NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
BCP Significant Threat Determination Report

9/13/2016

Site Code C915293 **Site Name** Highland Plaza
City Tonawanda (T) **Town** Tonawanda
Region 9 **County** Erie
Current Classification A
Estimated Size 0.6900 **Allowable Use** Commercial
Significant Threat: No **Project Manager** Glenn May

Summary of Approvals

Originator/Supervisor: Bart Putzig	**09/08/2016**
Regional Hazardous Waste Remedial Engineer: Chad Staniszewski:	**09/08/2016**
BEEI of NYSDOH:	**08/04/2016**
CO Bureau Director: Michael Cruden, Director, Bureau E:	**09/08/2016**
Assistant Division Director: Michael J. Ryan, P.E.:	**09/12/2016**

Basis for Significant Threat Determination

Chlorinated VOCs are the principal contaminants of concern at this site. These contaminants are commonly associated with dry cleaning operations, and are prevalent in both shallow and deep soils on the easternmost end of the service alley (off-site area) adjacent to the former dry cleaner. Concentrations of trichloroethene (up to 15.0 ppm), cis -1,2-dichloroethene (up to 29.0 ppm), and tetrachloroethene (up to 1,600 ppm) were detected above the NYSDEC Part 375 Protection of Groundwater SCOs.

Groundwater is also extensively contaminated with chlorinated VOCs. Chlorinated VOCs detected above NYSDEC Groundwater Standards include: 1,1-dichloroethene (up to 10.0 J ug/L), cis -1,2-dichloroethene (up to 1,100 ug/L), trans-1,2-dichloroethene (up to 34.0 ug/L), trichloroethene (up to 1,700 ug/L), and tetrachloroethene (up to 58,000 ug/L).

Concentrations of trichloroethene (up to 1,200 ug/cubic meter) and tetrachloroethene (up to 1,600 ug/cubic meter) in sub-slab soil vapor under the former dry cleaner building exceed the NYSDOH Immediate Action Guidance values. Concentrations of tetrachloroethene (180 ug/cubic meter) in indoor air of the former dry cleaner building exceed the NYSDOH Guidance value. A sub-slab depressurization system has been installed in the former dry cleaner building.

Site Description - Last Review: 02/26/2016

Location:
The Highland Plaza BCP Site consists of approximately 0.7 acres at 215 Highland Parkway in the

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Site Code C915293 **Site Name** Highland Plaza

Town of Tonawanda, Erie County. The site is bounded by Highland Parkway to the north, commercial property to the east, a service road and residential properties to the south, and a former Getty Service Station and Colvin Boulevard to the west.

Site Features:
The site is approximately 250 feet long by 100 feet wide. The site gently slopes northward toward Highland Parkway. Approximately 50% of the property is occupied by a one story strip plaza, which is 247 feet in length and 49 feet wide. This is a slab on grade cinder block building that is situated 2.95 feet from the southern property boundary to the back of the parcel. The northern half of the property is covered by an asphalt parking lot. The building is subdivided into eight commercial business spaces. The eastern one-third of the strip plaza was formerly occupied by the High Park Dry Cleaners.

Current Zoning/Land Use:
The site is occupied by a strip plaza, and is zoned for commercial use. The proposed future use of the site is commercial. The site is located in a mixed residential and commercial area of the Town of Tonawanda. The nearest residential property is located about 65 feet south of the BCP site.

Historic Use:
In 1928 the site was not developed, although the property was subdivided into 17 parcels for future residential development. By 1950 the site was fully developed into a strip plaza. One of the former tenants in the plaza was High Park Dry Cleaners, which closed in March 2010.

In 2014, a Phase II Environmental Site Investigation (ESI) was completed to evaluate the property. During the ESI twelve soil borings were completed throughout the property. In addition, a soil vapor intrusion study was completed in the former dry cleaner tenant space. Soil samples collected from the site contained trichloroethene and tetrachloroethene. Soil vapor contained elevated concentrations of dichloroethene, tetrachloroethene, and trichloroethene.

Geology and Hydrogeology:
The entire site is underlain by either 1 foot of asphalt and crushed stone (the parking lot area) or 0.5 feet of concrete (building area).

Native soils consist of reddish brown silty clay that is very dense. This unit has a very low permeability (meaning that groundwater cannot easily move through it). The thickness of this unit is unknown, but is greater than 23 feet.

Groundwater appears to be mounded around off-site well MW-5 with flow to the northwest, north, and northeast. This flow direction is away from the residential properties located south of the site.

Contaminants of Concern (Including Materials Disposed)	**Quantity Disposed**
OU 00	
dichloroethene (cis-1,2-)	UNKNOWN

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tetrachloroethene (PCE)	UNKNOWN
trichloroethene (TCE)	UNKNOWN
OU 01	
benzene	UNKNOWN
tetrachloroethene (PCE)	UNKNOWN
trichloroethene (TCE)	UNKNOWN
cis-1,2-dichloroethene	UNKNOWN

Analytical Data Available for : Groundwater, Soil, Soil Vapor, Indoor Air

Applicable Standards Exceeded for: Groundwater, Soil, Soil Vapor

Site Environmental Assessment - Last Review: 02/26/2016

Soil:
There were no VOCs detected at or above their respective NYSDEC Part 375 Commercial Soil Cleanup Objectives (SCOs) in on site soils. Several VOCs, however, exceeded the NYSDEC Part 375 Protection of Groundwater SCOs. These VOCs included (with number of exceedances and highest concentrations) benzene (1 sample; 0.24 ppm), trichloroethene (2 samples; 0.625 ppm) and tetrachloroethene (3 samples; 9.6 ppm). No SVOCs or PCBs were detected in on-site soils, while no metals or pesticides were detected in on-site soils above their respective NYSDEC Part 375 Commercial SCOs.

Groundwater:
Cis-1,2-dichloroethene (1 sample; 24.0 ug/L) was the only VOC detected above the NYSDEC Groundwater Standards in on-site monitoring wells.

Sub-Slab Soil Vapor, Soil Vapor, and Indoor Air:
Concentrations of trichloroethene (up to 1,200 ug/cubic meter) and tetrachloroethene (up to 1,600 ug/cubic meter) were detected in sub-slab soil vapor under the former dry cleaner building and exceed the NYSDOH Immediate Action Guidance values. Concentrations of tetrachloroethene (up to 180 ug/cubic meter) in indoor air of the former dry cleaner building exceed the NYSDOH Guidance value. A sub-slab depressurization system has been installed in the former dry cleaner building to prevent vapors from migrating into this building.

Site Health Assessment - Last Update:

Information submitted with the BCP application regarding the conditions at the site are currently under review and will be revised as additional information becomes available.

	Start		End	
OU 00				
Certificate of Completion	10/31/16	PLN	12/30/16	PLN
OGC Docket - Environmental Easement	5/20/16	ACT	9/30/16	PLN
Periodic Review	4/30/18	PLN	6/14/18	PLN
Site Management	12/30/16	PLN	12/30/46	PLN

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OU 01				
Agreement	4/1/15	ACT	5/19/15	ACT
Application Approval	2/18/15	ACT	4/1/15	ACT
Application Completion	1/22/15	ACT	2/18/15	ACT
OGC Docket - Eligibility Determination	2/18/15	ACT	4/1/15	ACT
Reclass Pkg.	7/13/16	ACT	9/30/16	PLN
Remedial Action	10/3/16	PLN	12/30/16	PLN
Remedial Investigation	9/3/15	ACT	9/30/16	PLN
OU 01A				
Remedial Action	2/1/16	ACT	3/31/16	ACT

Remedy Description and Cost

Remedy Description for Operable Unit 00

Not applicable as the Alternatives Analysis Report has not yet been drafted by the volunteer.

Total Cost

Remedy Description for Operable Unit 01

1. Cover System: A site cover currently exists and will be maintained to allow for commercial/industrial use of the site. Any site redevelopment will maintain the existing site cover, which consists of structures such as buildings, pavement and sidewalks. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

2. Vapor Mitigation: Continued operation and optimization of the sub-slab depressurization systems in the former dry cleaner building to prevent the migration of sub-slab soil vapor from soil and groundwater into this building.

3. Institutional Controls: Imposition of an institutional control in the form of an Environmental Easement for the controlled property that:

(a) Requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
(b) Allows the use and development of the controlled property for commercial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
(c) Restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
(d) Requires compliance with the Department approved Site Management Plan.

4. Site Management Plan: A Site Management plan is required, which includes the following:

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(a) An Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

- Institutional Controls: The Environmental Easement discussed in Paragraph 3 above; and
- Engineering Controls: The site cover discussed in Paragraph 1 and the sub-slab depressurization system discussed in paragraph 2 above.

This plan includes, but may not be limited to:

- An Excavation Plan that details the provisions for management of future excavations in areas of remaining contamination;
- Descriptions of the provisions of the Environmental Easement including any land use and groundwater use restrictions;
- A provision for the evaluation of the potential for soil vapor intrusion for any buildings developed on the site and/or existing or developed over the contaminated groundwater plume, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- Provisions for the management and inspection of the identified engineering controls;
- Maintaining site access controls and Department notification; and
- The steps necessary for periodic reviews and certification of the institutional and engineering controls.

(b) A Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

- Monitoring of soil vapor and indoor air to assess the performance and effectiveness of the sub-slab depressurization system. Enhancements to the sub-slab depressurization systems will be completed as necessary;
- A schedule of monitoring and frequency of submittals to the Department;
- Monitoring for vapor intrusion for any buildings, as may be required by the Institutional and Engineering Control Plan discussed above.

(c) An Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, optimization, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:

- Compliance monitoring of the existing sub-slab depressurization system to ensure proper operation as well as providing the data for any necessary permit or permit equivalent reporting;
- Maintaining site access controls and Department notification; and
- Providing the Department access to the site and O&M records.

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Total Cost

Remedy Description for Operable Unit 01A

In February 2016 the BCP applicant installed a sub-slab depressurization system in the former dry cleaner tenant space at the eastern end of the strip plaza. The system has operated continuously since that time.

The sub-slab depressurization system uses fan-powered vents and piping to draw vapors from the soil beneath the building slab and discharges the vapors to the atmosphere. Depressurizing the area beneath the building slabs relative to indoor air pressure creates a relative vacuum that minimizes or prevents the infiltration of sub-slab vapors into the building.

Total Cost

SIGNIFICANT THREAT DETERMINATION WORKSHEET

SIGNIFICANT THREAT DETERMINATION WORKSHEET

□ State Superfund Program
6 NYCRR 375-2.7

■ Brownfield Cleanup Program
ECL 27-1411.1(c)

Site Name: Highland Plaza

Site ID No. C915293

City/Town: Tonawanda (T)

County: Erie

1. Has all available and relevant evidence regarding the Site been reviewed and the factors in 375-2.7(a)(3) considered?	■ Yes (go to 2)	□ No (stop)	□ Unsure (stop)
2. Does Site contamination result in significant adverse impacts (375-2.7(a)(1)) to:			
a. species that are endangered, threatened, or of concern?	□ Yes (go to b)	■ No (go to b)	□ Unsure (go to b)
b. protected streams, tidal/freshwater wetlands, or significant fish and wildlife habitat?	□ Yes (go to c)	■ No (go to c)	□ Unsure (go to c)
c. flora or fauna from bioaccumulation or leads to a recommendation to limit consumption?	□ Yes (go to d)	■ No (go to d)	□ Unsure (go to d)
d. fish, shellfish, crustacea, or wildlife from concentrations that cause adverse/chronic effects?	□ Yes (go to e)	■ No (go to e)	□ Unsure (go to e)
e. the environment due to a fire, spill, explosion, or reaction that generates toxic gases, vapors, fumes, mists or dusts?	□ Yes (go to f)	■ No (go to f)	□ Unsure (go to f)
f. areas where individuals or water supplies may be present and NYSDOH has determined there to be a significantly increased risk to public health (including from soil vapor)?	■ Yes (go to 3)	□ No (go to 3)	□ Unsure (go to 3)
3. Does Site contamination result in significant environmental damage (375-2.7(a)(2))?	■ Yes (go to 4)	□ No (go to 4)	□ Unsure (stop)
4. If any box in items 2 or 3 have been checked "Yes," the site presents a significant threat to public health or the environment; check here.	Significant threat to: ■ Public Health ■ Environment		
5. If no boxes in items 2 or 3 have been checked "Yes," the site does not present a significant threat to public health or the environment; check here.	□ Not a Significant Threat		

Glenn M. May, EG2 _____ _____ 07/12/2016
Project Manager Name/Title - Print | Project Manager Name - Signature | Date

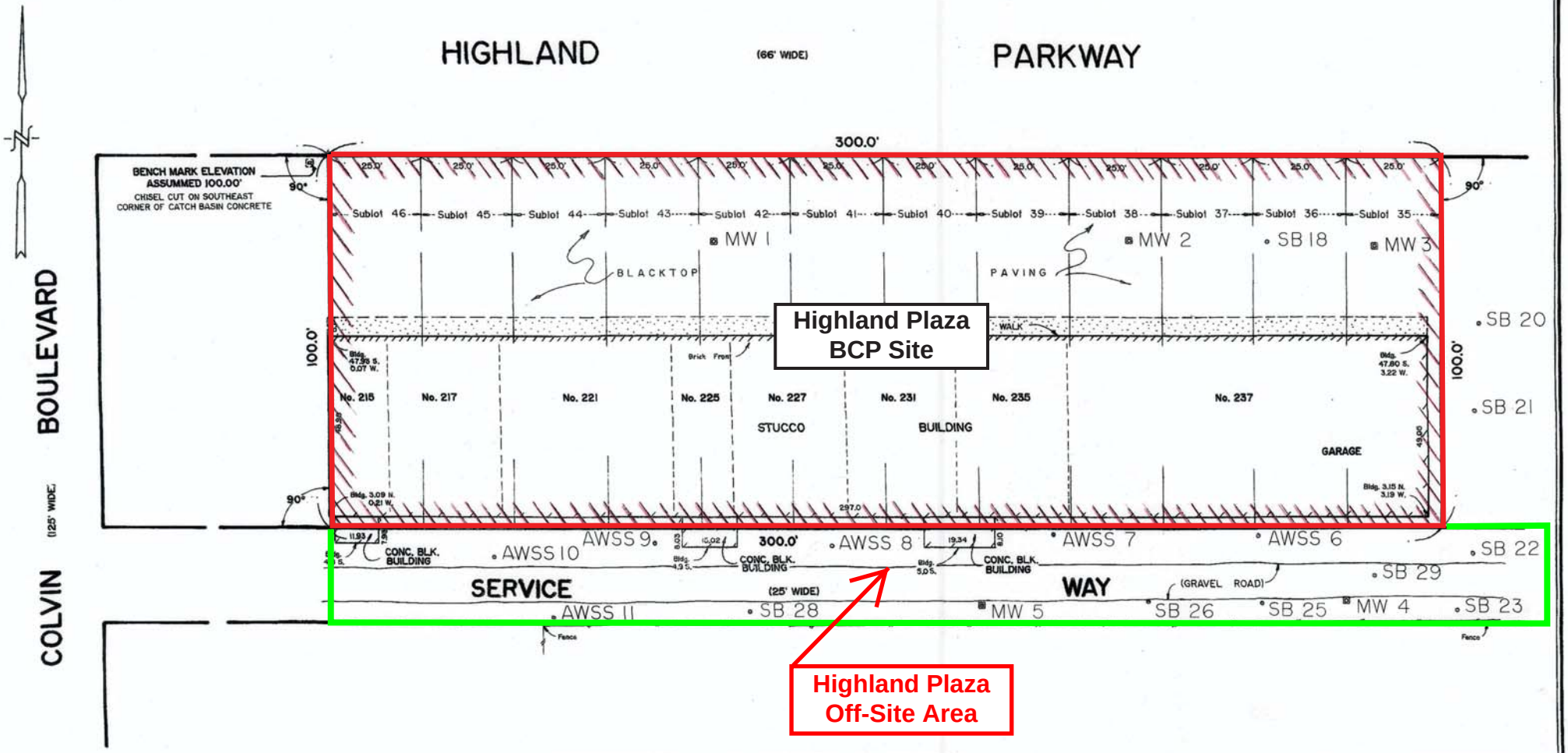
Barthan K Putzig

Bart Putzig, Section Chief, Remedial Bureau E _____ 07/12/2016
Bureau Director/RHWRE Name/Title - Print | Bureau Director/RHWRE Name - Signature | Date

07/29/10

FIGURES

FIGURE 1: SITE LOCATION MAP
REMEDIAL INVESTIGATION
HIGHLAND PLAZA IN TONAWANDA, NEW YORK



NOTE : DELINEATES BROWNFIELD AREA BOUNDARY

NOTE:
Tenant spaces/Addresses are as shown on EGMS Drawing
FIGURE 4: RI VAPOR INTRUSION SAMPLE LOCATIONS
SOIL VAPOR INTRUSION INVESTIGATION
HIGHLAND PLAZA IN TONAWANDA, N.Y.
Dated May 2016

Point Description	Distance East of Northwest Property Corner	Distance South of Northwest Property Corner	Elevation (PVC Pipe)
MW 1	104.45	22.36	100.51
MW 2	216.22	22.43	100.18
MW 3	282.43	24.29	100.08
MW 4	274.59	119.19	101.45
MW 5	176.13	120.15	102.06
SB 18	253.63	22.88	
SB20	310.68	44.85	
SB 21	309.38	68.53	
SB 22	309.20	106.52	
SB 23	304.75	121.78	
SB 25	251.83	119.34	
SB 26	221.32	118.93	
SB 28	113.74	121.41	
SB 29	282.23	112.08	
AWSS 6	251.01	101.56	
AWSS 7	195.55	101.02	
AWSS 8	136.09	104.20	
AWSS 9	88.35	102.98	
AWSS 10	45.14	106.68	
AWSS 11	61.17	122.98	

FIGURE 2 : SITE BASE MAP

SUBLOTS 35 to 46 INCLUSIVE
MAP COVER 1400
PART OF LOT 33, TOWNSHIP 12, RANGE 8
TOWN OF TONAWANDA
ERIE COUNTY, NEW YORK

SONNENBERGER LAND SURVEYING
60 NIAGARA STREET
BUFFALO, NEW YORK 14202
(716) 854-0159
SonnenbergerLandSurveying.com

Francis X. Metzger
N.Y.S. Lic. No. 049989

This map void unless EMBOSSED with New York State Licensed Land Surveyor's Seal No. 049989

Altering any item on this map is in violation of the law, excepting as provided in Section 7209, Part 2 of the New York State Education Law.

This Survey was prepared without the benefit of a current full abstract of title and is subject to any state of facts that may be revealed by an examination of same

SCALE: 1" = 20'
DATE: NOV. 10, 2015
SHEET: 69621
No. 15-221 ATS
REVISED 5/20/16

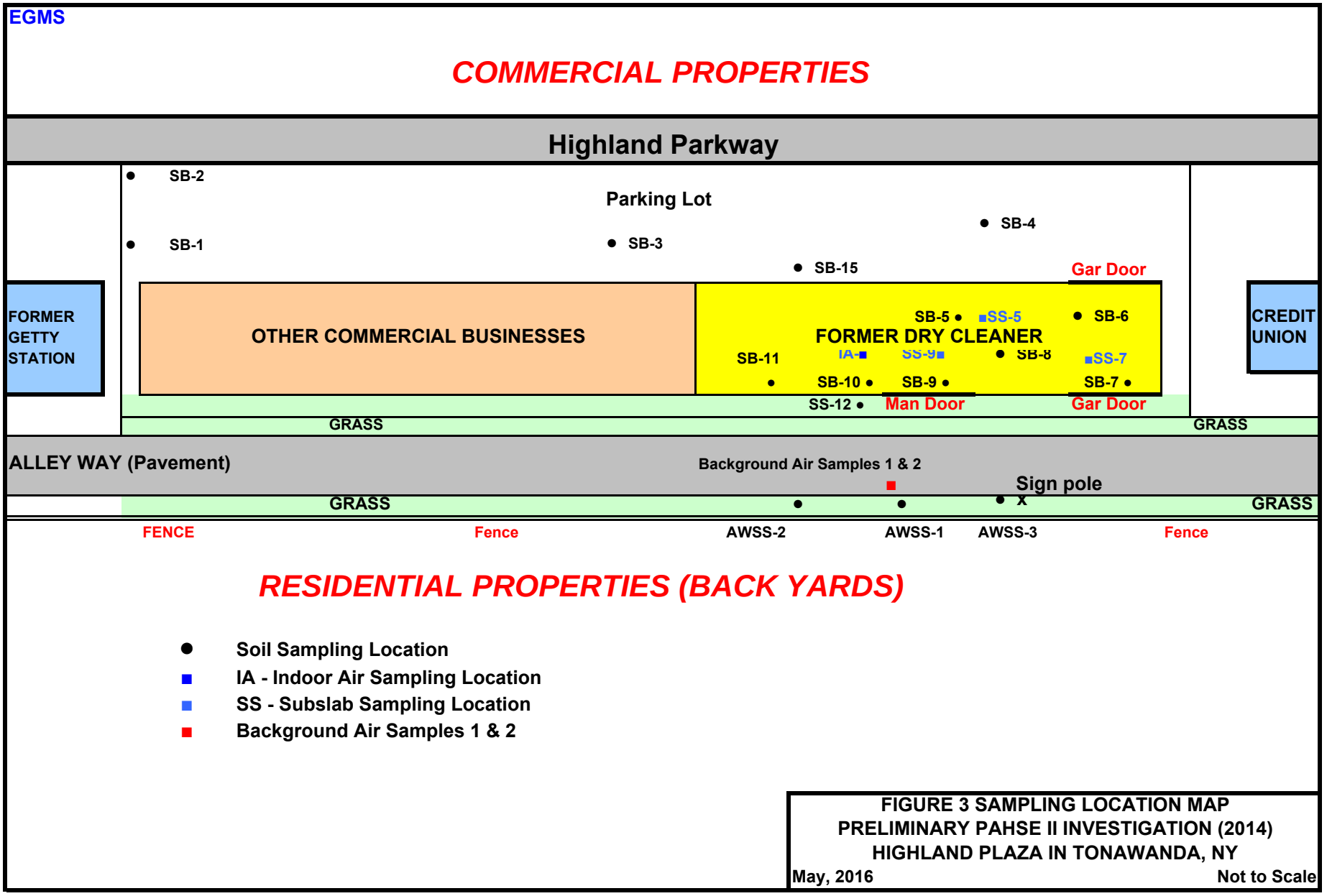


FIGURE 3 SAMPLING LOCATION MAP
PRELIMINARY PAHSE II INVESTIGATION (2014)
HIGHLAND PLAZA IN TONAWANDA, NY
May, 2016 **Not to Scale**

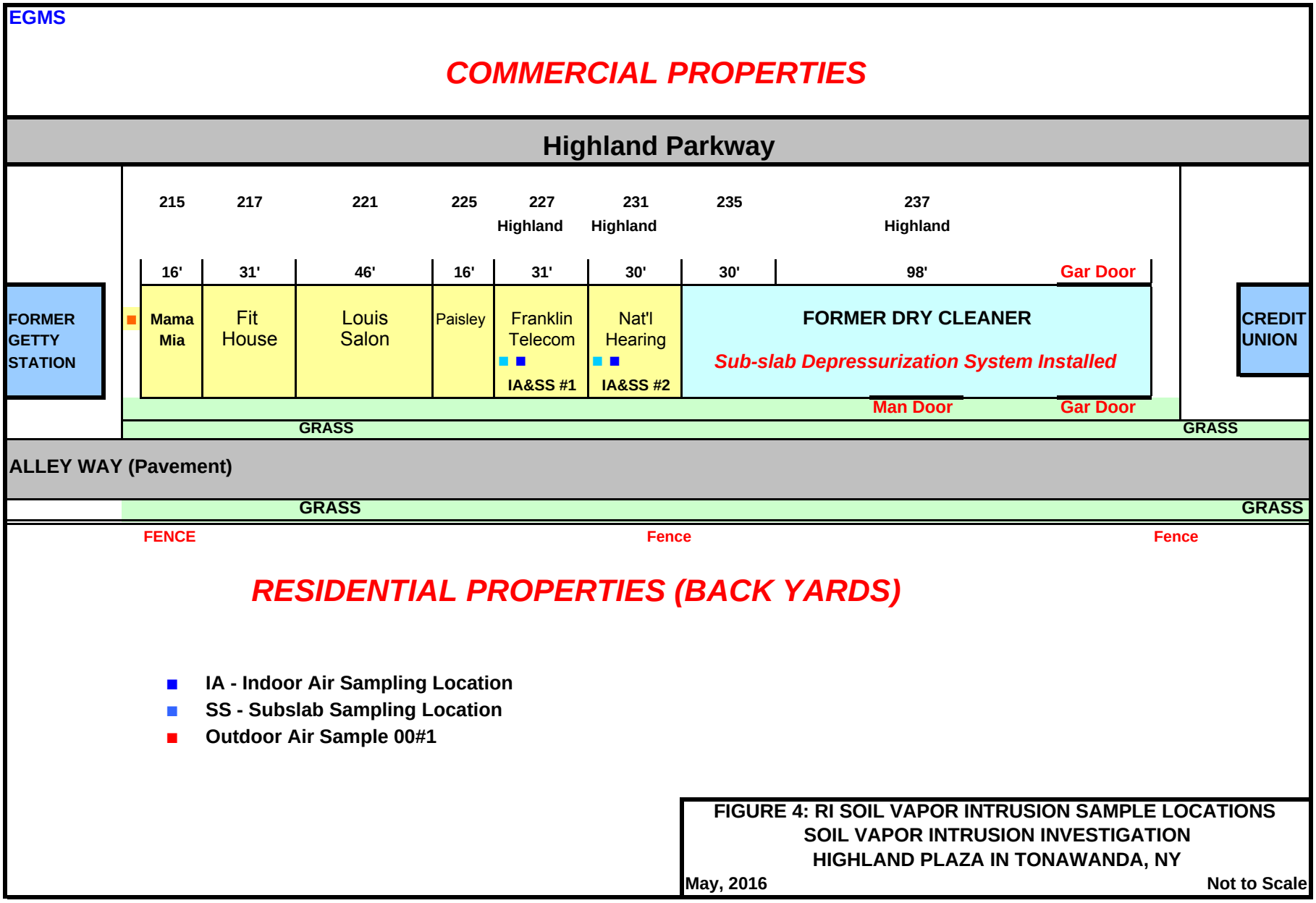
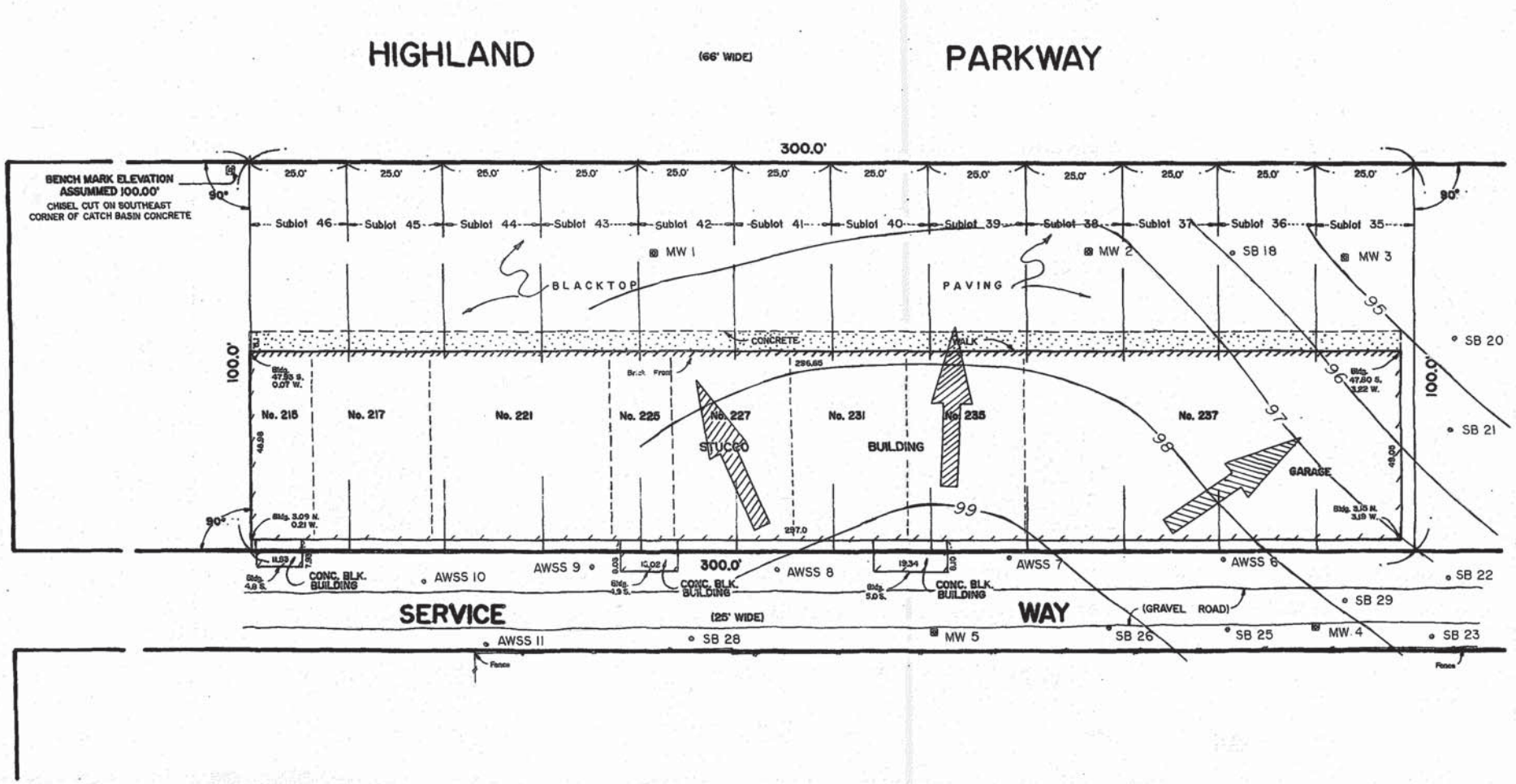


FIGURE 4: RI SOIL VAPOR INTRUSION SAMPLE LOCATIONS
SOIL VAPOR INTRUSION INVESTIGATION
HIGHLAND PLAZA IN TONAWANDA, NY

May, 2016 **Not to Scale**



NOTE:
The groundwater contour lines were provided to Sonnenberger Land Surveying by Environmental & Geological Management Services, LLC based on measurements shown on:
TABLE 3: REMEDIAL INVESTIGATION GROUNDWATER ELEVATIONS
HIGHLAND PLAZA IN TONAWANDA , N.Y.
Dated December 4, 2015

Sonnenberger Land Surveying accepts no responsibility for the accuracy or completeness of the contour lines shown.

Point Description	Distance East of Northwest Property Corner	Distance South of Northwest Property Corner	Elevation (PVC Pipe)	Groundwater Elevation as supplied by Environmental & Geological Management Services, LLC Table 3 Dated 12/4/15
MW 1	104.45	22.36	100.51	96.71
MW 2	216.22	22.43	100.18	97.38
MW 3	282.43	24.29	100.08	94.68
MW 4	274.59	119.19	101.45	98.35
MW 5	176.13	120.15	102.06	99.26
SB 18	253.63	22.88		
SB20	310.68	44.85		
SB 21	309.38	68.53		
SB 22	309.20	106.52		
SB 23	304.75	121.78		
SB 25	251.83	119.34		
SB 26	221.32	118.93		
SB 28	113.74	121.41		
SB 29	282.23	112.08		
AWSS 6	251.01	101.56		
AWSS 7	195.55	101.02		
AWSS 8	136.09	104.20		
AWSS 9	88.35	102.98		
AWSS 10	45.14	106.68		
AWSS 11	61.17	122.98		

FIGURE 5 : WATER TABLE MAP

SUBLOTS 35 to 46 INCLUSIVE
MAP COVER 1400
PART OF LOT 33, TOWNSHIP 12, RANGE 8
TOWN OF TONAWANDA
ERIE COUNTY, NEW YORK

SONNENBERGER LAND SURVEYING
60 NIAGARA STREET
BUFFALO, NEW YORK 14202
(716) 854-0159
SonnenbergerLandSurveying.com

SCALE: 1" = 20' DATE: NOV. 10, 2015
SHEET: 69621 No. 15-221 GW
REVISED 5/20/16

Francis X. Metzger
NYS Lic. No. 049989

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ANALYTICAL RESULTS
SUMMARY TABLES -
ON-SITE COMPONENT

EGMS April, 2016

TABLE 6A: ON SITE REMEDIAL INVESTIGATION SUBSURFACE & SURFACE SOIL ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS (DETECTED)
HIGHLAND PLAZA IN TONAWANDA, NEW YORK

				Sample #	SB -1	SB -2	SB -3	SB -4	SB - 5	SB -6	SB -7	SB -8	SB -9	SB -10	SB -11	SB-15
Volatile Organic Compounds			*ppm=mg/kg*	Depth		0 ft-4 ft	0 ft-4 ft	8 ft-12 ft	4 ft-8 ft	4 ft-8 ft	0.5 ft- 2 ft	0.5 ft- 2 ft	0.5 ft- 2 ft	0 ft-4 ft	0.5 ft- 2 ft	4 ft-8 ft
	Cas #	Protection Groundwtr	Commer-cial	Date	5/13/2014	5/13/2014	5/13/2014	5/13/2014	5/13/2014	5/13/2014	5/13/2014	5/13/2014	5/13/2014	5/13/2014	5/13/2014	5/13/2014
1,1,1-Trichloroethane [I]	71-55-6	0.68	500[b]						0.163	0.0816						
1,1 Dichloroethene	75-35-4	0.27	500[b]		N	N	N	N								N
cis -1,2-Dichloroethene [I]	156-59-2	0.25	500[b]		O	O	O	O								O
trans-1,2-Dichloroethene [I]	156-60-5	0.19	500[b]		T											
Acetone	67-64-1	0.05	500[b]			D	D	D								D
Benzene	71-43-2	0.06	44			E	E	E								E
Chloroform	67-66-3	0.37	350		S	T	T	T								T
Methyl ethyl ketone	78-93-3	0.12	500[b]		A	E	E	E								E
Methylene chloride	75-09-2	0.05	500[b]		M	C	C	C								C
n - Propylbenzene [I]	103-65-1	3.9	500[b]		P	T	T	T								T
Tetrachloroethene	127-18-4	1.3	150		L	I	I	I	3.4	0.5150	1.95	1.23	0.061	0.0218	0.03330	I
Toluene	108-88-3	0.7	500[b]		E	O	O	O								O
Trichloroethene	79-01-6	0.47	200		D	N	N	N	0.625	0.101	0.118		0.0108			N
1,2,4-Trimethylbenzene [I]	95-63-6	3.6	190			S	S	S								S
1,3,5-Trimethylbenzene[I]	108-67-8	8.4	190													
Vinyl chloride[I]	75-01-4	0.02	13													
Xylene (mixed)	1330-20-7	1.6	500[b]													

Footnotes:

Exceeds NYSDEC Part 375 Protection of Groundwater Soil Cleanup Objective

Exceeds NYSDEC Part 375 Commercial Soil Cleanup Objective

H Sample was prepped or analyzed beyond the specified holding time

B Compound was found in the blank and sample

J Result is less than the reporting limit (RL), but > than or = to the method detection limit (MDL), and is estimated.

F1 MS and/or MSD Recovery is outside acceptance limits

F2 MS/MSD RPD exceeds control limits

TABLE 6A: ON SITE REMEDIAL INVESTIGATION SUBSURFACE & SURFACE SOIL ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS (DETECTED)
HIGHLAND PLAZA IN TONAWANDA, NEW YORK

				Sample #	SB -16	SB -16	SB -17	SB -17	Dup#1 SB-17	SB -18	SB -18	SB -19	SB -19
Volatile Organic Compounds		*ppm=mg/kg*		Depth	6 in-12 in	23 ft-24 ft	6 in-12 in	23 ft-24 ft	23 ft-24 ft	12 in-18 in	7 ft-8 ft	6 in-18 in	23 ft-24 ft
	Cas #	Protection Groundwtr	Commer-cial	Date	10_14	10_14	10_14	10_14	10_14	10_14	10_14	10_14	10_14
1,1,1-Trichloroethane [I]	71-55-6	0.68	500[b]										
1,1 Dichloroethene	75-35-4	0.27	500[b]										
cis -1,2-Dichloroethene [I]	156-59-2	0.25	500[b]									0.0072 F1	
trans-1,2-Dichloroethene [I]	156-60-5	0.19	500[b]										
Acetone	67-64-1	0.05	500[b]			0.012 JHB	0.0078 JB	0.0054 JB	0.01 JHB		0.0043 JB	0.019 JF1	0.0095 J
Benzene	71-43-2	0.06	44									**0.24**	
Chloroform	67-66-3	0.37	350										
Methyl ethyl ketone	78-93-3	0.12	500[b]										
Methylene chloride	75-09-2	0.05	500[b]			0.0027 JHB	0.0024 JB					0.0021 JB	
n - Propylbenzene [I]	103-65-1	3.9	500[b]										
Tetrachloroethene	127-18-4	1.3	150		1.3 JHB	0.001 JHB	0.0097 JB	0.00066 JB	0.00067 JHB	0.00089 JB	0.0007 JB	**9.6**	0.00057 JB
Toluene	108-88-3	0.7	500[b]										
Trichloroethene	79-01-6	0.47	200									**0.53**	
1,2,4-Trimethylbenzene [I]	95-63-6	3.6	190										
1,3,5-Trimethylbenzene [I]	108-67-8	8.4	190										
Vinyl chloride [I]	75-01-4	0.02	13										
Xylene (mixed)	1330-20-7	1.6	500[b]									0.0008 JF2F1B	

Footnotes:

Exceeds NYSDEC Part 375 Protection of Groundwater Soil Cleanup Objective

Exceeds NYSDEC Part 375 Commercial Soil Cleanup Objective

H Sample was prepped or analyzed beyond the specified holding time

B Compound was found in the blank and sample

J Result is less than the reporting limit (RL), but > than or = to the method detection limit (MDL), and is estimated.

F1 MS and/or MSD Recovery is outside acceptance limits

F2 MS/MSD RPD exceeds control limits

TABLE 6A: ON SITE REMEDIAL INVESTIGATION SUBSURFACE & SURFACE SOIL ANALYTICAL RESULTS VOLATILE ORGANIC COMPOUNDS (DETECTED) HIGHLAND PLAZA IN TONAWANDA, NEW YORK

				Sample #	SS-12
Volatile Organic compounds				Depth	0 in-4 in
	CAS #	Protection Groundwater	Commer-cial	Date	10_18
1,1,1-Trichloroethane [I]	71-55-6	0.68	500[D]		
1,1 Dichloroethene	75-35-4	0.27	500[D]		
cis -1,2-Dichloroethene [I]	156-59-2	0.25	500[D]		
trans-1,2-Dichloroethene [I]	156-60-5	0.19	500[D]		
Acetone	67-64-1	0.05	500[D]		
Benzene	71-43-2	0.06	44		
Chloroform	67-66-3	0.37	350		
Methyl ethyl ketone	78-93-3	0.12	500[D]		
Methylene chloride	75-09-2	0.05	500[D]		
n - Propylbenzene [I]	103-65-1	3.9	500[D]		
Tetrachloroethene	127-18-4	1.3	150		0.002 J
Toluene	108-88-3	0.7	500[D]		
Trichloroethene	79-01-6	0.47	200		**0.01**
1,2,4-Trimethylbenzene [I]	95-63-6	3.6	190		
1,3,5-Trimethylbenzene [I]	108-67-8	8.4	190		
Vinyl chloride [I]	75-01-4	0.02	13		
Xylene (mixed)	1330-20-7	1.6	500[D]		

Footnotes:

Exceeds NYSDEC Part 375 Protection of Groundwater Soil Cleanup Objective

Exceeds NYSDEC Part 375 Commercial Soil Cleanup Objective

H: Sample was prepped or analyzed beyond the specified holding time

B: Compound was found in the blank and sample

J: Result is less than the reporting limit (RL), but > than than or = to the method detection limit (MDL), and is estimated

F1: MS and/or MSD Recovery is outside acceptance limits

F2: MS/MSD RPD exceeds control limits

EGMS APRIL, 2016

TABLE 10A: ON SITE REMEDIAL INVESTIGATION GROUNDWATER DETECTIONS - VOLATILE ORGANIC COMPOUNDS HIGHLAND PLAZA, IN TONAWANDA, NEW YORK

Sample Location	NYSDEC Standards & Guidance Values (ug/L)	SB - 2	MW-1	MW-2	MW-2 Dup	MW-3
Sample Date		13-May-14	22-Dec-15	22-Dec-15	22-Dec-15	22-Dec-15
Matrix		Water	Water	Water	Water	Water
Units		ug/L	ug/L	ug/L	ug/L	ug/L
Contaminant						
Volatile Organic Compounds						
Acetone	50	ND	**5. 4 J**	ND	ND	ND
1,1-Dichloroethene	5	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5	ND	ND	ND	ND	**24.0**
trans-1,2-Dichloroethene	5	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	**0.85 J**

Notes

Exceeds standard

1) Standards are NYSDEC T.O.G.S 1.1.1 Ambient Water Quality Standards
2) NS=no standard
J= Estimated Value
E= Result Exceeded Calibration Range

TABLE 11A: PHASE II SOIL VAPOR INTRUSION STUDY (2014)
VOLATILE ORGANIC COMPOUNDS DETECTED IN AIR & SUB-SLAB VAPORS
HIGHLAND PLAZA IN TONAWANDA, NEW YORK

Analyte (ug/m3)	NYSDOH GUIDANCE ug/m3	NYSDOH IMMEDIATE ACTION ug/m3	SS-5	SS-7	SS-9	INDOOR AIR	OUTDOOR AIR #1*	OUTDOOR Air #2
1,1-Dichloroethene			**1.7**	<0.59	<0.59	<0.59	**0.44**	<0.59
1,2,4-Trimethylbenzene			**6.8**	**6.3**	**8.4**	**4.7**	**0.84**	**1.0**
1,2-Dichloroethane			**7.8**	**8.4**	**7.9**	<0.61	<0.61	<1.2
1,3,5-Trimethylbenzene			**3.3**	**3.0**	**3.6**	**2.4**	<0.74	**0.79**
2,2,4-trimethylpentane			**0.98**	**1.8**	<0.70	<0.70	<0.70	<0.70
4-ethyltoluene			**2.7**	**2.2**	**2.9**	0.96	<0.74	<0.74
Acetone			**56**	**250.0**	**120.0**	31.0	**23.0**	**2.4**
Benzene			**2.5**	**2.7**	**2.8**	0.51	**0.35**	<0.48
Carbon disulfide			**2.3**	**38.0**	**12.0**	0.47	**1.1**	**0.62**
Carbontetrachloride			**0.75**	**0 75**	<0.94	0.75	**0.63**	**0.82**
Chloroform			**12**	**5.2**	**2.1**	0.68	<0.73	<0.73
Chloromethane			<0.40	<0.31	<0.31	1.4	**1.3**	**1.0**
cis-1,2-Dichloroethene			**520.0**	**31.0**	**2.1**	0.95	**54.0**	**1.3**
Cyclohexane			**4.3**	**9.3**	**11.0**	<0.52	<0.52	<0.52
Ethyl acetate			<0.90	**7.9**	**8.6**	1.3	<0.90	<0.90
Ethylbenzene			**2.6**	**3.1**	**2.6**	1.3	<0.65	<0.65
Freon 11			**1.7**	**2.0**	**1.8**	2	**1.8**	**2.0**
Freon 113			<1.1	<1.1	<1.1	0.77	<1.1	<1.1
Freon 12			**3.0**	**2.9**	**3.2**	3.7	**3.5**	**3.4**
Heptane			<0.61	**9.8**	**12.0**	<0.61	<0.61	<0.61
Hexane			<0.53	**16.0**	**20.0**	<0.53	**0.63**	**0.63**
Isopropyl alcohol			<0.37	<0.37	<0.37	9.3	**7.9**	**1.9**
m&p-Xylene			**5.5**	**6.9**	**6.0**	3.5	**1.4**	**0.69**
Methyl Ethyl Ketone			**8.6**	**14.0**	**14.0**	4.4	<0.88	**1.7**
Methylene chloride	60	NA	**9.4**	**8.7**	**11.0**	1.6	**0.83**	**0.69**
a-Xylene			**2.5**	**2.8**	**2.6**	1.7	**0.82**	**0.43**
Tetrachloroethylene	30	300	**1600.0**	**550.0**	**74.0**	**180.0**	**2900.0**	**7.0**
Toluene			**34.0**	**38.0**	**30.0**	5.8	**2.0**	**2.0**
trans-1,2-Dichloroethene			**260.0**	**41.0**	<0.59	<0.59	<0.59	<0.59
Trichloroethene	2	20	**1200.0**	**87.0**	**11.0**	**1.8**	**43.0**	**1.2**
Vinyl chloride			**12.0**	<0.38	<0.38	<0.10	<0.10	<0.10

0.0 Bold is a detection of specified volatile organic compound

< Not detected at or below specified quantitation limit

NYSDOH (2006) Table 3.1 and 3.2 Guidance

Exceeds Immediate Action Guidance

EGMS April, 2016

TABLE 11B: REMEDIAL INVESTIGATION SOIL VAPOR INTRUSION STUDY (2015)
VOLATILE ORGANIC COMPOUNDS DETECTED IN AIR & SUB-SLAB VAPORS
HIGHLAND PLAZA IN TONAWNADA, NEW YORK

Compound	NYSDOH Guidance ug/m3	NYSDOH Immediate Action ug/m3	Indoor Air #1 3/15/2016 ug/m3	Sub-slab #1 3/15/2016 ug/m3	Indoor Air #2 3/15/2016 ug/m3	Sub-slab #2 3/15/2016 ug/m3	Outdoor Air #1 3/15/2016 ug/m3
1,1,1-Trichloroethane			**1.3**	<0.82	<0.82	<0.82	<0.82
1,1 Dichloroethene			<0.59	<0.59	<0.59	**0.95**	<0.59
1,2,4-Trimethylbenzene			**2.0**	**5.7**	**3.1**	**3.7**	**2.2**
1,3,5-Trimethylbenzene			**0.98**	**3.2**	**1.1**	**2.0**	**1.0**
2,2,4-trimethylpentane			**1.4**	<0.70	**1.6**	**1.5**	**1.5**
4-ethyltoluene			**0.59 J**	**1.5**	**0.79**	**1.1**	**0.64 J**
Acetone			**43.0**	**47.0**	**30.0**	**48.0**	**21.0**
Benzene			**7.3**	**2.3**	**6.5**	**6.0**	**1.8**
Carbon disulfide			**0.34 J**	**0.62**	<0.47	**13.0**	**0.31 J**
Carbon tetrachloride			**0.38 J**	**0.31 J**	**0.44 J**	**0.38 J**	**0.44 J**
Chloroform			<0.73	**0.98**	<0.73	**7.8**	<0.73
Chloromethane			**1.3**	**0.31**	**1.3**	<0.31	**0.93**
cis-1,2 Dichloroethene			**0.4 J**	<0.59	<0.59	**170.0**	<0.59
Cyclohexane			**2.3**	**8.3**	**1.8**	**44.0**	**4.1**
Ethyl acetate			**1.6**	**2.7**	**0.86 J**	**2.1**	**1.1**
Ethylbenzene			**2.5**	**3.3**	**1.8**	**2.8**	**1.5**
Freon 11			**1.2**	**1.2**	**1.2**	**1.0**	**1.2**
Freon 12			**2.4**	**2.1**	**2.5**	**2.1**	**2.4**
Heptane			**2.5**	**2.7**	**2.0**	**22.0**	**0.9**
Hexane			<0.53	**3.1**	**7.1**	**24.0**	**2.6**
Isopropyl Alcohol			**23.0**	**8.8**	**7.6**	**8.8**	**4.0**
m&p Xylene			**9.3**	**11.0 J**	**6.7**	**10.0**	**4.9**
Methyl Ethyl Ketone			**93.0**	**14.0**	**8.8 J**	**9.4**	**4.2**
Methyl Isobutyl Ketone			<1.2	**0.74 J**	<1.2	**2.5**	**1.6**
Methylene chloride	60	NA	**1.9**	**17.0**	**0.94**	**6.5**	**1.9**
0-Xylene			**2.8**	**4.6**	**2.1**	**3.7**	**1.9**
Styrene			**1.0**	**2.5**	**0.81**	**1.7**	**0.94**
Tetrachloroethylene	30	300	**5.5**	**23.0**	**7.3**	**150.0**	**5.4**
Tetrahyrdofuran			**5.2**	**1.8**	**12.0**	<0.44	**1.0**
Toluene			**13**	**17.0**	**9.8**	**20.0**	**9.8**
Trichloroethene	2	20	**0.48 J**	**1.2**	**0.48 J**	**110.0**	**0.27 J**
trans 1,2 Dichloroethene			<0.59	<0.59	<0.59	**21.0**	<0.59
Vinyl Chloride			<0.38	<0.38	<0.38	**2.4**	<0.38

J: Analyte detected at or below quantitation limit
0.0 Bold is a detection of specified volatile organic compound
< Not detected at or below specified quantitation limit
NYSDOH (2006) Table 3.1 and 3.2 Guidance

Exceeds NYSDOH Immediate Action Guidance

ANALYTICAL RESULTS SUMMARY TABLES - OFF-SITE COMPONENT

April, 2016

TABLE 6B: OFF SITE REMEDIAL INVESTIGATION SUBSURFACE & SURFACE SOIL ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS (DETECTED)
HIGHLAND PLAZA IN TONAWANDA, NEW YORK

				Sample #	SB-20	SB-20	SB-21	SB-21	SB-22	SB -22	SB -23	SB -23
Volatile Organic compounds			*ppm=mg/kg*	Depth	6 in-18 in	7 ft-8 ft	12 in-20 in	7 ft-8 ft	6 in-18 in	7 ft-8 ft	17 in-24 in	6 ft-7 ft
	CAS #	Protection Groundwater	Commer-cial	Date	10_15	10_15	10_15	10_15	10_15	10_15	10_15	10_15
1,1,1-Trichloroethane f	71-55-6	0.68	500b									
1,1 Dichloroethene	75-35-4	0.27	500[b]								0.00089 J	
cis -1,2-Dichloroethene [f]	156-59-2	0.25	500[b]						0.00079 J		0.23 J	**0.018**
trans-1,2-Dichloroethene [f]	156-60-5	0.19	500[b]					N			0.00078 J	
Acetone	67-64-1	0.05	500[b]		0.047 B	0.0033 J	**0.084**	O	**0.039**	0.0044 J	0.049	0.01 j
Benzene	71-43-2	0.06	44									
Chloroform	67-66-3	0.37	350					D				
Methyl ethyl ketone	78-93-3	0.12	500[b]		0.0065 J		0.017 J	E				
Methylene chloride	75-09-2	0.05	500[b]					T				
n - Propylbenzene [f]	103-65-1	3.9	500[b]					E				
Tetrachloroethene	127-18-4	1.3	150		0.0019 J	0.00095 J	0.0009 J	C	0.00086 J	0.0006 J	**19.0**	**4.9**
Toluene	108-88-3	0.7	500[b]					T				
Trichloroethene	79-01-6	0.47	200					I			**3.0**	**0.49**
1,2,4-Trimethylbenzene [f]	95-63-6	3.6	190					O				
1,3,5-Trimethylbenzene [f]	108-67-8	8.4	190					N				
Vinyl chloride [f]	75-01-4	0.02	13					S				
Xylene (mixed)	1330-20-7	1.6	500[b]									

Footnotes:

	Exceeds NYSDEC Part 375 Protection of Groundwater Soil Cleanup Objective
	Exceeds NYSDEC Part 375 Commercial Soil Cleanup Objective
H	**Sample was prepped or analyzed beyond the specified holding time**
B	**Compound was found in the blank and sample**
J	**Result is less than the reporting limit (RL), but > than or = to the method detection limit (MDL), and is estimated.**
F1	**MS and/or MSD Recovery is outside acceptance limits**
F2	**MS/MSD RPD exceeds control limits**

TABLE 6B: OFF SITE REMEDIAL INVESTIGATION SUBSURFACE & SURFACE SOIL ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS (DETECTED)
HIGHLAND PLAZA IN TONAWANDA, NEW YORK

Volatile Organic compounds	CAS #	Protection Groundwater	ppm=mg/kg Commer-cial	Sample #	SB -24	SB -24	SB -24	SB -25	SB -25	SB -26	SB -26
				Depth	6 in-14 in	14 ft-15 ft	23 ft-24 ft	16 in-20 in	6 ft-7ft	17 in-22 in	7 ft-8 ft
				Date	10_15	10_15	10_15	10_16	10_16	10_16	10_16
1,1,1-Trichloroethane f	71-55-6	0.68	500b								
1,1 Dichloroethene	75-35-4	0.27	500[b]			0.00082 J	0.0018 J		0.0029 J		
cis -1,2-Dichloroethene [f]	156-59-2	0.25	500[b]		**29.0**	**0.0078**	0.0011 J	**1.6**	0.29 E		0.00057 J
trans-1,2-Dichloroethene [f]	156-60-5	0.19	500[b]						0.0018 J		
Acetone	67-64-1	0.05	500[b]			0.005 J	0.0085 J		**0.045**		
Benzene	71-43-2	0.06	44								
Chloroform	67-66-3	0.37	350			0.00049 J			0.0013 J		
Methyl ethyl ketone	78-93-3	0.12	500[b]								
Methylene chloride	75-09-2	0.05	500[b]								
n - Propylbenzene [f]	103-65-1	3.9	500[b]						0.0004 J		
Tetrachloroethene	127-18-4	1.3	150		**1600.0**	**170.0**	**140.0**	**1400.0**	**740.0**	**0.22**	**0.0054**
Toluene	108-88-3	0.7	500[b]		0.5 J	0.0004 JB	0.00039 JB		0.00048 J		
Trichloroethene	79-01-6	0.47	200		**15.0**	**0.023**	**0.061**	**0.014**	0.21 E		
1,2,4-Trimethylbenzene [f]	95-63-6	3.6	190						0,0015 J		
1,3,5-Trimethylbenzene [f]	108-67-8	8.4	190						0.00071 J		
Vinyl chloride [f]	75-01-4	0.02	13								
Xylene (mixed)	1330-20-7	1.6	500[b]		0.98 J						

Footnotes:

	Exceeds NYSDEC Part 375 Protection of Groundwater Soil Cleanup Objective
	Exceeds NYSDEC Part 375 Commercial Soil Cleanup Objective
H	**Sample was prepped or analyzed beyond the specified holding time**
B	**Compound was found in the blank and sample**
J	**Result is less than the reporting limit (RL), but > than or = to the method detection limit (MDL), and is estimated.**
F1	**MS and/or MSD Recovery is outside acceptance limits**
F2	**MS/MSD RPD exceeds control limits**

TABLE 6B: OFF SITE REMEDIAL INVESTIGATION SUBSURFACE & SURFACE SOIL ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS (DETECTED)
HIGHLAND PLAZA IN TONAWANDA, NEW YORK

				Sample #	SB -27	SB -27	SB -27	SB -28	SB -28	SB -29	SB -29
Volatile Organic compounds			*ppm=mg/kg*	Depth	0 in-14 in	14 ft-15 ft	23 ft-24 ft	10 in-22 in	7 ft-8 ft	17 in-22 in	7 ft-8 ft
	CAS #	Protection Groundwater	Commer-cial	Date	10_15	10_15	10_15	10_16	10_16	10_16	10_16
1,1,1-Trichloroethane f	71-55-6	0.68	500b								
1,1 Dichloroethene	75-35-4	0.27	500[b]				0.0012 J				0.0005 J
cis -1,2-Dichloroethene [f]	156-59-2	0.25	500[b]		0.0039 J	0.003 J	0.88 J				**1.2**
trans-1,2-Dichloroethene [f]	156-60-5	0.19	500[b]				**0.03**				0.0012 J
Acetone	67-64-1	0.05	500[b]			0.0062 JB	0.0046 J		0.0097 JB	0.011 J	0.0035 J
Benzene	71-43-2	0.06	44								
Chloroform	67-66-3	0.37	350								
Methyl ethyl ketone	78-93-3	0.12	500[b]								
Methylene chloride	75-09-2	0.05	500[b]		0.0032 JB						
n - Propylbenzene [f]	103-65-1	3.9	500[b]								
Tetrachloroethene	127-18-4	1.3	150		**0.029**	**0.011**	**79.0**	0.0065 F1	0.0006 J	0.0015 JB	**18.0**
Toluene	108-88-3	0.7	500[b]								
Trichloroethene	79-01-6	0.47	200		**0.011**	**0.0027**	**5.4**				**0.59**
1,2,4-Trimethylbenzene [f]	95-63-6	3.6	190								0.25 J
1,3,5-Trimethylbenzene [f]	108-67-8	8.4	190								
Vinyl chloride [f]	75-01-4	0.02	13								
Xylene (mixed)	1330-20-7	1.6	500[b]								

Footnotes:

	Exceeds NYSDEC Part 375 Protection of groundwater Soil Cleanup Objective
	Exceeds NYSDEC Part 375 Commercial Soil Cleanup Objective
H	**Sample was prepped or analyzed beyond the specified holding time**
B	**Compound was found in the blank and sample**
J	**Result is less than the reporting limit (RL), but > than or = to the method detection limit (MDL), and is estimated.**
F1	**MS and/or MSD Recovery is outside acceptance limits**
F2	**MS/MSD RPD exceeds control limits**

TABLE 6B: OFF SITE REMEDIAL INVESTIGATION SUBSURFACE & SURFACE SOIL ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS (DETECTED)
HIGHLAND PLAZA IN TONAWANDA, NEW YORK

Volatile Organic compounds	CAS #	Protection Groundwater	Commer-cial ppm=mg/kg	Sample #	AWSS-1	AWSS-2	AWSS-3	AWSS-6	AWSS-7	Dup 2 AWSS-	AWSS-8	AWSS-9	AWSS-10	AWSS-11
				Depth	0 in-6 in	0 in-6 in	0 in-6 in	0"-4"	0"-4"	0"-4"	0"-4"	0"-4"	0"-4"	0"-4"
				Date	7/8/2014	7/8/2014	7/8/2014	10_18	10_18	10_18	10_18	10_18	10_18	10_18
1,1,1-Trichloroethane f	71-55-6	0.68	500b											
1,1 Dichloroethene	75-35-4	0.27	500b											
cis -1,2-Dichloroethene l	156-59-2	0.25	500b											
trans-1,2-Dichloroethene l	156-60-5	0.19	500b											
Acetone	67-64-1	0.05	500b											
Benzene	71-43-2	0.06	44											
Chloroform	67-66-3	0.37	350											
Methyl ethyl ketone	78-93-3	0.12	500b										0.016 J	
Methylene chloride	75-09-2	0.05	500b								0.0035 JB			0.0097 JB
n - Propylbenzene l	103-65-1	3.9	500b											
Tetrachloroethene	127-18-4	1.3	150		**40.2**	**19.3**	**89.3**	0.002 J	**0.0063**	**0.0019**	**0.0062**	0.001 J	0.0006 J	
Toluene	108-88-3	0.7	500b											
Trichloroethene	79-01-6	0.47	200											
1,2,4-Trimethylbenzene l	95-63-6	3.6	190								0.0014 J			
1,3,5-Trimethylbenzene l	108-67-8	8.4	190											
Vinyl chloride l	75-01-4	0.02	13											
Xylene (mixed)	1330-20-7	1.6	500b								0.0015 JB			0.0019 JB

Footnotes:

	Exceeds NYSDEC Part 375 Protection of Groundwater Soil Cleanup Cleanup Objective
	Exceeds NYSDEC Part 375 Commercial Soil Cleanup Objective
H	**Sample was prepped or analyzed beyond the specified holding time**
B	**Compound was found in the blank and sample**
J	**Result is less than the reporting limit (RL), but > than or = to the method detection limit (MDL), and is estimated.**
F1	**MS and/or MSD Recovery is outside acceptance limits**
F2	**MS/MSD RPD exceeds control limits**

TABLE 7B: OFF SITE REMEDIAL INVESTIGATION SUBSURFACE AND SURFACE SOIL ANALYTICAL RESULTS
SEMI - VOLATILE ORGANIC COMPOUNDS (DETECTED)
HIGHLAND PLAZA IN TONAWANDA, NEW YORK

			Sample #	SB-24	SB-24	SB-27	SB -28	AWSS-6	AWSS-7	AWSS-9	AWSS-11
			Depth	6 in-14 in	23 ft-24 ft	0 in-14 in	10 in-22 in	0 in-4 in	0 in-4 in	0 in-4 in	0 in-4 in
	CAS Number	Commercial	Date	10/15/2015	10/15/2015	10/15/2015	10/16/2015	10/18/2015	10/18/2015	10/18/2015	10/18/2015
Semivolatile Organic Compounds		*ppm=mg/kg*									
Bis(2-ehtylhexyl) phthalate	NS	NS								6.9 J	
Acenaphthene	83-32-9	500[b]					0.77 JF1			4.7 J	
Anthracene [1]	120-12-7	500[b]			N		1.5 JF1		3.1 J	1.1	
Benz(a)anthracene [1]	56-55-3	5.6		0.76 J	O	0.46 J	**2.3** F1		**9.5** J	**28.0**	2.38 J
Benzo(a)pyrene	50-32-8	1[1]		**2.1** J		**1.0** J	**2.1** F1	**2.0** J	**9.6** J	**26.0**	**3.4** J
Benzo(b)fluoranthene[1]	205-99-2	5.6		2.5 J	D	0.98 J	2.2 F1	1.7 J	**12.0**	**33.0**	4.5 J
Benzo(g,h,i)perylene [1]	191-24-2	500[b]		2.6 J	E	0.93 J	1.4 JF1		6.8 J	21.0	2.9 J
Benzo(k)fluoranthene[1]	207-08-9	56		1.2 J	T		1.4 JF1		5.3 J	16.0	1.1 J
Carbazole	None	NS			E		0.62 JF1		2.6 J	5.7 J	
Chrysene [1]	218-01-9	56		1.1 J	C		2.1 F1		9.7 J	28.0	2.8 J
Dibenzo(a,h) anthracene	53-70-3	0.56			T				ND	**6.6** J	**2.2** J
Dibenzofuran	132-64-9	350			I		0.49 JF1		ND	2.5 J	
Fluoranthene [1]	206-44-0	500[b]		1.5 J	O	0.69 J	5.4 F1	1.1 J	22.0	68.0	5.2 J
Fluorene	86-73-7	500[b]			N		0.79 JF1		1.2 J	4.6 J	
Indeno(1,2,3-cd)pyrene [1]	193-39-5	5.6		2.5 J	S	1.1 J	1.4 JF1		**6.5 J**	**17.0**	3.0 J
Naphthalene [1]	91-20-3	500[b]					0.99 JF1			2.3 J	
Phenanthrene [1]	85-01-8	500[b]					5.1 F1		14.0	43.0	1.9 J
Pyrene[1]	129-00-0	500[b]		1.6 J		0.58 J	4.2 F1		16.0	50.0	4.0 J

Footnotes: **Exceeds NYSDEC Part 375 Commercial Soil Cleanup Objective**

NS: No standard

H: Sample was prepped or analyzed beyond the specified holding time

B: Compound was found in the blank and sample

J: Result is < than the reporting limit (RL), but > than or = to the method detection limit (MDL), and is estimated

F1: MS and/or MSD Recovery is outside acceptance limits

F2: MS/MSD RPD exceeds control limits

EGMS April, 2016

TABLE 10B: OFF SITE REMEDIAL INVESTIGATION GROUNDWATER DETECTIONS - VOLATILE ORGANIC COMPOUNDS HIGHLAND PLAZA, IN TONAWANDA, NEW YORK

Sample Location	NYSDEC Standards & Guidance Values (ug/L)	MW-4	MW-4	MW-5	MW-5
Sample Date		22-Dec-15	22-Dec-15	22-Dec-15	22-Dec-15
Matrix		Water	Water	Water	Water
Units		ug/L	ug/L	ug/L	ug/L
Contaminant			*DILUTE*		*DILUTE*
Volatile Organic Compounds					
Acetone	50	ND		ND	
1,1-Dichloroethene	5	**10.0 J**		ND	
cis-1,2-Dichloroethene	5	**900.0**		**1100.0**	**910.0**
trans-1,2-Dichloroethene	5	ND		**34.0**	
Tetrachloroethene	5	**22,000 E**	**58,000.00**	**3200 E**	**3000.0**
Trichloroethene	5	**740**	**560 J**	**1700**	**1500**

Notes

Exceeds standard

1) Standards are NYSDEC T.O.G.S 1.1.1 Ambient Water Quality Standards
2) NS=no standard
J= Estimated Value
E= Result Exceeded Calibration Range

NEW YORK STATE OF OPPORTUNITY. Department of Health

ANDREW M. CUOMO
Governor

HOWARD A. ZUCKER, M.D., J.D.
Commissioner

SALLY DRESLIN, M.S., R.N.
Executive Deputy Commissioner

August 4, 2016

Mr. Michael Cruden, Director
Remedial Bureau E
Division of Environmental Remediation
NYS Department of Environmental Conservation
625 Broadway,
Albany, NY 12233

Re: **Significant Threat Determination**
Highland Plaza
Site #C915293
Tonawanda, Erie County

Dear Mr. Cruden:

At your Department's request, we have reviewed all supporting documentation for the referenced site. Based on that review, the primary contaminants of concern are volatile (VOC) and semi-volatile organic compounds (SVOC) from previous site activities. I understand that VOCs and SVOCs have been detected on- and off-site in soil and groundwater at concentrations exceeding applicable standards. VOCs have also been found in on-site sub-slab soil vapor, indoor air and off-site in outdoor air at elevated concentrations.

This information, in conjunction with the location of the site near residential area indicates that the site-related contamination has the potential to impact the occupants of nearby off-site buildings. Additional investigation into the nature and extent of off-site contamination, along with actions to reduce exposures if necessary, is recommended.

Based on the information provided to date and the potential for exposure to site-related contamination, I believe this site represents a significant threat to public health. If you have any questions, please contact me at (518) 402-7860.

Sincerely,

Charlotte M. Bethoney

Charlotte M. Bethoney, Chief
Regions 1, 5, & 9
Bureau of Environmental Exposure Investigation

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