performed under the IRMWP. The Contaminants of Concern (COC) for the Site are VOC, primarily TCE, and heavier hydrocarbons in the form of medium weight petroleum hydrocarbons. TREC performed the work in a manner that is compliant with its corporate HASP and all governing Occupational Safety and Health Administration (OSHA) regulations.

Based on the hazardous nature of the sump sediments, removal and containerization of the sump media was performed by the contractor while wearing Level C respiratory protection. While all on-site personnel had OSHA 40-hour HAZWOPER training, only

those with appropriate respiratory protection were working inside the building while sump sediments were being removed and containerized.

All remedial work performed under this IRM was in full compliance with governmental requirements, including Site and worker safety requirements mandated by Federal OSHA. The Health and Safety Plan (HASP) was complied with for all remedial and invasive work performed at the Site.

A copy of all governing documents is provided in Appendix A.

2 IRM Sump Cleanout

2.1 Description of Work Performed

The remedial action objective of the sump cleanout was the source removal of hazardous concentrations of VOCs. Air monitoring and vapor mitigation was required during remedial activities as a protective measure for neighboring residents, and Level C personal protective equipment (PPE) was worn during this phase of the IRM. Sump cleanout activities were performed on December 14, 2016.

A temporary air ventilation and filtration system was installed in the building and exhausted to the exterior of the building before any work was performed. Sediments were then manually removed from the sump and containerized in two 55-gallon drums. During sediment removal, vapors were treated with activated charcoal before they were released to the environment. Photoionizing detectors (PIDs) placed in the immediate work area and at the filtration system exhaust were used to evaluate the efficacy of the filtration system; no VOCs were detected at the filtration system exhaust. After gross removal of sediments, residual material was removed by vacuuming and powerwashing; the sump materials were containerized with the rinseate for disposal.

Upon completion of the sump cleanout, four soil borings were installed in the vicinity of the sump. Confirmatory samples were collected to document the concentrations of residual VOCs around the sump.

2.2 Confirmatory Samples

Sub-slab confirmatory soil samples were collected by Geoprobe direct push sampling; the borings were screened using a PID and inspected for evidence of visual and olfactory impairment. A headspace reading was completed on each 4-ft. boring interval.

A total of four borings were completed from a distance of 3 to 5 ft. from the outer rim of the sump. Borings were completed to a depth of 3.5 to 7.5 below the bottom of the sump (approximately 8 to 12 ft. bgs.). A decision as to the number, location, and depth of the borings was made in the field in consultation with NYSDEC Field Inspector Robert Long.

One soil sample from each boring was selected from the interval with the highest PID reading and was submitted for laboratory analysis for TCL VOCs by USEPA Method 8260 plus Tentatively Identified Compounds (TICs).

In a letter dated December 30, 2016, Paradigm notified RE&LS of the potential that the confirmatory samples were "stored concurrent with another sample that contained very high levels of TCE" and that it is possible that the samples were cross-contaminated during storage.

Soil boring logs are provided in Appendix C. Paradigm's letter is provided with the analytical raw data in Appendix D.

2.3 Confirmatory Samples Results

In general, soils did not exhibit any staining; however, boring BH-1 exhibited slight petroleum odors, as well as the highest PID reading at a depth of 12 ft. bgs.; PID readings ranged from 1.8 to 32.0 ppm (Table 1). Bedrock refusal was encountered at 12.7 ft. beneath ground surface (bgs.).

Field observations are indicated in Table 1.

Table 1: Soil Boring Notes

Soil Boring ID	Approximate Depth			Sample collection depth	Boring distance from sump	Analytical Method	Notes
	0'-4'	4'-8'	8'-12'				
BH-1 (north of sump)	12 ppm @ 4'	8.4 ppm @ 5'	32.0 ppm @ 12'	12'	5’	8260 TCL +TICs	Slight petroleum odor at 12'
BH-2 (west of sump)	2.9 ppm @ 2'	5 ppm @ 4'	NA	4'-4.5	3’	8261 TCL +TICs	No odors or staining
BH-3 (south of sump)	8.4 ppm @ 4'	5.6 ppm @ 6.5'	NA	4'	4’	8262 TCL +TICs	No odors or staining
BH-4 (east of sump)	1.8 ppm @ 4'	3.4 ppm @ 5'	NA	5'	3.7’	8263 TCL +TICs	No odors or staining

- VOCs were detected in all four samples; however exceedances of 6 NYCRR Part 375 Unrestricted SCOs were reported in only two samples.

- Cis-1,2-dichloroethene and TCE were above the Unrestricted SCO in sample IRM-SS-2. Only TCE was above the standard in IRM-SS-3. There were no exceedances of Track 2 Restricted SCOs.

- No TICs or petroleum-related VOCs were detected in these two samples.

- There were no exceedances reported in IRM-SS-1 (collected 5 feet from the sump) and IRM-SS-4; however, petroleum-related VOCs, solvent-related VOCs, and TICs were detected in these samples.

VOC detections are depicted on Figure 2. Analytical Results are provided in Appendix D.

Table 2: Sump Confirmatory Sample Results – VOC Detections

Sample date 12/15/2016		Sample ID				6 NYCRR Part 375-6.8 Unrestricted Use SCOs	6 NYCRR Part 375-6.8 Commercial Use SCOs
Sample Depth (ft.bgs)		12'	4'	4'	5'		
Volatiles by 8260	Cas No.	IRM-SS-1	IRM-SS-2	IRM-SS-3	IRM-SS-4		
1,2-Dichlorobenzene	95-50-1	**0.00803**	**0.0197**	<0.0359	<0.00451	1.1	500
1,4-Dichlorobenzene	106-46-7	**0.00215J**	<0.0167	<0.0359	<0.00451	1.8	130
Acetone	67-64-1	<0.0196	<0.0835	<0.179	**0.0221J**	0.05	500
cis-1,2-Dichloroethene	156-59-2	**0.00227J**	**0.999**	**0.112**	**0.0914**	0.25	500
Ethylbenzene	100-41-4	**0.00216J**	<0.0167	<0.0359	<0.00451	1	390
m,p-Xylene	136777-61-2	**0.00723**	<0.0167	<0.0359	**0.00559**	0.26	500
o-Xylene	95-47-6	**0.00259J**	<0.0167	<0.0359	**0.00276J**	0.26	500
Styrene	100-42-5	**0.00693J**	<0.0417	<0.0896	<0.0113	NS	NS
Tetrachloroethene	127-18-4	**0.0955**	0.0733	0.0890	**0.00539**	1.3	150
Toluene	108-88-3	**0.00317J**	<0.0167	<0.0359	<0.00451	0.7	500
trans-1,2-Dichloroethene	156-60-5	<0.00393	**0.0297**	<0.0359	**0.0321**	0.19	500
Trichloroethene	79-01-6	**0.158**	**1.080**	**0.739**	**0.0914**	0.47	200
Unknown Aromatic	NA	**0.0762**	<0.0417	<0.0896	**0.0533**	NS	NS
Total Reported TICS	NA	**0.0762**	<0.0417	<0.0896	**0.0533**	NS	NS

Notes: Results are shown in mg/kg
NA - not applicable
NS - no associated standard
Bold type indicates a detection of the associated compound
J= Result estimated between the quantitation limit and half the quantitation limit

2.4 Sump Construction

After cleanout, the sump was inspected to document its construction and condition, as well as its dimensions and the number, orientation, and location of openings, cracks, gaps or breaks. The sump was determined to be approximately 2.1 feet (ft.) in diameter and 4.4 ft. deep. It is constructed of two cylindrical concrete columns stacked vertically, with a grouted seam in between the two columns. The grout and columns appeared to be undamaged; no holes or cracks or missing grout were identified. Two pipe breeches were noted in the sump.

Figure 3 depicts sump construction details; photos are provided in Appendix B.

2.5 Data Usability Summary Report

A Data Usability Summary Report (DUSR) was prepared for the confirmatory soil samples. The DUSR indicates that all TCE results were flagged by the laboratory with a "Z" due to suspected storage cross contamination.

All results for 1, 4-Dioxane were rejected. All other results (98%) are considered usable. The DUSR is included in Appendix E.

2.6 Air Monitoring and Nuisance Controls

VOC vapors were monitored in the work zone and at the perimeter of the building during the sump cleanout. The vapors from the sump were collected and treated with granulated activated charcoal to mitigate any potential exposure impacts to the surrounding area and adjacent residences and properties.

A handheld PID was used to monitor VOC levels at the perimeter of the building and the air filtration system exhaust during the sump cleanout. While a second PID placed in the immediate work area indicated high levels of VOCs above the Short Term Exposure Limit (STEL), the 15 minute time weighted average (TWA) at the perimeter of the building and at the filtration system exhaust was 0.0 ppm.

PID readings were also collected during the installation of soil borings and sample collection. There were no elevated ambient VOC levels above 5 ppm.

2.7 Equipment Decontamination

After gross removal of sump sediments, the sump was vacuumed for fine material removal. Approximately 2 gallons of rinsate water was generated to power wash the sump and wash hand tools. The vacuumed sediments and the rinseate were drummed for

disposal. Geoprobe equipment was washed with Alconox and rinsed with clean water in between soil borings.

After completion of the recovery well, soils were removed from the excavator bucket using a brush and added to the staged soil pile. The soil pile was characterized for waste disposal and covered with 12 mL polyethylene plastic sheeting.

2.8 Waste Management

Two 55-gallon drums of TCE-containing sediments were manually removed from the sump. Hazardous levels of TCE (18,400 mg/Kg) were confirmed by laboratory analysis prior to IRM work activities. Toluene (404 mg/Kg) was also reported.

Drummed hazardous waste is currently stored inside the main building pending assignment of the USEPA generator identification number for disposal.

3 IRM Recovery Well

3.1 Installation

The objective of the recovery well installation was to remove LNAPL accumulation from the top of groundwater in the vicinity of the historic UST. A utility stake out was performed by Dig Safely New York prior to ground intrusive activity. No underground utilities interfered with IRMWP field activities.

The recovery well was installed north of the boiler house on December 15, 2017, within three ft. of existing monitoring well MW-3. During excavation of the recovery well pit, a 4-inch diameter pipe was encountered at a depth of 4 ft. bgs. The pipe ran in an east/west direction and may have connected the historic UST to the boiler.

The recovery well was installed approximately 2.7 ft. from MW-3. Soils appeared to be clean and free of staining and odors from ground surface to approximately 4 ft. bgs. Soils were stained black from 4 to 8 ft. bgs. A small amount of LNAPL-saturated soil was removed during the excavation. LNAP-saturated soils were encountered at 8 ft. bgs. near the southwest corner of the excavation.

3.2 Well Construction

The recovery well was constructed of 12-inch diameter high density polyethylene (HDPE) pipe that was fashioned into a well screen with saw cuts to allow the LNAPL to permeate the pipe. The pipe was placed vertically into the pit and packed with 1A gravel from the bottom of the pit to one foot above the water table to allow the LNAPL to accumulate. A layer of geotextile fabric was placed on top of the gravel and up the side of the excavation walls. The pit was restored to ground surface with #1 crushed stone. The well was subsequently finished with a curb box that was grouted in place.

Well construction details are depicted on Figure 4.

3.3 Imported Backfill

Approximately 1 yard each of "1A" gravel from the Dolomite Group (Palmyra plant), and "#1" crushed stone from the Dolomite Group (Brockport plant) were imported to the Site for backfilling the recovery well. Documentation from the Dolomite Group indicates that the crushed stone and gravel met the specifications indicated in the Division of Environmental Remediation *Technical Guidance for Site Investigation and Remediation* (DER-10) for imported soils. All imported material was approved by the NYSDEC prior to importation to the Site in an email dated December 13, 2016.

The sieve analysis and approval documentation are provided in Appendix G.

3.4 LNAPL Recovery

The well was checked weekly for three weeks following installation to determine the rate of LNAPL accumulation. No significant amount of accumulation was measured.

The Department will be notified of any changes in the frequency of inspections and reclamation of the LNAPL recovery well. RE&LS will consult with NYSDEC to determine when the LNAPL recovery potion of the IRM is completed.

Table 3: Extraction Well Measurements

Date	Depth of Water (ft. bgs)	Depth of LNAPL
12/15/16	None	None
12/22/16	3.5	sheen
1/3/17	4.1	sheen
1/12/17	4.55	sheen

3.5 CAMP Monitoring and Nuisance controls

Community Air Monitoring Plan (CAMP) monitoring was performed during the installation of the recovery well. The monitors were placed in enclosures equipped with telemetry systems that alert users (via cell phone) when levels exceed a programmable limit. The systems were programmed to alert users whenever particulate and VOCs exceed the fifteen minute TWA response levels indicated in Appendix 1A of DER 10. The response level for particulates is 0.100 mg/m3 above the background reading; for VOCs it is 5 ppm above background readings.

All measured particulate and VOC levels were below response limits. The fifteen minute TWA for particulate matter ranged from 0.003 to 0.004 mg/m3 for both monitoring locations. The fifteen minute TWA for VOCs ranged from 0.006 to 0.3 ppm for both monitoring locations.

The two enclosures were located on each end of the narrow corridor between the main building and northwest perimeter of the Site.

Raw CAMP data are provided in Appendix H.

3.6 Staging of Excavated Soils

Excavated soils were staged on 12 milliliter (mL) polyethylene plastic sheeting next to the recovery well. Once excavation and decontamination activities were complete, the stockpile was covered with a second layer of 12 mL polyethylene sheeting and anchored to prevent wind and precipitation erosion.

3.7 Waste Removal

The stockpile was sampled for waste characterization and removed from the Site; it was disposed of at Waste Management's Mill Seat Landfill on February 7, 2017.

In the event that LNAPL accumulates in the well, it will be drummed and stored in a secure environment pending off-site disposal at a permitted facility in accordance with all applicable local, state, and federal regulations. Storage is not to exceed 90 days. When enough LNAPL is recovered, it will be disposed of at Industrial Oil Tank Service Corporation in Oriskany, New York (or an equivalent permitted facility).

Waste Management profile sheets and manifests are included in in Appendix F.

4 Deviations from the Work Plan

RE&LS was able to collect a groundwater sample from the recovery well on February 7, 2017 using low-flow methodologies and submitted to Paradigm for TCL VOCs and TICs. TCE was the only compound that exceeded the standard. Detections are tabulated below:

Table 4: Recovery Well Sample Results - VOC detections

Compound	Sample ID RW1-02072017	TOGs 1.1.1 Groundwater Standard or Guidance Value
cis-1, 2 - DCE	1.46 J	*
o-Xylene	1.32 J	*
Trichloroethene	15.0	*
Total Reported TICs	226	NS

Notes: Results are shown in µg/kg

NS - No associated standard

J= Result estimated between the quantitation limit and half the quantitation limit

5 Discussion and Conclusions

5.1 Confirmatory Results

TCE and cis-1,2-dichlorothene concentrations exceeding Unrestricted Use SCOs remain in soil in the vicinity of the sump; however, the highest concentrations of these compounds are well below Restricted Use SCOs. Given the planned commercial reuse of the Site, no further remedial actions around the sump are warranted.

5.2 Sump construction details

Labella's Supplemental Site Characterization (SSC) report indicated that one pipe is the confluence of two floor drains from the maintenance shop, and the other is a discharge pipe. Based on Figure 6 of the CHA RIR, two floor drains discharge to the sump; there is no sump discharge pipe depicted. Neither Labella nor CHA were able to determine the discharge location of the sump in their floor drain investigations. Our investigation indicates that the sump does not have a discharge pipe. One of the pipes is equipped with a corroded metal fitting that may have at one time been connected to a pump.

CHA's Figure 6 is provided in Appendix I.

5.3 Recovery Well

No LNAPL accumulation has occurred to date. The Department will be consulted to determine the frequency of well inspections to check for LNAPL going forward.

Groundwater results from the recovery well indicate that groundwater is minimally impacted north of the boiler house. The only other compound detected in the groundwater sample was o-xylene. Table 5 indicates a downward trend of TCE and cis-1,2-Dichloroethene concentrations, indicating a reduction of these compounds by natural attenuation.

Table 5: MW-3 Groundwater Detections from 2005 to 2017

Volatiles by 8260	Location ID				TOGS 1.1.1 Groundwater Standard
	Labella MW-3	Labella MW-3	CHA MW-3	RE&LS RW-1	
Sample Date	3/23/2005	2/8/2006	8/3/2010	2/7/2017	
1,1-Dichloroethene	<20.0	<2.00	**0.53J**	<2.00	5
1,2-Dichlorobenzene	<20.0	<2.00	<1	<2.00	3
1,4-Dichlorobenzene	<20.0	<2.00	<1	<2.00	3
Acetone	<100	<10.0	**6.8J**	<10.0	50
cis-1,2-Dichloroethene	**78.9**	**68.3**	**94**	**1.46 J**	5
Ethylbenzene	<20.0	<2.00	<1	<2.00	5
Isopropylbenzene	--	**2.14**	--	<2.00	5
m,p-Xylene	<20.0	<2.00	<1	<2.00	5
Methylcyclohexane	--	--	<1	<2.00	NS
o-Xylene	<20.0	<2.00	<1	**1.32 J**	5
Trichloroethene	**45.8**	**70.8**	**23**	**15.0**	5
Vinyl chloride	<20.0	**8.46**	**13**	<2.00	2

Notes:
Results are shown in ug/L
-- Not analyzed for these parameters
Bold indicates a detection of the associated parameter.
Grey shading indicates an exceedance of the associated standard or guidance value.
J= Result estimated between the quantitation limit and half the quantitation limit

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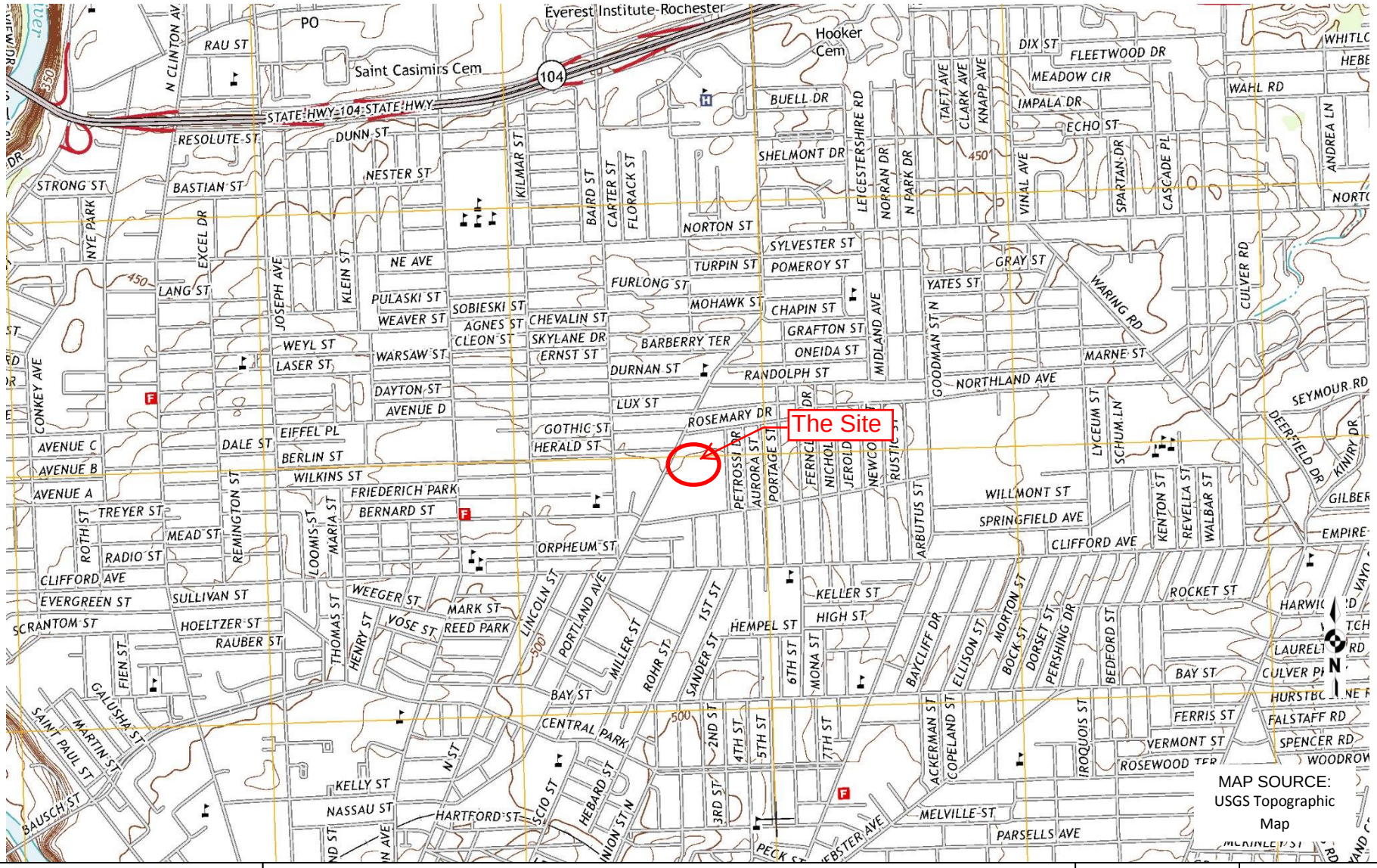


RAVI ENGINEERING & LAND SURVEYING, P.C. 2110 SOUTH CLINTON AVENUE, SUITE 1 ROCHESTER, NEW YORK 14618 TL: (585) 223-3660 FX (585) 223-4250	FORMER JML OPTICAL SITE 678-690 PORTLAND AVENUE CITY OF ROCHESTER, NEW YORK	PROJECT NO. 45-14-003-0B	DATE: January 2017
	FIGURE 1: SITE LOCATION MAP	SCALE: N.T.S.	DRAWING NO: Figure 1

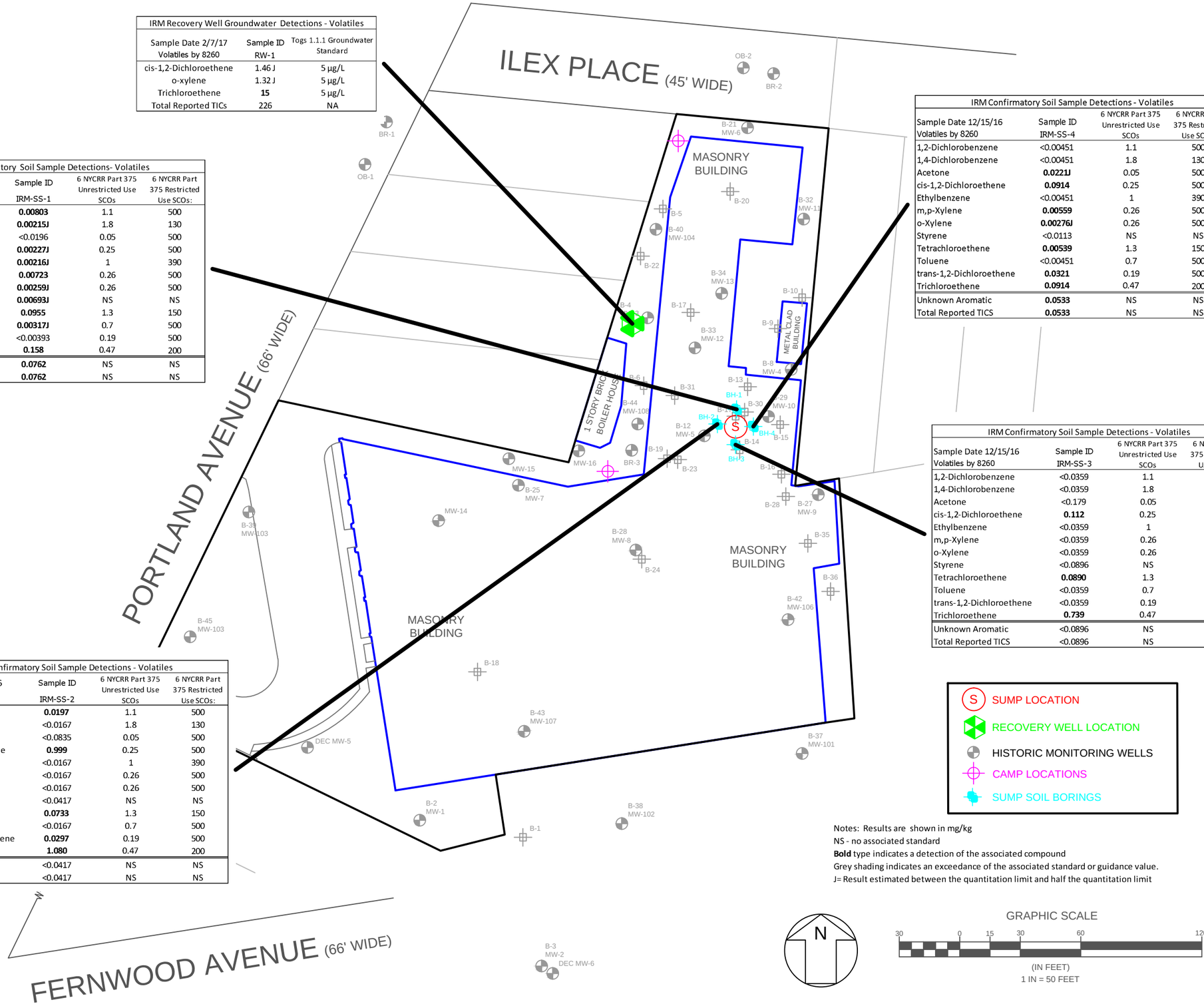
IRM Recovery Well Groundwater Detections - Volatiles		
Sample Date 2/7/17 Volatiles by 8260	Sample ID RW-1	Togs 1.1.1 Groundwater Standard
cis-1,2-Dichloroethene	1.46 J	5 µg/L
o-xylene	1.32 J	5 µg/L
Trichloroethene	**15**	5 µg/L
Total Reported TICs	226	NA

IRM Confirmatory Soil Sample Detections- Volatiles			
Sample Date 12/15/16 Volatiles by 8260	Sample ID IRM-SS-1	6 NYCRR Part 375 Unrestricted Use SCOs	6 NYCRR Part 375 Restricted Use SCOs:
1,2-Dichlorobenzene	**0.00803**	1.1	500
1,4-Dichlorobenzene	**0.00215J**	1.8	130
Acetone	<0.0196	0.05	500
cis-1,2-Dichloroethene	**0.00227J**	0.25	500
Ethylbenzene	**0.00216J**	1	390
m,p-Xylene	**0.00723**	0.26	500
o-Xylene	**0.00259J**	0.26	500
Styrene	**0.00693J**	NS	NS
Tetrachloroethene	**0.0955**	1.3	150
Toluene	**0.00317J**	0.7	500
trans-1,2-Dichloroethene	<0.00393	0.19	500
Trichloroethene	**0.158**	0.47	200
Unknown Aromatic	**0.0762**	NS	NS
Total Reported TICS	**0.0762**	NS	NS

IRM Confirmatory Soil Sample Detections - Volatiles			
Sample Date 12/15/16 Volatiles by 8260	Sample ID IRM-SS-4	6 NYCRR Part 375 Unrestricted Use SCOs	6 NYCRR Part 375 Restricted Use SCOs:
1,2-Dichlorobenzene	<0.00451	1.1	500
1,4-Dichlorobenzene	<0.00451	1.8	130
Acetone	**0.0221J**	0.05	500
cis-1,2-Dichloroethene	**0.0914**	0.25	500
Ethylbenzene	<0.00451	1	390
m,p-Xylene	**0.00559**	0.26	500
o-Xylene	**0.00276J**	0.26	500
Styrene	<0.0113	NS	NS
Tetrachloroethene	**0.00539**	1.3	150
Toluene	<0.00451	0.7	500
trans-1,2-Dichloroethene	**0.0321**	0.19	500
Trichloroethene	**0.0914**	0.47	200
Unknown Aromatic	**0.0533**	NS	NS
Total Reported TICS	**0.0533**	NS	NS

IRM Confirmatory Soil Sample Detections - Volatiles			
Sample Date 12/15/16 Volatiles by 8260	Sample ID IRM-SS-3	6 NYCRR Part 375 Unrestricted Use SCOs	6 NYCRR Part 375 Restricted Use SCOs:
1,2-Dichlorobenzene	<0.0359	1.1	500
1,4-Dichlorobenzene	<0.0359	1.8	130
Acetone	<0.179	0.05	500
cis-1,2-Dichloroethene	**0.112**	0.25	500
Ethylbenzene	<0.0359	1	390
m,p-Xylene	<0.0359	0.26	500
o-Xylene	<0.0359	0.26	500
Styrene	<0.0896	NS	NS
Tetrachloroethene	**0.0890**	1.3	150
Toluene	<0.0359	0.7	500
trans-1,2-Dichloroethene	<0.0359	0.19	500
Trichloroethene	**0.739**	0.47	200
Unknown Aromatic	<0.0896	NS	NS
Total Reported TICS	<0.0896	NS	NS

IRM Confirmatory Soil Sample Detections - Volatiles			
Sample Date 12/15/16 Volatiles by 8260	Sample ID IRM-SS-2	6 NYCRR Part 375 Unrestricted Use SCOs	6 NYCRR Part 375 Restricted Use SCOs:
1,2-Dichlorobenzene	**0.0197**	1.1	500
1,4-Dichlorobenzene	<0.0167	1.8	130
Acetone	<0.0835	0.05	500
cis-1,2-Dichloroethene	**0.999**	0.25	500
Ethylbenzene	<0.0167	1	390
m,p-Xylene	<0.0167	0.26	500
o-Xylene	<0.0167	0.26	500
Styrene	<0.0417	NS	NS
Tetrachloroethene	**0.0733**	1.3	150
Toluene	<0.0167	0.7	500
trans-1,2-Dichloroethene	**0.0297**	0.19	500
Trichloroethene	**1.080**	0.47	200
Unknown Aromatic	<0.0417	NS	NS
Total Reported TICS	<0.0417	NS	NS



S SUMP LOCATION

RECOVERY WELL LOCATION

HISTORIC MONITORING WELLS

CAMP LOCATIONS

SUMP SOIL BORINGS

Notes: Results are shown in mg/kg
NS - no associated standard
Bold type indicates a detection of the associated compound
Grey shading indicates an exceedance of the associated standard or guidance value.
J= Result estimated between the quantitation limit and half the quantitation limit

N

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 IN = 50 FEET

RAVI ENGINEERING & LAND SURVEYING, P.C.
2110 SOUTH CLINTON AVENUE, SUITE 1
ROCHESTER, NEW YORK 14618
TL: (585) 223-3660 FX: (585) 697-1764

PROJECT MANAGER: P.M.

MAPPING BY: L.Z.

MAP SCALE: 1" = 50'

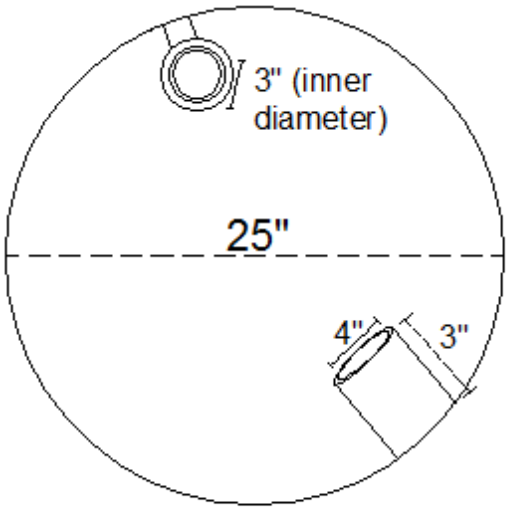
PROJECT NAME:
FORMER JML OPTICAL, INC.
690 PORTLAND AVENUE, ROCHESTER, NEW YORK
BROWNFIELD CLEANUP PROGRAM
NYSDEC SITE #C828151

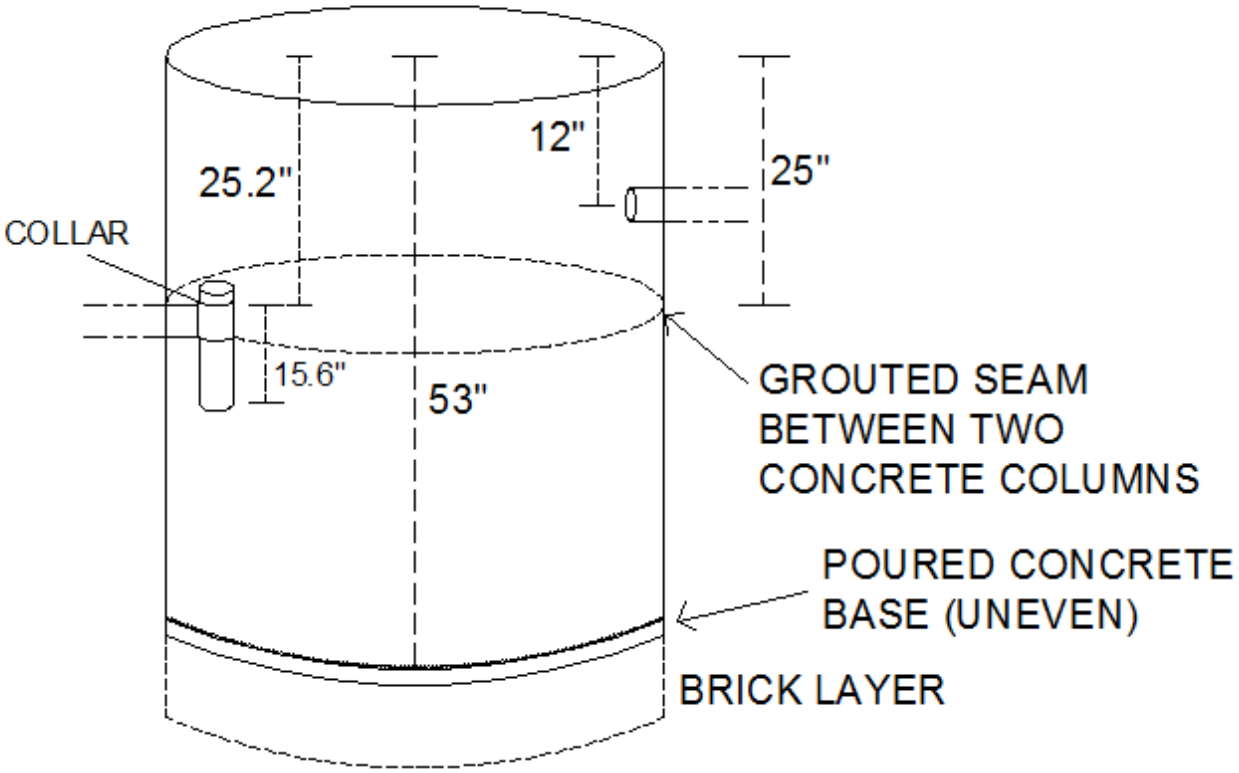
TITLE:
IRM FEATURE LOCATIONS AND VOC DETECTIONS MAP

PROJECT NO:
45-14-003-0B

DATE:
MARCH 2017

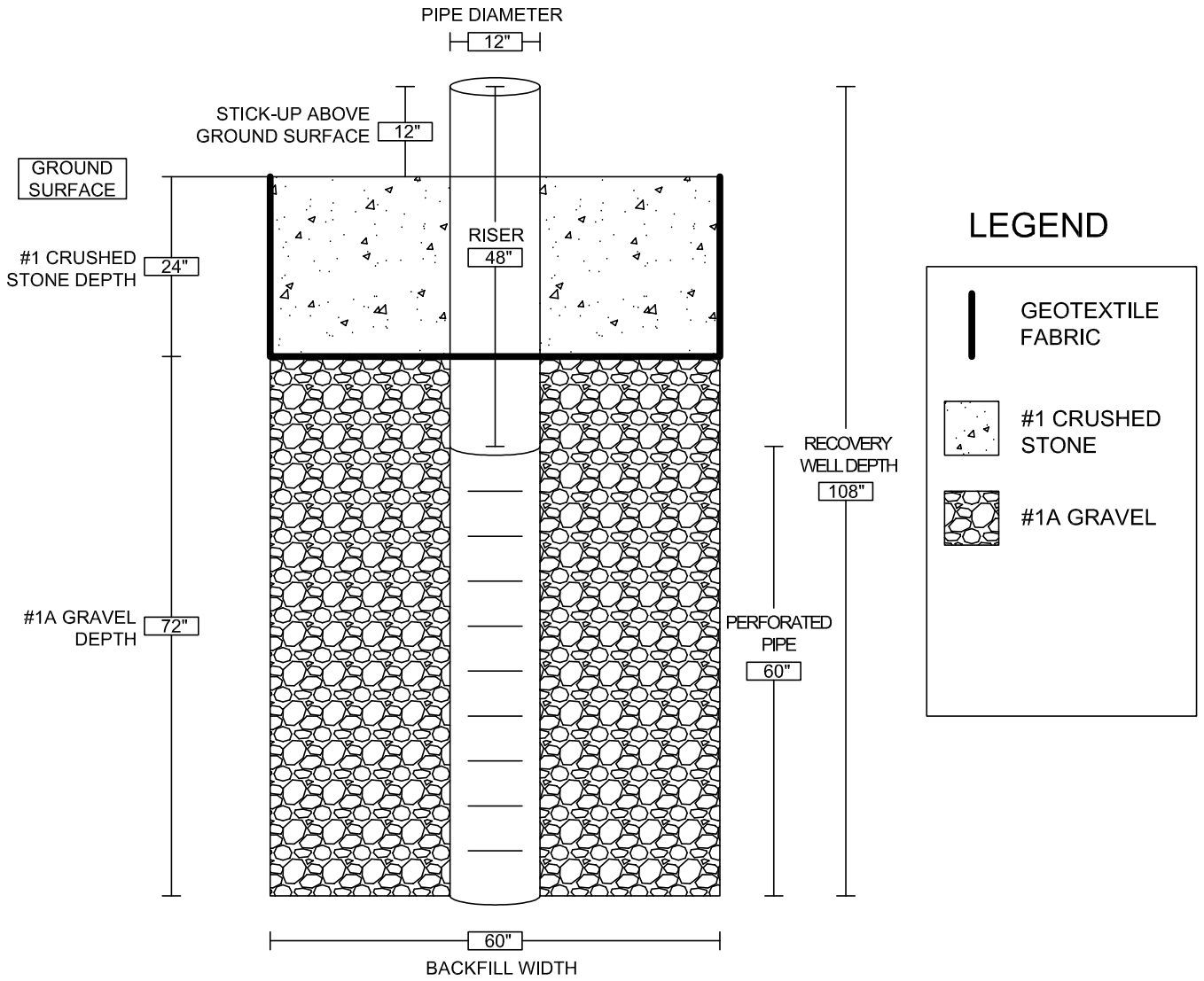
DRAWING NO:
FIGURE 2





RAVI ENGINEERING & LAND SURVEYING, P.C.
2110 SOUTH CLINTON AVENUE, SUITE 1
ROCHESTER, NEW YORK 14618
TL: (585) 223-3660 FX (585) 223-4250

	SUMP CONSTRUCTION DETAIL 690 PORTLAND AVENUE ROCHESTER, NY 14621	PROJECT NO. 45-14-003	DATE: 12-19-2016
	PLAN & SIDE VIEW	SCALE: N.T.S.	DRAWING NO: Figure 3



RAVI ENGINEERING & LAND SURVEYING, P.C.
2110 S. Clinton Ave., Suite 1
Rochester, New York 14618
585-223-3660 p
585-697-1764 f

PROJECT MANAGER: P.M.

DRAWN BY: L.Z.

MAP SCALE: N.T.S.

PROJECT NAME:
FORMER JML OPTICAL, INC.
690 PORTLAND AVENUE, ROCHESTER, NEW YORK
BROWNFIELD CLEANUP PROGRAM
NYSDEC SITE #C828151

TITLE:
WELL CONSTRUCTION DETAILS

PROJECT NO:
45-14-003-0B

DATE:
MARCH 2017

DRAWING NO:
FIGURE 4

APPENDIX A

Governing Documents

- **IRMWP**
- **NYSDEC Conditional Letter**

Interim Remedial Measure Work Plan

Former JML Optical Facility
678-690 Portland Avenue
City of Rochester, New York

BCP ID No. C828151

Prepared for:
690 Portland Avenue Company

Prepared by:

RAVI ENGINEERING & LAND SURVEYING, P.C.

2110 South Clinton Road
Rochester, New York 14618

I Nancy S. Van Dussen, P.E. am currently a NYS registered professional engineer and that this Report (Interim Remedial Measure Work Plan) was prepared in accordance with applicable statutes and regulations, and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

Nancy S. Vandussen, P.E.
Signature

9-2-16
Date

Project Number: 45-13-002-0B

September 2016

1.0 INTRODUCTION

The 690 Portland Avenue Company has entered into a Brownfield Cleanup Agreement (BCA) through the New York State Department of Environmental Conservation's (NYSDEC) Brownfield Cleanup Program (BCP), it is listed as BCP ID No. C828151. The property is located at 690 Portland Avenue in Rochester, New York; it is identified as the former *JML Optical Facility* (the "Site," Figure 1).

Ravi Engineering & Land Surveying, P.C. (RE&LS) is submitting this Work Plan (WP) for the proposed Interim Remedial Measures to be conducted to address conditions identified during our Remedial Investigation (RI). The WP presents the activities and work to be completed by RE&LS and our selected Contractor in support of completing this IRM. The following sections of the WP include a background summary of the Site, a brief scope of work for the IRM, and descriptions of the roles and responsibilities of the parties involved in the work.

The Site is the former JML Optical Site located at 690 Portland Avenue in the City of Rochester, New York. It is an approximately 1.565-acre parcel that is the former JML buildings, paved surfaces, and a mowed grass area along the Portland Avenue entrance to the Site and a strip of grass along the eastern property boundary. The building is currently unoccupied.

The Site and neighboring properties are located in an Industrial (M-1) zoning district. It is serviced by public sewer and water, as are the surrounding properties.

2.0 INTERIM REMEDIAL MEASURE

An Interim Remedial Measure (IRM) is a cleanup activity that may be performed when a source of contamination or exposure pathway (the way in which a person may contact contamination) can be effectively addressed without extensive investigation and evaluation.

Per NYSDEC Division of Environmental Remediation (DER) 10, an IRM can be performed to contain and/or stabilize sources of contamination to reduce/eliminate exposure pathways. IRMs may include the removal of source areas and installation of non-aqueous phase liquid (NAPL) recovery systems. An IRM construction completion report (CCR) will be prepared upon completion of the proposed IRM discussed below.

The IRM will be conducted in two phases:

1. Trichloroethylene (TCE)-impacted soils will be removed from the sub-slab sump-like structure beneath a metal manhole cover in the north-central portion of the building; the soils will be disposed of as a hazardous waste.
2. Light non-aqueous phase liquid (LNAPL) will be removed from the top of the groundwater table from the area that a 5,000-gallon underground storage tank (UST) was removed in 1999; the LNAPL will be containerized and disposed of in compliance with applicable regulations.

The areas to be addressed by the IRM are indicated on Figure 2.

3.0 SCOPE OF WORK

The IRM will include an access control component to deter unauthorized Site access and reduce potential public exposure to accessible contaminant source areas, and other on-site contamination while work is being performed. The work areas are located inside the Site boundary.

Our selected contractor is TREC Environmental Inc. (TREC). They will supply all labor and furnish all materials, supplies, tools, and equipment required to complete the work.

TREC will address the IRMs in the following manner:

Sump

The structure described as a "sump" is beneath a metal manhole cover in the building slab; it appears to be comprised of a circular clay tile box with a bottom. It is partially filled with sediment that is proposed for removal as part of this IRM.

RE&LS characterized the sump sediment with a "grab" sample on April 27, 2016. Paradigm Environmental Services, Inc. (Paradigm) identified the following volatile organic compounds (VOCs) at the concentrations reported below (Attachment 1):

Toluene 404,000 µg/Kg (micrograms per kilogram, or parts per billion, ppb)

TCE 18,400,000 µg/Kg

This work will be conducted in conformance with the RE&LS and TREC Health and Safety Plans (HASP) included in Attachment 1.

1. After removing the metal manhole cover over the sump, TREC will use a negative air blower to ventilate the sump; an 18-inch diameter hose will draw vapors from the sump for discharge outside of the building; the discharge point will be above the roofline to prevent discharge into the ambient breathing zone around the building. As this will be a solitary discharge, no treatment of the vapors is proposed.

2. Prior to disturbing sump soils, TREC personnel will don Level C personal protective equipment (PPE); half-faced air-purifying respirators will be employed.

3. TREC will manually shovel the sump soils into a 55-gallon drum(s); the drummed soils will be sampled for waste disposal characterization.

4. After TREC has manually removed the soils from the sump, they will pressure wash the crock to remove residuals; the rinsate waters will be vacuumed out and containerized for disposal.

5. Tools that come into contact with impacted soils will be washed with Alconox and rinsed with potable water; rinsate will be drummed.

Confirmatory Samples

After the sump has been cleaned, RE&LS will collect confirmatory samples at the north, south, east, and west sides of the sump. TREC will drill sub-slab borings by Geoprobe to a depth several feet deeper than the bottom of the sump. Soils will be screened for organic vapors. RE&LS will collect one confirmatory soil sample from each boring (4 total) for laboratory analysis for volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260 in conformance with New York Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) protocols with a Category B deliverable. These results will be submitted for third party data usability validation (DUSR).

LNAPL

On May 12, 2016, RE&LS attempted to sample Labella Associate's MW-3 that was installed north of the boiler house in the vicinity of the fuel oil tank that was removed in 1999. We measured approximately 12 inches of LNAPL on top of the groundwater. Paradigm characterized the LNAPL as "pure product" identified as "medium weight PHC (petroleum hydrocarbon) as Fuel Oil #4" (data attached).

1. TREC will install an extraction well with an excavator to recover the LNAPL; the pit will be dug approximately 5 feet into the saturated zone to recover floating product.

2. A pit will be dug with a backhoe to the depth at which the LNAPL is encountered.

3. The LNAPL recovery well will be constructed with a 12-inch diameter high density polyethylene (HDPE) pipe that will be fashioned into a well screen with saw cuts to allow the LNAPL to permeate the pipe; it will be placed vertically into the LNAPL and groundwater in the pit and packed with "pea gravel" to allow the LNAPL to accumulate.

4. The recovery well be backfilled with washed peastone and completed with a one-foot PVC standpipe with a plastic cover.

5. After the HDPE pipe is installed, TREC will use a drum vacuum or vacuum truck to recover the LNAPL.

6. When enough LNAPL is recovered, it will be disposed of at Industrial Oil Tank Service Corporation in Oriskany, New York (or the equivalent).

7. Soils removed during the recovery well excavation will be staged on polyethylene and sampled for laboratory analysis as required for landfill approval.

8. Upon completion, the excavator bucket will be pressure-washed and any tools that come into contact with impacted soils will be washed with Alconox; rinsate waters will be drummed.

9. TREC will return to the Site periodically to recover LNAPL until it appears that the oil is no longer accumulating in the sump. RE&LS will consult with NYSDEC to determine when the LNAPL recovery potion of the IRM is completed.

HEALTH & SAFETY

The RE&LS and TREC Health and Safety Plans (HASPs) are included in Attachment 2. TREC will perform the work in a manner that is compliant with its corporate HASP and all governing Occupational Safety and Health Administration (OSHA) regulations. If required, TREC will develop a site-specific HASP to direct work with and around the contaminants of concern (COCs). The COCs for the Site are volatile organic compounds, primarily TCE, and heavier hydrocarbons in the form of medium weight petroleum hydrocarbons.

COMMUNITY AIR MONITORING PROGRAM (CAMP)

This CAMP will be implemented during the excavation and removal of soils during installation of the LNAPL recovery well. The purpose of the CAMP is to provide a measure of protection for the downwind community, more specifically off-site receptors including residents and workers, from potential airborne contaminant releases as a result of remedial work activities performed at the Site.

- Particulate monitoring will be conducted during ground intrusive activities at the Site in accordance with the Fugitive Dust and Particulate Monitoring from DER-10 Technical Guidance for Site Investigation and Remediation (Attachment 3). Particulate air monitoring will be conducted with a TSI DustTrak (or a similar device). It will continually record emissions (calculating 15-minute running average concentrations) generated during field activities. The dust monitoring devices will be checked and the results will be recorded periodically throughout the day of intrusive activities to assess emissions and the need for corrective action. If the downwind particulate level is 100 micrograms per cubic meter (ug/m^3) greater than background (upwind perimeter) for the 15-minute period, or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed.

- Volatile organic compound (VOC) air monitoring will be conducted in conjunction with the dust monitoring program. VOC air monitoring will be conducted using a RAE Systems MiniRAE 2000 photoionization detector (PID). VOCs will be monitored and recorded at the downwind perimeter of the immediate work area. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued until VOCs return to background levels.

The PID will be calibrated prior to daily field activities according to manufacturer's instructions and standard industrial hygiene practices.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Region 8
6274 East Avon-Lima Road, Avon, NY 14414-9516
P: (585) 226-5353 I F: (585) 226-8139
www.dec.ny.gov

November 14, 2016

Joseph M. Lobozzo II
690 Portland Avenue Company
135 Orchard Park Boulevard
Rochester, New York 14609-3352

Re: Interim Remedial Measure Work Plan
Former JML Optical Site
Site No. C828151
Rochester (C), Monroe (C)

Dear Mr. Lobozzo:

The New York State Department of Environmental Conservation (the Department) and the New York State Department of Health (NYSDOH) have reviewed the revised Interim Remedial Measure Work Plan (IRMWP) dated September 2016 for the Former JML Optical Inc. Brownfield Cleanup Program site (BCP Site) located at 678-690 Portland Avenue in the City of Rochester, Monroe County.

The revised IRMWP still does not provide the necessary details as requested in the Department's August 18, 2016 disapproval letter regarding the proposed sump/manhole and LNAPL recovery well activities. In order to facilitate the Site moving forward through the remedial investigation phase of the BCP and based on the information presented in the revised IRMWP, the Department is conditionally approving the IRMWP with the following modifications and clarifications.

1. The Department understands that Dig Safe notification and stake out or an equivalent will be conducted at the Site prior to any ground intrusive activities.

2. The Department understands that IRM derived waste material generated with the managed in accordance with DER-10 Section 3.3(e). All IRM derived waste generated will be characterized, containerized, and disposed off-site at permitted facilities in accordance with all applicable local, state, and federal regulations.

3. The Department understands that all individuals will have OSHA 40 Hr. HAZWOPER training and will have current 8 Hr. refresher certification. The training documentation/certificates will be made available upon request.

4. Sump/Manhole Cleanout:
    - The IRMWP proposes the use of an 18-inch diameter hose drawing out and discharging the vapors outside the building. The vapors from the sump/manhole cleanout will be treated with granulated activated charcoal prior to discharge to the environmental to mitigate any potential exposure impacts to the surrounding and adjacent residences and properties.

- The revised IRMWP indicates that soil borings will be completed on the north, south, east, and west sides of the sump/manhole. There is no indication as the distance from the sump/manhole the soil borings will be completed. Based on the condition and the number of openings in the sump/manhole, a field decision with consultation with the Department will be made as to the location, distance from the sump/manhole, and the number of boring to be completed.

- As indicated in the revised IRMWP the soil borings will be completed several feet (assuming approx. 3 feet) below the bottom of the sump/manhole. If there is still evidence of impacts (e.g., staining, odor, elevated PID readings) then the soils will be completed until there is no evidence of impacts or refusal whichever comes first. All soil boring intervals will be screened with a PID. A headspace will be completed on each boring interval. Soil samples submitted for laboratory analysis will be collected from each boring and from the interval with the highest PID reading. If no elevated PID readings then the interval above the water table will be selected for laboratory analysis. Soil boring logs will be generated documenting the boring.

- Soil samples submitted for laboratory analysis will be analyzed for TCL VOCs plus TICs.

- Documentation of the condition of the sump/manhole will be conducted once it is cleaned out and pressure washed. Documentation will include but not limited to photographs, material of construction, depth and diameter of the sump/manhole, the number of openings and orientation, location of the openings with respect to ground surface, and any cracks/gaps/breaks in the sump/manhole.

- The drums containing the material from the sump/manhole will be staged in a secure location. The drums will be dated and labeled in accordance with the regulations. It should be noted that the material removed would be considered a listed hazardous waste and must be disposed within 90 days of generation. All material generated as part of the sump/manhole activities including the cuttings from the soil borings will be containerized, characterized, and disposed off-site at a permitted landfill facility in accordance with all applicable local, State, and Federal regulations.

5. LNAPL Recovery Well Installation:
    - The revised IRMWP does not provide any details on the location of the recovery well with respect to MW-3. The Department understands that the recovery well will be located on the Site within the area outlined on Figure 2 of the IRMWP no more than 5 feet from MW-3. The revised IRMWP does not provide any specific details on the size of the pit to be excavated for the LNAPL recovery well. The Department understands that the recovery well pit will be of sufficient size for the effective collection of the LNAPL within the recovery well.

    - The IRMWP indicates that the recovery well pit will be dug to the depth at which LNAPL is encountered. The Department understands that the depth of the recovery pit will take into account any seasonal groundwater fluctuations at the Site.

- All soil/fill material excavated during the recovery pit excavation will be staged on a minimum of 12 mil poly sheeting or directly placed in a roll-off. The soil/fill material staged on the site will be covered with a minimum of 12 mil poly sheeting and anchored at all times to prevent wind and precipitation erosion. If the soil/fill material is saturated then the soil/fill material staging area must be designed to collect the free liquids generated from the excavated soil/fill material. The staged soil/fill material will be characterized and disposed off-site at a permitted landfill facility in accordance with all applicable local, State, and Federal regulations. The staged soil/fill material must be disposed off-site within 30 days of waste characterization.

- All trucks transporting the staged soil/fill material will be decontaminated prior to leaving the Site such that no soil/fill material is deposited on the local streets and roadways. Decontamination can include truck washing, brushing off the truck, etc. If the soil/fill material is saturated (i.e., producing free liquid) then the trucks must be lined.

- The Department understands that the recovery well pit will be backfilled with washed pea stone to a depth of 1 foot above the water table. The recovery well pit will then be restored to ground surface and will consist of placement of geotextile over the pea stone surface with overlap placed up the sides of the excavation walls with the placement of stone fill material to match the ground surface. The geotextile material will prevent the infiltration of fines into the collection area but will allow for the infiltration of precipitation. The stone fill material must meet DER-10 Section 5.4(e)5. The sieve analysis for the pea stone and the stone fill material must be submitted to the Department for review and approval prior to importation of the material to the Site. The Request to Reuse form must be submitted to the Department with all of the supporting documentation for the backfill material to be imported to the Site. See attached.

- The thickness of the LNAPL in the recovery well will be checked 1x per week for the first three (3) weeks after installation has been completed to determine if LNAPL is accumulating within the recovery well. If significant layer of LNAPL is detected within the recovery well then the LNAPL will be collected, drummed, and stored on-site. The frequency of inspections and reclamation of the LNAPL will be contingent upon the results/volume of the initial inspections. Frequency of reclamation may need to increased or decreased. The Department will be notified of any changes in the frequency of inspections and reclamation. All field data associated with the inspection and reclamation activities will be recorded in the field log book.

- All liquids generated during the installation of the recovery well pit will be containerized, characterized, and disposed off-site in accordance with all local, State, and Federal regulations as well as in accordance with DER-10.

- All material generated as part of the decontamination activities will be containerized, characterized, and disposed off-site in accordance with all applicable local, State, and Federal regulations as well as in accordance with DER-10.

- Community Air Monitoring (CAMP) will be conducted for all intrusive activities as well as during loading out of any stage soil/fill material.

- The Department understands that the recovery well will be finished in a manner consistent with acceptable engineering practice and will be secure with a lock. The Department also understands that the recovery well will be of suitable diameter to facilitate the recovery of the LNAPL via vacuum drum or vacuum truck.

- It must be noted that trichloroethene has been detected in the groundwater of MW-3; therefore, the LNAPL collected could contain TCE and would be considered a listed hazardous wasted unless waste characterization analytical results indicates otherwise.

- The drums of collected LNAPL will be stored in a secure environment and will be disposed off-site at a permitted facility in accordance with all applicable local, State, and Federal regulations. The drums will be dated and labeled in accordance with the all applicable local, State, and Federal regulations. The storage of the drums on the Site cannot exceed 90 days.

6. All analytical data generated as part of the IRMWP will be submitted to the Department and the data usability summary reports (DUSRs) will be developed in accordance with DER-10 Section 2.2(a), (b), and (c) as well as DER-10 Appendix 2B.

7. An USEPA RCRA Identification number will need to be assigned to the cleanup site if one has not been already assigned.

8. The Health and Safety Plan (HASP) submitted to the Department is dated March 2015 and details fieldwork activities occurring in April 2015. A HASP should be updated if new site information, data is available, and new potential hazards. The HASP also references appendices which were not provided in the submittal to the Department. All future submittals must be complete and include all the appropriate appendices. The HASP indicates that the proposed level of PPE is Level D. This would be appropriate level for the installation of the recovery well pit but is not an appropriate level of PPE for the sump/manhole activities.

9. If a confined space entry is conducted all appropriate precautions be taken, appropriate worker safety monitoring must be conducted, and rescue equipment must be inplace for immediate use. Any individual(s) conducting a confined space entry must have all necessary certifications and training and the documentation must be made available upon request.

10. A Construction Completion Report detailing the activities associated with the IRMWP will be submitted to the Department within 90 days after the completion of the fieldwork activities. The CCR will be developed in accordance with DER-10 Section 5.8. This will included, but not limited to, all manifests and disposal records, summary data tables, photograph log of fieldwork activities, CAMP monitoring data, boring logs, etc.

11. As per the Brownfield Cleanup Agreement and 6 NYCRR Part 375-1.6(4) the Department must be notified at least 7 days in advance of fieldwork activities so that Department oversight of the fieldwork activities can be conducted.

12. The Department understands that within 3 weeks after the date of this approval letter the fieldwork activities will begin.

Within fifteen (15) days of the date of this letter and prior to any fieldwork activities associated with the Interim Remedial Measures Work Plan, the Applicant must elect in writing (electronic notification is acceptable) one of the following options:

- Option A: Accept the modified work plan;
- Option B: Invoke dispute resolution as set forth in 6 NYCRR Part 35-1.5(b)(2); or
- Option C: Terminate the Brownfield Cleanup Agreement in accordance with 6 NYCRR Part 375-3.5.

If the Applicant chooses to accept Option A then this letter becomes part of the approved Interim Remedial Measure Work Plan. Also, if Option A is chosen then a copy of the approved Interim Remedial Measures (IRM) Work Plan along with this letter attached must be placed in the document repository within 1 week of accepting Option A and prior to all fieldwork activities associated with the Interim Remedial Measure Work Plan. Please provide notification to the Department that the Interim Remedial Measure Work Plan and a copy of this letter have been placed in the document repository (electronic notification is acceptable).

The Department seeks to resolve the outstanding differences in a mutually agreeable manner, which addresses the requirements of the Brownfield Cleanup Agreement and associated work plans. If you have any questions, concerns, or need further assistance with the Site, please feel free to contact me at 585-226-5354 or via e-mail at charlotte.theobald@dec.ny.gov.

Sincerely,

Charlotte B. Theobald
Environmental Engineer 1

ec:
Pete Morton (Ravi)
Linda Shaw (Knauf Shaw)
Rev. Wright (Community Mutual, Inc.)
Justin Deming (NYS. Dept. of Health – Albany)
Eamonn O'Neil (NYS Dept. of Health - Albany)
Wade Silkworth (Monroe County Health Department)
Dudley Loew (NYSDEC)
Bernette Schilling (NYSDEC)
Todd Caffoe (NYSDEC)

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Request to Import/Reuse Fill or Soil

This form is based on the information required by DER-10, Section 5.4(e). Use of this form is not a substitute for reading the applicable Technical Guidance document.

SECTION 1 – SITE BACKGROUND

The allowable site use is: Choose an item

Have Ecological Resources been identified? Choose an item

Is this soil originating from the site? Choose an item

How many cubic yards of soil will be imported/reused? Choose an item

If greater than 1000 cubic yards will be imported, enter volume to be imported:

SECTION 2 – MATERIAL OTHER THAN SOIL

Is the material to be imported gravel, rock or stone? Choose an item

Does it contain less than 10%, by weight, material that would pass a size 80 sieve? Choose an item

Is this virgin material from a permitted mine or quarry? Choose an item

Is this material recycled concrete or brick from a DEC registered processing facility? Choose an item

SECTION 3 - SAMPLING

Provide a brief description of the number and type of samples collected in the space below:

Example Text: 5 discrete samples were collected and analyzed for VOCs. 2 composite samples were collected and analyzed for SVOCs, Inorganics & PCBs/Pesticides.

If the material meets requirements of DER-10 section 5.5 (other material), no chemical testing needed.

SECTION 3 CONT'D - SAMPLING

Provide a brief written summary of the sampling results or attach evaluation tables (compare to DER-10, Appendix 5):

Example Text: Arsenic was detected up to 17 ppm in 1 (of 5) samples; the allowable level is 16 ppm.

If Ecological Resources have been identified use the "If Ecological Resources are Present" column in Appendix 5.

SECTION 4 – SOURCE OF FILL

Name of person providing fill and relationship to the source:

Location where fill was obtained:

Identification of any state or local approvals as a fill source:

If no approvals are available, provide a brief history of the use of the property that is the fill source:

Provide a list of supporting documentation included with this request:

The information provided on this form is accurate and complete.

_____ _____

Signature Date

_____

Print Name

_____

Firm

Revised August 2014

RAVI ENGINEERING & LAND SURVEYING, P.C.

APPENDIX B

Sump Photographs

Sump prior to sediment removal

Sump after sediment removal

Close up of pipe at southeast perimeter of sump

Birds eye view of feature at northwest perimeter of sump

Side view of feature at northwest perimeter

Closeup of grouted seam between two stacked concrete columns

Excavation of recovery well pit

Stained soils in recover well pit

Staging of excavated soils

Covered excavation soils

1A gravel used as recovery well backfill

The finished recovery well

Measuring LNAPL accumulation

RAVI ENGINEERING & LAND SURVEYING, P.C.

APPENDIX C

Boring Logs

RAVI ENGINEERING & LAND SURVEYING, P.C.

PROJECT	BORING BH-1 (Sample IRM-SS1-20161215)
690 Portland Avenue IRM	SHEET 1 OF 4
	JOB #: 45-14-003-0B
	CHKD. BY: N/A

CONTRACTOR: TREC Environmental, Inc. BORING LOCATION: North of Sump ~5 ft.
DRILLER: GROUND SURFACE ELEVATION: N/A DATUM: N/A
RELS Personnel:: Lynn Z/Alexa B DATE: 12/15/16

TYPE OF DRILL RIG: Geoprobe
CASING SIZE AND TY NA
OVERBURDEN SAMPLING METH Macrocore
ROCK DRILLING METH NA

WATER LEVEL DATA

DATE	TIME	WATER	CASING	REMARKS

DEPTH	SAMPLE DATA BLOW /6"	NO.	DEPTH (FT.)	N-VALUE /RQD(%)	RECOVERY (%)	SAMPLE DESCRIPTION	PID
1						0-6" concrete	
						6"-2' reddish brown sandy silt; dry	4 ft. headspace
2						2'-4' reddish brown sandy gravel; moist	12.0
3							
4							
5						4'-4'2" Earthy brown sandy silt with gravel; moist 4'2"-4'10" Reddish brown silty clay	
6						4'10"-8' brown/gray brown sandy clay	5 ft. headspace 8.4
7							
8							
9						8-9'6" fine to medium brown sand; wet	
10						9'6"-10'6" brown sandy clay; dry	12 ft. headspace 32.0
11						10'6"-10'9" yellow brown hard silt; dry 10'9"-10'11" rock layer	
12						10'11"-12' yellow brown sandy silt with gravel 12'-12.7 very wet sandy clay	
13							
14						***Sample taken at 12 feet	
15						Refusal at 12.7 feet due to bedrock	
16							
17							
18							
19							
20							

LEGEND

S- SPLIT SPOON SOIL SAMPLE
U- UNDISTURBED SOIL SAMPLE
C- ROCK CORE SAMPLE

GENERAL NOTES:

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

BORING #

RAVI ENGINEERING & LAND SURVEYING, P.C.

PROJECT	BORING	BH-2 (Sample IRM-SS02-20161215)
690 Portland Avenue IRM	SHEET 1 OF	4
	JOB #:	45-14-003-0B
	CHKD. BY: N/A	

CONTRACTOR: TREC Environmental, Inc.
DRILLER:
RELS Personnel:: Lynn Z/Alexa B.

BORING LOCATION: West of Sump ~3 ft.
GROUND SURFACE ELEVATION: N/A DATUM: N/A
DATE: 12/15/16

TYPE OF DRILL RIG: Geoprobe
CASING SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOI Macrocore
ROCK DRILLING METHOI NA

WATER LEVEL DATA				
DATE	TIME	WATER	CASING	REMARKS

DEPTH	SAMPLE DATA BLOW /6"	NO.	DEPTH (FT.)	N-VALUE /RQD(%)	RECOVERY (%)	SAMPLE DESCRIPTION	PID
						0-6" concrete	
1						6"-3'6" reddish brown silt	
							2 ft. headspace
2							2.9
3						3'6"-4' reddish brown silt with gravel	
4							
						4'-4'2" reddish brown silt with gravel	
5						4'2"-5'2" moist reddish brown clay	
						5'2"-6'6" moist brown clay	4 ft. headspace
6							5
						6'6"-8' dry yellow brown silt	
7							
8							
9							
						****Sampling ~4-4 1/2 feet	
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

LEGEND

S- SPLIT SPOON SOIL SAMPLE
U- UNDISTURBED SOIL SAMPLE
C- ROCK CORE SAMPLE

GENERAL NOTES:

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

BORING #

RAVI ENGINEERING & LAND SURVEYING, P.C.

PROJECT	BORING	BH-3 (Sample IRM-SS03-20161215)
690 Portland Avenue IRM	SHEET 1 OF	4
	JOB #:	45-14-003-0B
	CHKD. BY:	N/A

CONTRACTOR: TREC Environmental, Inc.
DRILLER:
RELS Personnel:: Lynn Z/Alexa B.

BORING LOCATION: South of Sump ~4 ft.
GROUND SURFACE ELEVATION: N/A DATUM: N/A
Date: 12/15/16

TYPE OF DRILL RIG: Geoprobe
CASING SIZE AND TY NA
OVERBURDEN SAMPLING METH Macrocore
ROCK DRILLING METH NA

WATER LEVEL DATA

DATE	TIME	WATER	CASING	REMARKS

DEPTH	SAMPLE DATA BLOW /6"	NO.	DEPTH (FT.)	N-VALUE /RQD(%)	RECOVERY (%)	SAMPLE DESCRIPTION	PID
1						0-6" concrete	4 ft headspace
						6"-1'6" fine brown sand; dry	8.4
2						1'6"-2' red sandy gravel	
						2'-4' brown silty sand with gravel	
3							
4							
						4'-4'2" black brown moist clay	
5						4'2"-4'4" brown silty clay with gravel	6.5 ft headspace
						4'4"-5'5" black brown clay with some gravel	5.6
6						5'5"-6'4" wet brown clay	
						6'4"-8' yellow brown silt with some clay	
7							
8							
9						****Sample take at 4 feet	
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

LEGEND

S- SPLIT SPOON SOIL SAMPLE
U- UNDISTURBED SOIL SAMPLE
C- ROCK CORE SAMPLE

GENERAL NOTES:

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

BORING #

RAVI ENGINEERING & LAND SURVEYING, P.C.

PROJECT	BORING BH-4 (Sample IRM-SS04-20161215)
690 Portland Avenue IRM	SHEET 1 OF 4
	JOB #: 45-14-003-0B
	CHKD. BY: N/A

CONTRACTOR: TREC Environmental, Inc.
DRILLER:
RELS Personnel:: Lynn Z/Alexa B.

BORING LOCATION: East of Sump ~3.7 ft.
GROUND SURFACE ELEVATION: N/A DATUM: N/A
Date: 12/15/16

TYPE OF DRILL RIG: Geoprobe
CASING SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Macrocore
ROCK DRILLING METHOD NA

WATER LEVEL DATA				
DATE	TIME	WATER	CASING	REMARKS

DEPTH	SAMPLE DATA					SAMPLE DESCRIPTION	PID
	BLOW /6"	NO.	DEPTH (FT.)	N-VALUE /RQD(%)	RECOVERY (%)		
1						0-6" concrete	
2						6"-4' reddish brown silty clay; dry	4 ft. headspace 1.8
3							
4							
5						4'-4'2" gravelly silty sand; dry 4'2"-6' hard gravelly silty clay; dry	5 ft. headspace 3.4
6							
7							
8							
9							
10						****Sample at 5 feet	
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

LEGEND
S- SPLIT SPOON SOIL SAMPLE
U- UNDISTURBED SOIL SAMPLE
C- ROCK CORE SAMPLE

GENERAL NOTES:
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

BORING #

APPENDIX D

Analytical Data

PARADIGM
ENVIRONMENTAL SERVICES, INC.

LAB PROJECT NARRATIVE

CLIENT: Ravi Engineering & Land Surveying, P.C.

PROJECT REFERENCE: 690 Portland Ave IRM

LAB PROJECT NUMBER: 165435

DATE: 12/30/2016

You recently received a report that documents positive detections for trichloroethene (TCE) in select samples. At the time of analysis, instrumental run QC indicated that all parameters were compliant and in control. It has since been determined that your samples were stored concurrent with another sample that contained very high levels of TCE. Although the evidence is purely circumstantial, it is possible that the TCE results reported herein stem from cross contamination during storage.

Matthew Miller
Operations Manager

179 Lake Avenue

Rochester, NY 14608

OFFICE: 585.647.2530

FAX: 585.647.3311

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www.paradigmenv.com

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 165435

Client: **Ravi Engineering & Land Surveying, P.C.**

Project Reference: 690 Portland Ave IRM

Sample Identifier:	IRM-SS01-20161215		
Lab Sample ID:	165435-01	**Date Sampled:**	12/15/2016
Matrix:	Soil	**Date Received:**	12/15/2016

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 3.93	ug/Kg		12/22/2016 13:36
1,1,2,2-Tetrachloroethane	< 3.93	ug/Kg		12/22/2016 13:36
1,1,2-Trichloroethane	< 3.93	ug/Kg		12/22/2016 13:36
1,1-Dichloroethane	< 3.93	ug/Kg		12/22/2016 13:36
1,1-Dichloroethene	< 3.93	ug/Kg		12/22/2016 13:36
1,2,3-Trichlorobenzene	< 9.82	ug/Kg		12/22/2016 13:36
1,2,4-Trichlorobenzene	< 9.82	ug/Kg		12/22/2016 13:36
1,2-Dibromo-3-Chloropropane	< 19.6	ug/Kg		12/22/2016 13:36
1,2-Dibromoethane	< 3.93	ug/Kg		12/22/2016 13:36
1,2-Dichlorobenzene	**8.03**	ug/Kg		12/22/2016 13:36
1,2-Dichloroethane	< 3.93	ug/Kg		12/22/2016 13:36
1,2-Dichloropropane	< 3.93	ug/Kg		12/22/2016 13:36
1,3-Dichlorobenzene	< 3.93	ug/Kg		12/22/2016 13:36
1,4-Dichlorobenzene	**2.15**	ug/Kg	J	12/22/2016 13:36
1,4-dioxane	< 39.3	ug/Kg		12/22/2016 13:36
2-Butanone	< 19.6	ug/Kg		12/22/2016 13:36
2-Hexanone	< 9.82	ug/Kg		12/22/2016 13:36
4-Methyl-2-pentanone	< 9.82	ug/Kg		12/22/2016 13:36
Acetone	< 19.6	ug/Kg		12/22/2016 13:36
Benzene	< 3.93	ug/Kg		12/22/2016 13:36
Bromochloromethane	< 9.82	ug/Kg		12/22/2016 13:36
Bromodichloromethane	< 3.93	ug/Kg		12/22/2016 13:36
Bromoform	< 9.82	ug/Kg		12/22/2016 13:36
Bromomethane	< 3.93	ug/Kg		12/22/2016 13:36
Carbon disulfide	< 3.93	ug/Kg		12/22/2016 13:36
Carbon Tetrachloride	< 3.93	ug/Kg		12/22/2016 13:36
Chlorobenzene	< 3.93	ug/Kg		12/22/2016 13:36

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 165435

Client: **Ravi Engineering & Land Surveying, P.C.**

Project Reference: 690 Portland Ave IRM

Sample Identifier:	IRM-SS01-20161215		
Lab Sample ID:	165435-01	**Date Sampled:**	12/15/2016
Matrix:	Soil	**Date Received:**	12/15/2016

Chloroethane	< 3.93	ug/Kg		12/22/2016	13:36
Chloroform	< 3.93	ug/Kg		12/22/2016	13:36
Chloromethane	< 3.93	ug/Kg		12/22/2016	13:36
cis-1,2-Dichloroethene	**2.27**	ug/Kg	J	12/22/2016	13:36
cis-1,3-Dichloropropene	< 3.93	ug/Kg		12/22/2016	13:36
Cyclohexane	< 19.6	ug/Kg		12/22/2016	13:36
Dibromochloromethane	< 3.93	ug/Kg		12/22/2016	13:36
Dichlorodifluoromethane	< 3.93	ug/Kg		12/22/2016	13:36
Ethylbenzene	**2.16**	ug/Kg	J	12/22/2016	13:36
Freon 113	< 3.93	ug/Kg		12/22/2016	13:36
Isopropylbenzene	< 3.93	ug/Kg		12/22/2016	13:36
m,p-Xylene	**7.23**	ug/Kg		12/22/2016	13:36
Methyl acetate	< 3.93	ug/Kg		12/22/2016	13:36
Methyl tert-butyl Ether	< 3.93	ug/Kg		12/22/2016	13:36
Methylcyclohexane	< 3.93	ug/Kg		12/22/2016	13:36
Methylene chloride	< 9.82	ug/Kg		12/22/2016	13:36
o-Xylene	**2.59**	ug/Kg	J	12/22/2016	13:36
Styrene	**6.93**	ug/Kg	J	12/22/2016	13:36
Tetrachloroethene	**95.5**	ug/Kg		12/22/2016	13:36
Toluene	**3.17**	ug/Kg	J	12/22/2016	13:36
trans-1,2-Dichloroethene	< 3.93	ug/Kg		12/22/2016	13:36
trans-1,3-Dichloropropene	< 3.93	ug/Kg		12/22/2016	13:36
Trichloroethene	**158**	ug/Kg		12/22/2016	13:36
Trichlorofluoromethane	< 3.93	ug/Kg		12/22/2016	13:36
Vinyl chloride	< 3.93	ug/Kg		12/22/2016	13:36

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 165435

Client: **Ravi Engineering & Land Surveying, P.C.**

Project Reference: 690 Portland Ave IRM

Sample Identifier: IRM-SS01-20161215

Lab Sample ID: 165435-01 **Date Sampled:** 12/15/2016

Matrix: Soil **Date Received:** 12/15/2016

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**106**	82 - 124		12/22/2016 13:36
4-Bromofluorobenzene	**92.1**	80.5 - 116		12/22/2016 13:36
Pentafluorobenzene	**96.5**	88.7 - 112		12/22/2016 13:36
Toluene-D8	**94.7**	79.1 - 120		12/22/2016 13:36

Method Reference(s): EPA 8260C
EPA 5035A - L

Data File: x37958.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 165435

Client: **Ravi Engineering & Land Surveying, P.C.**

Project Reference: 690 Portland Ave IRM

Sample Identifier:	IRM-SS02-20161215		
Lab Sample ID:	165435-02	**Date Sampled:**	12/15/2016
Matrix:	Soil	**Date Received:**	12/15/2016

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 16.7	ug/Kg		12/22/2016 14:00
1,1,2,2-Tetrachloroethane	< 16.7	ug/Kg		12/22/2016 14:00
1,1,2-Trichloroethane	< 16.7	ug/Kg		12/22/2016 14:00
1,1-Dichloroethane	< 16.7	ug/Kg		12/22/2016 14:00
1,1-Dichloroethene	< 16.7	ug/Kg		12/22/2016 14:00
1,2,3-Trichlorobenzene	< 41.7	ug/Kg		12/22/2016 14:00
1,2,4-Trichlorobenzene	< 41.7	ug/Kg		12/22/2016 14:00
1,2-Dibromo-3-Chloropropane	< 83.5	ug/Kg		12/22/2016 14:00
1,2-Dibromoethane	< 16.7	ug/Kg		12/22/2016 14:00
1,2-Dichlorobenzene	**19.7**	ug/Kg		12/22/2016 14:00
1,2-Dichloroethane	< 16.7	ug/Kg		12/22/2016 14:00
1,2-Dichloropropane	< 16.7	ug/Kg		12/22/2016 14:00
1,3-Dichlorobenzene	< 16.7	ug/Kg		12/22/2016 14:00
1,4-Dichlorobenzene	< 16.7	ug/Kg		12/22/2016 14:00
1,4-dioxane	< 167	ug/Kg		12/22/2016 14:00
2-Butanone	< 83.5	ug/Kg		12/22/2016 14:00
2-Hexanone	< 41.7	ug/Kg		12/22/2016 14:00
4-Methyl-2-pentanone	< 41.7	ug/Kg		12/22/2016 14:00
Acetone	< 83.5	ug/Kg		12/22/2016 14:00
Benzene	< 16.7	ug/Kg		12/22/2016 14:00
Bromochloromethane	< 41.7	ug/Kg		12/22/2016 14:00
Bromodichloromethane	< 16.7	ug/Kg		12/22/2016 14:00
Bromoform	< 41.7	ug/Kg		12/22/2016 14:00
Bromomethane	< 16.7	ug/Kg		12/22/2016 14:00
Carbon disulfide	< 16.7	ug/Kg		12/22/2016 14:00
Carbon Tetrachloride	< 16.7	ug/Kg		12/22/2016 14:00
Chlorobenzene	< 16.7	ug/Kg		12/22/2016 14:00

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 165435

Client: **Ravi Engineering & Land Surveying, P.C.**

Project Reference: 690 Portland Ave IRM

Sample Identifier: IRM-SS02-20161215
Lab Sample ID: 165435-02 **Date Sampled:** 12/15/2016
Matrix: Soil **Date Received:** 12/15/2016

Chloroethane	< 16.7	ug/Kg	12/22/2016	14:00
Chloroform	< 16.7	ug/Kg	12/22/2016	14:00
Chloromethane	< 16.7	ug/Kg	12/22/2016	14:00
cis-1,2-Dichloroethene	**999**	ug/Kg	12/22/2016	14:00
cis-1,3-Dichloropropene	< 16.7	ug/Kg	12/22/2016	14:00
Cyclohexane	< 83.5	ug/Kg	12/22/2016	14:00
Dibromochloromethane	< 16.7	ug/Kg	12/22/2016	14:00
Dichlorodifluoromethane	< 16.7	ug/Kg	12/22/2016	14:00
Ethylbenzene	< 16.7	ug/Kg	12/22/2016	14:00
Freon 113	< 16.7	ug/Kg	12/22/2016	14:00
Isopropylbenzene	< 16.7	ug/Kg	12/22/2016	14:00
m,p-Xylene	< 16.7	ug/Kg	12/22/2016	14:00
Methyl acetate	< 16.7	ug/Kg	12/22/2016	14:00
Methyl tert-butyl Ether	< 16.7	ug/Kg	12/22/2016	14:00
Methylcyclohexane	< 16.7	ug/Kg	12/22/2016	14:00
Methylene chloride	< 41.7	ug/Kg	12/22/2016	14:00
o-Xylene	< 16.7	ug/Kg	12/22/2016	14:00
Styrene	< 41.7	ug/Kg	12/22/2016	14:00
Tetrachloroethene	**73.3**	ug/Kg	12/22/2016	14:00
Toluene	< 16.7	ug/Kg	12/22/2016	14:00
trans-1,2-Dichloroethene	**29.7**	ug/Kg	12/22/2016	14:00
trans-1,3-Dichloropropene	< 16.7	ug/Kg	12/22/2016	14:00
Trichloroethene	**1080**	ug/Kg	12/22/2016	14:00
Trichlorofluoromethane	< 16.7	ug/Kg	12/22/2016	14:00
Vinyl chloride	< 16.7	ug/Kg	12/22/2016	14:00

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 165435

Client: **Ravi Engineering & Land Surveying, P.C.**

Project Reference: 690 Portland Ave IRM

Sample Identifier: IRM-SS02-20161215

Lab Sample ID: 165435-02 **Date Sampled:** 12/15/2016

Matrix: Soil **Date Received:** 12/15/2016

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**103**	82 - 124		12/22/2016 14:00
4-Bromofluorobenzene	**97.8**	80.5 - 116		12/22/2016 14:00
Pentafluorobenzene	**102**	88.7 - 112		12/22/2016 14:00
Toluene-D8	**97.0**	79.1 - 120		12/22/2016 14:00

Method Reference(s): EPA 8260C
EPA 5035A - L

Data File: x37959.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 165435

Client: **Ravi Engineering & Land Surveying, P.C.**

Project Reference: 690 Portland Ave IRM

Sample Identifier:	IRM-SS03-20161215		
Lab Sample ID:	165435-03	**Date Sampled:**	12/15/2016
Matrix:	Soil	**Date Received:**	12/15/2016

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 35.9	ug/Kg		12/22/2016 14:24
1,1,2,2-Tetrachloroethane	< 35.9	ug/Kg		12/22/2016 14:24
1,1,2-Trichloroethane	< 35.9	ug/Kg		12/22/2016 14:24
1,1-Dichloroethane	< 35.9	ug/Kg		12/22/2016 14:24
1,1-Dichloroethene	< 35.9	ug/Kg		12/22/2016 14:24
1,2,3-Trichlorobenzene	< 89.6	ug/Kg		12/22/2016 14:24
1,2,4-Trichlorobenzene	< 89.6	ug/Kg		12/22/2016 14:24
1,2-Dibromo-3-Chloropropane	< 179	ug/Kg		12/22/2016 14:24
1,2-Dibromoethane	< 35.9	ug/Kg		12/22/2016 14:24
1,2-Dichlorobenzene	< 35.9	ug/Kg		12/22/2016 14:24
1,2-Dichloroethane	< 35.9	ug/Kg		12/22/2016 14:24
1,2-Dichloropropane	< 35.9	ug/Kg		12/22/2016 14:24
1,3-Dichlorobenzene	< 35.9	ug/Kg		12/22/2016 14:24
1,4-Dichlorobenzene	< 35.9	ug/Kg		12/22/2016 14:24
1,4-dioxane	< 359	ug/Kg		12/22/2016 14:24
2-Butanone	< 179	ug/Kg		12/22/2016 14:24
2-Hexanone	< 89.6	ug/Kg		12/22/2016 14:24
4-Methyl-2-pentanone	< 89.6	ug/Kg		12/22/2016 14:24
Acetone	< 179	ug/Kg		12/22/2016 14:24
Benzene	< 35.9	ug/Kg		12/22/2016 14:24
Bromochloromethane	< 89.6	ug/Kg		12/22/2016 14:24
Bromodichloromethane	< 35.9	ug/Kg		12/22/2016 14:24
Bromoform	< 89.6	ug/Kg		12/22/2016 14:24
Bromomethane	< 35.9	ug/Kg		12/22/2016 14:24
Carbon disulfide	< 35.9	ug/Kg		12/22/2016 14:24
Carbon Tetrachloride	< 35.9	ug/Kg		12/22/2016 14:24
Chlorobenzene	< 35.9	ug/Kg		12/22/2016 14:24

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 165435

Client: **Ravi Engineering & Land Surveying, P.C.**

Project Reference: 690 Portland Ave IRM

Sample Identifier:	IRM-SS03-20161215		
Lab Sample ID:	165435-03	**Date Sampled:**	12/15/2016
Matrix:	Soil	**Date Received:**	12/15/2016

Chloroethane	< 35.9	ug/Kg	12/22/2016	14:24
Chloroform	< 35.9	ug/Kg	12/22/2016	14:24
Chloromethane	< 35.9	ug/Kg	12/22/2016	14:24
cis-1,2-Dichloroethene	**112**	ug/Kg	12/22/2016	14:24
cis-1,3-Dichloropropene	< 35.9	ug/Kg	12/22/2016	14:24
Cyclohexane	< 179	ug/Kg	12/22/2016	14:24
Dibromochloromethane	< 35.9	ug/Kg	12/22/2016	14:24
Dichlorodifluoromethane	< 35.9	ug/Kg	12/22/2016	14:24
Ethylbenzene	< 35.9	ug/Kg	12/22/2016	14:24
Freon 113	< 35.9	ug/Kg	12/22/2016	14:24
Isopropylbenzene	< 35.9	ug/Kg	12/22/2016	14:24
m,p-Xylene	< 35.9	ug/Kg	12/22/2016	14:24
Methyl acetate	< 35.9	ug/Kg	12/22/2016	14:24
Methyl tert-butyl Ether	< 35.9	ug/Kg	12/22/2016	14:24
Methylcyclohexane	< 35.9	ug/Kg	12/22/2016	14:24
Methylene chloride	< 89.6	ug/Kg	12/22/2016	14:24
o-Xylene	< 35.9	ug/Kg	12/22/2016	14:24
Styrene	< 89.6	ug/Kg	12/22/2016	14:24
Tetrachloroethene	**89.0**	ug/Kg	12/22/2016	14:24
Toluene	< 35.9	ug/Kg	12/22/2016	14:24
trans-1,2-Dichloroethene	< 35.9	ug/Kg	12/22/2016	14:24
trans-1,3-Dichloropropene	< 35.9	ug/Kg	12/22/2016	14:24
Trichloroethene	**739**	ug/Kg	12/22/2016	14:24
Trichlorofluoromethane	< 35.9	ug/Kg	12/22/2016	14:24
Vinyl chloride	< 35.9	ug/Kg	12/22/2016	14:24

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 165435

Client: **Ravi Engineering & Land Surveying, P.C.**

Project Reference: 690 Portland Ave IRM

Sample Identifier: IRM-SS03-20161215

Lab Sample ID: 165435-03 **Date Sampled:** 12/15/2016

Matrix: Soil **Date Received:** 12/15/2016

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**110**	82 - 124		12/22/2016 14:24
4-Bromofluorobenzene	**101**	80.5 - 116		12/22/2016 14:24
Pentafluorobenzene	**104**	88.7 - 112		12/22/2016 14:24
Toluene-D8	**101**	79.1 - 120		12/22/2016 14:24

Method Reference(s): EPA 8260C
EPA 5035A - L

Data File: x37960.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 165435

Client: **Ravi Engineering & Land Surveying, P.C.**

Project Reference: 690 Portland Ave IRM

Sample Identifier:	IRM-SS04-20161215		
Lab Sample ID:	165435-04	**Date Sampled:**	12/15/2016
Matrix:	Soil	**Date Received:**	12/15/2016

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 4.51	ug/Kg		12/22/2016 14:48
1,1,2,2-Tetrachloroethane	< 4.51	ug/Kg		12/22/2016 14:48
1,1,2-Trichloroethane	< 4.51	ug/Kg		12/22/2016 14:48
1,1-Dichloroethane	< 4.51	ug/Kg		12/22/2016 14:48
1,1-Dichloroethene	< 4.51	ug/Kg		12/22/2016 14:48
1,2,3-Trichlorobenzene	< 11.3	ug/Kg		12/22/2016 14:48
1,2,4-Trichlorobenzene	< 11.3	ug/Kg		12/22/2016 14:48
1,2-Dibromo-3-Chloropropane	< 22.6	ug/Kg		12/22/2016 14:48
1,2-Dibromoethane	< 4.51	ug/Kg		12/22/2016 14:48
1,2-Dichlorobenzene	< 4.51	ug/Kg		12/22/2016 14:48
1,2-Dichloroethane	< 4.51	ug/Kg		12/22/2016 14:48
1,2-Dichloropropane	< 4.51	ug/Kg		12/22/2016 14:48
1,3-Dichlorobenzene	< 4.51	ug/Kg		12/22/2016 14:48
1,4-Dichlorobenzene	< 4.51	ug/Kg		12/22/2016 14:48
1,4-dioxane	< 45.1	ug/Kg		12/22/2016 14:48
2-Butanone	< 22.6	ug/Kg		12/22/2016 14:48
2-Hexanone	< 11.3	ug/Kg		12/22/2016 14:48
4-Methyl-2-pentanone	< 11.3	ug/Kg		12/22/2016 14:48
Acetone	**22.1**	ug/Kg	J	12/22/2016 14:48
Benzene	< 4.51	ug/Kg		12/22/2016 14:48
Bromochloromethane	< 11.3	ug/Kg		12/22/2016 14:48
Bromodichloromethane	< 4.51	ug/Kg		12/22/2016 14:48
Bromoform	< 11.3	ug/Kg		12/22/2016 14:48
Bromomethane	< 4.51	ug/Kg		12/22/2016 14:48
Carbon disulfide	< 4.51	ug/Kg		12/22/2016 14:48
Carbon Tetrachloride	< 4.51	ug/Kg		12/22/2016 14:48
Chlorobenzene	< 4.51	ug/Kg		12/22/2016 14:48

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 165435

Client: **Ravi Engineering & Land Surveying, P.C.**

Project Reference: 690 Portland Ave IRM

Sample Identifier: IRM-SS04-20161215
Lab Sample ID: 165435-04 **Date Sampled:** 12/15/2016
Matrix: Soil **Date Received:** 12/15/2016

Chloroethane	< 4.51	ug/Kg		12/22/2016	14:48
Chloroform	< 4.51	ug/Kg		12/22/2016	14:48
Chloromethane	< 4.51	ug/Kg		12/22/2016	14:48
cis-1,2-Dichloroethene	**91.4**	ug/Kg		12/22/2016	14:48
cis-1,3-Dichloropropene	< 4.51	ug/Kg		12/22/2016	14:48
Cyclohexane	< 22.6	ug/Kg		12/22/2016	14:48
Dibromochloromethane	< 4.51	ug/Kg		12/22/2016	14:48
Dichlorodifluoromethane	< 4.51	ug/Kg		12/22/2016	14:48
Ethylbenzene	< 4.51	ug/Kg		12/22/2016	14:48
Freon 113	< 4.51	ug/Kg		12/22/2016	14:48
Isopropylbenzene	< 4.51	ug/Kg		12/22/2016	14:48
m,p-Xylene	**5.59**	ug/Kg		12/22/2016	14:48
Methyl acetate	< 4.51	ug/Kg		12/22/2016	14:48
Methyl tert-butyl Ether	< 4.51	ug/Kg		12/22/2016	14:48
Methylcyclohexane	< 4.51	ug/Kg		12/22/2016	14:48
Methylene chloride	< 11.3	ug/Kg		12/22/2016	14:48
o-Xylene	**2.76**	ug/Kg	J	12/22/2016	14:48
Styrene	< 11.3	ug/Kg		12/22/2016	14:48
Tetrachloroethene	**5.39**	ug/Kg		12/22/2016	14:48
Toluene	< 4.51	ug/Kg		12/22/2016	14:48
trans-1,2-Dichloroethene	**32.1**	ug/Kg		12/22/2016	14:48
trans-1,3-Dichloropropene	< 4.51	ug/Kg		12/22/2016	14:48
Trichloroethene	**91.4**	ug/Kg		12/22/2016	14:48
Trichlorofluoromethane	< 4.51	ug/Kg		12/22/2016	14:48
Vinyl chloride	< 4.51	ug/Kg		12/22/2016	14:48

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 165435

Client: **Ravi Engineering & Land Surveying, P.C.**

Project Reference: 690 Portland Ave IRM

Sample Identifier: IRM-SS04-20161215

Lab Sample ID: 165435-04 **Date Sampled:** 12/15/2016

Matrix: Soil **Date Received:** 12/15/2016

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**109**	82 - 124		12/22/2016 14:48
4-Bromofluorobenzene	**99.3**	80.5 - 116		12/22/2016 14:48
Pentafluorobenzene	**102**	88.7 - 112		12/22/2016 14:48
Toluene-D8	**98.2**	79.1 - 120		12/22/2016 14:48

Method Reference(s): EPA 8260C
EPA 5035A - L

Data File: x37961.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 165435

Client: **Ravi Engineering & Land Surveying, P.C.**

Project Reference: 690 Portland Ave IRM

Sample Identifier: IRM-SS01-20161215
Lab Sample ID: 165435-01 **Date Sampled:** 12/15/2016
Matrix: Soil **Date Received:** 12/15/2016

Volatile Tentatively Identified Compounds

Tentatively Identified Compound	Result	Units	Qualifier	Date Analyzed
Unknown aromatic	**76.2**	ug/Kg		12/22/2016
Total Reported TICS	**76.2**	ug/Kg		12/22/2016

Method Reference(s): EPA 8260C
EPA 5035A - L

Tentatively Identified Compound results are estimated values, based on Internal Standard response factors.

Report Prepared Thursday, December 22, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 165435

Client: **Ravi Engineering & Land Surveying, P.C.**

Project Reference: 690 Portland Ave IRM

Sample Identifier:	IRM-SS02-20161215		
Lab Sample ID:	165435-02	**Date Sampled:**	12/15/2016
Matrix:	Soil	**Date Received:**	12/15/2016

Volatile Tentatively Identified Compounds

Tentatively Identified Compound	Result	Units	Qualifier	Date Analyzed
None Found	< 41.7	ug/Kg		12/22/2016
Total Reported TICS	< 41.7	ug/Kg		12/22/2016

Method Reference(s): EPA 8260C
EPA 5035A - L

Tentatively Identified Compound results are estimated values, based on Internal Standard response factors.

Report Prepared Thursday, December 22, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 165435

Client: **Ravi Engineering & Land Surveying, P.C.**

Project Reference: 690 Portland Ave IRM

Sample Identifier: IRM-SS03-20161215
Lab Sample ID: 165435-03 **Date Sampled:** 12/15/2016
Matrix: Soil **Date Received:** 12/15/2016

Volatile Tentatively Identified Compounds

Tentatively Identified Compound	Result	Units	Qualifier	Date Analyzed
None Found	< 89.6	ug/Kg		12/22/2016
Total Reported TICS	< 89.6	ug/Kg		12/22/2016

Method Reference(s): EPA 8260C
EPA 5035A - L

Tentatively Identified Compound results are estimated values, based on Internal Standard response factors.

Report Prepared Thursday, December 22, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 165435

Client: **Ravi Engineering & Land Surveying, P.C.**

Project Reference: 690 Portland Ave IRM

Sample Identifier: IRM-SS04-20161215
Lab Sample ID: 165435-04 **Date Sampled:** 12/15/2016
Matrix: Soil **Date Received:** 12/15/2016

Volatile Tentatively Identified Compounds

Tentatively Identified Compound	Result	Units	Qualifier	Date Analyzed
Unknown aromatic	**53.3**	ug/Kg		12/22/2016
Total Reported TICS	**53.3**	ug/Kg		12/22/2016

Method Reference(s): EPA 8260C
EPA 5035A - L

Tentatively Identified Compound results are estimated values, based on Internal Standard response factors.

Report Prepared Thursday, December 22, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Analytical Report Appendix

The reported results relate only to the samples as they have been received by the laboratory.

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All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

Low level Volatiles blank reports for soil/solid matrix are based on a nominal 5 gram weight. Sample results and reporting limits are based on actual weight, which may be more or less than 5 grams.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified. Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an "A" suffix.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of analyte-specific, frequently used data flags and their meaning:

"<" = Analyzed for but not detected at or above the quantitation limit.
"E" = Result has been estimated, calibration limit exceeded.
"Z" = See case narrative.
"D" = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.
"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.
"B" = Method blank contained trace levels of analyte. Refer to included method blank report.
"J" = Result estimated between the quantitation limit and half the quantitation limit.
"L" = Laboratory Control Sample recovery outside accepted QC limits.
"P" = Concentration differs by more than 40% between the primary and secondary analytical columns.
"NC" = Not calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.
"" = Indicates any recoveries outside associated acceptance windows. Surrogate outliers in samples are presumed matrix effects. LCS demonstrates method compliance unless otherwise noted.*
"(1)" = Indicates data from primary column used for QC calculation.
"A" = denotes a parameter for which ELAP does not offer approval as part of their laboratory certification program.
"F" = denotes a parameter for which Paradigm does not carry certification, the results for which should therefore only be used where ELAP certification is not required, such as personal exposure assessment.

GENERAL TERMS AND CONDITIONS
LABORATORY SERVICES

These Terms and Conditions embody the whole agreement of the parties in the absence of a signed and executed contract between the Laboratory (LAB) and Client. They shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties. The LAB specifically rejects all additional, inconsistent, or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Client to the LAB. The invalidity or unenforceability in whole or in part of any provision, term, or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions. No waiver by LAB of any provision, term, or condition hereof or of any breach by or obligation of the Client hereunder shall constitute a waiver of such provision, term, or condition on any other occasion or a waiver of any other breach by or obligation of the Client. This agreement shall be administered and interpreted under the laws of the state which services are procured.

Warranty. Recognizing that the nature of many samples is unknown and that some may contain potentially hazardous components, LAB warrants only that it will perform testing services, obtain findings, and prepare reports in accordance with generally accepted analytical laboratory principles and practices at the time of performance of services. LAB makes no other warranty, express or implied.

Scope and Compensation. LAB agrees to perform the services described in the chain of custody to which these terms and conditions are attached. Unless the parties agree in writing to the contrary, the duties of LAB shall not be construed to exceed the services specifically described. LAB will use LAB default method for all tests unless specified otherwise on the Work Order.

Payment terms are net 30 days from the date of invoice. All overdue payments are subject to an interest charge of one and one-half percent (1-1/2%) per month or a portion thereof. Client shall also be responsible for costs of collection, including payment of reasonable attorney fees if such expense is incurred. The prices, unless stated, do not include any sale, use or other taxes. Such taxes will be added to invoice prices when required.

Prices. Compensation for services performed will be based on the current Lab Analytical Fee Schedule or on quotations agreed to in writing by the parties. Turnaround time based charges are determined from the time of resolution of all work order questions. Testimony, court appearances or data compilation for legal action will be charged separately. Evaluation and reporting of initial screening runs may incur additional fees.

Limitations of Liability. In the event of any error, omission, or other professional negligence, the sole and exclusive responsibility of LAB shall be to re-perform the deficient work at its own expense and LAB shall have no other liability whatsoever. All claims shall be deemed waived unless made in writing and received by LAB within ninety (90) days following completion of services.

LAB shall have no liability, obligation, or responsibility of any kind for losses, costs, expenses, or other damages (including but not limited to any special, direct, incidental or consequential damages) with respect to LAB's services or results.

All results provided by LAB are strictly for the use of its clients and LAB is in no way responsible for the use of such results by clients or third parties. All reports should be considered in their entirety, and LAB is not responsible for the separation, detachment, or other use of any portion of these reports. Client may not assign the lab report without the written consent of the LAB.

Client covenants and agrees, at its/his/her sole expense, to indemnify, protect, defend, and save harmless the LAB from and against any and all damages, losses, liabilities, obligations, penalties, claims, litigation, demands, defenses, judgments, suits, actions, proceedings, costs, disbursements and/or expenses (including, without limitation attorneys' and experts' fees and disbursements) of any kind whatsoever which may at any time be imposed upon, incurred by or asserted or awarded against client relating to, resulting from or arising out of (a) the breach of this agreement by this client, (b) the negligence of the client in handling, delivering or disclosing any hazardous substance, (c) the violation of the Client of any applicable law, (d) non-compliance by the Client with any environmental permit or (e) a material misrepresentation in disclosing the materials to be tested.

Hazard Disclosure. Client represents and warrants that any sample delivered to LAB will be preceded or accompanied by complete written disclosure of the presence of any hazardous substances known or suspected by Client. Client further warrants that any sample containing any hazardous substance that is to be delivered to LAB will be packaged, labeled, transported, and delivered properly and in accordance with applicable laws.

Sample Handling. Prior to LAB's acceptance of any sample (or after any revocation of acceptance), the entire risk of loss or of damage to such sample remains with Client. Samples are accepted when receipt is acknowledged on chain of custody documentation. In no event will LAB have any responsibility for the action or inaction of any carrier shipping or delivering any sample to or from LAB premises.

Client authorizes LAB to proceed with the analysis of samples as received by the laboratory, recognizing that any samples not in compliance with all current DOH-ELAP-NELAP requirements for containers, preservation or holding time will be noted as such on the final report.

Disposal of hazardous waste samples is the responsibility of the Client. If the Client does not wish such samples returned, LAB may add storage and disposal fees to the final invoice. Maximum storage time for samples is 30 days after completion of analysis unless modified by applicable state or federal laws. Client will be required to give the LAB written instructions concerning disposal of these samples.

LAB reserves the absolute right, exercisable at any time, to refuse to receive delivery of, refuse to accept, or revoke acceptance of any sample, which, in the sole judgment of LAB (a) is of unsuitable volume, (b) may be or become unsuitable for or may pose a risk in handling, transport, or processing for any health, safety, environmental or other reason whether or not due to the presence in the sample of any hazardous substance, and whether or not such presence has been disclosed to LAB by Client or (c) if the condition or sample date make the sample unsuitable for analysis.

Legal Responsibility. LAB is solely responsible for performance of this contract, and no affiliated company, director, officer, employee, or agent shall have any legal responsibility hereunder, whether in contract or tort including negligence.

Assignment. LAB may assign its performance obligations under this contract to other parties, as it deems necessary. LAB shall disclose to Client any assignee (subcontractor) by ELAP ID # on the submitted final report.

Force Majeure. LAB shall have no responsibility or liability to the Client for any failure or delay in performance by LAB, which results in whole or in part from any cause or circumstance beyond the reasonable control of LAB. Such causes and circumstances shall include, but not limited to, acts of God, acts or orders of any government authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, difficulties or delays in transportation, mail or delivery services, inability to obtain sufficient services or supplies from LAB's usual suppliers, or any other cause beyond LAB's reasonable control.

Law. This contract shall be continued under the laws of the State of New York without regard to its conflicts of laws provision.

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

PARADIGM ENVIRONMENTAL SERVICES, INC

CHAIN OF CUSTODY

REPORT TO:	INVOICE TO:	LAB PROJECT ID
CLIENT: RAVI	CLIENT:	165435
ADDRESS:	ADDRESS:	
CITY: STATE: ZIP	CITY: STATE: ZIP:	Quotation #:
PHONE: 506-6975	PHONE:	Email: Pmorton@ravieng.com Lziccari@ravieng.com Abarber@ravieng.com
ATTN: Lynn Ziccari	ATTN:	

PROJECT REFERENCE
690 Portland Ave IRM

Matrix Codes:
AQ - Aqueous Liquid, NQ - Non-Aqueous Liquid, WA - Water, WG - Groundwater, DW - Drinking Water, WW - Wastewater, SO - Soil, SL - Sludge, SD - Solid, PT - Paint, WP - Wipe, CK - Caulk, OL - Oil, AR - Air

REQUESTED ANALYSIS

DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	TCL VOC +TIC's	CRLZ 12-21-16 [signature] 1430	REMARKS	PARADIGM LAB SAMPLE NUMBER
12/15/16			X	IRM-SS01-20161215	SO	1	X			01
↓			X	IRM-SS02-20161215	↓	↓	X			02
↓			X	IRM-SS-03-20161215	↓	↓	X			03
↓			X	IRM-SS04-20161215	↓	↓	X			04

Turnaround Time		Report Supplements			
Availability contingent upon lab approval; additional fees may apply.					
Standard 5 day	[X]	None Required	[ ]	None Required	[ ]
10 day	[ ]	Batch QC	[ ]	Basic EDD	[ ]
Rush 3 day	[ ]	Category A	[ ]	NYSDEC EDD	[X]
Rush 2 day	[ ]	Category B	[X]		
Rush 1 day	[ ]				
Other please indicate date needed:	[ ]	Other please indicate package needed:	[ ]	Other EDD please indicate EDD needed :	[ ]

Sampled By: Lynn Ziccari — Date/Time: 12/15/16

Relinquished By: [signature] — Date/Time: 12/15/16 1615

Received By: Jane J Daloia — Date/Time: 12/15/16 1615

Received @ Lab By: [signature] — Date/Time: 12/15/16 16:31

Total Cost:

P.I.F.

4°C iced 12/15/16 16:25

By signing this form, client agrees to Paradigm Terms and Conditions (reverse).

Custody Seal N/A, Samples delivered by client @ 12/15/16

See additional page for sample conditions.

Chain of Custody Supplement

Client: Ravi Engineering **Completed by:** Glen Pezzulo

Lab Project ID: 165435 **Date:** 12/15/16

Sample Condition Requirements

Per NELAC/ELAP 210/241/242/243/244

Condition	*NELAC compliance with the sample condition requirements upon receipt* Yes	No	N/A
Container Type	X	X 5035	
Comments			
Transferred to method-compliant container			X
Headspace (<1 mL)			X
Comments			
Preservation			X
Comments			
Chlorine Absent (<0.10 ppm per test strip)			X
Comments			
Holding Time	X		
Comments			
Temperature	X		
Comments	4°C iced		
Sufficient Sample Quantity	X		
Comments			

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170440

Client: **Ravi Engineering & Land Surveying, P.C.**

Project Reference: 690 Portland

Sample Identifier:	RW1_02072017		
Lab Sample ID:	170440-01	**Date Sampled:**	2/7/2017
Matrix:	Groundwater	**Date Received:**	2/7/2017

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 2.00	ug/L		2/9/2017 18:06
1,1,2,2-Tetrachloroethane	< 2.00	ug/L		2/9/2017 18:06
1,1,2-Trichloroethane	< 2.00	ug/L		2/9/2017 18:06
1,1-Dichloroethane	< 2.00	ug/L		2/9/2017 18:06
1,1-Dichloroethene	< 2.00	ug/L		2/9/2017 18:06
1,2,3-Trichlorobenzene	< 5.00	ug/L		2/9/2017 18:06
1,2,4-Trichlorobenzene	< 5.00	ug/L		2/9/2017 18:06
1,2-Dibromo-3-Chloropropane	< 10.0	ug/L		2/9/2017 18:06
1,2-Dibromoethane	< 2.00	ug/L		2/9/2017 18:06
1,2-Dichlorobenzene	< 2.00	ug/L		2/9/2017 18:06
1,2-Dichloroethane	< 2.00	ug/L		2/9/2017 18:06
1,2-Dichloropropane	< 2.00	ug/L		2/9/2017 18:06
1,3-Dichlorobenzene	< 2.00	ug/L		2/9/2017 18:06
1,4-Dichlorobenzene	< 2.00	ug/L		2/9/2017 18:06
1,4-dioxane	< 20.0	ug/L		2/9/2017 18:06
2-Butanone	< 10.0	ug/L		2/9/2017 18:06
2-Hexanone	< 5.00	ug/L		2/9/2017 18:06
4-Methyl-2-pentanone	< 5.00	ug/L		2/9/2017 18:06
Acetone	< 10.0	ug/L		2/9/2017 18:06
Benzene	< 1.00	ug/L		2/9/2017 18:06
Bromochloromethane	< 5.00	ug/L		2/9/2017 18:06
Bromodichloromethane	< 2.00	ug/L		2/9/2017 18:06
Bromoform	< 5.00	ug/L		2/9/2017 18:06
Bromomethane	< 2.00	ug/L		2/9/2017 18:06
Carbon disulfide	< 2.00	ug/L		2/9/2017 18:06
Carbon Tetrachloride	< 2.00	ug/L		2/9/2017 18:06
Chlorobenzene	< 2.00	ug/L		2/9/2017 18:06

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170440

Client: **Ravi Engineering & Land Surveying, P.C.**

Project Reference: 690 Portland

Sample Identifier:	RW1_02072017		
Lab Sample ID:	170440-01	**Date Sampled:**	2/7/2017
Matrix:	Groundwater	**Date Received:**	2/7/2017

Chloroethane	< 2.00	ug/L		2/9/2017	18:06
Chloroform	< 2.00	ug/L		2/9/2017	18:06
Chloromethane	< 2.00	ug/L		2/9/2017	18:06
cis-1,2-Dichloroethene	**1.46**	ug/L	J	2/9/2017	18:06
cis-1,3-Dichloropropene	< 2.00	ug/L		2/9/2017	18:06
Cyclohexane	< 10.0	ug/L		2/9/2017	18:06
Dibromochloromethane	< 2.00	ug/L		2/9/2017	18:06
Dichlorodifluoromethane	< 2.00	ug/L		2/9/2017	18:06
Ethylbenzene	< 2.00	ug/L		2/9/2017	18:06
Freon 113	< 2.00	ug/L		2/9/2017	18:06
Isopropylbenzene	< 2.00	ug/L		2/9/2017	18:06
m,p-Xylene	< 2.00	ug/L		2/9/2017	18:06
Methyl acetate	< 2.00	ug/L		2/9/2017	18:06
Methyl tert-butyl Ether	< 2.00	ug/L		2/9/2017	18:06
Methylcyclohexane	< 2.00	ug/L		2/9/2017	18:06
Methylene chloride	< 5.00	ug/L		2/9/2017	18:06
o-Xylene	**1.32**	ug/L	J	2/9/2017	18:06
Styrene	< 5.00	ug/L		2/9/2017	18:06
Tetrachloroethene	< 2.00	ug/L		2/9/2017	18:06
Toluene	< 2.00	ug/L		2/9/2017	18:06
trans-1,2-Dichloroethene	< 2.00	ug/L		2/9/2017	18:06
trans-1,3-Dichloropropene	< 2.00	ug/L		2/9/2017	18:06
Trichloroethene	**15.0**	ug/L		2/9/2017	18:06
Trichlorofluoromethane	< 2.00	ug/L		2/9/2017	18:06
Vinyl chloride	< 2.00	ug/L		2/9/2017	18:06

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170440

Client: **Ravi Engineering & Land Surveying, P.C.**

Project Reference: 690 Portland

Sample Identifier: RW1_02072017
Lab Sample ID: 170440-01 **Date Sampled:** 2/7/2017
Matrix: Groundwater **Date Received:** 2/7/2017

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
1,2-Dichloroethane-d4	**104**	81.2 - 120		2/9/2017	18:06
4-Bromofluorobenzene	**87.3**	82.4 - 112		2/9/2017	18:06
Pentafluorobenzene	**90.3**	90.2 - 112		2/9/2017	18:06
Toluene-D8	**93.8**	89.9 - 109		2/9/2017	18:06

Method Reference(s): EPA 8260C
EPA 5030C
Data File: x39041.D

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170440

Client: **Ravi Engineering & Land Surveying, P.C.**

Project Reference: 690 Portland

Sample Identifier:	Trip Blank		
Lab Sample ID:	170440-02	**Date Sampled:**	2/7/2017
Matrix:	Water	**Date Received:**	2/7/2017

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 2.00	ug/L		2/9/2017 16:07
1,1,2,2-Tetrachloroethane	< 2.00	ug/L		2/9/2017 16:07
1,1,2-Trichloroethane	< 2.00	ug/L		2/9/2017 16:07
1,1-Dichloroethane	< 2.00	ug/L		2/9/2017 16:07
1,1-Dichloroethene	< 2.00	ug/L		2/9/2017 16:07
1,2,3-Trichlorobenzene	< 5.00	ug/L		2/9/2017 16:07
1,2,4-Trichlorobenzene	< 5.00	ug/L		2/9/2017 16:07
1,2-Dibromo-3-Chloropropane	< 10.0	ug/L		2/9/2017 16:07
1,2-Dibromoethane	< 2.00	ug/L		2/9/2017 16:07
1,2-Dichlorobenzene	< 2.00	ug/L		2/9/2017 16:07
1,2-Dichloroethane	< 2.00	ug/L		2/9/2017 16:07
1,2-Dichloropropane	< 2.00	ug/L		2/9/2017 16:07
1,3-Dichlorobenzene	< 2.00	ug/L		2/9/2017 16:07
1,4-Dichlorobenzene	< 2.00	ug/L		2/9/2017 16:07
1,4-dioxane	< 20.0	ug/L		2/9/2017 16:07
2-Butanone	< 10.0	ug/L		2/9/2017 16:07
2-Hexanone	< 5.00	ug/L		2/9/2017 16:07
4-Methyl-2-pentanone	< 5.00	ug/L		2/9/2017 16:07
Acetone	< 10.0	ug/L		2/9/2017 16:07
Benzene	< 1.00	ug/L		2/9/2017 16:07
Bromochloromethane	< 5.00	ug/L		2/9/2017 16:07
Bromodichloromethane	< 2.00	ug/L		2/9/2017 16:07
Bromoform	< 5.00	ug/L		2/9/2017 16:07
Bromomethane	< 2.00	ug/L		2/9/2017 16:07
Carbon disulfide	< 2.00	ug/L		2/9/2017 16:07
Carbon Tetrachloride	< 2.00	ug/L		2/9/2017 16:07
Chlorobenzene	< 2.00	ug/L		2/9/2017 16:07

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170440

Client: **Ravi Engineering & Land Surveying, P.C.**

Project Reference: 690 Portland

Sample Identifier:	Trip Blank		
Lab Sample ID:	170440-02	**Date Sampled:**	2/7/2017
Matrix:	Water	**Date Received:**	2/7/2017

Chloroethane	< 2.00	ug/L	2/9/2017	16:07
Chloroform	< 2.00	ug/L	2/9/2017	16:07
Chloromethane	< 2.00	ug/L	2/9/2017	16:07
cis-1,2-Dichloroethene	< 2.00	ug/L	2/9/2017	16:07
cis-1,3-Dichloropropene	< 2.00	ug/L	2/9/2017	16:07
Cyclohexane	< 10.0	ug/L	2/9/2017	16:07
Dibromochloromethane	< 2.00	ug/L	2/9/2017	16:07
Dichlorodifluoromethane	< 2.00	ug/L	2/9/2017	16:07
Ethylbenzene	< 2.00	ug/L	2/9/2017	16:07
Freon 113	< 2.00	ug/L	2/9/2017	16:07
Isopropylbenzene	< 2.00	ug/L	2/9/2017	16:07
m,p-Xylene	< 2.00	ug/L	2/9/2017	16:07
Methyl acetate	< 2.00	ug/L	2/9/2017	16:07
Methyl tert-butyl Ether	< 2.00	ug/L	2/9/2017	16:07
Methylcyclohexane	< 2.00	ug/L	2/9/2017	16:07
Methylene chloride	< 5.00	ug/L	2/9/2017	16:07
o-Xylene	< 2.00	ug/L	2/9/2017	16:07
Styrene	< 5.00	ug/L	2/9/2017	16:07
Tetrachloroethene	< 2.00	ug/L	2/9/2017	16:07
Toluene	< 2.00	ug/L	2/9/2017	16:07
trans-1,2-Dichloroethene	< 2.00	ug/L	2/9/2017	16:07
trans-1,3-Dichloropropene	< 2.00	ug/L	2/9/2017	16:07
Trichloroethene	< 2.00	ug/L	2/9/2017	16:07
Trichlorofluoromethane	< 2.00	ug/L	2/9/2017	16:07
Vinyl chloride	< 2.00	ug/L	2/9/2017	16:07

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170440

Client: **Ravi Engineering & Land Surveying, P.C.**

Project Reference: 690 Portland

Sample Identifier: Trip Blank
Lab Sample ID: 170440-02 **Date Sampled:** 2/7/2017
Matrix: Water **Date Received:** 2/7/2017

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
1,2-Dichloroethane-d4	**106**	81.2 - 120		2/9/2017	16:07
4-Bromofluorobenzene	**85.7**	82.4 - 112		2/9/2017	16:07
Pentafluorobenzene	**87.8**	90.2 - 112	*	2/9/2017	16:07
Toluene-D8	**92.5**	89.9 - 109		2/9/2017	16:07

Method Reference(s): EPA 8260C
EPA 5030C
Data File: x39036.D

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170440

Client: **Ravi Engineering & Land Surveying, P.C.**

Project Reference: 690 Portland

Sample Identifier: RW1_02072017
Lab Sample ID: 170440-01 **Date Sampled:** 2/7/2017
Matrix: Groundwater **Date Received:** 2/7/2017

Volatile Tentatively Identified Compounds

Tentatively Identified Compound	Result	Units	Qualifier	Date Analyzed
Unknown Siloxane	**11.9**	ug/L		2/9/2017
1,2,4-Trimethylbenzene	**7.93**	ug/L		2/9/2017
Unknown Aromatic	**11.5**	ug/L		2/9/2017
Unknown Aromatic	**11.0**	ug/L		2/9/2017
Unknown Aromatic	**6.70**	ug/L		2/9/2017
Unknown Aromatic	**8.23**	ug/L		2/9/2017
Unknown Aromatic	**5.30**	ug/L		2/9/2017
Unknown Aromatic	**10.1**	ug/L		2/9/2017
Unknown Aromatic	**7.14**	ug/L		2/9/2017
Unknown Aromatic	**26.6**	ug/L		2/9/2017
Unknown Aromatic	**5.08**	ug/L		2/9/2017
Unknown Aromatic	**7.51**	ug/L		2/9/2017
Naphthalene	**14.2**	ug/L		2/9/2017
Unknown Benzothiophene	**7.22**	ug/L		2/9/2017
Unknown Aromatic	**7.13**	ug/L		2/9/2017
Unknown Aromatic	**10.6**	ug/L		2/9/2017
Unknown	**7.69**	ug/L		2/9/2017
Unknown Benzothiophene	**7.37**	ug/L		2/9/2017
n-methylnaphthalene	**21.7**	ug/L		2/9/2017
n-methylnaphthalene	**31.1**	ug/L		2/9/2017
Total Reported TICS	**226**	ug/L		2/9/2017

Method Reference(s): EPA 8260C
EPA 5030C

Tentatively Identified Compound results are estimated values, based on Internal Standard response factors.

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 170440

Client: **Ravi Engineering & Land Surveying, P.C.**

Project Reference: 690 Portland

Sample Identifier: Trip Blank
Lab Sample ID: 170440-02
Matrix: Water
Date Sampled: 2/7/2017
Date Received: 2/7/2017

Volatile Tentatively Identified Compounds

Tentatively Identified Compound	Result	Units	Qualifier	Date Analyzed
Unknown	**13.0**	ug/L		2/9/2017
Total Reported TICS	**13.0**	ug/L		2/9/2017

Method Reference(s): EPA 8260C
EPA 5030C

Tentatively Identified Compound results are estimated values, based on Internal Standard response factors.

Report Prepared Monday, February 13, 2017

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Analytical Report Appendix

The reported results relate only to the samples as they have been received by the laboratory.

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All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

Low level Volatiles blank reports for soil/solid matrix are based on a nominal 5 gram weight. Sample results and reporting limits are based on actual weight, which may be more or less than 5 grams.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified. Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an "A" suffix.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of analyte-specific, frequently used data flags and their meaning:

"<" = Analyzed for but not detected at or above the quantitation limit.
"E" = Result has been estimated, calibration limit exceeded.
"Z" = See case narrative.
"D" = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.
"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.
"B" = Method blank contained trace levels of analyte. Refer to included method blank report.
"J" = Result estimated between the quantitation limit and half the quantitation limit.
"L" = Laboratory Control Sample recovery outside accepted QC limits.
"P" = Concentration differs by more than 40% between the primary and secondary analytical columns.
"NC" = Not calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.
"" = Indicates any recoveries outside associated acceptance windows. Surrogate outliers in samples are presumed matrix effects. LCS demonstrates method compliance unless otherwise noted.*
"(1)" = Indicates data from primary column used for QC calculation.
"A" = denotes a parameter for which ELAP does not offer approval as part of their laboratory certification program.
"F" = denotes a parameter for which Paradigm does not carry certification, the results for which should therefore only be used where ELAP certification is not required, such as personal exposure assessment.

GENERAL TERMS AND CONDITIONS
LABORATORY SERVICES

These Terms and Conditions embody the whole agreement of the parties in the absence of a signed and executed contract between the Laboratory (LAB) and Client. They shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties. The LAB specifically rejects all additional, inconsistent, or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Client to the LAB. The invalidity or unenforceability in whole or in part of any provision, term, or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions. No waiver by LAB of any provision, term, or condition hereof or of any breach by or obligation of the Client hereunder shall constitute a waiver of such provision, term, or condition on any other occasion or a waiver of any other breach by or obligation of the Client. This agreement shall be administered and interpreted under the laws of the state which services are procured.

Warranty. Recognizing that the nature of many samples is unknown and that some may contain potentially hazardous components, LAB warrants only that it will perform testing services, obtain findings, and prepare reports in accordance with generally accepted analytical laboratory principles and practices at the time of performance of services. LAB makes no other warranty, express or implied.

Scope and Compensation. LAB agrees to perform the services described in the chain of custody to which these terms and conditions are attached. Unless the parties agree in writing to the contrary, the duties of LAB shall not be construed to exceed the services specifically described. LAB will use LAB default method for all tests unless specified otherwise on the Work Order.

Payment terms are net 30 days from the date of invoice. All overdue payments are subject to an interest charge of one and one-half percent (1-1/2%) per month or a portion thereof. Client shall also be responsible for costs of collection, including payment of reasonable attorney fees if such expense is incurred. The prices, unless stated, do not include any sale, use or other taxes. Such taxes will be added to invoice prices when required.

Prices. Compensation for services performed will be based on the current Lab Analytical Fee Schedule or on quotations agreed to in writing by the parties. Turnaround time based charges are determined from the time of resolution of all work order questions. Testimony, court appearances or data compilation for legal action will be charged separately. Evaluation and reporting of initial screening runs may incur additional fees.

Limitations of Liability. In the event of any error, omission, or other professional negligence, the sole and exclusive responsibility of LAB shall be to re-perform the deficient work at its own expense and LAB shall have no other liability whatsoever. All claims shall be deemed waived unless made in writing and received by LAB within ninety (90) days following completion of services.

LAB shall have no liability, obligation, or responsibility of any kind for losses, costs, expenses, or other damages (including but not limited to any special, direct, incidental or consequential damages) with respect to LAB's services or results.

All results provided by LAB are strictly for the use of its clients and LAB is in no way responsible for the use of such results by clients or third parties. All reports should be considered in their entirety, and LAB is not responsible for the separation, detachment, or other use of any portion of these reports. Client may not assign the lab report without the written consent of the LAB.

Client covenants and agrees, at its/his/her sole expense, to indemnify, protect, defend, and save harmless the LAB from and against any and all damages, losses, liabilities, obligations, penalties, claims, litigation, demands, defenses, judgments, suits, actions, proceedings, costs, disbursements and/or expenses (including, without limitation attorneys' and experts' fees and disbursements) of any kind whatsoever which may at any time be imposed upon, incurred by or asserted or awarded against client relating to, resulting from or arising out of (a) the breach of this agreement by this client, (b) the negligence of the client in handling, delivering or disclosing any hazardous substance, (c) the violation of the Client of any applicable law, (d) non-compliance by the Client with any environmental permit or (e) a material misrepresentation in disclosing the materials to be tested.

Hazard Disclosure. Client represents and warrants that any sample delivered to LAB will be preceded or accompanied by complete written disclosure of the presence of any hazardous substances known or suspected by Client. Client further warrants that any sample containing any hazardous substance that is to be delivered to LAB will be packaged, labeled, transported, and delivered properly and in accordance with applicable laws.

Sample Handling. Prior to LAB's acceptance of any sample (or after any revocation of acceptance), the entire risk of loss or of damage to such sample remains with Client. Samples are accepted when receipt is acknowledged on chain of custody documentation. In no event will LAB have any responsibility for the action or inaction of any carrier shipping or delivering any sample to or from LAB premises.

Client authorizes LAB to proceed with the analysis of samples as received by the laboratory, recognizing that any samples not in compliance with all current DOH-ELAP-NELAP requirements for containers, preservation or holding time will be noted as such on the final report.

Disposal of hazardous waste samples is the responsibility of the Client. If the Client does not wish such samples returned, LAB may add storage and disposal fees to the final invoice. Maximum storage time for samples is 30 days after completion of analysis unless modified by applicable state or federal laws. Client will be required to give the LAB written instructions concerning disposal of these samples.

LAB reserves the absolute right, exercisable at any time, to refuse to receive delivery of, refuse to accept, or revoke acceptance of any sample, which, in the sole judgment of LAB (a) is of unsuitable volume, (b) may be or become unsuitable for or may pose a risk in handling, transport, or processing for any health, safety, environmental or other reason whether or not due to the presence in the sample of any hazardous substance, and whether or not such presence has been disclosed to LAB by Client or (c) if the condition or sample date make the sample unsuitable for analysis.

Legal Responsibility. LAB is solely responsible for performance of this contract, and no affiliated company, director, officer, employee, or agent shall have any legal responsibility hereunder, whether in contract or tort including negligence.

Assignment. LAB may assign its performance obligations under this contract to other parties, as it deems necessary. LAB shall disclose to Client any assignee (subcontractor) by ELAP ID # on the submitted final report.

Force Majeure. LAB shall have no responsibility or liability to the Client for any failure or delay in performance by LAB, which results in whole or in part from any cause or circumstance beyond the reasonable control of LAB. Such causes and circumstances shall include, but not limited to, acts of God, acts or orders of any government authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, difficulties or delays in transportation, mail or delivery services, inability to obtain sufficient services or supplies from LAB's usual suppliers, or any other cause beyond LAB's reasonable control.

Law. This contract shall be continued under the laws of the State of New York without regard to its conflicts of laws provision.

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

1 of 2

CHAIN OF CUSTODY

PARADIGM ENVIRONMENTAL SERVICES, INC

REPORT TO:		INVOICE TO:		
CLIENT: RAVI		CLIENT: RAVI		LAB PROJECT ID: 170440
ADDRESS:		ADDRESS:		
CITY:	STATE: ZIP	CITY:	STATE: ZIP:	Quotation #:
PHONE:		PHONE:		Email:
ATTN: ←		ATTN: Lynn Zicari lzicari@ravieng.com		

PROJECT REFERENCE

C90 Portland

Matrix Codes:

AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	TCL VOCs	TICs									REMARKS	PARADIGM LAB SAMPLE NUMBER
2/7/17	2:15		X	RW1_02072017	WG	1	X	X									7	01
2/7/17	2:15		X	RW1_02072017	WG	1	X	X										
				Trip Blank	WA	1												02
				CPCL2 GP 2-7-17														
				one sample + TripBlk														
				Closed SDG														

Turnaround Time		Report Supplements		
Availability contingent upon lab approval; additional fees may apply.				
Standard 5 day	☒	None Required	☐	None Required ☐
10 day	☐	Batch QC	☐	Basic EDD ☐
Rush 3 day	☐	Category A	☐	NYSDEC EDD ☒
Rush 2 day	☐	Category B	☒	
Rush 1 day	☐			
Other please indicate date needed:	☐	Other please indicate package needed:	☐	Other EDD please indicate EDD needed : ☐

Dave DeYoung 2/7/17
Sampled By Date/Time

Alexa Barber 2/7/17 2:40
Relinquished By Date/Time

Jane Dalora 2/7/17 1440
Received By Date/Time

2/7/17 16:09
Received @ Lab By Date/Time

5°C 2/7/17 14:41

Total Cost:

P.I.F.

By signing this form, client agrees to Paradigm Terms and Conditions (reverse).

Custody Seal N/A, Samples delivered by client, GP 2/7/17

See additional page for sample conditions.

Chain of Custody Supplement

Client: Ravi Engineering **Completed by:** Glenn Pezzulo

Lab Project ID: 170440 **Date:** 2/7/17

Sample Condition Requirements

Per NELAC/ELAP 210/241/242/243/244

Condition	*NELAC compliance with the sample condition requirements upon receipt* Yes	No	N/A
Container Type	X		
Comments			
Transferred to method-compliant container			X
Headspace (<1 mL)	X		
Comments			
Preservation	X		
Comments			
Chlorine Absent (<0.10 ppm per test strip)			X
Comments			
Holding Time	X		
Comments			
Temperature	X		
Comments	5°C 2/7/17 14:4		
Sufficient Sample Quantity	X		
Comments			

RAVI ENGINEERING & LAND SURVEYING, P.C.

APPENDIX E

Data Usability Summary Reports

DATA USABILITY SUMMARY REPORT (DUSR)

690 Portland Ave IRM
Rochester, NY
NYSDEC BCP # C 828151

SDG: 5435-01

4 Soil Samples

Prepared for:

Ravi Engineering & Land Surveying, P.C.
2110 South Clinton Ave
Rochester, NY 14618

March 2017

Table of Contents

Tables

REVIEWER'S NARRATIVE
SDG 5435-01

The data associated with this Sample Delivery Group (SDG) 5435-01, analyzed by Paradigm Environmental Services, Inc. Rochester, NY have been reviewed in accordance with assessment criteria provided by the New York State Department of Environmental Conservation following the review procedures provided in the USEPA Functional Guidelines for evaluating organic and inorganic data.

All analytical results reported by the laboratory are considered valid and acceptable except results that have been qualified as rejected, "R". Results qualified as estimated "J", or as non-detects, "U", are considered usable for the purpose of evaluating water and/or soil quality. However, these qualifiers indicate that the accuracy and/or precision of the analytical result is questionable. A summary of all data that have been qualified and the reasons for qualification are provided in the following data usability summary report (DUSR).

Two facts should be noted by all data users. First, the "R" qualifier means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the analyte is present or not. Values qualified with an "R" should not appear on the final data tables because they cannot be relied upon, even as the last resort. Second, no analyte concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error.

Reviewer's Signature: Michael K Perry Date: 2/7/17

Michael K. Perry
Chemist

1.0 SUMMARY

SITE:	690 Portland Ave. IRM Rochester, NY
SAMPLING DATE:	December 15, 2016
SAMPLE TYPE:	4 soil samples
LABORATORY:	Paradigm Environmental Services, Inc. Rochester, NY
SDG No.:	5435-01

2.0 INTRODUCTION

This data usability summary report (DUSR) was prepared in accordance with guidance provided by the New York State Department of Environmental Conservation (NYSDEC). The DUSR is based on a review and evaluation of the laboratory analytical data package. Specifically, the NYSDEC guidance recommends review and evaluation of the following elements of the data package:

- Completeness of the data package as defined under the requirements of the NYSDEC Analytical Services Protocols (ASP) Category B or the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) deliverables,
- Compliance with established analyte holding times,
- Adherence to quality control (QC) limits and specifications for blanks, instrument tuning and calibration, surrogate recoveries, spike recoveries, laboratory duplicate analyses, and other QC criteria,
- Adherence to established analytical protocols,
- Conformance of data summary sheets with raw analytical data, and
- Use of correct data qualifiers.

Data deficiencies, analytical protocol deviations, and quality control problems identified using the review criteria above and their effect on the analytical results are discussed in this report.

3.0 SAMPLE AND ANALYSIS SUMMARY

The data package consists of analytical results for four soil samples collected on Decmber 15, 2016. These samples were analyzed for volatile organic compounds.

All laboratory analyses were performed by Paradigm Environmental Services, Inc., Rochester, NY and analyzed as SDG 5435-01. The analytical results were provided in NYSDEC ASP Category B format, which includes all raw analytical data and laboratory QC data.

4.0 GUIDANCE DOCUMENTS AND DATA REVIEW CRITERIA

The guidance documents used for reviewing laboratory quality control (QC) data and assigning data qualifiers (flags) to analytical results are listed in Table 4-1. The QC limits established in the documents applicable to this data review were used to assess the quality of the analytical results. In some cases, however, QC limits established internally by the laboratory were taken into account to determine data quality.

The QC criteria considered for assessing the usability of the reported analytical results provided for each analyte type (i.e. VOCs, SVOCs, metals, etc.) are listed in Table 4-2. These criteria may vary with the analytical method utilized by the laboratory. These criteria comply with the guidance recommended in Section 2.0 above.

5.0 DATA VALIDATION QUALIFIERS

The letter qualifiers (flags) used to define data usability are described briefly below. These letters are assigned by the data validator to analytical results having questionable accuracy and/or precision as determined by reviewing the laboratory QC data associated with the analytical results.

TABLE 4-1

DATA VALIDATION GUIDANCE DOCUMENTS

Analyte Type	Validation Guidance
VOCs	USEPA, 2008, Validating Volatile Organic Compounds By Gas Chromatography/Mass Spectrometry; SW-846 Method 8260B; SOP # HW-24, Rev. 2. USEPA, 2008, Statement of Work for Organic Analysis of Low/Medium Concentration of Volatile Organic Compounds SOM01.2; SOP HW-33, Rev. 2.
SVOCs	USEPA, 2007, Statement of Work for Organic Analysis of Low/Medium Concentration of Semivolatile Organic Compounds SOM01.2; SOP HW-35, Rev. 1.
Pesticides/PCBs	USEPA, 2006, CLP Organics Data Review and Preliminary Review (CLP/SOW OLMO 4.3); SOP # HW-6, Rev. 14, Part C.
Metals	USEPA, 2006, Validation of Metals for the Contract Laboratory Program (CLP) based on SOW ILMO 5.3 (SOP Revision 13), SOP # HW-2, Rev. 13.
Gen Chemistry	NYSDEC, 2005, Analytical Services Protocols (ASP)
VOCs (Ambient air)	USEPA, 2006, Validating Air Samples, Volatile Organic Analysis of Ambient Air in Canister by Method TO-15; SOP # HW-31, Rev. 4.

TABLE 4-2

QUALITY CONTROL CRITERIA USED FOR VALIDATING LABORATORY ANALYTICAL DATA

VOCs	SVOCs	Pesticides/PCBs	Metals	Gen Chemistry	Method TO-15
Completeness of Pkg	Completeness of Pkg	Completeness of Pkg	Completeness of Pkg	Completeness of Pkg	Completeness of Pkg
Sample Condition	Sample Condition	Sample Condition	Sample Condition	Sample Condition	Sample Condition
Holding Time	Holding Time	Holding Time	Holding Time	Holding Times	Holding Time
System Monitoring Compounds	Surrogate Recoveries	Surrogate Recoveries	Initial/Continuing Calibration	Calibration	Canister Certification
Lab Control Sample	Lab Control Sample	Matrix Spikes	CRDL Standards	Lab Control Samples	Lab Control Sample
Matrix Spikes	Matrix Spikes	Blanks	Blanks	Blanks	Instrument Tuning
Blanks	Blanks	Instrument Calibration & Verification	Interference Check Sample	Spike Recoveries	Blanks
Instrument Tuning	Instrument Tuning	Analyte ID	Spike Recoveries	Lab Duplicates	Initial Calibration & System Performance
Internal Standards	Internal Standards	Lab Qualifiers	Lab Duplicate		Daily Calibration
Initial Calibration	Initial Calibration	Field Duplicate	Lab Control Sample		Field Duplicate
Continuing Calibration	Continuing Calibration		ICP Serial Dilutions		
Lab Qualifiers	Lab Qualifiers		Lab Qualifiers		
Field Duplicate	Field Duplicate		Field Duplicate		

The laboratory may also use various letters and symbols to flag analytical results generated when QC limits were exceeded. The meanings of these flags may differ from those used by the independent data validator. Those used by the laboratory are provided with the analytical results.

NOTE: The assignment of data qualifiers by the data reviewer (validator) to laboratory analytical results should not necessarily be interpreted by the data user as a measure of laboratory ability or proficiency. Rather, the qualifiers are intended to provide a measure of data accuracy and precision to the data user, which, for example, may provide a level of confidence in determining whether or not standards or cleanup objectives have been met.

U The analyte was analyzed for but was not detected at or above the sample quantitation limit.

J The analyte was positively identified; the associated numerical value is the *approximate* concentration of the analyte in the sample. (The magnitude of any ± value associated with the result is not determined by data validation).

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is *approximate* and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R The sample result is rejected (i.e., is unusable) due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".

JN The analyte is considered to be "presumptively present." The associated numerical value represents its *approximate* concentration.

The validated analytical results are attached to this report. Validation qualifiers (flags) are indicated using red ink. Data sheets having qualified data are signed and dated by the data reviewer.

6.0 RESULTS OF THE DATA REVIEW

The results of the data review are summarized in Tables 6-1. The table list the samples where QC criteria were found to exceed acceptable limits and the actions taken to qualify the associated analytical results.

Note: The laboratory has flagged all Trichloroethene results with a "Z" due to suspected storage cross contamination. Since the laboratory did not include any storage, holding or trip blanks in the report, there is no way to confirm this contamination. However, there is no reason not to assume the laboratory concern is not valid and the data should be considered suspect.

7.0 TOTAL USABLE DATA

For SDG 5435-01, four samples were analyzed and results were reported for 212 analytes. Four results were rejected. Even though some results were flagged with a "J" as estimated, all other results (98 %) are considered usable. See the summary table for the analyses that have been rejected and the associated QC reasons.

Table 6-1 VOCs

SAMPLES AFFECTED	ANALYTES	ACTION	QC VIOLATION	COMMENTS
All samples	2-Butanone	none	Initial calibration RRF < 0.05	Based on the new low responders rule from SOM2.1, the RRF <0.01 is used
All samples	1,4-Dioxane	R	Initial calibration RRF < 0.005 (0.004)	Based on the new low responders rule from SOM2.1, the RRF <0.005 is used

ACRONYMS

BSP	Blank Spike
CCAL	Continuing Calibration
CCB	Continuing Calibration Blank
CCV	Continuing Calibration Verification
CRDL	Contract Required Detection Limit
CRQL	Contract Required Quantitation Limit
%D	Percent Difference
ICAL	Initial Calibration
ICB	Initial Calibration Blank
IS	Internal Standard
LCS	Laboratory Control Sample
MS/MSD	Matrix Spike/Matrix Spike Duplicate
QA	Quality Assurance
QC	Quality Control
%R	Percent recovery
RPD	Relative Percent Difference
%RSD	Percent Relative Standard Deviation
TAL	Target Analyte List (metals)
TCL	Target Compound List (organics)

Appendix A

Validated Analytical Results

LAB PROJECT NARRATIVE: 165435
PROJECT NAME: 690 Portland Ave IRM
SDG: 5435-01
CLIENT: Ravi Engineering & Land Surveying, P.C.

Four soil samples were collected by the client on 12/15/2016 and received at the Paradigm laboratory on the same day. Container and holding times were acceptable at time of receipt; the samples were received at 4° Centigrade and were on ice. The samples were submitted with the Chains-of-Custody requesting the TCL list for VOCs plus TICs. The analysis was performed using EPA SW-846 Methods and the associated holding times.

The items noted in this case narrative address compliance with the referenced methods, NYSDOH ELAP rules, and any project specific data quality requirements. These may be different from the usability criteria referenced in any "Functional Guidelines" or other data review standards used by data validators.

GENERAL NOTES

The initial and continuing calibration reports are only evaluated for compounds that are on the sample summary report.

Regarding results on QC summary forms versus included raw data, due to calculations made at the instrument where many significant figures may be used, there may be slight discrepancies between the summary report result and that recorded on the raw data. This does not affect data usability.

Regarding initial calibrations, it should be noted that the Quantitation Report concentrations supplied for the initial calibration reflect the calibration prior to updating. The response factors and areas are correct.

Regarding Quantitation Reports, it should be noted that the "#" symbol that appears on some of the Quantitation Reports is a software artifact and should be disregarded.

VOLATILES

Soil samples were not sampled per EPA method 5035A compliance rules. Thus, an extra note has been added to all VOC reports.

All hits for Trichloroethene(TCE) have been flagged with a "Z" due to suspected storage cross contamination from a sample that was high in TCE from another sampling event at this site. A project memo to this effect was also included with the Summary Report sent previously.

Holding times were met for all samples.

The surrogate recoveries for the samples and the QC samples were within QC limits.

Site specific QC was not requested on this SDG. The Laboratory Control Sample recovered within acceptance limits.

The method blank was free from contamination within the reportable ranges.

The instrument tunes passed all criteria.

The internal standards areas and retention times were within acceptance limits for the samples and the associated QC.

All data for the initial calibration was within acceptance limits. Compounds flagged with an "*" on the summary table have been calibrated using a non-average Response Factor calibration curve. The supporting curves are located after the initial calibration table.

All continuing calibration data was within acceptance limits.

(signed) M. Mill for: (date) 2/8/17

Bruce Hoogesteger- President

SDG# : 5435-01
LAB PROJECT #: 165435
CLIENT: Ravi Engineering & Land Surveying, P.C.
PROJECT NAME: 690 Portland Ave IRM

BATCH COMPLETE: 12/15/2016
DATE DUE: 1/16/2017
PROTOCOL: SW846

LAB.SAMPLE#	FIELD ID	MATRIX	REQUESTED ANALYSIS	DATE SAMPLED	DATE REC'D
165435-01	IRM-SS01-20161215	Soil	TCL-VOA+TICs	12/15/2016	12/15/2016
165435-02	IRM-SS02-20161215	Soil	TCL-VOA+TICs	12/15/2016	12/15/2016
165435-03	IRM-SS03-20161215	Soil	TCL-VOA+TICs	12/15/2016	12/15/2016
165435-04	IRM-SS04-20161215	Soil	TCL-VOA+TICs	12/15/2016	12/15/2016

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

PARADIGM

1 of 2

CHAIN OF CUSTODY

REPORT TO:		INVOICE TO:		
CLIENT: RAVI		CLIENT:		LAB PROJECT ID 165435
ADDRESS:		ADDRESS:		
CITY:	STATE: ZIP	CITY:	STATE: ZIP:	Quotation #:
PHONE: 506-6975		PHONE:		Email: pmorton@ravieng.com lzicari@ravieng.com Abarber@ravieng.com
ATTN: Lynn Zicari		ATTN:		

PROJECT REFERENCE
690 Portland Ave
IRM

Matrix Codes:
AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	TCL VOC +TIC's	CRLZ 12-21-16 [illegible] 1430									REMARKS	PARADIGM LAB SAMPLE NUMBER
12/15/16			X	IRM-SS01-20161215	SO	1	X											01
↓			X	IRM-SS02-20161215	↓	↓	X											02
↓			X	IRM-SS03-20161215	↓	↓	X											03
↓			X	IRM-SS04-20161215	↓	↓	X											04

Turnaround Time		Report Supplements			
Availability contingent upon lab approval; additional fees may apply.					
Standard 5 day	[X]	None Required	[ ]	None Required	[ ]
10 day	[ ]	Batch QC	[ ]	Basic EDD	[ ]
Rush 3 day	[ ]	Category A	[ ]	NYSDEC EDD	[X]
Rush 2 day	[ ]	Category B	[X]		
Rush 1 day	[ ]				
Other please indicate date needed:	[ ]	Other please indicate package needed:	[ ]	Other EDD please indicate EDD needed:	[ ]

Lynn Zicari — 12/15/16
Sampled By — Date/Time

Lynn Zicari — 12/15/16 1615
Relinquished By — Date/Time

[signature] — 12/15/16 1615
Received By — Date/Time

[signature] — 12/15/16 16:31
Received @ Lab By — Date/Time

Total Cost:

P.I.F.

4°C iced 12/15/16 16:25

By signing this form, client agrees to Paradigm Terms and Conditions (reverse).

Custody Seal N/A, Samples delivered by client @ 12/15/16

See additional page for sample conditions.

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 165435

Client: Ravi Engineering & Land Surveying, P.C.

Project Reference: 690 Portland Ave IRM

Sample Identifier:	IRM-SS01-20161215		
Lab Sample ID:	165435-01	**Date Sampled:**	12/15/2016
Matrix:	Soil	**Date Received:**	12/15/2016

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 3.93	ug/Kg		12/22/2016 13:36
1,1,2,2-Tetrachloroethane	< 3.93	ug/Kg		12/22/2016 13:36
1,1,2-Trichloroethane	< 3.93	ug/Kg		12/22/2016 13:36
1,1-Dichloroethane	< 3.93	ug/Kg		12/22/2016 13:36
1,1-Dichloroethene	< 3.93	ug/Kg		12/22/2016 13:36
1,2,3-Trichlorobenzene	< 9.82	ug/Kg		12/22/2016 13:36
1,2,4-Trichlorobenzene	< 9.82	ug/Kg		12/22/2016 13:36
1,2-Dibromo-3-Chloropropane	< 19.6	ug/Kg		12/22/2016 13:36
1,2-Dibromoethane	< 3.93	ug/Kg		12/22/2016 13:36
1,2-Dichlorobenzene	**8.03**	ug/Kg		12/22/2016 13:36
1,2-Dichloroethane	< 3.93	ug/Kg		12/22/2016 13:36
1,2-Dichloropropane	< 3.93	ug/Kg		12/22/2016 13:36
1,3-Dichlorobenzene	< 3.93	ug/Kg		12/22/2016 13:36
1,4-Dichlorobenzene	**2.15**	ug/Kg	J	12/22/2016 13:36
1,4-dioxane	~~< 39.3~~ R	ug/Kg		12/22/2016 13:36
2-Butanone	< 19.6	ug/Kg		12/22/2016 13:36
2-Hexanone	< 9.82	ug/Kg		12/22/2016 13:36
4-Methyl-2-pentanone	< 9.82	ug/Kg		12/22/2016 13:36
Acetone	< 19.6	ug/Kg		12/22/2016 13:36
Benzene	< 3.93	ug/Kg		12/22/2016 13:36
Bromochloromethane	< 9.82	ug/Kg		12/22/2016 13:36
Bromodichloromethane	< 3.93	ug/Kg		12/22/2016 13:36
Bromoform	< 9.82	ug/Kg		12/22/2016 13:36
Bromomethane	< 3.93	ug/Kg		12/22/2016 13:36
Carbon disulfide	< 3.93	ug/Kg		12/22/2016 13:36
Carbon Tetrachloride	< 3.93	ug/Kg		12/22/2016 13:36
Chlorobenzene	< 3.93	ug/Kg		12/22/2016 13:36

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Report Prepared Thursday, December 22, 2016

MKP 3/6/17

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 165435

Client: Ravi Engineering & Land Surveying, P.C.

Project Reference: 690 Portland Ave IRM

Sample Identifier: IRM-SS01-20161215
Lab Sample ID: 165435-01 **Date Sampled:** 12/15/2016
Matrix: Soil **Date Received:** 12/15/2016

Chloroethane	< 3.93	ug/Kg		12/22/2016	13:36
Chloroform	< 3.93	ug/Kg		12/22/2016	13:36
Chloromethane	< 3.93	ug/Kg		12/22/2016	13:36
cis-1,2-Dichloroethene	**2.27**	ug/Kg	J	12/22/2016	13:36
cis-1,3-Dichloropropene	< 3.93	ug/Kg		12/22/2016	13:36
Cyclohexane	< 19.6	ug/Kg		12/22/2016	13:36
Dibromochloromethane	< 3.93	ug/Kg		12/22/2016	13:36
Dichlorodifluoromethane	< 3.93	ug/Kg		12/22/2016	13:36
Ethylbenzene	**2.16**	ug/Kg	J	12/22/2016	13:36
Freon 113	< 3.93	ug/Kg		12/22/2016	13:36
Isopropylbenzene	< 3.93	ug/Kg		12/22/2016	13:36
m,p-Xylene	**7.23**	ug/Kg		12/22/2016	13:36
Methyl acetate	< 3.93	ug/Kg		12/22/2016	13:36
Methyl tert-butyl Ether	< 3.93	ug/Kg		12/22/2016	13:36
Methylcyclohexane	< 3.93	ug/Kg		12/22/2016	13:36
Methylene chloride	< 9.82	ug/Kg		12/22/2016	13:36
o-Xylene	**2.59**	ug/Kg	J	12/22/2016	13:36
Styrene	**6.93**	ug/Kg	J	12/22/2016	13:36
Tetrachloroethene	**95.5**	ug/Kg		12/22/2016	13:36
Toluene	**3.17**	ug/Kg	J	12/22/2016	13:36
trans-1,2-Dichloroethene	< 3.93	ug/Kg		12/22/2016	13:36
trans-1,3-Dichloropropene	< 3.93	ug/Kg		12/22/2016	13:36
Trichloroethene	**158**	ug/Kg		12/22/2016	13:36
Trichlorofluoromethane	< 3.93	ug/Kg		12/22/2016	13:36
Vinyl chloride	< 3.93	ug/Kg		12/22/2016	13:36

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 165435

Client: Ravi Engineering & Land Surveying, P.C.

Project Reference: 690 Portland Ave IRM

Sample Identifier: IRM-SS01-20161215
Lab Sample ID: 165435-01 **Date Sampled:** 12/15/2016
Matrix: Soil **Date Received:** 12/15/2016

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
1,2-Dichloroethane-d4	**106**	82 - 124		12/22/2016	13:36
4-Bromofluorobenzene	**92.1**	80.5 - 116		12/22/2016	13:36
Pentafluorobenzene	**96.5**	88.7 - 112		12/22/2016	13:36
Toluene-D8	**94.7**	79.1 - 120		12/22/2016	13:36

Method Reference(s): EPA 8260C
EPA 5035A - L
Data File: x37958.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.

Report Prepared Thursday, December 22, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 165435

Client: Ravi Engineering & Land Surveying, P.C.

Project Reference: 690 Portland Ave IRM

Sample Identifier: IRM-SS01-20161215
Lab Sample ID: 165435-01
Matrix: Soil

Date Sampled: 12/15/2016
Date Received: 12/15/2016

Volatile Tentatively Identified Compounds

Tentatively Identified Compound	Result	Units	Qualifier	Date Analyzed
Unknown aromatic	76.2	ug/Kg	J	12/22/2016
Total Reported TICS	76.2	ug/Kg		12/22/2016

Method Reference(s): EPA 8260C
EPA 5035A - L

Tentatively Identified Compound results are estimated values, based on Internal Standard response factors.

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Report Prepared Thursday, December 22, 2016

MWP 3/6/17

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 165435

Client: Ravi Engineering & Land Surveying, P.C.

Project Reference: 690 Portland Ave IRM

Sample Identifier: IRM-SS02-20161215
Lab Sample ID: 165435-02 **Date Sampled:** 12/15/2016
Matrix: Soil **Date Received:** 12/15/2016

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 16.7	ug/Kg		12/22/2016 14:00
1,1,2,2-Tetrachloroethane	< 16.7	ug/Kg		12/22/2016 14:00
1,1,2-Trichloroethane	< 16.7	ug/Kg		12/22/2016 14:00
1,1-Dichloroethane	< 16.7	ug/Kg		12/22/2016 14:00
1,1-Dichloroethene	< 16.7	ug/Kg		12/22/2016 14:00
1,2,3-Trichlorobenzene	< 41.7	ug/Kg		12/22/2016 14:00
1,2,4-Trichlorobenzene	< 41.7	ug/Kg		12/22/2016 14:00
1,2-Dibromo-3-Chloropropane	< 83.5	ug/Kg		12/22/2016 14:00
1,2-Dibromoethane	< 16.7	ug/Kg		12/22/2016 14:00
1,2-Dichlorobenzene	**19.7**	ug/Kg		12/22/2016 14:00
1,2-Dichloroethane	< 16.7	ug/Kg		12/22/2016 14:00
1,2-Dichloropropane	< 16.7	ug/Kg		12/22/2016 14:00
1,3-Dichlorobenzene	< 16.7	ug/Kg		12/22/2016 14:00
1,4-Dichlorobenzene	< 16.7	ug/Kg		12/22/2016 14:00
1,4-dioxane	~~< 167~~ R	ug/Kg		12/22/2016 14:00
2-Butanone	< 83.5	ug/Kg		12/22/2016 14:00
2-Hexanone	< 41.7	ug/Kg		12/22/2016 14:00
4-Methyl-2-pentanone	< 41.7	ug/Kg		12/22/2016 14:00
Acetone	< 83.5	ug/Kg		12/22/2016 14:00
Benzene	< 16.7	ug/Kg		12/22/2016 14:00
Bromochloromethane	< 41.7	ug/Kg		12/22/2016 14:00
Bromodichloromethane	< 16.7	ug/Kg		12/22/2016 14:00
Bromoform	< 41.7	ug/Kg		12/22/2016 14:00
Bromomethane	< 16.7	ug/Kg		12/22/2016 14:00
Carbon disulfide	< 16.7	ug/Kg		12/22/2016 14:00
Carbon Tetrachloride	< 16.7	ug/Kg		12/22/2016 14:00
Chlorobenzene	< 16.7	ug/Kg		12/22/2016 14:00

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Report Prepared Thursday, December 22, 2016

MKP 3/6/17

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 165435

Client: Ravi Engineering & Land Surveying, P.C.

Project Reference: 690 Portland Ave IRM

Sample Identifier: IRM-SS02-20161215
Lab Sample ID: 165435-02 **Date Sampled:** 12/15/2016
Matrix: Soil **Date Received:** 12/15/2016

Chloroethane	< 16.7	ug/Kg	12/22/2016	14:00
Chloroform	< 16.7	ug/Kg	12/22/2016	14:00
Chloromethane	< 16.7	ug/Kg	12/22/2016	14:00
cis-1,2-Dichloroethene	**999**	ug/Kg	12/22/2016	14:00
cis-1,3-Dichloropropene	< 16.7	ug/Kg	12/22/2016	14:00
Cyclohexane	< 83.5	ug/Kg	12/22/2016	14:00
Dibromochloromethane	< 16.7	ug/Kg	12/22/2016	14:00
Dichlorodifluoromethane	< 16.7	ug/Kg	12/22/2016	14:00
Ethylbenzene	< 16.7	ug/Kg	12/22/2016	14:00
Freon 113	< 16.7	ug/Kg	12/22/2016	14:00
Isopropylbenzene	< 16.7	ug/Kg	12/22/2016	14:00
m,p-Xylene	< 16.7	ug/Kg	12/22/2016	14:00
Methyl acetate	< 16.7	ug/Kg	12/22/2016	14:00
Methyl tert-butyl Ether	< 16.7	ug/Kg	12/22/2016	14:00
Methylcyclohexane	< 16.7	ug/Kg	12/22/2016	14:00
Methylene chloride	< 41.7	ug/Kg	12/22/2016	14:00
o-Xylene	< 16.7	ug/Kg	12/22/2016	14:00
Styrene	< 41.7	ug/Kg	12/22/2016	14:00
Tetrachloroethene	**73.3**	ug/Kg	12/22/2016	14:00
Toluene	< 16.7	ug/Kg	12/22/2016	14:00
trans-1,2-Dichloroethene	**29.7**	ug/Kg	12/22/2016	14:00
trans-1,3-Dichloropropene	< 16.7	ug/Kg	12/22/2016	14:00
Trichloroethene	**1080**	ug/Kg	12/22/2016	14:00
Trichlorofluoromethane	< 16.7	ug/Kg	12/22/2016	14:00
Vinyl chloride	< 16.7	ug/Kg	12/22/2016	14:00

Report Prepared Thursday, December 22, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 165435

Client: Ravi Engineering & Land Surveying, P.C.

Project Reference: 690 Portland Ave IRM

Sample Identifier: IRM-SS02-20161215
Lab Sample ID: 165435-02 **Date Sampled:** 12/15/2016
Matrix: Soil **Date Received:** 12/15/2016

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**103**	82 - 124		12/22/2016 14:00
4-Bromofluorobenzene	**97.8**	80.5 - 116		12/22/2016 14:00
Pentafluorobenzene	**102**	88.7 - 112		12/22/2016 14:00
Toluene-D8	**97.0**	79.1 - 120		12/22/2016 14:00

Method Reference(s): EPA 8260C
EPA 5035A - L
Data File: x37959.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 165435

Client: Ravi Engineering & Land Surveying, P.C.

Project Reference: ~~690~~ Portland Ave IRM

Sample Identifier: IRM-SS02-20161215
Lab Sample ID: 165435-02
Matrix: Soil

Date Sampled: 12/15/2016
Date Received: 12/15/2016

Volatile Tentatively Identified Compounds

Tentatively Identified Compound	Result	Units	Qualifier	Date Analyzed
None Found	< 41.7	ug/Kg		12/22/2016
Total Reported TICS	< 41.7	ug/Kg		12/22/2016

Method Reference(s): EPA 8260C
EPA 5035A - L

Tentatively Identified Compound results are estimated values, based on Internal Standard response factors.

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Thursday, December 22, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 165435

Client: Ravi Engineering & Land Surveying, P.C.

Project Reference: 690 Portland Ave IRM

Sample Identifier:	IRM-SS03-20161215		
Lab Sample ID:	165435-03	**Date Sampled:**	12/15/2016
Matrix:	Soil	**Date Received:**	12/15/2016

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 35.9	ug/Kg		12/22/2016 14:24
1,1,2,2-Tetrachloroethane	< 35.9	ug/Kg		12/22/2016 14:24
1,1,2-Trichloroethane	< 35.9	ug/Kg		12/22/2016 14:24
1,1-Dichloroethane	< 35.9	ug/Kg		12/22/2016 14:24
1,1-Dichloroethene	< 35.9	ug/Kg		12/22/2016 14:24
1,2,3-Trichlorobenzene	< 89.6	ug/Kg		12/22/2016 14:24
1,2,4-Trichlorobenzene	< 89.6	ug/Kg		12/22/2016 14:24
1,2-Dibromo-3-Chloropropane	< 179	ug/Kg		12/22/2016 14:24
1,2-Dibromoethane	< 35.9	ug/Kg		12/22/2016 14:24
1,2-Dichlorobenzene	< 35.9	ug/Kg		12/22/2016 14:24
1,2-Dichloroethane	< 35.9	ug/Kg		12/22/2016 14:24
1,2-Dichloropropane	< 35.9	ug/Kg		12/22/2016 14:24
1,3-Dichlorobenzene	< 35.9	ug/Kg		12/22/2016 14:24
1,4-Dichlorobenzene	< 35.9	ug/Kg		12/22/2016 14:24
1,4-dioxane	< 359	ug/Kg		12/22/2016 14:24
2-Butanone	< 179	ug/Kg		12/22/2016 14:24
2-Hexanone	< 89.6	ug/Kg		12/22/2016 14:24
4-Methyl-2-pentanone	< 89.6	ug/Kg		12/22/2016 14:24
Acetone	< 179	ug/Kg		12/22/2016 14:24
Benzene	< 35.9	ug/Kg		12/22/2016 14:24
Bromochloromethane	< 89.6	ug/Kg		12/22/2016 14:24
Bromodichloromethane	< 35.9	ug/Kg		12/22/2016 14:24
Bromoform	< 89.6	ug/Kg		12/22/2016 14:24
Bromomethane	< 35.9	ug/Kg		12/22/2016 14:24
Carbon disulfide	< 35.9	ug/Kg		12/22/2016 14:24
Carbon Tetrachloride	< 35.9	ug/Kg		12/22/2016 14:24
Chlorobenzene	< 35.9	ug/Kg		12/22/2016 14:24

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Thursday, December 22, 2016

MKP 3/6/17

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 165435

Client: Ravi Engineering & Land Surveying, P.C.

Project Reference: 690 Portland Ave IRM

Sample Identifier: IRM-SS03-20161215
Lab Sample ID: 165435-03 **Date Sampled:** 12/15/2016
Matrix: Soil **Date Received:** 12/15/2016

Chloroethane	< 35.9	ug/Kg	12/22/2016	14:24
Chloroform	< 35.9	ug/Kg	12/22/2016	14:24
Chloromethane	< 35.9	ug/Kg	12/22/2016	14:24
cis-1,2-Dichloroethene	**112**	ug/Kg	12/22/2016	14:24
cis-1,3-Dichloropropene	< 35.9	ug/Kg	12/22/2016	14:24
Cyclohexane	< 179	ug/Kg	12/22/2016	14:24
Dibromochloromethane	< 35.9	ug/Kg	12/22/2016	14:24
Dichlorodifluoromethane	< 35.9	ug/Kg	12/22/2016	14:24
Ethylbenzene	< 35.9	ug/Kg	12/22/2016	14:24
Freon 113	< 35.9	ug/Kg	12/22/2016	14:24
Isopropylbenzene	< 35.9	ug/Kg	12/22/2016	14:24
m,p-Xylene	< 35.9	ug/Kg	12/22/2016	14:24
Methyl acetate	< 35.9	ug/Kg	12/22/2016	14:24
Methyl tert-butyl Ether	< 35.9	ug/Kg	12/22/2016	14:24
Methylcyclohexane	< 35.9	ug/Kg	12/22/2016	14:24
Methylene chloride	< 89.6	ug/Kg	12/22/2016	14:24
o-Xylene	< 35.9	ug/Kg	12/22/2016	14:24
Styrene	< 89.6	ug/Kg	12/22/2016	14:24
Tetrachloroethene	**89.0**	ug/Kg	12/22/2016	14:24
Toluene	< 35.9	ug/Kg	12/22/2016	14:24
trans-1,2-Dichloroethene	< 35.9	ug/Kg	12/22/2016	14:24
trans-1,3-Dichloropropene	< 35.9	ug/Kg	12/22/2016	14:24
Trichloroethene	**739**	ug/Kg	12/22/2016	14:24
Trichlorofluoromethane	< 35.9	ug/Kg	12/22/2016	14:24
Vinyl chloride	< 35.9	ug/Kg	12/22/2016	14:24

Report Prepared Thursday, December 22, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 165435

Client: Ravi Engineering & Land Surveying, P.C.

Project Reference: 690 Portland Ave IRM

Sample Identifier: IRM-SS03-20161215
Lab Sample ID: 165435-03 **Date Sampled:** 12/15/2016
Matrix: Soil **Date Received:** 12/15/2016

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**110**	82 - 124		12/22/2016 14:24
4-Bromofluorobenzene	**101**	80.5 - 116		12/22/2016 14:24
Pentafluorobenzene	**104**	88.7 - 112		12/22/2016 14:24
Toluene-D8	**101**	79.1 - 120		12/22/2016 14:24

Method Reference(s): EPA 8260C
EPA 5035A - L
Data File: x37960.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 165435

Client: Ravi Engineering & Land Surveying, P.C.

Project Reference: 690 Portland Ave IRM

Sample Identifier: IRM-SS03-20161215
Lab Sample ID: 165435-03
Matrix: Soil

Date Sampled: 12/15/2016
Date Received: 12/15/2016

Volatile Tentatively Identified Compounds

Tentatively Identified Compound	Result	Units	Qualifier	Date Analyzed
None Found	< 89.6	ug/Kg		12/22/2016
Total Reported TICS	< 89.6	ug/Kg		12/22/2016

Method Reference(s): EPA 8260C
EPA 5035A - L

Tentatively Identified Compound results are estimated values, based on Internal Standard response factors.

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Thursday, December 22, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 165435

Client: Ravi Engineering & Land Surveying, P.C.

Project Reference: 690 Portland Ave IRM

Sample Identifier:	IRM-SS04-20161215		
Lab Sample ID:	165435-04	**Date Sampled:**	12/15/2016
Matrix:	Soil	**Date Received:**	12/15/2016

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 4.51	ug/Kg		12/22/2016 14:48
1,1,2,2-Tetrachloroethane	< 4.51	ug/Kg		12/22/2016 14:48
1,1,2-Trichloroethane	< 4.51	ug/Kg		12/22/2016 14:48
1,1-Dichloroethane	< 4.51	ug/Kg		12/22/2016 14:48
1,1-Dichloroethene	< 4.51	ug/Kg		12/22/2016 14:48
1,2,3-Trichlorobenzene	< 11.3	ug/Kg		12/22/2016 14:48
1,2,4-Trichlorobenzene	< 11.3	ug/Kg		12/22/2016 14:48
1,2-Dibromo-3-Chloropropane	< 22.6	ug/Kg		12/22/2016 14:48
1,2-Dibromoethane	< 4.51	ug/Kg		12/22/2016 14:48
1,2-Dichlorobenzene	< 4.51	ug/Kg		12/22/2016 14:48
1,2-Dichloroethane	< 4.51	ug/Kg		12/22/2016 14:48
1,2-Dichloropropane	< 4.51	ug/Kg		12/22/2016 14:48
1,3-Dichlorobenzene	< 4.51	ug/Kg		12/22/2016 14:48
1,4-Dichlorobenzene	< 4.51	ug/Kg		12/22/2016 14:48
1,4-dioxane	~~< 45.1~~ R	ug/Kg		12/22/2016 14:48
2-Butanone	< 22.6	ug/Kg		12/22/2016 14:48
2-Hexanone	< 11.3	ug/Kg		12/22/2016 14:48
4-Methyl-2-pentanone	< 11.3	ug/Kg		12/22/2016 14:48
Acetone	**22.1**	ug/Kg	J	12/22/2016 14:48
Benzene	< 4.51	ug/Kg		12/22/2016 14:48
Bromochloromethane	< 11.3	ug/Kg		12/22/2016 14:48
Bromodichloromethane	< 4.51	ug/Kg		12/22/2016 14:48
Bromoform	< 11.3	ug/Kg		12/22/2016 14:48
Bromomethane	< 4.51	ug/Kg		12/22/2016 14:48
Carbon disulfide	< 4.51	ug/Kg		12/22/2016 14:48
Carbon Tetrachloride	< 4.51	ug/Kg		12/22/2016 14:48
Chlorobenzene	< 4.51	ug/Kg		12/22/2016 14:48

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Thursday, December 22, 2016

MKF 3/6/17

PARADIGM
ENVIRONMENTAL SERVICES, INC

Lab Project ID: 165435

Client: Ravi Engineering & Land Surveying, P.C.

Project Reference: 690 Portland Ave IRM

Sample Identifier: IRM-SS04-20161215
Lab Sample ID: 165435-04 **Date Sampled:** 12/15/2016
Matrix: Soil **Date Received:** 12/15/2016

Chloroethane	< 4.51	ug/Kg		12/22/2016	14:48
Chloroform	< 4.51	ug/Kg		12/22/2016	14:48
Chloromethane	< 4.51	ug/Kg		12/22/2016	14:48
cis-1,2-Dichloroethene	**91.4**	ug/Kg		12/22/2016	14:48
cis-1,3-Dichloropropene	< 4.51	ug/Kg		12/22/2016	14:48
Cyclohexane	< 22.6	ug/Kg		12/22/2016	14:48
Dibromochloromethane	< 4.51	ug/Kg		12/22/2016	14:48
Dichlorodifluoromethane	< 4.51	ug/Kg		12/22/2016	14:48
Ethylbenzene	< 4.51	ug/Kg		12/22/2016	14:48
Freon 113	< 4.51	ug/Kg		12/22/2016	14:48
Isopropylbenzene	< 4.51	ug/Kg		12/22/2016	14:48
m,p-Xylene	**5.59**	ug/Kg		12/22/2016	14:48
Methyl acetate	< 4.51	ug/Kg		12/22/2016	14:48
Methyl tert-butyl Ether	< 4.51	ug/Kg		12/22/2016	14:48
Methylcyclohexane	< 4.51	ug/Kg		12/22/2016	14:48
Methylene chloride	< 11.3	ug/Kg		12/22/2016	14:48
o-Xylene	**2.76**	ug/Kg	J	12/22/2016	14:48
Styrene	< 11.3	ug/Kg		12/22/2016	14:48
Tetrachloroethene	**5.39**	ug/Kg		12/22/2016	14:48
Toluene	< 4.51	ug/Kg		12/22/2016	14:48
trans-1,2-Dichloroethene	**32.1**	ug/Kg		12/22/2016	14:48
trans-1,3-Dichloropropene	< 4.51	ug/Kg		12/22/2016	14:48
Trichloroethene	**91.4**	ug/Kg		12/22/2016	14:48
Trichlorofluoromethane	< 4.51	ug/Kg		12/22/2016	14:48
Vinyl chloride	< 4.51	ug/Kg		12/22/2016	14:48

Report Prepared Thursday, December 22, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 165435

Client: Ravi Engineering & Land Surveying, P.C.

Project Reference: 690 Portland Ave IRM

Sample Identifier: IRM-SS04-20161215
Lab Sample ID: 165435-04 **Date Sampled:** 12/15/2016
Matrix: Soil **Date Received:** 12/15/2016

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**109**	82 - 124		12/22/2016 14:48
4-Bromofluorobenzene	**99.3**	80.5 - 116		12/22/2016 14:48
Pentafluorobenzene	**102**	88.7 - 112		12/22/2016 14:48
Toluene-D8	**98.2**	79.1 - 120		12/22/2016 14:48

Method Reference(s): EPA 8260C
EPA 5035A - L
Data File: x37961.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 165435

Client: Ravi Engineering & Land Surveying, P.C.

Project Reference: 690 Portland Ave IRM

Sample Identifier: IRM-SS04-20161215
Lab Sample ID: 165435-04 **Date Sampled:** 12/15/2016
Matrix: Soil **Date Received:** 12/15/2016

Volatile Tentatively Identified Compounds

Tentatively Identified Compound	Result	Units	Qualifier	Date Analyzed
Unknown aromatic	**53.3**	ug/Kg		12/22/2016
Total Reported TICS	**53.3**	ug/Kg		12/22/2016

Method Reference(s): EPA 8260C
EPA 5035A - L

Tentatively Identified Compound results are estimated values, based on Internal Standard response factors.

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Thursday, December 22, 2016

Appendix B

Laboratory QC Documentation

Response Factor Report Instrument #1

Method Path : C:\msdchem\1\METHODS\
Method File : 161222.M
Title : 8260/624 Analysis
Last Update : Thu Dec 22 12:48:23 2016
Response Via : Initial Calibration

Calibration Files
1 =x37948.D 2 =x37949.D 3 =x37950.D 4 =x37951.D 5 =x37952.D 6 =x37953.D 7 =x37954.D

		Compound	1	2	3	4	5	6	7	Avg	%RSD
1)	I	Fluorobenzene	ISTD								
2)	P	Dichlorodifluo...	0.305	0.344	0.313	0.318	0.302	0.293	0.274	0.307	7.17
3)	P	Chloromethane	0.319	0.321	0.282	0.280	0.269	0.284	0.260	0.288	8.17
4)	P	Vinyl chloride	0.300	0.302	0.293	0.291	0.277	0.298	0.284	0.292	3.08
5)	P	Bromomethane	0.238	0.233	0.208	0.198	0.189	0.190	0.156	0.202	13.83
6)	P	Chloroethane	0.164	0.166	0.168	0.162	0.156	0.155	0.143	0.159	5.43
7)	P	Trichlorofluor...	0.602	0.723	0.681	0.668	0.637	0.637	0.578	0.647	7.57
8)		Ethyl ether	0.206	0.204	0.199	0.197	0.191	0.195	0.185	0.197	3.59
9)	P	Freon 113	0.278	0.291	0.281	0.270	0.257	0.264	0.243	0.269	5.99
10)	P	1,1-Dichloroet...	0.494	0.492	0.486	0.474	0.445	0.453	0.415	0.466	6.29
11)	P	Acetone	0.230	0.139	0.101	0.102	0.094	0.093	0.085	0.120	42.67*
12)		Isopropyl Alcohol	0.015	0.018	0.016	0.016	0.015	0.016	0.015	0.016	5.91
13)	P	Carbon disulfide	0.661	0.734	0.705	0.687	0.671	0.715	0.668	0.692	3.97
14)	P	Methyl acetate	0.189	0.151	0.151	0.148	0.143	0.150	0.138	0.153	10.86
15)	P	Methylene chlo...	0.257	0.273	0.257	0.242	0.237	0.248	0.233	0.250	5.45
16)		Acrylonitrile	0.108	0.088	0.081	0.077	0.074	0.080	0.072	0.083	14.63
17)		tert-Butyl Alc...	0.035	0.035	0.037	0.036	0.036	0.037	0.035	0.036	2.70
18)	P	Methyl tert-bu...	0.864	0.955	0.931	0.926	0.886	0.892	0.828	0.898	4.84
19)	P	trans-1,2-Dich...	0.418	0.459	0.438	0.430	0.398	0.413	0.376	0.419	6.48
20)	P	1,1-Dichloroet...	0.541	0.643	0.548	0.541	0.580	0.523	0.491	0.552	8.72
21)		Vinyl acetate	0.443	0.552	0.461	0.494	0.513	0.430	0.441	0.476	9.45
22)		2,2-Dichloropr...	0.697	0.739	0.735	0.705	0.674	0.665	0.605	0.688	6.71
23)	P	2-Butanone		0.032	0.037	0.037	0.036	0.033	0.032	0.035#	7.05
24)	P	cis-1,2-Dichlo...	0.313	0.359	0.331	0.317	0.305	0.307	0.285	0.317	7.34
25)		Bromochloromet...	0.113	0.141	0.135	0.133	0.128	0.128	0.119	0.128	7.30
26)	P	Chloroform	0.691	0.728	0.702	0.701	0.657	0.645	0.598	0.674	6.55
27)	S	Pentafluoroben...	0.576	0.565	0.564	0.545	0.534	0.512	0.519	0.545	4.50
28)		Tetrahydrofuran	0.063	0.078	0.077	0.072	0.069	0.068	0.062	0.070	9.02
29)	P	1,1,1-Trichlor...	0.660	0.726	0.729	0.708	0.671	0.665	0.610	0.681	6.26
30)	P	Cyclohexane	0.544	0.575	0.546	0.518	0.514	0.450	0.482	0.519	8.11
31)	S	1,2-Dichloroet...	0.389	0.408	0.419	0.414	0.398	0.377	0.366	0.396	4.99
32)	P	Carbon Tetrach...	0.545	0.624	0.627	0.626	0.592	0.585	0.531	0.590	6.66
33)	P	Benzene	1.324	1.373	1.255	1.231	1.157	1.160	1.080	1.226	8.32
34)	P	1,2-Dichloroet...	0.528	0.650	0.622	0.622	0.596	0.577	0.523	0.588	8.24
35)	P	Trichloroethene	0.292	0.332	0.336	0.322	0.304	0.307	0.288	0.312	6.00
36)		tert-Butyl Ace...	0.246	0.296	0.318	0.313	0.308	0.310	0.295	0.298	8.17
37)	P	Methylcyclohexane	0.559	0.614	0.572	0.558	0.524	0.529	0.494	0.550	7.02
38)		1,4-Dioxane			0.002	0.003	0.004	0.004	0.004	0.004	24.21*

RF < 0.005 (Rule)

Initial Calibration Summary Table

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Evaluate Continuing Calibration Report

Data File: C:\msdchem\1\DATA\161221\x37951.D
DataAcq Meth:8260RUN.M
Acq On : 22 Dec 2016 10:51 am Operator: M.Miller
Sample : 50ppb ICAL Std Inst : Instrument #1
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 22 13:06:52 2016
Quant Method : C:\msdchem\1\METHODS\161222.M
Quant Title : 8260/624 Analysis
QLast Update : Thu Dec 22 12:48:23 2016
Response via : Initial Calibration
Integrator: RTE

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	1.000	1.000	0.0	100	0.00
2	P	Dichlorodifluoromethane	0.307	0.318	-3.6	100	0.00
3	P	Chloromethane	0.288	0.280	2.8	100	0.00
4	P	Vinyl chloride	0.292	0.291	0.3	100	0.00
5	P	Bromomethane	0.202	0.198	2.0	100	0.00
6	P	Chloroethane	0.159	0.162	-1.9	100	0.00
7	P	Trichlorofluoromethane	0.647	0.668	-3.2	100	0.00
8		Ethyl ether	0.197	0.197	0.0	100	0.00
9	P	Freon 113	0.269	0.270	-0.4	100	0.00
10	P	1,1-Dichloroethene	0.466	0.474	-1.7	100	0.00
11	P	Acetone	0.120	0.102	15.0	100	0.00
12		Isopropyl Alcohol	0.016	0.016	0.0	100	0.00
13	P	Carbon disulfide	0.692	0.687	0.7	100	0.00
14	P	Methyl acetate	0.153	0.148	3.3	100	0.00
15	P	Methylene chloride	0.250	0.242	3.2	100	0.00
16		Acrylonitrile	0.083	0.077	7.2	100	0.00
17		tert-Butyl Alcohol	0.036	0.036	0.0	100	0.00
18	P	Methyl tert-butyl Ether	0.898	0.926	-3.1	100	0.00
19	P	trans-1,2-Dichloroethene	0.419	0.430	-2.6	100	0.00
20	P	1,1-Dichloroethane	0.552	0.541	2.0	100	0.00
21		Vinyl acetate	0.476	0.494	-3.8	100	0.00
22		2,2-Dichloropropane	0.688	0.705	-2.5	100	0.00
23	P	2-Butanone	0.035	0.037#	-5.7	100	0.00
24	P	cis-1,2-Dichloroethene	0.317	0.317	0.0	100	0.00
25		Bromochloromethane	0.128	0.133	-3.9	100	0.00
26	P	Chloroform	0.674	0.701	-4.0	100	0.00
27	S	Pentafluorobenzene	0.545	0.545	0.0	100	0.00
28		Tetrahydrofuran	0.070	0.072	-2.9	100	0.00
29	P	1,1,1-Trichloroethane	0.681	0.708	-4.0	100	0.00
30	P	Cyclohexane	0.519	0.518	0.2	100	0.00
31	S	1,2-Dichloroethane-d4	0.396	0.414	-4.5	100	0.00
32	P	Carbon Tetrachloride	0.590	0.626	-6.1	100	0.00
33	P	Benzene	1.226	1.231	-0.4	100	0.00
34	P	1,2-Dichloroethane	0.588	0.622	-5.8	100	0.00
35	P	Trichloroethene	0.312	0.322	-3.2	100	0.00
36		tert-Butyl Acetate	0.298	0.313	-5.0	100	0.00
37	P	Methylcyclohexane	0.550	0.558	-1.5	100	0.00
38		1,4-Dioxane	0.004	0.003	25.0#	100	0.00
39	UN	Ethyl acetate	0.000	0.000	0.0	100	0.00
40	P	1,2-Dichloropropane	0.303	0.306	-1.0	100	0.00
41	UN	Isobutyl alcohol	0.000	0.000	0.0	100	0.00
42		Dibromomethane	0.202	0.211	-4.5	100	0.00
43	P	Bromodichloromethane	0.512	0.555	-8.4	100	0.00
44		2-Chloroethyl vinyl Ether	0.160	0.167	-4.4	100	0.00
45	UN	Isopropyl acetate	0.000	0.000	0.0	100	0.00
46		1,1-Dichloropropene	0.501	0.514	-2.6	100	0.00
47	P	cis-1,3-Dichloropropene	0.550	0.576	-4.7	100	0.00

Appendix C

Validator Qualifications

KENNETH R. APPLIN
Geochemist/Data Validator

Ph.D., Geochemistry and Mineralogy, The Pennsylvania State University

M.S., Geochemistry and Mineralogy, The Pennsylvania State University

B.A., Geological Sciences, SUNY at Geneseo, NY

Dr. Applin has over 35 years of experience working with the geochemistry of natural waters. His prior experience includes working as an Assistant Professor of Geology at the University of Missouri-Columbia and as Chief Hydrogeologist and Geochemist with a leading engineering firm in Rochester, NY. In 1993, he established KR Applin and Associates, a small consulting business that focuses on the geochemistry of natural waters, especially as applied to problems involving the contamination of groundwater and surface water.

Dr. Applin is also an experienced analytical data validator and has provided data validation services since 1994 to a variety of clients performing brownfield cleanup projects, hazardous waste remediation, groundwater monitoring at solid waste facilities, and other projects requiring third-party data validation. Dr. Applin has several years of hands-on experience with the laboratory analysis of natural waters and has successfully completed the USEPA Region II certification courses for performing inorganic and organic analytical data validation.

MICHAEL K. PERRY
Chemist/Data Validator

B.S. Chemistry, Georgia State University, Atlanta, GA

A.A.S., Chemical Technology, Alfred State College, Alfred, NY

Mr. Perry has over 30 years of experience in the analytical laboratory business. During his early career, he spent several years as a laboratory analyst performing the analysis of soil, water, and air samples for inorganic and organic chemical parameters. During his last 20 years in the environmental laboratory business, he managed and directed two major analytical laboratories in Rochester, NY. His management responsibilities included oversight of the daily operations of the lab, staff training and supervision, the selection, purchase, and maintenance of analytical instruments, the introduction of new laboratory methods, analytical quality assurance and quality control, data acquisition and management, and other business-related activities.

Mr. Perry has an extensive working knowledge of the methods and procedures used for sampling and analyzing both inorganic and organic analytes in soil, water, and air. He is an accomplished laboratory chemist and is familiar with the analytical methods and procedures established under the USEPA Contract Laboratory Protocols (CLP), the NYSDEC Analytical Services Protocols (ASP), and the NYSDOH Environmental Laboratory Approval Program (ELAP).

APPENDIX F

Waste Manifests

WASTE MANAGEMENT

EZ Profile™

Requested Facility: Mill Seat LF ☐ Unsure Profile Number: 117414NY

☐ Multiple Generator Locations (Attach Locations) ☐ Request Certificate of Disposal ☐ Renewal? Original Profile Number: _____

A. GENERATOR INFORMATION (MATERIAL ORIGIN)

1. Generator Name: 690 Portland Ave Inc.
2. Site Address: 690 Portland Ave
   (City, State, ZIP) Rochester NY 14621
3. County: Monroe
4. Contact Name: keith hambley
5. Email: khambley@trecenv.com
6. Phone: (585) 594-5545 7. Fax: _____
8. Generator EPA ID: _____ ☑ N/A
9. State ID: _____ ☑ N/A

B. BILLING INFORMATION ☐ SAME AS GENERATOR

1. Billing Name: TREC Environmental Inc.
2. Billing Address: 1018 Washington St
   (City, State, ZIP) Spencerport NY 14559
3. Contact Name: Keith Hambley
4. Email: khambley@trecenv.com
5. Phone: (585) 594-5545 6. Fax: (585) 594-5675
7. WM Hauled? ☐ Yes ☑ No
8. P.O. Number: _____
9. Payment Method: ☑ Credit Account ☐ Cash ☐ Credit Card

C. MATERIAL INFORMATION

1. Common Name: Non Hazardous Soil
   Describe Process Generating Material: ☐ See Attached

   Excavation of petroleum impacted soil area.

2. Material Composition and Contaminants: ☐ See Attached

1. Soil	100 %
2.	
3.	
4.	
Total comp. must be equal to or greater than 100%	≥100%

3. State Waste Codes: _____ ☑ N/A
4. Color: Brown
5. Physical State at 70°F: ☑ Solid ☐ Liquid ☐ Other: _____
6. Free Liquid Range Percentage: _____ to _____ ☑ N/A
7. pH: _____ to _____ ☑ N/A
8. Strong Odor: ☐ Yes ☑ No Describe: _____
9. Flash Point: ☐ <140°F ☐ 140°–199°F ☐ ≥200° ☑ N/A

D. REGULATORY INFORMATION

1. EPA Hazardous Waste? ☐ Yes* ☑ No
   Code: _____
2. State Hazardous Waste? ☐ Yes ☑ No
   Code: _____
3. Is this material non-hazardous due to Treatment, Delisting, or an Exclusion? ☐ Yes* ☑ No
4. Contains Underlying Hazardous Constituents? ☐ Yes* ☑ No
5. From an industry regulated under Benzene NESHAP? ☐ Yes* ☑ No
6. Facility remediation subject to 40 CFR 63 GGGGG? ☐ Yes* ☑ No
7. CERCLA or State-mandated clean-up? ☐ Yes* ☑ No
8. NRC or State-regulated radioactive or NORM waste? ☐ Yes* ☑ No

***If Yes, see Addendum (page 2) for additional questions and space.**

9. Contains PCBs? → If Yes, answer a, b and c. ☐ Yes ☑ No
   a. Regulated by 40 CFR 761? ☐ Yes ☐ No
   b. Remediation under 40 CFR 761.61 (a)? ☐ Yes ☐ No
   c. Were PCB imported into the US? ☐ Yes ☐ No
10. Regulated and/or Untreated Medical/Infectious Waste? ☐ Yes ☑ No
11. Contains Asbestos? ☐ Yes ☑ No
    → If Yes: ☐ Non-Friable ☐ Non-Friable – Regulated ☐ Friable

E. ANALYTICAL AND OTHER REPRESENTATIVE INFORMATION

1. Analytical attached ☑ Yes
   Please identify applicable samples and/or lab reports:

   170010

2. Other information attached (such as MSDS)? ☐ Yes

F. SHIPPING AND DOT INFORMATION

1. ☑ One-Time Event ☐ Repeat Event/Ongoing Business
2. Estimated Quantity/Unit of Measure: 15
   ☑ Tons ☐ Yards ☐ Drums ☐ Gallons ☐ Other: _____
3. Container Type and Size: DT
4. USDOT Proper Shipping Name: ☑ N/A

G. GENERATOR CERTIFICATION (PLEASE READ AND CERTIFY BY SIGNATURE)

By signing this EZ Profile™ form, I hereby certify that all information submitted in this and all attached documents contain true and accurate descriptions of this material, and that all relevant information necessary for proper material characterization and to identify known and suspected hazards has been provided. Any analytical data attached was derived from a sample that is representative as defined in 40 CFR 261 - Appendix 1 or by using an equivalent method. All changes occurring in the character of the material (i.e., changes in the process or new analytical) will be identified by the Generator and be disclosed to Waste Management prior to providing the material to Waste Management.

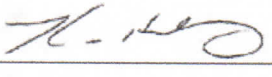
If I am an agent signing on behalf of the Generator, I have confirmed with the Generator that information contained in this Profile is accurate and complete.

Name (Print): Keith Hambley Date: 01/31/2017

Title: President

Company: TREC Environmental Inc.

Certification Signature



THINK GREEN®

QUESTIONS? CALL 800 963 4776 FOR ASSISTANCE

Revised June 30, 2015

WASTE MANAGEMENT

Mill Seat Landf ll
303 Brew Rd.
Bergen, NY, 14416
Ph: (585) 494-3000

Original
Ticket# 880989

Customer Name TRECENVIRONMENTAL-117414NY TR
Ticket Date 02/07/2017
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 1
Destination
PO
Profile 117414NY (NON HAZARDOUS SOIL)
Generator 190-690PORTLANDAVE 690 PORTLAND AVE,

Carrier TREC TREC ENVIRONMENTAL
Vehicle# 11
Container
Driver
Check#
Billing # 0001985
Gen EPA ID

Grid Mile

Volume

	Time	Scale	Operator	Inbound		
In	02/07/2017 11:57:17	SCALE1	bshove		Gross	26600 lb
Out	02/07/2017 12:15:08	Scale2	kking5		Tare	12560 lb
					Net	14040 lb
					Tons	7.02

Comments This vehicle was over the legal weight limit .

	Product	LD%	Qty	UOM	Rate	Tax	Amount	
1	Cont Soil RCG-Tons	100	7.02	Tons				MON
2	EVF-P-Standard Env	100		%				MON
3	RCR-P-Regulatory C	100		%				MON
4	LFS4-LANDFILL FIXE	100		%				MON

Total Tax
Total Ticket

Driver's Signature _____

404WM

7. Transporter 2 Company Name | U.S. EPA ID Number

8. Designated Facility Name and Site Address | U.S. EPA ID Number

Millseat LF
303 Brew Road
Bergen, NY 14416

Facility's Phone:

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1. NON Hazardous Soil		DT	15	T	
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information

Profile Number 117414 NY

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

Generator's/Offeror's Printed/Typed Name	Signature	Month	Day	Year
Agent of 640 Portland Ave Inc. Dave DeYoung	[signature]	2	7	17

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

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

16. Transporter Acknowledgment of Receipt of Materials

Transporter Printed/Typed Name	Signature	Month	Day	Year
Transporter 1: Kurt C. Ballerstein	[signature]	2	7	17
Transporter 2:				

17. Discrepancy

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

Manifest Reference Number:

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

Facility's Phone:

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

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

Printed/Typed Name	Signature	Month	Day	Year
[signature]	[signature]	2	7	17

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

169-BLC-O 5 11977 (Rev. 9/09) TRANSPORTER #1

RAVI ENGINEERING & LAND SURVEYING, P.C.

APPENDIX G

Sieve Analysis and Approval Documents

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Request to Import/Reuse Fill or Soil

This form is based on the information required by DER-10, Section 5.4(e). Use of this form is not a substitute for reading the applicable Technical Guidance document.

SECTION 1 – SITE BACKGROUND

The allowable site use is: Choose an item

Have Ecological Resources been identified? Choose an item

Is this soil originating from the site? Choose an item

How many cubic yards of soil will be imported/reused? Choose an item

If greater than 1000 cubic yards will be imported, enter volume to be imported:

SECTION 2 – MATERIAL OTHER THAN SOIL

Is the material to be imported gravel, rock or stone? Choose an item

Does it contain less than 10%, by weight, material that would pass a size 80 sieve? Choose an item

Is this virgin material from a permitted mine or quarry? Choose an item

Is this material recycled concrete or brick from a DEC registered processing facility? Choose an item

SECTION 3 - SAMPLING

Provide a brief description of the number and type of samples collected in the space below:

Example Text: 5 discrete samples were collected and analyzed for VOCs. 2 composite samples were collected and analyzed for SVOCs, Inorganics & PCBs/Pesticides.

If the material meets requirements of DER-10 section 5.5 (other material), no chemical testing needed.

SECTION 3 CONT'D - SAMPLING

Provide a brief written summary of the sampling results or attach evaluation tables (compare to DER-10, Appendix 5):

Example Text: Arsenic was detected up to 17 ppm in 1 (of 5) samples; the allowable level is 16 ppm.

If Ecological Resources have been identified use the "If Ecological Resources are Present" column in Appendix 5.

SECTION 4 – SOURCE OF FILL

Name of person providing fill and relationship to the source:

Location where fill was obtained:

Identification of any state or local approvals as a fill source:

If no approvals are available, provide a brief history of the use of the property that is the fill source:

Provide a list of supporting documentation included with this request:

The information provided on this form is accurate and complete.

_____ _____

Signature Date

_____

Print Name

_____

Firm

Revised August 2014

THE DOLOMITE GROUP

DOLOMITE PRODUCTS COMPANY, INC
MANITOU CONSTRUCTION COMPANY
ROCHESTER ASPHALT MATERIALS
IROQUOIS ROCK PRODUCTS
NORTHRUP MATERIALS

1150 Penfield Rd.
Rochester, NY 14625
Phone: 585-381-7010
Fax : 585-381-0208

DATE: 12/13/2016
PAGE: 1 of 2
FAX:

TO: Paul Willey
OF: Trec Environmental
EMAIL: pwilley@trecenv.com

PROJECT: 690 Portland Ave.

DOLOMITE PALMYRA PLANT

NYSDOT Source #: 4-86G
Current NYSDOT Test #: 13AG48C

This is to certify that the Crushed Gravel and Gravel to be used on the above referenced project will be produced in accordance with the most current New York State Department of Transportation's, "Standard Specifications" and Addenda. All stone properties conform to sections 703.0201, 203, 304, 605 and 620 of the Specification. Specific values are listed below.

PROPERTY	VALUE	SPEC.
Mag. Sulfate Loss	12	18 max.
LA Abrasion Loss	25	35 max.
Flat and Elongated Pieces - 3:1	5	30 max.
5:1	0	10 max.
Crushed Particles	100	n.a.
Deleterious Materials	0	2 max.

TYPICAL GRADATIONS (All Values are % passing)

SIEVE SIZE	TYPE 1 FILL	NYSDOT 703.06	1A GRAVEL	#1 GRAVEL	#2 GRAVEL Washed	#1 and #2 MIXTURE
4" (100 mm)						
2" (50)	100					
1 1/2" (37.5)					100	
1" (25)	100	100		100	98	100
1/2" (12.5)			100	91	9	40
1/4" (6.3)	65	100	90	6		2
1/8"			4			
#40 (0.425)	18					
#50 (0.300)		10.5				
#100 (.150)		2.7				
#200 (0.075)	4.2		.6	.5	0.7	0.3
Typical Item Numbers	203.07 Item 4	703.06 Cushion sand		605.0901 703.02	703.02	605.1001

BULK SPECIFIC GRAVITY SSD: 2.70
APPARENT SPECIFIC GRAVITY: 2.758
ABSORPTION: 1.4

Signed By: *Lila L. Smith* Lila L. Smith - Sales Representative

THE DOLOMITE GROUP

DOLOMITE PRODUCTS COMPANY, INC
MANITOU CONSTRUCTION COMPANY
ROCHESTER ASPHALT MATERIALS
IROQUOIS ROCK PRODUCTS
NORTHRUP MATERIALS

MATERIAL SUBMITTAL

1150 Penfield Road
Rochester, N.Y. 14625
Phone: (585) 381-7010
Fax : (585) 381-0208

DATE: 12/13/2016
PAGE: 2 of 2

TO: Paul Willey
OF: TREC Environmental Inc.
FAX or E-MAIL: pwilley@trecenv.com

PROJECT: 690 Portland Ave.

CRUSHED STONE: Brockport Plant

NYSDOT Source #: 4-5R
Current NYSDOT Test #: 13AR58

This is to certify that the Crushed Stone to be used on the above referenced project will be produced in accordance with the most current New York State Department of Transportation's, "Standard Specifications" and Addenda. All stone properties conform to sections 703.0201, 203, 304, 605 and 620 of the Specification. Specific values are listed below.

PROPERTY	VALUE	SPEC.
Mag. Sulfate Loss	16	18 max.
LA Abrasion Loss	19	35 max.
Flat and Elongated Pieces - 3:1	10	30 max.
5:1	0	10 max.
Crushed Particles	100	n.a.
Deleterious Materials	0	2 max.

TYPICAL GRADATIONS (All Values are % Passing)

SIEVE SIZE	CRUSHER RUN #2	CRUSHER RUN #1	#1 STONE	#2 STONE	#1 STONE WASHED	Road/ Bedding Sand
4" (100 mm)						
3" (75)						
2" (50)	100					
1 1/2" (37.5)	100			100		
1" (25)	82	100	100	94	100	
1/2" (12.5)	54		93	11	90.22	100
1/4" (6.3)	36	57	12	1	3.1	99.5
#40 (0.425)	11	18			(#10) 1.8	16.3
#200 (0.075)	7.6	6.5	0.8	0.2	(#20) 1.75	1.1
Typical Item Numbers	203.____ 304.12___				605.0901	

LIGHT STONE FILL		
SIZE	VALUE	SPEC
Lighter Than 100 Lbs.	100	90 - 100
Larger Than 6"	55	50 - 100
Smaller Than 1/2"	8	0 - 10

Notes:

1) Proctor Density typically runs 138 +/- 2 pcf at 6-8% Moisture.(For Crusher Run products only)

2) Medium and Heavy Stone Fill Items are selected at time of purchase to satisfy project requirements.

Signed By: *Lila L. Smith* Lila L. Smith Sales Representative

THE DOLOMITE GROUP

DOLOMITE PRODUCTS COMPANY, INC
MANITOU CONSTRUCTION COMPANY, INC
ROCHESTER ASPHALT MATERIALS
IROQUOIS ROCK PRODUCTS
NORTHRUP MATERIALS

THE DOLOMITE GROUP

MATERIAL SUBMITTAL

1150 Penfield Road
Rochester, N.Y. 14625
Phone: (585) 381-7010
Fax : (585) 381-0208

DATE: 12/13/2016
PAGE: 1

TO: Paul Willey
OF: Trec Environmental Inc.
FAX or E-MAIL: pwilley@trecenv.com

PROJECT: 690 Portland Ave.

CRUSHED STONE: Brockport Plant

NYSDOT Source #: 4-5R
Current NYSDOT Test #: 13AR58

This is to certify that the Crushed Stone to be used on the above referenced project will be produced in accordance with the most current New York State Department of Transportation's, "Standard Specifications" and Addenda. All stone properties conform to sections 703.0201, 203, 304, 605 and 620 of the Specification. Specific values are listed below.

PROPERTY	VALUE	SPEC.
Mag. Sulfate Loss	16	18 max.
LA Abrasion Loss	19	35 max.
Flat and Elongated Pieces - 3:1	10	30 max.
5:1	0	10 max.
Crushed Particles	100	n.a.
Deleterious Materials	0	2 max.

TYPICAL GRADATIONS (All Values are % Passing)

SIEVE SIZE	CRUSHER RUN #2	CRUSHER RUN #1	#1 STONE	#2 STONE	#1 STONE WASHED	#1A WASHED
4" (100 mm)						
3" (75)						
2" (50)	100					
1 1/2" (37.5)	100			100		
1" (25)	82	100	100	94	100	
1/2" (12.5)	54		93	11	90.22	100
1/4" (6.3)	36	57	12	1	3.1	91.3
#40 (0.425)	11	18			(#10) 1.8	(#10) 5.5
# 80 (0.180)	8	9				
#200 (0.075)	7.6	6.5	0.8	0.2	(#20) 1.75	(#20) 1.5
Typical Item Numbers	203.____ 304.12___				605.0901	605.1001

LIGHT STONE FILL		
SIZE	VALUE	SPEC
Lighter Than 100 Lbs.	100	90 - 100
Larger Than 6"	55	50 - 100
Smaller Than 1/2"	8	0 - 10

Notes:

1) Proctor Density typically runs 138 +/- 2 pcf at 6-8% Moisture.(For Crusher Run products only)

2) Medium and Heavy Stone Fill Items are selected at time of purchase to satisfy project requirements.

Signed By: *Lila L. Smith* *Sales Representative*

Lynn Zicari

From: Theobald, Charlotte B (DEC) <charlotte.theobald@dec.ny.gov>
Sent: Tuesday, December 13, 2016 3:47 PM
To: Lynn Zicari
Cc: Peter Morton
Subject: RE: Gradation with 80 sieve

Based the latest submittal for sieve analysis crusher #1 and #2 is approved for import.

From: Lynn Zicari [mailto:lzicari@ravieng.com]
Sent: Tuesday, December 13, 2016 3:43 PM
To: Theobald, Charlotte B (DEC) <charlotte.theobald@dec.ny.gov>
Cc: Peter Morton <pmorton@ravieng.com>
Subject: Fwd: Gradation with 80 sieve

Attached is the #80 sieve documentation. I am out of the office, so if there are any issues please call me. (585) 506-6975.

Thanks,

Lynn

Sent from my Verizon, Samsung Galaxy smartphone

-------- Original message --------
From: Paul Willey <pwilley@trecenv.com>
Date: 12/13/16 15:21 (GMT-05:00)
To: Lynn Zicari <lzicari@ravieng.com>
Subject: Fwd: Gradation with 80 sieve

Lynn,
Please let me know ASAP if I need to provide more information.
Thanks,
Paul

> Paul,
>
> Here you go-if you need anything else, give me a call.
>
> *Lila L. Smith*

The Dolomite Group

(585)943-7935 - cell

(585)637-6834 - office

(585)637-4475 - fax

lsmith@dolomitegroup.com

Lynn Zicari

From: Theobald, Charlotte B (DEC) <charlotte.theobald@dec.ny.gov>
Sent: Tuesday, December 13, 2016 2:20 PM
To: Lynn Zicari
Subject: RE: 690 Portland Avenue Imported stone/gravel documentation

Lynn:

The 1A Gravel meets Department specs and is approved.

But I need the 80 sieve analysis for the Crusher Run #1. With the specs provided I can't tell if it will pass the 80 sieve analysis.

Charlotte

From: Lynn Zicari [mailto:lzicari@ravieng.com]
Sent: Tuesday, December 13, 2016 2:07 PM
To: Theobald, Charlotte B (DEC) <charlotte.theobald@dec.ny.gov>
Subject: RE: 690 Portland Avenue Imported stone/gravel documentation

The #1A is the pea gravel for around the pipe and the #1 crushed stone is to complete the pit to the surface

---

From: Theobald, Charlotte B (DEC) [mailto:charlotte.theobald@dec.ny.gov]
Sent: Tuesday, December 13, 2016 11:02 AM
To: Lynn Zicari
Subject: RE: 690 Portland Avenue Imported stone/gravel documentation

Which fill materials are you looking to import to the site?

From: Lynn Zicari [mailto:lzicari@ravieng.com]
Sent: Tuesday, December 13, 2016 10:46 AM
To: Theobald, Charlotte B (DEC) <charlotte.theobald@dec.ny.gov>
Subject: 690 Portland Avenue Imported stone/gravel documentation

Charlotte,

Attached is the sieve analysis from Trek.

Lynn Zicari
Environmental Scientist
Ravi Engineering & Land Surveying, P.C.
2110 South Clinton Avenue, Suite 1 | Rochester, New York 14618
Office: (585) 223-3660 ext. 344| Fax: (585) 697-1764 | Direct Line: (585) 697-2071 |Cell: (585)506-6975
lzicari@ravieng.com | www.ravieng.com

APPENDIX H

Air Monitoring Data

690 Portlandt Avenue CAMP DATA - Upwind Location - 15 December 2016

Timestamp (GMT-5)	Batt. Voltage (V)	Current (mA)	Mass Conc. Total (mg/m³)	Memory (%)	Sensor Batt. (%)	TWA (mg/m³)	Latitude	Longitude
12/15/2016 15:26	12.37	67.05					43.1791	-77.588
12/15/2016 15:25	12.35	69.12					43.179	-77.5881
12/15/2016 15:24	12.15	68.22	0.01			0.004	43.1788	-77.5883
12/15/2016 15:23	12.15	83.2	0.015	100	0	0.004	43.1788	-77.5883
12/15/2016 15:22	12.15	80.36	0.016	100	0	0.004	43.1788	-77.5883
12/15/2016 15:21	12.15	66.15	0.007	100	0	0.004	43.1788	-77.5883
12/15/2016 15:20	12.15	72.09	0.007	100	0	0.004	43.1788	-77.5883
12/15/2016 15:19	12.15	70.8	0.007	100	0	0.004	43.1788	-77.5883
12/15/2016 15:18	12.14	93.28	0.007	100	0	0.004	43.1789	-77.5883
12/15/2016 15:17	12.15	67.96	0.007	100	0	0.004	43.1789	-77.5883
12/15/2016 15:16	12.16	67.7	0.007	100	0	0.004	43.1789	-77.5883
12/15/2016 15:15	12.17	66.41	0.007	100	0	0.004	43.1789	-77.5883
12/15/2016 15:14			0.007	100	0	0.004		
12/15/2016 15:11	12.14	72.74					43.1788	-77.5884
12/15/2016 15:10	12.15	66.02	0.007	100	0	0.003	43.1788	-77.5884
12/15/2016 15:09	12.16	66.28	0.007	100	0	0.003	43.1788	-77.5884
12/15/2016 15:08	12.17	67.57	0.006	100	0	0.003	43.1788	-77.5884
12/15/2016 15:07	12.15	65.5	0.007	100	0	0.003	43.1788	-77.5884
12/15/2016 15:06	12.15	71.45	0.007	100	0	0.003	43.1788	-77.5883
12/15/2016 15:05	12.14	88.63	0.007	100	0	0.003	43.1788	-77.5883
12/15/2016 15:04	12.15	74.16	0.007	100	0	0.003	43.1788	-77.5884
12/15/2016 15:03	12.15	70.41	0.007	100	0	0.003	43.1788	-77.5884
12/15/2016 15:02	12.17	65.89	0.007	100	0	0.003	43.1788	-77.5883
12/15/2016 15:01	12.16	82.17	0.01	100	0	0.003	43.1788	-77.5883
12/15/2016 15:00	12.16	70.16	0.008	100	0	0.003	43.1789	-77.5883
12/15/2016 14:59	12.16	75.06	0.015	100	0	0.003	43.1789	-77.5883
12/15/2016 14:58	12.15	69.38	0.007	100	0	0.003	43.1789	-77.5883
12/15/2016 14:57	12.16	67.96	0.007	100	0	0.003	43.1789	-77.5883
12/15/2016 14:56	12.15	83.72	0.007	100	0	0.003	43.1789	-77.5883
12/15/2016 14:55	12.16	68.22	0.007	100	0	0.003	43.1789	-77.5883
12/15/2016 14:54	12.17	71.71	0.007	100	0	0.003	43.1789	-77.5883
12/15/2016 14:53	12.17	70.03	0.007	100	0	0.003	43.1788	-77.5883
12/15/2016 14:52	12.16	83.2	0.007	100	0	0.003	43.1788	-77.5883
12/15/2016 14:51	12.17	64.73	0.008	100	0	0.003	43.1788	-77.5883
12/15/2016 14:50	12.17	74.03	0.032	100	0	0.003	43.1788	-77.5883
12/15/2016 14:49	12.18	63.82	0.025	100	0	0.003	43.1788	-77.5883
12/15/2016 14:48	12.17	68.86	0.009	100	0	0.003	43.1789	-77.5882
12/15/2016 14:47	12.16	83.85	0.007	100	0	0.003	43.1789	-77.5883
12/15/2016 14:46	12.17	70.8	0.007	100	0	0.003	43.1788	-77.5883
12/15/2016 14:45	12.17	67.05	0.009	100	0	0.003	43.1788	-77.5883
12/15/2016 14:44	12.17	66.93	0.023	100	0	0.003	43.1788	-77.5883
12/15/2016 14:43	12.17	82.43	0.008	100	0	0.003	43.1788	-77.5883
12/15/2016 14:42	12.15	75.45	0.008	100	0	0.003	43.1788	-77.5883
12/15/2016 14:41	12.17	71.06	0.008	100	0	0.003	43.1788	-77.5883
12/15/2016 14:40	12.19	70.41	0.011	100	0	0.003	43.1788	-77.5883
12/15/2016 14:39	12.19	62.66	0.011	100	0	0.003	43.1789	-77.5883
12/15/2016 14:38	12.2	85.27	0.018	100	0	0.003	43.1789	-77.5883
12/15/2016 14:37	12.17	66.02	0.046	100	0	0.003	43.1788	-77.5883
12/15/2016 14:36	12.17	66.28	0.022	100	0	0.003	43.1788	-77.5883
12/15/2016 14:35	12.17	65.37	0.008	100	0	0.003	43.1788	-77.5884
12/15/2016 14:34	12.17	94.32	0.011	100	0	0.003	43.1788	-77.5883
12/15/2016 14:33	12.17	68.48	0.008	100	0	0.003	43.1788	-77.5883
12/15/2016 14:32	12.18	64.6	0.009	100	0	0.003	43.1788	-77.5883
12/15/2016 14:31	12.17	74.55	0.008	100	0	0.003	43.1788	-77.5883
12/15/2016 14:30	12.17	73	0.012	100	0	0.003	43.1788	-77.5883
12/15/2016 14:29	12.17	81.14	0.008	100	0	0.003	43.1788	-77.5883
12/15/2016 14:28	12.18	65.37	0.008	100	0	0.003	43.1788	-77.5883
12/15/2016 14:27	12.17	68.48	0.008	100	0	0.003	43.1788	-77.5882
12/15/2016 14:26	12.18	66.54	0.009	100	0	0.003	43.1788	-77.5882
12/15/2016 14:25	12.19	66.93	0.007	100	0	0.002	43.1788	-77.5883
12/15/2016 14:24	12.2	67.83	0.012	100	0	0.002	43.1788	-77.5883
12/15/2016 14:23	12.18	71.45	0.022	100	0	0.002	43.1788	-77.5883

No PM-10 exceedances

12/15/2016 14:22	12.18	72.74	0.017	100	0	0.002	43.1788	-77.5883
12/15/2016 14:21	12.17	66.67	0.008	100	0	0.002	43.1788	-77.5883
12/15/2016 14:20	12.18	67.18	0.007	100	0	0.002	43.1788	-77.5883
12/15/2016 14:19	12.18	63.57	0.007	100	0	0.002	43.1788	-77.5883
12/15/2016 14:18	12.17	79.2	0.01	100	0	0.002	43.1788	-77.5883
12/15/2016 14:17	12.2	70.93	0.007	100	0	0.002	43.1788	-77.5883
12/15/2016 14:16	12.17	70.16	0.007	100	0	0.002	43.1788	-77.5883
12/15/2016 14:15	12.18	64.47	0.008	100	0	0.002	43.1788	-77.5882
12/15/2016 14:14	12.18	66.02	0.007	100	0	0.002	43.1788	-77.5882
12/15/2016 14:13	12.17	69.51	0.009	100	0	0.002	43.1788	-77.5883
12/15/2016 14:12	12.17	73.26	0.007	100	0	0.002	43.1788	-77.5883
12/15/2016 14:11	12.17	83.98	0.006	100	0	0.002	43.1788	-77.5883
12/15/2016 14:10	12.19	67.05	0.006	100	0	0.002	43.1788	-77.5883
12/15/2016 14:09	12.18	68.09	0.006	100	0	0.002	43.1788	-77.5883
12/15/2016 14:08	12.18	67.44	0.006	100	0	0.002	43.1788	-77.5883
12/15/2016 14:07	12.17	94.83	0.008	100	0	0.002	43.1788	-77.5883
12/15/2016 14:06	12.18	64.47	0.01	100	0	0.002	43.1788	-77.5883
12/15/2016 14:05	12.16	84.5	0.007	100	0	0.002	43.1788	-77.5884
12/15/2016 14:04	12.19	72.22	0.007	100	0	0.002	43.1787	-77.5884
12/15/2016 14:03	12.19	63.31	0.006	100	0	0.002	43.1788	-77.5884
12/15/2016 14:02	12.17	66.41	0.01	100	0	0.002	43.1788	-77.5884
12/15/2016 14:01	12.19	66.02	0.007	100	0	0.002	43.1788	-77.5883
12/15/2016 14:00	12.19	66.41	0.007	100	0	0.002	43.1788	-77.5884
12/15/2016 13:59	12.18	73.26	0.008	100	0	0.002	43.1788	-77.5884
12/15/2016 13:58	12.17	101.42	0.007	100	0	0.002	43.1788	-77.5884
12/15/2016 13:57	12.19	66.54	0.01	100	0	0.002	43.1787	-77.5884
12/15/2016 13:56	12.16	74.16	0.01	100	0	0.002	43.1788	-77.5883
12/15/2016 13:55	12.19	72.09	0.011	100	0	0.002	43.1788	-77.5883
12/15/2016 13:54	12.18	71.19	0.017	100	0	0.002	43.1788	-77.5883
12/15/2016 13:53	12.19	65.89	0.023	100	0	0.002	43.1788	-77.5883
12/15/2016 13:52	12.21	74.94	0.018	100	0	0.002	43.1788	-77.5883
12/15/2016 13:51	12.19	65.37	0.017	100	0	0.002	43.1788	-77.5883
12/15/2016 13:50	12.19	66.28	0.014	100	0	0.002	43.1788	-77.5883
12/15/2016 13:48	12.18	90.57	0.007	100	0	0.002	43.1789	-77.5883
12/15/2016 13:47	12.2	80.36	0.007	100	0	0.002	43.1788	-77.5883
12/15/2016 13:46	12.19	85.4	0.009	100	0	0.002	43.1788	-77.5883
12/15/2016 13:45	12.18	69.12	0.008	100	0	0.002	43.1788	-77.5883
12/15/2016 13:44	12.19	69.51	0.007	100	0	0.002	43.1788	-77.5883
12/15/2016 13:43	12.17	92.12	0.016	100	0	0.002	43.1788	-77.5883
12/15/2016 13:42	12.17	85.27	0.009	100	0	0.002	43.1789	-77.5883
12/15/2016 13:41	12.18	77.26	0.049	100	0	0.001	43.1788	-77.5883
12/15/2016 13:40	12.19	69.77	0.007	100	0	0.001	43.1789	-77.5883
12/15/2016 13:39	12.17	72.61	0.007	100	0	0.001	43.1789	-77.5883
12/15/2016 13:38	12.17	84.24	0.007	100	0	0.001	43.1789	-77.5883
12/15/2016 13:37	12.19	90.7	0.008	100	0	0.001	43.1788	-77.5883
12/15/2016 13:36	12.18	72.22	0.021	100	0	0.001	43.1788	-77.5883
12/15/2016 13:35	12.17	90.18	0.021	100	0	0.001	43.1788	-77.5883
12/15/2016 13:34	12.17	66.8	0.011	100	0	0.001	43.1788	-77.5883
12/15/2016 13:33	12.18	74.29	0.008	100	0	0.001	43.1789	-77.5883
12/15/2016 13:32	12.16	72.61	0.009	100	0	0.001	43.1789	-77.5883
12/15/2016 13:31	12.17	88.24	0.008	100	0	0.001	43.1789	-77.5883
12/15/2016 13:30	12.19	67.7	0.02	100	0	0.001	43.1789	-77.5883
12/15/2016 13:29	12.17	94.19	0.014	100	0	0.001	43.1789	-77.5883
12/15/2016 13:28	12.17	82.82	0.008	100	0	0.001	43.1789	-77.5883
12/15/2016 13:27	12.17	71.96	0.009	100	0	0.001	43.1789	-77.5883
12/15/2016 13:26	12.17	69.12	0.008	100	0	0.001	43.1788	-77.5883
12/15/2016 13:25	12.17	70.67	0.008	100	0	0.001	43.1789	-77.5883
12/15/2016 13:24	12.17	66.67	0.008	100	0	0.001	43.1789	-77.5883
12/15/2016 13:21	12.2	86.69	0.03	100	0	0.001	43.1789	-77.5883
12/15/2016 13:20	12.17	72.48	0.022	100	0	0.001	43.1789	-77.5883
12/15/2016 13:19	12.17	72.61	0.015	100	0	0.001	43.1789	-77.5883
12/15/2016 13:18	12.16	87.08	0.007	100	0	0.001	43.1789	-77.5883
12/15/2016 13:17	12.17	69.9	0.008	100	0	0.001	43.1789	-77.5882
12/15/2016 13:16	12.18	69.77	0.01	100	0	0.001	43.1789	-77.5883
12/15/2016 13:15	12.15	75.32	0.029	100	0	0.001	43.1789	-77.5883
12/15/2016 13:14	12.17	80.36	0.009	100	0	0.001	43.1789	-77.5883
12/15/2016 13:13	12.17	73.77	0.013	100	0	0.001	43.1789	-77.5883
12/15/2016 13:12	12.15	76.49	0.025	100	0	0.001	43.1789	-77.5883

12/15/2016 13:11	12.17	74.42	0.016	100	0	0	43.1789	-77.5883
12/15/2016 13:10	12.17	72.74	0.016	100	0	0	43.1789	-77.5883
12/15/2016 13:09	12.15	78.42	0.017	100	0	0	43.1789	-77.5883
12/15/2016 13:08	12.16	69.9	0.016	100	0	0	43.1789	-77.5883
12/15/2016 13:07	12.15	69.38	0.017	100	0	0	43.1789	-77.5883
12/15/2016 13:06	12.16	76.1	0.041	100	0	0	43.1789	-77.5883
12/15/2016 13:05	12.16	63.18	0.009	100	0	0	43.1789	-77.5883
12/15/2016 13:04	12.17	67.44	0.008	100	0	0	43.179	-77.5882
12/15/2016 13:03	12.15	71.71	0.008	100	0	0	43.1789	-77.5882
12/15/2016 13:02	12.16	65.63	0.007	100	0	0	43.1789	-77.5882
12/15/2016 13:01	12.13	74.29	0.012	100	0	0	43.1789	-77.5882
12/15/2016 13:00	12.14	73.26	0.007	100	0	0	43.1789	-77.5882
12/15/2016 12:59	12.15	72.61	0.01	100	0	0	43.1789	-77.5882
12/15/2016 12:58	12.15	71.06	0.007	100	0	0	43.1789	-77.5882
12/15/2016 12:57	12.15	66.93	0.009	100	0	0	43.1789	-77.5883
12/15/2016 12:55	12.14	64.47	0.007	100	0	0	43.1789	-77.5883
12/15/2016 12:54	12.13	93.41	0.007	100	0	0	43.1789	-77.5883
12/15/2016 12:53	12.17	69.64	0.008	100	0	0	43.1789	-77.5883
12/15/2016 12:52	12.13	66.67	0.009	100	0	0	43.1789	-77.5883
12/15/2016 12:51	12.11	87.47	0.008	100	0	0	43.1789	-77.5882
12/15/2016 12:50	12.14	70.8	0.007	100	0	0	43.1789	-77.5883
12/15/2016 12:49	12.12	69.12	0.008	100	0	0	43.1789	-77.5883
12/15/2016 12:48	12.11	81.78	0.009	100	0	0	43.1789	-77.5883
12/15/2016 12:47	12.12	70.16					43.1789	-77.5883
12/15/2016 12:46	12.14	85.66					43.1789	-77.5882
12/15/2016 12:45	12.12	61.5					43.1789	-77.5882
12/15/2016 12:44	12.11	69.64					43.1789	-77.5882
12/15/2016 12:43	12.11	68.09					43.1789	-77.5883
12/15/2016 12:42	12.09	96.64					43.1789	-77.5882
12/15/2016 12:41	12.11	67.44					43.1789	-77.5882
12/15/2016 12:40	12.1	69.12					43.1789	-77.5882
12/15/2016 12:39	12.15	71.71					43.1789	-77.5882
12/15/2016 12:38	12.15	88.24					43.1789	-77.5882
12/15/2016 12:37	12.2	76.74					43.1789	-77.5882

690 Portland Ave CAMP DATA - Downwind Location - 15 Dec 2016

Timestamp (GMT-5)	Batt. Voltage (V)	Current (mA)	Mass Conc. Total (mg/m³)	Memory (%)	Sensor Batt. (%)	TWA (mg/m³)
12/15/2016 15:04	11.84	66.15	0.01	100	0	0.003
12/15/2016 15:03	11.97	62.53	0.008	100	0	0.003
12/15/2016 15:02	11.73	67.7	0.007	100	0	0.003
12/15/2016 15:01	11.99	75.45	0.008	100	0	0.003
12/15/2016 15:00	11.81	72.48	0.008	100	0	0.003
12/15/2016 14:59	11.75	77	0.008	100	0	0.003
12/15/2016 14:58	12.03	66.93	0.008	100	0	0.003
12/15/2016 14:57	11.74	59.04	0.008	100	0	0.003
12/15/2016 14:56	12.03	67.44	0.007	100	0	0.003
12/15/2016 14:55	11.78	73.51	0.008	100	0	0.003
12/15/2016 14:54	11.87	72.87	0.008	100	0	0.003
12/15/2016 14:53	11.84	154.78	0.007	100	0	0.003
12/15/2016 14:52	11.89	65.5	0.008	100	0	0.003
12/15/2016 14:51	11.83	63.31	0.008	100	0	0.003
12/15/2016 14:50	11.91	62.79	0.008	100	0	0.003
12/15/2016 14:49	11.91	65.89	0.014	100	0	0.003
12/15/2016 14:48	11.81	72.48	0.008	100	0	0.003
12/15/2016 14:47	11.84	67.18	0.008	100	0	0.003
12/15/2016 14:46	11.9	59.95	0.008	100	0	0.003
12/15/2016 14:45	11.9	68.09	0.008	100	0	0.003
12/15/2016 14:44	11.95	65.89	0.016	100	0	0.003
12/15/2016 14:43	11.9	60.08	0.019	100	0	0.003
12/15/2016 14:42	11.86	59.17	0.016	100	0	0.003
12/15/2016 14:41	11.8	66.67	0.009	100	0	0.003
12/15/2016 14:40	11.8	58.91	0.007	100	0	0.003
12/15/2016 14:39	11.83	64.47	0.008	100	0	0.003
12/15/2016 14:38	12.08	70.54	0.014	100	0	0.003
12/15/2016 14:37	11.86	64.86	0.015	100	0	0.002
12/15/2016 14:36	11.87	68.48	0.024	100	0	0.002
12/15/2016 14:35	11.84	73.9	0.014	100	0	0.002
12/15/2016 14:34	11.82	71.96	0.017	100	0	0.002
12/15/2016 14:33	12.04	60.08	0.011	100	0	0.002
12/15/2016 14:32	11.8	71.83	0.018	100	0	0.002
12/15/2016 14:31	12.07	63.05	0.015	100	0	0.002
12/15/2016 14:30	11.87	68.22	0.024	100	0	0.002
12/15/2016 14:29	12.04	63.95	0.012	100	0	0.002
12/15/2016 14:28	11.96	58.66	0.017	100	0	0.002
12/15/2016 14:27	12.07	59.69	0.028	100	0	0.002
12/15/2016 14:26	12.08	71.06	0.011	100	0	0.002
12/15/2016 14:25	11.81	74.68	0.019	100	0	0.002
12/15/2016 14:24	12.04	66.28	0.014	100	0	0.002
12/15/2016 14:23	12.06	59.43	0.035	100	0	0.001
12/15/2016 14:22	11.93	57.88	0.043	100	0	0.001
12/15/2016 14:21	11.89	68.73	0.023	100	0	0.001
12/15/2016 14:20	11.79	95.48	0.037	100	0	0.001
12/15/2016 14:19	11.82	72.35	0.014	100	0	0.001
12/15/2016 14:18	11.93	61.37	0.019	100	0	0.001
12/15/2016 14:17	11.95	64.99	0.011	100	0	0.001
12/15/2016 14:16	11.87	65.12	0.02	100	0	0.001
12/15/2016 14:15	12.06	61.63	0.024	100	0	0.001
12/15/2016 14:14	11.87	77.13	0.04	100	0	0.001
12/15/2016 14:13	12.04	66.67	0.025	100	0	0.001
12/15/2016 14:12	11.83	100.52	0.022	100	0	0.001
12/15/2016 14:11	12.07	74.55	0.024	100	0	0.001

No PM-10 exceedances

12/15/2016 14:10	11.95	66.41	0.019	100	0	0.001
12/15/2016 14:09	12.04	74.16	0.015	100	0	0.001
12/15/2016 14:08	11.95	66.02	0.016	100	0	0.001
12/15/2016 14:07	11.9	83.85	0.018	100	0	0.001
12/15/2016 14:06	11.92	66.41	0.011	100	0	0.001
12/15/2016 14:05	11.79	84.11	0.009	100	0	0.001
12/15/2016 14:04	12.05	68.6	0.007	100	0	0.001
12/15/2016 14:03	11.89	68.48	0.008	100	0	0.001
12/15/2016 14:02	12.06	66.02	0.013	100	0	0.001
12/15/2016 14:01	11.78	70.93	0.011	100	0	0.001
12/15/2016 14:00	12.06	68.86	0.007	100	0	0.001
12/15/2016 13:59	11.82	59.82	0.008	100	0	0.001
12/15/2016 13:58	12.06	66.28	0.01	100	0	0.001
12/15/2016 13:57	11.84	82.56	0.012	100	0	0.001
12/15/2016 13:56	12.07	68.09	0.012	100	0	0.001
12/15/2016 13:55	11.8	64.34	0.017	100	0	0.001
12/15/2016 13:54	11.87	63.18	0.012	100	0	0.001
12/15/2016 13:53	11.98	68.99	0.009	100	0	0.001
12/15/2016 13:52	11.91	70.54	0.008	100	0	0.001
12/15/2016 13:51	11.93	66.02	0.008	100	0	0.001
12/15/2016 13:50	11.92	65.89	0.007	100	0	0.001
12/15/2016 13:49	11.92	62.02	0.006	100	0	0.001
12/15/2016 13:48	11.99	70.67	0.006	100	0	0.001
12/15/2016 13:47	11.84	95.61	0.006	100	0	0.001
12/15/2016 13:46	11.93	68.73	0.007	100	0	0.001
12/15/2016 13:45	11.93	61.5	0.007	100	0	0.001
12/15/2016 13:44	11.93	59.04	0.006	100	0	0.001
12/15/2016 13:43	12	60.08	0.006	100	0	0.001
12/15/2016 13:42	11.91	67.18	0.007	100	0	0.001
12/15/2016 13:41	11.95	70.16	0.007	100	0	0.001
12/15/2016 13:40	11.86	67.7	0.013	100	0	0.001
12/15/2016 13:39	11.92	58.79	0.006	100	0	0.001
12/15/2016 13:38	11.97	59.95	0.007	100	0	0.001
12/15/2016 13:37	11.93	56.07	0.006	100	0	0
12/15/2016 13:36	11.92	67.18	0.007	100	0	0
12/15/2016 13:35	11.95	76.62	0.007	100	0	0
12/15/2016 13:34	11.92	68.73	0.007	100	0	0
12/15/2016 13:33	11.94	62.4	0.007	100	0	0
12/15/2016 13:32	11.91	68.09	0.006	100	0	0
12/15/2016 13:31	11.93	62.02	0.006	100	0	0
12/15/2016 13:30	11.92	73.64	0.006	100	0	0
12/15/2016 13:29	11.97	70.8	0.007	100	0	0
12/15/2016 13:28	11.97	76.87	0.007	100	0	0
12/15/2016 13:27	11.89	83.2	0.006	100	0	0
12/15/2016 13:26	11.95	75.32	0.006	100	0	0
12/15/2016 13:25	11.92	71.06	0.006	100	0	0
12/15/2016 13:24	11.91	74.16	0.006	100	0	0
12/15/2016 13:23	11.92	71.06	0.006	100	0	0
12/15/2016 13:22	11.91	65.63	0.006	100	0	0
12/15/2016 13:21	11.86	71.96	0.005	100	0	0
12/15/2016 13:20	11.99	67.57	0.006	100	0	0
12/15/2016 13:19	11.87	67.96	0.006	100	0	0
12/15/2016 13:18	12	63.05	0.005	100	0	0
12/15/2016 13:17	11.89	63.7	0.008	100	0	0
12/15/2016 13:16	11.86	55.04	0.005	100	0	0
12/15/2016 13:15	11.92	70.67	0.005	100	0	0
12/15/2016 13:14	11.98	68.48	0.005	100	0	0
12/15/2016 13:13	11.91	74.55	0.005	100	0	0
12/15/2016 13:12	11.9	63.18	0.005	100	0	0

12/15/2016 13:11	11.9	64.34	0.005	100	0	0
12/15/2016 13:10	11.92	64.73	0.005	100	0	0
12/15/2016 13:09	11.99	71.58	0.005	100	0	0
12/15/2016 13:08	11.89	71.19	0.005	100	0	0
12/15/2016 13:07	11.98	63.05	0.005	100	0	0
12/15/2016 13:06	12.02	61.63	0.005	100	0	0
12/15/2016 13:05	11.76	74.42	0.004	100	0	0
12/15/2016 13:04	12.02	69.51	0.004	100	0	0
12/15/2016 13:03	12.03	65.37	0.004	100	0	0
12/15/2016 13:02	12.05	72.09	0.004	100	0	0
12/15/2016 13:01	11.73	64.99	0.004	100	0	0
12/15/2016 13:00	11.71	63.44	0.005	100	0	0
12/15/2016 12:59	11.96	66.02	0.004	100	0	0
12/15/2016 12:58	11.97	59.69	0.004	100	0	0
12/15/2016 12:57	12.04	64.08	0.004	100	0	0
12/15/2016 12:56	11.99	73.26	0.004	100	0	0
12/15/2016 12:55	11.82	69.9	0.004	100	0	0
12/15/2016 12:54	11.84	72.61	0.007	100	0	0
12/15/2016 12:53	11.86	73.13	0.012	100	0	0
12/15/2016 12:52	11.81	74.68	0.005	100	0	0
12/15/2016 12:51	11.87	74.16	0.004	100	0	0
12/15/2016 12:50	11.82	74.42	0.007	100	0	0
12/15/2016 12:49	11.89	70.93	0.004	100	0	0
12/15/2016 12:48	12.01	62.27	0.005	100	0	0
12/15/2016 12:47	11.99	64.47				
12/15/2016 12:46	12.01	64.34				
12/15/2016 12:45	11.98	66.15				
12/15/2016 12:44	12	62.4				
12/15/2016 12:43	11.94	65.25				
12/15/2016 12:42	11.97	68.22				
12/15/2016 12:41	12	71.45				
12/15/2016 12:40	12.06	62.27				
12/15/2016 12:39	12.08	66.54				
12/15/2016 12:38	12.17	71.71				
12/15/2016 12:37	12.12	72.35				
12/15/2016 12:36	12.13	84.24				

690 Portland Avenue - IRM Sump Cleanout PID Data

Test #1

Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
High Alarm Levels:	100.0	100.0	100.0
Low Alarm Levels:	50.0	50.0	50.0

Line#	Date	Time	Min(ppm)	Avg(ppm)	Max(ppm)
1	12/14/2016	13:32	0.0	0.1	6.6
2	12/14/2016	13:37	0.0	5.4	49.2
3	12/14/2016	13:42	0.0	9.1	44.0
4	12/14/2016	13:47	0.0	3.0	28.5
5	12/14/2016	13:52	0.0	1.9	23.3
6	12/14/2016	13:57	0.0	0.3	12.5
7	12/14/2016	14:02	0.0	0.8	13.2
8	12/14/2016	14:07	0.0	0.9	11.3
9	12/14/2016	14:12	0.0	0.2	7.9
10	12/14/2016	14:17	0.0	0.4	6.6
11	12/14/2016	14:22	0.0	0.2	5.4
12	12/14/2016	14:27	0.0	0.5	5.3
13	12/14/2016	14:32	0.0	1.5	4.3
14	12/14/2016	14:37	0.0	1.1	4.2
15	12/14/2016	14:42	0.0	3.7	7.8
16	12/14/2016	14:47	0.0	2.8	6.1
17	12/14/2016	14:52	0.0	2.9	8.3
18	12/14/2016	14:57	0.0	3.1	6.4
19	12/14/2016	15:02	0.0	0.9	4.1

Test 1 IRM - Sump cleanout data - perimeter of building
No TWA > 5ppm

Test#1

Measurement Type:	Min(ppm)			Avg(ppm)			Max(ppm		
Alarm Type:	STEL	TWA	AVG	STEL	TWA	AVG	STEL	TWA	AVG
Alarm Levels:	25.0	10.0		25.0	10.0		25.0	10.0	

Line#	Date	Time	Min(ppm) STEL	Min(ppm) TWA	Min(ppm) AVG	Avg(ppm) STEL	Avg(ppm) TWA	Avg(ppm) AVG	Max(ppm STEL	Max(ppm TWA	Max(ppm AVG
1	12/14/2016	13:32	0.0	0.0	0.0	0.0	0.0	0.1	2.2	0.1	6.6
2	12/14/2016	13:37	0.0	0.0	0.0	1.8	0.1	2.8	18.6	0.6	27.9
3	12/14/2016	13:42	0.0	0.0	0.0	4.9	0.2	4.9	33.3S	1.0	33.3
4	12/14/2016	13:47	0.0	0.0	0.0	5.8	0.2	4.4	40.6S	1.3	32.1
5	12/14/2016	13:52	0.0	0.0	0.0	4.7	0.2	3.9	31.9S	1.6	30.3
6	12/14/2016	13:57	0.0	0.0	0.0	1.7	0.2	3.3	21.4	1.7	27.4
7	12/14/2016	14:02	0.0	0.0	0.0	1.0	0.2	2.9	16.3	1.8	25.3
8	12/14/2016	14:07	0.0	0.0	0.0	0.7	0.2	2.7	12.3	2.0	23.6
9	12/14/2016	14:12	0.0	0.0	0.0	0.6	0.2	2.4	10.8	2.0	21.8
10	12/14/2016	14:17	0.0	0.0	0.0	0.5	0.2	2.2	8.6	2.1	20.3
11	12/14/2016	14:22	0.0	0.0	0.0	0.3	0.2	2.0	6.6	2.2	19.0
12	12/14/2016	14:27	0.0	0.0	0.0	0.4	0.2	1.9	5.8	2.2	17.8
13	12/14/2016	14:32	0.0	0.0	0.0	0.7	0.3	1.9	5.0	2.3	16.8
14	12/14/2016	14:37	0.0	0.0	0.0	1.0	0.3	1.8	4.6	2.3	15.9
15	12/14/2016	14:42	0.0	0.0	0.0	2.1	0.3	1.9	5.4	2.4	15.3
16	12/14/2016	14:47	0.0	0.0	0.0	2.5	0.3	2.0	6.0	2.5	14.8
17	12/14/2016	14:52	0.0	0.0	0.0	3.1	0.4	2.0	7.4	2.5	14.4
18	12/14/2016	14:57	0.0	0.0	0.0	2.9	0.4	2.1	6.9	2.6	13.9
19	12/14/2016	15:02	0.0	0.0	0.0	2.3	0.4	2.0	6.3	2.7	13.4

CAMP PID DATA - IRM Recovery Well Installation

Test #2

Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
High Alarm Levels:	100.0	100.0	100.0
Low Alarm Levels:	50.0	50.0	50.0

Line#	Date Time	Min(ppm)	Avg(ppm)	Max(ppm)
1	12/15/2016 12:34	0.0	0.0	0.0
2	12/15/2016 12:39	0.0	0.0	0.0
3	12/15/2016 12:44	0.0	0.0	0.0
4	12/15/2016 12:49	0.0	0.0	0.0
5	12/15/2016 12:54	0.0	0.0	0.0
6	12/15/2016 12:59	0.0	0.0	0.0
7	12/15/2016 13:04	0.0	0.0	0.0
8	12/15/2016 13:09	0.0	0.0	0.0
9	12/15/2016 13:14	0.0	0.0	0.0
10	12/15/2016 13:19	0.0	0.0	0.7
11	12/15/2016 13:24	0.0	0.0	0.6

Test 2-3 IRM-recovery well Installation 2/15/2016 - NO TWA >5 ppm
Location: upwind of excavation.

Measurement Type:	Min(ppm)			Avg(ppm)			Max(ppm)		
Alarm Type:	STEL	TWA	AVG	STEL	TWA	AVG	STEL	TWA	AVG
Alarm Levels:	25.0	10.0		25.0	10.0		25.0	10.0	

Line#	Date Time	Min(ppm)			Avg(ppm)			Max(ppm		
		STEL	TWA	AVG	STEL	TWA	AVG	STEL	TWA	AVG
1	12/15/2016 12:34	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	12/15/2016 12:39	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	12/15/2016 12:44	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	12/15/2016 12:49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	12/15/2016 12:54	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	12/15/2016 12:59	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	12/15/2016 13:04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	12/15/2016 13:09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	12/15/2016 13:14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	12/15/2016 13:19	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1
11	12/15/2016 13:24	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.1

Test #3

Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm)
High Alarm Levels:	100.0	100.0	100.0
Low Alarm Levels:	50.0	50.0	50.0

Line#	Date Time	Min(ppm)	Avg(ppm)	Max(ppm)
1	12/15/2016 13:39	0.0	0.0	0.0
2	12/15/2016 13:44	0.0	0.0	0.0
3	12/15/2016 13:49	0.0	0.3	15.8
4	12/15/2016 13:54	0.0	0.0	0.0
5	12/15/2016 13:59	0.0	0.0	0.0
6	12/15/2016 14:04	0.0	0.0	0.0
7	12/15/2016 14:09	0.0	0.0	0.1
8	12/15/2016 14:14	0.0	0.0	0.0
9	12/15/2016 14:19	0.0	0.0	0.0
10	12/15/2016 14:24	0.0	0.0	0.0
11	12/15/2016 14:29	0.0	0.0	0.1
12	12/15/2016 14:34	0.0	0.0	0.0
13	12/15/2016 14:39	0.0	0.0	0.0
14	12/15/2016 14:44	0.0	0.0	0.0
15	12/15/2016 14:49	0.0	0.0	0.0
16	12/15/2016 14:54	0.0	0.0	0.0
17	12/15/2016 14:59	0.0	0.0	0.0
18	12/15/2016 15:04	0.0	0.0	0.0
19	12/15/2016 15:09	0.0	0.0	0.0
20	12/15/2016 15:14	0.0	0.0	0.0
21	12/15/2016 15:19	0.0	0.0	0.0
22	12/15/2016 15:24	0.0	0.0	0.0

Measurement Type:	Min(ppm)			Avg(ppm)			Max(ppm		
Alarm Type:	STEL	TWA	AVG	STEL	TWA	AVG	STEL	TWA	AVG
Alarm Levels:	25.0	10.0		25.0	10.0		25.0	10.0	

Line#	Date Time	Min(ppm)			Avg(ppm)			Max(ppm		
		STEL	TWA	AVG	STEL	TWA	AVG	STEL	TWA	AVG
1	12/15/2016 13:39	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	12/15/2016 13:44	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	12/15/2016 13:49	0.0	0.0	0.0	0.1	0.0	0.1	5.3	0.2	5.3
4	12/15/2016 13:54	0.0	0.0	0.0	0.1	0.0	0.1	5.3	0.2	4.0
5	12/15/2016 13:59	0.0	0.0	0.0	0.1	0.0	0.1	5.3	0.2	3.2
6	12/15/2016 14:04	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	2.6
7	12/15/2016 14:09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.3
8	12/15/2016 14:14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.0
9	12/15/2016 14:19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.8
10	12/15/2016 14:24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.6
11	12/15/2016 14:29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.5
12	12/15/2016 14:34	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.3
13	12/15/2016 14:39	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.2
14	12/15/2016 14:44	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.1
15	12/15/2016 14:49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.1
16	12/15/2016 14:54	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0
17	12/15/2016 14:59	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9
18	12/15/2016 15:04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9
19	12/15/2016 15:09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8
20	12/15/2016 15:14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8
21	12/15/2016 15:19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8
22	12/15/2016 15:24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7

Test #1 Summary (Sump Cleanout) Perimeter of building

Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm
High Alarm Levels:	100.0	100.0	100.(
Low Alarm Levels:	50.0	50.0	50.(
STEL Alarm Levels:	25.0	25.0	25.(
TWA Alarm Levels:	10.0	10.0	10.(

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Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm
Peak Data Value:	0.0	9.1	49.2
Min Data Value:	0.0	0.1	4.3
TWA Data Value:	0.0	0.4	2.7
AVG Data Value:	0.0	2.0	13.4

Test #2 Summary

Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm
High Alarm Levels:	100.0	100.0	100.(
Low Alarm Levels:	50.0	50.0	50.(
STEL Alarm Levels:	25.0	25.0	25.(
TWA Alarm Levels:	10.0	10.0	10.(

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Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm
Peak Data Value:	0.0	0.0	0.7
Min Data Value:	0.0	0.0	0.(
TWA Data Value:	0.0	0.0	0.(
AVG Data Value:	0.0	0.0	0.1

Test #3 Summary (recovery well installation - hand held)

Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm
High Alarm Levels:	100.0	100.0	100.(
Low Alarm Levels:	50.0	50.0	50.(
STEL Alarm Levels:	25.0	25.0	25.(
TWA Alarm Levels:	10.0	10.0	10.(

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Measurement Type:	Min(ppm)	Avg(ppm)	Max(ppm
Peak Data Value:	0.0	0.3	15.8
Min Data Value:	0.0	0.0	0.(
TWA Data Value:	0.0	0.0	0.2
AVG Data Value:	0.0	0.0	0.7

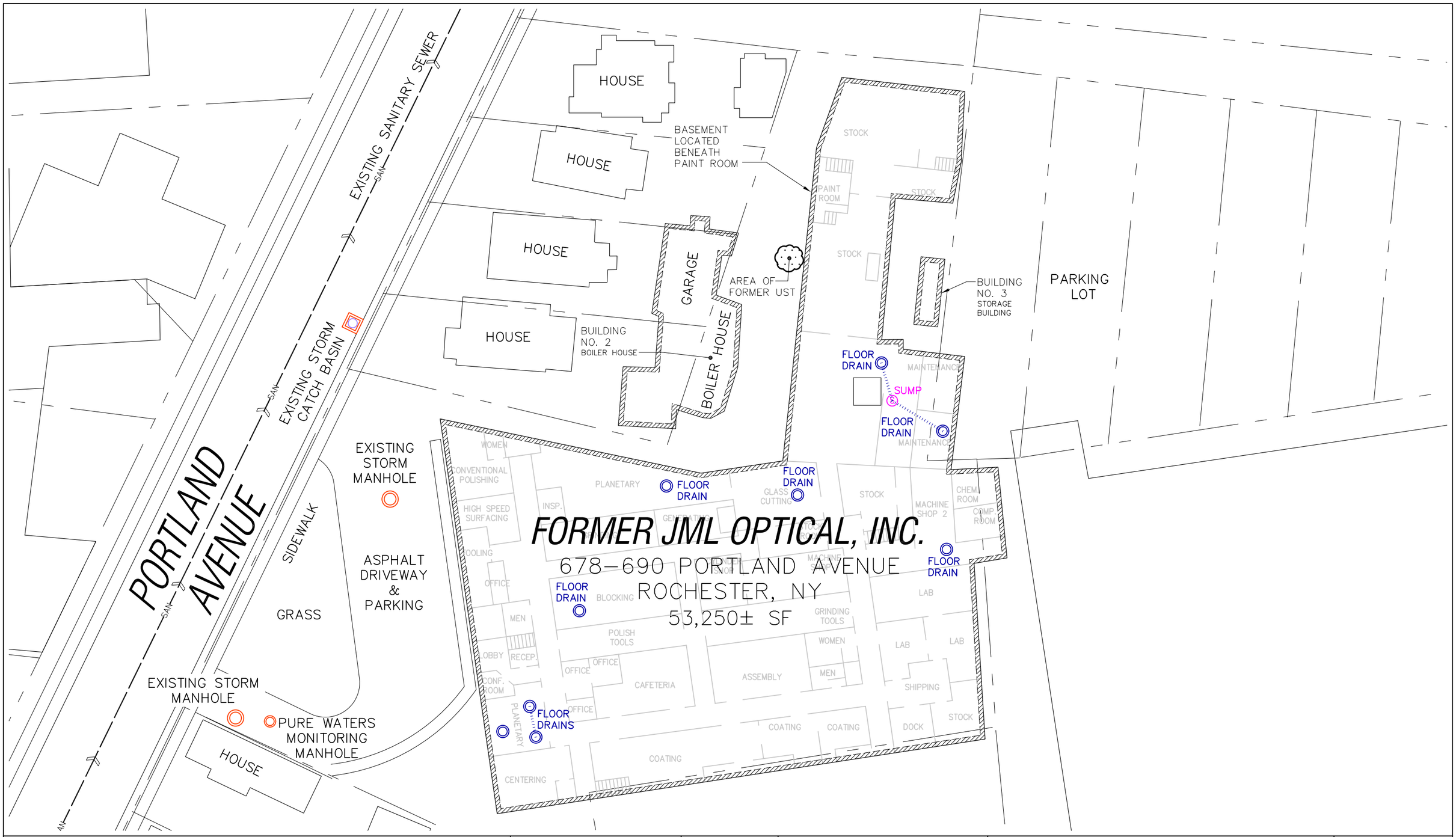
CAMP PID DATA - Recovery Well Installation - Downwind Location

1	12/15/2016 12:44	0.003	0.128	0.178	0.178		1	12/15/2016 12:44	0.006	0.178
2	12/15/2016 12:59	0.162	0.211	0.246	0.235		2	12/15/2016 12:59	0.013	0.235
3	12/15/2016 13:14	0.208	0.242	0.263	0.262		3	12/15/2016 13:14	0.021	0.262
4	12/15/2016 13:29	0.222	0.263	0.293	0.274	CAMP DATA -	4	12/15/2016 13:29	0.03	0.274
5	12/15/2016 13:44	0.138	0.262	0.315	0.266	No 15 minute	5	12/15/2016 13:44	0.038	0.266
6	12/15/2016 13:59	0.226	0.269	0.299	0.280	TWAs >5ppm	6	12/15/2016 13:59	0.047	0.28
7	12/15/2016 14:14	0.258	0.266	0.309	0.264		7	12/15/2016 14:14	0.055	0.264
8	12/15/2016 14:29	0.249	0.262	0.29	0.264		8	12/15/2016 14:29	0.063	0.264
9	12/15/2016 14:44	0.138	0.241	0.311	0.243		9	12/15/2016 14:44	0.071	0.243
10	12/15/2016 14:59	0.199	0.256	0.268	0.265		10	12/15/2016 14:59	0.079	0.265
11	12/15/2016 15:14	0.248	0.261	0.279	0.259		11	12/15/2016 15:14	0.087	0.259
Peak		0.258	0.269	0.315	0.280					
Min		0.003	0.128	0.178	0.178					
Average		0.186	0.242	0.277	0.254					

RAVI ENGINEERING & LAND SURVEYING, P.C.

Appendix I

Historical SUMP Diagram



NOTE:
EXISTING SANITARY & STORM STRUCTURES, SANITARY SEWER, AND FLOOR DRAINS ARE SHOWN IN APPROXIMATE LOCATIONS, BASED UPON A CHA FIELD VISIT ON 09/08/10

NO SCALE

N

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EXISTING FLOOR DRAIN LOCATIONS
REMEDIAL INVESTIGATION REPORT
FORMER JML OPTICAL, INC.
678–690 PORTLAND AVENUE
ROCHESTER, NY

PROJECT NO. 17781
DATE: 09/27/10
Figure 6