LABELLA Associates, D.P.C.
Engineering
Architecture
Environmental
Planning

Contained-In Demonstration Work Plan

AOC #1

BCP Site #C828159

Location:

690 Saint Paul Street
Rochester, New York

Prepared for:

Genesee Valley Real Estate Company
First Federal Plaza
28 East Main Street
Rochester, New York 14615

LaBella Project No. 209280

January 2017

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1.0 Introduction

LaBella Associates D.P.C. ("LaBella") prepared this "Contained-In" Demonstration Work Plan on behalf of Genesee Valley Real Estate Company ("GVRE") for the Brownfield Cleanup Program (BCP) Site C828159, located at 690 Saint Paul Street in the City of Rochester, Monroe County, New York, hereinafter referred to as the "Site". A Project Location Map is included as Figure 1. The Site was entered into the Brownfield Cleanup Program (BCP) under volunteer status.

This "Contained-In" Demonstration Work Plan is being submitted to address waste which was generated during the installation of monitoring, extraction and chemical treatment wells as part of the selected remedy at this Site. This Work Plan includes a summary of soil and groundwater data obtained through the completion of a New York State Department of Environmental Conservation (NYSDEC) approved Remedial Investigation Work Plan (RI Work Plan) and Remedial Design Work Plan (RDWP) at the Site prepared by and implemented by LaBella. In addition, this "Contained-In" Demonstration Work Plan provides a proposed sampling plan. This "Contained-In" Demonstration Work Plan was prepared in accordance with the "Contained-In" Criteria identified in NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 3028.

1.1 Site Description and History

The Site consists of approximately 4.73 acres of land improved with three (3) inter-connected buildings (designated Bldgs. 14A, 14B and 16) and a fourth separate building (designated Bldg. 22). In total, these buildings occupy approximately 89,280 square feet of the Site (footprint area).

The Site is situated in a mixed commercial, light industrial and residential area of the City of Rochester. The Site is bordered by St. Paul Street to the west with a Monroe County office building beyond, Lowell St. to the south with a City of Rochester park beyond, Martin Street to the east with a restaurant and residential properties beyond, and Hartel Alley to the north with a vacant restaurant and a light industrial (machine shop) building beyond.

LaBella initiated a Remedial Investigation (RI) at the Site between 2009 and 2013, although the majority of this work was completed in late 2009 and 2010. The RI activities completed at the Site have indicated the presence of subsurface impacts to soil and groundwater at several locations, including Area of Concern (AOC) #1, which is the subject of this work plan. A Remedial Design Work Plan (RDWP) for AOC #1 was approved by the NYSDEC (with modification) on June 24, 2015. This Work Plan included the installation of several bedrock wells for chemical treatment, monitoring and extraction of groundwater.

1.2 Summary of Contamination (AOC #1)

The subsurface investigation completed for AOC #1 as part of the RI included the advancement of soil borings, completion of test pits, collection of a soil gas sample, collection of a surface soil sample, collection of overburden groundwater samples, and the installation of five (5) bedrock groundwater monitoring wells and the subsequent collection and laboratory analysis of both soil and groundwater samples. Several of the groundwater samples were collected using the Geoprobe® Screen Point 15 (SP-15) groundwater sampler (refer to Table 1) rather than from dedicated monitoring wells (refer to Table 2).

Prior to the implementation of Interim Remedial Measures (IRMs) in AOC #1 in November and December 2011, laboratory analytical data from both soil and groundwater samples collected from this AOC indicated that chlorinated volatile organic compounds (CVOCs), primarily trichloroethene (TCE), exceeded the SCGs for soil and groundwater collected from soil borings and BW-5. In addition, a layer of light, non-aqueous phase liquid (LNAPL) had been observed on the water column within BW-5 prior to the IRMs.

The AOC #1 IRM consisted of the removal of contaminated soil and bedrock and the withdrawal of groundwater and LNAPL from the excavation. Following the completion of the removal actions, infrastructure was installed in the excavation to monitor for free product that may accumulate over time within this area. Additionally, the infrastructure was constructed to allow for the potential to recover free product should it be observed in the future or to act as an infiltration gallery for the future treatment of groundwater, if warranted. Figures 2 and 3 show the extent of the IRM excavation and the location of the infrastructure.

Based on the confirmatory soil sampling completed as part of the IRM, all soil containing constituents of concern above NYCRR Part 375-6.8(a) Unrestricted Use SCOs was removed from AOC #1 with the exception of soils associated with confirmatory sample CS-5 (4-ft. bgs). The compound 4,4'-DDT was detected above the NYCRR Part 375-6.8(a) Unrestricted Use SCO but below the NYCRR Part 375-6.8(b) Restricted Residential Use SCO in sample CS-5 (4-ft. bgs). Confirmatory sample locations are depicted on Figure 3.

Based on the post-IRM groundwater sampling (refer to Table 2), groundwater quality in immediate proximity to AOC #1 appears to have improved following the removal of significant CVOC mass and NAPL from AOC #1.

Based on the extensive groundwater sampling in this area and the analysis of pre-IRM soil samples and confirmatory sample data associated with the IRM, the nature and extent of contamination in AOC #1 was adequately defined. Specifically, the following remaining contamination appeared present associated with AOC #1 prior to implementation of the remedy:

Soil:

- Approximately 220 square feet of pesticide impacted soil above Unrestricted Use SCOs remained in AOC #1 between two and five feet below grade (refer to Figure 3). Note that this area is not within the footprint of material generated during the remedy which is the subject of this work plan.
- No soil has been documented in AOC #1 (which was not removed as part of the IRM) which contains COCs above Restricted Residential SCOs.

Groundwater:

- Groundwater impacts (i.e., COCs present at concentrations above Part 703 Groundwater Standards) appeared present within a 27,500-square foot area in AOC #1, as depicted on Figure 4.

Soil Vapor:

- Soil vapor is not a concern as it has been previously addressed through an active sub-slab depressurization system (SSDS) in Building 14B. However, the planned *in-situ* chemical

treatment of VOCs in groundwater will likely increase volatilization and therefore may represent a future soil vapor intrusion issue if not addressed. As such, an air monitoring program will be implemented in the occupied portion of Building 16. It should be noted addressing any potential soil vapor intrusion in Building 14A is not planned at this time based on the lack of occupancy on the first floor of this building. However, the Site Management Plan (SMP) will address any potential soil vapor intrusion mitigation requirements in Building 14A should future conditions dictate that mitigation is necessary (e.g., if the building use changes).

Based on the findings of the RIWP and IRM, in-situ chemical reduction (ISCR) with enhanced bioremediation was the selected remedy for AOC #1. Chemical reducing and bioremediation agents were injected into the subsurface in AOC #1 via the infiltration gallery created during the 2011 IRM as well as twelve (12) treatment wells which were installed in 2015. Dispersion of these agents was planned to be enhanced by temporarily extracting groundwater downgradient of the injection areas via three (3) extraction wells, which were also installed in 2015. Finally, three (3) additional monitoring wells were also installed in AOC #1 as part of the selected remedy; two (2) in 2015 and one (1) in 2016. Figure 4 depicts the locations of the various wells installed in 2015 and 2016 as part of the selected remedy for AOC #1. The well installations generated approximately 10-cubic yards of soil and rock cuttings, which are the subject of this work plan.

2.0 Summary of the Remedial Goals

The proposed future use for the Site will be classified as restricted residential. As such, at a minimum, the remedy must eliminate or mitigate all significant threats to public health and/or the environment presented by the impacts identified at the Site through the proper application of scientific and engineering principles.

The Remedial Action Objectives (RAOs) for the RDWP for AOC #1 were to eliminate or reduce to the extent practicable:

<u>Soil</u>

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

<u>Groundwater</u>

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

RAOs for Environmental Protection

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- Prevent the discharge of contaminants to surface water.
- Remove the source of ground or surface water contamination.

Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

3.0 Proposed "Contained-In" Sampling

This section summarizes the construction of the wells which generated the waste which is the subject of this plan. This section also outlines a sampling plan for making the "contained-in" determination.

Well Installation:

Bedrock at the Site in AOC #1 is relatively shallow, ranging from approximately 3.5-ft to 16-ft bgs. Overburden soils encountered during well installation generally consisted of reworked silt, sand and gravel. All wells were installed by initially augering through the overburden and into the top 1-3 feet of weathered bedrock. Bedrock was then cored to various depths depending on the type of well installed. Well locations are depicted on Figure 4. General well construction details are summarized below.

Groundwater Monitoring Wells:

Three (3) additional bedrock groundwater monitoring wells (designated BW-19 through BW-21) were installed at the Site as part of the remedial strategy for AOC #1. The wells were drilled to approximately 20-ft bgs and are 4-inches in diameter. The wells were installed to monitor the effectiveness of the selected remedy.

Extraction Wells:

Three (3) extraction wells (designated EW-1A, EW-2 and EW-3) were installed at the Site as part of the remedial strategy for AOC #1. The wells were drilled to approximately 25-ft bgs, 25-ft bgs, and 30.8-ft bgs, respectively. The extraction wells are each approximately 6-inches in diameter. Pumps were installed in the extraction wells which are connected to the groundwater extraction system (refer to Section 1.2).

Chemical Treatment Wells:

Twelve (12) chemical treatment wells (designated TW-01 through TW-12) were installed at the Site as part of the remedial strategy for AOC #1. The wells were drilled to depths between 16.6-ft and 24.9-ft bgs. Each treatment well is approximately 8-inches in diameter. These wells were designed to introduce the treatment chemical into the subsurface. Following the identification of a significant

horizontal fracture throughout AOC #1 and sampling of sediment in the fracture which identified elevated levels of CVOCs, this fracture was identified as a potential conduit for the groundwater impacts. As such, several treatment wells were partially filled with grout to ensure that the treatment program would target this fracture zone.

During the well installations, all overburden soils and rock cuttings were containerized in drums. This material was recently transferred from the drums to a roll-off dumpster for characterization and subsequent off-site disposal. A total of approximately 10-cubic yards (CY) of drill cuttings were generated as part of the remedy implementation in AOC #1.

Proposed Sampling for "Contained-In":

As noted above, approximately 10-CY of drill cuttings (i.e., soil and crushed rock) were generated during the installation of various wells as part of the AOC #1 remedy. This material is currently staged in a roll-off dumpster at the Site. Based on the previous sampling work it appears that the COCs are limited to VOCs. As such, the proposed "Contained-In" testing will be limited to discrete samples. Based on the volume of material generated and NYSDEC DER-10 Table 5.4(e)10 *"Recommended Number of Soil Samples for Soil Imported To or Exported From a Site",* the collection of one (1) sample for the following parameters is proposed:

- Total VOCs using USEPA Method 8260; and,
- Toxicity Characteristic Leaching Procedure (TCLP) for Total VOCs using USEPA Method 1311.

This sampling will be conducted in order to characterize the waste for appropriate disposal and to compare the testing results against the "Contained-In" Criteria identified in NYSDEC TAGM 3028. Samples will be collected from areas of "worst-case" impacts, based on field screening of the staged material.

Currently it is anticipated that the soil will be approved for 'contained-in' and will be disposed of at a solid waste landfill with a 6 NYCRR Part 360 Permit. The specific facility will be provided with the request for "Contained-In" when sampling results are received.

4.0 "Contained-In" Request

Subsequent to completing the sampling and receiving the analytical results, LaBella will submit a "Contained-In" request that provides the sampling completed, the laboratory reports, the quantities of material, etc. This request will provide the proposed disposal facility and request approval by NYSDEC (if data supports the request). Currently, it is anticipated that this request will be submitted in early February 2017.

Tables

Table 1
690 Saint Paul Street
NYSDEC Brownfield Cleanup Program Remedial Investigation
NYSDEC BCP ID No. C828159

Summary of Detected Volatile Organic Compounds in Groundwater (SP-15) Samples
Area of Concern (AOC) #1
Results in Micrograms per Liter (µg/L) or PPB

Sample ID	690-SB-14-O	690-SB-15-O	690-SB-19-0	690-SB-85-O	690-SB-86-O	690-SB-87-O	690-SB-88-O	690-BW-5-O	NYSDEC Part 703 Groundwater Standards	NYSDEC Part 703 Groundwater Standards
Area of Concern	**AOC #1**	**AOC #1**	**AOC #1**	**AOC #1**	**AOC #1**	**AOC #1**	**AOC #1**	**AOC #1**		
Sample Collection Date	**3/24/2010**	**3/24/2010**	**3/24/2010**	**6/25/2010**	**6/25/2010**	**6/25/2010**	**6/25/2010**	**10/20/2010**		
Volatile Organic Compounds										
Chloromethane	1.5 J	ND<5.0	1.5 J	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	5	5
Vinyl chloride	3.4 J	1.2 J	ND<5.0	510 D	65	530 D	10 J	670 E	2	2
1,1-Dichloroethene	ND<5.0	ND<5.0	ND<5.0	18	ND<5.0	14 J	ND<5.0	45	5	5
Acetone	ND<5.0	ND<5.0	ND<5.0	4.9 J	36 J	13.0 J	6.5 J	19.0	50	50
Carbon disulfide	ND<5.0	ND<5.0	ND<5.0	7.8 J	ND<5.0	ND<5.0	ND<5.0	26	60	60
Methylene chloride	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	5	5
trans-1,2-Dichloroethene	ND<5.0	ND<5.0	ND<5.0	23	ND<5.0	29 J	1.9 J	72	5	5
Methyl tert-butyl ether	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	10	10
1,1-Dichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	1.1 J	ND<5.0	ND<5.0	2.8 J	5	5
2-Butanone	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	50	50
cis-1,2-Dichloroethene	23	9.8	ND<5.0	7,100 D	20	5,300 D	89 J	5,900 D	5	5
Chloroform	ND<5.0	1.4 J	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	7	7
1,2-Dichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	0.6	0.6
Benzene	ND<5.0	ND<5.0	5.7	1.9 J	2.9 J	1.4 J	ND<5.0	24 J	1	1
Trichloroethene	23	18	ND<5.0	6,400 D	20	78 J	390 D	120,000 D	5	5
Toluene	ND<5.0	1.2 J	1.2 J	5.2 J	1.5 J	8.6 J	1.5 J	56	5	5
1,1,2-Trichloroethane	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	1	1
Tetrachloroethene	ND<5.0	4.7 J	ND<5.0	33.0 J	ND<5.0	ND<5.0	ND<5.0	25	5	5
Ethylbenzene	ND<5.0	ND<5.0	ND<5.0	7.0 J	ND<5.0	5.7 J	ND<5.0	14	5	5
m,p-Xylene	ND<5.0	2.6 J	ND<5.0	6.0 J	1.4 J	3.8 J	ND<5.0	22	5	5
o-Xylene	ND<5.0	ND<5.0	ND<5.0	5.2 J	ND<5.0	3.5 J	ND<5.0	8.9	5	5
Isopropylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	5	5
n-Propylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	5	5
1,3,5-Trimethylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	1.2 J	5	5
1,2,4-Trimethylbenzene	ND<5.0	ND<5.0	ND<5.0	1.1 J	ND<5.0	ND<5.0	ND<5.0	2.3 J	5	5
sec-Butylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	5	5
4-Isopropyltoluene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	5	5
n-Butylbenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	5	5
1,2-Dichlorobenzene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	3	3
Naphthalene	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	10	10
Total VOCs	51	34	8.4	14,123	148	5,967	499	126,888.2		
Total VOC TICs	None Detected	None Detected	None Detected	None Detected	50 NJ	None Detected	None Detected	None Detected	*Not Available*	*Not Available*
Total VOCs & VOC TICs	51	34	8.4	14,123	198	5,967	499	126,888.2		

Notes:

VOC analysis by United States Environmental Protection Agency (USEPA) Method SW846 8260B.

PPB = Parts Per Billion = ug/L

J – Indicates that the constituent was positively identified; but the associated numerical value is the approximate concentration of the constituent in the sample.

D - indicates compound identified in an analysis at the secondary dilution factor.

N - indicates presumptive evidence of a compound. This flag is used only for TICs, where the identification is based on the Mass Spectral library search. It is applied to all TIC results.

ND<X indicates analyte not identified at a concentration above the indicated laboratory method detection limit.

NA = Not Applicable or Not Available or Not Analyzed

Highlighted type indicates that the constituent was detected at a concentration above the NYSDEC Part 703 Groundwater Standards.

Indicates laboratory analysis completed by mobile laboratory (S2C2, Inc.)

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690 Saint Paul Street
NYSDEC Brownfield Cleanup Program Remedial Investigation
NYSDEC BCP ID No. C828159

Summary of Detected Volatile Organic Compounds in Dedicated Monitoring Well Groundwater Samples
Area of Concern (AOC) #1
Results in Micrograms per Liter (µg/L) or Parts Per Billion (PPB)

Sample ID	Groundwater Samples																			NYSDEC Part 703 Groundwater Standards and TOGS 1.1.1 Guidance Values
	690-MW-03	690-BW-04	690-BW-04	690-BW-04	690-BW-04 Duplicate	690-BW-05	***690-BW-05-Oil	BW-05 PDB 8.7'-10.7'	BW-05 PDB DUP 8.7'-10.7'	BW-05 PDB 15'-17'	690-BW-05	690-BW-05	690-BW-06	690-BW-06	690-BW-06	690-BW-07	690-BW-07-DUP	690-BW-07	690-BW-07	
Area of Concern	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	
Sample Interval**	~2.2'-7.2' BGS	5.7'-13.2' BGS	5.7'-13.2' BGS	5.7'-13.2' BGS	5.7'-13.2' BGS	8.7'-18.7' BGS	8.7'-18.7' BGS	8.7'-10.7' BGS	8.7'-10.7' BGS	15'-17' BGS	8.7'-18.7' BGS	8.7'-18.7' BGS	4.5'-14.5' BGS	4.5'-14.5' BGS	4.5'-14.5' BGS	11'-21' BGS	11'-21' BGS	11'-21' BGS	11'-21' BGS	
Sample Collection Date	9/14/2010	9/15/2010	10/30/2012	6/18/2013	6/18/2013	11/11/2010	11/11/2010	2/22/12 - 3/8/12	2/22/12 - 3/8/12	2/22/12 - 3/8/12	11/1/2012	6/18/2013	11/10/2010	10/30/2012	6/19/2013	11/10/2010	11/10/2010	11/5/2012	6/19/2013	
Volatile Organic Compounds																				
Chloromethane	5.0 U	5.0 U	5.0 U	10 U	10 U	5.0 U	57,000 U	5.0 U	5.0 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	5.0 U	5.0 U	5
Vinyl chloride	5.0 U	1,200 D	73	57	50	2,700 D	57,000 U	640 DJ	630 DJ	390 DJ	940 D	810	1,100 D	810 DJ	380	63	110 J	160	3.9 J	2
1,1-Dichloroethene	5.0 U	42	2.1 J	2.1 J	2.4 J	66	57,000 U	13 J	15 J	15 J	40 J	39 J	33	50.0	48 J	5.7	6.7 J	19	0.76 J	5
Acetone	5.0 U	5.0 U	5.0 U	10 U	10 U	5.0 U	57,000 U	5.0 U	5.0 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	5.0 U	5.0 U	50
Carbon disulfide	5.0 U	6.0	5.0 U	10 U	10 U	5.0 U	57,000 U	5.0 U	5.0 U	5.0 U	1.0 J	100 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	1.2 J	5.0 U	60*
Methylene chloride	5.0 U	5.0 U	5.0 U	10 U	10 U	5.0 U	57,000 U	5.0 U	5.0 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	5.0 U	5.0 U	5
trans-1,2-dichloroethene	5.0 U	24	1.7 J	10 U	1.8 J	65	57,000 U	46	29	41	51	41 J	27	31.0	24 J	4.9 J	10	26	5.0 U	5
Methyl tert-butyl ether	5.0 U	5.0 U	5.0 U	10 U	10 U	5.0 U	57,000 U	5.0 U	5.0 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	5.0 U	5.0 U	10
1,1-Dichloroethane	5.0 U	3.2 J	5.0 U	10 U	10 U	5.3	57,000 U	1.6 J	1.9 J	1.8 J	2.4 J	100 U	1.2 J	5.0 U	100 U	1.2 J	1.6 J	4.5 J	5.0 U	5
2-Butanone	5.0 U	5.0 U	5.0 U	10 U	10 U	5.0 U	57,000 U	5.0 U	5.0 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	5.0 U	5.0 U	50
cis-1,2-dichloroethene	2.9 J	4,500 D	190 D	240	230	5,400 D	57,000 U	2,000 DJ	2,000 DJ	1,800 DJ	3,300 D	4,800 D	3,300 D	3,300 D	3,100	590 D	600 D	1,600 D	67	5
Chloroform	5.0 U	5.0 U	5.0 U	10 U	10 U	5.0 U	57,000 U	5.0 U	5.0 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	5.0 U	5.0 U	7
Chloroethane	5.0 U	5.0 U	5.0 U	10 U	10 U	4.4 J	57,000 U	5.0 U	5.0 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	5.0 U	5.0 U	5
1,2-Dichloroethane	5.0 U	5.0 U	5.0 U	10 U	10 U	5.0 U	57,000 U	5.0 U	5.0 U	5.0 U	5.0 U	100 U	5.0 U	0.8 J	100 U	5.0 U	5.0 U	5.0 U	5.0 U	0.6
Benzene	5.0 U	3.5 J	0.72 J	10 U	10 U	3.3 J	57,000 U	1.4 J	1.5 J	1.5 J	1.8 J	100 U	5.0 U	1.1 J	100 U	5.0 U	5.0 U	1.6 J	5.0 U	1
Trichloroethene	23	2,100 D	100.0	150	160	4,300 D	2,400,000	370 DJ	350 DJ	260 DJ	880 D	3,000	4,700 D	5,300 D	6,200 D	740 D	860 D	2,100 D	86	5
Toluene	5.0 U	1 J	5.0 U	10 U	10 U	2.5 J	57,000 U	1.3 J	1.6 J	1.5 J	5.0 U	100 U	5.0 U	0.59 J	100 U	5.0 U	5.0 U	5.0 U	5.0 U	5
1,1,2-Trichloroethane	5.0 U	5.0 U	5.0 U	10 U	10 U	5.0 U	57,000 U	5.0 U	5.0 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	5.0 U	5.0 U	1
Tetrachloroethene	5.0 U	5.0 U	5.0 U	10 U	10 U	5.0 U	57,000 U	5.0 U	5.0 U	5.0 U	5.0 U	100 U	3.6 J	6.8	100 U	5.0 U	5.0 U	5.0 U	2.0 J	5
Ethylbenzene	5.0 U	2.1 J	5.0 U	10 U	10 U	3.1 J	57,000 U	2.5 J	2.8 J	3.0 J	2.4 J	100 U	1.4 J	2.7 J	100 U	5.0 U	5.0 U	5.0 U	5.0 U	5
m,p-Xylene	5.0 U	1.8 J	5.0 U	10 U	10 U	10	57,000 U	5.2	4.9 J	4.8 J	2.7 J	100 U	5.0 U	0.8 J	100 U	5.0 U	5.0 U	5.0 U	5.0 U	5
o-Xylene	5.0 U	5.0 U	5.0 U	10 U	10 U	3.5	57,000 U	3.2 J	3.1 J	3.1 J	2.6 J	100 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	5.0 U	5.0 U	5
Bromoform	NA	NA	5.0 U	10 U	10 U	NA	57,000 U	5.0 UJ	5.0 UJ	5.0 UJ	5.0 U	100 U	NA	5.0 U	100 U	NA	NA	5.0 U	5.0 U	50*
Isopropylbenzene	5.0 U	5.0 U	5.0 U	10 U	10 U	1.6 J	57,000 U	1.4 J	1.5 J	1.4 J	1.0 J	100 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	5.0 U	5.0 U	5
n-Propylbenzene	5.0 U	5.0 U	5.0 U	10 U	10 U	1.3 J	57,000 U	5.0 U	5.0 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	5.0 U	5.0 U	5
1,3,5-Trimethylbenzene	5.0 U	5.0 U	5.0 U	10 U	10 U	5.0 U	57,000 U	5.0 U	5.0 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	5.0 U	5.0 U	5
tert-Butylbenzene	5.0 U	5.0 U	5.0 U	10 U	10 U	5.0 U	57,000 U	5.0 U	5.0 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	5.0 U	5.0 U	5
1,2,4-Trimethylbenzene	5.0 U	5.0 U	5.0 U	10 U	10 U	1.9 J	57,000 U	5.0 U	5.0 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	5.0 U	5.0 U	5
sec-Butylbenzene	5.0 U	5.0 U	5.0 U	10 U	10 U	5.0 U	57,000 U	5.0 U	5.0 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	5.0 U	5.0 U	5
4-Isopropyltoluene	5.0 U	5.0 U	5.0 U	10 U	10 U	5.0 U	57,000 U	5.0 U	5.0 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	5.0 U	5.0 U	5
n-Butylbenzene	5.0 U	5.0 U	5.0 U	10 U	10 U	5.0 U	57,000 U	5.0 U	5.0 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	5.0 U	5.0 U	5
1,2-Dichlorobenzene	5.0 U	5.0 U	5.0 U	10 U	10 U	5.0 U	57,000 U	5.0 U	5.0 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	5.0 U	5.0 U	3
Naphthalene	5.0 U	5.0 U	5.0 U	10 U	10 U	5.0 U	57,000 U	5.0 UJ	5.0 UJ	5.0 UJ	5.0 U	100 U	5.0 U	5.0 U	100 U	5.0 U	5.0 U	5.0 U	5.0 U	10
Total VOCs	26	7,883.6	177.5 0.0	449.1	444.2	12,567.9	2,400,000	3,085.6	3,041	2,523.1	5,229.9	8,690.0	9,166.2	9,503.8	9,752.0	1,404.8	1,588.3	3,912.3	159.7	
Total VOC TICs	None Detected	None Detected	None Detected	None Detected	None Detected	5.4 J	3,260,000	NA	NA	NA	13	None Detected	13 N,J	None Detected	None Detected	None Detected	None Detected	11 J	None Detected	*Not Available*
Total VOCs & VOC TICs	26	7,883.6	177.5 0.0	449.1	444.2	11,825.3	5,660,000	NA	NA	NA	5,242.9	8,690.0	9,179.2	9,503.8	9,752.0	1,404.8	1,588.3	3,923.3	159.7	

Notes:
VOC analysis by United States Environmental Protection Agency (USEPA) Method SW846 8260B.
J – Indicates that the constituent was positively identified; but the associated numerical value is the approximate concentration of the constituent in the sample.
D - Indicates that the value was obtained from a secondary dilution anaylsis.
U - Indicates that the constituent was not detected.
E - Indicates the compound concentration exceeded the calibration range.
NA = Not Applicable or Not Available
**Refers to screened interval or length of open rock, depending on well construction.
***This is a sample of product and is not representative of VOC concentrations in dissolved groundwater. Recovery wells RW-West and RW-East were previously designated REC-N and REC-S.
Highlighted type indicates that the constituent was detected at a concentration above the NYSDEC Part 703 Groundwater Standards and TOGS 1.1.1.
Indicates sample is a DUPLICATE of the sample preceding this sample.
* Indicates value is from Division of Water Techinical and Operational Guidance Series (TOGS 1.1.1)

Table 2a - Page 2 of 2
690 Saint Paul Street
NYSDEC Brownfield Cleanup Program Remedial Investigation
NYSDEC BCP ID No. C828159

Summary of Detected Volatile Organic Compounds in Dedicated Monitoring Well Groundwater Samples
Area of Concern (AOC) #1
Results in Micrograms per Liter (µg/L) or Parts Per Billion (PPB)

Sample ID	Groundwater Samples															NYSDEC Part 703 Groundwater Standards and TOGS 1.1.1 Guidance Values
	BW-09	BW-09 DUP	690-BW-09	BW-10	BW-10DUP	690-BW-10	BW-11	690-BW-11	BW-12	690-BW-12	690-BW-12	BW-13** 26.8'-31.8'	BW-13** 27'-32' RE	BW-13** 31.8'-36.8'	690-BW-13	
Area of Concern	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	
Sample Interval***	2'-12' BGS	2'-12' BGS	2'-12' BGS	3.5'-11.5' BGS	3.5'-11.5' BGS	3.5'-11.5' BGS	2.5'-7.5' BGS	2.5'-7.5' BGS	2'-8.5' BGS	2'-8.5' BGS	2'-8.5' BGS	26.8'-31.8' BGS	27'-32' BGS	31.8'-36.8' BGS	27'-37' BGS	
Sample Collection Date	2/22/12	2/22/12	11/2/2012	4/19/2012	4/19/12	10/30/2012	2/22/12	10/30/2012	2/22/2012	10/30/2012	6/19/2013	5/15/2012	5/16/2012	5/16/2012	11/1/2012	
Volatile Organic Compounds																
Chloromethane	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5
Vinyl chloride	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	74	5.0 U	49	1.9 J	2.9 J	2.00 U	2.00 U	2.00 U	5.0 U	2
1,1-Dichloroethene	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	3.8 J	5.0 U	5.0 U	5.0 U	5.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5
Acetone	5.0 U	5.0 U	5.0 U	6.1	5.8	5.0 U	5.0 U	5.0 U	4.2 J	5.0 U	5.0 U	10.0 U	10.0 U	25.7	11	50
Carbon disulfide	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	2.00 U	2.00 U	2.00 U	8	60*
Methylene chloride	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5
trans-1,2-dichloroethene	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	2.9 J	5.0 U	1.9 J	5.0 U	5.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5
Methyl tert-butyl ether	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	2.00 U	2.00 U	2.00 U	5.0 U	10
1,1-Dichloroethane	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5
2-Butanone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10.0 U	10.0 U	10.0 U	5.0 U	50
cis-1,2-dichloroethene	2.7 J	1.8 J	5.0 U	1.2 J	1.4 J	1.4 J	460 D	35	31	1.5 J	5.2 U	2.00 U	2.00 U	2.00 U	5.0 U	5
Chloroform	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	1.5 J	0.61 J	5.0 U	5.0 U	5.0 U	6.56	5.73	18.3	4.4 J	7
Chloroethane	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5
1,2-Dichloroethane	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	2.00 U	2.00 U	2.00 U	5.0 U	0.6
Benzene	1.3 J	1.3 J	5.0 U	1.4 J	1.5 J	1.9 J	5.0 U	5.0 U	0.64 J	5.0 U	5.0 U	1.04	0.765	1.21	5.0 U	1
Trichloroethene	5.0 U	3.8 J	3.9 J	3.1 J	2.9 J	9.8	430 D	56	7.4	1.1 J	1.6 U	2.66	1.43 J	2.87	3.3 J	5
Toluene	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	1.0 J	5.0 U	5.0 U	14.4	77.20	5.38	5.0 U	5
1,1,2-Trichloroethane	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	2.00 U	2.00 U	2.00 U	5.0 U	1
Tetrachloroethene	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5
Ethylbenzene	5.0 U	5.0 U	5.0 U	1.1 J	1.1 J	5.0 U	5.0 U	5.0 U	1.3 J	5.0 U	5.0 U	2.00 U	2.00 U	2.78	1.4 J	5
m,p-Xylene	5.0 U	5.0 U	5.0 U	1.8 J	2.2 J	5.0 U	5.0 U	5.0 U	1.7 J	5.0 U	5.0 U	7.26	7.0	12.5	3.8 J	5
o-Xylene	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	1.1 J	5.0 U	5.0 U	2.00 U	2.00 U	2.78	1.2 J	5
Bromoform	5.0 U	5.0 U	5.0 UJ	NA	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.00 U	5.00 U	5.00 U	5.0 U	50*
Isopropylbenzene	5.0 U	5.0 U	5.0 U	1.8 J	1.9 J	5.5	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NA	NA	NA	5.0 U	5
n-Propylbenzene	5.0 U	5.0 U	5.0 U	2.2 J	2.3 J	5.0	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NA	NA	NA	5.0 U	5
1,3,5-Trimethylbenzene	5.0 U	5.0 U	5.0 U	2.4 J	2.4 J	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NA	NA	NA	5.0 U	5
tert-Butylbenzene	5.0 U	5.0 U	5.0 U	1.2 J	1.4 J	1.7 J	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NA	NA	NA	5.0 U	5
1,2,4-Trimethylbenzene	1.1 J	1.2 J	5.0 U	16.0	16.0	4.4 J	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NA	NA	NA	1.1 J	5
sec-Butylbenzene	5.0 U	5.0 U	5.0 U	1.9 J	1.9 J	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NA	NA	NA	5.0 U	5
4-Isopropyltoluene	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NA	NA	NA	5.0 U	5
n-Butylbenzene	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NA	NA	NA	5.0 U	5
1,2-Dichlorobenzene	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	2.00 U	2.00 U	2.00 U	5.0 U	3
Naphthalene	5.0 U	5.0 U	5.0 U	7.4	7.4	1.7 J	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NA	NA	NA	5.0 U	10
Total VOCs	5.1	8.1	3.9	47.6	48.2	31	542.2	92	99.2	4.5	2.9	31.9	92.1	77.2	34.2	
Total VOC TICs	NA	NA	8.6 J	443.0	446.0	345	NA	None Detected	33 J	None Detected	None Detected	NA	NA	NA	291.3	*Not Available*
Total VOCs & VOC TICs	NA	NA	12.5	490.6	494.2	376	NA	92	132.2	4.5	2.9	31.9	92.1	77.2	325.5	

Notes:
VOC analysis by United States Environmental Protection Agency (USEPA) Method SW846 8260B.
J – Indicates that the constituent was positively identified; but the associated numerical value is the approximate concentration of the constituent in the sample.
D - Indicates that the value was obtained from a secondary dilution anaylsis.
U - Indicates that the constituent was not detected.
E - Indicates the compound concentration exceeded the calibration range.
NA = Not Applicable or Not Available
***Refers to screened interval or length of open rock, depending on well construction.
**Indicates grab samples collected for screening purposes prior to developing well.
Highlighted type indicates that the constituent was detected at a concentration above the NYSDEC Part 703 Groundwater Standards and TOGS 1.1.1.
Indicates sample is a DUPLICATE of the sample preceding this sample.
* Indicates value is from Division of Water Techinical and Operational Guidance Series (TOGS 1.1.1)

Table 2b
690 Saint Paul Street
NYSDEC Brownfield Cleanup Program Remedial Investigation
NYSDEC BCP ID No. C828159

Summary of Detected Semi-Volatile Organic Compounds in Dedicated Monitoring Well Groundwater Samples
Area of Concern (AOC) #1
Results in Micrograms per Liter (µg/L) or Parts Per Billion (PPB)

Sample ID		690-BW-04		690-BW-05	***690-BW-5-Oil	690-BW-06	690-BW-07	690-BW-07-DUP-1	690-BW-10	BW-09	BW-11	BW-12	BW-10	690-BW-07	NYSDEC Part 703 Groundwater Standards
Area of Concern		AOC #1		AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	
Sample Interval*		5.7'-13.2' BGS		8.7'-18.7' BGS	8.7'-18.7' BGS	4.5'-14.5' BGS	11'-21' BGS	11'-21' BGS	3.5'-11.5' BGS	2'-12' BGS	2.5'-7.5' BGS	2'-8.5' BGS	3.5'-11.5' BGS	11'-21' BGS	
Sample Collection Date		9/15/2010		11/11/2010	11/11/2010	11/11/2010	11/10/2010	11/10/2010	10/30/2012	2/22/2012	2/22/2012	2/22/2012	4/19/2012	11/5/2012	
Semi-Volatile Organic Compounds															
Naphthalene		10 U		10 U	99,000 U	10 U	10 U	10 U	10 UJ	10 UJ	10 UJ	10 UJ	10 U	10 U	10
2,2'-oxybis(1-Chloropropane)		NA		10 U	99,000 U	10 U	10 U	10 U	NA	10 UJ	10 UJ	10 UJ	NA	NA	NA
2,4-Dimethylphenol		NA		10 UJ	99,000 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	NA	10 UJ	2
2-Methylnaphthalene		10 U		10 U	99,000 U	10 U	10 U	10 U	10 UJ	10 UJ	10 UJ	10 UJ	NA	10 U	NA
Acenaphthylene		10 U		10 U	99,000 U	10 U	10 U	10 U	10 UJ	10 UJ	10 UJ	10 UJ	NA	10 U	NA
Acenaphthene		10 U		10 U	99,000 U	10 U	10 U	10 U	10 UJ	10 UJ	10 UJ	10 UJ	10 U	10 U	20
Dibenzofuran		10 U		10 U	99,000 U	10 U	10 U	10 U	10 UJ	10 UJ	10 UJ	10 UJ	NA	10 U	NA
4-Chlorophenyl-phenylether		NA		10 U	99,000 U	10 U	10 U	10 U	10 UJ	10 UJ	10 UJ	10 UJ	NA	10 UJ	NA
Fluorene		10 U		10 U	99,000 U	10 U	10 U	10 U	10 UJ	10 UJ	10 UJ	10 UJ	10 U	10 UJ	50
Phenanthrene		10 U		10 U	38,000 J	10 U	10 U	10 U	10 UJ	10 UJ	10 UJ	10 UJ	10 U	10 U	50
Anthracene		10 U		10 U	99,000 U	10 U	10 U	10 U	10 UJ	10 UJ	10 UJ	10 UJ	10 U	10 U	50
Carbazole		10 U		10 U	99,000 U	10 U	10 U	10 U	10 UJ	10 UJ	10 UJ	10 UJ	NA	10 U	NA
Di-n-butylphthalate		NA		10 U	99,000 U	10 U	10 U	10 U	11 U	10 UJ	10 UJ	10 UJ	NA	11 U	50
Fluoranthene		10 U		10 U	99,000 U	10 U	10 U	10 U	10 UJ	10 UJ	10 UJ	10 UJ	10 U	10 U	50
Pyrene		10 U		10 U	99,000 U	10 U	10 U	10 U	10 UJ	10 UJ	10 UJ	10 UJ	10 U	10 U	50
Benzo(a)anthracene		10 U		10 U	99,000 U	10 U	10 U	10 U	10 UJ	10 UJ	10 UJ	10 UJ	10 U	10 U	0.002
Chrysene		10 U		10 U	99,000 U	10 U	10 U	10 U	10 UJ	10 UJ	10 UJ	10 UJ	10 U	10 U	0.002
Bis(2-ethylhexyl)phthalate		10 U		10 U	120,000 J	10 U	21	10 U	2.1 U	10 UJ	10 UJ	10 UJ	NA	10 U	5
Benzo(b)fluoranthene		10 U		10 U	99,000 U	10 U	10 U	10 U	10 UJ	10 UJ	10 UJ	10 UJ	10 U	10 U	0.002
Benzo(k)fluoranthene		10 U		10 U	99,000 U	10 U	10 U	10 U	10 UJ	10 UJ	10 UJ	10 UJ	10 U	10 U	0.002
Benzo(a)pyrene		10 U		10 U	99,000 U	10 U	10 U	10 U	10 UJ	10 UJ	10 UJ	10 UJ	10 U	10 U	ND
Indeno(1,2,3-cd)pyrene		10 U		10 U	99,000 U	10 U	10 U	10 U	10 UJ	10 UJ	10 UJ	10 UJ	10 U	10 U	0.002
Dibenzo(a,h)anthracene		10 U		10 U	99,000 U	10 U	10 U	10 U	10 UJ	10 UJ	10 UJ	10 UJ	10 U	10 U	NA
Benzo(g,h,i)perylene		10 U		10 U	99,000 U	10 U	10 U	10 U	10 UJ	10 UJ	10 UJ	10 UJ	10 U	10 UJ	NA
Total SVOCs		None Detected		None Detected	158,000	None Detected	21	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	None Detected	
Total SVOC TICs		40.2 N,J		80.5 N,J	12,180,000	None Detected	None Detected	None Detected	270.7 J	26.3 NJ	10.4 NJ	40 NJ	None Detected	170 NJ	*Not Available*
Total SVOCs & SVOC TICs		40.2		80.5	12,338,000	None Detected	21	None Detected	270.7	26.3	10.4	40	None Detected	170.0	

Notes:
SVOC analysis by United States Environmental Protection Agency (USEPA) Method SW846 8270.
J – Indicates that the constituent was positively identified; but the associated numerical value is the approximate concentration of the constituent in the sample.
U - Indicates that the constituent was not detected above the indicated method detection limit (MDL).
N - indicates presumptive evidence of a compound. This flag is used only for TICs, where the identification is based on the Mass Spectral library search. It is applied to all TIC results.
Highlighted type indicates that the constituent was detected at a concent
Indicates sample is a DUPLICATE of the sample preceding this sample.
NA = Not Applicable or Not Available
*Refers to screened interval or length of open rock, depending on well construction.
***This is a sample of product and is not representative of SVOC concentrations in dissolved groundwater. Recovery wells RW-West and RW-East were previously designated REC-N and REC-S.

Table 2c
690 Saint Paul Street
NYSDEC Brownfield Cleanup Program Remedial Investigation
NYSDEC BCP ID No. C828159

Summary of Detected Metals in Dedicated Monitoring Well Groundwater Samples
Area of Concern (AOC) #1
Results in Micrograms per Liter (µg/L) or Parts Per Billion (PPB)

Sample ID	Groundwater Samples															NYSDEC Part 703 Groundwater Standards and TOGS 1.1.1
	690-BW-04	690-BW-05	***690-BW-05-Oil	690-BW-06	690-BW-07	690-BW-07-DUP-1	690-BW-04	690-BW-06	690-BW-10	690-BW-11	690-BW-12	690-BW-12-DUP	690-BW-09	690-BW-05	690-BW-07	
Area of Concern	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	
Sample Interval*	5.7'-13.2' BGS	8.7'-18.7' BGS	8.7'-18.7' BGS	4.5'-14.5' BGS	11'-21' BGS	11'-21' BGS	5.7'-13.2' BGS	4.5'-14.5' BGS	3.5'-11.5' BGS	2.5'-7.5' BGS	2'-8.5' BGS	2'-8.5' BGS	2'-12' BGS	8.7'-18.7' BGS	11'-21' BGS	
Sample Collection Date	9/15/2010	11/11/2010	11/11/2010	11/11/2010	11/10/2010	11/10/2010	10/30/2012	10/30/2012	10/30/2012	10/30/2012	10/30/2012	10/30/2012	11/2/2012	11/1/2012	11/5/2012	
TAL Metals																
Aluminum	92.4 B	79.6 J	9,600 U	66.0 U	66.0 U	66.0 U	269	66 U	82 J	66 U	66 U	66 U	66.0 U	73.4 J	66 U	100
Antimony	9.3 U	9.3 U	280 U	9.3 U	9.3 U	9.3 U	9.3 U	14.5 J	13.6 J	9.3 U	9.6 J	9.3 U	9.3 U	11.1 J	9.3 U	3
Arsenic	4.3 U	4.3 U	500 J	4.3 U	4.3 U	4.3 U	4.3 J	4.3 U	4.3 U	4.3 U	4.3 U	4.3 U	4.3 U	4.3 U	4.3 U	25
Barium	136 B	121.0 J	2,400 J	62.8 J	55.5 J	53.9 J	145 J	65 J	137 J	65.4 J	101 J	85.6 J	85.7 J	76.8 J	65.6 J	1,000
Beryllium	0.26 U	0.26 U	2.5 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	3
Cadmium	0.89 U	0.89 U	11 U	0.89 U	0.89 U	0.89 U	0.89 U	0.89 U	0.89 U	0.89 U	0.89 U	0.89 U	0.89 U	0.89 U	0.89 U	5
Calcium	60,700	65,200	96,400	45,100	18,000	17,700	82,900	41,000	119,000	65,600	127,000	55,400	131,000	46,400	251,000	Not Listed
Chromium	0.64 U	0.64 U	340 J	0.64 U	31.1	26.3	0.73 J	0.64 U	0.64 U	1.5 J	0.64 U	0.64 U	0.64 U	0.64 U	15.90 J	50
Cobalt	0.67 U	0.67 U	51 J	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	3.7 J	0.67 U	1.7 J	0.67 U	0.75 J	5
Copper	3.6 U	3.6 U	1,600	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	6.0 J	3.6 U	3.6 U	3.6 U	3.6 U	5.7 J	200
Iron	782	654	357,000	184 U	8,620	5,250	944	445	791	37.9 J	1,520	547	911	3,910	7,270	300
Lead	4.2 U	4.2 U	1,400	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	25
Magnesium	12,100	21,800	13,900 J	11,200	13,300	13,400	17,500	8,890	27,900	13,700	31,100	10,700	28,300	12,800	7,250	35,000
Manganese	64.5	33.1 J	2,400	40.0 J	54.5	39.5 J	210	29.8 J	85.1	10.0 U	552	86.4	281	57.6	76.7	300
Mercury	0.028 U	0.028 U	2.3 U	0.028 U	0.028 U	0.028 U	0.028 U	0.028 U	0.067 U	0.028 U	0.028 U	0.028 U	0.078 J	0.028 U	0.028 U	0.7
Nickel	0.96 B	0.85 U	300 J	1.7 J	1.6 J	0.95 J	3.0 J	1.3 J	2.1 J	1.9 J	4.9 J	0.94 J	11.1 J	1.4 J	0.85 U	100
Potassium	11,000	9,970	6,100 J	15,900	29,700	30,900	8,910	9,410	12,200	7,890	8,660	14,000	16,800	7,470	12,100	Not Listed
Selenium	12.0 U	12.0 U	470 U	12.0 U	12.0 U	12.0 U	12.0 U	12.0 U	12.0 U	12.0 U	12.0 U	12.0 U	12.0 U	12.0 U	12.0 U	10
Silver	6.9 U	6.9 U	47 U	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U	50
Sodium	281,000	260,000	10,400 J	215,000	1,570,000	1,600,000	112,000	187,000	104,000	72,700	73,300	202,000	25,000	256,000	1,030,000	20,000
Thallium	6.2 U	6.2 U	160 U	6.2 U	6.2 U	6.2 U	6.2 U	6.2 U	6.2 U	6.2 U	6.2 U	6.2 U	6.2 U	6.2 U	6.2 U	8
Vanadium	1.1 U	1.1 U	470 J	1.1 U	3.1 J	2.4 J	1.6 J	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	14
Zinc	66.0	14.6 U	7,400	14.1 U	75.6	45.8 J	41.6 J	4.9 U	5.9 J	13.6 J	3,320	6.3 J	11.9 J	4.9 U	13.5 J	2,000

TAL Metals analysis by United States Environmental Protection Agency (USEPA) SW846 Methods 6010 (TAL Metals) and 7471 (Mercury)
B - denotes that a "trace" concentration was detected below the reporting limit and equal to or above the detection limit.
U - Indicates that the constituent was not detected above the indicated method detection limit (MDL).
N - Indicates spiked sample recovery not within control limits.
J – Indicates that the constituent was positively identified; but the associated numerical value is the approximate concentration of the constituent in the sample.
Bold type indicates that the constituent was detected at a concentration above the Part 375-6 Restricted Residential Soil Cleanup Objectives.
Highlighted type indicates that the constituent was detected at a concentration above the NYSDEC Part 703 Groundwater Standards and TOGS 1.1.1.
Indicates sample is a DUPLICATE of the sample preceding this sample.
*Refers to screened interval or length of open rock, depending on well construction.
Brown highlighted type indicates parameter is shown on Select Metals figure.
***This is a sample of product and is not representative of pesticide concentrations in dissolved groundwater. Recovery wells RW-West and RW-East were previously designated REC-N and REC-S.

Table 2d
690 Saint Paul Street
NYSDEC Brownfield Cleanup Program Remedial Investigation
NYSDEC BCP ID No. C828159

Summary of Detected Pesticides in Dedicated Monitoring Well Groundwater Samples
Area of Concern (AOC) #1
Results in Micrograms per Liter (µg/L) or Parts Per Billion

Sample ID	690-BW-04	690-BW-07	690-BW-07-DUP-1	690-BW-05	***690-BW-05-Oil	690-BW-06	690-BW-05	NYSDEC Part 703 Groundwater Standards
Area of Concern	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	
Sample Interval*	5.7'-13.2' BGS	11'-21' BGS	11'-21' BGS	8.7'-18.7' BGS	8.7'-18.7' BGS	4.5'-14.5' BGS	8.7'-18.7' BGS	
Sample Collection Date	9/15/10	11/10/10	11/10/10	11/11/10	11/11/2010	11/11/10	11/1/12	
Pesticides								
alpha-BHC	0.050 U	0.050 U	0.050 U	0.050 U	51 U	0.050 U	0.050 U	0.01
beta-BHC	0.050 U	0.050 U	0.050 U	0.050 U	51 U	0.050 U	0.050 U	0.04
delta-BHC	0.050 U	0.050 U	0.050 U	0.36 J	51 U	0.050 U	0.050 U	0.04
gamma-BHC (Lindane)	0.050 U	0.050 U	0.050 U	0.16 J	51 U	0.050 U	0.23 J	0.05
Heptachlor	0.050 U	0.050 U	0.050 U	0.55 J	51 U	0.050 U	0.050 U	0.04
Aldrin	0.050 U	0.050 U	0.050 U	0.050 U	51 U	0.050 U	0.050 U	50
Heptachlor Epoxide	0.050 U	0.050 U	0.050 U	0.050 U	51 U	0.050 U	0.050 U	0.03
Endosulfan I	0.050 U	0.050 U	0.050 U	0.050 U	51 U	0.050 U	0.050 U	ND*
Dieldrin	0.10 U	0.10 U	0.10 U	0.10 U	99 U	0.10 U	0.10 U	0.004
4,4'-DDE	0.10 U	0.10 U	0.10 U	0.10 U	220	0.10 U	0.10 U	0.2
Endrin	0.10 U	0.10 U	0.10 U	0.10 U	99 U	0.10 U	0.10 U	50
Endosulfan II	0.10 U	0.10 U	0.10 U	0.10 U	350 J	0.10 U	0.10 U	50
4,4'-DDD	0.10 U	0.10 U	0.10 U	0.10 U	650	0.10 U	0.10 U	0.3
Endosulfan Sulfate	0.10 U	0.10 U	0.10 U	0.10 U	99 U	0.10 U	0.10 U	50
4,4'-DDT	0.10 U	0.10 U	0.10 U	0.10 U	99 U	0.10 U	0.10 U	0.2
Methoxychlor	0.050 U	ND<0.50 U	0.050 U	0.050 U	510 U	0.050 U	0.050 U	35
Endrin Ketone	0.10 U	0.10 U	0.10 U	0.10 U	99 U	0.10 U	0.10 U	Not Listed
Endrin Aldehyde	0.10 U	0.10 U	0.10 U	0.10 U	99 U	0.10 U	0.10 U	Not Listed
alpha-Chlordane	0.050 U	0.050 U	0.050 U	0.050 U	51 U	0.050 U	0.050 U	0.05
gamma-Chlordane	0.050 U	0.050 U	0.050 U	0.050 U	330 J	0.050 U	0.050 U	0.05
Toxaphene	5 U	5 U	5 U	5 U	5,100 U	5 U	5 U	0.06
Total Pesticides	None Detected	None Detected	None Detected	1.07	1,550	None Detected	0.230	*Not Available*

Notes:
Pesticide analysis by United States Environmental Protection Agency (USEPA) Method SW846 8081.
J – Indicates that the constituent was positively identified; but the associated numerical value is the approximate concentration of the constituent in the sample.
U - Indicates that the constituent was not detected.
ND* indicates a non-detectable concentration by the approved analytical methods referenced in NYCRR Part 700.3
P = Used for CLP methodology only. For pesticide analytes, when a difference for detected concentrations between the two GC columns is greater than 25%, the lower of the two values is reported on the data page and flagged with a "P".
Highlighted type indicates that the constituent was detected at a concentration above the NYSDEC Part 703 Groundwater Standards.
Indicates sample is a DUPLICATE of the sample preceding this sample.
*Refers to screened interval or length of open rock, depending on well construction.
***This is a sample of product and is not representative of pesticide concentrations in dissolved groundwater. Recovery wells RW-West and RW-East were previously designated REC-N and REC-S.

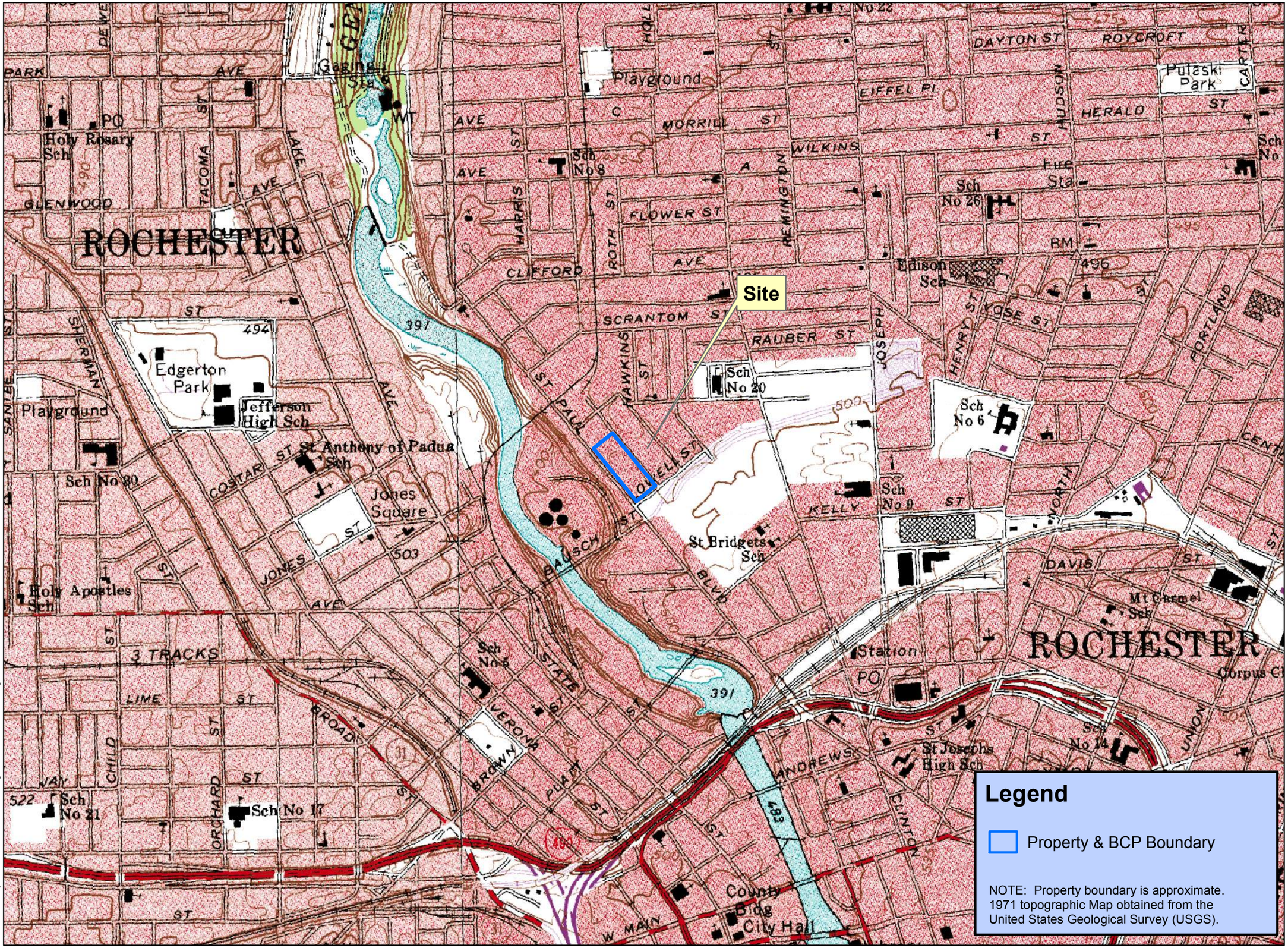
Table 2e
690 Saint Paul Street
NYSDEC Brownfield Cleanup Program Remedial Investigation
NYSDEC BCP ID No. C828159

Summary of Detected Polychlorinated Biphenyls in Dedicated Monitoring Well Groundwater Samples
Area of Concern (AOC) #1
Results in Micrograms per Liter (µg/L) or Parts Per Billion (PPB)

Sample ID	Groundwater Samples						NYSDEC Part 703 Groundwater Standards
	690-BW-07	690-BW-7-DUP-1	690-BW-05	***690-BW-05 - Oil	690-BW-06	690-BW-04	
Area of Concern	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	AOC #1	
Sample Interval*	11'-21' BGS	11'-21' BGS	8.7'-18.7' BGS	8.7'-18.7' BGS	4.5'-14.5' BGS	5.7'-13.2' BGS	
Sample Collection Date	11/10/10	11/10/10	11/11/10	11/11/10	11/10/10	9/15/10	
PCBs							
Aroclor 1016	1.0 U	1.0 U	1.0 U	990 U	1.0 U	1.0 UJ	N/A
Aroclor 1221	1.0 U	1.0 U	1.0 U	990 U	1.0 U	1.0 UJ	N/A
Aroclor 1232	1.0 U	1.0 U	1.0 U	990 U	1.0 U	1.0 UJ	N/A
Aroclor 1242	1.0 U	1.0 U	1.0 U	990 U	1.0 U	1.0 UJ	N/A
Aroclor 1248	1.0 U	1.0 U	1.0 U	990 U	1.0 U	1.0 UJ	N/A
Aroclor 1254	1.0 U	1.0 U	1.0 UJ	12,000 J	1.0 U	1.0 UJ	N/A
Aroclor 1260	1.0 U	1.0 U	1.0 U	990 U	1.0 U	1.0 UJ	N/A
Total PCBs	None Detected	None Detected	None Detected	12,000	None Detected	None Detected	0.09

Notes:
PCB analysis by United States Environmental Protection Agency (USEPA) Method SW846 8082.
J – Indicates that the constituent was positively identified; but the associated numerical value is the approximate concentration of the constituent in the sample.
U - Indicates that the constituent was not detected.
Indicates sample is a DUPLICATE of the sample preceding this sample.
*Refers to screened interval or length of open rock, depending on well construction.
***This is a sample of product and is not representative of pesticide concentrations in dissolved groundwater. Recovery wells RW-West and RW-East were previously designated REC-N and REC-S.
Highlighted type indicates that the constituent was detected at a concentration above the NYSDEC Part 703 Groundwater Standards.

Figures



Legend

Property & BCP Boundary

NOTE: Property boundary is approximate.
1971 topographic Map obtained from the United States Geological Survey (USGS).

I:\Genesee Valley Real Estate Co\209280\Drawings\Contained In Jan 2017\Figure 1.USGS.mxd

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SITE LOCATION MAP

CONTAINED-IN DEMONSTRATION

BROWNFIELD CLEANUP PROGRAM

690 SAINT PAUL STREET ROCHESTER, NEW YORK

VOLUNTEER: GENESEE VALLEY REAL ESTATE COMPANY

N
W E
S

250 0 1,000

1 inch = 1,000 feet

209280

FIGURE 1

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SITE FEATURES

CONTAINED-IN DEMONSTRATION

BROWNFIELD CLEANUP PROGRAM

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VOLUNTEER: GENESEE VALLEY REAL ESTATE COMPANY

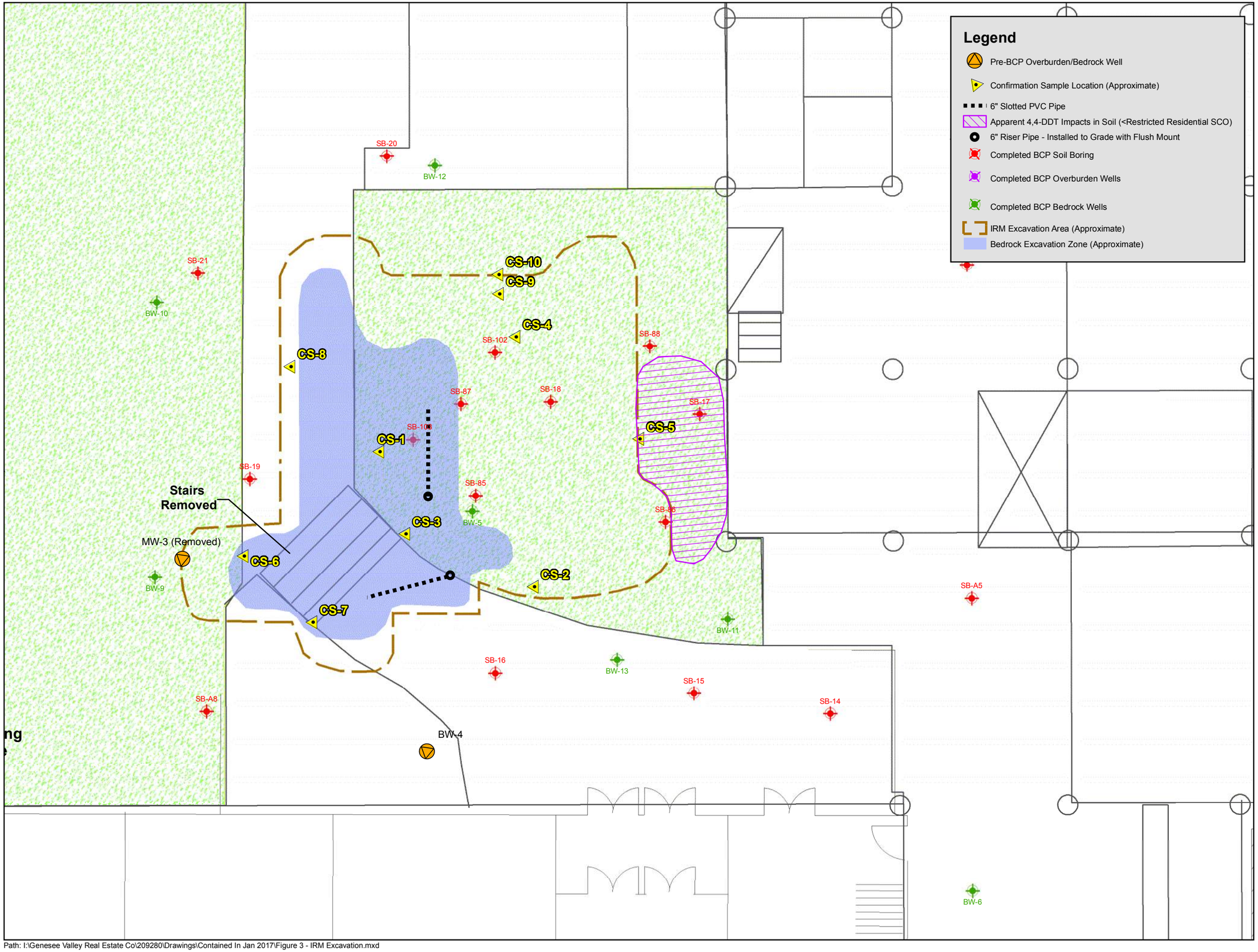
N W E S

0 20 40 80 Feet

1 inch = 80 feet
Intended to Print on 11"x17"

209280

FIGURE 2



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IRM EXCAVATION - CONFIRMATION SAMPLE LOCATIONS

CONTAINED-IN DEMONSTRATION

BROWNFIELD CLEANUP PROGRAM

690 SAINT PAUL STREET ROCHESTER, NEW YORK

VOLUNTEER: GENESEE VALLEY REAL ESTATE COMPANY

N E S W

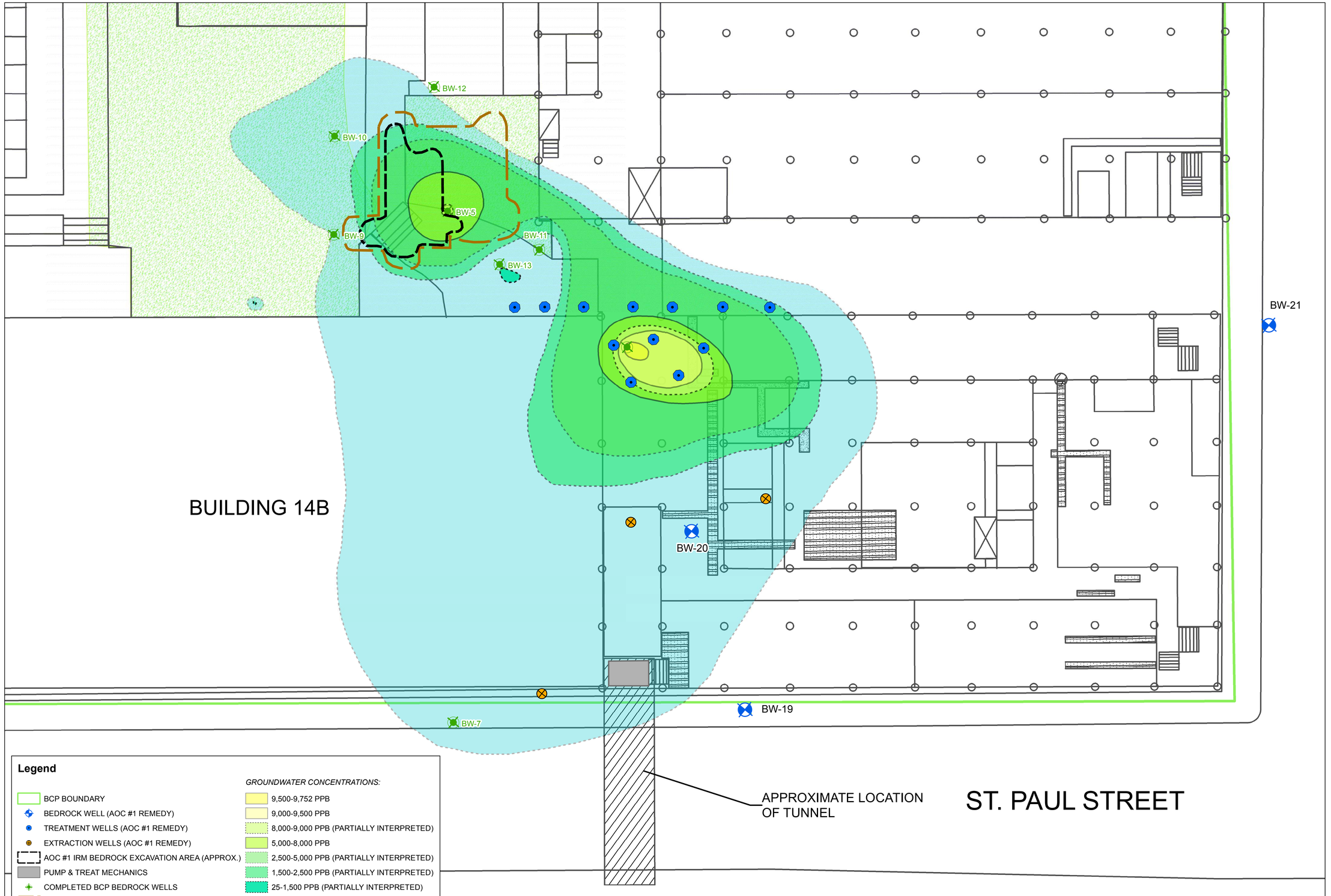
0 5 10 Feet

1 inch = 10 feet

209280

FIGURE 3

Path: I:\Genesee Valley Real Estate Co\209280\Drawings\Contained In Jan 2017\Figure 3 - IRM Excavation.mxd



Legend

	GROUNDWATER CONCENTRATIONS:
BCP BOUNDARY	9,500-9,752 PPB
BEDROCK WELL (AOC #1 REMEDY)	9,000-9,500 PPB
TREATMENT WELLS (AOC #1 REMEDY)	8,000-9,000 PPB (PARTIALLY INTERPRETED)
EXTRACTION WELLS (AOC #1 REMEDY)	5,000-8,000 PPB
AOC #1 IRM BEDROCK EXCAVATION AREA (APPROX.)	2,500-5,000 PPB (PARTIALLY INTERPRETED)
PUMP & TREAT MECHANICS	1,500-2,500 PPB (PARTIALLY INTERPRETED)
COMPLETED BCP BEDROCK WELLS	25-1,500 PPB (PARTIALLY INTERPRETED)
AOC #1 IRM EXCAVATION AREA (APPROX.)	5-25 PPB (PARTIALLY INTERPRETED)

NOTE:
(1) SITE PLAN DEVELOPED FROM BERO ASSOCIATES ARCHITECTS SITE PLAN FOR 690 SAINT PAUL STREET, ROCHESTER CHARTER OF SCHOOL SCIENCE AND TECHNOLOGY, DATED APRIL 11, 2000.
(2) GROUNDWATER DATA DISPLAYED IN PARTS PER MILLION (PPM). DATA FROM AUGUST 2015. UNDERLINED FONT INDICATES A VALUE ABOVE THE NYCRR PART 703 GROUNDWATER STANDARDS.
(3) KRIGING MODELING COMPLETED USING GOLDEN SOFTWARE SURFER V8. DASHED LINES INDICATE PARTIALLY INTERPRETED CONTOURS DUE TO MODEL DATA LIMITATIONS.
(4) LABELLA SAMPLE LOCATIONS MEASURED FROM GPS UNIT.

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AOC #1 GROUNDWATER CONTAMINANT MODELING

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BROWNFIELD CLEANUP PROGRAM

690 SAINT PAUL STREET ROCHESTER, NEW YORK

VOLUNTEER: GENESEE VALLEY REAL ESTATE COMPANY

10 0 30 Feet

1 inch = 15 feet

Figure Intended to Print as ANSI D.

209280

FIGURE 4

Path: I:\Genesee Valley Real Estate Co\209280\Drawings\Contained In Jan 2017\Fig 4 - AOC #1 GW.mxd