

BROWNFIELD CLEANUP PROGRAM DECISION DOCUMENT

3807 Highland Avenue
Niagara Falls
Niagara County, New York
Site No.: C932145
May 2010

Statement of Purpose and Basis

This Brownfield Cleanup Program (BCP) Decision Document presents the remedy identified by the Department of Environmental Conservation (Department) for the site. The remedial program was chosen in accordance with Article 27 Title 14 of the New York State Environmental Conservation Law and the 6 NYCRR375 regulations relative to the BCP.

Description of the Site

This BCP project is located at 3807 Highland Avenue, Niagara Falls, Niagara County. This site is approximately 22 acres in size.

The site is currently an active industrial complex and its intended use is industrial. Globe Metallurgical has re-furbished and redeveloped the site for the production of metallurgical and chemical-grade silicon metal and silicon based specialty alloys. Current plans call for the complete redevelopment of the site with the construction of a new facility on the western portion of the site that will produce and develop high-purity silicon for use in photo voltaic solar cells.

The known contaminants are Petroleum, Semi-Volatile Organics (SVOCs), Metals, and Polychlorinated biphenyls (PCBs) which are impacting the Soil and Sediment. The suspected contaminants are Petroleum, Chlorinated Solvents, SVOCs, Metals and PCBs which may be impacting the Soil, Groundwater and Sediment.

By letter dated March 12, 2009 the owner of the Globe BCP site requested that the adjacent proposed Solsil site be included in an amended BCP application. Additional data was provided to support the amended BCP application.

An amended application was submitted by the owner in May 2009. The application was approved and an agreement was signed on 9/4/2009.

A Remedial Investigation (RI) and Interim Remedial Measures (IRM) activities to address areas of concern was performed during the winter 2009/2010. An IRM to address areas of concern was completed and a RI/Alternatives Analysis Report (AAR)/IRM report recommending no further action was submitted March 2010.

Nature and Extent of Contamination

The site is a former heavy industrial facility since approximately 1910. Several environmental conditions related to the historic industrial manufacturing including underground storage tanks, drums, maintenance/repair buildings, current/former electrical substations, former waste battery storage area and a former smoke stack area have been identified. Contamination detected on site in the soil and sediment

included elevated levels of inorganic compounds above the industrial and commercial SCO's and possible hazardous waste. SVOCs, VOCs, PCBs and petroleum contaminants have also been detected in the soil and sediment.

The remedial Investigation of the site identified several areas of concern that included:

Surface Soil/Fill – Twenty eight surface soil/fill samples (SS-1 through SS-28) were collected across the site. RI surface soil/fill samples were analyzed for the Target Compound List (TCL), SVOCs, Target Analyte List (TAL) metals and PCBs. Nine historic surface soil samples were collected previous to the BCP RI. Historic samples were analyzed for TCL plus NYSDEC STARS (Volatile Organic Compounds (VOCs), TCL VOCs, TAL metals and/or PCBs. Concentrations of VOCs and PCBs were found below Part 375 Industrial SCOs. Benzo(a)Pyrene was detected at four sample locations slightly above its industrial Soil Cleanup Objectives (SCOs), however, that compound tends to be ubiquitous in soils at historic industrial properties and does not appear to be attributable to a specific release on-Site. Several SVOCs (historic sample locations SS-7 and SS-9) and Arsenic (historic sample SS-7 and RI samples SS-1 and SS-5) were detected at concentrations above the Part 375 Industrial SCOs.

Subsurface Soil/Fill – 29 Test pits (TP-1 through 29) and 30 direct push soil borings (SB-1 through SB-30) were used to evaluate the subsurface soil conditions. Subsurface soil/fill samples were collected from the test pits and soil borings and field screened for the presence of VOCs. Samples were analyzed for TCL SVOCs, PCBs and TAL Metals. Based on the field screening, 18 locations were also analyzed for TCL plus STARS VOCs. Concentrations of VOCs, pesticides, herbicides and PCBs were below Part 375 Industrial SCOs. Benzo(a)pyrene and dibenzo(a,h)anthracene were detected above the Industrial SCOs, these compounds tend to be ubiquitous in soils at historic industrial properties and do not appear to be attributable to a specific release on site. Inorganic compounds, arsenic (TP-1, TP-5, TP-22, TP-26, TP-29, SB-25, SB-29 and SB-30), chromium (TP-13 and TP-16), manganese (TP-1, SB-25 and SB-30) and nickel (TP-16) were found above the Industrial SCOs.

Sediments – Three sediment samples (SED-1, SED-2 and SED-3) were collected from on-Site catch basins during the RI. Two historic sediment samples were collected previous to the RI. Sediment samples were analyzed for TCL plus NYSDEC STARS VOCs, TCL SVOCs, TAL metals. Concentrations of VOCs, inorganic compounds and PCBs were below Part 375 Industrial SCOs. SVOCs were detected above the Industrial SCOs in several sumps/catch basins on site (historic sample SUMP-2, SED-3 and SED-3).

Stack Deposits – Historic furnace stack deposits in Stack-1 (west) and Stack-2 (east) were collected and analyzed from the two inactive furnace stacks prior to the RI. Stack-2 was put back into service prior to the RI activities therefore no samples were collected from Stack-2 during the RI. Historic data from Stack-2 indicated that the deposits were below Part 375 Industrial SCOs. RI sampling of the inactive Stack-1 was for PCBs only. Historic stack deposits in the Stack-1 indicate elevated arsenic concentrations as 666 ppm above the Part 375 Industrial SCO's. Toxicity Characteristic Leaching Procedure (TCLP) analysis for hazardous waste characteristics indicated the stack deposits were not a hazardous waste.

Groundwater – Six monitoring wells (MW-1, MW-2, MW-3S, MW-3D, MW-4 and MW-5) were installed in the overburden soils on the site to evaluate the groundwater gradient and contamination. Groundwater samples collected from the wells were analyzed for TCL plus NYSDEC STARS list VOCs, TCL SVOCs and TAL metals. Slightly elevated concentrations of two VOCs and one SVOC were detected above groundwater standards in one monitoring well (MW-5). Metals detected at concentrations above the groundwater standards included magnesium, manganese and sodium in all monitoring wells.

These metals are naturally occurring minerals commonly encountered in natural environments. Chromium was detected slightly above groundwater standards in MW-2.

The attached summary tables summarize the sample data and the attached figures indicate sample locations.

Description of the Remedy

To address areas of concern identified during the Remedial Investigation, an IRM was completed during the winter 2009/2010.

The completed IRM included:

- Removal and cleaning of aboveground storage tanks,
- Removal and disposal of 54 drums containing waste materials,
- Excavation and disposal of approximately 3844 tons of non-hazardous soil/fill and sediment debris that exceeded Part 375 SCOSs. Excavations were then backfilled with approved on-site soil,
- Removal and recycling of approximately 1150 tons of electronic wastes and three drums containing light ballasts,
- Removal and disposal of approx 250 tons of ash deposits in abandoned Stack-1.
- Removal and disposal of abandoned lab chemicals found in the former facility lab area.

The IRMs performed as part of the Remedial Investigation addressed the identified areas of concern. No further remedial action is planned.

Future Site Use

Based on the historical and current site use, the anticipated future site use will continue to be industrial. An Environmental easement has been prepared and will be filed in the Niagara County Clerk's office that will restrict the use of groundwater on the site, restrict the site to industrial uses and require the preparation approval and use of a Site Management Plan.

Locations for Viewing Public Documents

This Decision Document and the Remedial Investigation/Alternatives Analysis/Interim Remedial Measures Report and other documents are available for public review.

The public may view project documents at the following locations:

Niagara Falls Public Library
1425 Main Street
Niagara Falls, New York 14304
Phone: (716) 283-8309

Doris Jones Family Resource Center
3001 9th Street
Niagara Falls, NY 14305
Phone: (716) 285-5374

NYSDEC Region 9 Office
270 Michigan Avenue
Buffalo, New York 14203
Phone: (716) 851-7220
(Please call for appt.
Michael Hinton Project
Manager)

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action and will allow for the identified use of the site. This remedy utilizes permanent solutions and alternative treatment to the maximum extent practicable, and satisfies the preference for remedies that reduce remove or otherwise treat or contain sources of contamination and protection of groundwater.

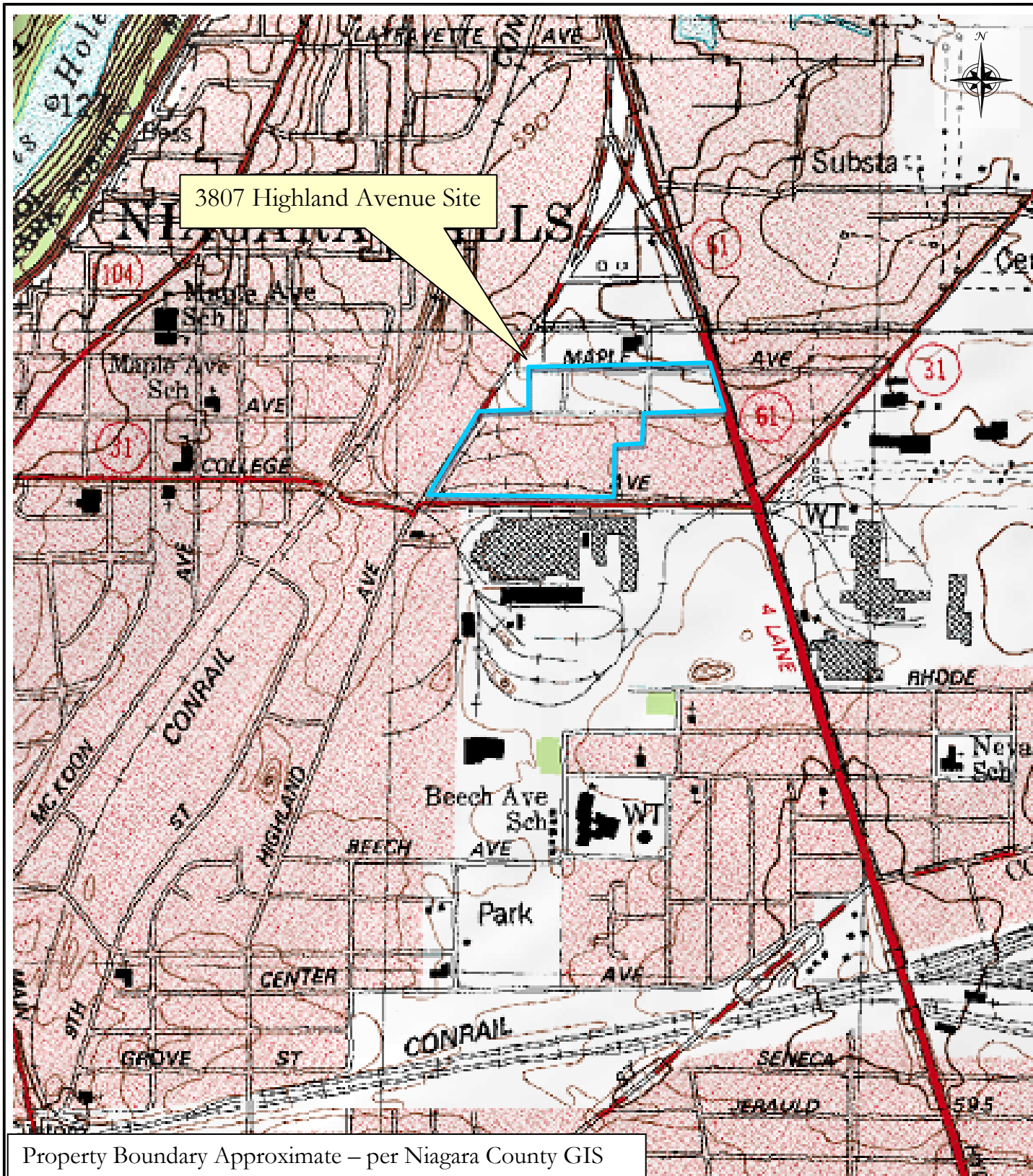
June 9, 2010

Date

Director
Remedial Bureau E
Division of Environmental Remediation

Electronic versions of project documents are also available at <http://www.dec.ny.gov/chemical/50224.html>

FIGURE 1



Property Boundary Approximate – per Niagara County GIS



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

SITE LOCATION AND VICINITY MAP

RI / AAR / IRM REPORT
3807 HIGHLAND AVENUE

NIAGARA FALLS, NEW YORK
PREPARED FOR

GLOBE METALLURGICAL, INC & SOLSIL, INC.

PROJECT NO.: 0170-001-103
DATE: JANUARY 2010
DRAFTED BY: NTM



— BCP PROPERTY BOUNDARY

NOT TO SCALE



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

PROJECT NO.: 0170-001-300

DATE: MARCH 2010

DRAFTED BY: NTM

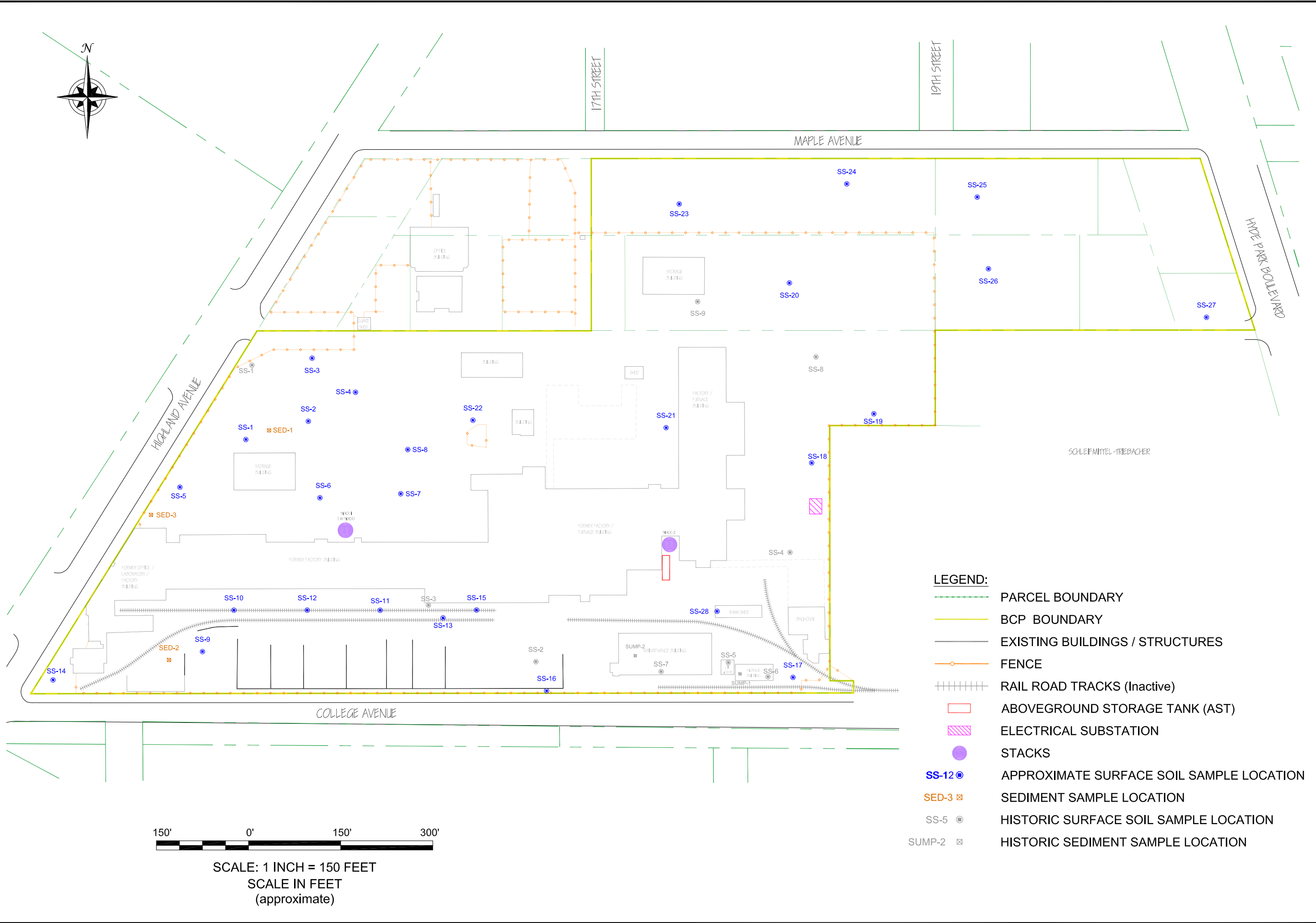
SITE PLAN (AERIAL)

3807 HIGHLAND AVENUE SITE

NIAGARA FALLS, NEW YORK

PREPARED FOR
GLOBE METALLURGICAL, INC. & SOLSIL, INC.

FIGURE 2



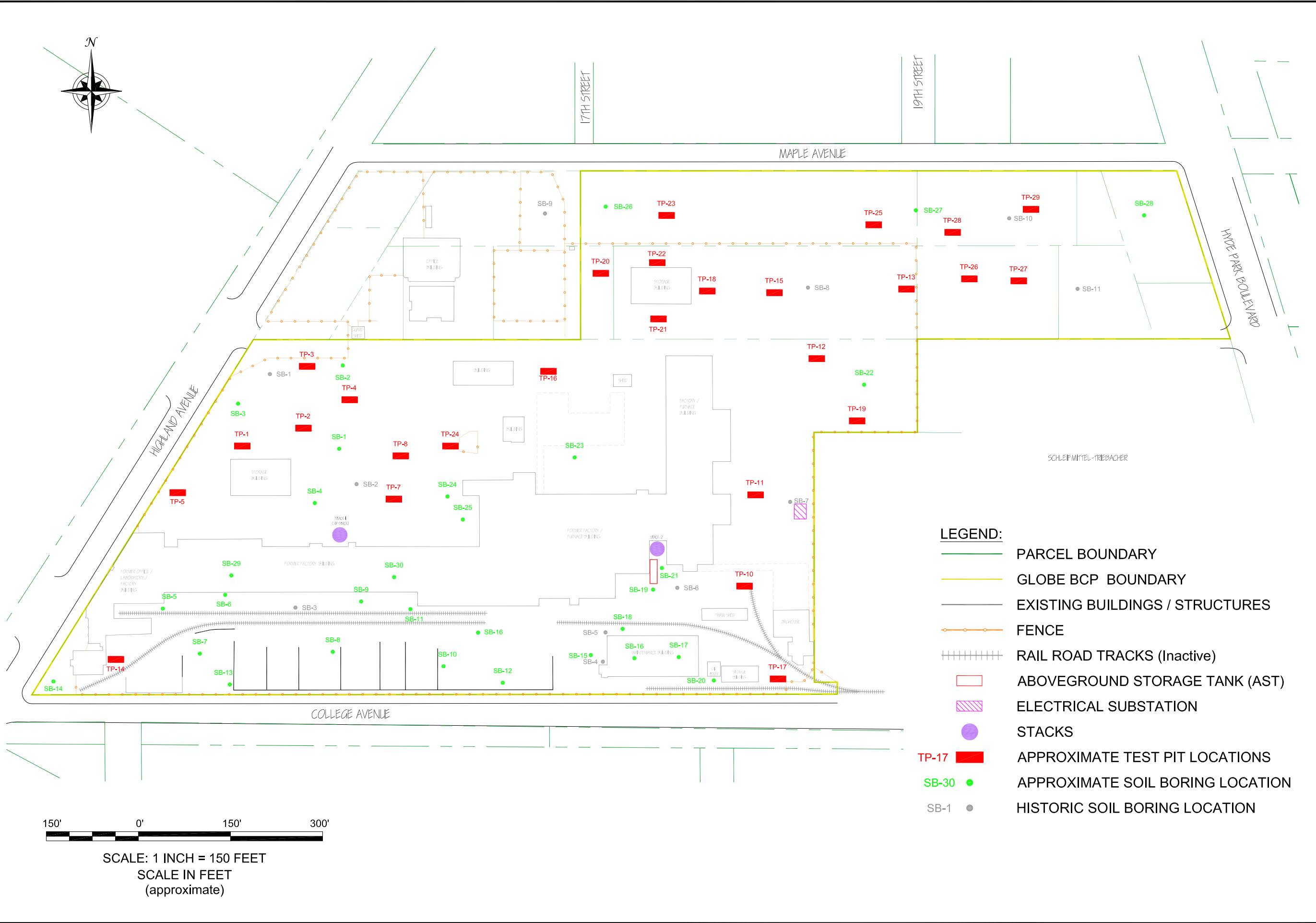
SCALE: 1 INCH = 150 FEET
SCALE IN FEET
(approximate)

- LEGEND:**
- PARCEL BOUNDARY
 - BCP BOUNDARY
 - EXISTING BUILDINGS / STRUCTURES
 - FENCE
 - RAIL ROAD TRACKS (Inactive)
 - ABOVEGROUND STORAGE TANK (AST)
 - ELECTRICAL SUBSTATION
 - STACKS
 - APPROXIMATE SURFACE SOIL SAMPLE LOCATION
 - SEDIMENT SAMPLE LOCATION
 - HISTORIC SURFACE SOIL SAMPLE LOCATION
 - HISTORIC SEDIMENT SAMPLE LOCATION

SURFACE SOIL AND SEDIMENT SAMPLING LOCATIONS

RI / AAR / IRM
3807 HIGHLAND AVENUE SITE
NIAGARA FALLS, NEW YORK
PREPARED FOR
GLOBE METALLURGICAL, INC. & SOLSIL, INC.

FIGURE 3

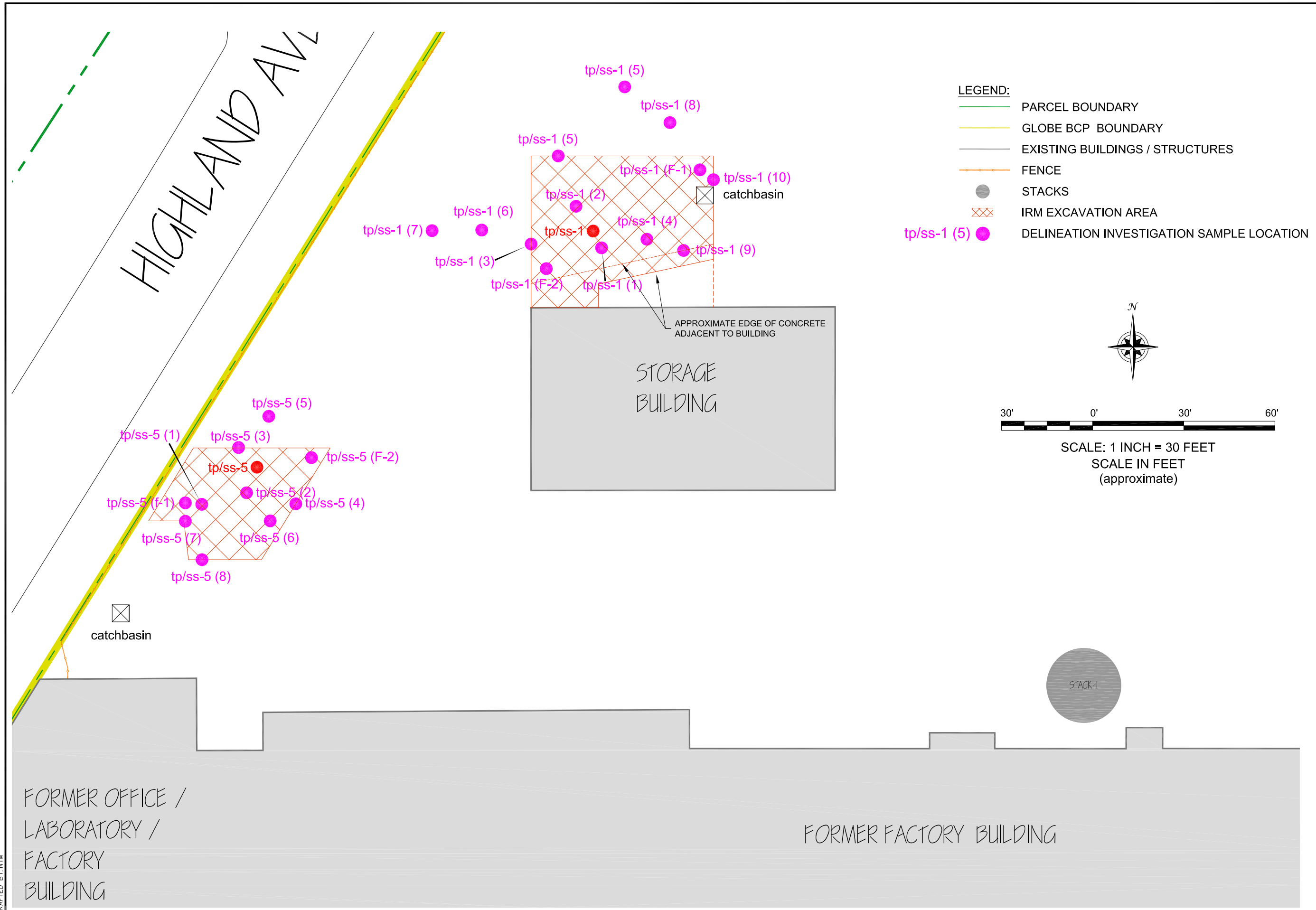


SUB-SURFACE SOIL SAMPLING LOCATIONS

RI / AAR / IRM
3807 HIGHLAND AVENUE SITE
NIAGARA FALLS, NEW YORK
PREPARED FOR
GLOBE METALLURGICAL, INC. & SOLSIL, INC.

FIGURE 4

DATE: MARCH 2010
DRAFTED BY: NTM



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

BENCHMARK
ENVIRONMENTAL
ENGINEERING &
SCIENCE, PLLC

JOB NO.: 0170-001-103

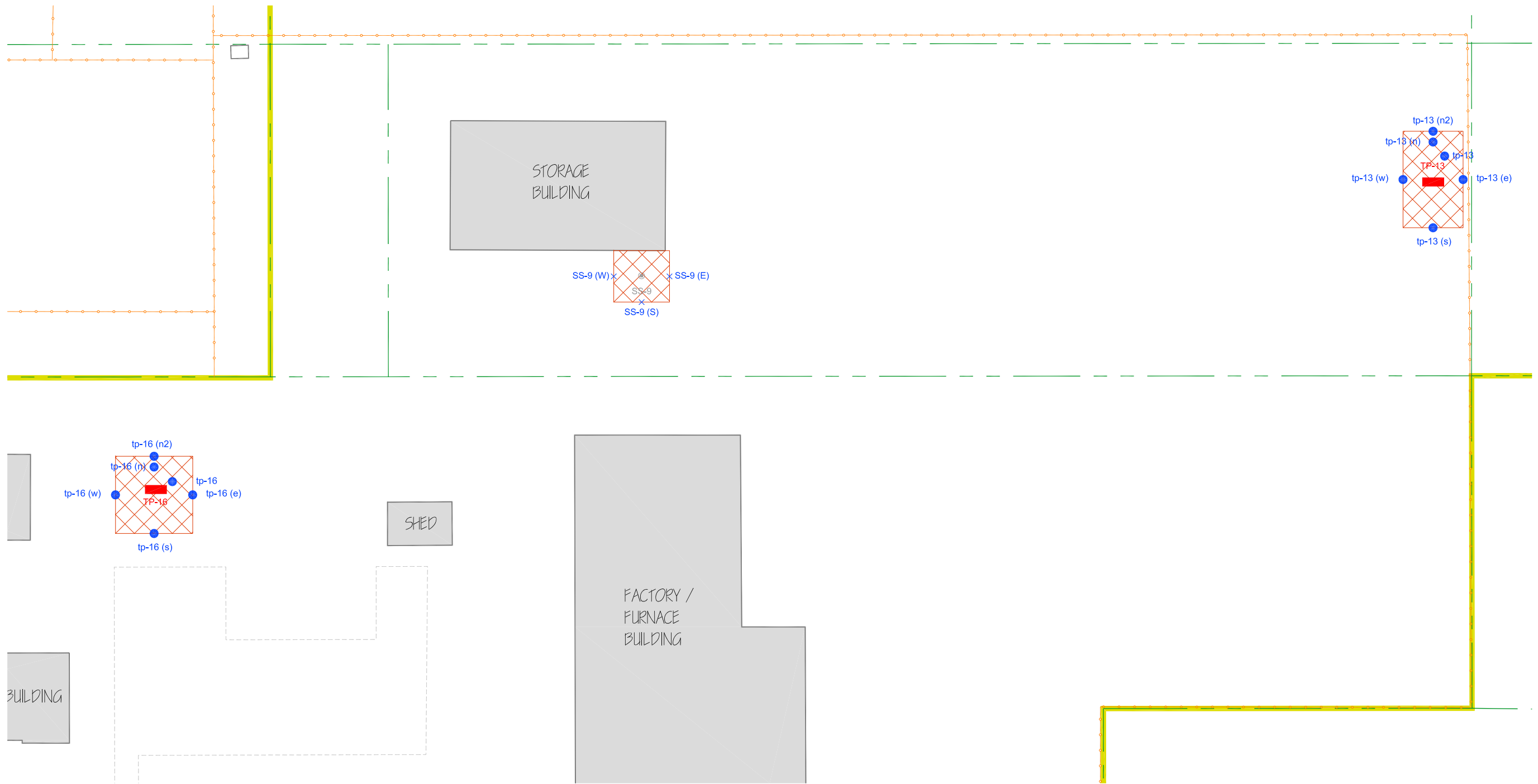
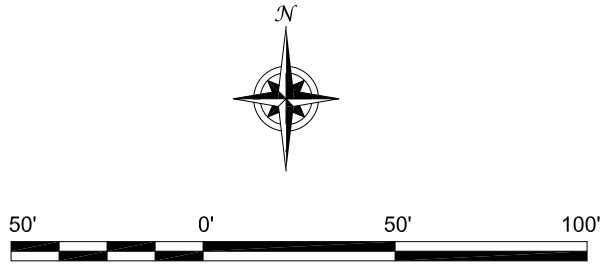
TP-1 & TP-5 DELINEATION INVESTIGATIONS

RI/AAR/IRM REPORT
3807 HIGHLAND AVENUE SITE
NIAGARA FALLS, NEW YORK
PREPARED FOR
GLOBE METALLURGICAL, INC. & SOLSIL, INC.

FIGURE 4a

LEGEND:

- PARCEL BOUNDARY
- GLOBE BCP BOUNDARY
- EXISTING BUILDINGS / STRUCTURES
- FENCE
- STACKS
- ⊠ IRM EXCAVATION AREA
- tp-13 (e) DELINEATION INVESTIGATION SAMPLE LOCATION



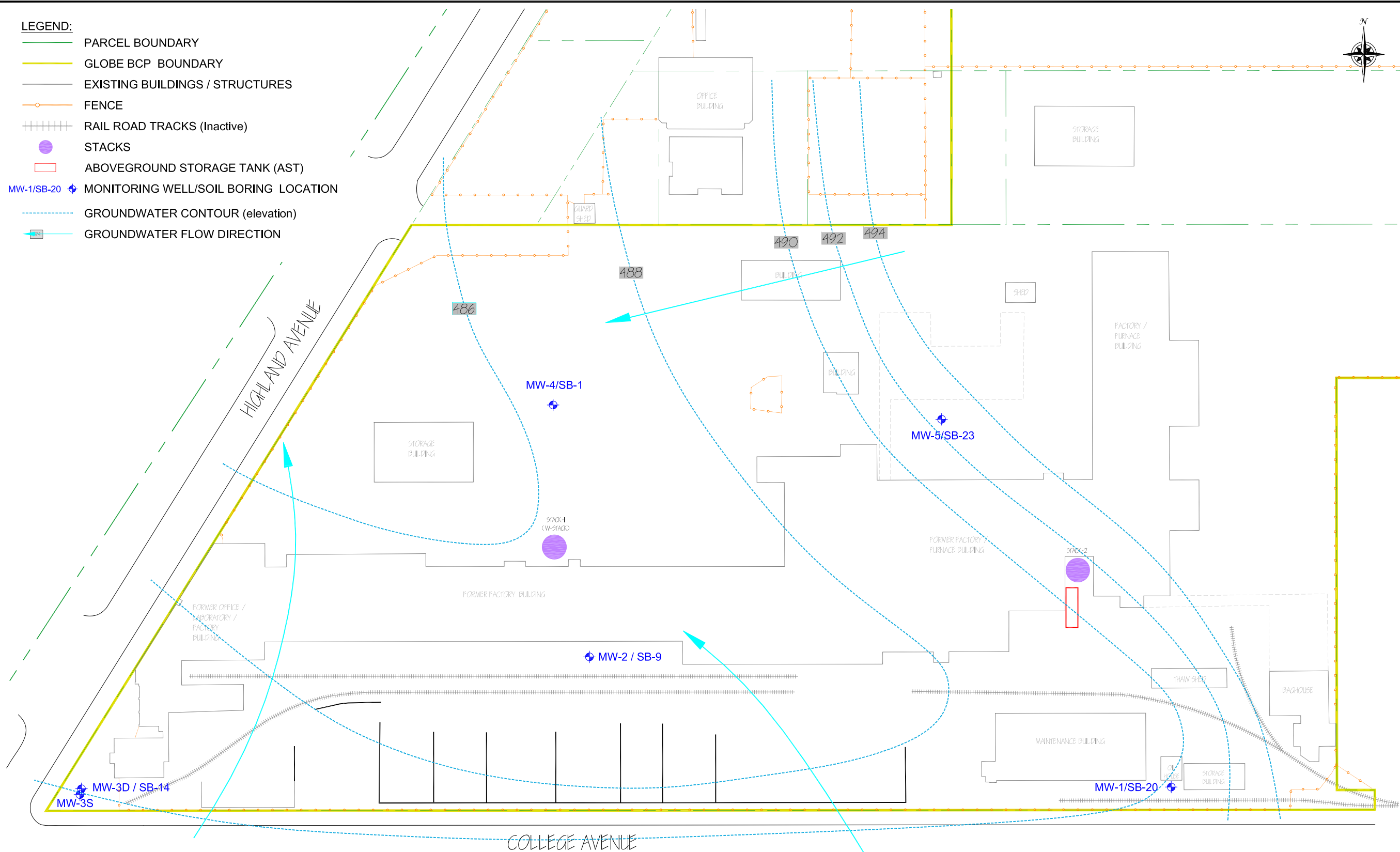
DATE: MARCH 2010
DRAFTED BY: NTM

TP-13, TP-16 & SS-9 DELINEATION INVESTIGATIONS

RI/AAR/IRM REPORT
3807 HIGHLAND AVENUE SITE
NIAGARA FALLS, NEW YORK
PREPARED FOR
GLOBE METALLURGICAL, INC. & SOLSIL, INC.

FIGURE 4b

- LEGEND:**
- PARCEL BOUNDARY
 - GLOBE BCP BOUNDARY
 - EXISTING BUILDINGS / STRUCTURES
 - FENCE
 - ||||| RAIL ROAD TRACKS (Inactive)
 - STACKS
 - ABOVEGROUND STORAGE TANK (AST)
 - ◆ MONITORING WELL/SOIL BORING LOCATION
 - - - GROUNDWATER CONTOUR (elevation)
 - GROUNDWATER FLOW DIRECTION



SCALE: 1 INCH = 100 FEET
 SCALE IN FEET
 (approximate)

DATE: FEBRUARY 2010
 DRAFTED BY: NTM

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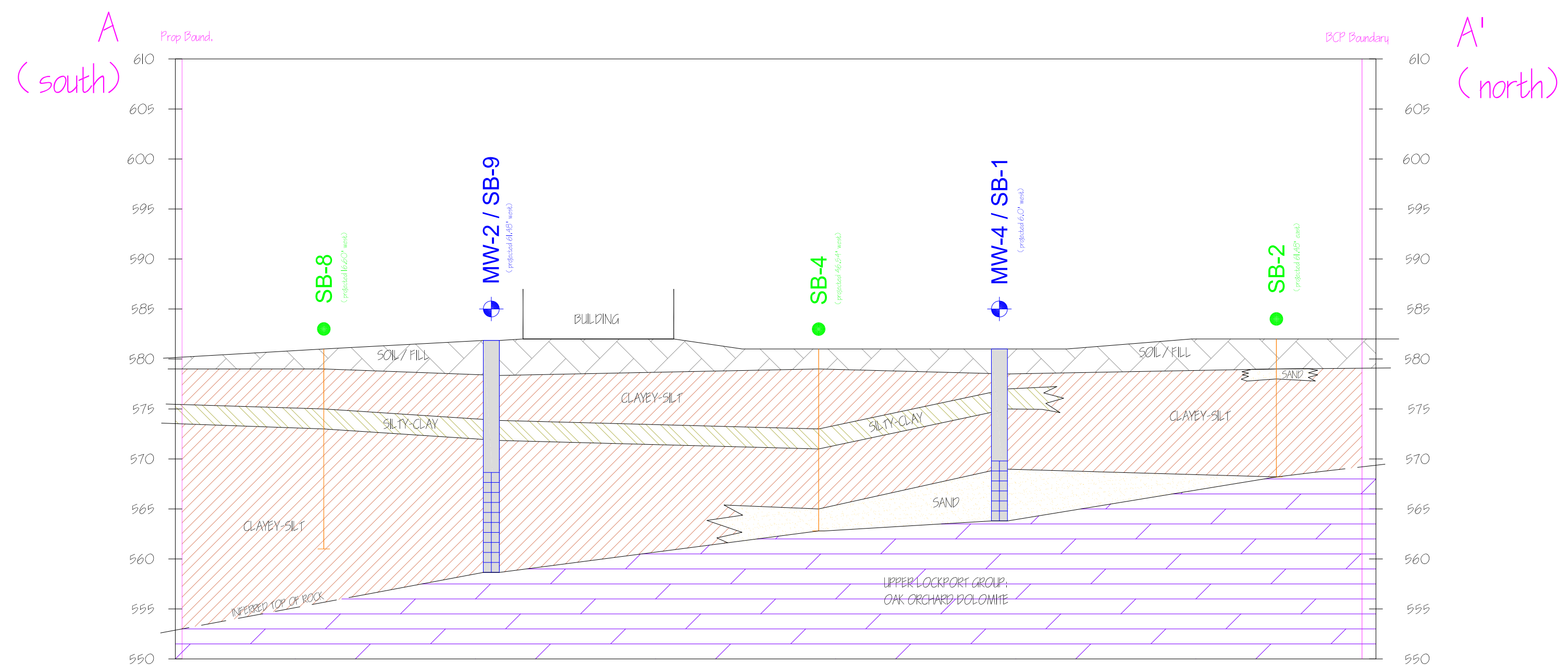
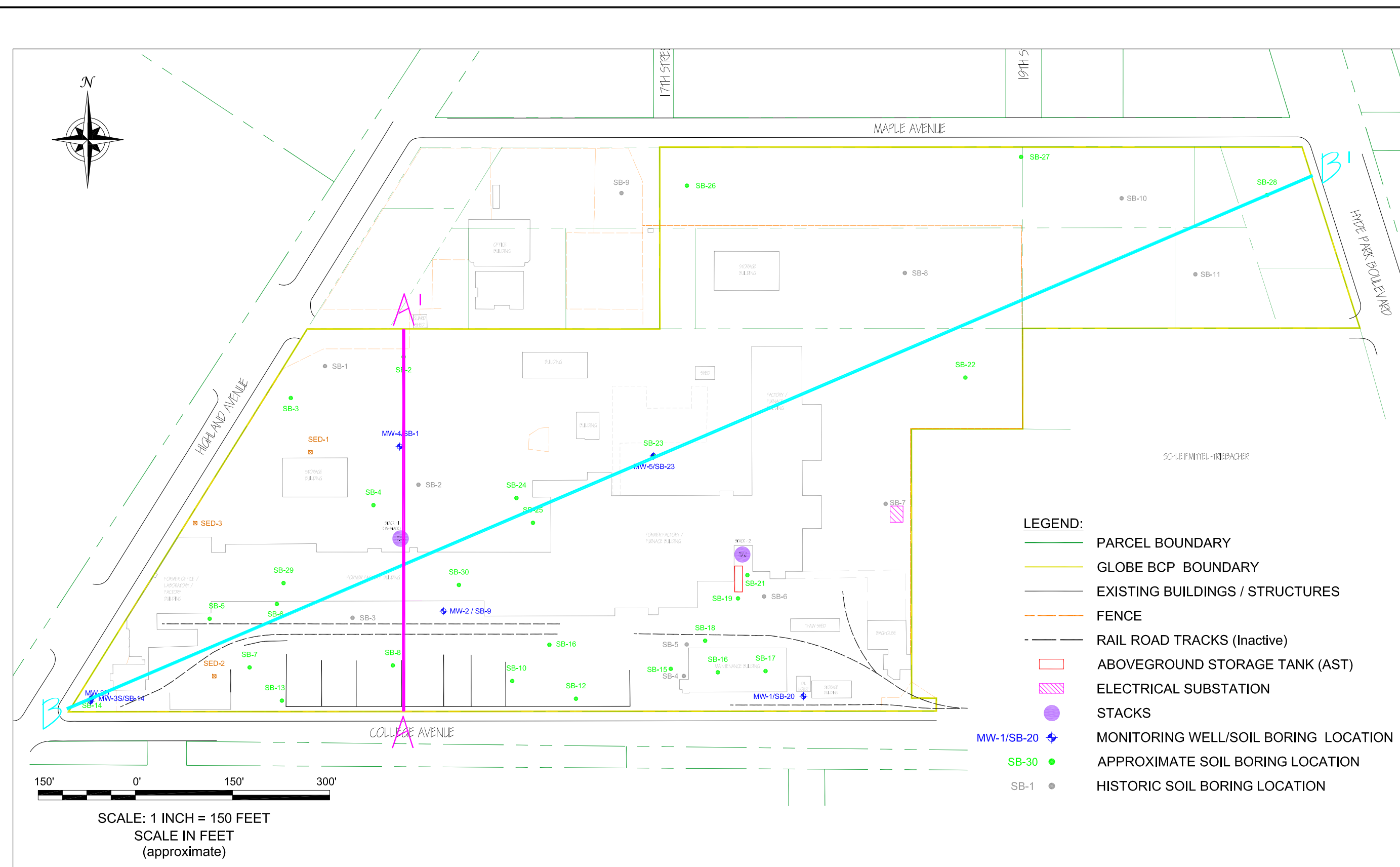
2558 HAMBURG TURNPIKE
 SUITE 300
 BUFFALO, NY 14218
 (716) 856-0599

JOB NO.: 0170-001-103

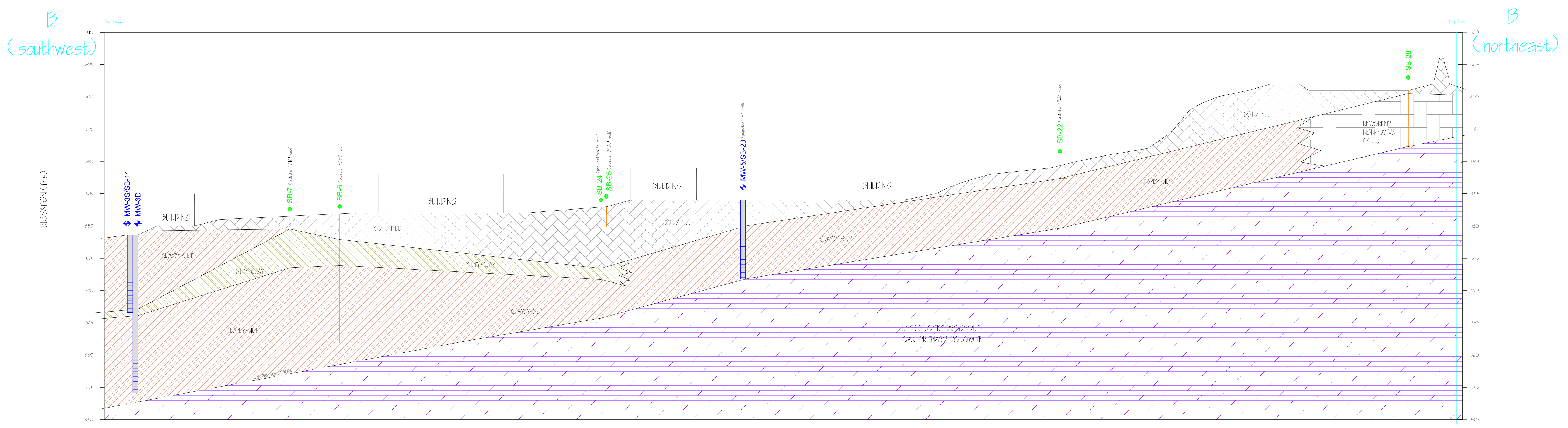
**GROUNDWATER MONITORING WELL LOCATIONS
 AND ISOPOTENTIAL MAP**
 RI / AAR / IRM

3807 HIGHLAND AVENUE SITE
 NIAGARA FALLS, NEW YORK
 PREPARED FOR
 GLOBE METALLURGICAL, INC. & SOLSIL, INC.

FIGURE 5



HORIZONTAL SCALE - 1" = 50'



HORIZONTAL SCALE - 1" = 80'

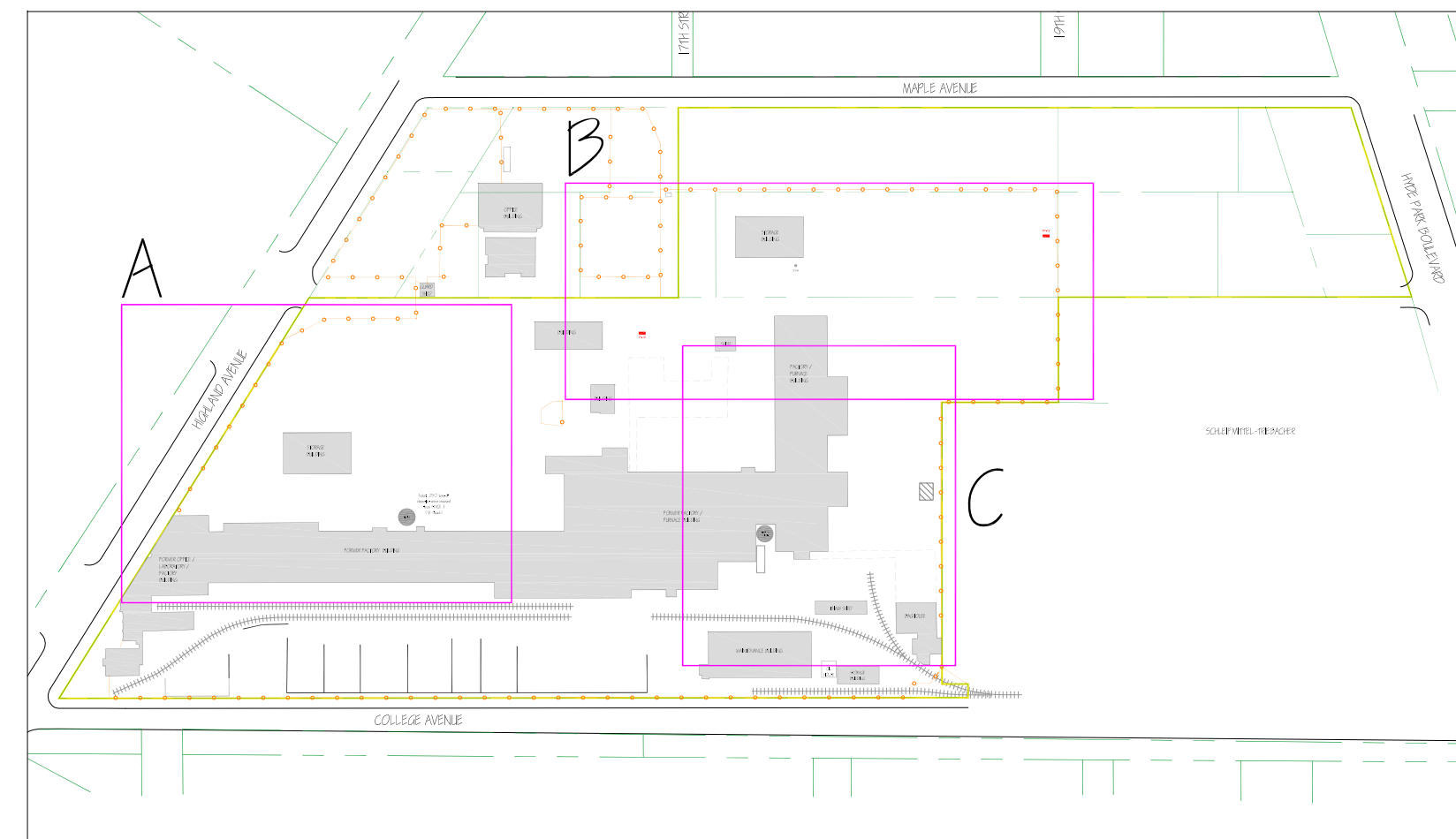
- Notes:
1. Overburden geologic descriptions obtained during Remedial Investigation (RI).
 2. Suspected top of bedrock is shown; no rock cores were obtained.
 3. Reference to bedrock type obtained from the "Geologic Map of New York, Niagara Sheet, Compiled and edited by Lawrence V. Richard & Donald W. Fisher, University of the State of New York, The State Education Department, March 1970.

NO.	BY	DATE	REMARKS

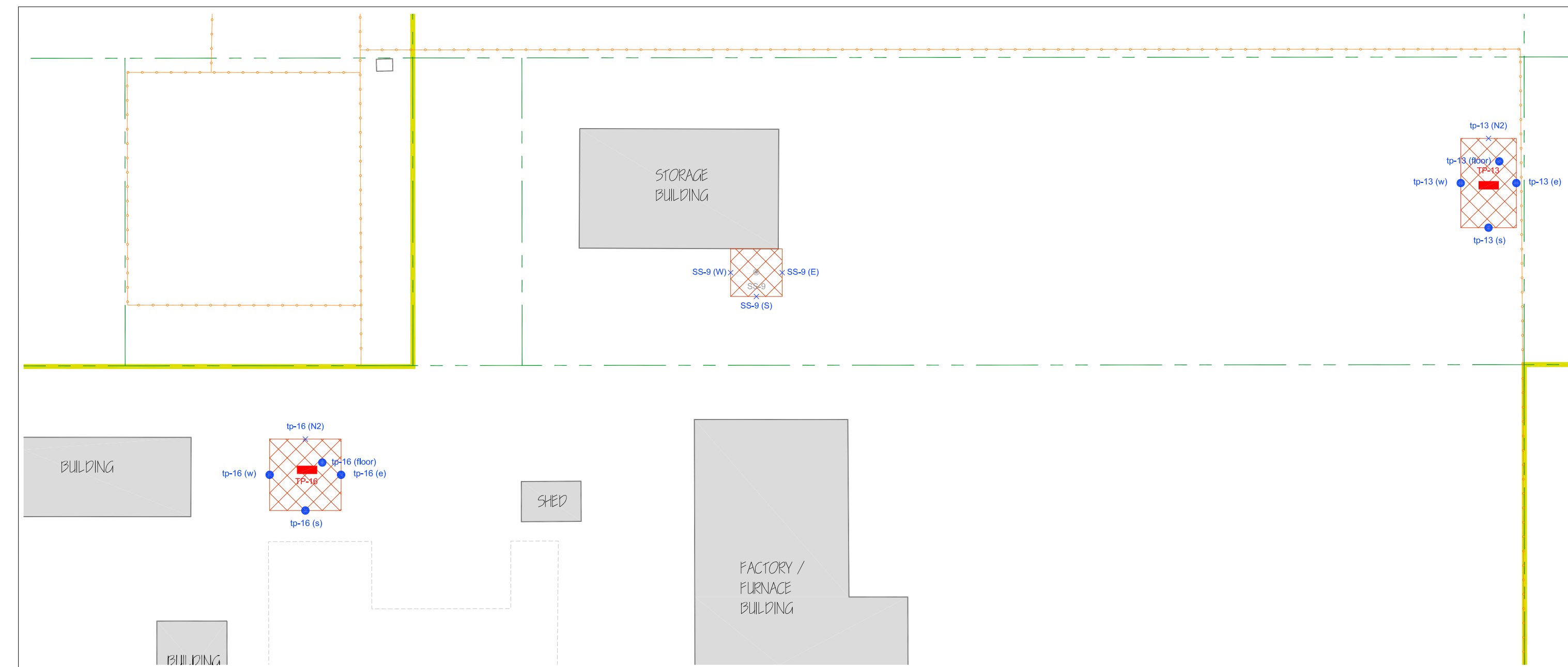
DRAWN BY:	NTM
DATE:	JANUARY 2010
CHECKED BY:	
APPROVED BY:	

CROSS SECTIONS
 RI / AAR / IRM REPORT
 3807 HIGHLAND AVENUE SITE
 NIAGARA FALLS, NEW YORK
 PREPARED FOR
 GLOBE METALLURGICAL, INC & SOLSIL, INC

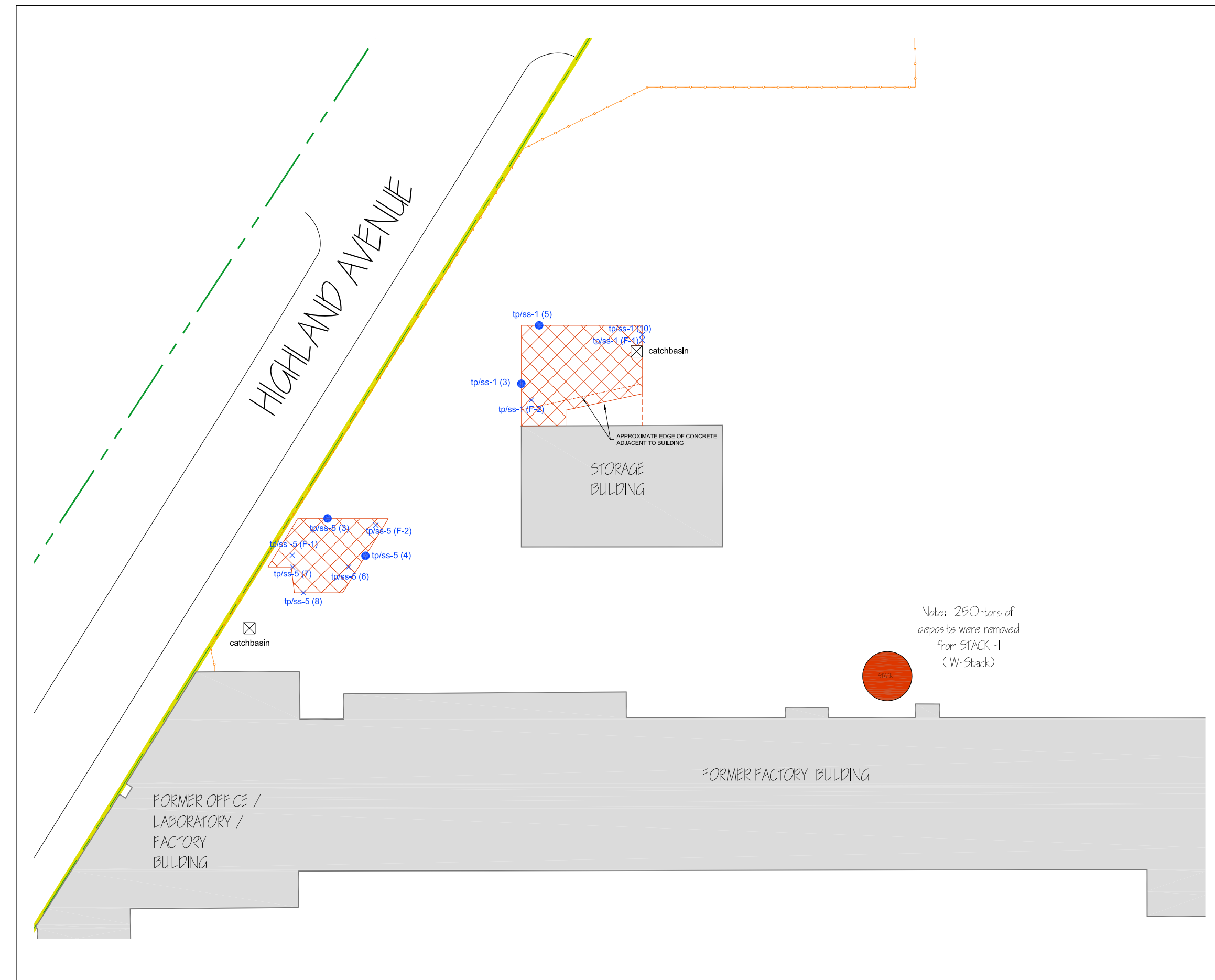
SITE PLAN (SCALE: 1" = 250')



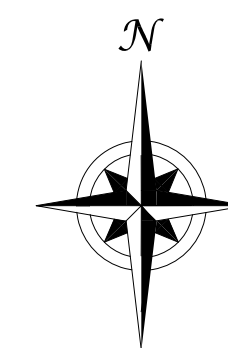
B: CHROMIUM AREAS [TP-13 & TP-16] & FORMER ELECTRODE STORAGE AREA [SS-9] (SCALE: 1" = 50')



A: ARSENIC AREAS [TP-1 & TP-5] & WEST STACK (SCALE: 1" = 50')

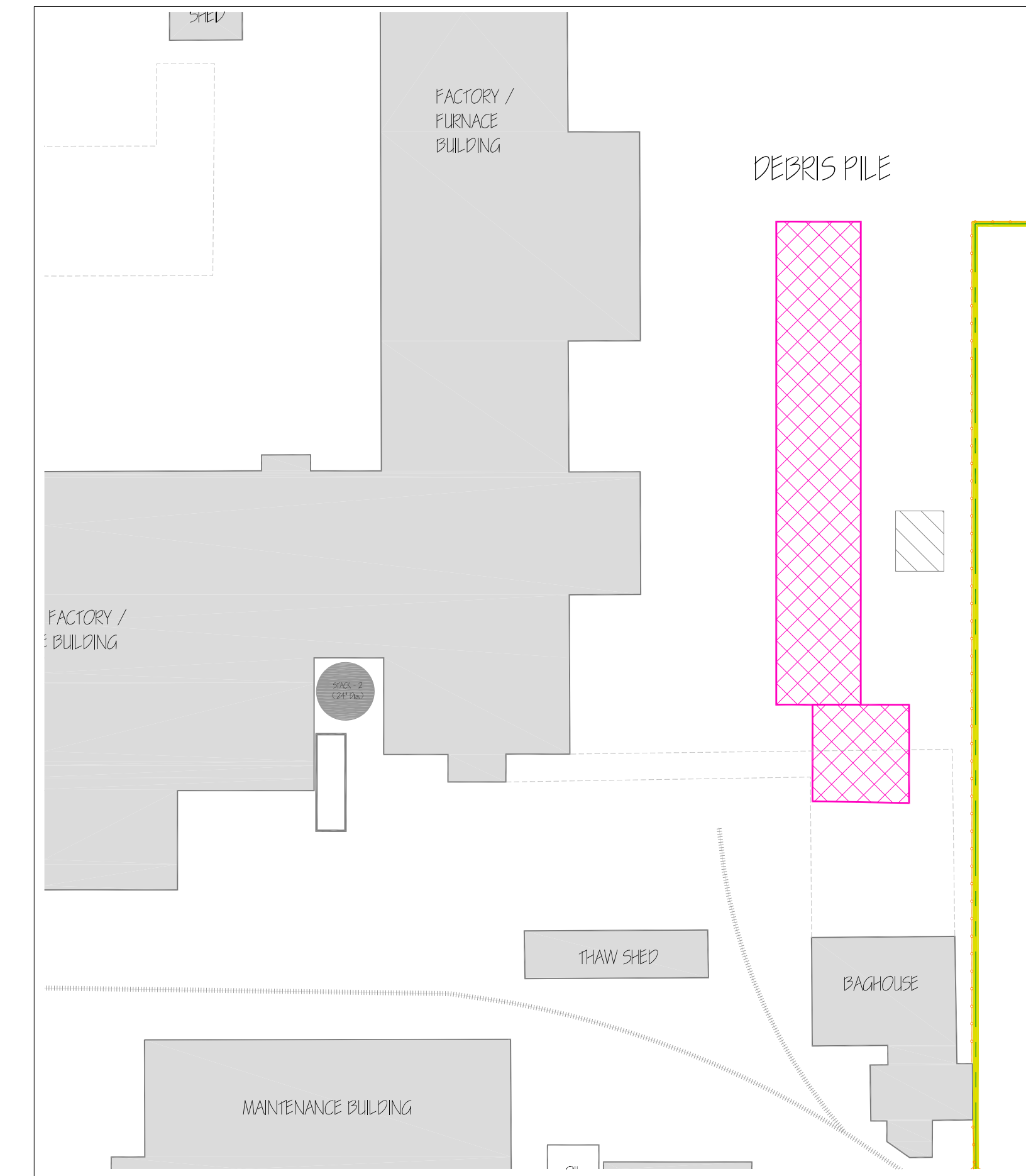


- LEGEND:**
- PARCEL BOUNDARY
 - GLOBE BCP BOUNDARY
 - EXISTING BUILDINGS / STRUCTURES
 - FENCE
 - ABOVEGROUND STORAGE TANK (AST)
 - ELECTRICAL SUBSTATION
 - DEBRIS PILE
 - STACKS
 - IRM EXCAVATION AREA
 - tp/ss-1 (4) DELINEATION INVESTIGATION SAMPLE LOCATION
 - × tp/ss-5 (8) CONFIRMATORY SAMPLE LOCATION
 - × tp/ss-1 (F-2) CONFIRMATORY FLOOR SAMPLE LOCATION
 - TP-17 APPROXIMATE TEST PIT LOCATIONS
 - SS-5 HISTORIC SURFACE SOIL SAMPLE LOCATION



50' 0' 50' 100'
SCALE: 1 INCH = 50 FEET
SCALE IN FEET
(approximate)

C: DEBRIS PILE AREA (SCALE: 1" = 50')



NO.	BY	DATE	REMARKS

SEAL

DRAWN BY:	DATE:	CHECKED BY:	DATE:

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IRM EXCAVATION AREAS
RI / AAR / IRM REPORT
3807 HIGHLAND AVENUE SITE
NIAGARA FALLS, NEW YORK
PREPARED FOR
GLOBE METALLURGICAL, INC & SOLSIL, INC.

TABLE 2

Summary of Surface Soil Analytical Data

3807 Highland Avenue Site

Niagara Falls, New York

PARAMETER ¹	Industrial SCOs ²	Historical Data (August 2008-January 2009)									Remedial Investigation Data (October 2009)								
		SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9
		Aug 08	Aug 08	Aug 08	Aug 08	Jan 09	Jan 09	Jan 09	Jan 09	Jan 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09
Volatile Organic Compounds (VOCs) - mg/kg																			
1,2,4-Trimethylbenzene	380	NA	NA	NA	NA	0.019 I	NA	0.0084 J	NA	0.035	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	380	NA	NA	NA	NA	0.0047 I,J	NA	ND	NA	0.023 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone (MEK)	1000	NA	NA	NA	NA	0.022	NA	0.17	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	1000	NA	NA	NA	NA	0.076	NA	0.11	NA	0.054	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	89	NA	NA	NA	NA	ND	NA	ND	NA	0.78	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	780	NA	NA	NA	NA	ND	NA	ND	NA	0.33	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene (Cumene)	--	NA	NA	NA	NA	ND	NA	ND	NA	0.0069	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride	1000	NA	NA	NA	NA	0.018	NA	0.043 B	NA	0.051 B	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene	1000	NA	NA	NA	NA	0.0022 I,J	NA	ND	NA	0.0074 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cymene (p-isopropyltoluene)	--	NA	NA	NA	NA	0.0016 I,J	NA	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	1000	NA	NA	NA	NA	0.0018 I,J	NA	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	1000	NA	NA	NA	NA	0.0013 I	NA	ND	NA	6.3 D	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Xylene	1000	NA	NA	NA	NA	0.0063 I,J	NA	ND	NA	0.68	NA	NA	NA	NA	NA	NA	NA	NA	NA
Semi-Volatile Organic Compounds (SVOCs) (mg/kg)																			
2-Methylnaphthalene	--	1.5 J	NA	ND	0.32 J	2.1 D,J	ND	1.9 D,J	0.07 D,J	44 D,J	0.33 D,J	ND	0.13 D,J	ND	0.51 D,J	0.31 D,J	0.13 D,J	0.15 D,J	ND
Acenaphthene	1000	ND	NA	ND	ND	ND	ND	2.2 D,J	ND	580 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	1000	ND	NA	ND	ND	ND	ND	1.8 D,J	ND	4.3 D,J	0.46 D,J	ND	ND	ND	ND	0.6 D,J	ND	ND	ND
Anthracene	1000	ND	NA	ND	0.14 J	0.4 D,J	ND	8.3 D,J	0.06 D,J	1200 D	0.35 D,J,B	ND	ND	ND	ND	0.26 D,J	0.079 D,J	0.096 D,J	ND
Benzo(a)anthracene	11	0.7 J	NA	1 J	0.4 J	ND	ND	16 D	0.17 D,J	1800 D	2.3 D,J,B	0.21 D,J,B	0.3 D,J,B	0.61 D,J,B	0.52 D,J	1.7 D,J	0.39 D,J	0.37 D,J	0.62 D,J
Benzo(a)pyrene	1.1	1.3 J	NA	ND	0.5 J	ND	5.3 D,J	14 D	0.37 D,J	1300 D	2.4 D,J,B	0.22 D,J,B	0.28 D,J,B	0.46 D,J,B	0.56 D,J	3.5 D,J	0.29 D,J	0.38 D,J	0.52 D,J
Benzo(b)fluoranthene	11	1.8 J	NA	ND	0.7 J	ND	ND	24 D	0.24 D,J	2300 D	3.8 D,J,B	0.41 D,J,B	0.52 D,J,B	0.77 D,J,B	0.81 D,J	5.7 D	0.51 D,J	0.62 D,J	0.84 D,J
Benzo(g,h,i)perylene	1000	0.65 J	NA	ND	0.24 J	ND	ND	9 D,J	0.17 D,J	910 D	1.9 D,J	0.22 D,J	0.33 D,J	0.45 D,J	0.56 D,J	3.7 D,J	0.31 D,J	0.42 D,J	0.53 D,J
Benzo(k)fluoranthene	110	1.2 J	NA	ND	0.29 J	ND	ND	ND	0.08 D,J	2300 D	1.6 D,J,B	0.092 D,J,B	0.14 D,J,B	0.34 D,J,B	0.44 D,J	2 D,J	0.21 D,J	0.21 D,J	ND
Butyl benzyl phthalate	--	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.98 D,J	ND
Chrysene	110	2.2 B,J	NA	1.3 J	0.5 J	2 D,J	ND	15 D	0.22 D,J	1500 D	2.6 D,J,B	0.33 D,J,B	0.35 D,J,B	0.66 D,J,B	0.69 D,J	3 D,J	0.41 D,J	0.48 D,J	0.55 D,J
Dibenzo(a,h)anthracene	1.1	ND	NA	ND	0.066 J	ND	ND	5.8 D,J	0.31 D,J	100 D	0.5 D,J	ND	ND	ND	ND	1.1 D,J	ND	0.11 D,J	ND
Dibenzofuran	1000	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	1000	1.3 J	NA	2 J	1.2	1.6 D,J	ND	37 D	0.44 D,J	4800 D	3.7 D,J,B	0.33 D,J,B	0.48 D,J,B	0.59 D,J,B	0.98 D,J	0.81 D,J	0.65 D,J	0.65 D,J	1.1 D,J
Fluorene	--	NA	NA	ND	ND	0.5 D,J	ND	3.3 D,J	ND	470 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	11	0.6 J	NA	ND	0.22 J	ND	ND	8.6 D,J	0.12 D,J	850 D	1.7 D,J,B	0.18 D,J,B	0.25 D,J,B	0.37 D,J,B	0.42 D,J	3.1 D,J	0.26 D,J	0.33 D,J	0.4 D,J
Naphthalene	1000	0.78 J	NA	ND	0.18 J	1 D,J	ND	2.5 D,J	0.09 D,J	130 D	ND	ND	ND	ND	0.39 D,J	0.2 D,J	ND	ND	ND
Phenanthrene	1000	2 B,J	NA	ND	0.82 J	4.2 D,J	ND	30 D	0.27 D,J	4100 D	0.98 D,J,B	0.2 D,J,B	0.25 D,J,B	0.37 D,J,B	0.61 D,J	0.31 D,J	0.51 D,J	0.58 D,J	0.59 D,J
Pyrene	1000	1.6 J	NA	1.2 J	0.56 J	1.7 D,J	ND	25 D	0.32 D,J	3200 D	3.3 D,J,B	0.28 D,J,B	0.38 D,J,B	0.53 D,J,B	0.85 D,J	0.77 D,J	0.53 D,J	0.54 D,J	0.86 D,J
Total PCBs (mg/kg)																			
Aroclor 1242	25	ND	NA	NA	NA	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1248	25	ND	NA	NA	NA	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	25	0.63	NA	NA	NA	ND	NA	NA	NA	NA	0.051	0.0075 J	0.014 J	0.028	0.035 C	0.012 C, J	0.0086 C, J	0.026 C	0.0061 C, J
Aroclor 1260	25	ND	NA	NA	NA	ND	NA	NA	NA	NA	0.051	ND	ND	ND	ND	ND	ND	ND	ND
Total Metals (mg/kg)																			
Aluminum - Total	--	ND	ND	ND	ND	NA	NA	3770	3590	NA	14800	1230	2280	4350	2000	2760	973	871	4350
Antimony - Total	--	ND	ND	ND	ND	NA	NA	2.65 J	0.662 J	NA	ND J	ND J	ND J	ND J	ND J	ND J	ND J	ND J	ND J
Arsenic - Total	16	15.3	ND	5.4	ND	NA	NA	21.8	3.02	NA	22.4 J	7.1 J	4.2 J	8.9 J	48.4 J	14.5 J	3.5 J	ND	2.2 J
Barium - Total	10000	447	88.7	99.5	22.7	NA	NA	4510 D	47.5	NA	213 J	22.2 J	55 J	62 J	139 J	86.7 J	45.4 J	31.7 J	29.2 J
Beryllium - Total	2700	ND	ND	ND	ND	NA	NA	0.402	1.28	NA	1.05	0.234	0.259	0.394	0.459	0.503	0.261	0.648	ND
Cadmium - Total	60	9.3	0.8	3.5	0.28	NA	NA	5.98	1.57	NA	1.12	0.62	0.553	0.837	0.573	0.588	0.381	ND	ND
Calcium - Total	--	ND	ND	ND	ND	NA	NA	99400 D	19100	NA	25300	37500	89400 D	48200	34400	53600	85400 D	13100	41300 J
Chromium - Total	6800	245	17.1	216	11.8	NA	NA	127	65.5	NA	466	88.1	62.5	590	400	61.1	20.4	23.2	109
Cobalt - Total	--	ND	ND	ND	ND	NA	NA	8.23	4.35	NA	18.6 J	3.73 J	4.3 J	15.4 J	29.1 J	5.49 J	1.96 J	2.19 J	3.78 J
Copper - Total	10000	ND	ND	ND	ND	NA	NA	220	112	NA	132	29.7	35.5	171	211	99.6	27.4	26.2	14.5
Iron - Total	--	ND	ND	ND	ND	NA	NA	3760	30000	NA	40700	10700	8520	51800	54100	13700	10700	6220	4080
Lead - Total	3900	629	47.7	255	17.1	NA	NA	614	78.1	NA	106	39	49.7	56.6	80.7	41.2	26.8	25.4	19.9
Magnesium - Total	--	ND	ND	ND	ND	NA	NA	10800	3340	NA	11200	18300	36900	16700	15600	22900	45200	5160	29500
Manganese - Total	10000	ND	ND	ND	ND	NA	NA	810	321	NA	8180 D	532 B	1910 B	1780 B	23600 D	2420 D	500	177	558 J
Mercury - Total	5.7	0.4	1.2	0.083	ND	NA	NA	0.38	0.0147 J	NA	0.0515	ND	ND	0.056	ND	ND	ND	ND	ND
Nickel - Total	10000	ND	ND	ND	ND	NA	NA	119	60.8	NA	262	85.4	33.1	424	228	64.5	19.9	26	ND
Potassium - Total	--	ND	ND	ND	ND	NA	NA	1680	636	NA	1790	467	585	536	383	387	338	198	273 J
Selenium - Total	6800	ND	ND	ND	ND	NA	NA	0.938 J	0.64 J	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver - Total	6800	ND	ND	ND	ND	NA	NA	21.9	0.194 J	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium - Total	--	ND	ND	ND	ND	NA	NA	2970	419	NA	847	ND	ND	175	ND	240	878	289	ND
Vanadium - Total	--	ND	ND	ND	ND	NA	NA	22.1	6.12	NA	29.9 J	4.57 J	6.8 J	18.4 J	24.2 J	9.6 J	3.7 J	3.52 J	5.08 J
Zinc - Total	10000	ND	ND	ND	ND	NA	NA	5290 D	3560 D	NA	318	1670 D	182	571	417	339	3150 D	4470 D	75.2

TABLE 2

Summary of Surface Soil Analytical Data

3807 Highland Avenue Site

Niagara Falls, New York

PARAMETER ¹	Industrial SCOs ²	Remedial Investigation Data (October 2009)																		
		SS-10	SS-11	SS-12	SS-13	SS-14	SS-15	SS-16	SS-17	SS-18	SS-19	SS-20	SS-21	SS-22	SS-23	SS-24	SS-25	SS-26	SS-27	SS-28
		Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09
Volatiles Organic Compounds (VOCs) - mg/kg																				
1,2,4-Trimethylbenzene	380	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	380	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone (MEK)	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	89	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	780	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene (Cumene)	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cymene (p-isopropyltoluene)	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Xylene	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Semi-Volatile Organic Compounds (SVOCs) (mg/kg)																				
2-Methylnaphthalene	--	1.5 D,J	0.98 D,J	2.6 D,J	5.6 D,J	ND	ND	ND	ND	ND	0.073 J	ND	ND	0.18 D,J	0.21 D,J	ND	ND	ND	ND	0.77 D,J
Acenaphthene	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1000	ND	ND	ND	ND	0.2 D,J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.26 D,J
Benzo(a)anthracene	11	0.96 D,J	0.77 D,J	0.66 D,J	0.78 D,J	1.1 D,J	ND	0.42 D,J	ND	0.16 D,J	ND	0.28 D,J	ND	0.31 D,J	0.32 D,J	0.32 D,J	0.73 D,J	0.4 D,J	0.38 D,J	0.67 D,J
Benzo(a)pyrene	1.1	0.96 D,J	ND	0.57 D,J	0.51 D,J	1.4 D,J	ND	ND	ND	0.19 D,J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	11	1.3 D,J	0.66 D,J	0.86 D,J	0.64 D,J	1.5 D,J	ND	0.66 D,J	ND	0.27 D,J	ND	ND	ND	0.4 D,J	0.4 D,J	0.42 D,J	0.73 D,J	0.29 D,J	0.53 D,J	ND
Benzo(ghi)perylene	1000	0.86 D,J	ND	0.47 D,J	ND	1.1 D,J	ND	ND	ND	0.15 D,J	ND	ND	ND	0.28 D,J	ND	ND	ND	ND	ND	0.53 D,J
Benzo(k)fluoranthene	110	0.73 D,J	ND	0.45 D,J	ND	0.57 D,J	ND	ND	ND	0.096 D,J	ND	ND	ND	ND	ND	ND	0.51 D,J	ND	ND	ND
Butyl benzyl phthalate	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	110	1.2 D,J	0.44 D,J	0.94 D,J	0.78 D,J	1.2 D,J	ND	0.44 D,J	ND	0.17 D,J	ND	0.24 D,J	ND	0.28 D,J	0.3 D,J	0.26 D,J	0.6 D,J	0.26 D,J	0.38 D,J	0.75 D,J
Dibenzo(a,h)anthracene	1.1	ND	ND	ND	ND	0.28 D,J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	1000	ND	ND	0.53 D,J	1.1 D,J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	1000	1.7 D,J	0.77 D,J	1.2 D,J	1.2 D,J	1.8 D,J	ND	0.59 D,J	ND	0.21 D,J	ND	0.5 D,J	ND	0.37 D,J	0.5 D,J	0.42 D,J	0.91 D,J	0.44 D,J	0.54 D,J	1.2 D,J
Fluorene	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.22 D,J
Indeno(1,2,3-cd)pyrene	11	0.65 D,J	ND	0.38 D,J	ND	0.9 D,J	ND	0.22 D,J	ND	0.12 D,J	ND	ND	ND	ND	ND	ND	0.37 D,J	ND	ND	0.33 D,J
Naphthalene	1000	0.94 D,J	ND	1.7 D,J	3.5 D,J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.58 D,J
Phenanthrene	1000	1.1 D,J	0.66 D,J	1.5 D,J	2.6 D,J	1 D,J	ND	ND	ND	0.11 D,J	0.04 J	ND	ND	ND	0.45 D,J	0.23 D,J	0.68 D,J	0.23 D,J	0.38 D,J	1.3 D,J
Pyrene	1000	1.5 D,J	0.81 D,J	1.3 D,J	0.98 D,J	1.6 D,J	2.6 D,J	0.5 D,J	ND	0.18 D,J	ND	0.39 D,J	ND	0.31 D,J	0.38 D,J	0.46 D,J	0.83 D,J	ND	ND	1.1 D,J
Total PCBs (mg/kg)																				
Aroclor 1242	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0044 C, J	ND	ND	ND	0.0069 C, J	ND
Aroclor 1248	25	ND	ND	ND	ND	ND	0.12 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	25	0.011 C, J	0.026 C	0.011 C, J	0.006 C, J	ND	ND	ND	ND	ND	ND	0.013 J	0.025 J	0.083 J	0.014 C, J	0.017 C, J	0.026 C	0.013 C, J	0.024 C, J	0.014 C, J
Aroclor 1260	25	ND J	ND J	ND J	ND J	ND J	ND J	ND J	ND J	ND J	ND J	ND J	ND J	ND J	ND	ND	ND	ND	ND	ND
Total Metals (mg/kg)																				
Aluminum - Total	--	2340	1720	822	1040	13300	2290	1460	1600	2150	243	869	1630	1830	7760	13300	8360	11300	6230	3020
Antimony - Total	--	ND J	ND J	ND J	ND J	ND J	ND	ND	ND	ND	ND	30.8	ND	ND	ND J	ND J	ND J	ND J	ND J	ND J
Arsenic - Total	16	5.2 J	6.6 J	3.1 J	12.2 J	8.6 J	7.1	3.2	3.9	ND	ND	8.2	8.5	4.7	5.3	12.3	4.5	4	6.7	
Barium - Total	10000	58.6 J	35.2 J	33.5 J	306 J	133 J	65.9	24.2	123	34.2	17.2	42.4	83.2	120	109	121	108	150	224	151.6
Beryllium - Total	2700	0.342	0.42	0.344	0.647	0.726	ND	ND	ND	0.54	ND	ND	0.322	1.18	0.471	0.633	0.56	0.705	0.505	0.433
Cadmium - Total	60	0.765	0.482	0.374	ND	0.87	4.95	0.474	1.22	0.347	ND	0.975	1.06	1.24	0.28	0.735	1.38	0.442	3.21	1.98
Calcium - Total	--	59600	45300	64500	16000	19000	58300	12400	71100 D	4320	3570	12700	87000 D	87300 D	4710	12400	15500	32400	109000 D	55300
Chromium - Total	6800	50.8	66.6	22.6	12.4	58	237	52.2	107	13.9	17.6	1390	190	234	85.8 J	34 J	234 J	55 J	83.1 J	149 J
Cobalt - Total	--	4.6 J	5.66 J	2.8 J	2.66 J	11.3 J	5.95	3.39	4.96	1.09	ND	226	7.29	12.4	9.4 J	11.5 J	16.8 J	11.2 J	6.28 J	7.22 J
Copper - Total	10000	42.9	62.6	30.3	15.4	58.1	140 J	91.5 J	33 J	9.9 J	9.7 J	110 J	130 J	129 J	30.8 J	37.7 J	155 J	27.4 J	27.2 J	92.5 J
Iron - Total	--	14000	22000	7940	6350	21700	41100	21700	13800	1780 J	1740	24700	27400	41900	20900	21400	7220	20300	13600	23800
Lead - Total	3900	42.5	28.7	23.4	13.6	149	75.7	49.9	23.4	126	6.2	32.5	197	172	18.9	46.2	364	78.4	116	94.4
Magnesium - Total	--	32600	23300	34000	7390	9350	36300 J	20200 J	24900 J	785 J	342 J	6140 J	14600 J	46000 J	12700	7660	9700	18600	61600 D	21200
Manganese - Total	10000	1820	2870 D	765	213	1190	966	498	965 J	44.7	52.6	626	1040	886	1260	779	1190	636	525	730
Mercury - Total	5.7	ND	ND	ND	ND	0.264	0.0399 J	ND	ND	ND	ND	ND	0.117 J	ND	ND	0.0763	0.071	0.0441	0.0952	0.0595
Nickel - Total	10000	35.2	52.5	22.9	13.4	51.3	171	54.3	57.3	15.8	11.1	2440	133	143	39.5 J	32.6 J	175 J	49.9 J	46.2 J	73.3 J
Potassium - Total	--	298	239	204	210	1730	670	175	477	210	123	629	294	635	1360	2070	2120	2010	1300	650
Selenium - Total	6800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver - Total	6800	ND	ND	ND	ND	ND	ND	ND	ND	0.99	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium - Total	--	ND	ND	ND	ND	265	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	186	196
Vanadium - Total	--	6.85 J	6.03 J	4.64 J	4.85 J	28.5 J	7.54 J	3.55 J	11.5 J	1.69 J	1.13 J	28.4 J	7.86 J	9.94 J	17.6 J	27.1 J	26.3 J	26.9 J	20 J	15.1 J
Zinc - Total	10000	225	278	189	168	353	3500 D	108	538	175	29.4	118	594	542	102	275	410	132	1720 D	763

Notes:

- Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
- Values per NYSDEC Part 375 Soil Cleanup Objectives (December 2006)

Definitions:

- ND = Parameter not detected above laboratory detection limit.
- NA = Sample not analyzed for parameter.
- = No SCO available.
- J = Estimated value; result is less than the sample quantitation limit but greater than zero.
- B = Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
- C = Calibration verification recovery was below the method control limit.
- D = Compounds were identified in an analysis at the secondary dilution factor.
- I = Internal standard recovery was outside of method limits.

 = Result exceeds 6NYCRR Part 375 Industrial SCO.

TABLE 3

Summary of Sediment and Stack Deposits Analytical Data

3807 Highland Avenue Site

Niagara Falls, New York

PARAMETER ¹	Industrial SCOs ²	Stack Deposits			Sediment				
		Stack-1	Stack-2	W-Stack	Sump-1	Sump-2	Sed-1	Sed-2	Sed-3
		Aug-08	Aug-08	Oct-09	Jan-09	Jan-09	Oct-09	Oct-09	Oct-09
Volatile Organic Compounds (VOCs) - mg/Kg									
Acetone	1000	NA	NA	NA	1.3	0.23	ND	0.015 J	0.16
1,2,4-Trimethylbenzene	380	NA	NA	NA	0.014 J	0.08	ND	ND	ND
1,3,5-Trimethylbenzene	380	NA	NA	NA	ND	0.046	ND	ND	ND
2-Butanone (MEK)	--	NA	NA	NA	0.036	ND	ND	ND	0.026 J
Benzene	89	NA	NA	NA	0.0068	ND	ND	ND	ND
Cyclohexane	--	NA	NA	NA	ND	ND	ND	0.0022 J	ND
Methylcyclohexane	--	NA	NA	NA	ND	0.025	ND	ND	ND
Methylene chloride	1000	NA	NA	NA	0.046 B	0.017 B	ND J	ND J	ND J
p-Cymene (p-isopropyltoluene)	--	NA	NA	NA	ND	0.025 J	ND	ND	ND
sec-Butylbenzene	1000	NA	NA	NA	ND	0.0094 J	ND	ND	ND
Toluene	1000	NA	NA	NA	0.019	0.025	ND	ND	0.32
Total Xylene	1000	NA	NA	NA	0.044	0.012 J	ND	ND	ND
Vinyl chloride	27	NA	NA	NA	ND	0.043	ND	ND	ND
Semi-Volatile Organic Compounds (SVOCs) - mg/Kg									
2-Methylnaphthalene	--	NA	0.084 D,J	NA	ND	5.8 D,J	ND	0.86 D,J	ND
Acenaphthene	1000	NA	ND	NA	ND	0.86 D,J	ND	3.1 D,J	ND
Acenaphthylene	1000	NA	ND	NA	ND	0.97 D,J	ND	ND	ND
Anthracene	1000	NA	0.049 D,J	NA	ND	2.7 D,J	ND	6.1 D,J	ND
Benzo(a)anthracene	11	NA	0.2 D,J	NA	ND	3.8 D,J	0.35 D,J	17 D	2.4 D,J
Benzo(a)pyrene	1.1	NA	0.3 D,J	NA	ND	6.1 D,J	ND	16 D	2.6 D,J
Benzo(b)fluoranthene	11	NA	ND	NA	ND	ND	ND	18 D	3.3 D,J
Benzo(ghi)perylene	1000	NA	0.16 D,J	NA	ND	2.9 D,J	ND	13 D	ND
Benzo(k)fluoranthene	110	NA	ND	NA	ND	ND	ND	9.5 D,J	ND
Carbazole	--	NA	ND	NA	ND	ND	ND	4.4 D,J	ND
Chrysene	110	NA	0.45 D,J	NA	ND	4.5 D,J	ND	20 D	2.8 D,J
Dibenzo(a,h)anthracene	1.1	NA	0.33 D,J	NA	ND	ND	ND	2.2 D,J	ND
Fluoranthene	1000	NA	0.84 D,J	NA	ND	9.6 D,J	0.39 D,J	56 D	4.9 D,J
Fluorene	1000	NA	ND	NA	ND	1.9 D,J	ND	2.5 D,J	ND
Indeno(1,2,3-cd)pyrene	11	NA	0.092 D,J	NA	ND	2.4 D,J	ND	11 D,J	ND
Naphthalene	1000	NA	0.074 D,J	NA	ND	2.6 D,J	ND	ND	ND
Phenanthrene	1000	NA	0.38 D,J	NA	ND	8.1 D,J	0.41 D,J	44 D	2.6 D,J
Pyrene	1000	NA	0.4 D,J	NA	ND	8.6 D,J	0.35 D,J	43 D	4.6 D,J
Total PCBs - mg/Kg									
Aroclor 1260	25	NA	NA	0.01 J	NA	NA	NA	NA	NA
Aroclor 1254	25	NA	NA	0.011 J	NA	0.139 J	0.0057 J	ND	0.097 J
Total Metals - mg/Kg									
Aluminum	--	NA	3700	NA	NA	9850	1190	1900	5370
Antimony	--	NA	ND	NA	NA	3.41	ND J	ND J	ND
Arsenic	16	666	11.1	NA	NA	2.67	6.5	9.3	7.4
Barium	10000	1250	42.6	NA	NA	176	26.7	40.8	177
Beryllium	2700	NA	0.307	NA	NA	1.27	0.392	0.376	0.681
Cadmium	60	30.3	7.7	NA	NA	3.36	2.81	0.769	2.22
Calcium	--	NA	17700	NA	NA	20500	100000 D	27400	108000
Chromium	6800	101	654	NA	NA	62	51 J	1270 J	84.8
Cobalt	--	NA	66.6	NA	NA	6.21	4.43	3.99	8.4
Copper	10000	NA	150	NA	NA	680	49.5	40.7	131
Iron	--	NA	55900	NA	NA	19800	65200 D	6390	16700
Lead	3900	1900	266	NA	NA	42.6	52.9	32.6	125
Magnesium	--	NA	4340	NA	NA	10900	53100 D	13900	53300
Manganese	10000	NA	1040	NA	NA	338	569	956	825
Mercury	5.7	0.043	0.0648	NA	NA	0.123	ND	ND	0.438
Nickel	10000	NA	1460	NA	NA	45.4	32 J	14.9 J	64.4
Potassium	--	NA	767	NA	NA	1610	408	287	906
Selenium	6800	55.3	4.37	NA	NA	1.14	ND	ND	ND
Silver	6800	NA	0.557	NA	NA	1.06	ND	ND	ND
Sodium	--	NA	476	NA	NA	1960	192	869	ND
Vanadium	--	NA	24.6	NA	NA	22.9	4.83 J	9.01 J	18.4
Zinc	10000	NA	2560 D	NA	NA	1890 D	1460 D,J	315 J	1520

Notes:

1. Only those 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 Part 375 Soil Cleanup Objectives (December 2006)

Definitions:

- ND = Parameter not detected above laboratory detection limit.
- NA = Sample not analyzed for parameter.
- = No SCO available.
- J = Estimated value; result is less than the sample quantitation limit but greater than zero.
- B = Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
- D = Compounds were identified in an analysis at the secondary dilution factor.

 = Result exceeds 6NYCRR Part 375 Industrial SCO.

TABLE 4a
Summary of Subsurface Soil Analytical Data
Historic Soil Boring Samples
3807 Highland Avenue Site
Niagara Falls, New York

PARAMETER ¹	Industrial SCOs ²	SB-1 (5.5-7.5)	SB-2 (4-8)	SB-3 (0-3)	SB-4 (4-6)	SB-5 (4-8)	SB-6 (10-14)	SB-7 (4-8)	SB-8 (0-4)	SB-9 (0-4)	SB-10 (4-7)	SB-11 (8-10)
		Aug 08	Aug 08	Aug 08	Aug 08	Aug 08	Aug 08	Aug 08	Aug 08	Aug 08	Aug 08	Aug 08
Volatile Organic Compounds (VOCs) - mg/Kg												
1,2,4-Trimethylbenzene	380	ND	0.004 J	ND	NA	NA	ND	NA	NA	NA	ND	ND
1,3,5-Trimethylbenzene	380	ND	0.003 J	ND	NA	NA	ND	NA	NA	NA	ND	ND
2-Butanone (MEK)	1000	ND	ND	0.016 J	NA	NA	ND	NA	NA	NA	ND	ND
Acetone	1000	0.029	0.02	0.16	NA	NA	0.02	NA	NA	NA	ND	ND
Carbon disulfide	--	0.003 J	0.003 J	0.004 J	NA	NA	0.003 J	NA	NA	NA	0.002	0.002 J
Isopropylbenzene (Cumene)	--	ND	ND	ND	NA	NA	0.001 J	NA	NA	NA	ND	ND
Methylcyclohexane	--	ND	ND	ND	NA	NA	0.003 J	NA	NA	NA	ND	ND
Methylene chloride	1000	0.011 B	0.015 B	0.008 B	NA	NA	0.014 B	NA	NA	NA	0.014 B	0.012 B
n-Butylbenzene	1000	ND	ND	ND	NA	NA	0.008	NA	NA	NA	ND	ND
n-Propylbenzene	1000	ND	ND	ND	NA	NA	0.003 J	NA	NA	NA	ND	ND
p-Cymene (p-isopropyltoluene)	--	ND	ND	ND	NA	NA	0.001 J	NA	NA	NA	ND	ND
sec-Butylbenzene	1000	ND	ND	ND	NA	NA	0.004 J	NA	NA	NA	ND	ND
Toluene	1000	ND	ND	ND	NA	NA	0 B,J	NA	NA	NA	ND	ND
Semi-Volatile Organic Compounds (SVOCs) - mg/Kg												
2-Methylnaphthalene	--	ND	ND	0.22 J	NA	ND	0.27 J	0.052 J	ND	ND	ND	ND
Acenaphthene	1000	ND	ND	0.55 J	NA	ND	0.14 J	0.068 J	ND	ND	ND	0.11 J
Acenaphthylene	1000	ND	ND	0.18 J	NA	ND	0.082 J	0.082 J	ND	ND	ND	ND
Anthracene	1000	0.015 J	ND	0.55 J	NA	ND	0.13 J	0.2 J	ND	ND	0.11 J	0.16 J
Benzo(a)anthracene	11	ND	0.009 J	1.4	NA	ND	ND	0.7 J	ND	ND	0.35 J	0.56 J
Benzo(a)pyrene	1.1	ND	ND	2.1	NA	ND	ND	0.66 J	ND	ND	0.38 J	0.6 J
Benzo(b)fluoranthene	11	ND	0.008 J	2.3	NA	ND	ND	0.87 J	ND	ND	0.5 J	0.82 J
Benzo(ghi)perylene	1000	ND	ND	1.6	NA	ND	ND	0.47 J	ND	ND	0.21	0.31 J
Benzo(k)fluoranthene	110	ND	0.021 J	0.72 J	NA	ND	ND	0.29 J	ND	0.019 J	0.21 J	0.29 J
Chrysene	110	0.02 B,J	0.02 B,J	1.5 B	NA	0.02 B,J	0.13 B,J	0.68 B,J	0.03 B,J	0.02 B,J	0.44 B,J	0.71 B,J
Dibenzo(a,h)anthracene	1.1	ND	ND	0.35 J	NA	ND	ND	0.15 J	ND	ND	0.073 J	0.011 J
Fluoranthene	1000	0.015 J	0.013 J	2.8	NA	ND	0.048 J	1.3	0.009 J	0.01 J	0.5 J	1.1
Fluorene	--	ND	ND	0.39 J	NA	ND	0.3 J	ND	ND	ND	0.043 J	0.064 J
Indeno(1,2,3-cd)pyrene	11	ND	ND	1.4	NA	ND	ND	0.41 J	ND	ND	0.22 J	0.27 J
Naphthalene	1000	ND	ND	0.33 J	NA	ND	ND	0.069 J	ND	ND	0.04 J	0.072 J
Phenanthrene	1000	0.02 B,J	0.02 B,J	2.1 B	NA	0.01 B,J	0.68 B,J	0.7 B,J	0.02 B,J	0.02 B,J	0.33 B,J	0.74 B,J
Pyrene	1000	0.016 J	0.011 J	2.6	NA	ND	0.085 J	1 J	ND	ND	0.4 J	0.84 J
PCBs - mg/Kg												
Aroclor 1254	25	0.63	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1260	25	ND	ND	0.84	ND	ND	ND	ND	ND	ND	ND	ND
Total Metals - mg/Kg												
Arsenic	16	3.7	6.8	11.9	3	2.9	2.4	14.1	4.5	ND	10.5	11.2
Barium	10000	75.8	290	77.6	36.6	63.6	22	375	174	20.8	94	111
Cadmium	60	ND	0.86	1.2	ND	ND	1.8	1.2	0.29	1.6	1.3	1.5
Chromium	6800	12.8	692	105	11.3	15.7	15.6	830	30.2	15.2	310	483
Lead	3900	5.9	212	74.6	3	5.2	177	168	10.9	52.4	409	508
Mercury	5.7	0.043	0.095	ND	ND	ND	0.048	ND	ND	0.23	0.036	0.071

Notes:

1. Only those 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 Part 375 Soil Cleanup Objectives (December 2006)

Definitions:

- ND = Parameter not detected above laboratory detection limit.
- NA = Sample not analyzed for parameter.
- = No SCO available.
- J = Estimated value; result is less than the sample quantitation limit but greater than zero.
- B = Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
- [Yellow Box] = Result exceed 6NYCRR Part 375 Industrial SCOs.



TABLE 4b
Subsurface Soil Sample Data
Remedial Investigation Soil Boring Samples
3807 Highland Avenue Site
Niagara Falls, New York

PARAMETER ¹	Industrial SCOs ²	Remedial Investigation - Sample Locations (October 2009)																					
		SB-1 (2-4)	SB-2 (4-6)	SB-3 (2-4)	SB-4 (2-4)	SB-5 (4-6)	SB-6 (2-4)	SB-7 (3-5)	SB-8 (0-2)	SB-9 (4-8)	SB-10 (4-6)	SB-11 (0-2)	SB-12 (0-2)	SB-13 (0-2)	SB-14 (8-12)	SB-15 (0-2)	SB-16 (0-2)	SB-17 (0-2)	SB-18 (2-4)	SB-19 (11-14.7)	SB-20 (0-2)	SB-21 (12-14)	SB-22 (4-6)
		Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09
Volatle Organic Compounds (VOCs) - mg/Kg																							
1,2,4-Trimethylbenzene	380	NA	NA	NA	NA	NA	ND	NA	0.11	NA	NA	0.0066	ND	ND	NA	NA	NA	NA	ND	0.0023 J	NA	0.0041 J	NA
1,3,5-Trimethylbenzene	380	NA	NA	NA	NA	NA	ND	NA	0.031	NA	NA	ND	ND	ND	NA	NA	NA	NA	ND	ND	NA	ND	NA
1,4-Dichlorobenzene	1000	NA	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	ND	ND	NA	NA	NA	NA	ND	ND	NA	ND	NA
2-Butanone (MEK)	1000	NA	NA	NA	NA	NA	0.0094 J	NA	ND	NA	NA	ND	ND	ND	NA	NA	NA	NA	0.044	ND	NA	ND	NA
Acetone	1000	NA	NA	NA	NA	NA	0.073	NA	0.035	NA	NA	0.033	0.04	0.0068 J	NA	NA	NA	NA	0.21	0.021 J	NA	0.016 J	NA
Benzene	89	NA	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	ND	ND	NA	NA	NA	NA	ND	ND	NA	ND	NA
Carbon disulfide	--	NA	NA	NA	NA	NA	0.0019 J	NA	0.0049 J	NA	NA	ND	ND	ND	NA	NA	NA	NA	ND J	ND J	NA	ND J	NA
cis-1,2-dichloroethene	1000	NA	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	ND	ND	NA	NA	NA	NA	0.0013 J	ND	NA	ND	NA
Cyclohexane	--	NA	NA	NA	NA	NA	ND	NA	0.015	NA	NA	0.0026 J	ND	ND	NA	NA	NA	NA	ND	0.0011 J	NA	ND	NA
Ethylbenzene	780	NA	NA	NA	NA	NA	ND	NA	0.0036 J	NA	NA	ND	ND	ND	NA	NA	NA	NA	ND	ND	NA	ND	NA
Isopropylbenzene (Cumene)	--	NA	NA	NA	NA	NA	ND	NA	0.0046 J	NA	NA	ND	ND	ND	NA	NA	NA	NA	ND	ND	NA	0.0013 J	NA
Methylcyclohexane	--	NA	NA	NA	NA	NA	ND	NA	0.045	NA	NA	0.011 J	ND	ND	NA	NA	NA	NA	ND	ND	NA	0.0037 J	NA
Methylene chloride	1000	NA	NA	NA	NA	NA	0.0066 J	NA	0.0044 J	NA	NA	0.0028 J	0.0038 J	ND	NA	NA	NA	NA	0.0048 J	0.0052 J	NA	ND	NA
n-Butylbenzene	1000	NA	NA	NA	NA	NA	ND	NA	ND	NA	NA	ND	ND	ND	NA	NA	NA	NA	ND	ND	NA	ND	0.0062
n-Propylbenzene	1000	NA	NA	NA	NA	NA	ND	NA	0.0045 J	NA	NA	ND	ND	ND	NA	NA	NA	NA	ND	ND	NA	0.0039 J	NA
p-Cymene (p-isopropyltoluene)	--	NA	NA	NA	NA	NA	ND	NA	0.012	NA	NA	0.0027 J	ND	ND	NA	NA	NA	NA	ND	ND	NA	ND	NA
sec-Butylbenzene	1000	NA	NA	NA	NA	NA	ND	NA	0.0072	NA	NA	0.0014	ND	ND	NA	NA	NA	NA	ND	ND	NA	0.0032 J	NA
Toluene	1000	NA	NA	NA	NA	NA	ND	NA	0.0029 J	NA	NA	ND	ND	0.0018 J	NA	NA	NA	NA	ND	ND	NA	0.0013 J	NA
Total Xylene	1000	NA	NA	NA	NA	NA	ND	NA	0.03	NA	NA	ND	ND	ND	NA	NA	NA	NA	ND	ND	NA	0.0018 J	NA
Semi-Volatile Organic Compounds (SVOCs) - mg/Kg																							
2-Methylnaphthalene	--	ND	ND	ND	ND	0.031 J	ND	ND	1.2	ND	ND	1.6 D,N,J	ND	ND	ND	0.27 D,J	ND	ND	0.036 J	14 D	ND	ND	ND
Acenaphthene	1000	ND	ND	ND	ND	ND	ND	ND	0.096 J	ND	ND	0.74 D,J	ND	ND	ND	ND	ND	0.16 D,J	0.037 J	1.4 D,J	ND	ND	0.15 D,J
Acenaphthylene	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.32 D,J	ND	0.26 D,J	0.042 J	1.1 D,J	ND	ND	ND
Benzo(a)anthracene	11	0.05 J	ND	ND	ND	0.052 J	0.19 D,J	0.016 J	0.068 J	ND	ND	0.44 D,J	ND	0.74 D,J	ND	1.6 D,J	ND	0.53 D,J	0.064 J	ND	ND	ND	0.64 D,J
Benzo(a)pyrene	1.1	0.062 J	ND	ND	ND	0.049 J	0.18 D,J	0.012 J	0.061 J	ND	ND	0.67 D,J	ND	0.69 D,J	ND	1.7 D,J	ND	0.49 D,J	0.065 J	ND	ND	ND	0.81 D,J
Benzo(b)fluoranthene	11	0.073 J	ND	ND	ND	0.06 J	0.22 D,J	0.017 J	0.11 J	ND	ND	1.2 D,J	ND	1.5 D,J	ND	2.2 D,J	ND	0.57 D,J	0.067 J	ND	ND	ND	1.3 D,J
Benzo(ghi)perylene	1000	0.051 J	ND	ND	ND	0.043 J	0.17 D,J	ND	0.059 J	ND	ND	0.54 D,J	ND	ND	ND	1.3 D,J	ND	0.27 D,J	0.049 J	ND	ND	ND	0.65 D,J
Benzo(k)fluoranthene	110	0.026 J	ND	ND	ND	0.036 J	0.11 D,J	ND	ND	ND	ND	ND	ND	ND	ND	0.86 D,J	ND	0.22 D,J	0.038 J	ND	ND	ND	ND
Biphenyl	--	ND	ND	ND	ND	ND	ND	ND	0.0041 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-ethylhexyl) phthalate	--	ND	ND	ND	ND	0.15 J	1.1 D,J	ND	0.081 J	0.071 J	ND	ND	ND	ND	0.42	ND	0.077 J	ND	0.33	ND	ND	ND	ND
Carbazole	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.084 D,J	ND	ND	ND	ND	ND
Chrysene	110	0.055 J	ND	ND	ND	0.059 N,J	0.18 D,J	0.012 J	0.12 J	ND	ND	0.61 D,J	ND	0.68 D,J	ND	1.5 D,J,B	ND	0.53 D,J,B	0.061 B,J	ND	ND	ND	0.67 D,J
Dibenzo(a,h)anthracene	1.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.33 D,J	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2 D,J	ND	0.068 D,J	0.012 J	ND	ND	ND	ND
Diethyl phthalate	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.057 J	0.41 D,J	ND	ND	ND
Di-n-butyl phthalate	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.083 J	ND	0.16 J	ND	ND	ND	ND
Fluoranthene	1000	0.081 J	ND	ND	ND	0.074 J	0.33 D,J	0.022 J	0.14 J	ND	ND	0.93 D,J	ND	0.93 D,J	ND	2.4 D,J	ND	1.2 D	0.11 J	0.23 D,J	ND	ND	1.2 D,J
Fluorene	--	ND	ND	ND	ND	ND	ND	ND	0.21	ND	ND	ND	ND	ND	ND	ND	ND	0.15 D,J	0.036 J	2.3 D	ND	ND	ND
Indeno(1,2,3-cd)pyrene	11	0.04 J	ND	ND	ND	0.032 J	0.13 D,J	ND	ND	ND	ND	0.4 D,J	ND	ND	ND	1 D,J	ND	0.24 D,J	0.037 J	ND	ND	ND	0.5 D,J
Naphthalene	1000	ND	ND	ND	ND	ND	ND	ND	0.27	ND	ND	0.65 D,N,J	ND	ND	ND	0.23 D,J	ND	ND	0.021 J	0.61 D,J	ND	ND	ND
Phenanthrene	1000	0.056 J	ND	ND	ND	0.043 J	ND	0.015 J	0.5	ND	ND	2 D	ND	ND	ND	1.8 D,J	ND	1 D,J	0.081 J	6.9 D	ND	ND	0.86 D,J
Pyrene	1000	0.071 J	ND	ND	ND	0.076 J	0.32 D,J	0.02 J	0.13 J	ND	ND	1.1 D,J	ND	0.88 D,J	ND	2.2 D,J	ND	1.1 D,J	0.097 J	0.51 D,J	ND	ND	1 D,J
PCBs - mg/Kg																							
Aroclor 1248	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.16 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	25	ND	ND	ND	ND	ND	ND	ND	0.072 J	ND	ND	ND	0.23 J	ND	ND	ND	ND	ND	0.015 J	ND	ND	ND	ND
Aroclor 1260	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.046 J	ND	ND
Total Metals - mg/Kg																							
Aluminum	--	14900	14700	7390	14600	12600	6910	14400	7850	10500	10300	8290	4010	5090	8510	5480	14300	23000	14900	8270	18900	3570	17200
Arsenic	16	8.1	4.2	2.5	4.2	6.2	10.1	4.9	10	2.6	4.5	7.8	3.7	6.3	3.7	12.2	2.4	7.1	7.1	2.2	2.8	ND	5.1
Barium	10000	183	167	62.1	96.3	89.3	98.5	342	53.3	108	81.2	739	32.4	39.8	60.4	2230 D	81.3	163	108	46.8	84.3	22.7	264
Beryllium	2700	0.729	0.726	0.342	0.654	0.685	0.49	0.729	0.505	0.581	0.734	0.504	0.334	0.309	0.424	0.648	0.596	1.07	0.638	0.318	0.655	0.23	2.71
Cadmium	60	0.744	ND	0.57	ND	ND	ND	ND	ND	ND	0.302	ND	0.625	0.551	ND	1.05	ND	0.288	0.466	ND	0.351	0.641	0.28
Calcium	--	15700	80500	56000	4830	17900	18200	45400	10600	110000 D	48200	31700	143000 D	76800 D	71000	11600	37000	19700	13700	37600	16700	111000 D	32600
Chromium	6800	29.3 J	19.9 J	10.7 J	18.4 J	27.3 J	278 J	154 J	141 J	13.8 J	15.1 J	346 J	19.4 J	3630	13.1	107	18.9	29.8	31.4	11.9	271	7.28	118
Cobalt	--	8.73	10.6	7.95	11.4	11.1	8.54	11.4	12.3	8.77	10.8	4.39	2.23	32.8 J	8.36 J	7.76 J	8.58 J	14.4 J	11.2 J	8.22 J	7.93 J	3.47 J	5.18 J
Copper	10000	31.3	19.7	12.3	18.3	32.9	287	21.7	93.1	19.8	22.6	197	11.9	94.8 J	18 J	60.1 J	16.4 J	24.2 J	29.3 J	11.6 J	28.3 J	9 J	1460 J
Iron	--	19200	21300	12800	22500	27900	31000	21700	95700	16500	20200	27500	7480	18100	15300	71500 D	19100	31400	22600	14400	5960	7590	11400
Lead	3900	73.8	7.7	4.2	6.1	15.4	77.4	7.5	58.8	5.7	5.9	74	47.7	21.9	6.4	205	4.6	9.8	147	3.6	64.7	47.5	101
Magnesium	--	5610	9900	7770	5800	10900	8640	14400	4740	8200	8540	8870	53400 D	6200 D	26500	5270	10600	9970	5920	8180	59200 D	52700 D	7310
Manganese	10000	1250	560	619	684	475	601	1970	1610	727	1370	1790	0.69	375 D	583	6000 D	504	610	569	556	645	552	401
Nickel	10000	27.1 J	22.3 J	16.4 J	22.3 J	29.3 J	80.3 J	31.6 J	127 J	19.5 J	20.7 J	67.6 J	12.8 J	1860	16.1	22.4	21.9	36.8	35.9	17.6	144	8.47	44.4
Potassium	--	1720	3170	1200	1220	1490	1160	2450	810	2160	1730	592	1020	419	2000	836	2130	2410	1050	1610	810	1040	



TABLE 4b
 Subsurface Soil Sample Data
 Remedial Investigation Soil Boring Samples
 3807 Highland Avenue Site
 Niagara Falls, New York

PARAMETER ¹	Industrial SCOs ²	Remedial Investigation - Sample Locations (October 2009)																							
		SB-23 (8-12)	SB-24 (4-6)	SB-25 (1-3)	SB-26 (1-3)	SB-27 (1-3)	SB-28 (6-8)	SB-29 (4-6)	SB-30 (6-4)	TP/SS-1 (1)	TP/SS-1 (2)	TP/SS-1 (3)	TP/SS-1 (4)	TP/SS-1 (5)	TP/SS-1 (6)	TP/SS-1 (7)	TP/SS-1 (8)	TP/SS-1 (9)	TP/SS-1 (10)	TP/SS-5 (1)	TP/SS-5 (2)	TP/SS-5 (3)	TP/SS-5 (4)	TP/SS-5 (5)	
		Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Jan 10	Jan 10	Jan 10	Jan 10	Jan 10	Jan 10	Jan 10	Jan 10	Jan 10	Jan 10	Jan 10	Jan 10	Jan 10	Jan 10	Jan 10	Jan 10
Volatile Organic Compounds (VOCs) - mg/Kg																									
1,2,4-Trimethylbenzene	380	0.002 J	ND	NA	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	380	ND	ND	NA	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	1000	ND	ND	NA	NA	NA	0.0014 B, J	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone (MEK)	1000	0.011 J	0.012 J	NA	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	1000	0.054	0.081	NA	NA	NA	ND	0.016 J	0.007 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	89	ND	ND	NA	NA	NA	ND	ND	0.0016 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	--	0.0022 J	0.0026 J	NA	NA	NA	ND J	0.0015 J	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-dichloroethene	1000	ND	ND	NA	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	--	ND	ND	NA	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	780	ND	ND	NA	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene (Cumene)	--	0.0049 J	ND	NA	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylcyclohexane	--	0.0042 J	ND	NA	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride	1000	ND	ND	NA	NA	NA	0.0049 J	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Butylbenzene	1000	0.0055 J	ND	NA	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene	1000	0.01	ND	NA	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cymene (p-isopropyltoluene)	--	ND	ND	NA	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	1000	0.0043 J	ND	NA	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	1000	0.0014 J	ND	NA	NA	NA	ND	ND	0.0016 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Xylene	1000	0.0031 J	ND	NA	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Semi-Volatile Organic Compounds (SVOCs) - mg/Kg																									
2-Methylnaphthalene	--	0.25 D, J	0.17 D, J	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	1000	0.39 D, J	ND	ND	ND	0.075 D, J	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	1000	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	1000	ND	ND	ND	ND	0.16 D, J	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	11	ND	0.31 D, J	ND	0.12 D, J	0.41 D, J	ND	ND	0.2 D, J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	1.1	ND	ND	ND	0.12 D, J	0.36 D, J	ND	ND	0.19 D, J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	11	ND	ND	ND	0.12 D, J	0.49 D, J	ND	ND	0.31 D, J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	1000	ND	ND	ND	0.12 D, J	0.24 D, J	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	110	ND	ND	ND	0.064 D, J	0.16 D, J	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Biphenyl	--	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl) phthalate	--	ND	ND	ND	ND	0.067 J	0.088 J	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	--	ND	ND	ND	ND	0.085 D, J	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	110	ND	0.28 D, J	ND	0.1 D, J	0.42 D, J	ND	ND	0.22 D, J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	1.1	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	1000	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	--	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	--	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	1000	0.35 D, J	0.54 D, J	ND	0.15 D, J	0.86 D, J	ND	ND	0.24 D, J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	--	0.43 D, J	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	11	ND	ND	ND	ND	0.18 D, J	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	1000	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	1000	0.54 D, J	0.47 D, J	ND	0.13 D, J	0.76 D, J	ND	ND	0.16 D, J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	1000	0.32 D, J	0.46 D, J	ND	0.15 D, J	0.74 D, J	ND	ND	0.23 D, J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs - mg/Kg																									
Aroclor 1248	25	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	25	0.0062 J	ND	0.17 D	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	25	ND	ND	0.14 D	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals - mg/Kg																									
Aluminum	--	10200	7830	5840	17500	10000	2790	2110	8200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	16	7.5	8.5	58.2	5	4.4	2.4	16.9	77.3	35.4	85.1	7.7	24.8	2.1	15	12.6	8.4	25.8	11.6	58.8	35.9	10.6	10.8	15	
Barium	10000	89.7	126	304	107	64	12	96.5	249	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	2700	0.544	0.471	0.58	0.746	0.445	0.387	0.414	0.414	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	60	1.01	1.52	5.67	0.382	0.39	0.747	ND	2.71	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	--	60600	33000	40600	5850	44000	199000	2250	19900	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	6800	240	59.8	301	21.3	84.9	3.93	4.09	793	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	--	13.1 J	7.44 J	25.2 J	9.65 J	7.92 J	2.24 J	0.619 J	38.6 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	10000	36.1 J	42.5 J	379 J	22.2 J	22 J	6.2 J	232 J	142 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	--	18000	16400	60400 D	21500	15600	6720	7640	27900	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	3900	17.9	34	113	9.9	38.4	144</																		



TABLE 4c
Summary of Subsurface Soil Analytical Data
Remedial Investigation Test Pit Samples
3807 Highland Avenue Site
Niagara Falls, New York

PARAMETER ¹	Industrial SCOs ²	Remedial Investigation - Sample Locations																		
		TP-1 (0-3)	TP-2 (0-3)	TP-3 (0-1.5)	TP-4 (2.5-6)	TP-5 (0-3)	TP-7 (1-2)	TP-8 (1-2)	TP-10 (6-8)	TP-11 (0-2)	TP-12 (0-2)	TP-13 (0-2)	TP-13 (3)	TP-13N (0-2)	TP-13N2 (0-2)	TP-13E (0-2)	TP-13S (0-2)	TP-13W (0-2)	TP-14 (2.5-3.5)	TP-15 (0-2)
		Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Jan 10	Oct 09	Oct 09	Oct 09	Oct 09
Volatile Organic Compounds (VOCs) - mg/Kg																				
1,2,4-Trimethylbenzene	380	NA	NA	ND	ND	NA	0.0016 J	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone (MEK)	1000	NA	NA	ND	ND	NA	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	1000	NA	NA	ND	0.033	NA	0.027 J	NA	0.013 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	89	NA	NA	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	--	NA	NA	ND	ND	NA	0.0017 J	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	--	NA	NA	ND	ND	NA	0.0016 J	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	780	NA	NA	ND	ND	NA	ND	NA	0.0019 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene (Cumene)	--	NA	NA	ND	ND	NA	ND	NA	0.0018 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride	1000	NA	NA	ND	ND	NA	0.0022 J	NA	0.0028 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene	1000	NA	NA	ND	ND	NA	ND	NA	0.0014 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Cymene (p-isopropyltoluene)	--	NA	NA	ND	ND	NA	ND	NA	0.0015 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	1000	NA	NA	ND	ND	NA	ND	NA	0.0017 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	1000	NA	NA	ND	ND	NA	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Semi-Volatile Organic Compounds (SVOCs) - mg/Kg																				
2-Methylnaphthalene	--	0.086 D,J	ND	ND	0.038 D,J	ND	0.19	ND	ND	0.28 D,J	ND	0.078 D,J	NA	NA	NA	NA	NA	NA	ND	ND
Acenaphthene	1000	ND	1.6 D,J	ND	ND	ND	0.13 J	ND	ND	0.37 D,J	ND	ND	NA	NA	NA	NA	NA	NA	ND	ND
Acenaphthylene	1000	0.17 D,J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	ND	ND
Anthracene	1000	0.12 D,J,B	1.2 D,J,B	ND	ND	ND	0.16 J	ND	ND	0.83 D,J	0.055 D,J	ND	NA	NA	NA	NA	NA	NA	ND	0.084 J
Benzo(a)anthracene	11	0.47 D,J,B	6.3 D,B	0.36 D,J,B	0.29 D,J,B	0.36 D,J	0.59	0.75 D,J	ND	2.4 D	0.28 D,J	0.28 D,J	NA	NA	NA	NA	NA	NA	0.64 D,J	0.46 J
Benzo(a)pyrene	1.1	0.53 D,J,B	7.6 D,B	0.39 D,J,B	0.32 D,J,B	0.32 D,J	0.43	ND	ND	2.4 D	0.44 D,J	0.28 D,J	NA	NA	NA	NA	NA	NA	ND	0.54 J
Benzo(b)fluoranthene	11	0.7 D,J,B	8.5 D,B	0.46 D,J,B	0.36 D,J,B	0.38 D,J	0.65	ND	ND	3 D	0.55 D,J	0.34 D,J	NA	NA	NA	NA	NA	NA	ND	0.61 J
Benzo(ghi)perylene	1000	0.56 D,J	5.3 D	0.4 D,J	0.36 D,J	0.39 D,J	0.44	1.2 D,J	ND	1.3 D,J	0.37 D,J	0.23 D,J	NA	NA	NA	NA	NA	NA	ND	0.39 J
Benzo(k)fluoranthene	110	0.38 D,J,B	3.9 D,B	0.21 D,J,B	0.2 D,J,B	0.2 D,J	0.22	ND	ND	1.2 D,J	0.17 D,J	0.12 D,J	NA	NA	NA	NA	NA	NA	ND	0.22 J
Biphenyl	--	ND	ND	ND	ND	ND	0.036 J	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	ND	ND
Carbazole	--	ND	0.62 D,J,B	ND	ND	ND	0.11 J	ND	ND	0.44 D,J	ND	ND	NA	NA	NA	NA	NA	NA	ND	ND
Chrysene	110	0.51 D,J,B	6 D,B	0.31 D,J,B	0.26 D,J,B	0.33 D,J	0.73	0.8 D,J	ND	2.5 D	0.36 D,J	0.27 D,J	NA	NA	NA	NA	NA	NA	ND	0.44 J
Dibenz(a,h)anthracene	1.1	0.17 D,J	1.2 D,J	0.11 D,J	0.086 D,J	ND	0.095 J	ND	ND	0.4 D,J	0.097 D,J	ND	NA	NA	NA	NA	NA	NA	ND	ND
Dibenzofuran	1000	0.043 D,J	0.3 D,J	ND	ND	ND	0.07 J	ND	ND	0.25 D,J	ND	0.054 D,J	NA	NA	NA	NA	NA	NA	ND	ND
Fluoranthene	1000	0.67 D,J,B	9.3 D,B	0.5 D,J,B	0.38 D,J,B	0.47 D,J	1.2	ND	ND	3.9 D	0.47 D,J	0.41 D,J	NA	NA	NA	NA	NA	0.53 D,J	0.67 J	
Fluorene	--	ND	0.51 D,J	ND	ND	ND	0.084 J	ND	ND	0.42 D,J	ND	ND	NA	NA	NA	NA	NA	NA	ND	ND
Indeno(1,2,3-cd)pyrene	11	0.46 D,J,B	5 D,B	0.3 D,J,B	0.28 D,J,B	0.28 D,J	ND	0.73 D,J	ND	1.3 D,J	0.3 D,J	0.18 D,J	NA	NA	NA	NA	NA	NA	ND	0.35 J
Naphthalene	1000	ND	0.48 D,J	ND	ND	ND	0.078 J	ND	ND	0.39 D,J	ND	ND	NA	NA	NA	NA	NA	NA	ND	0.14 J
Phenanthrene	1000	0.33 D,J,B	4.8 D,B	0.36 D,J,B	0.24 D,J,B	0.3 D,J	0.95	0.48 D,J	ND	2.9 D	0.28 D,J	0.38 D,J	NA	NA	NA	NA	NA	NA	ND	0.35 J
Pyrene	1000	0.61 D,J,B	8.4 D,B	0.53 D,J,B	0.37 D,J,B	0.43 D,J	1	ND	ND	3.4 D	0.43 D,J	0.42 D,J	NA	NA	NA	NA	NA	NA	ND	0.59 J
PCBs - mg/Kg																				
Aroclor 1242	25	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	25	0.088 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	25	0.043 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides/Herbicides - mg/Kg																				
Alpha BHC	6.8	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Delta BHC	1000	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	410	0.0036 D,N,J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma BHC	23	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	--	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals - mg/Kg																				
Aluminum	--	2720	9050	9570	2910	3120	8480	1080	9910 J	5420 J	16000 J	3510 J	NA	NA	NA	NA	NA	NA	7620	19800 J
Arsenic	16	105 J	8.2 J	6.9 J	5.5 J	7.3	9.4	7.8	3	9.1	8.5	5.4	NA	NA	NA	NA	NA	NA	9.1	7.2
Barium	10000	197 J	277 J	710 J	32.4 J	191	242	65	69.4 J	125 J	87.6 J	59 J	NA	NA	NA	NA	NA	NA	85.7	178
Beryllium	2700	0.383	0.556	0.62	ND	0.315	1.23	0.224	0.466	0.329	0.653	ND	NA	NA	NA	NA	NA	NA	0.509	0.614
Cadmium	60	0.606	0.509	1	1.37	0.518	0.285	0.242	ND	5.61	3.26	0.518	NA	NA	NA	NA	NA	NA	ND	0.489
Calcium	--	10800	21400	24200	16500	8260	47500	36800	46100	16400	27100	18300	NA	NA	NA	NA	NA	NA	8030	14600
Chromium	6800	502 J	409 J	173 J	1060 J	443 J	240 J	140 J	15.1	3790	325	29600 D	20.6 J	14100 J	3450 J	174 J	241 J	3670 J	126 J	1070 J
Chromium (Hexavalent)	800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.5	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	--	32.6	51.6	9.99	57	5.57	28.4	7.46	10.9	226	22	118	NA	NA	NA	NA	NA	NA	13.3	28.3
Copper	10000	150	53	131	462	81.1	124	46.4	13.8 J	309 J	82.7 J	170 J	NA	NA	NA	NA	NA	NA	143	160 J
Iron	--	35400	30700	25400	21800	12400	25300	7800	18400	75000 D	16100	228000 D	NA	NA	NA	NA	NA	NA	98900 D	21100
Lead	3900	88.1	34.9	166	69	74.6	52.6	23	4.5	119	167	51.7	NA	NA	NA	NA	NA	NA	67.1	48.5
Magnesium	--	4310	13600	7130	8620	9370	17400	18800	8410 J	7130 J	28000 J	5740 J	NA	NA	NA	NA	NA	NA	4320	42800 J
Manganese	10000	29600 D	8790 D	9390 D	989 B	3880 D	1370	2470 D	680	2010	1000	1060	NA	NA	NA	NA	NA	NA	1930	3510 D
Nickel	10000	323 J	1440 J	77 J	2310 J	54.2 J	497 J	111 J	23.1	1890	231	9680 D	NA	NA	NA	NA	NA	NA	312 J	1330 J
Potassium	--	606	1340	1240	337	428	1660	241	1530 J	590 J	1770 J	436 J	NA	NA	NA	NA	NA	NA	901	934 J
Silver	6800	0.798	ND	1.13	ND	ND	ND	ND	ND	0.754	ND	ND	NA	NA	NA	NA	NA	NA	ND	ND
Sodium	--	ND	371	ND	ND	ND	343	ND	ND	ND	230	ND	NA	NA	NA	NA	NA	NA	415	ND
Thallium	--	ND	ND	ND	ND	ND	ND	ND	ND	7.3	ND	ND	NA	NA	NA	NA	NA	NA	9.9	ND
Vanadium	--	50.3 J	28.6 J	19.9 J	56.5 J	9.36 J	24.2 J	5.78 J	19.1 J	223 J	20.7 J	107 J	NA	NA	NA	NA	NA	NA	17.7 J	27.3 J
Zinc	10000	132	600	296	149	545 J	316 J	406 J	46.1 J	360 J	351 J	164 J	NA	NA	NA	NA	NA	NA	189 J	130 J
Mercury	5.7	0.105	0.0435	1.59 D	0.0426	0.0641	0.0261	0.0488	ND	0.169	0.0463	ND	NA	NA	NA	NA	NA	NA	0.0828	0.04 J

TABLE 4c
Summary of Subsurface Soil Analytical Data
Remedial Investigation Test Pit Samples
3807 Highland Avenue Site
Niagara Falls, New York

PARAMETER ¹	Industrial SCOs ²	Remedial Investigation - Sample Locations																			
		TP-16 (0-2)	TP-16 (1.5)	TP-16N (0-1)	TP-16N2 (0-1)	TP-16S (0-1)	TP-16W (0-1)	TP-16E (0-1)	TP-17 (0-2)	TP-18 (0-2)	TP-20 (0-2)	TP-22 (0-2)	TP-23 (0-2)	TP-24 (0-3)	TP-25 (3-5)	TP-26 (5-7)	TP-27 (4-6)	TP-28 (4-6)	TP-29 (0-2)		
		Oct 09	Oct 09	Oct 09	Jan 10	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09	Oct 09		
Volatile Organic Compounds (VOCs) - mg/Kg																					
1,2,4-Trimethylbenzene	380	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0013 J	NA	NA	NA	NA	NA	NA	
2-Butanone (MEK)	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0053 J	NA	NA	NA	NA	NA	NA	
Acetone	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.082	NA	NA	NA	NA	NA	NA	
Benzene	89	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0013 J	NA	NA	NA	NA	NA	NA	
Carbon disulfide	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0016 J	NA	NA	NA	NA	NA	NA	
Cyclohexane	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	
Ethylbenzene	780	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0011 J	NA	NA	NA	NA	NA	NA	
Isopropylbenzene (Cumene)	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	
Methylene chloride	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	
n-Propylbenzene	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	
p-Cymene (p-isopropyltoluene)	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	
sec-Butylbenzene	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	
Toluene	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0022 J	NA	NA	NA	NA	NA	NA	
Semi-Volatile Organic Compounds (SVOCs) - mg/Kg																					
2-Methylnaphthalene	--	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	0.077 D,J	ND	0.16 D,J	ND	ND	0.16 D,J	ND	0.25 D,J	0.14 D,J
Acenaphthene	1000	ND	NA	NA	NA	NA	NA	NA	NA	0.17 D,J	ND	ND	0.063 D,J	ND	0.43 D	ND	ND	0.35 D,J	ND	0.18 D,J	ND
Acenaphthylene	1000	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	1000	ND	NA	NA	NA	NA	NA	NA	NA	0.31 D,J	0.057 D,J	ND	0.13 D,J	ND	0.79 D,J	ND	ND	ND	ND	0.51 D,J	ND
Benzo(a)anthracene	11	0.55 D,J	NA	NA	NA	NA	NA	NA	NA	1.2 D,J	0.27 D,J	0.77 D,J	0.45 D,J	0.18 D,J	3.1 D	0.54 D,J	0.68 D,J	1.9 D,J	0.19 D,J	1.4 D,J	0.49 D,J
Benzo(a)pyrene	1.1	ND	NA	NA	NA	NA	NA	NA	NA	1.5 D,J	0.3 D,J	0.84 D,J	0.47 D,J	ND	4.3 D	0.61 D,J	0.9 D,J	2.8 D	0.21 D,J	1.7 D,J	0.55 D,J
Benzo(b)fluoranthene	11	ND	NA	NA	NA	NA	NA	NA	NA	1.5 D,J	0.32 D,J	1 D,J	0.58 D,J	ND	4.7 D	0.55 D,J	1 D,J	3 D	0.32 D,J	2 D	0.78 D,J
Benzo(ghi)perylene	1000	ND	NA	NA	NA	NA	NA	NA	NA	1.5 D,J	0.29 D,J	0.62 D,J	0.31 D,J	ND	3.6 D	ND	0.76 D,J	2.1 D,J	0.17 D,J	1.4 D,J	0.51 D,J
Benzo(k)fluoranthene	110	ND	NA	NA	NA	NA	NA	NA	NA	0.82 D,J	0.19 D,J	0.41 D,J	0.2 D,J	ND	1.8 D,J	0.47 D,J	0.37 D,J	1.2 D,J	0.11 D,J	0.74 D,J	0.27 D,J
Biphenyl	--	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	--	ND	NA	NA	NA	NA	NA	NA	NA	0.21 D,J	ND	ND	ND	ND	0.49 D,J	ND	ND	0.25 D,J	ND	0.23 D,J	ND
Chrysene	110	ND	NA	NA	NA	NA	NA	NA	NA	1.3 D,J	0.31 D,J	0.98 D,J	0.52 D,J	0.12 D,J	3.3 D	0.57 D,J	0.7 D,J	2.1 D,J	0.24 D,J	1.5 D,J	0.55 D,J
Dibenzofuran	1000	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	0.84 D,J	ND	ND	0.52 D,J	ND	0.38 D,J	ND
Dibenzofuran	1000	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	0.28 D,J	ND	ND	ND	ND	0.21 D,J	ND
Fluoranthene	1000	0.7 D,J	NA	NA	NA	NA	NA	NA	NA	2.1 D,J	0.38 D,J	1.2 D,J	1.2 D	0.094 D,J	5.9 D	0.83 D,J	1.1 D,J	3.3 D	0.28 D,J	2.6 D	0.81 D,J
Fluorene	--	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	0.41 D,J	ND	ND	0.23 D,J	ND	0.27 D,J	ND
Indeno(1,2,3-cd)pyrene	11	ND	NA	NA	NA	NA	NA	NA	NA	1.1 D,J	0.18 D,J	ND	0.26 D,J	ND	3.1 D	0.28 D,J	0.6 D,J	1.8 D,J	0.14 D,J	1.2 D,J	0.41 D,J
Naphthalene	1000	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.31 D,J	ND
Phenanthrene	1000	0.53 D,J	NA	NA	NA	NA	NA	NA	NA	1.5 D,J	0.21 D,J	0.51 D,J	0.74 D,J	0.15 D,J	4.1 D	0.51 D,J	0.72 D,J	1.7 D,J	0.21 D,J	2.1 D	0.6 D,J
Pyrene	1000	ND	NA	NA	NA	NA	NA	NA	NA	1.7 D,J	0.4 D,J	1.4 D,J	0.94 D	0.15 D,J	4.7 D	0.76 D,J	0.93 D,J	2.8 D	0.22 D,J	2 D	0.68 D,J
PCBs - mg/Kg																					
Aroclor 1242	25	0.11 C, J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
Aroclor 1254	25	0.048 C	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.027 C	NA	NA	NA	NA	NA
Aroclor 1260	25	0.071 C, J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.027 C	NA	NA	NA	NA	NA
Pesticides/Herbicides - mg/Kg																					
Alpha BHC	6.8	0.011 D,J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Delta BHC	1000	0.0098 D,J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	410	0.0082 D,J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma BHC	23	0.012 D,J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	--	0.013 D,J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals - mg/Kg																					
Aluminum	--	3810 D	NA	NA	NA	NA	NA	NA	NA	7830	1790	1010	1270	1130	9940	5270	11500	6240	7250	9910	6290
Arsenic	16	24.3 D	4.4 J	14.1 D,J	NA	9.2 J	9.8 J	9.4 J	5.3	9.9	3.3	4.2	20.9 J	7.5	8.8	14.5	17	7.5	13.3	16.1	
Barium	10000	91.3 D	NA	NA	NA	NA	NA	NA	42.7	216	22.2	28.9 J	18.2 J	109	94.7	95.2	51.9	52.8	128	88.9	
Beryllium	2700	ND	NA	NA	NA	NA	NA	NA	0.473	0.267	ND	ND	ND	0.579	0.349	0.573	0.392	0.349	1.27	0.425	
Cadmium	60	ND	NA	NA	NA	NA	NA	NA	0.636 J	0.838	0.439	ND	0.851	0.756	1.26	1.47	1.24	0.731	0.84	0.559	
Calcium	--	35700 D	NA	NA	NA	NA	NA	NA	101000 D,J	7650	37600	13100	4590	36600	60600 D	8450	15300	26200	21100	19000	
Chromium	6800	23300 D	23.1 J	23900 D,J	609	1190 J	462 J	527 J	51.3 J	714	57.8	432	446 J	103	3800	182	1050	565	407	336	
Chromium (Hexavalent)	800	1.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Cobalt	--	429 D	NA	NA	NA	NA	NA	NA	7.15	28.7	3.31	20.6	18.4 J	11.9	90.7	17.2	9.77	5.35	8.46	15.6	
Copper	10000	614 D	NA	NA	NA	NA	NA	NA	26.7	293	44.4	80.2 J	561 J	76.5	183	57.5	103	84.2	105	207	
Iron	--	164000 D	NA	NA	NA	NA	NA	NA	15800	108000 D	23500	41100	243000 D,J	20400	39200	20000	27700	23200	23700	81500	
Lead	3900	177 D	NA	NA	NA	NA	NA	NA	79.1	117	35.1	54.6	160	129	95.2	156	892	454	415	481	
Magnesium	--	14400 D	NA	NA	NA	NA	NA	NA	59300 D,J	4090	20300	5830 J	1550	14600	28400	9530	21900	25800	14600	11900	
Manganese	10000	3980 D	NA	NA	NA	NA	NA	NA	640	3200 D	503	669	1820 J	1130	1860	758	1030	1120	1280	1620	
Nickel	10000	16900 D	28.1 J	17300 D,J	NA	1100 J	2460 J	800 J	41.8 J	542	44	394	176	114	2730 D	218	492	101	116	193	
Potassium	--	772 D	NA	NA	NA	NA	NA	NA	1060	184	256	207 J	228	1400	799	1640	2720	770	1690	1030	
Silver	6800	ND	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Sodium	--	ND	NA	NA	NA	NA	NA	NA	542	ND	ND	ND	ND	ND	211	ND	358	ND	199	ND	
Thallium	--	ND	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Vanadium	--	250 D	NA	NA	NA	NA	NA	NA	21.5 J	27.7	5.11	14.1 J	19.6 J	30.7	54.9	33.7	615	9.48	13.2	21.7	
Zinc	10000	450 D	NA	NA	NA	NA	NA	NA	326 J	226	99.3	132 J	46.2 J	251	288	284	615	362	338		

TABLE 5

Summary of Groundwater Analytical Data

3807 Highland Avenue Site

Niagara Falls, New York

PARAMETER ¹	GWQS/ GV ²	MW-1 ³	MW-2	MW-3S	MW-3D	MW-4	MW-5
Volatile Organic Compounds (ug/L)							
1,2,4-Trimethylbenzene	5	ND	ND	ND	ND	ND	0.81 J
2-Hexanone	50	ND	ND	ND	ND	ND	5.7
Acetone	50	ND	ND	15	ND	ND	23
Benzene	1	ND	ND	ND	ND	ND	0.81 NJ
Chlorobenzene	5	ND	ND	ND	ND	1	ND
cis-1,2-Dichloroethene	5	ND	ND	ND	ND	2.2	ND
Cyclohexane	--	ND	ND	ND	ND	ND	5
Isopropylbenzene	5	ND	ND	ND	ND	ND	6.2
Methylcyclohexane	--	ND	ND	ND	ND	ND	6
Methyl Ethyl Ketone (MEK)	50	ND	ND	2.6 J	ND	ND	7.1
Methylene Chloride	5	ND	2.2 DJ	ND	ND	ND	ND
n-Butylbenzene	5	ND	ND	ND	ND	ND	3.5
n-Propylbenzene	5	ND	ND	ND	ND	ND	11
sec-Butylbenzene	5	ND	ND	ND	ND	ND	3.1
Toluene	5	ND	ND	ND	ND	ND	1.1
Vinyl chloride	2	ND	ND	ND	ND	1.4	ND
Xylenes, Total	5	ND	ND	ND	ND	ND	1.9 J
Semi-volatile organic compounds (ug/L)							
2-Methylnaphthalene	5	ND	ND	ND	ND	ND	58
4-Methylphenol	--	ND	ND	1 J	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	0.8 J	8.5 J
Acetophenone	--	ND	ND	ND	ND	ND	2 J
Anthracene	50	ND	ND	ND	ND	0.22 J	0.96 J
Carbazole	--	ND	ND	ND	ND	ND	2 J
Di-n-butyl phthalate	5	0.49 J	ND	0.29 J	ND	ND	0.72 J
Dibenzofuran	--	ND	ND	ND	ND	ND	3.5 J
Diethyl phthalate	50	ND	ND	0.49 J	ND	ND	2.6 J
Fluoranthene	50	ND	ND	ND	ND	ND	0.82 J
Fluorene	50	ND	ND	0.29 J	ND	0.24 J	7.9 J
Naphthalene	10	ND	ND	ND	ND	ND	8 J
Phenanthrene	50	ND	ND	1.7 J	0.8 J	ND	5.5 J
Pyrene	50	ND	ND	ND	ND	ND	0.64 J
Total Metals (ug/L)							
Aluminum	--	1,860	37,400	ND	1,270	469	4,820
Barium	1000	127	405	53.5	28.2	70	143
Calcium	--	165,000	261,000	102,000	242,000	332,000	122,000
Chromium	50	ND	51.8	ND	ND	ND	20.2
Cobalt	--	ND	24.8	ND	ND	ND	ND
Copper	200	ND	54.7	ND	ND	ND	10.7
Iron	300	1,550	61,100	140	3,280	527	5,500
Lead	25	8.2	23.4	ND	ND	ND	19.1
Magnesium	35,000	63,000	37,300	58,400	97,600	85,200	50,400
Manganese	300	216	2,260	145	123	336	672
Nickel	100	ND	58	ND	ND	ND	37
Potassium	--	4,350	12,600	4,550	4,390	16,300	9,480
Sodium	20,000	59,700	169,000	32,700	49,300	126,000	113,000
Vanadium	--	ND	78.4	ND	ND	ND	6.3
Zinc	2,000	19	151	ND	ND	18.2	175
Soluble Metals (ug/L)							
Barium	1000	109	177	57.3	21.2	71	109
Calcium	--	142,000	88,000	110,000	240,000	323,000	111,000
Magnesium	35,000	52,600	41,600	65,100	98,100	83,700	46,200
Manganese	300	217	321	129	92.4	337	416
Potassium	--	3,400 J	1,920 J	4,470 J	3,930 J	16,500 J	8,620 J
Sodium	20,000	52,800	184,000	33,000	51,500	132,000	116,000
Zinc	2,000	ND J	11.5 J	ND J	ND J	ND J	11 J
Mercury	0.7	ND	ND	ND	0.1 J	ND	0.1 J

Notes:

- Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
- Values per NYSDEC Division of Water Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations - GA Class (TOGS 1.1.1)
- MW-1 was resampled on Nov 24, 2009 for VOCs due to a laboratory foaming-related dilution issue with the initial sample.

Definitions:

- "--" = No GWQS/GV available.
- D = Analyte detected at a secondary dilution factor.
- J = Estimated value; result is less than the sample quantitation limit but greater than zero.
- N = Tentative identification and estimated value.
- ND = Parameter not detected above laboratory detection limit.

 = Analyte detected above GWQS/GV.