BENCHMARK
ENVIRONMENTAL
ENGINEERING &
SCIENCE, PLLC

January 25, 2019

Mr. Anthony Lopes, P.E.
Engineer I
New York State Department of Environmental Conservation
Division of Environmental Remediation
270 Michigan Avenue
Buffalo, New York 14203

Re: 1485-1491 Niagara Street Site (BCP Site: 915330)
Remedial Investigation/Supplemental Interim Remedial Measures Update

Dear Mr. Lopes:

On behalf of our client, 1485 Niagara LLC, Benchmark Environmental Engineering & Science, PLLC (Benchmark) has prepared this letter to provide the New York State Department of Environmental Conservation (NYSDEC or Department) with an update on the Remedial Investigation (RI) activities to date and supplemental information on the Interim Remedial Measures (IRM) to be completed at the 1485-1491 Niagara Street Site (Site) as outlined in Section 4.0 of the NYSDEC-approved Remedial Investigation/Interim Remedial Measures Work Plan[1] (RI/IRM WP).

This letter contains the findings of the RI activities completed by Benchmark in September 2018. The RI analytical sampling program is outlined in attached draft Table 1. The results of the surface soil/fill, subsurface soil/fill, groundwater, and soil vapor intrusion sampling (2 tables) completed are summarized on draft Tables 2, 3, 4, 5, and 6, respectively. Note the analytical data associated with subsurface soil/fill and groundwater samples collected from the 2017 Phase II[2] are also included on Tables 3 and 4, respectively. Draft Figures 1 through 6 illustrating the results from the RI sampling and historic work are also included for reference. The exceedances of applicable standards, criteria and guidance values (SCGs) for the surface soil/fill, subsurface soil/fill, and groundwater are illustrated on attached Figures 3, 4, and 5, respectively. Because our client is a Volunteer under Brownfield Cleanup Agreement C915330-07-18, the RI focused on assessing the nature and extent of on-Site contamination.

[1] "Remedial Investigation/Interim Remedial Measures Work Plan, 1485-1491 Niagara Street Site, Buffalo, New York". Prepared for 1485 Niagara Street, LLC by Benchmark Environmental Engineering and Science, PLLC. July 2018.
[2] "Phase II Environmental Investigation Report, 1485-1491 Niagara Street, Buffalo, New York". Prepared for Natale Development Company by TurnKey Environmental Restoration, LLC. May 2017.

The previous Phase II and RI identified surface/subsurface soil/fill contamination, groundwater contamination, and soil vapor intrusion concerns within the two (2) existing Site buildings. The Volunteer's goal for this Brownfield Cleanup Program (BCP) Site is to achieve a Track 4 Restricted-Residential cleanup to allow for the redevelopment of the existing buildings for mixed residential and commercial uses.

The purpose of the IRM is to address some of the soil/fill contaminated areas and design an active sub-slab depressurization (ASD) system to protect the indoor air quality of the existing buildings. Soil/fill and groundwater contamination not addressed by the IRM will be further evaluated and discussed as part of the Alternative Analysis Report (AAR).

Soil Impacts

Five (5) discrete areas of concern (AOC) have been identified at the Site that contain surface and/or subsurface soil/fill contamination that exceeds applicable SCGs (see Figure 7). Those five (5) areas are discussed below. Four (4) of the five (5) areas will be addressed by the proposed IRM.

- AOC SS/NS-1 is located in an area of greenspace in the northeast corner of the Site along the property boundaries. Semi-volatile organic compounds (SVOCs) and metal analytes have been detected in the upper 2-feet of soil/fill in AOC SS/NS-1 above their respective Part 375 Restricted Residential, Commercial, and Industrial Soil Cleanup Objectives (RRSCOs, CSCOs, and ISCOs). This area is estimated at approximate 40 feet (north-south) by 30 feet (east-west) by 2 feet deep, which is approximately 90 cubic yards (145 tons). This area will be addressed as part of the IRM by excavating the upper 2 feet of soil/fill and replacing it with NYSDEC DER-10 backfill.
- AOC SS/SN-2 is located in an area of greenspace along the eastern property boundary of the Site. SVOCs and metal analytes have been detected in the upper 2-feet of soil/fill in AOC SS/SN-2 above their respective Part 375 RRSCOs, CSCOs, and ISCOs. This area is estimated at approximate 50 feet (north-south) by 5 feet (east-west) by 2 feet deep, which is approximately 19 cubic yards (30 tons). This area will be addressed as part of the IRM by excavating the upper 2 feet of soil/fill and replacing it with NYSDEC DER-10 backfill.
- AOC SB-9 is located in the central asphalt paved portion of the Site. Chlorinated volatile organic compounds (cVOCs) have been detected in the soil/fill material in AOC SB-9 above their Protection of Groundwater SCOs (PGWSCOs). Fill material is estimated to be present to a depth of 3 feet below ground surface (fbgs) and is overlying native clay soil. The native soil sample collected from 8 to 10 fbgs at this location does not indicate cVOC impacts are present in the native soil. AOC SB-9 is estimated at approximately 20 feet by 20 feet by 3.5 feet deep, which is approximately 52 cubic yards (85 tons). This area will be addressed as part of the IRM.

- AOC MW-3 is located in the southern central asphalt paved portion of the Site. Total SVOCs have been detected in the soil/fill in AOC MW-3 at a concentration greater than 500 mg/kg. Fill material is estimated to be present to a depth of 4 fbgs and is overlying native clay soil. The native soil sample collected from 11 to 12.5 fbgs at this location does not indicate SVOC impacts are present in the native soil. This area is estimated at approximately 30 feet by 30 feet by 4 feet deep, which is approximately 135 cubic yards (215 tons). This area will be addressed as part of the IRM.
- AOC SB-2/SB-12/SB-14 is located in the southeastern corner of the Site. In the AOC SB-2/SB-12/SB-14, cVOCs, SVOCs and metals have been detected in the soil/fill at concentration greater than the PGWSCOs, CSCOs and ISCOs. Fill material and reworked clay at this location is estimated to be to be present to an average depth of 6 fbgs and is overlying native clay soil. This area is estimated at approximately 75 feet (east-west) by 45 feet by 6 feet deep, which is approximately 750 cubic yards (1,200 tons). This area will not be addressed as part of the IRM and will be further evaluated and addressed in the AA Report along with Site groundwater.

Soil Vapor Impacts

Benchmark conducted a soil vapor intrusion evaluation in accordance with the applicable Guidance[3] of the New York State Department of Health (NYSDOH) in the two (2) existing buildings at the Site. A comparison of soil vapor intrusion sample results under decision Matrices A, B and C of the NYSDOH Guidance is found in Table 6. Soil vapor intrusion has been identified as a concern within both existing buildings as sub-slab vapor concentrations for trichloroethene (TCE) indicate "mitigation" is required according to the NYSDOH Guidance's decision Matrix A.

Benchmark will complete sub-slab communication testing consistent with the NYSDOH Guidance within the two (2) buildings which will be used to determine:

- the radius of influence below the slabs,
- required number of suction points and/or subsurface piping locations; and
- number and types of fans to adequately provide negative pressure under the buildings.

This information will be provided to the Department (for sharing with NYSDOH) in a separate IRM ASD System Design Work Plan for review and approval. The ASD system will consider proposed building(s) layout and will be installed prior to occupancy.

[3] "Guidance for Evaluating Soil Vapor Intrusion in the State of New York". New York State Department of Health. October 2006 (and subsequent updates).

Groundwater Impacts

Groundwater sampling has identified cVOCs, SVOCs and metal analytes in the groundwater at the Site above their respective Groundwater Quality Standards/Values (GWQS), including in monitoring well MW-5 in the southeast corner of the Site which had 213,500 micrograms per liter (ug/L) total cVOCs. Groundwater flow across the Site in late-September 2018 is interpolated in attached Figure 6. On-site groundwater contamination will be further evaluated as part of the AA Report and will not be addressed as part of the IRM.

PRE-IRM TASKS

Underground Utilities Location

The remediation contractor will contact the underground facilities protection organization (Dig Safely New York, UFPO) to locate utility lines within the work areas.

Mobilization and Site Preparation

The remediation contractor's field operations at the Site will commence with mobilizing equipment and materials to the Site and other temporary controls as described below. Temporary facilities for use during the remedial work may include a construction field trailer and portable toilets.

Access Controls

Public access to the Site is deterred by a chain-link fence and/or building walls which surrounds to Site, with the exception of the northeast corner of the Site in the area of SS/NS-1. Temporary fencing will be utilized during remedial work, as necessary, to secure/protect that area during excavation activities. Work areas will be determined based on the planned remedial activities and may be changed throughout the work day to ensure safe operations. Access control will consider site worker and general public safety, and owner access requirements.

Dust Monitoring and Controls

A Community Air Monitoring Plan (CAMP) will be implemented during Site excavation work. If community air monitoring indicates the need for dust suppression or if dust is visually observed leaving the Site, the remediation contractor will apply a water spray across the excavation and surrounding areas, and on-Site haul roads, as necessary, to mitigate airborne dust formation and migration. Potable water will either be obtained from a public hydrant or provided by on-site water service, if available.

Real-time community air monitoring will be performed during intrusive remedial activities at the Site. A CAMP is included with Benchmark's HASP. Particulate and VOC monitoring will be performed along the downwind perimeter of the work area

during excavation, grading and soil/fill handling activities in accordance with this plan. Upwind concentrations may be field monitored at the start and periodically throughout the work day. However, Benchmark uses a conservative approach to CAMP and assumes that the upwind concentrations of volatile organics and particulates are zero when performing CAMP. CAMP action levels are set at 5 ppm for total volatile organics and 100 ug/m^3 for particulates and are based on downwind concentrations.

Monitoring locations will be evaluated throughout the work day, as described in the CAMP. The CAMP is consistent with the requirements for community air monitoring at remediation sites as established by the New York State Department of Health (NYSDOH) and NYSDEC. Accordingly, it follows procedures and practices outlined under NYSDEC's DER-10 (May 2010) Appendix 1A (NYSDOH's Generic Community Air Monitoring Plan) and Appendix 1B (Fugitive Dust and Particulate Monitoring). CAMP monitoring will occur during ground intrusive activities prior to the installation of the final cover system, and will include soil/fill excavations, soil/fill handling and grading, test pits, trenching, generation of soil/fill stockpiles or loading of soil/fill stockpiles.

IRM EXCAVATION ACTIVITIES

As discussed above, soil/fill in four (4) AOCs on the Site will be addressed as part of the IRM. This will involve excavation and off-site disposal of the excavated materials at a permitted landfill facility. Prior to starting the excavation activities, appropriate waste characterization samples will be collected to characterize the soil/fill for landfill approval. It is estimated that approximately 390 tons of SVOC impacted soil/fill and 85 tons of cVOC impacted soil/fill will be removed from the Site. Therefore, two (2) waste characterization samples are proposed to be collected to characterize the soil/fill to be generated.

Remedial excavation work will be directed by an experienced Benchmark professional to remove impacted soil/fill material. A photoionization detection (PID) and visual/olfactory observations will be used to screen soil/fill materials and assist in verifying removal of impacted soil/fill. Excavation activities will be completed to remove the soil/fill until the areas to be addressed by the IRM are removed, the property line is reached, or NYSDEC agrees that no further excavation is required. If grossly contaminated material is encountered during remedial activities, the Department will be notified and it will be removed to the extent feasible.

POST-EXCAVATION CONFIRMATORY/DOCUMENTATION SAMPLING

Post-excavation confirmatory sampling consisting of sidewall and bottom samples will be collected. A minimum of one sample per 30 linear feet of sidewall and one sample for each 900 square feet of excavation bottom will be collected in accordance with DER-10. Post-excavation confirmatory samples will be collected from the excavated area and will include sidewalls and bottom samples to confirm the excavation limits have achieved the RRSCOs

or because Volunteer is not required to excavate off-Site, to document the contaminant levels remaining at the property lines. Confirmation/documentation samples will be analyzed by a NYSDOH ELAP certified analytical laboratory as follows:

SS/NS-1
Post-excavation samples will be collected for Part 375 list SVOCs and Part 375 list metals analysis, as no VOCs, PCBs, pesticides and/or herbicides were detected above their respective RRSCOs in the RI soil/fill samples collected from this area.

The remedial goal for the SS/NS-1 area is to achieve the Part 375 RRSCOs for metals and total PAHs less than 500 mg/kg. Soil/fill excavated from this area will be replaced with DER-10 compliant backfill.

SS/NS-2
Post-excavation samples will be collected for Part 375 list SVOCs and Part 375 list metals analysis, as no VOCs, PCBs, pesticides and/or herbicides were detected above their respective RRSCOs in the RI soil/fill samples collected from this area.

The remedial goal for the SS/NS-2 area is to achieve the Part 375 RRSCOs for metals and total PAHs less than 500 mg/kg. Soil/fill excavated from this area will be replaced with DER-10 compliant backfill.

SB-9
Post-excavation samples will be collected for Target Compound List (TCL) VOC analysis, as SVOCs and metals data collected from is location were below their respective Part RRSCOs in the samples collected from 0.5 to 2 ft and 8 to 10 ft.

The remedial goal for the SB-9 area is to achieve the Part 375 PGWSCOs for cVOCs present in this area.

MW-3
Post-excavation samples will be collected for Part 375 list metals and Part 375 list SVOCs analysis, as no VOCs, PCBs, pesticides and/or herbicides were detected above their respective RRSCOs in the two (2) RI soil/fill samples (0 to 3.8 ft and 11 to 12.5 ft) collected from this location.

The remedial goal for the SS/NS-1 area is to achieve the Part 375 RRSCOs for metals and total PAHs less than 500 mg/kg.

A Category B deliverable package will be provided to facilitate data evaluation by a third-party validation expert who will prepare a data usability summary report (DUSR).

OFF-SITE TRANSPORTATION AND DISPOSAL OF NON-HAZARDOUS SOIL/FILL

It is anticipated that the soil/fill to be excavated and disposed of as part of the IRM will be non-hazardous but will be characterized prior to excavation and disposal to determine its characteristic. The transportation and disposal of soil/fill materials generated will be taken to Waste Management's Chaffee Landfill for disposal as non-hazardous material. The soil/fill will be transported by licensed haulers. The landfill will provide waste manifests and disposal receipts, which will be submitted in the IRM Completion Report.

ACCEPTABLE BACKFILL MATERIALS

In accordance with DER-10, backfill material used on-site may consist of the following materials:

- Gravel, rock, or stone, consisting of virgin material, from a permitted mine or quarry may be imported, without chemical testing, if it meets the requirements of DER-10, or as otherwise approved by NYSDEC.
- Imported soil/fill originating from known off-site sources having no evidence of disposal or releases of hazardous substances, hazardous, toxic or radioactive wastes, or petroleum that meets the chemical criteria of the lesser of the Restricted Residential SCOs or the Protection of Groundwater SCOs. No off-site materials meeting the definition of a solid waste as defined in 6NYCRR, Part 360-1.2(a) shall be used as backfill.
- In addition to the above criteria, backfill materials being imported to the Site will be subject to the characterization requirements in accordance with DER-10 Table 5.4(e)10.

Please contact us if you have any questions, require additional information, or would like to discuss. Benchmark will notify the Department at least 1 week prior to the start of IRM activities.

Sincerely,
Benchmark Environmental Engineering and Science, PLLC

Christopher Boron, P.G.
Senior Project Manager

Thomas H. Forbes, P.E.
Principal Engineer

Attachments

ec: Bobby Corrao (1485 Niagara Street LLC)
Thomas Walsh, Esq. (Barclay Damon)
Chad Staniszewski (NYSDEC Region 9)

File: 0417-018-001

TABLES

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TABLE 1

REMEDIAL INVESTIGATION SAMPLING AND ANALYSIS PROGRAM SUMMARY
REMEDIAL INVESTIGATION / INTERIM REMEDIAL MEASURES / ALTERNATIVE ANALYSIS REPORT
1485 - 1491 NIAGARA STREET SITE (C915330)
BUFFALO, NEW YORK

Date	Remedial Investigation Location	Sample Interval	Sample Matrix	TO-15 VOCs	Full List VOCs [1]	TCL SVOCs	Total TAL Metals	Soluble TAL Metals	PCBs	Pesticides	Herbicides	Emergent Contaminants (1,4-Dioxane & PFAS)
Surface (SS) and Near Surface (NS) Soil/Fill Samples												
9/10/2018	NS-1	(2"-24")	near surface soil/fill		x	x	x		x	x	x	
9/11/2018	NS-2	(2"-24")	near surface soil/fill		x	x	x		x	x	x	
9/11/2018	NS-3	(2"-24")	near surface soil/fill		x	x	x		x	x	x	
9/10/2018	SS-1	(0-2")	surface soil/fill		x	x	x		x	x	x	
9/11/2018	SS-2	(0-2")	surface soil/fill		x	x	x		x	x	x	
9/10/2018	SS-3	(0-2")	surface soil/fill		x	x	x		x	x	x	
Sub-surface Soil/Fill Samples												
9/6/2018	MW-1	(10-12)	Native		x	x	x		x	x	x	
9/6/2018	MW-2	(2-4)	Native		x	x	x		x	x	x	
9/6/2018	MW-3	(0.0 -3.8)	Subsurface Fill		x	x	x		x	x	x	
9/6/2018	MW-3	(11-12.5)	Native		x	x	x		x	x	x	
9/6/2018	MW-4	(2-4)	Subsurface Fill		x	x	x		x	x	x	
9/7/2018	MW-5	(2-4)	Subsurface Fill		x	x	x		x	x	x	
9/7/2018	MW-5	(10-12)	Native		x	x	x		x	x	x	
9/11/2018	MW-6	(2-4)	Subsurface Fill		x	x	x		x	x	x	
9/11/2018	MW-6	(10-12)	Native		x	x	x		x	x	x	
9/7/2018	MW-7	(0-2)	Subsurface Fill			x	x		x	x	x	
9/7/2018	MW-7	(2-4)	Subsurface Fill		x							
9/6/2018	SB-9	(0.5-2)	Subsurface Fill		x	x	x					
9/6/2018	SB-9	(8-10)	Subsurface Fill		x	x	x					
9/7/2018	SB-10	(0-2)	Subsurface Fill		x	x	x					
9/7/2018	SB-11	(0-2)	Subsurface Fill		x	x	x					
9/7/2018	SB-12	(2-4)	Subsurface Fill		x	x	x					
9/6/2018	SB-14	(0-3)	Subsurface Fill		x	x	x					
9/6/2018	SB-14	(4-6)	Subsurface Fill		x	x	x					
9/12/2018	SB-15	(4-6)	Native		x							
9/12/2018	SB-16	(10-12)	Native		x							
Sub-slab and indoor air samples												
9/14/2018	SVI-1	Sub-Slab	Air	x								
9/14/2018	Indoor-1	Indoor Air	Air	x								
9/14/2018	SVI-2	Sub-Slab	Air	x								
9/14/2018	Indoor-2	Indoor Air	Air	x								
9/14/2018	SVI-3	Sub-Slab	Air	x								
9/14/2018	Indoor-3	Indoor Air	Air	x								
9/14/2018	Outdoor Ambient	Outdoor Air	Air	x								
Groundwater Samples												
9/26/2018	MW-1	NA	Groundwater		X	X	X		X	X	X	
9/26/2018	MW-2	NA	Groundwater		X	X	X		X	X	X	
9/26/2018	MW-3	NA	Groundwater		X							x
9/26/2018	MW-4	NA	Groundwater		X							
9/26/2018	MW-5	NA	Groundwater		x	x	x	x	x	x	x	x
9/26/2018	MW-6	NA	Groundwater		x	x	x		x	x	x	x
9/26/2018	MW-7	NA	Groundwater		x							

Notes:

1. Full List VOCs includes TCL VOCs plus CP-51 List VOCs via Method 8260.

Acronyms:

VOCs = volatile organic compounds
SVOCs = semi-volatile organic compounds
TCL = Target Compound List
TAL = Target Analyte List
PCBs = Polychlorinated Biphenyls
NA = Not Applicable
PFAS = per- and polyfluoroalkyl substances

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TABLE 2

SUMMARY OF REMEDIAL INVESTIGATION SURFACE AND NEAR-SURFACE SOIL/FILL SAMPLE ANALYTICAL RESULTS
REMEDIAL INVESTIGATION/INTERIM REMEDIAL MEASURE/ALTERNATIVE ANALYSIS REPORT
1485-1491 NIAGARA STREET SITE
BUFFALO, NEW YORK

PARAMETER	Unrestricted Use SCO's[1]	Protection of Groundwater SCO's [2]	Restricted Residential Use SCO's [2]	Commercial Use SCO's[2]	Industrial Use SCO's[2]	RI SAMPLE LOCATIONS					
						SS-1 0-2 inches	SS-2 0-2 inches	SS-3 0 - 2 inches	NS-1 2-24 inches	NS-2 2-24 inches	NS-3 2-24 inches
						9/17/2018	9/20/2018	9/17/2018	9/17/2018	9/20/2018	9/20/2018
Volatile Organic Compounds (SVOCs) - mg/Kg [3]											
1,1-Dichloroethene	0.33	0.27	100	500	1000	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	0.68	0.68	100	500	1000	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3.6	3.6	52	190	380	ND	ND	ND	ND	ND	0.15 J
1,3,5-Trimethylbenzene	8.4	8.4	52	190	380	ND	ND	ND	ND	ND	0.036 J
1,4-Dichlorobenzene	1.8	1.8	13	130	250	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	1.1	1.1	100	500	1000	ND	ND	ND	ND	ND	ND
2-Butanone	0.12	0.12	100	500	1000	ND	ND	ND	ND	ND	ND
Acetone	0.05	0.05	100	500	1000	**0.06**	0.016 J	ND	**0.086**	ND	ND
Benzene	0.06	0.06	4.8	44	89	ND	ND	ND	ND	ND	0.034 J
Bromomethane	--	--	--	--	--	ND	ND	ND	ND	ND	ND
Chloroform	0.37	0.37	49	350	700	ND	ND	ND	ND	ND	ND
Chlororbenzene	1.1	1.1	100	500	1000	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	0.25	0.25	100	500	1000	ND	ND	ND	ND	ND	**1.1**
Cyclochexane	--	--	--	--	--	ND	ND	ND	ND	ND	0.21 J
Ethylbenzene	1	1	41	390	700	ND	ND	ND	ND	ND	0.087 J
Isopropylbenzene	--	--	--	--	--	ND	ND	ND	ND	ND	0.075 J
Methylene chloride	0.05	0.05	100	500	1000	ND	ND	ND	ND	ND	ND
Methyl Acetate	--	--	--	--	--	ND	ND	1.5	ND	ND	0.5 J
Methyl cyclohexane	--	--	--	--	--	ND	ND	ND	ND	ND	0.82
Methyl tert butyl ether	0.93	0.93	100	500	1000	ND	ND	ND	ND	ND	ND
n-Butylbenzene	12	12	100	500	1000	ND	ND	ND	ND	ND	0.039 J
n-Propylbenzene	3.9	3.9	100	500	1000	ND	ND	ND	ND	ND	0.12 J
p-Isopropytoluene	--	--	--	--	--	ND	ND	0.12	ND	ND	0.019 J
sec-Butylbenzene	11	11	100	500	1000	ND	ND	ND	ND	ND	0.034 J
Tetrachloroethene	1.3	1.3	19	150	300	ND	ND	0.15	0.0022	0.00058 J	**32**
Trichloroethene	0.47	0.47	21	200	400	ND	ND	0.065	0.0008 J	ND	**37**
Toluene	0.7	0.7	100	500	1000	ND	ND	ND	ND	ND	0.24
Total Xylenes	0.26	1.6	100	500	1000	ND	ND	ND	ND	ND	**0.43 J**
trans-1,2-Dichloroethene	0.19	0.19	100	500	1000	ND	ND	ND	ND	ND	0.11 J
Vinyl chloride	0.02	0.02	0.9	13	27	ND	ND	ND	ND	ND	ND
Semi-Volatile Organic Compounds (SVOCs) - mg/Kg [3]											
2-Methylnaphthalene	--	--	--	--	--	0.15 J	1.1 J	0.051 J	0.65	0.16 J	0.73
2,4-Dimethylphenol	--	--	--	--	--	ND	ND	ND	ND	ND	ND
Acenaphthene	20	98	100	500	1000	0.56	5.8	0.2	0.26	0.42	0.51
Acenaphthylene	100	107	100	500	1000	0.11 J	0.28 J	0.054 J	0.068 J	0.39	0.48
Acetophenone	--		--	--	--	0.030 J	ND	ND	ND	ND	ND
Anthracene	100	1000	100	500	1000	1.3	11	0.31	0.66	1.1	2
Benzaldehyde	--		--	--	--	ND	ND	ND	ND	0.086 J	ND
Benzo(a)anthracene	1	1	1	5.6	11	**3.6**	**28**	**1.2**	**1.4**	**4.3**	**6.7**
Benzo(a)pyrene	1	22	1	1	1.1	**3.8**	**30**	**1.4**	**1.2**	**4.5**	**6.5**
Benzo(b)fluoranthene	1	1.7	1	5.6	11	**5.6**	**38**	**2.1**	**1.9**	**5.6**	**9**
Benzo(ghi)perylene	100	1000	100	500	1000	2.6	20	1.1	0.87	2.7	4.2
Benzo(k)fluoranthene	0.8	1.7	3.9	56	110	**1.4**	**14**	0.63	0.62	**2**	**2.8**
Biphenyl	--	--	--	--	--	ND	0.29 J	ND	0.12 J	ND	0.11 J
Bis(2-ethylhexyl) phthalate	--	--	--	--	--	0.47	ND	0.38	ND	ND	0.99
Butyl benzyl phthalate	--	--	--	--	--	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	--	--	--	--	--	ND	ND	0.1 J	ND	ND	ND
Carbazole	--	--	--	--	--	0.91	9.8	0.31	0.34	0.6	1.1
Chrysene	1	1	3.9	56	110	**3.7**	**32**	**1.4**	**1.8**	**4.8**	**7.6**
Dibenzo (a,h)anthracene	0.33	210	0.33	0.56	1.1	**0.52**	**3.8**	0.23	0.26	**0.67**	**1.1**
Dibenzofuran	7	1000	59	350	1000	0.23	2.6	0.08 J	0.36	0.28	0.54
Fluoranthene	100	1000	100	500	1000	16	89	3	3.2	9.4	18
Fluorene	30	386	100	500	1000	0.44	4.2	0.13 J	0.28	0.39	0.67
Indeno(1,2,3-cd)pyrene	0.5	8.2	0.5	5.6	11	ND	**21**	**1.2**	**0.95**	**2.8**	**4.4**
NDPA/DPA	--	--	--	--	--	ND	ND	ND	ND	ND	ND
Naphthalene	12	12	100	500	1000	0.22	3.2	0.082 J	0.5	0.31	0.81
Phenanthrene	100	1000	100	500	1000	5.4	61	1.8	2.9	5.8	11
Phenol	0.33	0.33	100	500	1000	ND	ND	ND	0.052 J	0.036 J	ND
Pyrene	100	1000	100	500	1000	7.1	70	2.4	2.6	8.6	14
m-Cresol	0.33	0.33	100	500	1000	ND	ND	ND	0.068 J	0.048 J	ND
o-Cresol	0.33	0.33	100	500	1000	ND	ND	ND	ND	ND	ND
Total PCBs - mg/Kg [3]											
Aroclor 1254	--	--	--	--	--	0.0407 J	ND	ND	0.249	ND	ND
Aroclor 1260	--	--	--	--	--	0.0944	0.164	ND	ND	0.0229 J	ND
Aroclor 1262	--	--	--	--	--	ND	ND	ND	ND	ND	ND
Aroclor 1268	--	--	--	--	--	ND	0.0371 J	1.79	ND	0.0489	0.248
Total PCBs	0.1	3.2	1	1	25	**0.135 J**	**0.201 J**	**1.79**	**0.249**	0.0718 J	**0.248**
Total Metals - mg/Kg											
Aluminum	--	--	--	--	--	27600	7660	2630	8850	6690	6270
Antimony	--	--	--	--	--	2.90 J	2.13 J	ND	28.7	2.81 J	24.9
Arsenic	13	16	16	16	16	6.57	7.89	3.25	**26.4**	12	**19.7**
Barium	350	820	400	400	10000	345	318	69.8	263	210	**418**
Beryllium	7.2	47	72	590	2700	1.9	0.427 J	0.088 J	1.1	0.414 J	0.558
Cadmium	2.5	7.5	4.3	9.3	60	2.34	**3.97**	**4.04**	**14.9**	**8.44**	**7.81**
Calcium	--	--	--	--	--	11400	22900	92200	6080	41300	15700
Chromium	30	19	180	1500	6800	**153**	**36.8**	**251**	**163**	**38.6**	**34.8**
Cobalt	--	--	--	--	--	7.89	6.09	2.25	9.99	6.03	8.46
Copper	50	1720	270	270	10000	**249**	**190**	42	**16600**	**522**	**2300**
Iron	--	--	--	--	--	99800	17100	44500	31800	26600	90100
Lead	63	450	400	1000	3900	**114**	**806**	48.7	**1090**	**614**	**726**
Magnesium	--	--	--	--	--	1740	5290	4160	1320	11300	2520
Manganese	1600	2000	2000	10000	10000	174	413	**5240**	125	410	686
Mercury	0.18	0.73	0.81	2.8	5.7	**0.573**	**0.203**	0.168	**0.578**	**0.324**	**0.387**
Nickel	30	130	310	310	10000	**46.3**	**39.6**	11.3	**606**	**64.7**	**44.8**
Potassium	--	--	--	--	--	3270	1010	756	1100	617	387
Selenium	30	4	180	1500	10000	2 J	1.02 J	1.46 J	1.91	1.04 J	1.14 J
Silver	2	8.3	180	1500	6800	ND	0.939 J	ND	**22.3**	1.54	**4.36**
Sodium	--	--	--	--	--	1130	259	78.1 J	327	156 J	205
Thallium	--	--	--	--	--	ND	ND	ND	0.568 J	ND	0.433 J
Vanadium	--	--	--	--	--	36.4	19.1	121	21.8	19	32.5
Zinc	109	2480	10000	10000	10000	**815**	**1200**	**10600**	**1130**	**2520**	**3790**
Pesticides - mg/Kg [3]											
Heptachlor epoxide	--	--	--	--	--	ND	ND	ND	0.00183 JPI	ND	ND
4,4'-DDD	0.0033	14	13	92	180	0.0029	**0.0223**	ND	0.00123 JPI	**0.00847**	ND
4,4'-DDE	0.0033	17	8.9	62	120	**0.00363 P**	**0.014**	**0.0196 P**	ND	**0.00776 P**	ND
4,4'-DDT	0.0033	136	7.9	47	94	**0.0131**	**0.0623**	**0.0242 P**	ND	**0.0289 P**	**0.00443 PI**
Endosulfan I	2.4	102	24	200	920	ND	ND	ND	0.00146 JPI	ND	ND
Endosulfan II	2.4	102	24	200	920	ND	ND	ND	ND	ND	ND
trans-Chlordane	--	--	--	--	--	ND	ND	ND	ND	ND	ND
Herbicides - mg/Kg [3]											
	--	--	--	--	--	ND	ND	ND	ND	ND	ND

Notes:

1. Values per NYSDEC Part 375 Unrestricted Soil Cleanup Objectives (SCOs), Table 375-6(a).
2. Values per NYSDEC Part 375 Restricted Use Soil Cleanup Objectives (SCOs), Table 375-6.8(b).
3. Sample results were reported by the laboratory in ug/kg and converted to mg/kg for comparisons to SCOs

Definitions:

ND = Parameter not detected above laboratory detection limit.
"--" = No value available for the parameter, or the parameter was not analysed for.
P = The RPD betweeen the results for the two columns exceeds the method-specified criteria.
J = Estimated value; result is less than the sample quantitation limit but greater than zero.
I = The lower value for the two columns has been reported due to obvious interference

BOLD	= Result exceeds Unrestricted use SCO's.
BOLD	= Result exceeds Protection of Groundwater SCO's.
BOLD	= Result exceedes Restricted Residential use SCOs
BOLD	= Result exceeds Commercial use SCO's.
BOLD	= Result exceeds Industrial use SCO's.

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TABLE 3

SUMMARY OF SUBSURFACE SOIL/FILL SAMPLE ANALYTICAL RESULTS
REMEDIAL INVESTIGATION/INTERIM REMEDIAL MEASURE/ALTERNATIVE ANALYSIS REPORT
1485-1491 NIAGARA STREET SITE
BUFFALO, NEW YORK

PARAMETER	Unrestricted Use SCOs[1]	Protection of Groundwater SCOs [2]	Restricted Residential Use SCOs [2]	Commercial Use SCOs[2]	Industrial Use SCOs[2]	PHASE II INVESTIGATION SAMPLE LOCATION							REMEDIAL INVESTIGATION SAMPLE LOCATION															
						HA-1 0 - 6 inches	SB-1 2-3 ft	SB-2 0-2 ft	SB-3 2" - 1 ft	SB-5 0-1.5 ft	SB-6 0-1.5 ft	SB-8 0-1.5 ft	MW-1 10-12 ft	MW-2 2-4 ft	MW-3 0-3.8 ft	MW-3 11-12.5 ft	MW-4 2-4 ft	MW-5 2-4 ft	MW-5 10-12 ft	MW-6 2-4 ft	MW-6 10-12 ft	MW-7 0-2 ft	MW-7 2-4 ft	SB-9 0.5-2 ft	SB-9 8-10 ft	SB-10 0-2 ft	SB-11 0-2 ft	SB-12 2-4 ft	SB-14 0-3 ft	SB-15 4-6 ft	SB-16 10-12 ft
						4/10/2017	4/10/2017	4/10/2017	4/10/2017	4/10/2017	4/10/2017	4/10/2017	9/6/2018	9/6/2018	9/6/2018	9/6/2018	9/6/2018	9/17/2018	9/17/2018	9/20/2018	9/20/2018	9/17/2018	9/17/2018	9/6/2018	9/6/2018	9/17/2018	9/17/2018	9/17/2018	9/6/2018	9/182018	9/18/2018
Volatile Organic Compounds (SVOCs) - mg/Kg[3]																													
1,1-Dichloroethene	0.33	0.27	100	500	1000	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	0.13	ND	ND	0.13 J	ND	ND	ND	ND
1,1,1-Trichloroethane	0.68	0.68	100	500	1000	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	0.035 J	ND	ND
1,2,4-Trimethylbenzene	3.6	3.6	52	190	380	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	0.18 J	ND	ND	ND	ND
1,3,5-Trimethylbenzene	8.4	8.4	52	190	380	--	--	--	--	--	--	--	ND	ND	0.00048 J	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	0.089 J	ND	ND	ND	ND
1,4-Dichlorobenzene	1.8	1.8	13	130	250	--	--	--	--	--	--	--	ND	ND	0.029	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	1.1	1.1	100	500	1000	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	0.12	0.12	100	500	1000	--	--	--	--	--	--	--	ND	ND	0.008 J	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	0.05	0.05	100	500	1000	--	0.073 J	ND	--	--	--	--	0.038	0.016	0.14	ND	0.04	0.034	ND	0.035	0.029	--	ND	ND	0.04	ND	ND	ND	ND	ND	ND
Benzene	0.06	0.06	4.8	44	89	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	ND	0.084 J	ND	ND	0.082 J	ND	ND	--	ND	0.075 J	ND	ND	ND	0.064 J	ND	ND
Chloroform	0.37	0.37	49	350	700	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND
Chlororbenzene	1.1	1.1	100	500	1000	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	0.25	0.25	100	500	1000	--	0.031	0.89 J	--	--	--	--	0.038	ND	0.0022 J	0.14 J	ND	0.0006 J	0.042 J	ND	ND	--	0.17 J	3.8	0.00078 J	ND	1.7	0.072	0.098	0.14	0.047 J
Cyclochexane	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	1	1	41	390	700	--	--	--	--	--	--	--	ND	ND	0.00042 J	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	--	--	--	--	--	--	0.02	ND	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	0.031 J	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	0.05	0.05	100	500	1000	--	--	--	--	--	--	--	ND	ND	0.0034 J	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Acetate	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	0.21 J	ND	ND	--	0.33 J	0.24 J	ND	0.45 J	0.54 J	0.14 J	0.22 J	0.2	0.44
Methyl cyclohexane	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	0.13 J	0.56 J	ND	ND	ND	ND
Methyl tert butyl ether	0.93	0.93	100	500	1000	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	12	12	100	500	1000	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	3.9	3.9	100	500	1000	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Isopropytoluene	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	0.01 J	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	0.037 J	ND	ND	ND	ND	ND
sec-Butylbenzene	11	11	100	500	1000	--	--	--	--	--	--	--	ND	ND	0.00034 J	ND	ND	ND	ND	ND	ND	--	0.26	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	5.9	5.9	100	500	1000	--	0.049	ND	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	1.3	1.3	19	150	300	--	ND	ND	--	--	--	--	0.02	0.0028	0.012	13	0.008	0.015	5.3	ND	ND	--	0.068 J	0.38	0.0018	ND	4.7	0.86	0.77	0.27	0.39
Trichloroethene	0.47	0.47	21	200	400	--	0.024	120	--	--	--	--	0.510 E	ND	0.0073	0.74	0.0026	0.025	2	ND	ND	--	0.34	8.2	0.023	0.1	61	1.5	9.3	1.1	0.71
Toluene	0.7	0.7	100	500	1000	--	ND	ND	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	0.26	1.6	100	500	1000	--	ND	ND	--	--	--	--	ND	ND	0.00056 J	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	0.064 J	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	0.19	0.19	100	500	1000	--	0.047	ND	--	--	--	--	0.0032	ND	0.002 J	0.016 J	ND	ND	ND	ND	ND	--	0.063 J	4.5	0.0003 J	ND	0.41 J	0.016 J	0.028 J	ND	ND
Vinyl chloride	0.02	0.02	0.9	13	27	--	ND	ND	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND
Semi-Volatile Organic Compounds (SVOCs) - mg/Kg[3]																															
2-Methylnaphthalene	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	7.2	ND	ND	ND	ND	ND	ND	0.5	--	ND	ND	20	0.24	0.28	0.27	--	--
2,4-Dimethylphenol	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	2.2 J	ND	ND	ND	--	--
Acenaphthene	20	98	100	500	1000	ND	ND	ND	ND	--	4 J	ND	ND	ND	21	0.022 J	ND	ND	ND	ND	ND	0.14 J	--	ND	ND	42	0.27	0.63	0.29	--	--
Acenaphthylene	100	107	100	500	1000	ND	--	--	--	--	--	--	ND	ND	1.3	ND	ND	0.09 J	ND	ND	ND	0.09 J	--	ND	ND	27	0.15	0.26	0.071 J	--	--
Acetophenone	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.067 J	--	ND	ND	ND	0.05 J	ND	ND	--	--
Anthracene	100	1000	100	500	1000	ND	ND	ND	ND	--	8.7 J	ND	ND	ND	33	ND	ND	0.065 J	ND	ND	ND	0.44	--	0.051 J	ND	140	0.65	2.1	1.7	--	--
Benzaldehyde	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	0.24 J	0.073 J	ND	--	--
Benzo(a)anthracene	1	1	1	5.6	11	ND	0.13 J	3.9 F1 F2	0.27 J	--	10	1.4 J	ND	ND	14	0.055 J	ND	0.19	ND	ND	ND	1.9	--	0.2	ND	220	3.1	4.8	3	--	--
Benzo(a)pyrene	1	22	1	1	1.1	ND	ND	4 F1 F2	0.25 J	--	9.1 J	1.3 J	ND	ND	36	ND	ND	0.2	ND	ND	ND	1.7	--	0.17	ND	200	2.2	5.8	2.3	--	--
Benzo(b)fluoranthene	1	1.7	1	5.6	11	ND	0.18 J	8.1 F2	0.38 J	--	11	1.7 J	ND	ND	47	0.056 J	ND	0.32	ND	ND	ND	2.6	--	0.28	ND	240	4.6	7.8	3	--	--
Benzo(ghi)perylene	100	1000	100	500	1000	ND	0.11 J	5.1 F1 F2	0.22 J	--	5.4 J	0.79 J	ND	ND	20	0.024 J	ND	0.19	ND	ND	ND	1.2	--	0.13 J	ND	100	1.9	4.5	1.2	--	--
Benzo(k)fluoranthene	0.8	1.7	3.9	56	110	ND	ND	2.6 J F1 F2	ND	--	5.3 J	0.75 J	ND	ND	14	ND	ND	0.085 J	ND	ND	ND	0.77	--	0.084 J	ND	85	1.2	2.5	1.1	--	--
Biphenyl	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	3	ND	ND	ND	ND	ND	ND	0.06 J	--	ND	ND	7.4 J	0.045 J	0.1 J	0.072 J	--	--
Bis(2-ethylhexyl) phthalate	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	5.7	ND	ND	ND	ND	0.29	ND	0.4	--	ND	ND	ND	5.9	ND	0.14 J	--	--
Carbazole	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	16	ND	ND	0.053 J	ND	ND	ND	0.18 J	--	0.023 J	ND	50	0.46	1.1	0.4	--	--
Chrysene	1	1	3.9	56	110	ND	ND	7 F1 F2	0.31 J	--	10	1.4 J	ND	ND	36	0.047 J	ND	0.21	0.021 J	0.024 J	ND	2.1	--	0.24	ND	210	3.1	4.5	2.7 J	--	--
Dibenzofuran	7	210	59	350	1000	--	--	--	--	--	--	--	ND	ND	17	ND	ND	ND	ND	ND	ND	0.23	--	ND	ND	50	0.23	0.69	0.53	--	--
Dibenzo (a,h)anthracene	0.33	1000	0.33	0.56	1.1	ND	ND	1.5 J F1 F2	ND	--	ND	ND	ND	ND	5.2	ND	ND	0.035 J	ND	ND	ND	0.3	--	0.034 J	ND	27	0.64	1.2	0.33	--	--
Fluoranthene	100	1000	100	500	1000	ND	0.37 J	10 F2	0.52 J	--	29	3.3 J	0.027 J	0.027 J	96	0.12	ND	0.39	0.042 J	0.031 J	ND	3.5	--	0.47	ND	550	5.9	8.1	6.5	--	--
Fluorene	30	386	100	500	1000	ND	ND	ND	ND	--	5.7 J	ND	ND	ND	24	0.019 J	ND	ND	ND	ND	ND	0.12 J	--	ND	ND	55	0.32	0.74	0.57	--	--
Indeno(1,2,3-cd)pyrene	0.5	8.2	0.5	5.6	11	ND	ND	4.4 F1 F2	0.18 J	--	4.9 J	0.81 J	ND	ND	23	0.028 J	ND	0.2	ND	ND	ND	1.3	--	0.14 J	ND	120	2.1	4.8	1.4	--	--
NDPA/DPA	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--
Naphthalene	12	12	100	500	1000	ND	ND	ND	ND	--	3.1 J	ND	ND	ND	14	ND	ND	ND	ND	ND	ND	0.4	--	ND	ND	49	0.26	0.64	0.36	--	--
Phenanthrene	100	1000	100	500	1000	ND	0.15 J	4.9 F1 F2	0.34 J	--	33	2.9 J	ND	ND	110	0.11	ND	0.19	0.030 J	0.027 J	ND	2.2	--	0.27	ND	480	3.6	6.8	5.7	--	--
Phenol	0.33	0.33	100	500	1000	--	--	--	--	--	--	--	ND	ND	0.18 J	ND	ND	ND	ND	0.068 J	ND	ND	--	ND	ND	3.2 J	ND	0.037 J	ND	--	--
Pyrene	100	1000	100	500	1000	ND	0.29 J	7.2 F1	0.4 J	--	21	2.3 J	0.019 J	0.021 J	72	0.09 J	ND	0.33	0.036 J	0.026 J	ND	2.8	--	0.37	ND	440	4.7	6.6	5 J	--	--
m-Cresol	0.33	0.33	100	500	1000	--	--	--	--	--	--	--	ND	ND	0.33 J	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	4.8 J	ND	0.047 J	ND	--	--
o-Cresol	0.33	0.33	100	500	1000	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	1.5 J	ND	ND	ND	--	--

TABLE 3

SUMMARY OF SUBSURFACE SOIL/FILL SAMPLE ANALYTICAL RESULTS
REMEDIAL INVESTIGATION/INTERIM REMEDIAL MEASURE/ALTERNATIVE ANALYSIS REPORT
1485-1491 NIAGARA STREET SITE
BUFFALO, NEW YORK

PARAMETER	Unrestricted Use SCOs[1]	Protection of Groundwater SCOs [2]	Restricted Residential Use SCOs [2]	Commercial Use SCOs[2]	Industrial Use SCOs[2]	PHASE II INVESTIGATION SAMPLE LOCATION							REMEDIAL INVESTIGATION SAMPLE LOCATION																
						HA-1 0 - 6 inches	SB-1 2-3 ft	SB-2 0-2 ft	SB-3 2" - 1 ft	SB-5 0-1.5 ft	SB-6 0-1.5 ft	SB-8 0-1.5 ft	MW-1 10-12 ft	MW-2 2-4 ft	MW-3 0-3.8 ft	MW-3 11-12.5 ft	MW-4 2-4 ft	MW-5 2-4 ft	MW-5 10-12 ft	MW-6 2-4 ft	MW-6 10-12 ft	MW-7 0-2 ft	MW-7 2-4 ft	SB-9 0.5-2 ft	SB-9 8-10 ft	SB-10 0-2 ft	SB-11 0-2 ft	SB-12 2-4 ft	SB-14 0-3 ft	SB-15 4-6 ft	SB-16 10-12 ft
						4/10/2017	4/10/2017	4/10/2017	4/10/2017	4/10/2017	4/10/2017	4/10/2017	9/6/2018	9/6/2018	9/6/2018	9/6/2018	9/6/2018	9/17/2018	9/17/2018	9/20/2018	9/20/2018	9/17/2018	9/17/2018	9/6/2018	9/6/2018	9/17/2018	9/17/2018	9/17/2018	9/6/2018	9/18/2018	9/18/2018
Total PCBs - mg/Kg [3]																													
Aroclor 1242						--	--	--	--	--	--	--	ND	ND	0.00953 J	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
Aroclor 1254						--	--	--	--	--	--	--	ND	ND	0.0114 J	ND	ND	ND	ND	ND	ND	1.73	--	--	--	--	--	--	--	--	--
Total PCBs	**0.1**	**3.2**	**1**	**1**	**25**	--	--	--	--	--	--	--	ND	ND	0.0209 J	ND	ND	ND	ND	ND	ND	**1.73**	--	--	--	--	--	--	--	--	--
Total Metals - mg/Kg																													
Aluminum	--	--	--	--	--	--	--	--	--	--	--	--	12200	15300	10600	11100	13800	11000	13800	16200	11200	5480	--	15300	9660	19200	1840	6180	11700	--	--
Antimony	--	--	--	--	--	--	--	--	--	--	--	--	0.875 J	1.3 J	12	0.976 J	1.17 J	ND	ND	ND	ND	9.72	--	1.39 J	0.651 J	ND	97.6	14.4	1.35 J	--	--
Arsenic	**13**	**16**	**16**	**16**	**16**	**30.8**	6.1	**16.4**	**24.3**	3.6	6.9	5.2	2.82	5.6	7.84	3.07	3.57	6.91	4.02	4.33	3.14	**19.2**	--	3	2.54	6.64	**42**	**18.1**	3.42	--	--
Barium	**350**	**820**	**400**	**400**	**10000**	318 F2	170	239	**437**	310	149	27.5	84.2	116	121	69.4	141	191	111	153	83.6	306	--	91.8	73.6	179	79.8	**819**	67.3	--	--
Beryllium	**7.2**	**47**	**72**	**590**	**2700**	--	--	--	--	--	--	--	0.371 J	0.561 J	0.57 J	0.352 J	0.638	0.49	ND	0.732	0.365 J	0.378 J	--	0.914	0.335 J	2.56	0.046 J	0.275 J	0.408 J	--	--
Cadmium	**2.5**	**7.5**	**4.3**	**9.3**	**60**	1.1	0.46	**64.9**	1	2	1.6	**5.1**	0.451 J	0.522 J	**3.35**	0.461 J	1.98	0.686 J	0.463 J	0.385 J	0.270 J	**5.91**	--	1.18	0.446 J	**5.12**	**10.2**	**3.14**	**2.62**	--	--
Calcium	--	--	--	--	--	--	--	--	--	--	--	--	62500	56300	80000	60400	3490	9540	64000	5752	62000	33400	--	23900	61000	95500	23300	26600	1920	--	--
Chromium	**30**	**19**	**180**	**1500**	**6800**	15.1	**57.3**	**524**	**59.2**	17.9	**52.6**	**150**	15.3	18.4	**52.8**	14	**24.6**	**22.4**	17.6	**24**	14.1	**254**	--	29.3	13.5	**257**	**124**	**34.6**	**38.4**	--	--
Cobalt	--	--	--	--	--	--	--	--	--	--	--	--	5.9	10.7	4.44	6.19	6.74	7.13	6.9	10.4	6.69	8.23	--	5.11	5.22	2.48	16.3	6.25	7.29	--	--
Copper	**50**	**1720**	**270**	**270**	**10000**	--	--	--	--	--	--	--	16.1	21.5	**92.1**	15.8	21.5	**90**	14.7	**77.4**	16.8	**908**	--	**66.6**	16.6	**854**	**2840**	**1770**	**53.1**	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--	14800	20400	11900	14700	18600	19500	15100	26800	16000	47500	--	18100	14400	10900	314000	115000	21700	--	--
Lead	**63**	**450**	**400**	**1000**	**3900**	**455**	**78.1**	**696**	**464**	57.7	**234**	23.7	9.42	16.6	**198**	8.88	11.4	**299**	11.3	24.1	11.7	**506**	--	32.1	9.74	**145**	**921**	**595**	26.3	--	--
Magnesium	--	--	--	--	--	--	--	--	--	--	--	--	23800	20500	7250	22900	3170	2950	24200	5810	21500	2280	--	2660	22500	13800	1180	3000	1820	--	--
Manganese	**1600**	**2000**	**2000**	**10000**	**10000**	--	--	--	--	--	--	--	356	658	459	370	346	669	424	238	366	1290	--	810	349	1550	1340	664	183	--	--
Mercury	**0.18**	**0.73**	**0.81**	**2.8**	**5.7**	0.14	0.097	0.17	**0.47 F1 F2**	0.024	**0.5**	0.11	ND	ND	**1.01**	ND	0.036 J	**2.15**	ND	ND	ND	**0.185**	--	0.098	ND	**0.236**	**0.874**	0.098	0.030 J	--	--
Nickel	**30**	**130**	**310**	**310**	**10000**	--	--	--	--	--	--	--	13.4	22.8	28.4	13.8	**38.7**	11.5	12.3	25.9	15.1	**127**	--	12.5	13.5	**436**	27.6	8.54	10.2	--	--
Potassium	--	--	--	--	--	--	--	--	--	--	--	--	3760	3250	1560	3070	1660	918	5120	1610	2720	558	--	1200	2210	1660	218 J	638	1040	--	--
Selenium	**30**	**4**	**180**	**1500**	**10000**	ND	ND	ND	ND	ND	ND	ND	0.415 J	0.6 J	1.58 J	0.587 J	0.838 J	0.953 J	0.480 J	ND	ND	1.21 J	--	1.51 J	0.353 J	2.64	ND	ND	1.17 J	--	--
Silver	**2**	**8.3**	**180**	**1500**	**6800**	**7.5 F1 F2**	ND	ND	**3.6**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.28	--	ND	ND	1.2	1.85	0.662 J	ND	--	--
Sodium	--	--	--	--	--	--	--	--	--	--	--	--	508	494	580	430	62.5 J	160 J	759	92.3 J	394	156 J	--	390	255	852	72.9 J	81.1 J	116 J	--	--
Thallium	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.904 J	--	ND	ND	0.416 J	1.63 J	0.705 J	ND	--	--
Vanadium	--	--	--	--	--	--	--	--	--	--	--	--	23.6	28.2	25.5	22.1	30.6	28	26.6	28.6	22.4	36.3	--	27.4	20.4	5.39	87.7	28.2	25.6	--	--
Zinc	**109**	**2480**	**10000**	**10000**	**10000**	--	--	--	--	--	--	--	65	65.6	**569**	63.9	**179**	**148**	59.2	78.1	61.6	**3290**	--	**1760**	74.6	**1330**	**2550**	**586**	**122**	--	--
Pesticides - mg/Kg [3]																													
4,4'-DDD	**0.0033**	**14**	**13**	**92**	**180**	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	0.00228	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
4,4'-DDE	**0.0033**	**17**	**8.9**	**62**	**120**	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0182**	--	--	--	--	--	--	--	--	--
4,4'-DDT	**0.0033**	**136**	**7.9**	**47**	**94**	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	**0.0113**	ND	ND	ND	**0.032 PI**	--	--	--	--	--	--	--	--	--
Herbicides - mg/Kg [3]																													
						--	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--

Notes:
1. Values per 6NYCRR Part 375 Unrestricted Soil Cleanup Objectives (SCOs), Table 375-6(a).
2. Values per 6NYCRR Part 375 Residential Use Soil Cleanup Objectives (SCOs), Table 375-6.8(b).
3. Sample results were reported by the laboratory in ug/kg and converted to mg/kg for comparisons to SCOs

Definitions:
ND = Parameter not detected above laboratory detection limit.
"--" = No value available for the parameter, or the parameter was not analysed for.
E = Concentration of analyte exceeded the range of the calibration curve and/or linear range of the instrument.
P = The RPD betweeen the results for the two columns exceeds the method-specified criteria.
J = Estimated value; result is less than the sample quantitation limit but greater than zero.
I = The lower value for the two columns has been reported due to obvious interference
F1 = MS and/or MSD Recovery is outside acceptance limits
F2 = MS/MSD RPD exceeds control limits

BOLD	= Result exceeds Unrestricted use SCOs.
BOLD	= Result exceedes Protection of Groundwater SCOs
BOLD	= Result exceeds Restricted Residential use SCOs.
BOLD	= Result exceeds Commercial use SCOs.
BOLD	= Result exceeds Industrial use SCOs.

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TABLE 4

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
REMEDIAL INVESTIGATION/INTERIM REMEDIAL MEASURES/ALTERNATIVES ANALYSIS REPORT
1485-1491 NIAGARA STREET SITE
BUFFALO, NEW YORK

PARAMETERS [1]	Class GA GWQS[2]	Phase II Sample Location			RI Sample Location							
		TMW-1 [3]	TMW-2	TMW-3 [3]	MW-1	MW-2	MW-3	MW-4	MW-5	MW-5 Dissolved Metals	MW-6	MW-7
		5/1/2017			9/26 & 27/2018			9/26/2018	9/26/27/18	9/27/2018	9/26 & 27/18	9/26/2018
Volatile Organic Compounds (VOCs) - ug/L												
1,1-Dichloroethane	**5**	ND	ND	ND	ND	ND	ND	ND	ND	--	0.76 J	ND
1,1-Dichloroethene	**5**	ND	ND	ND	ND	ND	ND	1.9	ND	--	ND	0.18 J
Acetone	**50**	ND	16	ND	ND	4.2 J	ND	ND	ND	--	2.1 J	7.6
Benzene	**1**	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	0.56
Cis-1,2-Dichloroethene	**5**	**810**	1.3 J	**380**	**200**	**15**	**1,700**	**80**	**5,500**	**--**	ND	**6.7**
Cyclohexane	**--**	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	0.29 J
Methylene Chloride	**5**	ND	ND	ND	ND	ND	ND	ND	ND	--	0.83 J	ND
Tetrachloroethene	**5**	**9,600**	3	**36**	**100**	3	**17,000**	1.5	**28,000**	**--**	0.22 J	0.47 J
Toluene	**5**	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND
trans-1,2-Dichloroethene	**5**	**120 J**	ND	ND	**18 J**	1 J	ND	**25**	ND	--	ND	0.96 J
Trichloroethene	**5**	**2,000**	**8.8**	**5,100**	**1,600**	**150**	**4,600**	**360**	**180,000**	**--**	1.8	**80**
Vinyl Chloride	**2**	**18 J**	ND	ND	ND	ND	**49 J**	0.41 J	ND	--	ND	ND
Semivolatile Organic Compounds (SVOCs) - ug/L												
2-Methylnaphthalene	**--**	**--**	**--**	**--**	0.38	0.12	--	--	0.37	--	ND	--
3-Methylphenol/4-methylphenol*	**5**	**--**	**--**	**--**	ND	ND	--	--	0.48 J	--	ND	--
Acenaphthene	**20**	**--**	**--**	**--**	0.15	0.17	--	--	0.1	--	ND	--
Acenaphthylene	**--**	**--**	**--**	**--**	ND	ND	--	--	ND	--	ND	--
Acetophenone	**--**	**--**	**--**	**--**	0.87 J	0.80 J	--	--	1.3 J	--	ND	--
Anthracene	**50**	**--**	**--**	**--**	0.1 J	0.03 J	--	--	0.02 J	--	ND	--
Benzaldehyde	**--**	**--**	**--**	**--**	ND	ND	--	--	ND	--	ND	--
Benzo(a)anthracene	**0.002**	**--**	**--**	**--**	ND	ND	--	--	ND	--	**0.05 J**	--
Benzo(a)pyrene	**ND**	**--**	**--**	**--**	0.02 J	0.02 J	--	--	ND	--	0.06 J	--
Benzo(b)fluoranthene	**0.002**	**--**	**--**	**--**	**0.04 J**	**0.03 J**	--	--	ND	--	**0.1**	--
Benzo(ghi)perylene	**--**	**--**	**--**	**--**	0.02 J	0.02 J	--	--	ND	--	0.05 J	--
Benzo(k)fluoranthene	**0.002**	**--**	**--**	**--**	**0.02 J**	**0.01 J**	--	--	ND	--	**0.04 J**	--
Chrysene	**0.002**	**--**	**--**	**--**	ND	ND	--	--	ND	--	**0.07 J**	--
Fluoranthene	**50**	**--**	**--**	**--**	0.14	0.13	--	--	0.05 J	--	0.14	--
Fluorene	**50**	**--**	**--**	**--**	0.34	0.22	--	--	0.18	--	ND	--
Indeno(1,2,3-cd)pyrene	**0.002**	**--**	**--**	**--**	**0.02 J**	**0.02 J**	--	--	ND	--	**0.06 J**	--
Naphthalene	**10**	**--**	**--**	**--**	0.5	0.06 J	--	--	0.34	--	ND	--
Phenanthrene	**50**	**--**	**--**	**--**	0.91	0.5	--	--	0.61	--	0.06 J	--
Phenol	**1**	**--**	**--**	**--**	**3.2 J**	ND	--	--	**6.3**	--	ND	--
Pyrene	**50**	**--**	**--**	**--**	0.11	0.1 J	--	--	0.03 J	--	0.11	--
1,4 Dioxane - ng/l [5]												
1,4 Dioxane	**350**	**--**	**--**	**--**	--	--	<30,000	--	<30,000	--	**7,780**	--
Perfluorinated Alkyl Acids - ng/L [5]												
Perfluorobutanoic acid (PFBA)	**--**	--	--	--	--	--	247	--	97.6	--	3.93	--
Perfluoropentanoic acid (PFPeA)	**--**	--	--	--	--	--	902	--	19.4	--	<1.82	--
Perfluorobutanesulfonic acid (PFBS)	**--**	--	--	--	--	--	<1.73	--	<1.81	--	<1.82	--
Perfluorohexanoic acid (PFHxA)	**--**	--	--	--	--	--	840	--	8.6	--	2.28	--
Perfluoroheptanoic acid (PFHpA)	**--**	--	--	--	--	--	472	--	3.74	--	<1.82	--
Perfluorohexanesulfonic acid (PFHxS)	**--**	--	--	--	--	--	1.06 J	--	<1.81	--	<1.82	--
Perfluorooctanoic acid (PFOA)	**--**	--	--	--	--	--	1430	--	10.1	--	<1.82	--
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2FTS)	**--**	--	--	--	--	--	1.36 J	--	<1.81	--	<1.82	--
Perfluoroheptanesulfonic acid (PFHpS)	**--**	--	--	--	--	--	<1.73	--	<1.81	--	<1.82	--
Perfluorononanoic acid (PFNA)	**--**	--	--	--	--	--	126	--	<1.81	--	<1.82	--
Perfluorooctanesulfonic acid (PFOS)	**--**	--	--	--	--	--	4.46	--	0.793 J	--	1.97	--
Perfluorodecanoic acid (PFDA)	**--**	--	--	--	--	--	57.7	--	<1.81	--	<1.82	--
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2FTS)	**--**	--	--	--	--	--	<1.73	--	<1.81	--	<1.82	--
N-Methyl Perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	**--**	--	--	--	--	--	<1.73	--	<1.81	--	<1.82	--
Perfluoroundecanoic Acid (PFUnA)	**--**	--	--	--	--	--	<1.73	--	<1.81	--	<1.82	--
Perfluorodecanesulfonic acid (PFDS)	**--**	--	--	--	--	--	<1.73	--	<1.81	--	<1.82	--
Perfluorooctanesulfonamide (FOSA)	**--**	--	--	--	--	--	<1.73	--	<1.81	--	<1.82	--
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	**--**	--	--	--	--	--	<1.73	--	<1.81	--	<1.82	--
Perfluorododecanoic Acid (PFDoA)	**--**	--	--	--	--	--	<1.73	--	<1.81	--	<1.82	--
Perfluorotridecanoic Acid (PFTrDA)	**--**	--	--	--	--	--	<1.73	--	<1.81	--	<1.82	--
Perfluorotetradecanoic acid (PFTA)	**--**	--	--	--	--	--	<1.73	--	<1.81	--	<1.82	--
Total PFOA and PFOS	**70**	**--**	**--**	**--**	--	--	**1,434.46**	--	10.893 J	--	1.97	--
Total PFAS	**500**	**--**	**--**	**--**	--	--	**4,081.58**	--	140.233 J	--	8.18	--
Polychlorinated Biphenyls - ug/L												
Total PCBs	**0.09**	**--**	**--**	**--**	ND	ND	--	--	ND	--	ND	--
Total Metals - ug/L [4]												
Aluminum	--	--	--	--	177	204	--	--	299	32.6	33	--
Antimony	**3**	--	--	--	1.34 J	1.26 J	--	--	0.55 J	1.08 J	ND	--
Arsenic	**25**	--	--	--	1.53	1.87	--	--	1.39	1.54	0.59	--
Barium	**1000**	--	--	--	13.62	40.77	--	--	22.48	18.91	30.39	--
Beryllium	**--**	--	--	--	ND	ND	--	--	ND	ND	ND	--
Cadmium	**5**	--	--	--	ND	ND	--	--	ND	ND	ND	--
Calcium	**--**	--	--	--	62,700	113,000	--	--	140,000	142,000	239,000	--
Chromium	**50**	--	--	--	2.64	1.67	--	--	1.91	0.54 J	0.9 J	--
Cobalt	**--**	--	--	--	1.19	0.67	--	--	1.27	1.25	2.93	--
Copper	**200**	--	--	--	2.24	3.45	--	--	3.41	2.27	8.71	--
Iron	**300**	--	--	--	**307**	**570**	--	--	**564**	59.6	73.2	--
Lead	**25**	--	--	--	0.39 J	1.64	--	--	1.49	ND	0.4 J	--
Magnesium	**35000**	--	--	--	29,100	**41,300**	--	--	**106,000**	**95,800**	**132,000**	--
Manganese	**300**	--	--	--	92.03	101.8	--	--	232.5	297.1	287.2	--
Mercury	**0.7**	--	--	--	ND	ND	--	--	ND	ND	ND	--
Nickel	**100**	--	--	--	3.15	2.96	--	--	10.31	8.71	**214.4**	--
Potassium	**--**	--	--	--	3,020	5,620	--	--	6,820	7,010	5,780	--
Selenium	**10**	--	--	--	2.04 J	ND	--	--	ND	ND	ND	--
Silver	**50**	--	--	--	ND	ND	--	--	ND	ND	ND	--
Sodium	**20000**	--	--	--	**60,300**	**154,000**	--	--	**45,400**	**52,100**	**59,100**	--
Thallium	**0.5**	--	--	--	0.19 J	ND	--	--	ND	ND	ND	--
Vanadium	**--**	--	--	--	ND	ND	--	--	1.63 J	ND	ND	--
Zinc	**2000**	--	--	--	6.79 J	22.46	--	--	20.01	6.64 J	14.68	--
Pesticides - ug/L												
		--	**--**	**--**	ND	ND	--	--	ND	--	ND	--
Herbicides - ug/L												
		--	**--**	**--**	ND	ND	--	--	ND	--	ND	--

Notes:

1. Only parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. Values per NYSDEC TOGS 1.1.1 Class GA Groundwater Quality Standards.
3. Sample was diluted by laboratory. Results shown are after first dilution.
4. Sample results were reported by the laboratory in mg/L and converted to ug/L for comparisons to GWQSs
5. For emerging contaminants, reporting limit (RL) is used in lieu of non-detect (ND)

Qualifiers:

ND = Parameter not detected above laboratory detection limit.
"--" = Sample not analyzed for parameter or no GWQS available for the parameter.
J = Estimated Value - Below calibration range
* = Guidance value for total phenols used for comparison to GWQSs

BOLD = Result exceeds class "GA" Groundwater Quality Standards

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TABLE 5

SUMMARY OF SUBSLAB VAPOR, INDOOR AIR AND OUTDOOR AIR ANALYTICAL DATA
REMEDIAL INVESTIGATION/INTERIM REMEDIALMEASURES/ALTERNATIVES ANALYSIS REPORT
1485-1491 NIAGARA STREET SITE

Parameter	Sample Location						
	Building 1				Building 2		Ambient Air
	SVI-1	INDOOR-1	SVI-2	INDOOR-2	SVI-3	INDOOR-3	OUTDOOR AMBIENT
	9/17/2018	9/17/2018	9/17/2018	9/17/2018	9/17/2018	9/17/2018	9/17/2018
Volatile Organic Compounds (VOCs, ug/m3)							
1,1,1-Trichloroethane (Matrix B)	ND	ND	ND	ND	24.4	ND	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (Matrix A)	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	1.19	ND
1,3-Dichlorobenzene	ND	1.44	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	1.45	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND
2-Butanone	5.4	2.52	ND	ND	6.61	2.28	ND
4-Methyl-2-pentanone (MIBK)	ND	ND	ND	ND	ND	ND	ND
Acetone	67.9	21.1	39	13.8	45.6	16.2	6.51
Benzene	11	ND	3.58	ND	12.7	ND	ND
Carbon Disulfide	30.2	ND	56.7	ND	155	ND	ND
Carbon Tetrachloride (Matrix A)	ND	0.459	ND	0.516	ND	0.503	0.478
Chloroethane	ND	ND	ND	ND	ND	ND	ND
Chloroform	6.2	ND	14.9	ND	15.7	ND	ND
Chloromethane	ND	1.02	ND	0.946	ND	0.933	0.915
cis-1,2-Dichlorethene (Matrix A)	ND	ND	29	ND	ND	ND	ND
Cyclohexane	20.7	ND	5.58	ND	19.3	ND	ND
Dichlorodifluoromethane	ND	2.25	ND	2.07	ND	2.11	2.24
Ethyl acetate	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	3.3	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND
Isopropyl Alcohol	3.49	1.52	ND	ND	2.88	ND	ND
Methylene chloride Matrix B)	ND	ND	ND	ND	57	ND	ND
n-Heptane	39.1	ND	4.26	ND	5.74	ND	ND
n-Hexane	51.5	ND	5.64	ND	15.7	ND	ND
Styrene	ND	ND	ND	ND	ND	ND	ND
tert-Butyl Alcohol	ND	ND	ND	ND	4.21	ND	ND
Tetrachloroethene (Matrix B)	210	1.36	909	1.12	199	2.52	0.142
Tetrahydrofuran	ND	ND	ND	ND	ND	ND	ND
Toluene	23.6	1.42	5.35	1.04	14.9	2.02	ND
Total Xylenes	15.07	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (Matrix A)	494	0.408	1600	0.371	529	0.838	0.419
Trichlorofluoromethane	ND	1.84	ND	2.03	64.6	2.1	1.16
Vinyl chloride (Matrix C)	ND	ND	ND	ND	ND	ND	ND

Notes:
1. ND - Not Detected
2. Only those compounds detected at a minimum of one location are presented.
3. Matrix A, B and C refers to NYSDOH Soil Vapor / Indoor Air Matrices dated May 2017.

Color Code:
blue = one of eight compounds regulated by the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York (May 2017)
ug/m3 = micrograms per cubic meter

DRAFT
TABLE 6

COMPARISON OF SOILVAPOR INTRUSION AIR SAMPLE RESULTS TO NYSDOH SVI GUIDANCE MATRICES
REMEDIAL INVESTIGATION/INTERIM REMEDIAL MEASURES/ALTERNATIVE ANALYSIS REPORT
1485-1491 NIAGARA STREET SITE

Sample Location	Carbon Tetrachloride		Trichloroethene (TCE)		cis-1,2-Dichloroethene		1,1-Dichloroethene		Tetrachloroethene (PCE)		1,1,1 -Trichloroethane		Methylene Chloride		Vinyl Chloride	
	Lab Reported Concentration (ug/m^3)	Soil Vapor / Indoor Air Matrix 1	Lab Reported Concentration (ug/m^3)	Soil Vapor / Indoor Air Matrix 1	Lab Reported Concentration (ug/m^3)	Soil Vapor / Indoor Air Matrix 2	Lab Reported Concentration (ug/m^3)	Soil Vapor / Indoor Air Matrix 2	Lab Reported Concentration (ug/m^3)	Soil Vapor / Indoor Air Matrix 2	Lab Reported Concentration (ug/m^3)	Soil Vapor / Indoor Air Matrix 2	Lab Reported Concentration (ug/m^3)	Soil Vapor / Indoor Air Matrix 2	Lab Reported Concentration (ug/m^3)	Soil Vapor / Indoor Air Matrix 1
Building 1																
Subslab/Indoor Air 1																
SVI-1	ND	NFA	494	MITIGATE	ND	NFA	ND	NFA	210	NFA	ND	NFA	ND	NFA	ND	NFA
INDOOR-1	0.459		0.408		ND		ND		1.36		ND		ND		ND	
Outdoor Air	0.478		0.419		ND		ND		0.142		ND		ND		ND	
Subslab/Indoor Air 2																
SVI-2	ND	NFA	1600	MITIGATE	29	NFA	ND	NFA	909	NFA	ND	NFA	ND	NFA	ND	NFA
INDOOR-2	0.516		0.371		ND		ND		1.12		ND		ND		ND	
Outdoor Air	0.478		0.419		ND		ND		0.142		ND		ND		ND	
Building 2																
Subslab/Indoor Air 3																
SVI-3	ND	NFA	529	MITIGATE	ND	NFA	ND	NFA	199	NFA	24.4	NFA	57	NFA	ND	NFA
INDOOR-3	0.503		0.838		ND		ND		2.52		ND		ND		ND	
Outdoor Air	0.478		0.419		ND		ND		0.142		ND		ND		ND	

Notes:
1. Outdoor air sample listed as "Outdoor Air" was identifed in the laboratory report as "Outdoor Air 7-6-17".
2. Concentration in micrograms per cubic meter (ug/m^3)

Definitions:
ND = Not Detected
NFA = No further action.
I, R = Take reasonable and practical actions to identify source(s) and reduce exposures and resample or mitigate.
Monitor = Monitor soil vapor / indoor air
Mitigate = Mitigate source of identified parameter.

Analytes Assigned:
Trichloroethene (TCE), *cis*-1,2-Dichloroethene (c12-DCE), 1,1-Dichloroethene (11-DCE), Carbon Tetrachloride

SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m^3)	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m^3)		
	< 0.2	0.2 to < 1	1 and above
< 6	1. No further action	2. No Further Action	3. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
6 to < 60	4. No further action	5. MONITOR	6. MITIGATE
60 and above	7. MITIGATE	8. MITIGATE	9. MITIGATE

Analytes Assigned:
Tetrachloroethene (PCE), 1,1,1-Trichloroethane (111-TCA), Methylene Chloride

SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m^3)	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m^3)		
	< 3	3 to < 10	10 and above
< 100	1. No further action	2. No Further Action	3. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
100 to < 1,000	4. No further action	5. MONITOR	6. MITIGATE
1,000 and above	7. MITIGATE	8. MITIGATE	9. MITIGATE

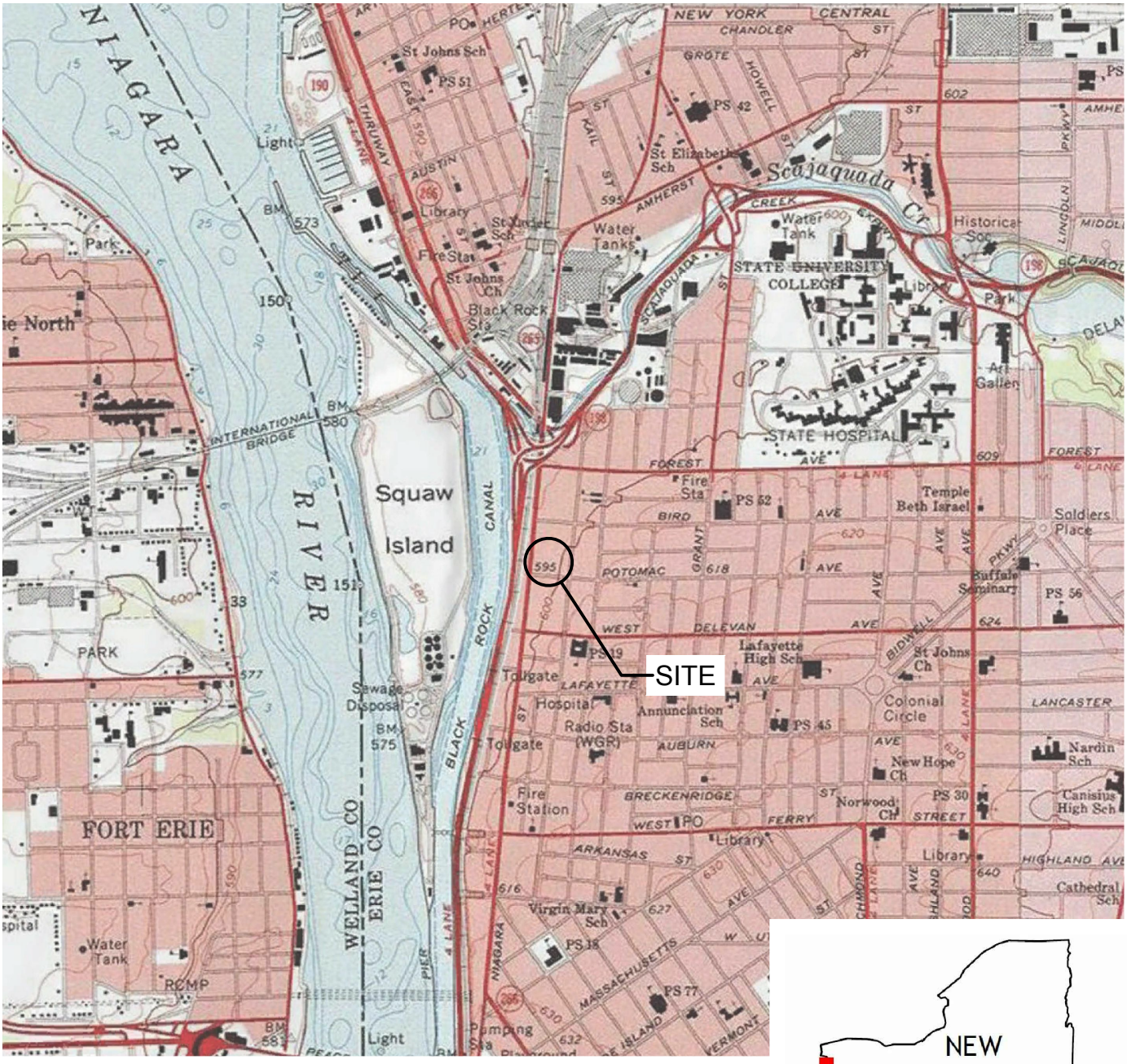
Analytes Assigned:
Vinyl Chloride

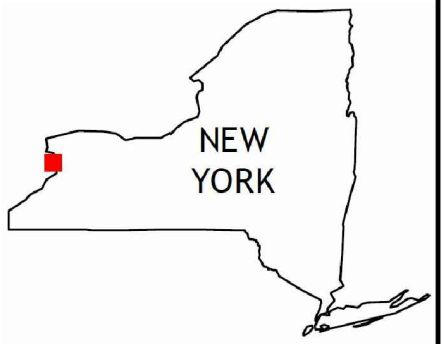
SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m^3)	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m^3)	
	< 0.2	0.2 and above
< 6	1. No further action	2. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
6 to < 60	3. MONITOR	4. MITIGATE
60 and above	5. MITIGATE	6. MITIGATE

FIGURES

F:\CAD\Benchmark\Natale Development Company\RI-AA Report\Figure 1; Site Location and Vicinity Map.dwg

FIGURE 1





N

2000' 0' 2000' 4000'

SCALE: 1 INCH = 2000 FEET
SCALE IN FEET
(approximate)

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
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PROJECT NO.: B0417-018-001

DATE: OCTOBER 2018

DRAFTED BY: CMS

SITE LOCATION AND VICINITY MAP

BROWNFIELD CLEANUP PROGRAM
REMEDIAL INVESTIGATION / ALTERNATIVES ANALYSIS REPORT

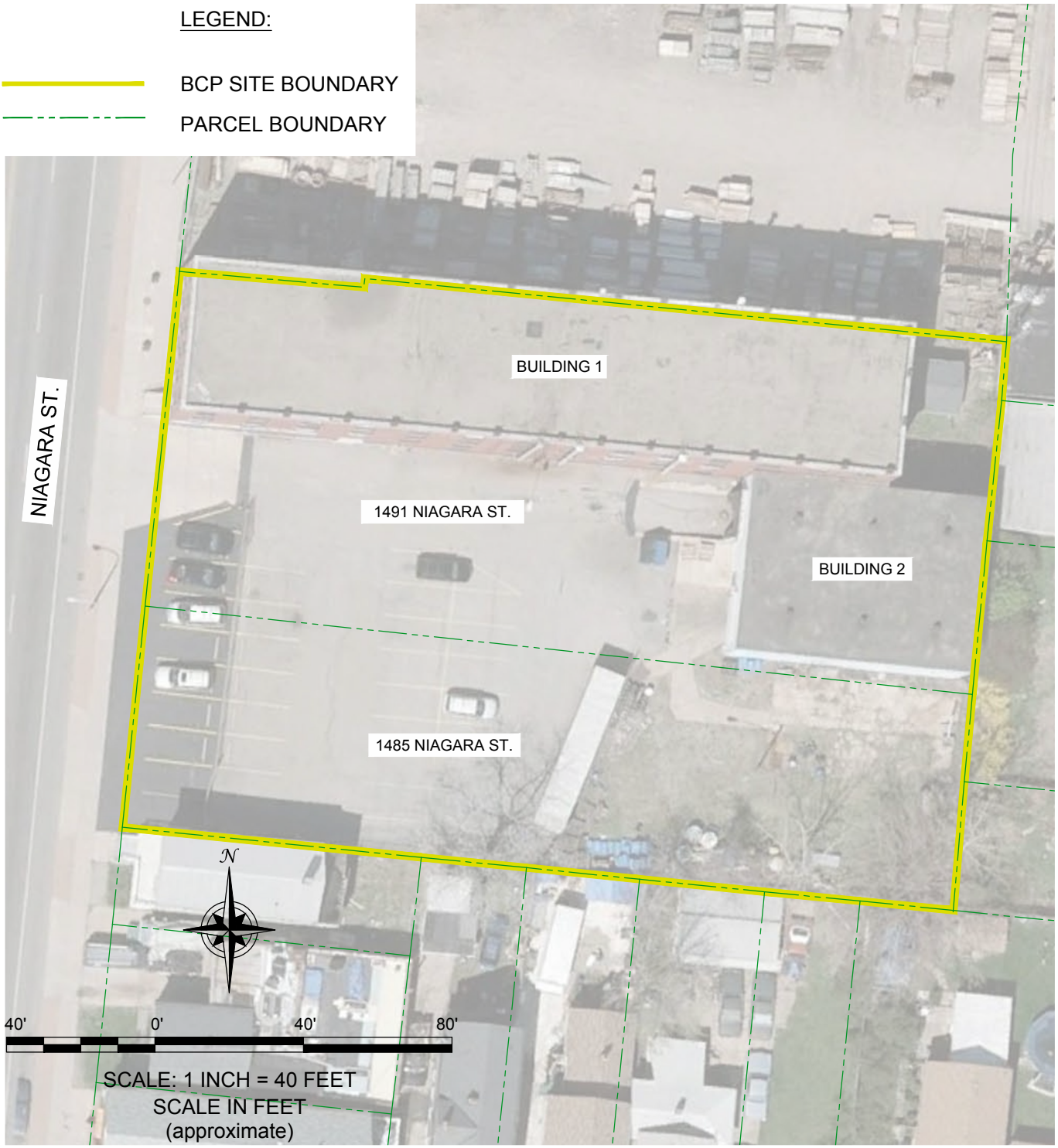
1485 - 1491 NIAGARA STREET
BCP SITE NO. C915330
BUFFALO, NEW YORK

PREPARED FOR

1485 NIAGARA, LLC

F:\CAD\Benchmark\Natale Development Company\RI-AA Report\Figure 2; Site Plan (Aerial).dwg

FIGURE 2



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PROJECT NO.: B0417-018-001

DATE: OCTOBER 2018

DRAFTED BY: CMS

SITE PLAN (AERIAL)

BROWNFIELD CLEANUP PROGRAM
REMEDIAL INVESTIGATION / ALTERNATIVES ANALYSIS REPORT

1485 - 1491 NIAGARA STREET
BCP SITE NO. C915330
BUFFALO, NEW YORK

PREPARED FOR

1485 NIAGARA, LLC

F:\CAD\Benchmark\Natale Development Company\RI-AA Report\Figure 3; Investigation Locations & Analytical Results_Surface SoilRev.dwg

LEGEND:

- BCP SITE BOUNDARY
- PARCEL BOUNDARY
- SB-1/TMW-1 — HISTORIC SOIL BORING/TEMPORARY MONITORING WELL
- SB-5 — HISTORIC SOIL BORING/TEMPORARY MONITORING WELL
- SB-2 — RI SOIL BORING
- MW-2 — RI MONITORING WELL
- SS/NS-3 — RI SURFACE SOIL SAMPLE
- SVI-1 — RI SUB-SLAB VAPOR SAMPLE

NOTE:
- ANALYTICAL RESULTS PROVIDED WITHOUT QUALIFIERS.

= EXCEEDS NYCRR PART 375 RESTRICTED RESIDENTIAL SCOs

= EXCEEDS NYCRR PART 375 COMMERCIAL SCOs

= EXCEEDS NYCRR PART 375 INDUSTRIAL SCOs

= EXCEEDS NYCRR PART 375 PROTECTION OF GROUNDWATER SCOs

SS-1 (0-2")	MG/KG
ACETONE	0.06
BENZO(A)ANTHRACENE	3.6
BENZO(A)PYRENE	3.8
BENZO(B)FLUORANTHENE	5.6
CHRYSENE	3.7
DIBENZO(AH)ANTHRACENE	0.52

NS-1 (2-24")	MG/KG
ACETONE	0.086
BENZO(A)ANTHRACENE	1.4
BENZO(A)PYRENE	1.2
BENZO(B)FLUORANTHENE	1.9
CHRYSENE	1.8
INDENO(1,2,3-CD)PYRENE	0.95
ARSENIC	26.4
CADMIUM	14.9
COPPER	16,600
LEAD	1,090
NICKEL	606
SILVER	22.3

SS-2 (0-2")	MG/KG
BENZO(A)ANTHRACENE	28
BENZO(A)PYRENE	30
BENZO(B)FLUORANTHENE	38
BENZO(K)FLUORANTHENE	14
CHRYSENE	32
DIBENZO(AH)ANTHRACENE	3.8
INDENO(1,2,3-CD)PYRENE	21
LEAD	806

NS-2 (2-24")	MG/KG
BENZO(A)ANTHRACENE	4.3
BENZO(A)PYRENE	4.5
BENZO(B)FLUORANTHENE	5.6
BENZO(K)FLUORANTHENE	2
CHRYSENE	4.8
DIBENZO(AH)ANTHRACENE	0.67
INDENO(1,2,3-CD)PYRENE	2.8
CADMIUM	8.44
COPPER	522
LEAD	614
ZINC	2,520

SS-3 (0-2")	MG/KG
BENZO(A)ANTHRACENE	1.2
BENZO(A)PYRENE	1.4
BENZO(B)FLUORANTHENE	2.1
CHRYSENE	1.4
INDENO(1,2,3-CD)PYRENE	1.2
TOTAL PCBs	1.79
CHROMIUM	251
MANGANESE	5,240
ZINC	10,600

NS-3 (2-24")	MG/KG
CIS-1,2-DICHLOROETHENE	1.1
TETRACHLOROETHENE	32
TRICHLOROETHENE	37
BENZO(A)ANTHRACENE	6.7
BENZO(A)PYRENE	6.5
BENZO(B)FLUORANTHENE	9
BENZO(K)FLUORANTHENE	2.8
CHRYSENE	7.6
DIBENZO(AH)ANTHRACENE	1.1
INDENO(1,2,3-CD)PYRENE	4.4
ARSENIC	19.7
BARIUM	418
CADMIUM	7.81
COPPER	2,300
LEAD	726
ZINC	3,790

SVI-1, SVI-2, SVI-3, SS/NS-1, SS/NS-2, SS/NS-3, MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, SB-1, SB-2/TMW-3, SB-3, SB-4, SB-5, SB-6, SB-7, SB-8/TMW-1, SB-9, SB-10, SB-11, SB-12, SB-13, SB-14, SB-15, SB-16, NIAGARA ST., POTOMAC AVE.

N

60' 0' 60' 120'

SCALE: 1 INCH = 60 FEET
SCALE IN FEET
(approximate)

DATE: OCTOBER 2018
DRAFTED BY: CMC

RI SURFACE SOIL INVESTIGATION LOCATIONS

BROWNFIELD CLEANUP PROGRAM

REMEDIAL INVESETIGATION / ALTERNATIVES ANALYSIS REPORT

1485 - 1491 NIAGARA STREET

BCP SITE NO. C915330

BUFFALO, NEW YORK

PREPARED FOR

1485 NIAGARA, LLC

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
2558 HAMBURG TURNPIKE
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BUFFALO, NY 14218
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JOB NO.: B0417-018-001

FIGURE 3

F:\CAD\Benchmark\Natale Development Company\RI-AA Report\Figure 4; Investigation Locations & Analytical Results_SoilRev.dwg

LEGEND:

- BCP SITE BOUNDARY
- PARCEL BOUNDARY
- SB-1/TMW-1 — HISTORIC SOIL BORING/TEMPORARY MONITORING WELL
- SB-5 — HISTORIC SOIL BORING/TEMPORARY MONITORING WELL
- HA-3 — SUB-SLAB HAND AUGER SAMPLE
- SB-2 — RI SOIL BORING
- MW-2 — RI MONITORING WELL
- SS/NS-3 — RI SURFACE SOIL SAMPLE
- SVI-1 — RI SUB-SLAB VAPOR SAMPLE

NOTE:
- PHASE II ANALYTICAL SOIL BORINGS AND SUB-SLAB HAND AUGER SAMPLING COMPLETED BY TURNKEY ENVIRONMENTAL RESTORATION, LLC. APRIL 2017.
- ANALYTICAL RESULTS PROVIDED WITHOUT QUALIFIERS

= EXCEEDS NYCRR PART 375 RESTRICTED RESIDENTIAL SCOs

= EXCEEDS NYCRR PART 375 COMMERCIAL SCOs

= EXCEEDS NYCRR PART 375 INDUSTRIAL SCOs

= EXCEEDS NYCRR PART 375 PROTECTION OF GROUNDWATER SCOs

SB-10 (0-2')	MG/KG
ANTHRACENE	140
BENZO(A)ANTHRACENE	220
BENZO(A)PYRENE	200
BENZO(B)FLUORANTHENE	240
BENZO(K)FLUORANTHENE	85
CHRYSENE	210
DIBENZO(AH)ANTHRACENE	27
FLUORANTHENE	550
INDENO(123-CD)PYRENE	120
PHENANTHRENE	480
PHENOL	3.2
PYRENE	440
CADMIUM	5.12
CHROMIUM	257
COPPER	854
NICKEL	436

MW-4 (2-4')	MG/KG
CHROMIUM	24.6

HA-1 (0-6")	MG/KG
ARSENIC	30.8
LEAD	455

MW-6 (2-4')	MG/KG
CHROMIUM	24

SB-9 (0.5-2')	MG/KG
CIS-1,2-DICHLOROETHENE	3.8
TRICHLOROETHENE	8.2
TRANS-1,2-DICHLOROETHENE	4.5

MW-7 (0-2')	MG/KG
BENZO(A)ANTHRACENE	1.9
BENZO(A)PYRENE	1.7
BENZO(B)FLUORANTHENE	2.6
CHRYSENE	2.1
INDENO(123-CD)PYRENE	1.3
TOTAL PCBs	1.73
ARSENIC	19.2
CADMIUM	5.91
CHROMIUM	254
COPPER	908
LEAD	506
ZINC	3,290

SB-6 (2"-1.5')	MG/KG
BENZO(A)ANTHRACENE	10
BENZO(A)PYRENE	9.1
BENZO(B)FLUORANTHENE	11
BENZO(K)FLUORANTHENE	5.3
CHRYSENE	10
INDENO(123-CD)PYRENE	4.9

SB-16 (10-12')	MG/KG
TRICHLOROETHENE	0.71

SB-15 (4-6')	MG/KG
TRICHLOROETHENE	1.1

MW-1 (10-12')	MG/KG
TRICHLOROETHENE	0.51

SB-3 (2"-1')	MG/KG
ARSENIC	24.3
BARIUM	437
LEAD	464

SB-1 (2'-3')	MG/KG
ACETONE	0.073

MW-3 (0-3.8')	MG/KG
ACETONE	0.14
BENZO(A)ANTHRACENE	14
BENZO(A)PYRENE	36
BENZO(B)FLUORANTHENE	47
BENZO(K)FLUORANTHENE	14
CHRYSENE	36
DIBENZO(AH)ANTHRACENE	5.2
INDENO(123-CD)PYRENE	23
PHENANTHRENE	110
MERCURY	1.01
MW-3 (11-12.5')	**MG/KG**
TETRACHLOROETHENE	13
TRICHLOROETHENE	0.74

SB-8 (2"-1.5')	MG/KG
BENZO(A)ANTHRACENE	1.4
BENZO(A)PYRENE	1.3
BENZO(B)FLUORANTHENE	1.7
CHRYSENE	1.4
INDENO(123-CD)PYRENE	0.81
CADMIUM	5.1

SB-14 (0-3')	MG/KG
TRICHLOROETHENE	9.3
BENZO(A)ANTHRACENE	3
BENZO(A)PYRENE	2.3
BENZO(B)FLUORANTHENE	3
CHRYSENE	2.7
DIBENZO(AH)ANTHRACENE	0.33
INDENO(123-CD)PYRENE	1.4

SB-2 (0-2')	MG/KG
CIS-1,2-DICHLOROETHENE	0.89
TRICHLOROETHENE	120
BENZO(A)ANTHRACENE	3.9
BENZO(A)PYRENE	4
BENZO(B)FLUORANTHENE	8.1
BENZO(K)FLUORANTHENE	2.6
CHRYSENE	7
DIBENZO(AH)ANTHRACENE	1.5
INDENO(123-CD)PYRENE	4.4
ARSENIC	16.4
CADMIUM	64.9
CHROMIUM	524
LEAD	696

MW-5 (2-4')	MG/KG
CHROMIUM	22.4
MERCURY	2.15
MW-5 (10-12')	**MG/KG**
TETRACHLOROETHENE	5.3
TRICHLOROETHENE	2

SB-12 (2-4')	MG/KG
TRICHLOROETHENE	1.5
BENZO(A)ANTHRACENE	4.8
BENZO(A)PYRENE	5.8
BENZO(B)FLUORANTHENE	7.8
BENZO(K)FLUORANTHENE	2.5
CHRYSENE	4.5
DIBENZO(AH)ANTHRACENE	1.2
INDENO(123-CD)PYRENE	4.8
ARSENIC	18.1
BARIUM	819
COPPER	1,770
LEAD	595

SB-11 (0-2')	MG/KG
CIS-1,2-DICHLOROETHENE	1.7
TETRACHLOROETHENE	4.7
TRICHLOROETHENE	61
TRANS-1,2-DICHLOROETHENE	0.41
BENZO(A)ANTHRACENE	3.1
BENZO(A)PYRENE	2.2
BENZO(B)FLUORANTHENE	4.6
CHRYSENE	3.1
DIBENZO(AH)ANTHRACENE	0.64
INDENO(123-CD)PYRENE	2.1
ARSENIC	42
CADMIUM	10.2
COPPER	2,840
LEAD	921
MERCURY	0.874
ZINC	2,550

NIAGARA ST.
WEST AVE.
POTOMAC AVE.

SVI-1, SVI-2, SVI-3, HA-1, HA-2, SS/NS-1, SS/NS-2, MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, SB-1, SB-2/TMW-3, SB-3, SB-4, SB-5, SB-6, SB-7, SB-8/TMW-1, SB-9, SB-10, SB-11, SB-12, SB-13, SB-14, SB-15, SB-16

N

60' 0' 60' 120'

SCALE: 1 INCH = 60 FEET
SCALE IN FEET
(approximate)

DATE: OCTOBER 2018
DRAFTED BY: CMC

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
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BUFFALO, NY 14218
(716) 856-0599

JOB NO.: B0417-018-001

HISTORIC & RI SOIL INVESTIGATION LOCATIONS

BROWNFIELD CLEANUP PROGRAM

REMEDIAL INVESETIGATION / ALTERNATIVES ANALYSIS REPORT

1485 - 1491 NIAGARA STREET

BCP SITE NO. C915330

BUFFALO, NEW YORK

PREPARED FOR

1485 NIAGARA, LLC

FIGURE 4

F:\CAD\Benchmark\Natale Development Company\RI-AA Report\Figure 5, Investigation Locations & Analytical Results_GroundwaterREV.dwg

LEGEND:

- BCP SITE BOUNDARY
- PARCEL BOUNDARY
- SB-1/TMW-1 — HISTORIC SOIL BORING/TEMPORARY MONITORING WELL
- SB-5 — HISTORIC SOIL BORING/TEMPORARY MONITORING WELL
- HA-3 — SUB-SLAB HAND AUGER SAMPLE
- SB-2 — RI SOIL BORING
- MW-2 — RI MONITORING WELL
- SS/NS-3 — RI SURFACE SOIL SAMPLE
- SV-1 — RI SUB-SLAB VAPOR SAMPLE

NOTE:
- ANALYTICAL RESULTS PROVIDED WITHOUT QUALIFIERS.

= EXCEEDS CLASS GA GROUNDWATER QUALITY STANDARDS (GWQS)

MW-4	UG/L
CIS-1,2-DICHLOROETHENE	80
TRANS-1,2-DICHLOROETHENE	25
TRICHLOROETHENE	360

TMW-2	UG/L
TRICHLOROETHENE	8.8

TMW-1	UG/L
CIS-1,2-DICHLOROETHENE	810
TETRACHLOROETHENE	9,600
TRANS-1,2-DICHLOROETHENE	120
TRICHLOROETHENE	2,000
VINYL CHLORIDE	18

MW-6	UG/L
BENZO(A)ANTHRACENE	0.05
BENZO(B)FLUORANTHENE	0.1
BENZO(K)FLUORANTHENE	0.04
CHRYSENE	0.07
INDENO(1,2,3-CD)PYRENE	0.06
MAGNESIUM	132,000
NICKEL	214.4
SODIUM	59,100

MW-2	UG/L
CIS-1,2-DICHLOROETHENE	15
TRICHLOROETHENE	150
BENZO(B)FLUORANTHENE	0.03
BENZO(K)FLUORANTHENE	0.01
INDENO(1,2,3-CD)PYRENE	0.02
IRON	570
MAGNESIUM	41,300
SODIUM	154,000

MW-7	UG/L
CIS-1,2-DICHLOROETHENE	6.7
TRICHLOROETHENE	80

MW-1	UG/L
CIS-1,2-DICHLOROETHENE	200
TETRACHLOROETHENE	100
TRANS-1,2-DICHLOROETHENE	18
TRICHLOROETHENE	1,600
BENZO(B)FLUORANTHENE	0.04
BENZO(K)FLUORANTHENE	0.02
INDENO(1,2,3-CD)PYRENE	0.02
PHENOL	3.2
IRON	307
SODIUM	60,300

MW-5	UG/L
CIS-1,2-DICHLOROETHENE	5,500
TETRACHLOROETHENE	28,000
TRICHLOROETHENE	180,000
PHENOL	6.3
MAGNESIUM (DISSOLVED)	95,800
SODIUM (DISSOLVED)	52,100

MW-3	UG/L
CIS-1,2-DICHLOROETHENE	1,700
TETRACHLOROETHENE	17,000
TRICHLOROETHENE	4,600
VINYL CHLORIDE	49

TMW-3	UG/L
CIS-1,2-DICHLOROETHENE	380
TETRACHLOROETHENE	36
TRICHLOROETHENE	5,100

SVI-1, SVI-2, SVI-3, HA-1, HA-2, SB-5, SB-6, SB-16, SB-9, SB-10, SB-11, SB-15, SB-7, SB-8/TMW-1, SB-14, SB-2/TMW-3, SB-12, SB-13, SB-1, SB-3, SB-4/TMW-2, MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, SS/NS-1, SS/NS-2, SS/NS-3

NIAGARA ST.

POTOMAC AVE.

WEST AVE.

N

60' 0' 60' 120'

SCALE: 1 INCH = 60 FEET
SCALE IN FEET
(approximate)

DATE: OCTOBER 2018
DRAFTED BY: CMC

HISTORIC AND RI GROUNDWATER INVESTIGATION LOCATIONS

BROWNFIELD CLEANUP PROGRAM

REMEDIAL INVESETIGATION / ALTERNATIVES ANALYSIS REPORT

1485 - 1491 NIAGARA STREET
BCP SITE NO. C915330
BUFFALO, NEW YORK

PREPARED FOR
1485 NIAGARA, LLC

FIGURE 5

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0599

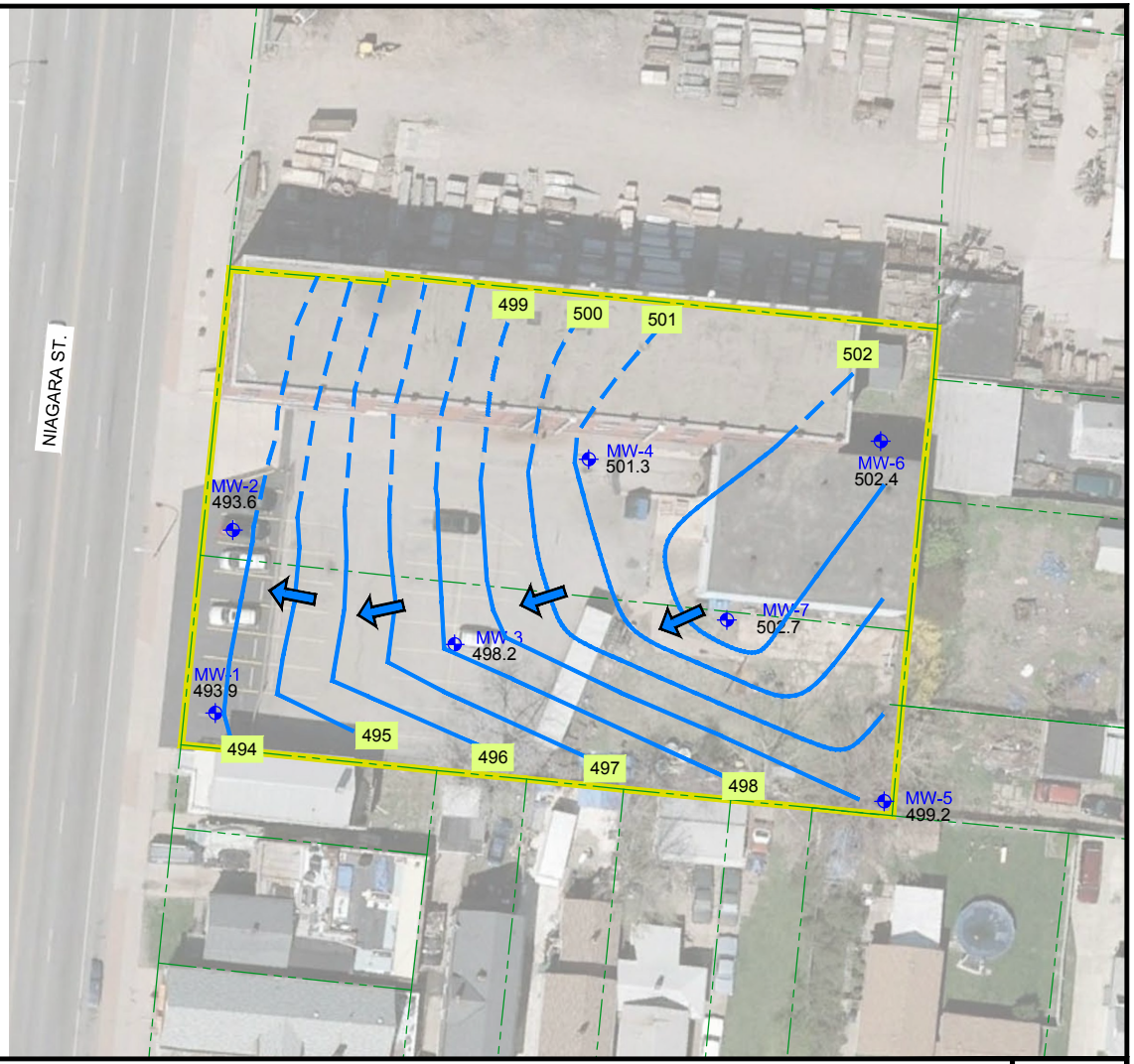
JOB NO.: B0417-018-001

F:\CAD\Benchmark\Natale Development Company\RI-AA Report\Figure 7; Groundwater Isopotential MapREV.dwg

LEGEND:

- BCP SITE BOUNDARY
- PARCEL BOUNDARY
- MW-2 489.14 — RI MONITORING WELL WITH GROUNDWATER ELEVATION
- 488 — GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)
- GROUNDWATER FLOW DIRECTION

NOTE:
-Depth to water measurements by Benchmark-TurnKey on 9/24/18.
-Elevations were established using the northeast corner of storm grate on the east side of Niagara Street in from of Site with an arbitrary benchmark datum of 500 feet.



N

60' 0' 60' 120'

SCALE: 1 INCH = 60 FEET
SCALE IN FEET
(approximate)

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0599

PROJECT NO.: 0417-018-001
DATE: OCTOBER 2018
DRAFTED BY: CMC/RFL

GROUNDWATER ISOPOTENTIAL MAP

REMEDIAL INVESTIGATION / ALTERNATIVES ANALYSIS REPORT

1485 - 1491 NIAGARA STREET
BCP SITE NO. C915330
BUFFALO, NEW YORK

PREPARED FOR
1485 NIAGARA, LLC

FIGURE 6

F:\CAD\Benchmark\Natale Development Company\IRM Activities\Figure 7 - Proposed IRM Activities.dwg

LEGEND:

- BCP SITE BOUNDARY
- PARCEL BOUNDARY
- AREA TO BE ADDRESSED DURING IRM ACTIVITIES
- AREA TO BE ADDRESSED AS PART OF FINAL REMEDY
- SB-1/TMW-1 — HISTORIC SOIL BORING/TEMPORARY MONITORING WELL
- SB-5 — HISTORIC SOIL BORING/TEMPORARY MONITORING WELL
- HA-3 — SUB-SLAB HAND AUGER SAMPLE
- SB-2 — RI SOIL BORING
- MW-2 — RI MONITORING WELL
- SS/NS-3 — RI SURFACE SOIL SAMPLE
- SVI-1 — RI SUB-SLAB VAPOR SAMPLE

BUILDINGS 1 & 2 WILL BE ADDRESSED BY ACTIVE SUB-SLAB DEPRESSURIZATION

APPROXIMATE 30' x 30' BY 2' DEEP EXCAVATION TO ADDRESS SHALLOW FILL IN PROPOSED GREEN SPACE AREA NEAR SS/NS-1 ABOVE RRSCOs

APPROXIMATE 20' x 20' by 3' DEEP EXCAVATION TO ADDRESS CVOCs IN FILL ABOVE PGWSCOs

APPROXIMATE 30 x 30 BY 4' DEEP EXCAVATIONS TO ADDRESS TOTAL SVOCs IN FILL >500 MG/KG

APPROXIMATE 5' x 50' BY 2' DEEP EXCAVATION TO ADDRESS SHALLOW FILL IN PROPOSED GREEN SPACE AREA NEAR SS/NS-2 ABOVE RRSCOs

SOIL/FILL IMPACTS TO BE ADDRESSED AS PART OF FINAL REMEDY DISCUSSED IN ALTERNATIVE ANALYSIS REPORT, IN ADDITION TO GROUNDWATER TREATMENT

BUILDING 1

BUILDING 2

NIAGARA ST.

SVI-1, SVI-2, SVI-3, HA-1, HA-2, SS/NS-1, MW-6, MW-4, SB-4, SB-5, SB-9, SB-6, MW-2, SB-16, MW-3, SB-15, MW-1, SB-7, SB-8/TMW-1, MW-7, SB-1, SB-3, SB-11, SS/NS-3, SB-14, SB-2/TMW-2, SB-12, SB-13, MW-5, SB-10, SS/NS-2

N

40' 0' 40' 80'

SCALE: 1 INCH = 40 FEET
SCALE IN FEET
(approximate)

DATE: NOVEMBER 2018
DRAFTED BY: CMC

2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0599

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

JOB NO.: B0417-018-001

PROPOSED IRM ACTIVITIES

REMEDIAL INVESETIGATION / ALTERNATIVES ANALYSIS REPORT
1485 - 1491 NIAGARA STREET
BCP SITE NO. C915330
BUFFALO, NEW YORK

PREPARED FOR
1485 NIAGARA, LLC

FIGURE 7