



MASSACHUSETTS CONTINGENCY PLAN

Release Abatement Measure Status Report #3

0 & 12-24 Fairmount Court
Hyde Park, MA 02136
RTN: 3-1616

980 Washington Street
Suite 325
Dedham, Massachusetts 02026
800.446.5518

woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

221375.01

City of Boston
Department of
Neighborhood
Development

May 2012

TABLE OF CONTENTS

SECTION	PAGE NO.
1. INTRODUCTION	1-1
1.1 Site Description	1-1
1.2 Surrounding Receptors.....	1-1
1.3 Release History	1-1
2. RAM STATUS	2-1
2.1 Status of Ongoing RAM Activities.....	2-1
2.2 Significant or New Information.....	2-1
2.3 Subslab Vapor Removal Summary	2-1
2.4 Remediation Waste Management	2-2
2.5 Schedule & RAM Reporting.....	2-2
2.6 Licensed Site Professional Opinion, Seal and Signature	2-2
3. REMEDIAL MONITORING REPORT	3-1
3.1 General	3-1
3.2 SVE Routine Operation	3-1
3.3 Significant Operational Events	3-1
3.3.1 Groundwater Collection within Condensate Knock-out Drum.....	3-2
4. LIMITATIONS.....	4-1
5. REFERENCES	5-1

TABLES

Table 1:	Process Air Sampling Results Summary
Table 2:	TVOC Readings and Mass Removal versus Time
Table 3:	Remedial Activities Summary

FIGURES

Figure 1:	Site Locus
Figure 2:	Site Plan
Figure 3:	Mass Removal Graph

APPENDICES

Appendix A:	BWSC Forms 106, 106A, and 106B (Post-Submittal Report Copies)
Appendix B:	SVE System Field Monitoring Reports
Appendix C:	Laboratory Analytical Reports

1. INTRODUCTION

This Release Abatement Measure (RAM) Status Report has been prepared in accordance with the Massachusetts Contingency Plan (MCP), 310 CMR 40.0445, for the property located at 0 and 12-24 Fairmount Court in Hyde Park, Massachusetts (the Site). A Site Locus is provided as **Figure 1**.

The City of Boston, Massachusetts has assumed the role as the potentially responsible party (PRP) for the release, designated by Release Tracking Number (RTN) 3-1616 by the Massachusetts Department of Environmental Protection (MassDEP). The City of Boston has implemented a RAM to address volatile organic compounds (VOCs) in soil and soil vapor present at the Site below the Site building foundation. The RAM activities include the operation of a Soil Vapor Extraction (SVE) System at the Site. The original RAM Transmittal Forms (BWSC 106, 106A, and 106B) are being signed and submitted with this report via the eDEP filing system. Copies of the transmittal forms will be included as **Appendix A** in post-submittal report copies.

1.1 SITE DESCRIPTION

The subject property, 30,592 square feet in size, is currently owned by the City of Boston and comprised of two parcels laid out in a rectangular manner. The smaller of the two parcels, comprising 6,338 square feet, is not improved. The larger parcel, comprising 24,254 square feet, is improved with a currently vacant three-story, 8,800-square foot (building footprint), former industrial building. The coordinates of the property are 42° 15' 10"N latitude, 71° 07' 11"W longitude. The Universal Transverse Mercator (UTM) coordinates are 4680042 Northing and 325153 Easting in Zone 19. A Site Plan is included as **Figure 2**.

1.2 SURROUNDING RECEPTORS

The Site is located in a restricted manufacturing zoned area of Boston. Nearby properties are zoned commercial, restricted manufacturing, and residential and are developed as such. The nearest human receptors are residents living within 500 feet north and east of the Site across MBTA railroad lines, which run along the northern Site boundary. The Neponset River, which runs along the southern Site boundary, and the land situated adjacently southwest of the Site is identified as protected open space.

1.3 RELEASE HISTORY

The Site has a history of industrial use and was formerly the location of the Lewis Chemical Company. Based on available information, the Site was utilized as a leather manufacturing company from 1940 to the early 1960's. Lewis Chemical operated the Site from 1963 until 1983 and collected, stored, transported, and processed hazardous waste. Lewis Chemical was forced to cease operations under a Court Order issued by MassDEP in 1983. The MassDEP subsequently listed the Site as a State disposal site in 1987 and issued release tracking number (RTN) 3-1616. The Site is currently listed as a Tier 1B disposal site. The City of Boston gained ownership of the property in October 2000 via tax foreclosure.

Several environmental investigations have been performed at the Site since 1986 and were detailed in the RAM Plan submitted to the MassDEP in July 2010 (W&C, 2010). The most recent was a supplemental soil investigation conducted by Woodard & Curran for the City of Boston completed in 2008. The 2008 investigation conducted at the Site identified significant volatile organic compound (VOC) concentrations in soil below the building foundation. Notably, tetrachloroethene (PCE) and trichloroethene (TCE) were detected in maximum concentrations of 8,000 mg/Kg and 1,900 mg/Kg, respectively, in soil samples

collected beneath the concrete slab floor at the western portion of the Site building. The previous RAM Status Report was submitted in November 2011.

2. RAM STATUS

2.1 STATUS OF ONGOING RAM ACTIVITIES

The SVE system construction was completed at the Site on September 24, 2010. SVE system start-up also occurred on this day. The RAM Plan submitted to the MassDEP in July 2010 detailed the construction of the SVE system (W&C, 2010). The SVE system was constructed in accordance with the RAM Plan and no significant changes in the system were made during construction. As documented in the RAM Status Report #1 submitted to MassDEP on June 2, 2011, the SVE system was modified on October 20, 2010 to include a potassium permanganate filter to extract the vinyl chloride from the system effluent vapors prior to discharge to the atmosphere (W&C, 2011a).

2.2 SIGNIFICANT OR NEW INFORMATION

RAM Status Report #2 summarized the new information since the submittal of the RAM Status Report #1 in May 2011 through November 2011. The reporting period for this RAM Status Report is from November 2011 to May 21, 2012.

On January 13, 2012, the SVE system was shut down due to a heavy rain event in order to avoid infiltration of groundwater into the extraction well and condensate knock-out drum. The SVE system remained off for 12 days until the system was restarted on January 25, 2012. The SVE system was shut down again for a short period on March 29, 2012 in order to complete a change out of the Hydrosil International LTD HS-600 material (potassium permanganate filter added in October 2010).

The SVE system is currently off in order to complete a carbon change. Further information regarding the need to turn off the SVE system is provided in Section 3.3 of this report.

2.3 SUBSLAB VAPOR REMOVAL SUMMARY

Cumulative total volatile organic compounds (TVOC) mass removal accomplished during the reporting period is shown in **Table 2** and shown graphically in **Figure 3**. To date, approximately 1,124 pounds of VOCs have been removed from the subsurface. In general, as the cumulative VOC removal amount has increased, the VOC concentrations within the process air stream have also remained relatively consistent over this reporting period, as shown in **Figure 3**. The system efficiency for the removal of TVOCs based on the laboratory data obtained from the SVE system process air sampling events is shown on **Table 1**. The system efficiency for the removal of TVOCs based on the PID screening data obtained during the SVE system monitoring events is provided on the field monitoring reports in **Appendix B**.

A 99% or greater TVOC removal efficiency was achieved during this reporting period. Only vinyl chloride at a concentration of 23 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) was detected in the effluent process air sample that was submitted for laboratory analysis in February 2012. No other constituents were detected. As previously noted, the TVOC removal efficiency continued to achieve greater than 99% percent removal efficiency throughout the reporting period. Based upon the concentrations of vinyl chloride in the effluent process air, on March 29, 2012, W&C replaced the 55-gallon drum unit containing the Hydrosil International LTD HS-600 material, which was installed to mitigate the concentrations of vinyl chloride in the effluent process air being discharged to the atmosphere. Further information regarding the spent Hydrosil material is discussed further below in Section 2.4.

2.4 REMEDIATION WASTE MANAGEMENT

Additional carbon has not been transported from the Site for regeneration during this reporting period. However, the SVE system was shut down on May 10, 2012 and a carbon change is currently being scheduled. Similarly as reported in RAM Status Report #2, the spent carbon that is generated will be transported to Carbon Activated in Blasdel, New York for regeneration by Carbon Filtrations Systems (CFS) of Johnston, Rhode Island (W&C, 2011b).

Disposal characterization sampling results from the spent Hydrosil International LTD HS-600 material that was replaced on March 29, 2012 indicates that this material is non-hazardous. The drum containing this spent material will be removed from the Site by CFS during the upcoming carbon change.

As noted in the previous RAM Status Report, water collected from the SVE system knock-out drum is currently being stored in 55-gallon drums inside the Site building. This waste has been characterized for disposal and is currently awaiting approval from the disposal facility prior to transport.

Disposal and waste characterization documentation for the Hydrosil material and water will be provided in the next RAM Status Report to be submitted in November 2012.

2.5 SCHEDULE & RAM REPORTING

It is anticipated that RAM Status Report #4 will be submitted in November 2012. The SVE system will continue to run over the next reporting period once the carbon change-out is complete.

2.6 LICENSED SITE PROFESSIONAL OPINION, SEAL AND SIGNATURE

The activities described in this RAM Status Report are in general conformance with the tasks outlined in the RAM Plan. The seal and signature of Craig Blake, the Licensed Site Professional who is overseeing RAM activities, is provided and a copy of the RAM Transmittal Form has been submitted via eDEP concurrently with this report.

3. REMEDIAL MONITORING REPORT

3.1 GENERAL

This is the third remedial monitoring report (RMR) to summarize the RAM activities conducted since the submission of the RAM Plan. A completed RMR BWSC form 106A and 106B is being submitted concurrently with this report via eDEP. An SVE System layout is provided on the Site plan, which is provided as **Figure 2**. The following sections provide the information requested on the RMR checklist and describe the start-up, testing, and operation of the SVE system.

3.2 SVE ROUTINE OPERATION

W&C conducted a total of four Site visits since the submission of the RMR in November 2012 in order to conduct a full monitoring round to collect physical and chemical field measurements, such as air flowrate, vacuum, temperature, and TVOC levels using a photoionization detector (PID) at each monitoring point throughout the system. **Table 3** summarizes the remedial activities conducted during the reporting period. Additional spot checks were also performed by W&C personnel to ensure the system was running efficiently and to drain water from the condensate knock-out drum, if present. A Site visit was conducted during December 2011 but due to encountering unauthorized entry into the Site building by persons unknown no system readings were obtained. No damage to the SVE system occurred as the result of the break-in but the light stanchions were stolen. The lighting was replaced and the building was further secured during the month of December 2011. Copies of the SVE field monitoring reports are provided in **Appendix B**.

W&C collected quarterly process air samples from the SVE influent and effluent stream on February 8, 2012. The process air samples were submitted for EPA TO-15 analysis to Absolute Resource Associates of Portsmouth, New Hampshire. The purpose of these process air samples was to further characterize the subslab soil gas in order to correlate PID readings to the laboratory data to assist in the mass removal estimation. The laboratory report from the process air sampling events is provided in **Appendix C**.

3.3 SIGNIFICANT OPERATIONAL EVENTS

On January 13, 2012, the SVE system was shut down due to a heavy rain event in order to avoid the potential infiltration of groundwater into the extraction wells and condensate knock-out drum. The SVE system remained off for 12 days until the system was restarted on January 25, 2012.

The SVE system was shut down for a short period on March 29, 2012, in order to complete a change out of the Hydrosil International LTD HS-600 filter material, which had been previously added to the process air off-gas controls on October 20, 2010.

The SVE system was shut down on May 10, 2012 during a system spot check by W&C personnel. During the spot check, PID readings from the first carbon vessel indicated that the carbon in this vessel was “spent” and was not effectively treating the process air. The SVE system was shut down in order to schedule a carbon change of this single vessel. PID monitoring of the second carbon vessel that is in place prior to the process air discharge to the atmosphere showed the carbon in this vessel was still active and the overall process air treatment efficiency remained above 95%. However, to facilitate the efficiency of the off-gas treatment controls, the system was shutdown in order to complete the carbon change for the first vessel. Once the carbon change has been completed, the SVE system will be restarted and a full monitoring round will be completed.

3.3.1 Groundwater Collection within Condensate Knock-out Drum

Approximately five gallons of water were removed from the knock-out drum during this reporting period. Based upon the volume of water collected in the knock-out drum, it is assumed that the collected water was extracted groundwater rather than condensate. This was previously discussed in RAM Status Report #1. The water is currently stored on-site in 55-gallon drums. The drums have been characterized for disposal and are currently awaiting approval from the disposal facility. Disposal manifests will be provided in the next RAM Status Report submittal that is scheduled for November 2012.

4. LIMITATIONS

The activities described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or limited is implied. These services were performed consistent with the agreement with our client. The conclusions presented in this Report were based upon the services described and not on scientific tasks or procedures beyond the scope of described services or time or budgetary constraints. Any statement or opinion contained in this report prepared by Woodard & Curran shall not be construed to create any warranty or representation that the property is free of pollution or complies with any or all applicable regulatory or statutory requirements; or that the property is fit for any particular purpose. Unless otherwise indicated in this Report, no attempt was made to check on the compliance of present or past owners of the Site with federal, state, or local laws and regulations. Woodard & Curran Inc. shall not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed at the time the evaluation was performed.

Results of the activities contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others or the use of segregated portions of this report.

This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

5. REFERENCES

Woodard & Curran, Inc. (W&C) 2010. *Release Abatement Measure Plan*, 0 & 12-24 Fairmount Court, Hyde Park, Massachusetts, RTN 3-1616, July.

Woodard & Curran, Inc. (W&C) 2011a. *Release Abatement Measure Status Report*, 0 & 12-24 Fairmount Court, Hyde Park, Massachusetts, RTN 3-1616, May.

Woodard & Curran, Inc. (W&C) 2011b. *Release Abatement Measure Status Report #2*, 0 & 12-24 Fairmount Court, Hyde Park, Massachusetts, RTN 3-1616, November.

TABLES

Table 1
Process Air Sampling Results Summary
2/8/2012

LOCATION SAMPLING DATE			INFLUENT 2/8/2012	EFFLUENT 2/8/2012
	CasNum	h		
MCP Volatile Organics in Air		ug/m3		
Vinyl chloride	75-01-4		120	23
1,1-Dichloroethene	75-35-4		81	ND(25)
Methylene chloride	75-09-2		61	ND(22)
1,1-Dichloroethane	75-34-3		160	ND(25)
cis-1,2-Dichloroethene	156-59-2		3,400	ND(25)
1,2-Dichloroethane	107-06-2		100	ND(25)
1,1,1-Trichloroethane	71-55-6		14,000	ND(34)
Trichloroethene	79-01-6		20,000	ND(34)
Toluene	108-88-3		1,300	ND(24)
Tetrachloroethene	127-18-4		33,000	ND(42)
Ethylbenzene	100-41-4		160	ND(27)
p/m-Xylene	106-42-3/108-38-3		310	ND(54)
o-Xylene	95-47-6		360	ND(27)
Freon 113	76-13-1		1,400	ND(48)
4-Ethyltoluene	622-96-8		71	ND(31)
1,2,4-Trimethylbenzene	95-63-6		46	ND(31)
1,2-Dichlorobenzene	95-50-1		62	ND(38)
1,3,5-Trimethylbenzene	108-67-8		54	ND(31)
SUM			74,685	23
Removal Efficiency		%		99.97%

Notes:

Only laboratory detections are summarized in this table.

ND= Not detected above laboratory detection limit. Detection limit is provided in parenthesis.

ug/m3= microgram per cubic meter.

MCP= Massachusetts Contingency Plan.

TABLE 2
TVOC Mass Removal Summary
September 2010 to May 2012

DATE	FLOW (scfm)	TVOC- PID (ppmV)	Run Time (Days)	Mass Removed (Lbs)	Cum. Mass Removed (Lbs)	Cum. Run Time (Days)
9/24/10	81.0	410.5				
10/1/10	124.0	166.1	6.70	101.32	101.32	6.70
10/8/10	175.0	91.5	7.00	69.3	170.62	13.70
1/1/00	264.0	57.5	12.00	100.65	271.27	25.70
11/12/10	282.0	12.1	13.60	66.04	337.31	39.30
12/22/10	172.0	48.9	10.30	36.52	373.83	49.60
1/7/11	159.0	16.7	15.92	44.09	417.92	65.52
2/3/11	98.0	24.2	10.80	14.48	432.4	76.32
2/18/11	194.0	16.0	4.71	7.06	439.46	81.03
3/4/11	165.0	6.2	14.08	14.31	453.77	95.11
4/1/11	110.0	47.5	16.11	30.34	484.11	111.22
4/29/11	35.0	36.9	27.82	43.42	527.53	139.04
5/27/11	151.0	45.7	27.95	54.87	582.4	166.99
6/19/11	118.0	42.3	21.00	63.52	645.92	187.99
9/23/11	147.0	121.0	11.11	61.32	707.24	199.10
10/27/11	72.0	12.0	31.01	114.49	821.73	230.11
1/5/12	75.0	26.8	69.48	90.01	911.74	299.59
2/8/12	206.0	23.1	21.64	55.8	967.54	321.23
3/14/12	98.0	20.7	34.97	85.62	1053.16	356.20
4/20/12	100.0	32.1	36.92	70.97	1124.1	393.12

Notes:

scfm= standard cubic feet per minute

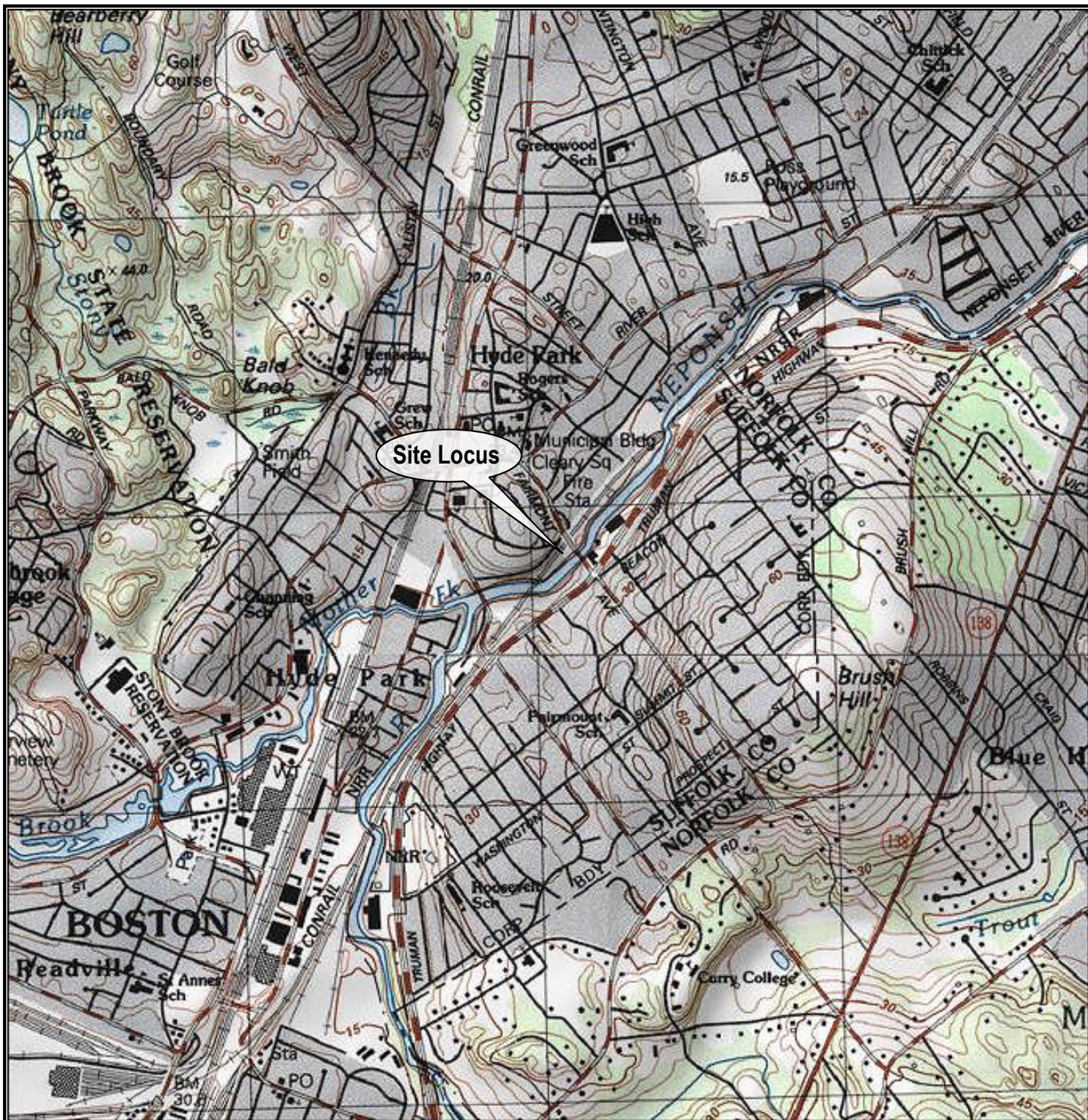
ppmV= parts per million by volume

Lbs= pounds

Table 3: Remedial Activities Summary

Item	Description
a.) Operating Status of the Active Remedial System Including Shutdowns	The system is currently off and awaiting a carbon change prior to restarting. The SVE operated for a total of approximately 183 days between October 27, 2011 and May 10, 2012 (date of system shutdown). The SVE was shutdown for approximately 12 days prior to May 10, 2012 and a total of 23 days to the ending date of this remedial monitoring period, which is May 21, 2012.
b.) Dates and Number of Monitoring Events	Four full Site monitoring events were conducted on the following dates: 1/5/2012, 2/8/2012, 3/14/2012, and 4/20/2012.
c.) Effluent Concentrations	The goal of the off-gas treatment controls is to maintain a removal efficiency of 95%. Based upon both the PID measurements obtained from the influent and effluent process air streams during SVE system monitoring events and the influent and effluent process air samples collected for TO-15 laboratory analysis, this goal has been achieved to date.
d.) Discharges Above Permissible Levels	Not applicable.
e.) Recovery Rates and/or Volumes	Based on an average flowrate of 141 scfm and runtime of approximately 393 days, approximately 302 pounds of VOCs were removed between October 27, 2011 and May 21, 2012. Table 2 summarizes the system TVOC mass removal based on a runtime of 393 days from data collected over 19 total Site visits since startup. A graph showing the influent TVOC concentration over time and the cumulative mass removal by the SVE is provided in Figure 3.
f.) Discharge Volumes	<p>Approximately 5 gallons of groundwater were intermittently extracted through the SVE wells in January and February 2012. The groundwater was captured and is stored on-Site in 55-gallon drums.</p> <p>It is estimated that 46,952,012 standard cubic feet of air was discharged to the atmosphere since the SVE system was started on September 24, 2010.</p>
g.) Remedial Additives	No remedial additives were applied.
h.) Related Maps, Graphs or Diagrams	SVE design drawings including a piping and well layout, piping and instrumentation diagram (P&ID), piping and well details were previously provided in the July 2010 RAM Plan.

FIGURES



MN ★ TN
15½°

0 5 1 MILE
0 1000 FEET 0 500 1000 METERS

Printed from TOPO! ©2000 Wildflower Productions (www.topo.com)

Base Map Source:
TOPO!™ © 2000
Wildflower Productions

LAT: 42°15'11.00"
LONG: 71°07'10.09"

DES.BY: DR.BY: MES CK.BY: CB

12-24 Fairmount Court
Hyde Park, MA 02136

FIGURE 1 SITE LOCUS

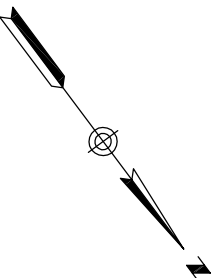
SCALE: AS SHOWN JOB NO.: 221375.01
DATE: JULY 2010 FILE NAME:



**COMMITMENT & INTEGRITY
DRIVE RESULTS**

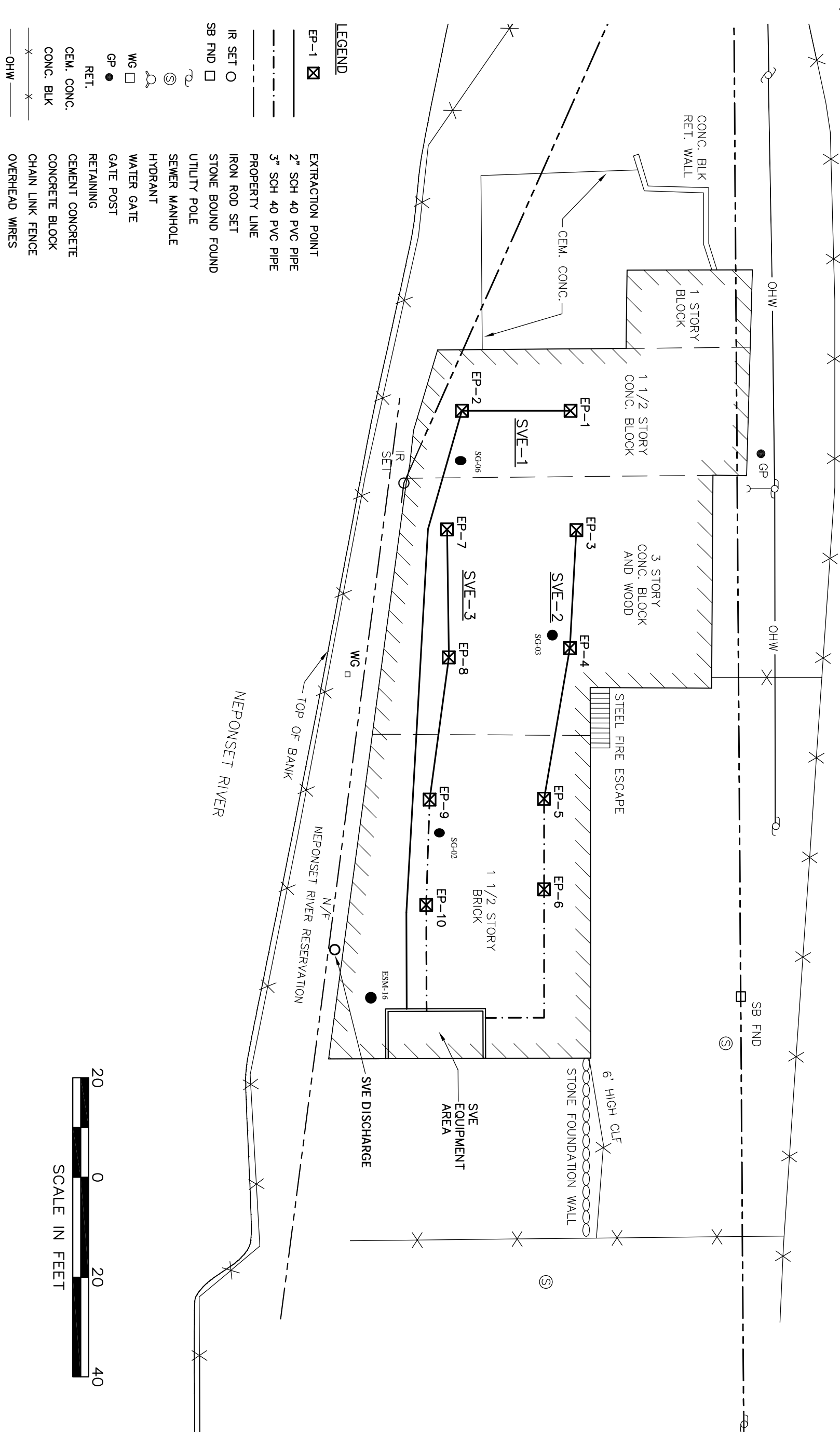
980 Washington St, Suite 325
Dedham, MA 02026

T: 800.446.5518



COMMONWEALTH OF MASSACHUSETTS MBTA

- NOTES:**
- SEE CITY OF BOSTON ASSESSOR'S PLAN WARD #18, BLOCK #199, LOT #10598 AND #10601 FOR SITE REFERENCE. SITE IS KNOWN AS #12 AND #0 FAIRMOUNT COURT.
 - SEE S.C.R.D. BOOK 8338, PG 650, AND LC 38601 FOR SITE PROPERTY LINE INFORMATION.



SITE PLAN

DESIGNED BY: DRC	CHECKED BY: SLD
DRAWN BY: GA	221375-SVE-Layout-FIG-1.dwg



980 WASHINGTON STREET
DEDHAM, MASSACHUSETTS 02026
781.251.0200 | www.woodardcurran.com

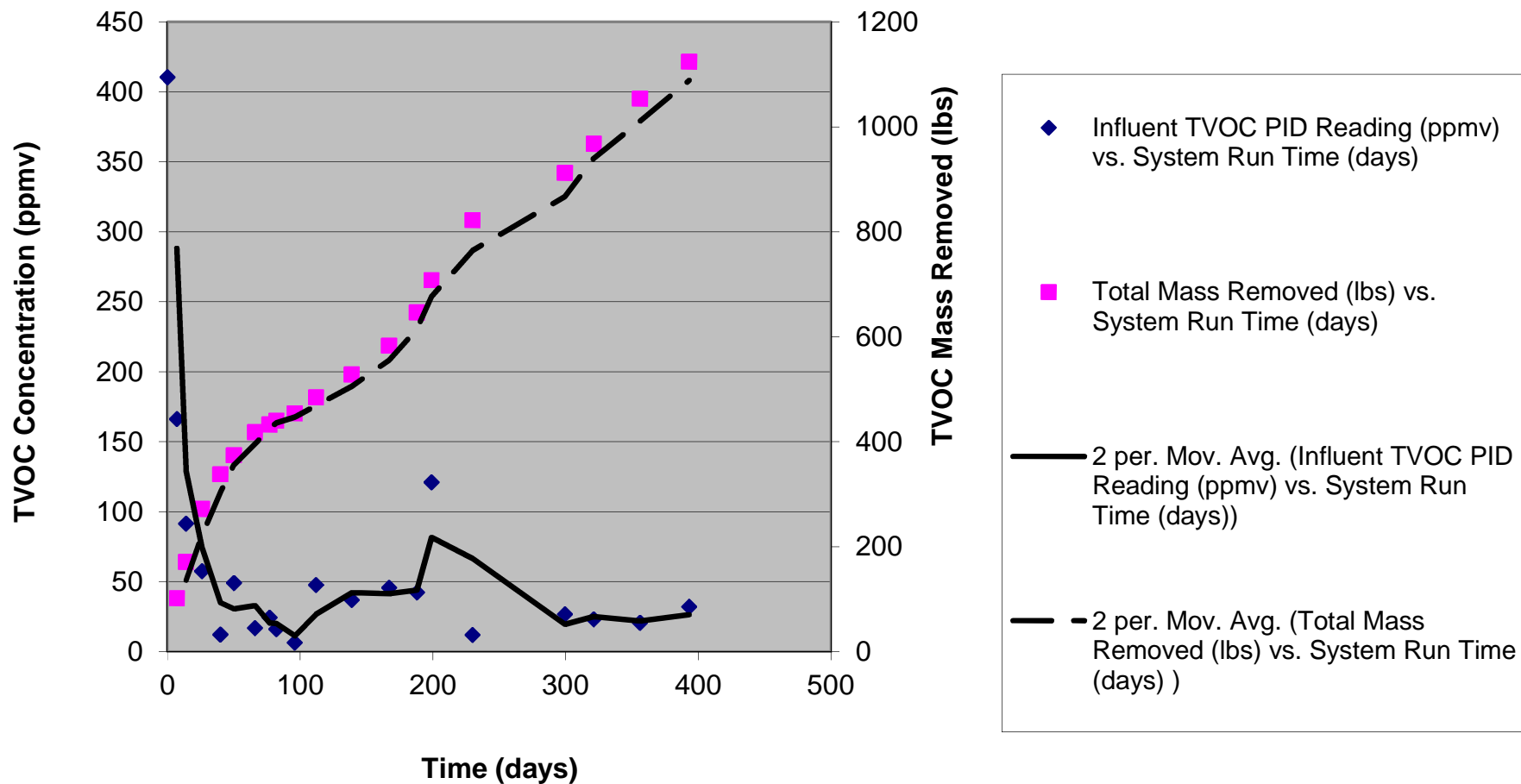
COMMITMENT & INTEGRITY DRIVE RESULTS

CITY OF BOSTON
DEPARTMENT OF
NEIGHBORHOOD DEVELOPMENT

FORMER LEWIS CHEMICAL SITE

JOB NO: 221375
DATE: AUGUST 2009
SCALE: 1" = 20'
FIGURE - 2

Figure 3: TVOC Readings and Mass Removal versus Time



APPENDIX A: BWSC FORMS 106, 106A, AND 106B (POST-SUBMITTAL REPORT COPIES)

Note: Forms not included with report filed via e-DEP because forms are completed during e-DEP submittal. Forms included in post-submittal report copies.

APPENDIX B: SVE SYSTEM FIELD MONITORING REPORTS

TABLE B-1
Soil Vapor Extraction System Checklist
Former Lewis Chemical Site Hyde Park, Massachusetts

Operator: DC/BG

Date: 1/5/2012

Location	Time	Vacuum/Pressure	Measured Velocity	Flow Rate*	TVOC-PID Concentration	Temperature
		(in-W.C.)	(ft/min)	(scf/min)	(ppm _v)	(deg - F)
Knock-Out Drum Inlet	10:53	-19.0			28	
SVE Blower Inlet	10:56	-20.0	1533	75	26.8	39.1
SVE Blower Outlet	11:06	15.0	1500	131	12.1	60.5
VGAC #1 Outlet	11:13	12.0			0	
VGAC #2 Outlet	11:15	10.0			0	
Post MnO4/Discharge	11:20	1.0	3400	297	0	48.9

System Efficiency 100%

Knockout Drum Water Vol.	(gallons)	0
SVE Blower Runtime	(Time)	11:30
	(hours)	7205.6

Extraction Point ID	Time	Vacuum	Measured Velocity	Flow Rate*	TVOC-PID Concentration	Status
		(in-W.C.)	(ft/min)	(scf/min)	(ppm _v)	(ON/OFF)
SVE-1	10:43	-15.0	2055	45	47.3	ON
EP-1	10:12	-9.0	430	9	87.7	ON
EP-2	10:00	-7.5	950	21	13.9	ON
SVE-2	10:43	-15.0	5000	245	13.4	ON
EP-3	10:28	-10.0	577	13	18	ON
EP-4	10:30	-10.0	620	14	5.1	ON
EP-5	10:38	—	—	—	1.6	OFF
EP-6	10:40	—	—	—	1.3	OFF
SVE-3	10:52	-15.0	4500	221	8.7	ON
EP-7	10:25	-10.0	544	12	7.9	ON
EP-8	10:20	-2.0	162	4	9.8	ON
EP-9	10:47	—	—	—	6.5	OFF
EP-10	10:52	—	—	—	6.2	OFF

*To calculate the flowrate, multiply the measured velocity by [0.021817 for 2-inch pipe] [0.049087 for 3-inch pipe] [0.087266 for 4-inch pipe]
(Q = 3.14 (2/12)² * V)

Vapor Probe ID	Time	Vacuum	TVOC-PID Concentration
		(in-W.C.)	(ppm _v)
SG-02	10:50	—	H2O in line
SG-03	10:30	-1.2	1.7
ESM-15			
ESM-16	11:04	0	5

Notes:

- 1) SG-01, SG-04, SG-05, and SG-06 are destroyed and will not be included in future monitoring sheets.
- 2) ESM-15 is a future monitoring point to be constructed.

TABLE B-1
Soil Vapor Extraction System Checklist
Former Lewis Chemical Site Hyde Park, Massachusetts

Operator: DC/BG

Date: 2/8/2012

Location	Time	Vacuum/Pressure	Measured Velocity	Flow Rate*	TVOC-PID Concentration	Temperature
		(in-W.C.)	(ft/min)	(scf/min)	(ppm _v)	(deg - F)
Knock-Out Drum Inlet	9:19	-14.0			21	
SVE Blower Inlet	9:21	-15.0	4200	206	23.1	32.5
SVE Blower Outlet	9:27	15.0	2100	183	10	57
VGAC #1 Outlet	9:29	13.0			0	
VGAC #2 Outlet	9:30	10.0			0	
Post MnO4/Discharge	9:35	1.0	3300	288	0	47.4

System Efficiency 100%

Knockout Drum Water Vol.	(gallons)	5
SVE Blower Runtime	(Time)	9:35
	(hours)	7724.9

Extraction Point ID	Time	Vacuum	Measured Velocity	Flow Rate*	TVOC-PID Concentration	Status
		(in-W.C.)	(ft/min)	(scf/min)	(ppm _v)	(ON/OFF)
SVE-1	9:03	-15.0	1983	43	40.1	ON
EP-1	Not Sampled Due to Lack of Lighting					
EP-2						
SVE-2	9:05	-14.0	2900	142	13	ON
EP-3	8:47	-11.0	800	17	15	ON
EP-4	8:50	-12.5	820	18	4.2	ON
EP-5	8:50	—	—	—	0.9	OFF
EP-6	9:00	—	—	—	1.3	OFF
SVE-3	9:06	-14.0	3900	191	9.4	ON
EP-7	8:45	-11.5	664	14	7.7	ON
EP-8	8:40	-3.0	86	2	8	ON
EP-9	9:10	—	—	—	12.2	OFF
EP-10	9:12	—	—	—	10.6	OFF

*To calculate the flowrate, multiply the measured velocity by [0.021817 for 2-inch pipe] [0.049087 for 3-inch pipe] [0.087266 for 4-inch pipe]
(Q = 3.14 (2/12)² * V)

Vapor Probe ID	Time	Vacuum	TVOC-PID Concentration
		(in-W.C.)	(ppm _v)
SG-02	9:13	—	H2O in line
SG-03	9:16	-3	1.2
ESM-15			
ESM-16	9:15	0	10.2

Notes:

- 1) SG-01, SG-04, SG-05, and SG-6 are destroyed and will not be included in future monitoring sheets.
- 2) ESM-15 is future monitoring point to be constructed.

TABLE B-1
Soil Vapor Extraction System Checklist
Former Lewis Chemical Site Hyde Park, Massachusetts

Operator: DC/BG

Date: 3/14/2012

Location	Time	Vacuum/Pressure	Measured Velocity	Flow Rate*	TVOC-PID Concentration	Temperature
		(in-W.C.)	(ft/min)	(scf/min)	(ppm _v)	(deg - F)
Knock-Out Drum Inlet	9:08	-14.0			21.4	
SVE Blower Inlet	9:10	-15.0	2000	98	20.7	52.1
SVE Blower Outlet	9:20	15.5	2400	209	8.8	62
VGAC #1 Outlet	9:25	13.0			1.5	
VGAC #2 Outlet	9:27	10.0			0	
Post MnO4/Discharge	9:30	1.0	3300	288	0	64

System Efficiency 100%

Knockout Drum Water Vol.	(gallons)	0
SVE Blower Runtime	(Time)	9:59
	(hours)	8564.1

Extraction Point ID	Time	Vacuum	Measured Velocity	Flow Rate*	TVOC-PID Concentration	Status
		(in-W.C.)	(ft/min)	(scf/min)	(ppm _v)	(ON/OFF)
SVE-1	8:57	-13.5	1960	43	34.6	ON
EP-1	8:30	-10.5	600	13	78.1	ON
EP-2	8:26	-10.5	930	20	8.9	ON
SVE-2	8:57	-13.5	1000	49	8.6	ON
EP-3	8:40	-12.0	997	22	11.6	ON
EP-4	8:41	-12.0	1280	28	3.8	ON
EP-5	8:47	—	—	—	0.9	OFF
EP-6	8:49	—	—	—	1.2	OFF
SVE-3	9:00	-13.0	470	23	6.7	ON
EP-7	8:37	-11.0	928	20	9.5	ON
EP-8	8:35	-2.5	315	7	11.8	ON
EP-9	9:00	—	—	—	12.3	OFF
EP-10	9:10	—	—	—	11.5	OFF

*To calculate the flowrate, multiply the measured velocity by [0.021817 for 2-inch pipe] [0.049087 for 3-inch pipe] [0.087266 for 4-inch pipe]
(Q = 3.14 (2/12)² * V)

Vapor Probe ID	Time	Vacuum	TVOC-PID Concentration
		(in-W.C.)	(ppm _v)
SG-02	9:06	0	0.1
SG-03	8:45	-3	2.3
ESM-15			
ESM-16	9:08	0	10.4

Notes:

- 1) SG-01, SG-04, SG-05, and SG-6 are destroyed and will not be included in future monitoring sheets.
- 2) ESM-15 is a future monitoring point to be constructed.

TABLE B-1
Soil Vapor Extraction System Checklist
Former Lewis Chemical Site Hyde Park, Massachusetts

Operator: DC/BVA

Date: 4/20/2012

Location	Time	Vacuum/Pressure	Measured Velocity	Flow Rate*	TVOC-PID Concentration	Temperature
		(in-W.C.)	(ft/min)	(scf/min)	(ppm _v)	(deg - F)
Knock-Out Drum Inlet	8:30	-12.0			61.8	
SVE Blower Inlet	8:32	-14.0	2030	100	66.9	59.1
SVE Blower Outlet	8:38	12.5	2640	230	32.1	84.3
VGAC #1 Outlet	8:45	10.0			9.5	
VGAC #2 Outlet	8:45	7.0			0	
Post MnO4/Discharge	8:50	0.9	3220	281	0	72.3

System Efficiency 100%

Knockout Drum Water Vol.	(gallons)	0
SVE Blower Runtime	(Time)	8:52
	(hours)	9450.2

Extraction Point ID	Time	Vacuum	Measured Velocity	Flow Rate*	TVOC-PID Concentration	Status
		(in-W.C.)	(ft/min)	(scf/min)	(ppm _v)	(ON/OFF)
SVE-1	8:20	-13.0	2133	47	59.7	ON
EP-1	7:52	-10.0	776	17	162	ON
EP-2	7:50	-10.0	1226	27	55	ON
SVE-2	8:20	-13.0	950	47	20.9	ON
EP-3	8:06	-12.0	1120	24	15.3	ON
EP-4	8:08	-12.0	1273	28	7.3	ON
EP-5	8:10	—	—	—	0.2	OFF
EP-6	8:11	—	—	—	1.1	OFF
SVE-3	8:22	-13.0	617	30	10.4	ON
EP-7	8:02	-10.0	614	13	29.8	ON
EP-8	8:00	-4.0	258	6	31.3	ON
EP-9	8:25	—	—	—	5.7	OFF
EP-10	8:28	—	—	—	17.1	OFF

*To calculate the flowrate, multiply the measured velocity by [0.021817 for 2-inch pipe] [0.049087 for 3-inch pipe] [0.087266 for 4-inch pipe]
(Q = 3.14 (2/12)² * V)

Vapor Probe ID	Time	Vacuum	TVOC-PID Concentration
		(in-W.C.)	(ppm _v)
SG-02	8:25	—	(see note 3)
SG-03	8:08	-3	1.2
ESM-15			
ESM-16	8:34	—	13.6

Notes:

- 1) SG-01, SG-04, SG-05, and SG-6 are destroyed and will not be included in future monitoring sheets.
- 2) ESM-15 is a future monitoring point to be constructed.
- 3) SG tubing blocked or insufficient vacuum - PID pump stopped

APPENDIX C: LABORATORY ANALYTICAL REPORTS



USEPA TO-15 Data Report

Client

Woodard & Curran
980 Washington Street, Suite 325
Dedham, MA 02026
Attn: Dan Clinton

Report Date

02/27/12

Project Receipt Date

02/09/12

Client Project ID

Lewis Chemical/ 221375

EMSL Project ID

491200127

Sample Summary

EMSL Sample ID	Client Sample ID	Sample Collection Date
491200127-1 RE	Influent	02/08/2012
491200127-2	Effluent	02/08/2012

I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and electronic data has been authorized by the laboratory manager or his/her designee, as verified by the following signature.

2/27/2012

Marjorie Howley
TO-15 Laboratory Manager
EMSL Analytical, Inc

This report shall not be modified or reproduced, except in its entirety, without the written consent of EMSL Analytical, Inc.



Air Analysis Data Summary

EPA Compendium TO-15

Target Compound List

Client Project Name: Lewis Chemical/ 221375

EMSL ID: 491200127-1 RE

Client Sample ID: Influent

Canister ID: HD2272

Primary Lab File ID: J2373.D

Dilution Lab File ID: J2390

Analysis Date: 02/22/2012

Analysis Date: 02/23/2012

Sample Vol(ml): 29

Sample Vol(ml): 25

Dilution Factor: 12.5

Dilution Factor: 110.00

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3
Propylene	115-07-1	58.08	ND	13		ND	30
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	6.3		ND	31
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	170.9	ND	6.3		ND	44
Chloromethane	74-87-3	50.49	ND	6.3		ND	13
n-Butane	106-97-8	58.12	ND	6.3		ND	15
Vinyl chloride	75-01-4	62.50	48	6.3		120	16
1,3-Butadiene	106-99-0	54.09	ND	6.3		ND	14
Bromomethane	74-83-9	94.94	ND	6.3		ND	24
Chloroethane	75-00-3	64.52	ND	6.3		ND	16
Ethanol	64-17-5	46.07	ND	6.3		ND	12
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	6.3		ND	27
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	6.3		ND	35
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	ND	6.3		ND	15
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	187.4	190	6.3		1400	48
Acetone	67-64-1	58.08	ND	6.3		ND	15
1,1-Dichloroethene	75-35-4	96.94	20	6.3		81	25
Acetonitrile	75-05-8	41.00	ND	6.3		ND	10
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	6.3		ND	19
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	6.3		ND	28
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	6.3		ND	20
Carbon disulfide	75-15-0	76.14	ND	6.3		ND	19
Methylene chloride	75-09-2	84.94	18	6.3		61	22
Acrylonitrile	107-13-1	53.00	ND	6.3		ND	14
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	6.3		ND	23
trans-1,2-Dichloroethene	156-60-5	96.94	ND	6.3		ND	25
n-Hexane	110-54-3	86.17	ND	6.3		ND	22
1,1-Dichloroethane	75-34-3	98.96	39	6.3		160	25
Vinyl acetate	108-05-4	86.00	ND	6.3		ND	22
2-Butanone(MEK)	78-93-3	72.10	ND	6.3		ND	18
cis-1,2-Dichloroethene	156-59-2	96.94	860	55	D	3400	220
Ethyl acetate	141-78-6	88.10	ND	6.3		ND	23
Chloroform	67-66-3	119.4	ND	6.3		ND	31
Tetrahydrofuran	109-99-9	72.11	ND	6.3		ND	18
1,1,1-Trichloroethane	71-55-6	133.4	2600	55	D	14000	300
Cyclohexane	110-82-7	84.16	ND	6.3		ND	22
2,2,4-Trimethylpentane(Isooctane)	540-81-1	114.2	ND	6.3		ND	29
Carbon tetrachloride	56-23-5	153.8	ND	6.3		ND	39
n-Heptane	142-82-5	100.2	ND	6.3		ND	26
1,2-Dichloroethane	107-06-2	98.96	25	6.3		100	25
Benzene	71-43-2	78.11	ND	6.3		ND	20



Air Analysis Data Summary

EPA Compendium TO-15

Target Compound List

Client Project Name: Lewis Chemical/ 221375

EMSL ID: 491200127-1 RE

Client Sample ID: Influent

Canister ID: HD2272

Primary Lab File ID: J2373.D

Dilution Lab File ID: J2390

Analysis Date: 02/22/2012

Analysis Date: 02/23/2012

Sample Vol(ml): 29

Sample Vol(ml): 25

Dilution Factor: 12.5

Dilution Factor: 110.00

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3
Trichloroethene	79-01-6	131.4	3800	55	D	20000	300
1,2-Dichloropropane	78-87-5	113.0	ND	6.3		ND	29
Methyl Methacrylate	80-62-6	56.06	ND	6.3		ND	14
Bromodichloromethane	75-27-4	163.8	ND	6.3		ND	42
1,4-Dioxane	123-91-1	88.12	ND	6.3		ND	23
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	6.3		ND	26
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	6.3		ND	28
Toluene	108-88-3	92.14	350	6.3		1300	24
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	6.3		ND	28
1,1,2-Trichloroethane	79-00-5	133.4	ND	6.3		ND	34
2-Hexanone(MBK)	591-78-6	100.1	ND	6.3		ND	26
Tetrachloroethene	127-18-4	165.8	4900	55	DE	33000	370
Dibromochloromethane	124-48-1	208.3	ND	6.3		ND	53
1,2-Dibromoethane	106-93-4	187.8	ND	6.3		ND	48
Chlorobenzene	108-90-7	112.6	ND	6.3		ND	29
Ethylbenzene	100-41-4	106.2	37	6.3		160	27
Xylene (p,m)	1330-20-7	106.2	72	13		310	54
Xylene (Ortho)	95-47-6	106.2	83	6.3		360	27
Styrene	100-42-5	104.1	ND	6.3		ND	27
Isopropylbenzene (cumene)	98-82-8	120.19	ND	6.3		ND	31
Bromoform	75-25-2	252.8	ND	6.3		ND	65
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	6.3		ND	43
4-Ethyltoluene	622-96-8	120.2	14	6.3		71	31
1,3,5-Trimethylbenzene	108-67-8	120.2	11	6.3		54	31
2-Chlorotoluene	95-49-8	126.6	ND	6.3		ND	32
1,2,4-Trimethylbenzene	95-63-6	120.2	9.3	6.3		46	31
1,3-Dichlorobenzene	541-73-1	147.0	ND	6.3		ND	38
1,4-Dichlorobenzene	106-46-7	147.0	ND	6.3		ND	38
Benzyl chloride	100-44-7	126.0	ND	6.3		ND	32
1,2-Dichlorobenzene	95-50-1	147.0	10	6.3		62	38
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	6.3		ND	46
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	6.3		ND	67
Naphthalene	91-20-3	128.17	ND	6.3		ND	33

Surrogate

4-Bromofluorobenzene

Result

9.5

Spike

10

Recovery

95%

Qualifier Definitions

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

ND= Non Detect



Air Analysis Data Summary

EPA Compendium TO-15

Target Compound List

Client Project Name: Lewis Chemical/ 221375

EMSL ID: 491200127-2 RE

Client Sample ID: Effluent

Canister ID: HD2271

Primary Lab File ID: J2372.D

Dilution Lab File ID: NA

Analysis Date: 02/22/2012

Analysis Date: NA

Sample Vol(ml): 24

Sample Vol(ml): NA

Dilution Factor: 12.5

Dilution Factor: NA

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3
Propylene	115-07-1	58.08	ND	13		ND	30
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	6.3		ND	31
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	170.9	ND	6.3		ND	44
Chloromethane	74-87-3	50.49	ND	6.3		ND	13
n-Butane	106-97-8	58.12	ND	6.3		ND	15
Vinyl chloride	75-01-4	62.50	8.9	6.3		23	16
1,3-Butadiene	106-99-0	54.09	ND	6.3		ND	14
Bromomethane	74-83-9	94.94	ND	6.3		ND	24
Chloroethane	75-00-3	64.52	ND	6.3		ND	16
Ethanol	64-17-5	46.07	ND	6.3		ND	12
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	6.3		ND	27
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	6.3		ND	35
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	ND	6.3		ND	15
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	187.4	ND	6.3		ND	48
Acetone	67-64-1	58.08	ND	6.3		ND	15
1,1-Dichloroethene	75-35-4	96.94	ND	6.3		ND	25
Acetonitrile	75-05-8	41.00	ND	6.3		ND	10
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	6.3		ND	19
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	6.3		ND	28
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	6.3		ND	20
Carbon disulfide	75-15-0	76.14	ND	6.3		ND	19
Methylene chloride	75-09-2	84.94	ND	6.3		ND	22
Acrylonitrile	107-13-1	53.00	ND	6.3		ND	14
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	6.3		ND	23
trans-1,2-Dichloroethene	156-60-5	96.94	ND	6.3		ND	25
n-Hexane	110-54-3	86.17	ND	6.3		ND	22
1,1-Dichloroethane	75-34-3	98.96	ND	6.3		ND	25
Vinyl acetate	108-05-4	86.00	ND	6.3		ND	22
2-Butanone(MEK)	78-93-3	72.10	ND	6.3		ND	18
cis-1,2-Dichloroethene	156-59-2	96.94	ND	6.3		ND	25
Ethyl acetate	141-78-6	88.10	ND	6.3		ND	23
Chloroform	67-66-3	119.4	ND	6.3		ND	31
Tetrahydrofuran	109-99-9	72.11	ND	6.3		ND	18
1,1,1-Trichloroethane	71-55-6	133.4	ND	6.3		ND	34
Cyclohexane	110-82-7	84.16	ND	6.3		ND	22
2,2,4-Trimethylpentane(Isooctane)	540-81-1	114.2	ND	6.3		ND	29
Carbon tetrachloride	56-23-5	153.8	ND	6.3		ND	39
n-Heptane	142-82-5	100.2	ND	6.3		ND	26
1,2-Dichloroethane	107-06-2	98.96	ND	6.3		ND	25
Benzene	71-43-2	78.11	ND	6.3		ND	20



Air Analysis Data Summary

EPA Compendium TO-15

Target Compound List

Client Project Name: Lewis Chemical/ 221375

EMSL ID: 491200127-2 RE

Client Sample ID: Effluent

Canister ID: HD2271

Primary Lab File ID: J2372.D

Dilution Lab File ID: NA

Analysis Date: 02/22/2012

Analysis Date: NA

Sample Vol(ml): 24

Sample Vol(ml): NA

Dilution Factor: 12.5

Dilution Factor: NA

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3
Trichloroethene	79-01-6	131.4	ND	6.3		ND	34
1,2-Dichloropropane	78-87-5	113.0	ND	6.3		ND	29
Methyl Methacrylate	80-62-6	56.06	ND	6.3		ND	14
Bromodichloromethane	75-27-4	163.8	ND	6.3		ND	42
1,4-Dioxane	123-91-1	88.12	ND	6.3		ND	23
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	6.3		ND	26
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	6.3		ND	28
Toluene	108-88-3	92.14	ND	6.3		ND	24
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	6.3		ND	28
1,1,2-Trichloroethane	79-00-5	133.4	ND	6.3		ND	34
2-Hexanone(MBK)	591-78-6	100.1	ND	6.3		ND	26
Tetrachloroethene	127-18-4	165.8	ND	6.3		ND	42
Dibromochloromethane	124-48-1	208.3	ND	6.3		ND	53
1,2-Dibromoethane	106-93-4	187.8	ND	6.3		ND	48
Chlorobenzene	108-90-7	112.6	ND	6.3		ND	29
Ethylbenzene	100-41-4	106.2	ND	6.3		ND	27
Xylene (p,m)	1330-20-7	106.2	ND	13		ND	54
Xylene (Ortho)	95-47-6	106.2	ND	6.3		ND	27
Styrene	100-42-5	104.1	ND	6.3		ND	27
Isopropylbenzene (cumene)	98-82-8	120.19	ND	6.3		ND	31
Bromoform	75-25-2	252.8	ND	6.3		ND	65
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	6.3		ND	43
4-Ethyltoluene	622-96-8	120.2	ND	6.3		ND	31
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	6.3		ND	31
2-Chlorotoluene	95-49-8	126.6	ND	6.3		ND	32
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	6.3		ND	31
1,3-Dichlorobenzene	541-73-1	147.0	ND	6.3		ND	38
1,4-Dichlorobenzene	106-46-7	147.0	ND	6.3		ND	38
Benzyl chloride	100-44-7	126.0	ND	6.3		ND	32
1,2-Dichlorobenzene	95-50-1	147.0	ND	6.3		ND	38
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	6.3		ND	46
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	6.3		ND	67
Naphthalene	91-20-3	128.17	ND	6.3		ND	33

Surrogate

4-Bromofluorobenzene

Result

9.2

Spike

10

Recovery

92%

Qualifier Definitions

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

ND= Non Detect



EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS • TRAINING

USEPA TO-15

External Chain of Custody/ Field Test Data Sheet

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077
Ph. (800) 220-3675
Fax (856) 786-0327

EMSL Order Number (Lab Use Only):

491200127

Report To Contact Name: Dan Clinton

Bill To Company: Absolute Resources #ABAQ78

Sampled By (Sign):

Company Name: Woodward & Curran

Attention To: Guy Sylvester

Sampled By (Name): Dan Clinton

Address 1: 980 Washington Street, Suite 325

Address 1: 124 Heritage Avenue #10

Total # of Samples: 2

Address 2: Dedham, MA 02026

Address 2: Portsmouth, NH 03801

Date Shipped: 2/8/12

Phone No.: 781-251-0200

Phone No.: 603-436-2001

Sample Collection Zip Code: 02136

Email Results To: dclinton@woodardcurran.com

Project Name: Lewis Chemical/221375

Purchase Order:

Turnaround Time (in Business Days):

Reporting Format: ☒ Results Only (Standard Lab Report)

☐ 5 Day ☐ 4 Day ☐ 3 Day

☐ Full Deliverables (Surcharge may apply)

☐ 2 Day ☐ 1 Day ☐ Other

☐ Other

Field Use - All Information Required!

Lab Use Only

Client Field Sample Identification

Influent

Effluent

Sampling Start Information

Barometric Pres. ("Hg): 30.1

Canister Pressure ("Hg): 30.1

Interior Temp. (F): 47

Time (24 hr clock): 0940

Start Date: 2/8/12

Sampling Stop Information

Barometric Pres. ("Hg): 30.1

Canister Pressure ("Hg): 30.1

Interior Temp. (F): 47

Time (24 hr clock): 0958

Stop Date: 2/8/12

Canister Information

Canister ID: HD 2272

Size (L): 1.4

Can Cert Batch ID: 4P0027

Outgoing Pressure ("Hg): -30.0

Incoming Pressure ("Hg): -6.5

Flow Controller

Reg. ID: 6.246

Cal Flow (ml/min): n/a

USEPA TO-15

LIBRARY SEARCH

Other (Specify)

Indoor/Ambient Air

Soil Gas

Landfill/Vent

Matrix

RECEIVED
EMSL
CINNAMINSON, NJ
12 FEB 9 AM 10

Comments:

Also email: Janeb@absoluteresourceassociates.com

Lab Canister Certification
Analyst Signature (TO-15):

Relinquished by:	Date/ Time	Received by:	Date/ Time	Affixed Seal #	Reason for Exchange (circle appropriate)
<i>[Signature]</i>	2/13/12 1645	<i>[Signature]</i>	2/8/12 1000	1077	Shipping <input checked="" type="radio"/> Courier Receiving <input checked="" type="radio"/> Sampling <input type="radio"/> Other:
<i>[Signature]</i>	2/8/12 1200	<i>[Signature]</i>	2/9/12 9:30AM	9:30AM	Shipping <input checked="" type="radio"/> Courier Receiving <input checked="" type="radio"/> Sampling <input type="radio"/> Other:
<i>[Signature]</i>	2/9/12 9:30AM	<i>[Signature]</i>	2/10/12 12:00		Shipping <input checked="" type="radio"/> Courier Receiving <input checked="" type="radio"/> Sampling <input type="radio"/> Other: AN
					Shipping <input checked="" type="radio"/> Courier Receiving <input checked="" type="radio"/> Sampling <input type="radio"/> Other:
					Shipping <input checked="" type="radio"/> Courier Receiving <input checked="" type="radio"/> Sampling <input type="radio"/> Other:

491200127
TO-15 Sample Information

Please fill out this worksheet in addition to the Chain of Custody form. This information helps us to best analyze your samples.

Company: Woodward-Curran, Inc

Contact Person:

Name: <u>DAN CLINTON</u>	12 FEB -9 AM 10:00
E-mail: <u>dclinton@woodwardcurran.com</u>	
Additional E-mail: <u>-</u>	
Telephone #: <u>781-251-0200</u>	Fax: <u>781-251-0847</u>

RECEIVED
EMSL
CINNAMINSON, NJ

Do you want your results emailed? ☒ YES ☐ NO

Library Search requested: ☐ YES ☒ NO

A library search will identify up to 20 of the largest, non-target peaks that are not part of the standard TO-15 list of 70 compounds. If you are performing an Indoor Air Quality or odor investigation the library search is recommended. If you will need help interpreting your report the library search is REQUIRED. Requesting a library search after sample results are reported will be invoiced at an additional \$75/sample.

Sample Type:

☐ Indoor Air Quality (Home/Office) ☐ Vent Gas ☐ Soil Gas
☐ IAQ (Industrial) ☒ Other: SVE Process Air

Description of sample (Important for the lab to achieve your requested turnaround time):

Influent sample will have higher VOC concentration than Effluent

Are there any special detection limits, specific set of compounds, or any other specifics you need in your report?

☐ YES (Please list or attach separate sheet)

☒ NO

Do you need any additional analysis on the canister sample? (circle below)

CO Methane CO2 SO2 EtO Nox O2 Other _____

Sample Retention Policy: All canisters are guaranteed to be retained for one day after results are reported. Please review your results promptly to ensure that your project scope is fully addressed. Cans may be retained for a longer period of time but arrangements to hold your cans must be made through your customer account representative quickly. Thank you.