

**Site Investigation
and
Remedial Alternatives Report

for**

**1318 Niagara Street Site
Buffalo, New York
NYSDEC ID #E915213**

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Prepared for:



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TABLE OF CONTENTS

LIST OF ACRONYMS AND ABBREVIATIONS.....	vii
1.0 INTRODUCTION	1
1.1 Project Goals and Scope	1
1.2 Project Purpose and Report Organization.....	2
2.0 Background.....	3
2.1 Site Setting.....	3
2.2 Site Background.....	3
3.0 Site Investigation Program.....	5
3.1 Preliminary Site Investigations	5
3.1.1 Soil and Surface Water Investigation	5
3.1.2 Drum and Tank Investigation	5
3.2 IRM-1 Results.....	6
3.3 Site Investigation (June/July 2011).....	10
3.3.1 Soil Sampling Results.....	11
3.3.2 Groundwater Sampling Results (July 2011).....	12
3.3.3 Site Hydrogeology	13
3.4 Supplemental Site Investigation (November 2011)	13
3.4.1 Supplemental Soil Sampling Results (November 2011).....	14
3.4.2 Groundwater Sampling Results (November 2011).....	14
3.5 IRM-2 Results.....	15
3.5.1 Excavation Area A West.....	16
3.5.2 Excavation Area A East.....	17
3.5.3 Excavation Area B	17
3.5.4 Excavation Area C.....	18
3.5.5 Excavation Area D.....	19
3.5.6 Excavation Area E	20
3.7 Potentially Applicable Standards, Criteria and Guidance (SCGs).....	20
3.8 Nature and Extent of Contamination	21
3.8.1 Soil Contamination	21
3.8.2 Groundwater Contamination.....	22
3.9 Conceptual Site Model.....	22
4.0 Qualitative Exposure Assessment.....	24
5.0 Remedial Goal and Remedial Action Objectives	26
5.1 Goal and Objectives.....	26



5.2	Remediation Areas and Volumes.....	26
5.2.1	Soil	26
5.2.2	Air	27
5.2.3	Groundwater	27
5.3	Interim Remedial Measure Evaluation	27
5.4	General Response Actions	27
5.5	Identification and Screening of Technologies for Soil	28
5.5.1	Containment.....	28
5.5.2	Excavation and Offsite Disposal/Treatment	28
5.5.3	In-Situ Treatment.....	29
5.5.4	Excavation and Ex-Situ Treatment	31
5.6	Identification and Screening of Technologies for Groundwater.....	31
5.6.1	Monitored Natural Attenuation.....	31
5.6.2	Site Management Plan	32
5.7	Summary of Retained Technologies.....	33
5.8	Development of Remedial Alternatives	33
6.0	Description and Detailed Analysis of Alternatives.....	34
6.1	Description of Alternatives	34
6.1.1	Alternative 1 – No Action, SMP, MNA	34
6.1.2	Alternative 2 – Excavation and Offsite Disposal – 1 PPM, SMP	35
6.1.3	Alternative 3 – Excavation and Offsite Disposal – 10 PPM, Cover, SMP	37
6.1.4	Alternative 4 – Excavation and Offsite Disposal – 50 PPM, Cover, SMP	38
6.2	Description of Evaluation Criteria	40
6.2.1	Overall Protection of Public Health and the Environment	40
6.2.2	Compliance with Standards, Criteria, and Guidance (SCGs)	40
6.2.3	Long-Term Effectiveness and Permanence	40
6.2.4	Reduction of Toxicity, Mobility or Volume with Treatment.....	41
6.2.5	Short-Term Effectiveness	41
6.2.6	Implementability.....	41
6.2.7	Cost	41
6.2.8	Community and State Acceptance	41
6.3	Detailed Analysis of Alternatives	41
6.3.1	Alternative 1 – No Action.....	41
6.3.2	Alternative 2 – Excavation and Offsite Disposal – 1 PPM, SMP.....	42
6.3.3	Alternative 3 – Excavation and Offsite Disposal – 10 PPM, Cover, SMP	43
6.3.4	Alternative 4 – Excavation and Offsite Disposal – 25 PPM, Cover, SMP	45
6.4	Comparative Analysis of Alternatives	46
6.4.1	Overall Protection of Public Health and the Environment	46
6.4.2	Compliance with Standards, Criteria, and Guidance (SCGs)	46
6.4.3	Long-Term Effectiveness and Permanence	46
6.4.4	Reduction of Toxicity, Mobility or Volume with Treatment.....	46



6.4.5	Short-Term Effectiveness	46
6.4.6	Implementability	47
6.4.7	Cost	47
7.0	Recommended Remedial Alternative	48
7.1	Basis for Recommendation	48
7.2	Recommended Remedial Alternative Components	48

REFERENCES



**LIST OF TABLES
(Following Text)**

Table 1	Preliminary Investigation Surface Soil Sampling Results for PCBs
Table 2	Preliminary Investigation UST and 55-Gal Drum Contents Composite Sampling Results for VOCs and PCBs
Table 3	Preliminary Investigation UST and 55-Gal Drum Contents Composite Sampling Results for TCLP
Table 4	IRM-1 Final Endpoint Soil Sampling Results (PCBs)
Table 5	IRM-1 TCL Soil Sampling Results for VOCs
Table 6	IRM-1 TCL Soil Sampling Results for SVOCs
Table 7	IRM-1 TCL Soil Sampling Results for Metals
Table 8	IRM-1 TCL Soil Sampling Results for Pesticides
Table 9	IRM-1 TCL Soil Sampling Results for PCBs
Table 10	SI Soil Sampling Results for VOCs
Table 11	SI Soil Sampling Results for SVOCs
Table 12	SI Soil Sampling Results for Metals
Table 13	SI Soil Sampling Results for Pesticides
Table 14	SI Soil Sampling Results for PCBs
Table 15	SI Groundwater Sampling Results for VOCs
Table 16	SI Groundwater Sampling Results for SVOCs
Table 17	SI Groundwater Sampling Results for Metals
Table 18	SI Groundwater Sampling Results for Pesticides
Table 19	SI Groundwater Sampling Results for PCBs
Table 20	Supplemental SI Soil Sampling Results for VOCs
Table 21	Supplemental SI Soil Sampling Results for SVOCs
Table 22	Supplemental SI Soil Sampling Results for Metals
Table 23	Supplemental SI Soil Sampling Results for Pesticides
Table 24	Supplemental SI Soil Sampling Results for PCBs
Table 25	Supplemental SI Groundwater Sampling Results for VOCs
Table 26	Supplemental SI Groundwater Sampling Results for SVOCs
Table 27	Supplemental SI Groundwater Sampling Results for Metals
Table 28	Supplemental SI Groundwater Sampling Results for Pesticides
Table 29	Supplemental SI Groundwater Sampling Results for PCBs
Table 30	IRM-2 Area A West Excavation Final Endpoint Soil Sampling Results (PCBs)
Table 31	IRM-2 Area A East Excavation Final Endpoint Soil Sampling Results (PCBs)
Table 32	IRM-2 Area B Excavation Final Endpoint Soil Sampling Results (PCBs)
Table 33	IRM-2 Area C Excavation Final Endpoint Soil Sampling Results (PCBs)
Table 34	IRM-2 Area D Excavation Final Endpoint Soil Sampling Results (PCBs)
Table 35	IRM-2 Area E Excavation Final Endpoint Soil Sampling Results (PCBs)
Table 36	Potentially Applicable Standards, Criteria and Guidance
Table 37	General Response Actions and Remedial Technology Screening
Table 38	Preliminary Annual Cost Estimate – Monitored Natural Attenuation
Table 39	Preliminary Capital Cost Estimate – Excavation and Offsite Disposal of PCB Contaminated Soils above 1 ppm
Table 40	Preliminary Capital Cost Estimate – Excavation and Offsite Disposal of PCB Contaminated Soils above 10 ppm
Table 41	Preliminary Capital Cost Estimate – Excavation and Offsite Disposal of PCB Contaminated Soils above 50 ppm



Table 42 Summary of Remedial Alternative Cost Estimates

**LIST OF FIGURES
(Following Tables)**

Figure 1	Site Location Map
Figure 2	Site Plan
Figure 3	Preliminary Investigation Sample Locations and Summary of Results
Figure 4	IRM-1 Excavation Areas
Figure 5	SI Sample Locations and PCB Exceedences
Figure 6	SI and Supplemental SI Groundwater Sample Results – Organics Exceedences
Figure 7	Geological Cross-section A-A'
Figure 8	Geological Cross-section B-B'
Figure 9	Groundwater Elevation Contour Map – July 2011
Figure 10	Supplemental SI Sample Locations and Soil Exceedences
Figure 11	IRM-2 Excavation Areas
Figure 12	Commercial SCO Exceedences
Figure 13	PCBs in Shallow Soil Samples (0-1')
Figure 14	PCBs in Soil Sample Results 1' to Bottom of Fill
Figure 15	PCBs in Soil Sample Results Bottom of Fill to 14 ft
Figure 16	Alternative 2 – Excavation/Disposal of Soils Over 1 ppm
Figure 17	Alternative 3 – Excavation/Disposal of Soils Over 10 ppm
Figure 18	Alternative 4 – Excavation/Disposal of Soils Over 25 ppm

LIST OF ATTACHMENTS

A	Site Investigation Boring Logs and Well Construction Logs
B	Site Investigation Data Usability Summary Reports
C	Laboratory Analytical Data Reports (provided on CD)



LIST OF ACRONYMS AND ABBREVIATIONS

AOC	Area of Concern
bgs	below ground surface
CFR	Code of Federal Regulations
cm/sec	centimeters per second
COCs	chemicals of concern
cy	cubic yard
EA	Qualitative Human Health Exposure Assessment
ECIDA	Erie County Industrial Development Agency
ERP	Environmental Restoration Program
ft	feet
IC/EC	institutional controls and engineering controls
IRM	interim remedial measure
ISS	in situ solidification
LiRo	LiRo Engineers, Inc.
mg/kg	milligram per kilogram
NC	no criteria
ND	non-detect
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OM&M	operation, maintenance and monitoring
OSHA	Occupational Safety and Health Administration
OU	Operable Unit
PAHs	polycyclic aromatic hydrocarbons
PID	photoionization detector
PPE	personal protection equipment
RAOs	remedial action objectives
RAR	Remedial Alternatives Report
RCRA	Resource Conservation and Recovery Act
ROD	Record of Decision
SCGs	Standards, Criteria, and Guidance
SI	Site Investigation
SIR	Site Investigation Report
SMP	Site Management Plan
SVOCs	semi-volatile organic compounds
SWMU	Solid Waste Management Unit
TAGM	Technical and Administrative Guidance Memorandum
TCLP	toxicity characteristic leaching procedure
TCL/TAL	Target Compound List/Target Analyte List
TMV	toxicity, mobility or volume
TOGS	Technical and Operational Guidance Series
TSCA	Toxic Substances Control Act
USEPA	United States Environmental Protection Agency
VOCs	volatile organic compounds



1.0 INTRODUCTION

LiRo Engineers, Inc. (LiRo) is in contract agreement with the City of Buffalo, Office of Strategic Planning to provide a Site Investigation and Remedial Alternatives Report (SI/RAR) for the 1318 Niagara Street Site in Buffalo, New York. The Site location is shown on Figure 1. General Site and nearby/adjacent property features are shown on Figure 2. The property is bounded by Niagara Street to the East, a rail corridor to the West and commercial properties to the north and south.

Documents previously prepared by LiRo for this project include the Site Investigation Plan/ Standard Operation Procedures/ Quality Assurance Project Plan (collectively referred to as the Work Plan), two IRM Work Plans, the site Health and Safety Plan, and the Citizen Participation Plan. These documents, which were approved by the New York State Department of Environmental Conservation (NYSDEC) prior to the Site Investigation field work, define the scope of work, technical approach and procedures for conducting the field investigation. This SI report summarizes the results of SI sampling and IRM endpoint sampling at the 1318 Niagara Street Site.

1.1 Project Goals and Scope

The purpose of this SI/RAR is to summarize the findings of the SI completed in June through July 2011 and November 2011, to summarize the results of soil sampling conducted in conjunction with two Interim Remedial Measures (IRMs), and to identify a recommended remedial alternative for the Site that will eliminate or mitigate all significant threats to human health and/or the environment, to the extent practicable, caused by contaminants present due to former Site activities.

Site Investigation activities included document review, monitoring well installation, and sampling and analysis of soil and groundwater. The site is zoned for commercial use and the future intended use is likely commercial. Therefore, the site remedial goals are based on 6NYCRR Part 375 Restricted Commercial Track 2 Soil Cleanup Objectives (SCOs).

The document review included review of NYSDEC spills division records for the Site and City of Buffalo building demolition records. No previous Phase I Environmental Site Assessment was evident in the records. LiRo also reviewed NYSDEC reports for the nearby Chem Core site located approximately 650 feet north of the site as Chem Core may potentially impact the 1318 Niagara Street Site. The hydro geological information developed for the Chem Core project is considered relevant to the 1318 Niagara Street site. The document review information has been incorporated into the Site history and relevant sections of this report.



1.2 Project Purpose and Report Organization

The 1318 Niagara Street SI/RAR is being conducted under a NYSDEC ERP State Assistance Contract with the City of Buffalo (the City), Office of Strategic Planning. LiRo is under contract with the City to plan and implement the SI/RAR and NYSDEC is responsible for oversight of the investigation as well as review and approval of project deliverables.

The NYSDEC project manager is Mr. Anthony Lopes and Mr. Dennis Sutton directs the project for the City. LiRo's key project personnel are Mr. Robert Kreuzer, project manager; Mr. Martin Wesolowski, P.E., project engineer; and Mr. Stephen Frank, project coordinator.

This SI/RAR is structured in accordance with NYSDEC DER-10 guidance for the Environmental Restoration Program (ERP) and contains six sections:

- Section 1 provides the project purpose and goals.
- Section 2 provides a summary of the Site background
- Section 3 provides a summary of the Site Investigation performed by LiRo. The Site Investigation was completed to more accurately evaluate the extent (area and volume) of remediation areas.
- Section 4 presents the remedial goal and remedial action objectives for the site, along with an identification and screening of remedial technologies which would meet those goal(s) and objectives. A discussion on the need for an interim remedial measure is provided. The list of developed remedial alternatives is presented.
- Section 5 describes and evaluates the remedial alternatives developed for the Site. The evaluation criteria consist of: overall protection of human health and the environment; compliance with standards, criteria and guidance (SCGs), long-term effectiveness and permanence, reduction of toxicity, mobility and volume with treatment, short-term effectiveness, implementability and cost.
- Section 6 provides the basis and presents the recommendation of a remedial alternative for the Site.



2.0 Background

2.1 Site Setting

The Site is located at 1318 Niagara Street in the City of Buffalo, New York (Figure 1) on approximately 0.77 acres of land. The Site elevation along Niagara Street (eastern side of the Site) is approximately 600 feet above sea level, and the Site slopes to the west. The site was previously developed with a brewery; however, these structures were demolished in 2006 - 2007. Some foundation structures remain at the Site, which are represented on Figure 2.

The Site is located in an urban setting, with commercial properties along Niagara Street north and south of the site, and residential/commercial properties across Niagara Street to the southeast, east, and northeast. The site is bordered to the west by the Penn Central Railroad and beyond that by the New York State I-190 and the Black Rock Canal.

2.2 Site Background

The Site was formerly operated as a brewery from approximately 1909 until approximately 1987. The site was held by private owners from 1987 until November 2004, at which time the City of Buffalo obtained the property through the tax foreclosure process. It is not known what the property was utilized for during the period from 1987 until 2004.

Demolition of the site buildings began in May of 2006. During demolition, two 20,000 gallon fuel oil underground storage tanks (USTs) were discovered. A laboratory report from January 2007 indicated that the residual oil in the tanks contained hazardous levels of polychlorinated biphenyls (PCBs) (Aroclor 1242 at concentrations of 90 mg/kg and 124.5 mg/kg). The samples also contained tetrachloroethene (150 mg/kg and 200 mg/kg), trichloroethene (78 mg/kg and 270 mg/kg), 1,2-dichlorobenzene (44 mg/kg) and lead (4,100 mg/kg and 2,100 mg/kg). The residual oil was reportedly removed using a Vac-truck in February 2007. The two tanks were excavated in February 2007, staged along the southern margin of the site, and covered with polyethylene tarps. Upon UST excavation, it was found that one of the USTs had leaked into the subsurface, impacting the surrounding soil. Piping from the USTs was also discovered and removed. The site records indicate that one soil sample described as "tank soil" was collected on February 12, 2007. The soil sample was analyzed for PCBs and Toxicity Characteristic Leaching Procedure (TCLP) organics/metals. The PCB concentration was 0.866 mg/kg in soil and the TCLP results showed non-hazardous levels of barium and lead. As a result of the UST leak, the New York State Department of Environmental Conservation assigned Spill Number 0651726 to the Site.

In addition to contamination associated with the USTs, a former furnace was uncovered in January 2007. The furnace contained sludge that was tested for PCBs and TCLP organics/metals. The PCB



concentration in sludge was 23,700 mg/kg and the TCLP results showed detectable (but non-hazardous) levels of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and barium.

In addition, 55-gallon drums reportedly containing PCBs in waste oil/sludge, and used personal protective equipment (PPE) were staged along the northern margin of the Site and covered with polyethylene tarps.

LiRo visited the site on June 25, 2009 with representatives from the City. Mr. Larry Schiavone, who directed the site demolition project for the City in 2006, indicated the northeast portion of the Site where the USTs had been removed. He recalled that soil from the tank excavation was used for backfilling and that a polyethylene tarp (the edge of which was visible) had been placed to mark the excavation limit. Mr. Schiavone also recalled that imported fill had been used to level the Site and that an existing mound of fill material was imported. The furnace excavation was open and it appeared that the former bottom of the structure had been covered by recent sedimentation.



3.0 Site Investigation Program

3.1 Preliminary Site Investigations

LiRo developed a Preliminary Site Investigation Plan (dated July 13, 2009) to generate screening level data to support the Interim Remedial Measure (IRM) planning. The preliminary investigation included soil sampling, surface water sampling, sludge and residual water sampling from each of the former USTs, and composite sampling of oil and of sludge from the 55-gallon drums staged on-site. The results of the Preliminary Site Investigation are discussed further in the sections below.

3.1.1 Soil and Surface Water Investigation

LiRo conducted a preliminary site investigation at the Site on September 24, 2009 and documented the results in a letter report dated October 14, 2009. The purpose of the preliminary surface soil investigation was to determine if surface soils pose a significant health risk due to PCB contamination. Surface soil samples were collected from a depth interval of 0 to 2 inches or 0 to 6 inches at 14 locations including, but not limited to, the furnace pit, the area of the UST excavation, and the area near the staged USTs. LiRo also collected a sample of surface water and sediment present in the furnace pit for PCB analysis.

Preliminary Investigation surface soil sampling results from September 24, 2009 are summarized in Table 1 and shown on Figure 3. Aroclor-1260 was detected in all of the surface soil and sediment samples ranging in concentrations from 0.043 parts per million (ppm) to 51 ppm. Surface soil samples SS-1 through SS-5, SS-12 and SS-15 all exceeded the NYSDEC Part 375 Soil Clean-up Objective (SCO) of 1 ppm.

The pit water sample showed Aroclor 1260 at a concentration of 0.29 parts per billion (ppb). The pit water concentration exceeded the NYSDEC Class GA groundwater standard which is 0.09 ppb for total PCBs.

3.1.2 Drum and Tank Investigation

The nineteen (19) onsite drums contained sludge, oil, polyethylene sheeting, and personal protective equipment (PPE). LiRo opened each drum and classified the contents (to the extent possible). A composite sample of drum sludge and a composite sample of the residual oil/water were analyzed for PCBs and VOCs (total), and hazardous waste characteristics (full TCLP, sludge composite only). Sludge and residual oil/water samples were also collected from each of the former USTs.

Both tank oil samples contained relatively low concentrations of Aroclor 1260. Also detected were trichloroethene (in both samples) and toluene (in the West Tank). The companion sludge samples showed PCB concentrations up to 7.9 ppm (in the west tank), as well as chlorinated solvents and fuel-related compounds.



Compared to the UST samples, the drum samples showed significantly higher levels of PCBs, chlorinated solvents and fuel related compounds. The PCB concentration in the drum sludge composite sample was 59 ppm for Aroclor 1242. Both drum sludge samples exceeded the TCLP limit for lead.

Drum and UST VOC and PCB composite sampling results from September 24, 2009 are summarized in Table 2. Composite sample results for TCLP are summarized in Table 3.

3.2 IRM-1 Results

Based on the results of the preliminary investigation, LiRo developed an IRM Work Plan that was submitted in March, 2010. The objectives of the first IRM were: to clean and dispose of the former USTs staged in the southeastern portion of the site; to remove and dispose of drums staged in the northeastern portion of the site; to remove contaminated soil from the UST excavation area; to remove the remaining furnace pieces and contaminated soil from the furnace pit; to remove contaminated surface soil at locations with SCO exceedences identified during the preliminary investigation work; and to collect soil data that could be used to develop the SI scope. The following sections contain a summary of the IRM-1 activities.

IRM-1 was conducted by Empire GeoServices, Inc., a subsidiary of SJB Services, Inc., with oversight conducted by LiRo. The first phase of the IRM was implemented from September 2010 to October 2010. The two 20,000-gallon USTs that had been previously excavated and staged in the southeast corner of the Site were cleaned and removed from the Site. The USTs were disposed of off-site at a metal recycling facility. The staged 55-gallon drums containing PCB sludge waste and used PPE were removed and disposed of off-site at a permitted treatment, storage, and disposal facility. Impacted soils from four discrete areas of the Site were excavated as described below and disposed of at a permitted treatment, storage, and disposal facility.

3.2.1 UST Excavation

The UST excavation was located in the northeastern portion of the subject property where PCBs in fill materials were detected in excess of the NYSDEC Part 375 Commercial SCOs. Remedial excavation work on the UST area was initiated on September 16-17, 2010 with the excavation and disposal of contaminated soil. The initial excavation was advanced to the top of the underlying native silty clay soil which was encountered at a depth of approximately 12 feet below the pre-excavation ground surface. The sidewalls of the excavation were initially extended to the limits of the blue tarps that reportedly had been placed in 2007 to mark the original UST excavation limit. The initial excavation area was approximately 1,100 square feet.

Ten sidewall and three bottom confirmation soil samples were collected from the UST excavation area on September 24-27, 2010 and analyzed for PCBs. Three confirmation soil samples (W-1 at 10 feet below



ground surface (ft. bgs), W-5 at 5 ft. bgs, and B-3 at 12 ft. bgs), from the eastern sidewall, western sidewall, and the southern bottom of the excavation exceeded the NYSDEC SCOs for PCBs.

Based upon confirmation sample exceedences, additional soil excavation was conducted on October 7, 2010. A three foot wide by 12 foot deep excavation was performed along the northwestern sidewall. An additional confirmation soil sample (W-10A at 10 ft. bgs) from the northwestern sidewall was collected on October 7, 2010 and the sample result showed compliance with the NYSDEC SCOs.

At completion of the IRM, exceedences of the PCB SCO were evident in the northern portion of the east wall (locations W-1 and W-8), south bottom (location B-3) and central portion of the west wall (location W-5). The final excavation was approximately 1,287 sq. ft. A demarcation barrier was placed and the excavation was backfilled with select fill (virgin quarry stone) on September 29, October 4-5, October 14-15, and October 25, 2010 and graded level with the surrounding area.

The UST Excavation final endpoint soil sampling results are summarized in Table 4 and the final excavation limits are shown on Figure 4.

3.2.2 Area Immediately North and West of UST Excavation Area

The area immediately north and west of the UST excavation is located in the northeastern area of the property where PCBs in shallow fill soil were detected in excess of the NYSDEC SCO. Remedial excavation work in this area was initiated on September 29, 2010. The excavation was initially advanced to a depth of approximately one foot below the pre-excavation ground surface. The initial excavation area was approximately 1,200 square feet in size.

Six sidewall and two bottom confirmation soil samples were collected on September 29, 2010 and analyzed for PCBs. Two bottom (BT-1 at 1 ft. bgs and BT-2 at 1 ft. bgs) and five sidewall confirmation soil samples (WS-1 at 1 ft. bgs, WS-3 at 1 ft. bgs, WS-4 at 1 ft. bgs, WS-5 at 1 ft. bgs, and WS-6 at 1 ft. bgs) exceeded the NYSDEC SCO for PCBs. An additional excavation was conducted on October 7, 2010. An additional one foot of soil material was removed from the bottom of the excavation along with an additional three feet of material along the western sidewall, to a depth of two feet. The excavation along the western sidewall was approximately 75 feet in length. Five sidewall and two bottom confirmation soil samples were collected on October 7, 2010 and analyzed for PCBs. At completion of the IRM, exceedences of the PCB SCO were evident in a southern bottom sample (BT-1A at 1 ft. bgs), a western sidewall sample (WS-1A at 1 ft. bgs) and a northern sidewall sample (WS-4A at 1 ft. bgs). The excavation was backfilled with soil from the on-site approved stockpile on October 18, 2010 and graded level with the surrounding area.

The Area Immediately North and West of UST Excavation Area final endpoint soil sampling results are summarized in Table 4 and the final excavation limits are shown on Figure 4.



3.2.3 Discrete Area SS-12

Discrete Area SS-12 is located in the southwestern portion of the property where PCBs in shallow fill soil were detected in excess of the NYSDEC SCO. Remedial excavation work at Discrete Area SS-12 was initiated on September 23, 2010 with the excavation and disposal of contaminated soil. The excavation was initially advanced to a depth of approximately one foot below the pre-excavation ground surface. The initial excavation area was approximately 100 sq. ft. in size.

Four sidewall and one bottom confirmation soil samples were collected on September 23, 2010, and analyzed for PCBs. Three of the four sidewall confirmation soil samples (SS-12 North at 1 ft. bgs, SS-12 South at 1 ft. bgs, and SS-12 West at 1 ft. bgs), from the sidewalls slightly exceeded the NYSDEC SCO for PCBs and therefore, additional soil excavation was performed from the northern, western and southern sidewalls on October 8, 2010. An approximate one and a half foot wide and one foot deep excavation was performed along these sidewalls. Additional sidewall confirmation soil samples (SS-12A North at 1 ft. bgs, SS-12A West at 1 ft. bgs, and SS-12A South at 1 ft. bgs) were collected on October 8, 2010 and the western and southern wall sample results exceeded the NYSDEC SCO for PCBs. Following the second set of sample exceedences (SS-12B West at 1 ft. bgs and SS-12B South at 1 ft. bgs), an approximate one and a half foot wide by one foot deep of additional soil was removed from the western and southern sidewalls on October 19, 2010. Additional sidewall confirmation soil samples were collected on October 19, 2010 and analytical results indicated that the western and southern sidewall samples still slightly exceeded the NYSDEC SCOs for PCBs. The final excavation was approximately 160 square feet in size. The excavation was backfilled with soil from the on-site approved stockpile on October 19, 2010 and graded level with the surrounding area.

The Discrete Area SS-12 Excavation final endpoint soil sampling results are summarized in Table 4 and the final excavation limits are shown on Figure 4.

3.2.4 Discrete Area SS-5

Discrete Area SS-5 is located in the southeastern area of property where PCBs in shallow fill soil were detected in excess of the NYSDEC SCO. Remedial excavation work was initiated on September 18, 2010 with the excavation and disposal of contaminated soil. The excavation was advanced to a depth of approximately one foot below the pre-excavation ground surface. The initial excavation area was approximately 100 sq. ft. in size.

Four sidewall and one bottom confirmation soil samples were collected on September 23, 2010 and analyzed for PCBs. All of the confirmation samples complied with NYSDEC SCOs. The final excavation was 100 sq. ft. in size. The excavation was backfilled with select fill and graded level with the surrounding area.



The Discrete Area SS-5 excavation final endpoint soil sampling results are summarized in Table 4 and the final excavation limits are shown on Figure 4.

3.2.5 Furnace Pit Area

The Furnace Pit Area is located in the northwestern portion of the property. Remedial excavation work at the furnace pit area was initiated on September 21, 2010 with the excavation and disposal of contaminated soil and sediment from the bottom and sidewalls of the existing pit. The bottom of the excavation was initially advanced to depths of one to two ft. below the pre-excavation pit bottom. Existing sidewalls were excavated approximately one ft. to the north, east, south, and west. The initial excavation area was approximately 1,600 square feet in size.

Six sidewall (FPS-1 at 2 ft. bgs, FPS-2 at 2 ft. bgs, FPS-3 at 3 ft. bgs, FPS-4 at 2 ft. bgs, FPS-5 at 3 ft. bgs and FPS-6 at 2 ft. bgs) and two bottom confirmation soil samples (FPB-1 and FPB-2) were collected on September 23, 2010 and analyzed for PCBs. All of the confirmatory soil sample results exceeded the NYSDEC SCO for PCBs.

Based on these and subsequent PCB exceedences in endpoint samples, additional excavation work was conducted on September 30, 2010, October 8, 2010, October 20, 2010, October 22, 2010, and October 25, 2010.

At completion of the IRM, exceedences of the PCB SCO were evident in two of the bottom samples (FPB-2A and FPB-MID12), west sidewall sample (FPS-3A) and a southwest sidewall sample (FPS-4C). A demarcation barrier was placed and the excavation was backfilled to approximately one ft. below surrounding grade with soil from the on-site approved stockpile on October 27, 2010.

The Furnace Pit excavation final endpoint soil sampling results are summarized in Table 4 and the final excavation limits are shown on Figure 4.

3.2.6 IRM Target Compound List Sample Results

To support the ongoing ERP investigation of the Site for other contaminants, three of the endpoint samples were analyzed for the full Target Compound List (TCL) criteria. The full TCL includes VOCs, SVOCs, pesticides, PCBs and Target Analyte List (TAL) metals. The full TCL samples were collected from the Furnace Pit Excavation Area (FPS-7), UST Excavation Area (W-11), and Discrete Area SS-12 (S-12-B-A). The IRM TCL soil sampling results are summarized in Table 5 through Table 9.

TCL VOCs were analyzed for all three samples. No detections were reported.

TCL SVOCs were analyzed for all three samples. Although detections of Bis(2-ethylhexyl)phthalate, Anthracene, Pyrene, Dibenzofuran, Benzo(g,h,i)perylene, Indeno(1,2,3-cd)pyrene, Benzo(b)fluoranthene, Fluoranthene, Chrysene, Benzo(a)pyrene, Benzo(a)anthracene, Di-n-butyl phthalate, Phenanthrene,



Fluorene, Naphthalene, and 2-Methylnaphthalene were observed, no exceedences of the Restricted Commercial Use SCOs were reported. Most of the detections were identified as polycyclic aromatic hydrocarbons (PAH's), which are commonly detected in urban fill soils.

TAL Metals were analyzed for all three samples. Although detections of Aluminum, Iron, Lead, Magnesium, Manganese, Nickel, Potassium, Sodium, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Vanadium, Zinc, and Calcium were observed, no exceedences of the Restricted Commercial Use SCOs were reported. These metals are typically naturally occurring in soils and often found in urban fill.

TCL Pesticides/Herbicides were analyzed for all three samples. Although detections of Endosulfan II and 4,4'-DDT, were observed, no exceedences of the Restricted Commercial Use SCOs were reported.

3.3 Site Investigation (June/July 2011)

LiRo developed a Site Investigation Plan dated March 31, 2011 to fully characterize the Site chemical and physical conditions in order to support an evaluation of remedial alternatives and select a preferred alternative for site remediation. Site Investigation activities included soil borings, monitoring well installation, and sampling and analysis of soil and groundwater. The site is zoned for commercial use and the future intended use is likely commercial. Therefore, the site analytical results were evaluated relative to 6NYCRR Part 375 Restricted Commercial Track 2 Soil Cleanup Objectives (SCOs).

Site Investigation work was conducted in accordance with the procedures identified in the NYSDEC approved Work Plan. Soil and groundwater samples were collected into laboratory supplied, pre-cleaned sample jars and labeled with a unique sample identification code, packed in a cooler with ice, and shipped under chain-of-custody control to Chemtech of Mountainside, New Jersey, a New York State Certified Laboratory. Sample bottle requirements, holding times, laboratory QC procedures and field QA sampling procedures are detailed in the QAPP portion of the Site Investigation Work Plan.

Soil and groundwater samples were analyzed for volatile organic compounds (VOCs) using USEPA Method 8260, semi-volatile organic compounds (SVOCs) using Method 8270, PCBs using Method 8082, pesticides using Method 8081, TAL metals using Method 6010/7000 and cyanide using Method 9012. .

Soil boring logs and well construction logs from the SI are provided in Attachment A. Data Usability Summary Reports (DUSRs) for the SI data were prepared in accordance with NYSDEC guidelines and are provided in Attachment B. Laboratory analytical data reports are provided in Attachment C.

The results of the Site Investigation are discussed in the sections below.



3.3.1 Soil Sampling Results

Soil borings and surface soil locations were sampled to determine the nature and extent of soil contamination. Locations of samples were biased toward contaminant source areas or to delineate the extent of PCB contamination in areas where IRM confirmation samples exceeded SCOs. The SI sampling locations are shown on Figure 5.

Eleven soil borings (SB-01 through SB-08, SB-10, SB-11 and SB-13) and five monitoring wells (MW-01 through MW-05) were installed at the Site from June 20, 2011 to June 27, 2011 by Buffalo Well Drilling, with oversight by LiRo. Four additional surface soil samples (SS-13 through SS-16) samples were also collected for PCB analysis. All borings/monitoring wells were advanced using hollow stem augers. Soil from each boring was screened for the presence of organic vapors using a photoionization detector (PID). The LiRo supervising geologist recorded field descriptions of the soil as well as PID readings.

Eighteen soil samples were analyzed for VOCs using USEPA Method 8260, SVOCs using Method 8270, TAL metals using Method 6010, mercury using Method 7471, and cyanide using Method 9012. The results of the analyses are summarized in Tables 10, 11 and 12. No VOC or SVOC concentrations were detected above Restricted Use Commercial Soil Cleanup Objectives (SCOs). The soil sample collected at MW-03 from 18 to 20 ft. bgs contained zinc and copper at concentrations above Restricted Use Commercial SCOs. The soil sample collected at SB-02 from 0 to 2 ft. bgs contained copper at a concentration above Restricted Use Commercial SCOs. No other soil samples contained metal concentrations exceeding Restricted Use Commercial SCOs.

Eleven soil samples were analyzed for pesticides using Method 8081. The results of the analyses are summarized in Table 13. No pesticide concentrations were detected above Restricted Use Commercial SCOs.

Thirty-four soil samples from the boring/monitoring well installations were analyzed for PCBs using Method 8082. The results of the analyses are summarized in Table 14. The soil samples collected at MW-04 (2 to 4 ft. bgs), MW-05 (0 to 0.3 ft. bgs), SB-01 (0 to 2 ft. bgs), SB-04 (13 ft. bgs), SB-04 (15 ft. bgs), SB-05 (3 ft. bgs), SB-06 (3 ft. bgs), SB-06 (4 ft. bgs), SB-07 (1 to 2 ft. bgs), SB-10 (0 to 0.3 ft. bgs), SB-10 (5 ft. bgs), and SB-11 (0 to 0.3 ft. bgs) contained total PCB concentrations above Restricted Use Commercial SCOs.

Four shallow surface soil samples (SS-13 to SS-16) were collected adjacent to excavation area SS-12 to delineate the extent of PCB contamination to the south and west of the excavation area. Each location was excavated to approximately 1 ft. bgs, by hand, and one soil sample was collected and sent for PCB analysis. The results of the analyses are summarized in Table 14. The soil sample collected at SS-14 contained a total PCB concentration above Restricted Use Commercial SCOs.



3.3.2 Groundwater Sampling Results (July 2011)

Five monitoring wells were installed at the Site to characterize the groundwater conditions at known or suspected contaminant source locations and also to evaluate hydraulic conditions at the Site. The locations of these monitoring wells are shown on Figure 6. The wells were located to the south of the furnace pit, in the north central area of the Site, within the UST excavation, in the southwest corner of the Site, and also within the staging area of the excavated USTs. The monitoring wells were constructed using 2-inch (inside diameter), Schedule 40 PVC screens (10-feet in length) and riser and finished with a watertight cap and protective steel casing.

Newly-installed monitoring wells were developed a minimum of 24-hours after installation and sampled a minimum of 2-weeks after development. Following installation, each monitoring well was developed by surging, pumping, bailing, or a combination thereof until the discharged water was relatively sediment free. Development water was containerized within 55-gallon drums, and disposed of in accordance with NYSDEC guidance. The effectiveness of the development process was monitored by recording measurements of temperature, pH, specific conductance, and turbidity using a portable water quality analyzer.

Groundwater samples were collected from wells MW-01 through MW-05 on July 21, 22 and 25, 2011. Prior to sampling, the wells were purged to remove water held in casing storage. If the well productivity was sufficient, the wells were purged of at least three casing volumes prior to sampling. If the wells purged to dryness, the groundwater samples were collected after the water level had returned to within 85 percent of the static condition.

Groundwater samples were analyzed for VOCs using USEPA Method 8260. The results of the analyses are summarized in Table 15. The groundwater sample collected from MW-03 contained 1,2,4-trichlorobenzene, 1,2-dichloroethane and benzene at concentrations exceeding Ambient Water Quality Standards and Guidance Values (AWQSGVs). The groundwater sample collected from MW-04 contained cis-1,2-dichloroethene and trichloroethene at concentrations exceeding AWQSGVs.

Groundwater samples were analyzed for SVOCs using Method 8270. The results of the analyses are summarized in Table 16. No SVOC concentrations were detected above AWQSGVs in the groundwater samples.

Groundwater samples were analyzed for TAL metals using Method 6010, mercury using Method 7471, and cyanide using Method 9012. The results of the analyses are summarized in Table 17. Each sample contained at least one metal at a level exceeding AWQSGVs. The metals detected above AWQSGVs, sodium, magnesium and iron are not site-related contaminants.



Groundwater samples were analyzed for pesticides using Method 8081. The results of the analyses are summarized in Table 18. The groundwater sample collected from MW-03 contained dieldrin and heptachlor epoxide at concentrations exceeding AWQSGVs.

Groundwater samples were analyzed for PCBs using Method 8082. The results of the analyses are summarized in Table 19. The groundwater sample collected from MW-03 contained total PCBs at a concentration exceeding AWQSGVs.

3.3.3 Site Hydrogeology

Subsurface information obtained from the SI and IRM activities conducted at the Site is described below. The stratigraphic sequence at the site includes, from the surface down: fill; stratified clayey silt/silty clay; and bedrock. Generally, the fill material found at the Site consisted of a clayey-silt soil with gravel, concrete, bricks, plastic, and wood. The fill material was encountered from the ground surface to depths ranging generally from 7 to 12 feet below grade. Fill in the former UST area was deeper, extending to approximately 14 feet. Re-graded or native silty clay soil was encountered beneath the fill. Bedrock, believed to consist of the Silurian age Akron Dolostone, was encountered at depths ranging from 20 to 22 feet below grade. The bedrock surface slopes downward to the west. Figure 7 and Figure 8 show geologic cross sections of the site stratigraphy.

Groundwater was generally observed slightly above or slightly below the bedrock interface. The measured depth to groundwater during the July 2011 sampling event ranged from 10.86 to 25.29 feet below ground surface. The July 2011 groundwater elevation measurements were used to develop a groundwater contour map (Figure 9) which shows a westward flow gradient of approximately 0.07 ft/ft.

During the Supplemental SI work all five monitoring wells were gauged and compared to the July 2011 groundwater elevations. There was no significant difference in groundwater elevations or flow gradient compared to the July elevation measurements. The measured depth to groundwater during the November 2011 sampling event ranged from 11.03 to 25.58 feet below ground surface.

3.4 Supplemental Site Investigation (November 2011)

Based on the initial SI results, LiRo met with the City of Buffalo and NYSDEC to discuss potential remedial options and additional data needs. LiRo developed a Supplemental Site Investigation Plan dated October 17, 2011 to define the horizontal and vertical limits of chemical compounds in soil at concentrations greater than SCOs and increase the accuracy of the area and volume estimate of contaminated soil.

Work for the Supplemental Site Investigation was conducted in accordance with the Supplemental Work Plan and the SI Work Plans. Soil boring logs from the Supplemental SI are provided in Attachment A. Data Usability Summary Reports (DUSRs) for the SI data were prepared in accordance with



NYSDEC guidelines and are provided in Attachment B. Laboratory analytical data reports are provided in Attachment C.

The results of the Supplemental Site Investigation are discussed in the sections below.

3.4.1 Supplemental Soil Sampling Results (November 2011)

Twenty-six soil borings (GP-01 through GP-26) were installed from November 8, 2011 to November 9, 2011. The supplemental boring locations are shown on Figure 10. All borings were completed within the Site limits except for GP-03 which was completed off-site on the sidewalk adjacent to Niagara Street to delineate the northern limit of UST Area PCB contamination. All soil borings were advanced using an RC-85 Track Mount Geoprobe by Buffalo Well Drilling, with oversight by LiRo. Soil from each core was screened for the presence of organic vapors using a photoionization detector (PID). The LiRo supervising geologist recorded field descriptions of the soil as well as PID readings.

Fifteen soil samples were analyzed for VOCs using USEPA Method 8260. The results of the analyses are summarized in Table 20. No VOC concentrations were detected above Restricted Use Commercial SCOs.

Six soil samples were analyzed for SVOCs using USEPA Method 8270. The results of the analyses are summarized in Table 21. No SVOC concentrations were detected above Restricted Use Commercial SCOs.

Three soil samples were analyzed for TAL metals using USEPA Method 6010, mercury using Method 7471, and cyanide using Method 9012. The results of the analyses are summarized in Table 22. No metal concentrations were detected above Restricted Use Commercial SCOs.

Two soil samples were analyzed for pesticides using USEPA Method 8081. The results of the analyses are summarized in Table 23. No pesticide concentrations were detected above Restricted Use Commercial SCOs.

Seventy-six soil samples were analyzed for PCBs using USEPA Method 8082. The results of the analyses are summarized in Table 24. The soil samples collected at GP-02 (4 to 6 ft. bgs), GP-12 (0 to 2 ft. bgs), GP-16 (16 to 18 ft. bgs), GP-18 (5 to 7 ft. bgs), GP-19 (0 to 2 ft. bgs), GP-19 (5 to 7 ft. bgs), GP-19 (14 to 16 ft. bgs), GP-21 (5 to 7 ft. bgs), GP-22 (5 to 7 ft. bgs), and GP-26 (10 to 12 ft. bgs) contained total PCB concentrations above Restricted Use Commercial SCOs.

3.4.2 Groundwater Sampling Results (November 2011)

Groundwater samples were collected from wells MW-01 through MW-05 on November 2 and 3, 2011. Prior to sampling, the wells were purged to remove water held in casing storage. If the well productivity was sufficient, the wells were purged of at least three casing volumes prior to sampling. If the wells



purged to dryness, the groundwater samples were collected after the water level had returned to within 85 percent of the static condition.

Groundwater samples were analyzed for VOCs using USEPA Method 8260. The results of the analyses are summarized in Table 25. The groundwater sample collected from MW-03 contained 1,2,4-trichlorobenzene and 1,2-dichloroethane at concentrations exceeding AWQSGVs. The groundwater sample collected from MW-04 contained cis-1,2-dichloroethene and trichloroethene at concentrations exceeding AWQSGVs. The groundwater sample collected from MW-05 contained 1,1-dichloroethane, 1,2-dichloroethane, benzene, cis-1,2-dichloroethene and vinyl chloride at concentrations exceeding AWQSGVs.

Groundwater samples were analyzed for SVOCs using Method 8270. The results of the analyses are summarized in Table 26. No SVOC concentrations were detected above AWQSGVs in the groundwater samples.

Groundwater samples from MW-02 through MW-05 were analyzed for TAL metals using Method 6010 and mercury using Method 7471. The results of the analyses are summarized in Table 27. Each sample contained at least one compound at a level exceeding AWQSGVs. The compounds detected above AWQSGVs in frequency of detection are sodium, thallium, antimony, magnesium, iron and manganese.

Groundwater samples from MW-02 through MW-05 were analyzed for pesticides using Method 8081. The results of the analyses are summarized in Table 28. No pesticide concentrations were detected above AWQSGVs in the groundwater samples.

Groundwater samples were analyzed for PCBs using Method 8082. The results of the analyses are summarized in Table 29. The groundwater sample collected from MW-03 contained total PCBs at a concentration exceeding AWQSGVs.

3.5 IRM-2 Results

Soil sample results from the SI and the Supplemental SI were compared to the NYSDEC Part 375 SCOs. PCBs were detected at numerous locations at the Site in excess of the SCO. Investigation results were presented to the NYSDEC and the City of Buffalo, and based upon the SI results, a second IRM was proposed. LiRo prepared a Limited Excavation and Soil Cover IRM Work Plan, dated May 4, 2012, that proposed limited excavations of PCB “hotspots” (i.e., locations where PCB concentrations exceeded 10 mg/Kg) and the installation of a soil cover to be implemented as a second phase of the IRM. In a letter from the NYSDEC dated October 31, 2012, the NYSDEC approved the IRM-2 work plan.

IRM-2 was conducted by OpTech Environmental Services, Inc., with oversight conducted by LiRo from January 2013 to February 2013. Five areas exhibiting higher levels of PCB contaminated soil were located and staked off in preparation for the soil removal process. These areas were labeled A through E.



Excavation Area A and Excavation Area B were initially divided into East and West section centered at SI sample point PCB exceedence locations. Figure 11 shows the excavation areas and endpoint sample locations.

Approximately 750 tons of PCB-contaminated soil was removed from the Site as described in the Sections which follow. Based on characterization testing, the soil waste PCB concentration was greater than 50 ppm and the contaminated soil was disposed of at CWM Model City. The excavations were backfilled with certified clean fill. Lastly, a temporary stone cover will be installed over the Site which will mitigate the potential for exposure to contaminated soil until the final Site remedy is implemented.

3.5.1 Excavation Area A West

Excavation Area A West was located in the western portion of the subject property and centered around soil boring GP-22. PCBs in fill materials down to native soil were detected in excess of the NYSDEC Part 375 Commercial SCO. Remedial excavation work in this area consisted of excavation and disposal of contaminated soils, and was initiated on January 8, 2013 with the initial excavation dimensions of 15 ft by 15 ft by 8.5 ft (top of native clay) and endpoint soil sampling.

Four sidewall samples, Nothwall-1 Area A West, Eastwall-1 Area A West, Southwall-1 Area A West, Westwall-1 Area A West and one bottom sample, Bottom-1 Area A West, were collected from Area A West Excavation on January 8, 2013 and analyzed for PCBs. Bottom-1 Area A West was non detect and Southwall-1 Area A West (1.1 ppm) slightly exceeded the NYSDEC SCO for PCBs. However, Nothwall-1 Area A West (14 ppm), Eastwall-1 Area A West (21 ppm), and Westwall-1 Area A West (11 ppm) all exceeded the NYSDEC SCO for PCBs.

Based upon confirmation sample exceedences, additional soil excavation was conducted on January 14, 2013. The excavation was extended out three feet on the north and west sidewalls and five feet on the eastwall. Additional endpoint samples, Northwall-2 Area A West, Eastwall-2 Area A West, and Westwall-2 Area A West, were collected from the newly excavated sidewalls and analyzed for PCBs.

At the completion of the second phase of the IRM, exceedences of the PCB SCO were still evident in the Northwall-2 Area A West sample (44 ppm), Eastwall-2 Area A West sample (28 ppm), Southwall-1 Area A West sample (1.1 ppm), and Westwall-2 Area A West sample (13 ppm). The final excavation was approximately 320 sq. ft. The excavation was lined with a demarcation barrier and backfilled with select fill (clean clay) during Site wide backfilling activities from January 16 to the 18, 2013 and graded level with the surrounding area.

Area A West Excavation soil sampling results are summarized in Table 30.



3.5.2 Excavation Area A East

Excavation Area A East was located in the western portion of the subject property and centered around soil boring GP-21. PCBs in fill materials down to native soil were detected in excess of the NYSDEC Part 375 Commercial SCO. Remedial excavation work in this area consisted of excavation and disposal of contaminated soils, and was initiated on January 9, 2013 with the excavation and endpoint soil sampling. The initial limit of the excavation was 15 ft by 15 ft by 8.5 ft (top of native clay).

Four sidewall samples, Northwall-1 Area A East, Eastwall-1 Area A East, Southwall-1 Area A East, Westwall-1 Area A East and one bottom sample, Bottom-1 Area A East, were collected from Area A East Excavation on January 9, 2013 and analyzed for PCBs. Bottom-1 Area A East was non-detect. Northwall-1 Area A East (1.3 ppm) and Westwall-1 Area A East (5.2 ppm) slightly exceeded the NYSDEC SCO for PCBs. However, Eastwall-1 Area A East (15 ppm), and Southwall-1 Area A east (46 ppm) both exceeded the NYSDEC SCO for PCBs.

Based upon confirmation sample exceedences, additional soil excavation was conducted on January 15, 2013. The excavation was extended out three ft on the east sidewall and five ft on the southwall. Additional endpoint samples, Eastwall-2 Area A East and Southwall-2 Area A East were collected from the newly excavated sidewalls and analyzed for PCBs.

At the completion of the second phase of the IRM, exceedences of the PCB SCO were still evident in the Northwall-1 Area A East sample (1.3 ppm) and Westwall-1 Area A East sample (5.2 ppm). The final excavation was approximately 247 sq. ft. The excavation was lined with geo-fabric and backfilled with select fill (clean clay) during Site wide backfilling activities from January 16 to the 18, 2013 and graded level with the surrounding area.

Area A East Excavation soil sampling results are summarized in Table 31.

3.5.3 Excavation Area B

Excavation Area B was located in the northwestern portion of the subject property adjacent to the furnace pit and initially was divided into two separate excavations centered around soil boring GP-2 (Area B West) and SB-10 (Area B East). The initial limits of each of the excavations were 10 ft by 10 ft by 6.5 ft (top of native clay). PCBs in fill materials down to native soil were detected in excess of the NYSDEC Part 375 Commercial SCO. Remedial excavation work in this area consisted of excavation and disposal of contaminated soils, and was initiated on January 8, 2013 with initial excavation and endpoint soil sampling.

Four sidewall samples, Northwall-1 Area B West, Eastwall-1 Area B West, Southwall-1 Area B West, Westwall-1 Area B West and one bottom sample, Bottom-1 Area B West, were collected from Area B West Excavation on January 8, 2013 and analyzed for PCBs. Bottom-1 Area B West (1.2 ppm) was



detected slightly over the NYSDEC SCO for PCBs. Northwall-1 Area B West (50 ppm), Eastwall-1 Area B West (31 ppm), Southwall-1 Area B West (59 ppm), and Westwall-1 Area B West (28 ppm) all exceeded the NYSDEC SCO for PCBs.

Four sidewall samples, Northwall-1 Area B East, Eastwall-1 Area B East, Southwall-1 Area B East, Westwall-1 Area B East and one bottom sample, Bottom-1 Area B East, were collected from Area B East Excavation on January 8, 2013 and analyzed for PCBs. Bottom-1 Area B East (6.6 ppm) and Eastwall-1 Area B East (7 ppm) were detected slightly over the NYSDEC SCO for PCBs. Northwall-1 Area B East (26 ppm), Southwall-1 Area B East (380 ppm), and Westwall-1 Area B East (41 ppm) all exceeded the NYSDEC SCOs for PCBs.

Based upon confirmation sample exceedences in both initial excavations, the entire Area B was excavated on January 10, 2013 to the proposed limits within the Limited Excavation And Soil Cover IRM Work Plan, dated May 4, 2012. The excavation was also extended out two ft on the west sidewall and three ft on the northwall. Additional endpoint samples, Northwall-2 Area B, Eastwall-2 Area B, Southwall-2 Area B, and Westwall-2 Area B were collected from the newly excavated sidewalls and analyzed for PCBs.

The results from the confirmation samples indicated that exceedences in the southwall and eastwall of Area B remained. As such, approximately three more ft of soil was excavated from the southwall and all soil between the eastwall and the furnace pit was also excavated. Since the furnace pit soils were already excavated in September and October 2012 and confirmation samples collected, only one composite sample was collected - from the southwall (Southwall-3 Area B) - and analyzed for PCBs.

At the completion of the second phase of the IRM, slight exceedences of the PCB SCO were still evident in the bottom samples (Bottom-1 Area B West, 1.2 ppm; Bottom-1 Area B East, 6.6 ppm), northwall sample (Northwall-2 Area B, 5.6 ppm), and the westwall sample (Westwall-2 Area B, 6.7 ppm). Higher level PCB exceedences were still present in the southwall (Southwall-3 Area B, 150 ppm). The final excavation was approximately 981 sq. ft. The excavation was lined with a demarcation barrier and backfilled with select fill (clean clay) during Site wide backfilling activities from January 16 to the 18, 2013 and graded level with the surrounding area.

Area B Excavation soil sampling results are summarized in Table 32.

3.5.4 Excavation Area C

Excavation Area C was located in the southwestern portion of the subject property and centered around soil boring GP-18. PCBs in fill materials down to native soil were detected in excess of the NYSDEC Part 375 Commercial SCOs. Remedial excavation work in this area consisted of excavation and disposal of contaminated soils, and was initiated on January 9, 2013 with the excavation and endpoint soil sampling. The initial limit of the excavation was 10 ft by 10 ft by 8 ft (top of native clay).



Four sidewall samples, Northwall-1 Area C, Eastwall-1 Area C, Southwall-1 Area C, Westwall-1 Area C and one bottom sample, Bottom-1 Area C, were collected from the Area C Excavation on January 9, 2013 and analyzed for PCBs. Bottom-1 Area C (non-detect) and Westwall-1 Area C (0.52 ppm) did not exceed the NYSDEC SCO for PCBs, while Northwall-1 Area C (79 ppm), Eastwall-1 Area C (100 ppm), and Southwall-1 Area C (55 ppm) exceeded the NYSDEC SCO for PCBs.

Based upon confirmation sample exceedences, additional soil excavation was conducted on January 14, 2013. The excavation was extended out to the proposed limits within the Limited Excavation And Soil Cover IRM Work Plan, dated May 4, 2012 for the northwall, eastwall, and southwall. Additional endpoint samples, Northwall-2 Area C, Eastwall-2 Area C, and Southwall-2 Area C were collected from the newly excavated sidewalls and analyzed for PCBs.

At the completion of the second phase of the IRM, high exceedences of the PCB SCO were still evident in the Eastwall-2 Area C sample (530 ppm) and Southwall-2 Area C sample (300 ppm). The final excavation was approximately 414 sq. ft. The excavation was lined with a demarcation barrier and backfilled with select fill (clean clay) during Site wide backfilling activities from January 16 to the 18, 2013 and graded level with the surrounding area.

Area C Excavation soil sampling results are summarized in Table 33.

3.5.5 Excavation Area D

Excavation Area D was located in the central portion of the subject property near the western edge of the previous UST excavation and centered around soil boring GP-12. PCBs in fill materials down to approximately two ft were detected in excess of the NYSDEC Part 375 Commercial SCO. Remedial excavation work in this area consisted of excavation and disposal of contaminated soils, and was initiated on January 8, 2013 with the excavation and endpoint soil sampling. The initial limits of the excavation, was 10 ft by 10 ft by 3 ft.

Four sidewall samples, Northwall-1 Area D, Eastwall-1 Area D, Southwall-1 Area D, Westwall-1 Area D and one bottom sample, Bottom-1 Area D, were collected from the Area D Excavation on January 8, 2013 and analyzed for PCBs. Southwall-1 Area D was non-detect and Bottom-1 Area D (0.13) did not exceed the NYSDEC SCO for PCBs. Eastwall-1 Area D (3.3 ppm) and Westwall-1 Area D (1.3 ppm) slightly exceeded the NYSDEC SCOs for PCBs. Northwall-1 Area D (120 ppm) greatly exceeded the NYSDEC SCOs for PCBs and warranted further excavation.

Based upon confirmation sample exceedences at Northwall-1 Area D, an additional 5 ft of soil was excavated from the northwall on January 14, 2013. Additional endpoint sample Northwall-2 Area D was collected from the newly excavated sidewall and analyzed for PCBs.



At the completion of the second phase of the IRM, exceedences of the PCB SCO were still evident in the Northwall-2 Area D sample (39 ppm) and slightly exceeded in Eastwall-1 Area D sample (3.3 ppm) and Westwall-1 Area D sample (1.3). The final excavation was approximately 227 sq. ft. The excavation was lined with a demarcation barrier and backfilled with select fill (clean clay) during Site wide backfilling activities from January 16 to the 18, 2013 and graded level with the surrounding area.

Area D Excavation soil sampling results are summarized in Table 34.

3.5.6 Excavation Area E

Excavation Area E was located in the sidewalk along Niagara Street adjacent to the northeastern portion of the Site and centered around soil boring SB-01. PCBs in fill materials down to approximately two ft were detected in excess of the NYSDEC Part 375 Commercial SCO. Remedial excavation work in this area consisted of excavation and disposal of contaminated soils, and was initiated on January 11, 2013 with the excavation and endpoint soil sampling. The initial limit of the excavation was 26 ft by 13 ft by 2 ft.

The concrete sidewalk was cut along its joints and then excavated out and used as backfill. Four sidewall samples, Northwall-1 Area E, Eastwall-1 Area E, Southwall-1 Area E, Westwall-1 Area E and one bottom sample, Bottom-1 Area E, were collected from the Area E Excavation on January 11, 2013 and analyzed for PCBs. Eastwall-1 Area E and Bottom-1 Area E were both non-detect for PCBs. Northwall-1 Area E (0.89 ppm), Southwall-1 Area E (0.26 ppm), and Westwall-1 Area E (0.14 ppm) did not exceed the NYSDEC SCO for PCBs.

At the completion of the second phase of the IRM, no exceedences of the PCB SCO were evident in the four sidewall and one bottom endpoint samples. The final excavation was approximately 295 sq. ft. The excavation was backfilled with crushed stone and barricaded off until the sidewalk was repaired on February 6, 2013.

Area E Excavation soil sampling results are summarized in Table 35.

3.7 Potentially Applicable Standards, Criteria and Guidance (SCGs)

Standards, Criteria and Guidance (SCGs) are cleanup standards, standards of control, and other substantive environmental protection requirements, criteria or limitations promulgated under federal or state law that specifically address a hazardous substance, contaminant, remedial action, or location. Guidance values include non-promulgated criteria and guidelines that are not legal requirements but should be considered if determined to be applicable to the Site. SCGs are categorized as chemical-specific, location-specific, or action-specific. SCGs developed for the Site, and which are considered potentially applicable, are presented on Table 36.



Chemical-specific SCGs are based on 6 NYCRR Part 375 Soil Cleanup Objectives for Restricted Use Commercial criteria. Analytical data from groundwater monitoring have been compared with Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values for Class GA Groundwater.

Hazardous waste characterization values are obtained from Resource Conservation and Recovery Act (RCRA) regulatory standards identified in the Code of Federal Regulation (CFR) Identification of Hazardous Wastes (40 CFR Part 261.24).

3.8 Nature and Extent of Contamination

Soil and groundwater are considered the media of concern at the Site. A comparison with the chemicals of concern (COCs) and SCGs is provided in the following sections.

3.8.1 Soil Contamination

Based on the endpoint results from IRM soil excavations and the SI investigation work performed at the Site, PCB-contaminated fill material remains in the western portion of the Site. The contaminated fill material is found down to native clay soil which is typically encountered between six and eight feet below ground surface, but ranges from as little as 4 feet to as much as 15 feet. The known areas of the higher level PCB (i.e., greater than 50 ppm) soil contamination are located along the south and east walls of IRM-2 Excavation Area C and between IRM 2 Excavation areas A and B. The irregular pattern of contamination suggests that the contaminated soil was relocated during demolition activities of the Site buildings that were formerly located on the property.

In general soil contamination is limited to PCBs in fill, however, soil at MW-03 adjacent to furnace pit showed metals (copper And zinc) at concentrations in excess of Commercial use SCOs in a soil sample from 18 ft to 20 feet below ground surface. Several samples from native clay soil showed PCB concentrations which exceeded the SCO. These exceedences were evident at depths of 12 feet or greater in the UST and furnace pit areas. In addition, one IRM-2 Area B bottom sample showed a PCB exceedence at a depth of approximately 7.5 feet. Figure 12 shows the remaining Commercial Use SCO exceedences based on all SI and IRM endpoint sampling results.

Figures 13 through 15 show the distribution of contamination with respect to depth at the Site. Figure 13 shows PCB results for all shallow soil samples collected entirely or partially within the top 1 foot of ground surface at the Site. Figure 14 shows the PCB results for fill samples collected below a depth of 1 ft to the bottom of fill (fill ranged from approximately 6 ft to 12.5 ft thick at the site). Figure 15 shows the PCB results for native soil in the interval from the top of native soil to a depth of 14 ft.



3.8.2 Groundwater Contamination

Groundwater contamination exists in monitoring wells MW-03, MW-04, and MW-05 at the Site. Several VOC compounds including 1,2,4-trichlorobenzene, 1,2-dichloroethane, benzene, cis-1,2-dichloroethene, trichloroethene, 1,1-dichloroethane, and vinyl chloride were detected at concentrations above the NYSDEC AWQSGV for these monitoring wells during both groundwater sampling events. The other two monitoring wells, MW-01 and MW-02, did not have any exceedences of the NYSDEC AWQSGV s for VOCs during either groundwater sampling event.

The only PCB impacts to groundwater at the Site were observed in MW-03. The 1,2,4-trimethylbenzene detection at MW-03 appears to be attributable to the Site as that compound was also detected in MW-3 soil at a relatively high level. The other VOC compounds observed in groundwater are most likely attributable to migration of chlorinated solvent contamination from the nearby Chem Core Site.

3.9 Conceptual Site Model

Based on historical testing of the UST residuals conducted in January 2007, the USTs stored fuel oil contaminated with VOCs, metals and PCBs prior to their excavation in 2007. The USTs appear to have been connected to the furnace pit via piping which was removed in 2007. Ground observations suggest that the location of the former piping was along the northern margin of the Site, but the location was not documented and is not known with certainty. When the USTs were removed it was observed that one of the USTs had leaked into the subsurface. The excavated soils around the tanks were used as backfill for the excavation. It is possible that the downward migration of contamination may have further impacted the soils in the UST excavation and potentially impacted the groundwater at the Site as well.

The USTs were staged in the southeast corner of the Site. The USTs were not properly cleaned prior to their placement. Sludge mixed with rain water was observed in the open ends of the USTs while they were staged at the Site. There is the potential that the contaminated rain water leaked out from the USTs and impacted the soils beneath and around the staging area, however, soil testing from the staging area showed no evidence of significant soil impacts in the area.

Based on the SI results and IRM work, historic UST area leakage has not had a major impact on groundwater quality. Likewise, any leakage in the UST staging area has not had a major impact on soil or groundwater quality in the southeastern portion of the Site.

The furnace was used to burn the contaminated oil at the Site. Based on the IRM work, contamination migrated from the furnace pit and affected surrounding soils beneath the furnace pit and to the south of the furnace. Higher soil PCB concentrations were observed in the western portion of the Site (around IRM-2 Excavation Area A and Area C). There is no known historical information regarding historic site operations and the source of the higher level PCB concentrations in the southern portion of the Site is



unknown. Based on the irregular pattern of contaminant distribution, contaminated soil may have been moved around the Site during the Site demolition work backfilling operations. The soil contamination appears to be prevalent in fill with marginal impact to the underlying native soil.

Hazardous PCB concentrations (> 50 ppm) remain in fill soil in the western and southern portions of the Site, and nearly all fill (except clean backfill placed in the IRM excavation areas) can be inferred to be contaminated at levels which exceed the Commercial use SCO of 1 ppm. Because of the manner in which contaminated was distributed in the fill area, significant uncertainty remains concerning the relative amount of hazardous (PCB >50 ppm) vs. non-hazardous (PCB <50ppm) soil.



4.0 Qualitative Exposure Assessment

The qualitative human health exposure assessment (EA) was prepared in accordance with the NYSDEC Environmental Restoration Program requirements and the Draft DER-10 Guidance Document (May 2010). The objective of the EA was to evaluate the presence of completed or potential exposure pathways in order to determine if site contamination poses an existing or potential hazard to current or future site users. The EA identified the potential for human exposures, if any, associated with chemical constituents detected in soil and groundwater. The EA addressed onsite and offsite receptors for current use, future site construction during redevelopment, and future use scenarios. The anticipated future use of the Site is for light industrial and commercial purposes.

Site investigation data indicate that the Site's historic use released contaminants to the surrounding environment. Residual affected media are primarily soil. Limited site-related groundwater contamination was evident, however, groundwater at the Site appears to be impacted - primarily with chlorinated solvent VOCs - by the nearby Chem Core Site. Chemicals of potential concern for soil and groundwater were identified based on exceedences of Site SCGs.

Under the current use scenario, trespassers on the site would have a potentially complete pathway through dermal contact or ingestion of contaminated soil. Nearby residents could potentially be exposed through inhalation from wind dispersion of fugitive dust from the site to offsite areas.

Under the future use scenario with no further remedial actions, trespassers on the Site would have a potentially complete pathway through dermal contact and ingestion of contaminated soil. Nearby residents could potentially be exposed through inhalation of wind dispersion of fugitive dust from the site to offsite areas.

Future site redevelopment construction workers and commercial site workers would have a potentially complete pathway through dermal contact and ingestion of contaminated soil, and inhalation of volatile contaminants from an off-site source through soil vapor intrusion into future structures.

Under the current and future use scenarios, groundwater is not known to be used or anticipated to be used as a potable water supply; therefore the groundwater ingestion exposure pathway is considered incomplete. Future Site construction workers could potentially come into contact with contaminated groundwater, however, due to the depth of groundwater, exposure to groundwater is unlikely.

The following completed potential exposure pathways have been identified for the site:

- Under the current and future use scenarios, exposure via inhalation of fugitive dust is considered a potentially complete exposure pathway for future construction workers, Site commercial workers and nearby residents.



- Under the future use scenarios, exposure via inhalation of soil vapor is considered a potentially complete exposure pathway for future construction workers and Site commercial workers.
- Under the current and future use scenarios, exposure via dermal contact and ingestion of soil is a potentially complete exposure pathway for trespassers.
- Under the future use scenario, exposure via dermal contact and ingestion of soil is a potentially complete exposure pathway for Site construction workers and commercial Site workers.



5.0 Remedial Goal and Remedial Action Objectives

5.1 Goal and Objectives

The remedial action goal for the Site is to eliminate or mitigate all significant threats to human health and/or the environment, to the extent practicable, caused by contaminants present due to former Site activities. In order to meet this goal, remedial action objectives (RAOs) were established to protect human health and the environment, provide the basis for selecting appropriate technologies, and to develop remedial alternatives. RAOs are based on contaminated media (soil and groundwater), SCGs, and the results of the qualitative human health exposure assessment.

The remedial action objectives for soil are to:

- Eliminate or reduce to the extent practicable Site contamination sources that exceed soil SCGs.
- Eliminate or reduce the potential for exposure to contaminated Site soil.

The remedial action objective for groundwater is to:

- Prevent or mitigate the potential for exposure to contaminated groundwater.

The remedial action objective for air is to:

- Prevent or mitigate the potential for exposure to fugitive dust.

Because the potential soil vapor impact is derived from an off-site source, no remedial action objective is developed for soil vapor. Based on the depth to groundwater, and groundwater contaminant concentrations, soil vapor impacts are not likely.

5.2 Remediation Areas and Volumes

Based on information obtained from site investigations, remediation areas and volumes have been developed for soil. A discussion of air and groundwater is also presented.

5.2.1 Soil

Figure 16 presents the locations of SCO exceedences in soil for restricted use commercial criteria. The anticipated future use of the Site is for commercial purposes. The associated remediation area is also shown on Figure 16 and a conservative (i.e., biased high) estimate of the contaminated soil volume exceeding the 1 ppm SCO for PCBs is approximately 6,400 cubic yards.



5.2.2 Air

The remedial action objective for air with regards to exposure to contaminants present in fugitive dust would be met with soil remediation measures at the Site, since the source of contaminants in fugitive dust are due to site soil.

5.2.3 Groundwater

Groundwater within the subsurface below the Site is not significantly impacted by Site contamination, therefore, RAOs will not be developed for groundwater. Potential exposure to contaminated groundwater should be managed through institutional controls (groundwater use restrictions) and engineering controls (proper PPE) for future site construction workers.

5.3 Interim Remedial Measure Evaluation

During course of the ERP work, two IRMs were implemented. Based on the results of the IRM-2, it is apparent that PCB contamination is distributed irregularly in fill and further IRMs are not warranted.

5.4 General Response Actions

General response actions are broad categories of remedial actions capable of satisfying the RAOs for the site. Some response actions are sufficiently broad to be able to satisfy all RAOs to SCGs for the site as a whole. Other response actions must be combined to satisfy RAOs for all impacted media. Remedial technologies were evaluated according to the general response actions of no action, containment, source removal, and treatment. A brief description of the general response actions shown on Table 37 follows.

- **No Action** – A No Action alternative was evaluated as part of the RAR process as a baseline alternative. The Site would remain in its current state and long-term sampling and analysis would be conducted.
- **Containment** – Containment measures are those remedial actions whose purpose is to contain and/or isolate contaminants on the site. These measures provide protection to human health and the environment by reducing exposure or migration of contaminants, but do not treat or remove the contamination.
- **Source Removal** – Excavation of contaminated soil is a remedial action whose purpose is to remove contaminants from the site. Combined with offsite treatment and or disposal in an appropriate facility, source removal provides protection to human health and the environment by reducing exposure or migration of contaminants.
- **Ex-situ Treatment** – Ex-situ treatment of contaminated media is a remedial action whose purpose is to reduce the toxicity, mobility or volume of contaminants by directly altering, isolating, or destroying those contaminants through either chemical, physical or



thermal methods. Remaining contamination (residual) would no longer pose an unacceptable health risk.

5.5 Identification and Screening of Technologies for Soil

This section identifies and provides a screening of remedial technologies for contaminated soil at the site in a two-step approach. In the first step, potentially applicable remedial technologies which meet the remedial action objectives are identified. In the second step, technologies are screened with respect to their relative effectiveness, technical implementability and cost for this site. This evaluation is based on the site characterization, which includes the types and concentrations of contaminants, and geology and hydrogeology of the area. Table 37 provides a summary of the remedial technology identification and screening process.

5.5.1 Containment

A newly-constructed cap covering the Site would reduce infiltration from precipitation, and reduce contaminant leaching and subsequent migration within the groundwater system. Further, it would prevent the potential for exposure to contaminated soil and fugitive dust; however it would not be suitable for the proposed future use of the Site.

Effectiveness: Construction of a new site cap would prevent the potential for exposure to contaminated soil and fugitive dust to nearby residents and limit precipitation infiltration to the subsurface. Cap technologies have been utilized at numerous remediation projects.

Implementability: A new cap covering areas of contaminated surface soil would not be difficult to construct. However, a site cap would not be consistent with the future use of the Site.

Cost: The relative cost of a cap as compared to other remedial technologies would be low.

Conclusion: A cap is not retained for consideration for the Site since it would not be suitable for the future use of the site.

5.5.2 Excavation and Offsite Disposal/Treatment

Excavating contaminated soil is a proven and reliable technology for contaminant removal. Contaminated soil would be excavated by conventional equipment and transported offsite either to an appropriate treatment facility, or to a permitted disposal facility. Excavated soil would be subject to soil and waste characterization testing to identify whether it would require disposal in an appropriate landfill, or need transportation to a treatment (e.g., thermal desorption) facility

Effectiveness: Excavation of contaminated soil and offsite disposal would be effective in removing the source of contamination and meeting the remedial action objectives for soil and air.



Implementability: This technology is widely used for remediation and would be implementable at the site.

Cost: The cost of excavating contaminated soil to an appropriate depth using proper health and safety measures, and disposing the contaminated material offsite is considered to be relatively moderate to high.

Conclusion: Excavation and offsite disposal of contaminated soil can be an effective and implementable technology. It will be retained.

5.5.3 In-Situ Treatment

In situ treatment technologies include biological and thermal processes designed to destroy the contaminants, chemical/physical processes designed to increase the mobilization of contaminants, and stabilization/solidification processes that reduce the mobility of the contaminants.

5.5.3.1 Biological Treatment

Naturally occurring microorganisms in the soil promote the breakdown and detoxification of organic contaminants. In situ biological treatment such as bioremediation may enhance that process in soil and groundwater. Water enhanced with nutrients, oxygen, and other amendments is delivered to contaminated soil to enhance biological degradation of target contaminants. An infiltration gallery or injection wells can be utilized for the saturated and unsaturated zones.

Effectiveness: Bioremediation has been not been proven to be effective on PCBs contamination. Bioremediation would require a long time period to effectively remediate site soils.

Implementability: Implementation of an effective injection system would be difficult given the non-contiguous contamination areas and the nature of the fill material.

Cost: The cost is considered to be moderate to high depending on the operation period.

Conclusion: Biological treatment is not retained.

5.5.3.2 Thermal Treatment

In situ thermal treatment methods employ heat to increase the mobilization of contaminants via volatilization and viscosity reduction. Available methods include heating by the addition of steam and/or hot water, electrical resistance, and radio frequency. However, high temperature thermal treatment (e.g., incineration) would be required to effectively remediate for PCBs.

Effectiveness: Under favorable conditions, in situ thermal treatment technologies can remediate contaminants to below clean-up criteria. High temperatures would be necessary to remediate PCBs.



Implementability: The technology is implementable at the site assuming that adequate power sources are available. Off-gasses may have to be collected.

Cost: The cost is estimated to be high due to power requirements to generate high temperatures.

Conclusion: In situ thermal treatment is not retained due to the high temperatures and energy requirements for PCB contamination.

5.5.3.3 Chemical Treatment

In situ chemical treatment processes such as chemical oxidation or soil flushing with surfactants have been used to remediate contaminated soil and groundwater. Chemicals and amendments are introduced into the subsurface through a series of injection wells appropriately spaced across the site to maximize contact between contaminants and injected materials. Introduced materials either destroy the organic contaminants or convert them to non-toxic compounds.

Effectiveness: Chemical treatment has been not been proven to be effective on PCB contamination.

Implementability: Implementation of an effective injection system would be difficult given the non-contiguous contamination areas and the nature of the fill material.

Cost: The cost is considered to be moderate to high depending on the operation period.

Conclusion: Chemical treatment is not retained.

5.5.3.4 Solidification

In situ solidification (ISS) introduces solidifying agents, such as cement, slag or kiln dust, or other proprietary reagents into subsurface soil to immobilize contaminants. Contaminants are immobilized primarily by binding the contaminants in a soil-cement mix and encapsulating contaminated soil with an impermeable coating. If desired, a subsurface monolith can also be developed which would create a low permeability mass, reducing groundwater flow through the soil. However, this may preclude future construction at the site. While the overall mass of contaminants is not reduced, contaminant mobility through fugitive dust and the dissolution of contaminants to groundwater is prevented.

Effectiveness: Solidification is effective on a wide range of contaminants including organics and metals. This technology would be effective in reducing source and exposure pathways and the mobility of all site-related contaminants in soil, however, subsurface PCB concentrations would not be reduced.

Implementability: In situ solidification can either be conducted through auguring the subsurface or by below-ground mixing utilizing a backhoe bucket. Auguring the subsurface while introducing solidification materials would create a monolith comprised of a series of overlapping columns of



solidified material. ISS utilizing a backhoe would result in smaller and more manageable particle sizes, and be more amenable to the proposed future use of the Site.

An increase in the volume of the mixture will occur and require appropriate site grading and potentially some offsite disposal of swell material if onsite re-use is not feasible.

Cost: The cost is considered to be moderate high depending on the operation period and the amount of swell material which must be disposed offsite if an onsite re-use is not feasible.

Conclusion: In situ solidification is not retained.

5.5.4 Excavation and Ex-Situ Treatment

Utilizing this method, contaminated soil is excavated by conventional equipment, treated onsite above ground, and then replaced on the site if a site re-use is identified, or disposed of offsite if onsite re-use is not feasible.

5.5.4.1 Thermal Treatment

Effectiveness: Thermal treatment methods employ heat to increase the mobilization of contaminants via volatilization and viscosity reduction or to incinerate contaminants. Available methods include heating by the addition of steam and/or hot water, electrical resistance, and radio frequency. However, intermediate (thermal desorption) or high temperature (incineration) thermal treatment would be required to effectively remediate for PCBs.

Implementability: Excavation and ex situ treatment through thermal treatment would require multiple handlings of contaminated soil, first through excavation, secondly through treatment, and thirdly through onsite backfilling. This multi-staged approach would require a longer implementation time and additional measures to mitigate potential impacts to nearby receptors.

Cost: The relative cost of this technology is anticipated to be high.

Summary: Excavation and ex situ thermal treatment is not retained.

5.6 Identification and Screening of Technologies for Groundwater

5.6.1 Monitored Natural Attenuation

Monitored natural attenuation (MNA) is a technology that combines natural processes to achieve remedial action objectives with a comprehensive monitoring program. According to United States Environmental Protection Agency (USEPA) guidance (USEPA, 1999), the most important considerations regarding the suitability of MNA as a remedy include: whether the contaminants are likely to be effectively addressed



by natural attenuation processes; the stability of the contaminants in groundwater; and the potential for unacceptable risks to human health or environmental resources by the contamination.

If the source is removed or isolated from the aquifer through remediation, natural attenuation will further cause contaminant concentrations to reduce assuming that no new mass is introduced. If the source of contamination remains in place, natural attenuation will require a longer period of time to reduce contaminant concentrations.

MNA consists of periodic sampling of existing monitoring wells, and analysis for a select list of contaminants of concern.

Effectiveness: MNA may not be effective because PCBs are resistant to degradation in the environment. Soil contamination would likely persist for an excessively long period.

Implementability: Sampling and analysis for contaminants of concern is easy to implement.

Cost: The annual cost for sampling, analysis, and reporting would be relatively low. However, considering the length of time required to make an assessment of the effectiveness of this measure (on the order of decades or more), the present worth cost would be moderate to high.

Conclusion: MNA is feasible at this Site, however, the time frame for effectiveness could be excessively long.

5.6.2 Site Management Plan

A Site Management Plan (SMP) will identify the institutional controls and engineering controls (IC/EC) including groundwater use restrictions on groundwater as a source of potable water. Although the primary groundwater contaminants are derived from an off-site source, the SMP may require groundwater monitoring at regular intervals. Further, the SMP will identify excavation protocols, in particular, procedures for soil characterization, handling, and health and safety measures to be undertaken during future onsite excavation activities for construction purposes to mitigate potential exposures to contaminated groundwater and identify the need for vapor intrusion monitoring and mitigation per NYSDOH air guidance for future structures.

Effectiveness: An SMP is an effective technology to mitigate potential human health exposures for current and future use scenarios.

Implementability: An SMP restricting groundwater use as a potable source, requiring long-term monitoring, and identifying necessary health and safety measures for future construction and soil vapor intrusion mitigation due to residual contamination would be implementable at the Site.



Cost: The SMP would pose a relatively low cost as it would be consistent with the proposed future use of the Site.

Summary: A Site Management Plan will be retained for use at the Site.

5.7 Summary of Retained Technologies

The following remedial technologies have been retained for use in the development of alternatives for the Site.

- No Action
- Monitored Natural Attenuation
- Site Management Plan
- Excavation with Offsite Disposal
- Site Cap/Cover

5.8 Development of Remedial Alternatives

This section combines the remedial technologies considered feasible for soil and groundwater into a list of remedial alternatives for the site as a whole. The following remedial alternatives have been developed for the Site. They are described in detailed and evaluated in the following section.

Alternative 1 - No Action.

Alternative 2 – Excavation and Offsite Disposal of All Soils Greater than 1 PPM, Site Management Plan.

Alternative 3 – Excavation and Offsite Disposal of All Soils Greater than 10 PPM/Cover, Site Management Plan.

Alternative 4 – Excavation and Offsite Disposal of All Soils Greater than 25 PPM/Cover, Site Management Plan.



6.0 Description and Detailed Analysis of Alternatives

6.1 Description of Alternatives

6.1.1 Alternative 1 – No Action

The No Further Action with Site Management Alternative recognizes the remediation of the site completed by the IRMs described in Section 3.0 and Site Management and Institutional Controls and Engineering Controls which are necessary to confirm the effectiveness of the IRM. This alternative maintains engineering controls which were part of the IRM and includes institutional controls, in the form of an environmental easement and site management plan, necessary to protect public health and the environment from contamination remaining at the site after the IRMs.

6.1.1.1 Size and Configuration

- The SMP would be prepared by a professional engineer for a lump sum and include:
 - environmental easements restricting the use and redevelopment of the site.
 - controls and procedures necessary for soil characterization, handling, and health and safety measures, to manage residual risks present at the site including those related to contaminated soils that may be excavated from the site during future construction activities;
 - an evaluation of the potential need for vapor intrusion monitoring and mitigation per NYSDOH air guidance for future structures developed on the site; and
 - maintaining deed restrictions for groundwater use restrictions as a source of potable water and require groundwater monitoring at regular intervals.
- MNA, an estimated cost of which is provided on Table 38, would include monitoring to assess the effectiveness of natural attenuation processes in reducing the concentration of contaminants present in soil and groundwater at the site. In particular, an annual round of water samples from the existing groundwater monitoring wells and soil samples from within the identified exceedence areas on Figure 16 would be collected and analyzed for PCBs.

6.1.1.2 Time for Remediation

The restrictions and controls of the SMP would continue indefinitely. Long-term monitoring is assumed to continue for a period of 30 years.



6.1.1.3 Spatial Requirements

There would be no spatial requirements for this alternative.

6.1.1.4 Options for Disposal

There would be no substantial disposal requirements for this alternative. Disposal of materials collected during sampling and analysis would be minimal.

6.1.1.5 Permit Requirements

There would be no permits required for this alternative.

6.1.1.6 Limitations

Restrictions within the SMP in the absence of remediation would preclude future use of the Site.

6.1.1.7 Impacts on Fish and Wildlife Resources

This alternative would not have an impact on fish and wildlife resources.

6.1.2 Alternative 2 – Excavation and Offsite Disposal – 1 PPM, SMP

Alternative 2 includes excavation of all accessible soil exceeding the commercial PCB SCO for protection of public health (1 ppm) shown on Figure 16 with a Site Management Plan. For Alternative 2, remediation to the Part 375 PCB SCO for protection of groundwater (3.2) ppm was considered and rejected because the protection of groundwater (3.2 ppm) remediation area would be virtually identical to the protection of public health (1 ppm) remediation area. An estimated 10,100 tons of soil would be excavated and transported offsite for disposal. PCB-contaminated soil would be disposed of offsite at appropriate facilities. Verification samples would be collected from the bottom and sidewalls. Excavated soil would be subject to waste characterization testing prior to offsite disposal. A five-year groundwater monitoring period is assumed under this alternative.

6.1.2.1 Size and Configuration

Components of the Site Management Plan were detailed in Section 6.1.1.

- Alternative 2 includes excavation and offsite disposal of up to 10,100 tons of contaminated soil.
- All work will be performed within one construction season during non-winter months and within standard 8-hour work days, 5 days per week (22 days per month).
- Additional fencing or site security will not be required during remediation.



- Air monitoring will be performed during remediation and personal protection equipment (PPE) levels may need to be upgraded based on action levels indicated within the Health and Safety Plan. For costing purposes, it is assumed that all work will be performed using Level D PPE.
- It is assumed that minimal dewatering will be necessary. Water encountered during excavation, decontamination water, and any other water potentially contaminated will be collected and transported offsite for disposal.
- Verification sampling will be conducted.
- PCB-contaminated soils will be properly disposed under NYSDEC Part 371 and the Toxic Substances Control Act (TSCA). A comprehensive pre-design investigation will be conducted to separate highly contaminated (>50 ppm) soil from soil with lower PCB concentrations. For cost estimating, approximately 45 percent of the excavated soil will be assumed to be highly contaminated.
- Site restoration includes backfilling, as necessary, with offsite soil.
- Topsoil and seed will be placed for erosion control.
- The cost estimate is presented in Table 39.

6.1.2.2 Time for Remediation

Any restrictions and controls of the SMP would continue indefinitely. Construction is estimated to be completed in less than two months.

6.1.2.3 Spatial Requirements

Adequate space is available onsite for construction equipment and necessary stockpiling.

6.1.2.4 Options for Disposal

Excavated soil would be characterized prior to acceptance as onsite backfill or disposed of offsite as appropriate. PCB-contaminated soils will be disposed of offsite under NYSDEC Part 371 and the Toxic Substances Control Act (TSCA) following appropriate characterization testing.

6.1.2.5 Permit Requirements

Permit requirements for offsite transportation and disposal would have to be met.



6.1.2.6 Limitations

The final grading plan for the Site would have to be developed. Substantial truck traffic on neighborhood roadways would have to be coordinated with the local community.

6.1.2.7 Impacts on Fish and Wildlife Resources

This alternative would not have an impact on fish and wildlife resources.

6.1.3 Alternative 3 – Excavation and Offsite Disposal – 10 PPM, Cover, SMP

Alternative 3 includes excavation of the identified area of remediation on Figure 17 with a Site Management Plan. An estimated 4,100 tons of soil would be excavated and transported offsite for disposal. PCB-contaminated soil would be disposed of offsite at appropriate facilities. Verification samples would be collected from the bottom and sidewalls. Excavated soil would be subject to waste characterization testing prior to offsite disposal. A five-year groundwater monitoring period is assumed under this alternative.

6.1.3.1 Size and Configuration

- Components of the Site Management Plan were detailed in Section 6.1.1.
- Alternative 3 includes excavation and offsite disposal of approximately 4,100 tons of contaminated soil.
- All work will be performed within one construction season during non-winter months and within standard 8-hour work days, 5 days per week (22 days per month).
- Additional fencing or site security will not be required during remediation.
- Air monitoring will be performed during remediation and personal protection equipment (PPE) levels may need to be upgraded based on action levels indicated within the Health and Safety Plan. For costing purposes, it is assumed that all work will be performed using Level D PPE.
- It is assumed that minimal dewatering will be necessary. Water encountered during excavation, decontamination water, and any other water potentially contaminated will be collected and transported offsite for disposal.
- Verification sampling will be conducted.
- PCB-contaminated soils will be properly disposed under NYSDEC Part 371 and the Toxic Substances Control Act (TSCA). A comprehensive pre-design investigation will be conducted to separate highly contaminated (>50 ppm) soil from soil with lower PCB concentrations.
- Site restoration includes backfilling of excavation areas with offsite soil.



- The surface will be covered with a one-foot thick layer of clean fill and topsoil, and then seeded for erosion control.
- The cost estimate is presented in Table 40.

6.1.3.2 Time for Remediation

Any restrictions and controls of the SMP would continue indefinitely. Construction is estimated to be completed in less than two months.

6.1.3.3 Spatial Requirements

Adequate space is available onsite for construction equipment and necessary stockpiling.

6.1.3.4 Options for Disposal

Excavated soil would be characterized prior to acceptance as onsite backfill or disposed of offsite as appropriate. PCB-contaminated soils will be disposed of offsite under NYSDEC Part 371 and the Toxic Substances Control Act (TSCA) following appropriate characterization testing.

6.1.3.5 Permit Requirements

Permit requirements for offsite transportation and disposal would have to be met.

6.1.3.6 Limitations

The final grading plan for the Site would have to be developed. Substantial truck traffic on neighborhood roadways would have to be coordinated with the local community.

6.1.3.7 Impacts on Fish and Wildlife Resources

This alternative would not have an impact on fish and wildlife resources.

6.1.4 Alternative 4 – Excavation and Offsite Disposal – 25 PPM, Cover, SMP

Alternative 4 includes excavation of the identified area of remediation on Figure 18 with a Site Management Plan. An estimated 3,900 tons of soil would be excavated and transported offsite for disposal. PCB-contaminated soil would be disposed of offsite at appropriate facilities. Verification samples would be collected from the bottom and sidewalls. Excavated soil would be subject to waste characterization testing prior to offsite disposal. A thirty-year groundwater monitoring period is assumed under this alternative.

6.1.4.1 Size and Configuration

- Components of the Site Management Plan were detailed in Section 6.1.1.



- Alternative 4 includes excavation and offsite disposal of approximately 3,900 tons of contaminated soil.
- All work will be performed within one construction season during non-winter months and within standard 8-hour work days, 5 days per week (22 days per month).
- Additional fencing or site security will not be required during remediation.
- Air monitoring will be performed during remediation and personal protection equipment (PPE) levels may need to be upgraded based on action levels indicated within the Health and Safety Plan. For costing purposes, it is assumed that all work will be performed using Level D PPE.
- It is assumed that minimal dewatering will be necessary. Water encountered during excavation, decontamination water, and any other water potentially contaminated will be collected and transported offsite for disposal.
- Verification sampling will be conducted.
- PCB-contaminated soils will be properly disposed under NYSDEC Part 371 and the Toxic Substances Control Act (TSCA).
- Site restoration includes backfilling of excavation areas with offsite soil.
- The surface will be covered with a one-foot thick layer of clean fill and topsoil, and then seeded for erosion control.

The cost estimate is presented in Table 41.

6.1.4.2 Time for Remediation

Any restrictions and controls of the SMP would continue indefinitely. Construction is estimated to be completed in less than two months.

6.1.4.3 Spatial Requirements

Adequate space is available onsite for construction equipment and necessary stockpiling.

6.1.4.4 Options for Disposal

Excavated soil would be characterized prior to acceptance as onsite backfill or disposed of offsite as appropriate. PCB-contaminated soils will be disposed of offsite under NYSDEC Part 371 and the Toxic Substances Control Act (TSCA) following appropriate characterization testing.

6.1.4.5 Permit Requirements

Permit requirements for offsite transportation and disposal would have to be met.



6.1.4.6 Limitations

The final grading plan for the Site would have to be developed. Substantial truck traffic on neighborhood roadways would have to be coordinated with the local community.

6.1.4.7 Impacts on Fish and Wildlife Resources

This alternative would not have an impact on fish and wildlife resources.

6.2 Description of Evaluation Criteria

Each of the alternatives is subjected to a detailed evaluation with respect to the criteria outlined in 6 NYCRR Part 375 and described below. This evaluation aids in the selection process for remedial actions in New York State.

6.2.1 Overall Protection of Public Health and the Environment

This criterion is an assessment of whether the alternative meets requirements that are protective of human health and the environment. The overall assessment is based on a composite of factors assessed under other evaluation criteria, particularly long-term effectiveness and performance, short-term effectiveness, and compliance with SCGs. This evaluation focuses on how a specific alternative achieves protection over time and how site risks are reduced. The analysis includes how the source of contamination is to be eliminated, reduced, or controlled.

6.2.2 Compliance with Standards, Criteria, and Guidance (SCGs)

This criterion determines whether or not each alternative complies with applicable environmental laws, and SCGs pertaining to the chemicals detected in contaminated media, the location of the Site, and relating to proposed technologies. A discussion is included on any necessary waivers.

6.2.3 Long-Term Effectiveness and Permanence

This criterion addresses the performance of a remedial action in terms of its permanence and the quantity/nature of waste or residuals remaining at the Site after implementation. An evaluation is made on the extent and effectiveness of controls required to manage residuals remaining at the Site and the operation and maintenance systems necessary for the remedy to remain effective. The factors that are evaluated include permanence of the remedial alternative, magnitude of the remaining risk, adequacy of controls used to manage residual contamination, and the reliability of controls used to manage residual contamination.



6.2.4 Reduction of Toxicity, Mobility or Volume with Treatment

This criterion assesses the remedial alternative's use of technologies that permanently and significantly reduce toxicity, mobility, or volume (TMV) of the contamination as their principal element. Preference is given to remedies that permanently and significantly reduce the toxicity, mobility, or volume of the wastes at the site.

6.2.5 Short-Term Effectiveness

This criterion assesses the effects of the alternative during the construction and implementation phase with respect to the effect on human health and the environment. The factors that are assessed include protection of the workers and the community during remedial action, environmental impacts that result from the remedial action, and the time required until the remedial action objectives are achieved.

6.2.6 Implementability

This criterion addresses the technical and administrative feasibility of implementing the alternative and the availability of various services and materials required during implementation. The evaluation includes the feasibility of construction and operation, the reliability of the technology, the ease of undertaking additional remedial action, monitoring considerations, activities needed to coordinate with regulatory agencies, availability of adequate equipment, services and materials, offsite treatment, and storage and disposal services.

6.2.7 Cost

Capital costs and OM&M costs are estimated for each alternative and presented on a present worth basis based on a 5% discount rate. Cost estimates for the remedial alternatives are summarized on Table 42.

6.2.8 Community and State Acceptance

Concerns of the State and the Community will be addressed separately in accordance with the public participation program developed for this Site.

6.3 Detailed Analysis of Alternatives

6.3.1 Alternative 1 – No Action

6.3.1.1 Overall Protection of Public Health and the Environment

Alternative 1 is not protective of human health or the environment except through deed and groundwater use restrictions.



6.3.1.2 Compliance with Standards, Criteria, and Guidance (SCGs)

Alternative 1 does not comply with the cleanup criteria developed for the site.

6.3.1.3 Long-Term Effectiveness and Permanence

Alternative 1 is not an effective or permanent remedy for the contaminants present at the site. Residual contamination would exist at current concentrations and levels. The SMP would include substantial institutional and engineering controls to protect human health and the environment and would preclude future use of the Site.

6.3.1.4 Reduction of Toxicity, Mobility or Volume with Treatment

Alternative 1 does not reduce the toxicity, mobility or volume of contaminants present at the site, except through natural attenuation processes.

6.3.1.5 Short-Term Effectiveness

Alternative 1 poses the fewest short term impacts to workers and the community from construction activities since only monitoring is proposed. RAOs will not be met with Alternative 1.

6.3.1.6 Implementability

Alternative 1 would be the most implementable due to the lack of construction activities included.

6.3.1.7 Cost

The cost of the development of the Site Management Plan and long term monitoring associated with MNA is summarized on Table 42. A discount rate of 5% is assumed to develop the present worth cost over a 30-year period.

6.3.2 Alternative 2 – Excavation and Offsite Disposal – 1 PPM, SMP

6.3.2.1 Overall Protection of Public Health and the Environment

Alternative 2 is protective of human health and the environment and would meet SCGs for soil over the majority of the site. Residual soil exceeding criteria in subsurface soil in limited areas would not present a human health risk.

6.3.2.2 Compliance with Standards, Criteria, and Guidance (SCGs)

Soil SCGs would be met over the majority of the Site following excavation and offsite disposal of soil exceeding criteria.



6.3.2.3 Long-Term Effectiveness and Permanence

Excavating contaminated soil would be effective for the site-specific contaminants, and permanent in the long term. Additional remedial measures would not be required at the site as long as the groundwater use restrictions detailed in the SMP were enforced.

6.3.2.4 Reduction of Toxicity, Mobility or Volume with Treatment

Excavation and offsite disposal of contaminated soil would reduce the volume of contaminants at the Site.

6.3.2.5 Short-Term Effectiveness

Excavation of the large volume of contaminated soil would pose short-term impacts on workers, the nearby community, and the environment. Health and safety measures such as air monitoring, dust control, and erosion control would be necessary during construction to mitigate any impacts. Truck traffic would have to be coordinated due to the large number required for offsite disposal of non-reused material. The RAOs for soil - to eliminate or reduce site contamination and potential for exposure - and for air - to prevent or mitigate the potential for exposure - would be met upon completion of excavation activities. The RAO for groundwater would be met through continued enforcement of the groundwater use restrictions in the SMP.

6.3.2.6 Implementability

Excavation with offsite disposal is a widely-used, conventional remedial technology. Equipment and trained personnel should be readily available. Predesign soil testing should be conducted to identify fill PCB concentrations and to develop an approach for segregating hazardous from non-hazardous PCB-contaminated soil. Excavated material will be classified as hazardous or non-hazardous and transported and disposed in accordance with TSCA. Adequate health and safety measures must be undertaken for the proposed remediation which will occur adjacent to a residential neighborhood.

6.3.2.7 Cost

The cost of excavation and offsite disposal of material exceeding criteria, as well as the cost of the development of the SMP is summarized on Table 42.

6.3.3 Alternative 3 – Excavation and Offsite Disposal – 10 PPM, Cover, SMP

6.3.3.1 Overall Protection of Public Health and the Environment

Alternative 3 is protective of human health and the environment. Based on NYSDEC CP-51 Soil Cleanup Guidance Policy, an acceptable presumptive remedy for soil where neither the unrestricted SCOs nor the ESCOs are applied in the remedial program may include a soil cleanup level for PCBs of 1 ppm in the surface soils and 10 ppm in subsurface soils. Site soil exceeding 10 ppm would be



excavated and disposed off-site. A one-foot thick cover of clean soil would be applied to ensure compliance with the 1 ppm surface soil criterion.

6.3.3.2 Compliance with Standards, Criteria, and Guidance (SCGs)

Soil would comply with the CP-51 presumptive remedy for PCB-contaminated soil cleanup.

6.3.3.3 Long-Term Effectiveness and Permanence

Excavating contaminated soil would be effective for the site-specific contaminants, and permanent in the long term. Additional remedial measures would not be required at the site as long as the soil management and groundwater use restrictions detailed in the SMP were enforced.

6.3.3.4 Reduction of Toxicity, Mobility or Volume with Treatment

Excavation and offsite disposal of contaminated soil would reduce the volume of contaminants at the Site. Mobility of the contaminants through fugitive dust will be eliminated and mobility of contaminants through leaching will be reduced.

6.3.3.5 Short-Term Effectiveness

Excavation of the large volume of contaminated soil would pose short-term impacts on workers, the nearby community, and the environment. Health and safety measures such as air monitoring, dust control, and erosion control would be necessary during construction to mitigate any impacts. Truck traffic would have to be coordinated due to the large number required for offsite disposal of non-reused material. The RAOs for soil - to eliminate or reduce site contamination and potential for exposure - and for air - to prevent or mitigate the potential for exposure - would be met upon completion of excavation activities. The RAO for groundwater would be met through continued enforcement of the groundwater use restrictions in the SMP.

6.3.3.6 Implementability

Excavation with offsite disposal is a widely-used, conventional remedial technology. Equipment and trained personnel should be readily available. Predesign soil testing should be conducted to identify fill PCB concentrations and to develop an approach for segregating hazardous from non-hazardous PCB-contaminated soil. Excavated material will be classified as hazardous or non-hazardous and transported and disposed in accordance with TSCA. Adequate health and safety measures must be undertaken for the proposed remediation which will occur adjacent to a residential neighborhood.

6.3.3.7 Cost

The cost of the excavation and soil cover, as well as the cost of the development of the SMP is summarized on Table 42.



6.3.4 Alternative 4 – Excavation and Offsite Disposal – 25 PPM, Cover, SMP

6.3.4.1 Overall Protection of Public Health and the Environment

Based on NYSDEC CP-51 Soil Cleanup Guidance Policy, Alternative 4 is protective of human health for an industrial future use provided that access is limited and individual occupancy is restricted to less than an average of 6.7 hours per week. Site soil exceeding 25 ppm total PCB concentration would be excavated and disposed off-site. A one-foot thick cover of clean soil would be applied to ensure compliance with the 1 ppm surface soil criterion. The Site would be suitable for industrial re-use in accordance with the restrictions noted above.

6.3.4.2 Compliance with Standards, Criteria, and Guidance (SCGs)

Alternative 4 would comply with the CP-51 industrial use guidance.

6.3.4.3 Long-Term Effectiveness and Permanence

Excavating highly contaminated soil would be effective for reducing the site-specific contaminants, and permanent in the long term. Additional remedial measures would be required prior to any Site re-use that does not meet the industrial requirements noted above.

6.3.4.4 Reduction of Toxicity, Mobility or Volume with Treatment

Excavation and offsite disposal of hazardous soil would reduce the volume of contaminants at the Site. Mobility of the contaminants through fugitive dust will be eliminated and mobility of contaminants through leaching will be reduced.

6.3.4.5 Short-Term Effectiveness

Excavation of the large volume of contaminated soil would pose short-term impacts on workers, the nearby community, and the environment. Health and safety measures such as air monitoring, dust control, and erosion control would be necessary during construction to mitigate any impacts. Truck traffic would have to be coordinated due to the large number required for offsite disposal of non-reused material. The RAOs for soil - to eliminate or reduce site contamination and potential for exposure would not be met upon completion of excavation activities. The RAO for groundwater would be met through continued enforcement of the groundwater use restrictions in the SMP.

6.3.4.6 Implementability

Excavation with offsite disposal is a widely-used, conventional remedial technology. Equipment and trained personnel should be readily available. Predesign soil testing should be conducted to identify fill PCB concentrations and to develop an approach for segregating areas where hazardous PCB-contaminated soil is present. Excavated material will be classified as hazardous or non-hazardous and



transported and disposed in accordance with TSCA. Adequate health and safety measures must be undertaken for the proposed remediation which will occur adjacent to a residential neighborhood.

6.3.4.7 Cost

The cost of the excavation and soil cover, as well as the cost of the development of the SMP is summarized on Table 42.

6.4 Comparative Analysis of Alternatives

6.4.1 Overall Protection of Public Health and the Environment

Alternatives 2 and 3 provide the greatest overall protection to human health and the environment as the majority of contaminated soil is removed from the site, largely meeting the soil SCGs and meeting CP-51 presumptive remedy criteria. The potential for exposure to contaminants present in soil and air is mitigated under Alternative 2 and Alternative 3. Under the 1 ppm Alternative 2 cleanup, residual soil exceeding criteria in limited areas would not present a human health risk and the site would be suitable for re-use. Under the 1 ppm surface/10 ppm subsurface Alternative 3 cleanup, potential exposure to subsurface soil would be mitigated by the SMP and the Site would be suitable for commercial or restricted residential re-use.

6.4.2 Compliance with Standards, Criteria, and Guidance (SCGs)

Alternative 2 complies with the majority of soil SCGs since contaminated soil is excavated and removed from the Site. Alternative 3 and Alternative 4 comply with NYSDEC CP-51 policy guidance.

6.4.3 Long-Term Effectiveness and Permanence

Alternative 2 is the most effective and permanent alternative.

6.4.4 Reduction of Toxicity, Mobility or Volume with Treatment

Alternatives 2, 3 and 4 reduce the volume and mobility of contaminants at the Site.

6.4.5 Short-Term Effectiveness

Alternative 2 poses the greatest short term impacts to workers, the community, and the environment, however, similar short term impacts will also be associated with Alternatives 3 and 4. Adequate health and safety measures must be undertaken with Alternatives 2, 3 and 4 to monitor air, dust, control dust, and limit truck traffic. The RAOs for soil to eliminate or reduce the potential for exposure, and for air to prevent or mitigate the potential for exposure would be met to the greatest extent upon completion of excavation activities with Alternative 2. However, Alternative 3 would also provide a high level of



compliance with the RAOs. The RAO for groundwater would be met through continued enforcement of the groundwater use restrictions in the SMP for all alternatives.

6.4.6 Implementability

All of the considered alternatives are implementable.

6.4.7 Cost

As shown on Table 42, Alternative 1 and Alternative 4 include a long-term monitoring program over a period of 30 years. Alternatives 2 and 3 include a shorter-term monitoring program over a period of 5 years. For the alternatives that permit future use of the Site (Alternatives 2, 3, and 4), the capital and total cost of Alternative 2 is significantly higher than the cost of Alternative 3 or Alternative 4. The costs for Alternative 3 and Alternative 4 are similar, however, Alternative 3 is more protective and offers more Site re-use options,

The costs for the excavation alternatives are driven by the amount of soil exceeding 50 ppm. Because of uncertainty in the distribution of contamination, the attached cost estimates used conservative (i.e., worst case) estimates of the area where soil may exceed 50 ppm. Detailed pre-design testing should be conducted to identify fill PCB concentrations and to develop an approach for segregating areas where hazardous PCB-contaminated soil is present. Reductions in the amount of hazardous soil disposal may significantly reduce the remedial costs.



7.0 Recommended Remedial Alternative

Alternatives were developed and evaluated for remediation at the 1318 Niagara Street Site. The evaluation of alternatives was conducted using the remedial action objectives and SCGs identified for the Site to provide source and exposure pathway eliminations. Remediation areas and volumes were calculated to meet restricted use commercial SCGs.

7.1 Basis for Recommendation

Alternative 1, the No Action Alternative was rejected because it does not provide protection to human health and the environment, does not meet SCGs, and does not satisfy RAOs for soil or groundwater except through institutional and engineering controls and restrictions required by the Site Management Plan. Alternative 4 was rejected because the cost is similar to Alternative 3, but future use of the Site is severely restricted.

Alternatives 2 and 3 would be protective of human health and the environment and meet RAOs for the site. These alternatives would be implementable and require health and safety measures to protect workers and the community during remediation.

Both Alternative 2 and Alternative 3 include offsite disposal of excavated soil at a nearby facility thereby meeting soil SCGs and reducing the volume of contaminants. Alternative 2 would result in the least amount of residual contamination, but is also the most intensive and costly. Alternative 3 also would significantly reduce the amount of residual contamination.

Alternative 3 would result in the most cost effective and feasible way to reduce the PCB contamination to reasonable levels at the site, with only small amounts of residual contamination.

Based on the evaluation, Alternative 3 – Excavation and Offsite Disposal of PCB contaminated soils above 10 ppm, Cover and Site Management Plan, is the recommended remedy for the Site. Alternative 3 is protective of human health and the environment and would result in the most cost effective and feasible way to reduce the PCB contamination to levels which comply with NYSDEC guidance values at the site, with only small amounts of residual contamination. By including the cover and SMP, Alternative 3 meets RAOs for soil and groundwater at the Site.

7.2 Recommended Remedial Alternative Components

The components of the recommended remedy include:

- A Site Management Plan will identify the institutional and engineering controls including groundwater use restrictions on groundwater as a source of potable water and require groundwater monitoring at regular intervals. Further, the SMP will identify excavation



protocols, in particular, procedures for soil characterization, handling, and health and safety measures to be undertaken during future onsite excavation activities for construction purposes to mitigate potential exposures to contaminated groundwater, as well as residual soil and soil vapor, and identify the need for vapor intrusion monitoring and mitigation per NYSDOH air guidance for future structures.

- Approximately 4,100 tons of contaminated soil will be excavated from the areas identified on Figure 16.
- A pre-design study and soil segregation program are recommended to separate highly contaminated soil from soil with lower PCB levels. Excavated soil will be sampled for waste characterization parameters as required by the disposal facilities.
- To ensure compliance with the CP-51 requirement for surface soil PCB concentrations of 1 ppm or lower, a one-foot thick clean fill/clean topsoil cover should be applied over the entire Site. The cover should be seeded for erosion control.



REFERENCES

NYSDEC, Determination of Soil Cleanup Objectives and Levels, TAGM #4046, January, 1994.

NYSDEC, Draft Technical Guidance for Site Investigations and Remediation, December, 2002.

NYSDEC, Environmental Remediation Programs, 6NYCRR Part 375, December, 2006.

NYSDEC, Soil Cleanup Guidance Policy CP-51, October, 2010

NYSDOH, Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October, 2006.

USEPA, Monitored Natural Attenuation of Petroleum Hydrocarbons, EPA/600/F-98/021, May, 1999.

TABLES

TABLE 1

Preliminary Site Investigation (2009) Surface Soil Sampling Results for PCB's
 1318 Niagara Street,
 Buffalo, NY

Sample Designation	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	SS-1	SS-2	SS-3	SS-4	SS-5
Depth Interval (ft. bgs)			0-2"	0-6"	0-2"	0-6"	0-2"
Date Sampled			9/24/2009	9/24/2009	9/24/2009	9/24/2009	9/24/2009
Compound			Soil	Soil	Soil	Soil	Soil
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
PCBs							
PCB-1016	NS	NS	ND	ND	ND	ND	ND
PCB-1221	NS	NS	ND	ND	ND	ND	ND
PCB-1232	NS	NS	ND	ND	ND	ND	ND
PCB-1242	NS	NS	ND	ND	ND	ND	ND
PCB-1248	NS	NS	ND	ND	ND	ND	ND
PCB-1254	NS	NS	ND	ND	ND	ND	ND
PCB-1260	NS	NS	48000	3100	1800	35000	2400
Polychlorinated biphenyls, Total	100	1000	48000	3100	1800	35000	2400

Notes:

1) PCB's analyzed by USEPA method SW846 - 8082.

2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.

3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from the Part 375.

4) < = not detected - below the laboratory's Reporting Limit (RL).

5) ft. bgs = feet below ground surface.

6) ug/kg = micrograms per kilogram.

7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.

8) NS = No standard available.

9) ND = Non Detect

TABLE 1

Preliminary Site Investigation (2009) Surface Soil Sampling Results for PCB's
1318 Niagara Street,
Buffalo, NY

Sample Designation	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	SS-6	SS-7	SS-8	SS-9	SS-10
Depth Interval (ft. bgs)			0-2"	0-2"	0-6"	0-6"	0-2"
Date Sampled			9/24/2009	9/24/2009	9/24/2009	9/24/2009	9/24/2009
Compound			Soil	Soil	Soil	Soil	Soil
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
PCBs							
PCB-1016	NS	NS	ND	ND	ND	ND	ND
PCB-1221	NS	NS	ND	ND	ND	ND	ND
PCB-1232	NS	NS	ND	ND	ND	ND	ND
PCB-1242	NS	NS	ND	ND	ND	ND	ND
PCB-1248	NS	NS	ND	ND	ND	ND	ND
PCB-1254	NS	NS	ND	ND	ND	ND	ND
PCB-1260	NS	NS	<u>960</u>	<u>210</u>	43	71	<u>310</u>
Polychlorinated biphenyls, Total	100	1000	<u>960</u>	<u>210</u>	43	71	<u>310</u>

Notes:

1) PCB's analyzed by USEPA method SW846 - 8082.

2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.

3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from the Part 375.

4) < = not detected - below the laboratory's Reporting Limit (RL).

5) ft. bgs = feet below ground surface.

6) ug/kg = micrograms per kilogram.

7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.

8) NS = No standard available.

9) ND = Non Detect

TABLE 1

Preliminary Site Investigation (2009) Surface Soil Sampling Results for PCB's
1318 Niagara Street,
Buffalo, NY

Sample Designation	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	SS-11	SS-12	SS-13-SED	SS-14-SED	SS-15-SED
Depth Interval (ft. bgs)			0-2"	0-2"	0-6"	0-3"	0-6"
Date Sampled			9/24/2009	9/24/2009	9/24/2009	9/24/2009	9/24/2009
Compound			Soil	Soil	Soil	Soil	Soil
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
PCBs							
PCB-1016	NS	NS	ND	ND	ND	ND	ND
PCB-1221	NS	NS	ND	ND	ND	ND	ND
PCB-1232	NS	NS	ND	ND	ND	ND	ND
PCB-1242	NS	NS	ND	ND	ND	ND	ND
PCB-1248	NS	NS	ND	ND	ND	ND	ND
PCB-1254	NS	NS	ND	ND	ND	ND	ND
PCB-1260	NS	NS	54	3000 D	230	96	51000 D
Polychlorinated biphenyls, Total	100	1000	54	3000	230	96	51000

Notes:

1) PCB's analyzed by USEPA method SW846 - 8082.

2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.

3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from the Part 375.

4) < = not detected - below the laboratory's Reporting Limit (RL).

5) ft. bgs = feet below ground surface.

6) ug/kg = micrograms per kilogram.

7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.

8) NS = No standard available.

9) ND = Non Detect

TABLE 2

Preliminary Site Investigation (2009) UST and 55-Gal Drum Contents Composite Sampling Results for VOC's and PCB's
1318 Niagara Street,
Buffalo, NY

Sample Identification	Tank-E-AQ		Tank-E-S		Tank-W-AQ		Tank-W-S		Drum-Comp-AQ		Drum-Comp-S	
Interval Sampled	A4465-01		A4465-02		A4465-03		A4465-04		A4465-06		A4465-07	
Date Sampled	9/24/2009		9/24/2009		9/24/2009		9/24/2009		9/24/2009		9/24/2009	
Matrix	oil		sludge		oil		sludge		oil		sludge	
Compound												
VOCs	Concentration in ug/Kg											
Dichlorodifluoromethane	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloromethane	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Vinyl Chloride	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromomethane	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Chloroethane	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Trichlorofluoromethane	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Freon 113 (1,1,2-Trichlorotrifluoroethane)	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1-Dichloroethene	ND	U	ND	U	ND	U	ND	U	ND	U	440	J
Acetone	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Carbon disulfide	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methyl ter-butyl Ether	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methyl Acetate	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Methylene Chloride	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
trans-1,2-Dichloroethene	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1-Dichloroethane	ND	U	ND	U	ND	U	ND	U	ND	U	790	
Cyclohexane	ND	U	ND	U	ND	U	7200		ND	U	9600	
2-Butanone	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Carbon Tetrachloride	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
cis-1,2-Dichloroethene	ND	U	ND	U	ND	U	ND	U	ND	U	52000	D
Chloroform	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,1-Trichloroethane	ND	U	ND	U	ND	U	ND	U	ND	U	17000	JD
Methylcyclohexane	ND	U	1600		ND	U	26000		34000		42000	D
Benzene	ND	U	ND	U	ND	U	ND	U	ND	U	5800	
1,2-Dichloroethane	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Trichloroethene	2800	J	1400		9200		50000		11000	J	180000	D
1,2-Dichloropropane	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromodichloromethane	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
4-Methyl-2-pentanone	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Toluene	ND	U	590		3500	J	36000		51000		280000	D
t-1,3-Dichloropropene	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
cis-1,3-Dichloropropene	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,1,2-Trichloroethane	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
2-Hexanone	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Dibromochloromethane	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2-Dibromoethane	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Tetrachloroethene	ND	U	2300		ND	U	48000		16000	J	82000	D
Chlorobenzene	ND	U	ND	U	ND	U	ND	U	ND	U	930	
Ethylbenzene	ND	U	260	J	ND	U	27000		23000	J	110000	D
Xylene (para & meta)	ND	U	920	J	ND	U	130000		180000		490000	D
Xylene (Ortho)	ND	U	1300		ND	U	60000		73000		200000	D
Styrene	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Bromoform	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Isopropylbenzene	ND	U	ND	U	ND	U	8800		9500	J	28000	D
1,1,2,2-Tetrachloroethane	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,3-Dichlorobenzene	ND	U	ND	U	ND	U	ND	U	ND	U	1200	
1,4-Dichlorobenzene	ND	U	ND	U	ND	U	ND	U	ND	U	2900	
1,2-Dichlorobenzene	ND	U	350	J	ND	U	11000		14000	J	27000	D
1,2-Dibromo-3-Chloropropane	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
1,2,4-Trichlorobenzene	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
PCBs	Concentration in ug/kg											
Aroclor-1016	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Aroclor-1221	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Aroclor-1232	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Aroclor-1242	ND	U	ND	U	ND	U	ND	U	59000	D	ND	U
Aroclor-1248	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Aroclor-1254	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Aroclor-1260	5.9	P	5100	D	2.1	P	7900	D	ND	U	10000	D

Notes:

NC = No criteria

ND = Not Detected

D = Compound reported from laboratory dilution

J = Compound detected below laboratory MDL

Bold = Result exceeds TSCA 50 ppm threshold

Page 1 of 1

Sample Identification	NYSDEC HAZARDOUS WASTE LIMITS		Tank-Comp-S		Drum-Comp-S	
Lab Sample ID			A4465-05		A4465-07	
Date Sampled			9/24/2009		9/24/2009	
Compound			Sludge		Sludge	
Corrosivity (as pH)	2-12	Std Unit	6.9		7	
Ignitability	<140	°F	NO		NO	
Reactive Cyanide	250	mg/kg	ND	U	ND	U
Reactive Sulfide	500	mg/kg	ND	U	ND	U
TCLP BNA						
Pyridine	5,000	ug/L	ND	U	ND	U
1,4-Dichlorobenzene	7,500	ug/L	ND	U	ND	U
2-Methylphenol	200,000	ug/L	120		1500	D
3+4-Methylphenols	200,000	ug/L	440		7000	D
Hexachloroethane	3,000	ug/L	ND	U	ND	U
Nitrobenzene	2,000	ug/L	ND	U	ND	U
Hexachlorobutadiene	500	ug/L	ND	U	ND	U
2,4,6-Trichlorophenol	2,000	ug/L	ND	U	ND	U
2,4,5-Trichlorophenol	400,000	ug/L	ND	U	ND	U
2,4-Dinitrotoluene	130	ug/L	ND	U	ND	U
Hexachlorobenzene	130	ug/L	ND	U	ND	U
Pentachlorophenol	100,000	ug/L	ND	U	ND	U
TCLP Herbicide						
2,4-D	10,000	ug/L	ND	U	ND	U
2,4,5-TP (SILVEX)	1,000	ug/L	ND	U	ND	U
TCLP Metals						
Arsenic	5,000	ug/L	ND	U	ND	U
Barium	100,000	ug/L	2840		6240	
Cadmium	1,000	ug/L	18.7	J	9.5	J
Chromium	5,000	ug/L	ND	U	ND	U
Lead	5,000	ug/L	15500		11800	
Selenium	1,000	ug/L	ND	U	57.8	J
Silver	5,000	ug/L	ND	U	ND	U
TCLP Mercury						
Mercury	200	ug/L	1.3	J	1.8	J
TCLP Pesticide						
gamma-BHC (Lindane)	400	ug/L	ND	U	ND	U
Heptachlor	8	ug/L	ND	U	ND	U
Heptachlor epoxide	8	ug/L	ND	U	ND	U
Endrin	20	ug/L	ND	U	ND	U
Methoxychlor	10,000	ug/L	ND	U	ND	U
Toxaphene	500	ug/L	ND	U	ND	U
Chlordane	30	ug/L	ND	U	ND	U
TCLP VOA						
Vinyl Chloride	200	ug/L	ND	U	ND	U
1,1-Dichloroethene	700	ug/L	ND	U	ND	U
2-Butanone (MEK)	200,000	ug/L	ND	U	ND	U
Carbon Tetrachloride	500	ug/L	ND	U	ND	U
Chloroform	6,000	ug/L	ND	U	ND	U
Benzene	500	ug/L	ND	U	31	
1,2-Dichloroethane	500	ug/L	ND	U	ND	U
Trichloroethene	500	ug/L	40		280	
Tetrachloroethene	700	ug/L	ND	U	26	
Chlorobenzene	100,000	ug/L	ND	U	ND	U
Notes: NO - Not ignitable waste ND/U = Not Detected J = Estimated value Bold = Result exceeds NYSDEC Part 371 hazardous waste limit						

TABLE 4

IRM - 1 Excavations (2010) - Final Endpoint Soil Sampling Results for PCB's
1318 Niagara Street,
Buffalo, NY

Sample ID	Date	Total PCBs Concentration in mg/kg
Discrete Area SS-5		
Discrete SS-5-North	9/23/2010	0.39
Discrete SS-5-South	9/23/2010	<u>0.22</u>
Discrete SS-5-East	9/23/2010	0.24
Discrete SS-5-West	9/23/2010	ND
Discrete SS-5-Floor	9/23/2010	0.29
Discrete Area SS-12		
Discrete SS-12-East	9/23/2010	0.50
Discrete SS-12 Bottom	9/23/2010	<u>1.0</u>
Discrete SS-12A-North	10/8/2010	ND
Discrete SS-12B West	10/19/2010	1.4
Discrete SS-12B-South	10/19/2010	1.4
North & West of UST		
BT-1A	10/7/2010	2.3
WS-2	9/29/2010	0.89
BT-2A	10/7/2010	ND
WS-3A	10/7/2010	<u>0.21</u>
WS-4A	10/7/2010	2.3
WS-5A	10/7/2010	0.92
WS-6A	10/7/2010	0.56
WS-1A	10/7/2010	3.1
UST Excavation Area		
B-1	9/24/2010	ND
B-2	9/27/2010	ND
B-3	9/29/2010	3.6
W-1	9/24/2010	1.2
W-2	9/27/2010	ND
W-3	9/27/2010	ND
W-4	9/24/2010	0.64
W-5	9/29/2010	5.6
W-6	9/29/2010	0.39
W-7	9/30/2010	ND
W-8	9/24/2010	6.9
W-10A	10/7/2010	ND
Furnace Pit Area		
FPB-2A	9/30/2010	1.6
FPS-1A	9/30/2010	ND
FPS-2A	9/30/2010	ND
FPS-3A	9/30/2010	3.1
FPS-4C	10/21/2010	1.33
FPS-5B	10/8/2010	ND
FPS-6B	10/8/2010	ND
FPB-West	10/20/2010	ND
FPB-9 East	10/20/2010	0.90
FPB-Mid 12	10/25/2010	2.25

Notes:

ND=Not Detect.

Bold values indicate that the concentration exceeds the applicable Restricted Commercial SCO of **1 mg/kg**, from Part 375

Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO of 0.1 mg/kg, from Part 375.

TABLE 5

IRM - 1 (2010) - TCL Soil Sampling Results for VOC's
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use - SCO's	FPS-7		W-11		S-12-B-A	
Date Sampled			10/13/2010		10/12/2010		10/13/2010	
Depth			Soil		Soil		Soil	
Units			ug/kg		ug/kg		ug/kg	
VOCs								
Ethylbenzene	1,000	390,000	<6.1		<6.2		<6.2	
1,2-Dichloroethane	20	30,000	<6.1		<6.2		<6.2	
Toluene	700	500,000	<6.1		<6.2		<6.2	
Chlorobenzene	1,100	500,000	<6.1		<6.2		<6.2	
Tetrachloroethene	1,300	150,000	<6.1		<6.2		<6.2	
Carbon tetrachloride	760	22,000	<6.1		<6.2		<6.2	
Acetone	50	500,000	<12		<12		<12	
Chloroform	370	350,000	<6.1		<6.2		<6.2	
Benzene	60	44,000	<6.1		<6.2		<6.2	
1,1,1-Trichloroethane	680	500,000	<6.1		<6.2		<6.2	
Vinyl chloride	20	13,000	<6.1		<6.2		<6.2	
Methylene chloride	50	500,000	<6.1		<6.2		<6.2	
1,1-Dichloroethane	270	240,000	<6.1		<6.2		<6.2	
1,1-Dichloroethene	330	500,000	<6.1		<6.2		<6.2	
1,2,4-Trimethylbenzene	3,600	190,000	<6.1		<6.2		<6.2	
1,2-Dichlorobenzene	1,100	500,000	<6.1		<6.2		<6.2	
1,3,5-Trimethylbenzene	8,400	190,000	<6.1		<6.2		<6.2	
1,3-Dichlorobenzene	2,400	280,000	<6.1		<6.2		<6.2	
1,4-Dichlorobenzene	1,800	130,000	<6.1		<6.2		<6.2	
1,4-Dioxane	100	130,000	<120		<120		<120	
Methyl tert-butyl ether	930	500,000	<6.1		<6.2		<6.2	
n-Butylbenzene	12,000	NS	<6.1		<6.2		<6.2	
n-Propylbenzene	3,900	500,000	<6.1		<6.2		<6.2	
sec-Butylbenzene	11,000	500,000	<6.1		<6.2		<6.2	
tert-Butylbenzene	5,900	500,000	<6.1		<6.2		<6.2	
trans-1,2-Dichloroethene	190	500,000	<6.1		<6.2		<6.2	
cis-1,2-Dichloroethene	250	500,000	<6.1		<6.2		<6.2	
Xylene (Mixed)	260	500,000	<6.1		<6.2		<6.2	
2-Butanone	120	500,000	<12		<12		<12	
Trichloroethene	470	200,000	<6.1		<6.2		<6.2	
Total VOCs	NS	NS	ND		ND		ND	

Note:

- 1) VOCs analyzed for Target Compound List (TCL) by USEPA method SW8260.
- 2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.
- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- 4) < = not detected - below the laboratory's method detection limit (MDL).
- 5) ug/kg = micrograms per kilogram.
- 6) J = Detected below the Reporting Limit (RL) but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 7) NS = No Available SCO.
- 8) ND = Non Detect

TABLE 6

IRM - 1 (2010) - TCL Soil Sampling Results for SVOC's
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	FPS-7		W-11		S-12-B-A	
Date Sampled			10/13/2010		10/12/2010		10/13/2010	
Depth			Soil		Soil		Soil	
Units			ug/kg		ug/kg		ug/kg	
SVOCs								
Phenol	330	500,000	<400		<410		<4100	
Bis(2-ethylhexyl)phthalate	NS	NS	300	J	300	J	<4100	
Anthracene	100,000	500,000	<400		<410		1000	J
1,2,4-Trichlorobenzene	NS	NS	<400		<410		<4100	
2,4-Dichlorophenol	NS	NS	<400		<410		<4100	
2,4-Dinitrotoluene	NS	NS	<400		<4100		<4100	
Pyrene	100,000	500,000	<400		<410		2000	J
Dibenzofuran	NS	NS	<400		<410		800	J
Benzo(g,h,i)perylene	100,000	500,000	<400		<410		500	J
Indeno(1,2,3-cd)pyrene	500	5,600	<400		<410		600	J
Benzo(b)fluoranthene	1,000	5,600	<400		<410		1000	J
Fluoranthene	100,000	500,000	<400		<410		3000	J
Benzo(k)fluoranthene	800	56,000	<400		<410		<4100	
Acenaphthylene	100,000	500,000	<400		<410		<4100	
Chrysene	1,000	56,000	<400		<410		1000	J
Benzo(a)pyrene	1,000	1,000	<400		<410		1000	J
Dibenzo(a,h)anthracene	330	560	<400		<410		<4100	
Benzo(a)anthracene	1,000	5,600	<400		<410		1000	J
Acenaphthene	20,000	500,000	<400		<410		<4100	
Di-n-butyl phthalate	NS	NS	<400		50	J	<4100	
Phenanthrene	100,000	500,000	<400		<410		4700	
Fluorene	30,000	500,000	<400		<410		1000	J
Pentachlorophenol	800	6,700	<820		<820		<8300	
Naphthalene	12,000	500,000	<400		<410		700	J
2-Methylnaphthalene	NS	NS	<400		<410		1000	J
2-Methylphenol	NS	500,000	<400		<410		<4100	
(3+4)-Methylphenol	330	500,000	<400		<410		<4100	
Total SVOCs	NS	NS	300		350		19300	

Note:

- 1) VOCs analyzed for Target Compound List (TCL) by USEPA method SW8260.
- 2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.
- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- 4) < = not detected - below the laboratory's method detection limit (MDL).
- 5) ug/kg = micrograms per kilogram.
- 6) J = Detected below the Reporting Limit (RL) but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 7) NS = No Available SCO.
- 8) ND = Non Detect

TABLE 7

IRM - 1 (2010) - TCL Soil Sampling Results for Metals
 1318 Niagara Street,
 Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	FPS-7	W-11	S-12-B-A
Date Sampled			10/13/2010	10/12/2010	10/13/2010
Compound			Soil	Soil	Soil
Units			mg/kg	mg/kg	mg/kg
Metals					
Aluminum	NS	NS	13000	15000	14000
Iron	NS	NS	19000	23000	20000
Lead	63	1,000	19	12	66
Magnesium	NS	NS	21000	12000	11000
Manganese	1,600	10,000	440	340	490
Nickel	30	310	20	26	20
Potassium	NS	NS	4200	2600	2200
Silver	2	1,500	<6.1	<6.2	<6.2
Sodium	NS	NS	220	160	130
Arsenic	13	16	<6.1	<6.2	<6.2
Barium	350	400	110	110	120
Beryllium	7.2	590	0.63	0.72	0.74
Cadmium	2.5	9.3	<.61	0.75	0.69
Chromium	1	400	<u>17</u>	<u>21</u>	<u>23</u>
Cobalt	NS	NS	9.3	12	9.4
Copper	27	270	18	21	20
Vanadium	NS	NS	20	30	30
Zinc	109	10000	60	57	80
Calcium	NS	NS	72000	32000	31000
Selenium	3.9	1,500	<3.7	<3.7	<3.7
Mercury	0.18	2.8	<.122	<.123	<.123

Note:

1) Metals analyzed for Target Analyte List by USEPA method SW6010.

2) Mercury analyzed by USEPA method SW7471.

3) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.

4) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.

5) < = not detected - below the laboratory's method detection limit (MDL).

6) mg/mg = micrograms per kilogram.

7) J = Detected below the Reporting Limit (RL) but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.

8) NS = No Available SCO.

9) ND - Non Detect

TABLE 8

IRM - 1 (2010) - TCL Soil Sampling Results for Pesticides
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	FPS-7		W-11		S-12-B-A	
Date Sampled			10/13/2010		10/12/2010		10/13/2010	
Compound			Soil		Soil		Soil	
Units			ug/kg		ug/kg		ug/kg	
Pesticides								
Endosulfan sulfate	2,400	200,000	<4.0		<4.1		<41	
Aldrin	5	680	<2.1		<2.1		<21	
alpha-BHC	20	3,400	<2.1		<2.1		<21	
beta-BHC	36	3,000	<2.1		<2.1		<21	
delta-BHC	40	500,000	<2.1	Q	<2.1	Q	<21	Q
Endosulfan II	2,400	200,000	<4.0	Q	<4.1	Q	54	Q
4,4'-DDT	3.3	47,000	<u>54</u>	Q	<4.1	Q	<u>65</u>	Q
alpha-Chlordane	94	24,000	<2.1		<2.1		<21	
gamma-BHC	100	9,200	<2.1		<2.1		<21	
Dieldrin	5	1,400	<4.0		<4.1		<41	
Endrin	14	89,000	<4.0		<4.1		<41	
4,4'-DDD	3.3	92,000	<4.0	Q	<4.1	Q	<41	Q
4,4'-DDE	3.3	62,000	<4.0		<4.1		<41	
Heptachlor	42	15,000	<2.1		<2.1		<21	
Endosulfan I	2,400	200,000	<2.1	Q	<2.1	Q	<21	Q

Note:

- 1) Pesticides analyzed by USEPA method SW8082.
- 2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.
- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- 4) < = not detected - below the laboratory's method detection limit (MDL).
- 5) ug/kg = micrograms per kilogram.
- 6) J = Detected below the Reporting Limit (RL) but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 7) NS = No Available SCO.

TABLE 9

IRM - 1 (2010) - TCL Soil Sampling Results for PCB's
 1318 Niagara Street,
 Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	FPS-7		W-11		S-12-B-A	
Date Sampled			10/13/2010		10/12/2010		10/13/2010	
Compound			Soil		Soil		Soil	
Units			ug/kg		ug/kg		ug/kg	
PCB's								
Aroclor 1260	NS	NS	440		15.2		700	
Polychlorinated biphenyls, Total	100	1000	440		15.2		700	

Note:

- 1) PCB's analyzed by USEPA method SW8082.
- 2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.
- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- 4) < = not detected - below the laboratory's method detection limit (MDL).
- 5) ug/kg = micrograms per kilogram.
- 6) J = Detected below the Reporting Limit (RL) but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 7) NS = No Available SCO.

TABLE 10
SI Soil Sampling Results for VOC's (June 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	MW-01		MW-01		MW-02		MW-03	
Sample Designation			MW-01-0'-2'		MW-01-10'-12'		MW-02-16'-18'		MW-03-18'-20'	
Depth Interval (ft. bgs)			0.0' to 2.0'		10.0' to 12.0'		16.0' to 18.0'		18.0' to 20.0'	
Date Sampled			6/24/2011		6/24/2011		6/23/2011		6/27/2011	
Compound			Soil		Soil		Soil		Soil	
Units	ug/kg	mg/kg	ug/kg		ug/kg		ug/kg		ug/kg	
TCL Volatile Compounds										
1,1,1-Trichloroethane	680	500000	<5.4		<5.7		18		<5.3	
1,1-Dichloroethane	270	240000	<5.4		<5.7		22		<5.3	
1,1-Dichloroethene	330	500000	<5.4		<5.7		1.6	J	<5.3	
1,2,4-Trichlorobenzene	3400	NS	<5.4		<5.7		<5.7		16000	
1,2-Dichlorobenzene	1100	500000	<5.4		<5.7		24		20	
1,2-Dichloroethane	20	30000	<5.4		<5.7		<5.7		<5.3	
1,3-Dichlorobenzene	2400	280000	<5.4		<5.7		<5.7		<5.3	
1,4-Dichlorobenzene	1800	130000	<5.4		<5.7		<5.7		28	
2-Butanone (MEK)	120	500000	<27		<28		<29		<26	
Acetone	50	500000	<27		<28		27	J	<26	
Benzene	60	44000	<5.4		<5.7		16		<5.3	
Carbon tetrachloride	760	22000	<5.4		<5.7		<5.7		<5.3	
Chlorobenzene	1100	500000	<5.4		<5.7		6.8		<5.3	
Chloroform	370	350000	<5.4		<5.7		<5.7		<5.3	
cis-1,2-Dichloroethene	250	500000	<5.4		<5.7		160		<5.3	
Cyclohexane	NS	NS	<5.4		<5.7		56		<5.3	
Ethylbenzene	1000	390000	<5.4		<5.7		37		<5.3	
Isopropylbenzene	2300	NS	<5.4		<5.7		4.1	J	<5.3	
Methyl tert-butyl ether (MTBE)	930	500000	<5.4		<5.7		<5.7		<5.3	
Methylcyclohexane	NS	NS	<5.4		<5.7		90		<5.3	
Methylene Chloride	50	500000	5.3	JB	5.1	JB	6.5		3.1	JB
Tetrachloroethene	1300	150000	1.9	J	<5.7		120		<5.3	
Toluene	700	500000	<5.4		1.2	JB	13	B	1.2	JB
trans-1,2-Dichloroethene	190	500000	<5.4		<5.7		1.7	J	<5.3	
Trichloroethene	470	200000	<5.4		<5.7		12		<5.3	
Vinyl chloride	20	13000	<5.4		<5.7		48		<5.3	
Xylenes, Total	260	500000	<11		<11		180		<11	
Total Volatile Organics	NS	NS	7		6		844		16052	

Notes:

- 1) VOCs analyzed for NYSDEC Target Compound List by USEPA method SW846 - 8260.
- 2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.
- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- 4) < = not detected - below the laboratory's Reporting Limit (RL).
- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
- 7) J = Detected below RL but greater than or equal to Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.
- 9) ND = No compounds detected above reporting limits.
- 10) B = Analyte is found in the associated analysis batch blank.

TABLE 10
SI Soil Sampling Results for VOC's (June 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	MW-04		MW-04		MW-05		MW-05	
Sample Designation			MW-04-0-4"		MW-04-2'-3.5'		MW-05-0-4"		MW-05-9'-11'	
Depth Interval (ft. bgs)			0" to 4"		2.0' to 3.5'		0" to 4"		9.0' to 11.0'	
Date Sampled			6/21/2011		6/20/2011		6/22/2011		6/22/2011	
Compound			Soil		Soil		Soil		Soil	
Units	ug/kg	mg/kg	ug/kg		ug/kg		ug/kg		ug/kg	
TCL Volatile Compounds										
1,1,1-Trichloroethane	680	500000	<5.6		<6.1		<5.5		<5.9	
1,1-Dichloroethane	270	240000	<5.6		<6.1		<5.5		<5.9	
1,1-Dichloroethene	330	500000	<5.6		<6.1		<5.5		<5.9	
1,2,4-Trichlorobenzene	3400	NS	<5.6		<6.1		<5.5		<5.9	
1,2-Dichlorobenzene	1100	500000	<5.6		<6.1		<5.5		<5.9	
1,2-Dichloroethane	20	30000	<5.6		<6.1		<5.5		<5.9	
1,3-Dichlorobenzene	2400	280000	<5.6		<6.1		<5.5		<5.9	
1,4-Dichlorobenzene	1800	130000	<5.6		<6.1		<5.5		<5.9	
2-Butanone (MEK)	120	500000	<28		14	J	<27		<29	
Acetone	50	500000	<28		26	JB	<27		<29	
Benzene	60	44000	<5.6		<6.1		<5.5		<5.9	
Carbon tetrachloride	760	22000	<5.6		<6.1		<5.5		<5.9	
Chlorobenzene	1100	500000	<5.6		<6.1		<5.5		<5.9	
Chloroform	370	350000	<5.6		<6.1		<5.5		<5.9	
cis-1,2-Dichloroethene	250	500000	<5.6		<6.1		<5.5		<5.9	
Cyclohexane	NS	NS	<5.6		<6.1		<5.5		<5.9	
Ethylbenzene	1000	390000	<5.6		<6.1		<5.5		<5.9	
Isopropylbenzene	2300	NS	<5.6		<6.1		<5.5		<5.9	
Methyl tert-butyl ether (MTBE)	930	500000	<5.6		<6.1		<5.5		<5.9	
Methylcyclohexane	NS	NS	<5.6		<6.1		<5.5		<5.9	
Methylene Chloride	50	500000	5.4	JB	6.6	B	2.6	J	3.1	J
Tetrachloroethene	1300	150000	<5.6		<6.1		<5.5		<5.9	
Toluene	700	500000	<5.6		<6.1		<5.5		<5.9	
trans-1,2-Dichloroethene	190	500000	<5.6		<6.1		<5.5		<5.9	
Trichloroethene	470	200000	<5.6		<6.1		<5.5		<5.9	
Vinyl chloride	20	13000	<5.6		<6.1		<5.5		<5.9	
Xylenes, Total	260	500000	<11		<12		<11		<12	
Total Volatile Organics	NS	NS	5		47		3		3	

Notes:

- 1) VOCs analyzed for NYSDEC Target Compound List by USEPA method SW846 - 8260.
- 2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.
- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- 4) < = not detected - below the laboratory's Reporting Limit (RL).
- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
- 7) J = Detected below RL but greater than or equal to Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.
- 9) ND = No compounds detected above reporting limits.
- 10) B = Analyte is found in the associated analysis batch blank.

TABLE 10
SI Soil Sampling Results for VOC's (June 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	SB-02		SB-02		SB-03		SB-03	
Sample Designation			SB-02-0'-2'		SB-02-10.5'-11.5'		SB-03-2		SB-03-11.0-12.0	
Depth Interval (ft. bgs)			0.0' to 2.0'		10.5' to 11.5'		2.0'		10.5' to 11.5'	
Date Sampled			6/21/2011		6/21/2011		6/22/2011		6/22/2011	
Compound			Soil		Soil		Soil		Soil	
Units	ug/kg	mg/kg	ug/kg		ug/kg		ug/kg		ug/kg	
TCL Volatile Compounds										
1,1,1-Trichloroethane	680	500000	<5.4		<5.6		<5.6		<5.4	
1,1-Dichloroethane	270	240000	<5.4		<5.6		<5.6		<5.4	
1,1-Dichloroethene	330	500000	<5.4		<5.6		<5.6		<5.4	
1,2,4-Trichlorobenzene	3400	NS	<5.4		<5.6		<5.6		<5.4	
1,2-Dichlorobenzene	1100	500000	<5.4		54		<5.6		<5.4	
1,2-Dichloroethane	20	30000	<5.4		<5.6		<5.6		<5.4	
1,3-Dichlorobenzene	2400	280000	<5.4		5.2	J	<5.6		<5.4	
1,4-Dichlorobenzene	1800	130000	<5.4		7.7		<5.6		<5.4	
2-Butanone (MEK)	120	500000	<27		3.8	J	<28		<27	
Acetone	50	500000	<27		23	J	<28		<27	
Benzene	60	44000	<5.4		13		<5.6		<5.4	
Carbon tetrachloride	760	22000	<5.4		<5.6		<5.6		<5.4	
Chlorobenzene	1100	500000	<5.4		13		<5.6		<5.4	
Chloroform	370	350000	<5.4		<5.6		<5.6		<5.4	
cis-1,2-Dichloroethene	250	500000	<5.4		<5.6		<5.6		<5.4	
Cyclohexane	NS	NS	<5.4		110		<5.6		<5.4	
Ethylbenzene	1000	390000	<5.4		190		<5.6		<5.4	
Isopropylbenzene	2300	NS	<5.4		48		<5.6		<5.4	
Methyl tert-butyl ether (MTBE)	930	500000	<5.4		<5.6		<5.6		<5.4	
Methylcyclohexane	NS	NS	<5.4		200		<5.6		<5.4	
Methylene Chloride	50	500000	5.8	B	14	B	4.2	J	3.9	J
Tetrachloroethene	1300	150000	<5.4		<5.6		<5.6		<5.4	
Toluene	700	500000	<5.4		<5.6		<5.6		<5.4	
trans-1,2-Dichloroethene	190	500000	<5.4		<5.6		<5.6		<5.4	
Trichloroethene	470	200000	<5.4		<5.6		<5.6		<5.4	
Vinyl chloride	20	13000	<5.4		<5.6		<5.6		<5.4	
Xylenes, Total	260	500000	<11		320		<11		<11	
Total Volatile Organics	NS	NS	6		1002		4		4	

Notes:

- 1) VOCs analyzed for NYSDEC Target Compound List by USEPA method SW846 - 8260.
- 2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.
- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- 4) < = not detected - below the laboratory's Reporting Limit (RL).
- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
- 7) J = Detected below RL but greater than or equal to Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.
- 9) ND = No compounds detected above reporting limits.
- 10) B = Analyte is found in the associated analysis batch blank.

TABLE 10
SI Soil Sampling Results for VOC's (June 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	SB-07	SB-08	SB-08	SB-11
Sample Designation			SB-07-0-4"	SB-08-7.0-8.0	SB-08-10.5-11.5	SB-11-0-4"
Depth Interval (ft. bgs)			0 to 4"	7.0' to 8.0'	10.5' to 11.5'	0 to 4"
Date Sampled			6/20/2011	6/21/2011	6/21/2011	6/21/2011
Compound			Soil	Soil	Soil	Soil
Units	ug/kg	mg/kg	ug/kg	ug/kg	ug/kg	ug/kg
TCL Volatile Compounds						
1,1,1-Trichloroethane	680	500000	<5.1	<5.7	<28	<5.2
1,1-Dichloroethane	270	240000	<5.1	<5.7	<28	<5.2
1,1-Dichloroethene	330	500000	<5.1	<5.7	<28	<5.2
1,2,4-Trichlorobenzene	3400	NS	<5.1	<5.7	<28	<5.2
1,2-Dichlorobenzene	1100	500000	<5.1	15	130	<5.2
1,2-Dichloroethane	20	30000	<5.1	<5.7	<28	<5.2
1,3-Dichlorobenzene	2400	280000	<5.1	2.6	16	<5.2
1,4-Dichlorobenzene	1800	130000	<5.1	5.8	43	<5.2
2-Butanone (MEK)	120	500000	<25	6.7	<140	<26
Acetone	50	500000	<25	38	<140	<26
Benzene	60	44000	<5.1	2.3	11	<5.2
Carbon tetrachloride	760	22000	<5.1	<5.7	<28	<5.2
Chlorobenzene	1100	500000	<5.1	7.2	30	<5.2
Chloroform	370	350000	<5.1	<5.7	<28	<5.2
cis-1,2-Dichloroethene	250	500000	<5.1	<5.7	<28	<5.2
Cyclohexane	NS	NS	<5.1	14	84	<5.2
Ethylbenzene	1000	390000	<5.1	1	13	<5.2
Isopropylbenzene	2300	NS	<5.1	5.7	90	<5.2
Methyl tert-butyl ether (MTBE)	930	500000	<5.1	<5.7	<28	<5.2
Methylcyclohexane	NS	NS	<5.1	23	160	<5.2
Methylene Chloride	50	500000	4.2	9.3	42	5.7
Tetrachloroethene	1300	150000	<5.1	<5.7	<28	<5.2
Toluene	700	500000	<5.1	0.9	3.2	<5.2
trans-1,2-Dichloroethene	190	500000	<5.1	<5.7	<28	<5.2
Trichloroethene	470	200000	<5.1	<5.7	<28	<5.2
Vinyl chloride	20	13000	<5.1	<5.7	<28	<5.2
Xylenes, Total	260	500000	<10	18	360	1.3
Total Volatile Organics	NS	NS	4	150	982	7

Notes:

- 1) VOCs analyzed for NYSDEC Target Compound List by USEPA method SW846 - 8260.
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- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- 4) < = not detected - below the laboratory's Reporting Limit (RL).
- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
- 7) J = Detected below RL but greater than or equal to Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.
- 9) ND = No compounds detected above reporting limits.
- 10) B = Analyte is found in the associated analysis batch blank.

TABLE 10

SI Soil Sampling Results for VOC's (June 2011)

1318 Niagara Street,

Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	SB-13	
Sample Designation			SB-13-0-4"	
Depth Interval (ft. bgs)			0 to 4"	
Date Sampled			6/20/2011	
Compound			Soil	
Units	ug/kg	mg/kg	ug/kg	
TCL Volatile Compounds				
1,1,1-Trichloroethane	680	500000	<5.8	
1,1-Dichloroethane	270	240000	<5.8	
1,1-Dichloroethene	330	500000	<5.8	
1,2,4-Trichlorobenzene	3400	NS	<5.8	
1,2-Dichlorobenzene	1100	500000	<5.8	
1,2-Dichloroethane	20	30000	<5.8	
1,3-Dichlorobenzene	2400	280000	<5.8	
1,4-Dichlorobenzene	1800	130000	<5.8	
2-Butanone (MEK)	120	500000	<29	
Acetone	50	500000	<29	
Benzene	60	44000	<5.8	
Carbon tetrachloride	760	22000	<5.8	
Chlorobenzene	1100	500000	<5.8	
Chloroform	370	350000	<5.8	
cis-1,2-Dichloroethene	250	500000	<5.8	
Cyclohexane	NS	NS	<5.8	
Ethylbenzene	1000	390000	<5.8	
Isopropylbenzene	2300	NS	<5.8	
Methyl tert-butyl ether (MTBE)	930	500000	<5.8	
Methylcyclohexane	NS	NS	<5.8	
Methylene Chloride	50	500000	5.3	JB
Tetrachloroethene	1300	150000	<5.8	
Toluene	700	500000	<5.8	
trans-1,2-Dichloroethene	190	500000	<5.8	
Trichloroethene	470	200000	<5.8	
Vinyl chloride	20	13000	<5.8	
Xylenes, Total	260	500000	<12	
Total Volatile Organics	NS	NS	5	

Notes:

- 1) VOCs analyzed for NYSDEC Target Compound List by USEPA method SW846 - 8260.
- 2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.
- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- 4) < = not detected - below the laboratory's Reporting Limit (RL).
- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
- 7) J = Detected below RL but greater than or equal to Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.
- 9) ND = No compounds detected above reporting limits.
- 10) B = Analyte is found in the associated analysis batch blank.

TABLE 11

SI Soil Sampling Results for SVOC's (June 2011)

1318 Niagara Street,

Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	MW-01		MW-01		MW-02		MW-03	
Sample Designation			MW-01-0'-2'		MW-01-10'-12'		MW-02-16'-18'		MW-03-18'-20'	
Depth Interval (ft. bgs)			0.0' to 2.0'		10.0' to 12.0'		16.0' to 18.0'		18.0' to 20.0'	
Date Sampled			6/24/2011		6/24/2011		6/23/2011		6/27/2011	
Compound			Soil		Soil		Soil		Soil	
Units	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg	
TCL Semi-volatile Compounds										
2-Methylnaphthalene	36400	NS	2.4	J	<200		1100		8.3	J
2-Methylphenol	330	500000	<190		<200		<190		<180	
Acenaphthene	20000	500000	12	J	<200		89	J	<180	
Acenaphthylene	100000	500000	<190		<200		<190		<180	
Anthracene	100000	500000	40	J	<200		170	J	<180	
Benzo(a)anthracene	1000	5600	210		<200		200		<180	
Benzo(a)pyrene	1000	1000	230		<200		180	J	<180	
Benzo(b)fluoranthene	1000	5600	290		<200		180	J	<180	
Benzo(g,h,i)perylene	100000	500000	130	J	<200		100	J	<180	
Benzo(k)fluoranthene	800	56000	130	J	<200		90	J	<180	
Biphenyl	NS	NS	<190		<200		62	J	<180	
Bis(2-ethylhexyl) phthalate	50000	NS	92	J	<200		94	J	<180	
Carbazole	NS	NS	31	J	<200		69	J	<180	
Chrysene	1000	56000	260		<200		190		<180	
Dibenz(a,h)anthracene	330	560	<190		<200		30	J	<180	
Dibenzofuran	7000	350000	<190		<200		86	J	<180	
Di-n-butyl phthalate	8100	NS	<190		<200		<190		<180	
Fluoranthene	100000	500000	370		<200		460		<180	
Fluorene	30000	500000	<190		<200		140	J	<180	
Indeno(1,2,3-cd)pyrene	500	5600	120	J	<200		87	J	<180	
Naphthalene	12000	500000	<190		<200		340		19	J
Pentachlorophenol	800	6700	<380		<380		<370		<350	
Phenanthrene	100000	500000	190		<200		710		<180	
Phenol	330	500000	<190		<200		<190		<180	
Pyrene	100000	500000	340		<200		400		<180	
Total SVOC's	NS	NS	2447		ND		4777		27	

Notes:

- 1) SVOCs analyzed for NYSDEC Target Compound List by USEPA method SW846 - 8270.
- 2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.
- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- 4) < = not detected - below the laboratory's Reporting Limit (RL).
- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
- 7) J = Detected below RL but greater than or equal to Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.
- 9) ND = No compounds detected above reporting limits.
- 10) B = Analyte is found in the associated analysis batch blank.

TABLE 11

SI Soil Sampling Results for SVOC's (June 2011)

1318 Niagara Street,

Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	MW-04		MW-04		MW-05		MW-05	
Sample Designation			MW-04-0-4"		MW-04-2'-3.5'		MW-05-0-4"		MW-05-9'-11'	
Depth Interval (ft. bgs)			0" to 4"		2.0' to 3.5'		0" to 4"		9.0' to 11.0'	
Date Sampled			6/21/2011		6/20/2011		6/22/2011		6/22/2011	
Compound			Soil		Soil		Soil		Soil	
Units	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg	
TCL Semi-volatile Compounds										
2-Methylnaphthalene	36400	NS	11	J	14	J	13	J	21	J
2-Methylphenol	330	500000	<190		<210		<950		<200	
Acenaphthene	20000	500000	22	J	41	J	38	J	63	J
Acenaphthylene	100000	500000	65	J	<210		120	J	8.6	J
Anthracene	100000	500000	120	J	120	J	170	J	140	J
Benzo(a)anthracene	1000	5600	390		230		690	J	250	
Benzo(a)pyrene	1000	1000	380		200	J	790	J	210	
Benzo(b)fluoranthene	1000	5600	490		250		1000		240	
Benzo(g,h,i)perylene	100000	500000	180	J	82	J	590	J	130	J
Benzo(k)fluoranthene	800	56000	210		93	J	470	J	110	J
Biphenyl	NS	NS	<190		<210		<950		<200	
Bis(2-ethylhexyl) phthalate	50000	NS	<190		<210		<950		<200	
Carbazole	NS	NS	42	J	50	J	87	J	47	J
Chrysene	1000	56000	400		220		790	J	230	
Dibenz(a,h)anthracene	330	560	57	J	28	J	180	J	39	J
Dibenzofuran	7000	350000	18	J	32	J	34	J	48	J
Di-n-butyl phthalate	8100	NS	<190		<210		<950		<200	
Fluoranthene	100000	500000	780		500		1400		580	
Fluorene	30000	500000	51	J	52	J	72	J	61	J
Indeno(1,2,3-cd)pyrene	500	5600	170	J	71	J	530	J	110	J
Naphthalene	12000	500000	<190		<210		<950		31	J
Pentachlorophenol	800	6700	<370		<400		<1800		<380	
Phenanthrene	100000	500000	400		450		760	J	600	
Phenol	330	500000	<190		<210		<950		<200	
Pyrene	100000	500000	540		370		1200		540	
Total SVOC's	NS	NS	4326		2803		8934		3459	

Notes:

- 1) SVOCs analyzed for NYSDEC Target Compound List by USEPA method SW846 - 8270.
- 2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.
- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- 4) < = not detected - below the laboratory's Reporting Limit (RL).
- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
- 7) J = Detected below RL but greater than or equal to Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.
- 9) ND = No compounds detected above reporting limits.
- 10) B = Analyte is found in the associated analysis batch blank.

TABLE 11

SI Soil Sampling Results for SVOC's (June 2011)

1318 Niagara Street,

Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	SB-02		SB-02		SB-03		SB-03	
Sample Designation			SB-02-0-2		SB-02-10.5-11.5		SB-03-2		SB-03-11.0-12.0	
Depth Interval (ft. bgs)			0.0' to 2.0'		10.5' to 11.5'		0.0' to 2.0'		10.5' to 11.5'	
Date Sampled			6/21/2011		6/21/2011		6/22/2011		6/22/2011	
Compound			Soil		Soil		Soil		Soil	
Units	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg	
TCL Semi-volatile Compounds										
2-Methylnaphthalene	36400	NS	17	J	550		16	J	<190	
2-Methylphenol	330	500000	<190		<190		<200		<190	
Acenaphthene	20000	500000	32	J	110	J	64	J	<190	
Acenaphthylene	100000	500000	20	J	<190		<200		<190	
Anthracene	100000	500000	100	J	120	J	190	J	<190	
Benzo(a)anthracene	1000	5600	440		61	J	380		<190	
Benzo(a)pyrene	1000	1000	420		<190		310		<190	
Benzo(b)fluoranthene	1000	5600	560		<190		350		<190	
Benzo(g,h,i)perylene	100000	500000	200		<190		170	J	<190	
Benzo(k)fluoranthene	800	56000	250		<190		170	J	<190	
Biphenyl	NS	NS	<190		120	J	<200		<190	
Bis(2-ethylhexyl) phthalate	50000	NS	<190		70	J	<200		<190	
Carbazole	NS	NS	48	J	32	J	71	J	<190	
Chrysene	1000	56000	480		91	J	330		<190	
Dibenz(a,h)anthracene	330	560	68	J	<190		57	J	<190	
Dibenzofuran	7000	350000	18	J	79	J	44	J	<190	
Di-n-butyl phthalate	8100	NS	<190		<190		<200		<190	
Fluoranthene	100000	500000	820		200		770		<190	
Fluorene	30000	500000	29	J	190		75	J	<190	
Indeno(1,2,3-cd)pyrene	500	5600	170	J	<190		160	J	<190	
Naphthalene	12000	500000	<190		260		<200		<190	
Pentachlorophenol	800	6700	<370		<370		<380		<370	
Phenanthrene	100000	500000	450		620		650		<190	
Phenol	330	500000	<190		<190		<200		<190	
Pyrene	100000	500000	620		200		680		<190	
Total SVOC's	NS	NS	4742		2703		4487		ND	

Notes:

- 1) SVOCs analyzed for NYSDEC Target Compound List by USEPA method SW846 - 8270.
- 2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.
- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- 4) < = not detected - below the laboratory's Reporting Limit (RL).
- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
- 7) J = Detected below RL but greater than or equal to Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.
- 9) ND = No compounds detected above reporting limits.
- 10) B = Analyte is found in the associated analysis batch blank.

TABLE 11

SI Soil Sampling Results for SVOC's (June 2011)

1318 Niagara Street,

Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	SB-07		SB-08		SB-08		SB-11	
Sample Designation			SB-07-0-4"		SB-08-7.0-8.0		SB-08-10.5-11.5		SB-11-0-4"	
Depth Interval (ft. bgs)			0 to 4"		7.0' to 8.0'		10.5' to 11.5'		0 to 4"	
Date Sampled			6/20/2011		6/21/2011		6/21/2011		6/21/2011	
Compound			Soil		Soil		Soil		Soil	
Units	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg	
TCL Semi-volatile Compounds										
2-Methylnaphthalene	36400	NS	11	J	34	J	2500		15	J
2-Methylphenol	330	500000	<170		<190		<190		<180	
Acenaphthene	20000	500000	35	J	34	J	140	J	35	J
Acenaphthylene	100000	500000	180		<190		<190		73	J
Anthracene	100000	500000	260		<190		130	J	150	J
Benzo(a)anthracene	1000	5600	780		13	J	70	J	450	
Benzo(a)pyrene	1000	1000	800		<190		<190		530	
Benzo(b)fluoranthene	1000	5600	930		<190	J	<190		650	
Benzo(g,h,i)perylene	100000	500000	380		<190		<190		260	
Benzo(k)fluoranthene	800	56000	530		<190		<190		330	
Biphenyl	NS	NS	<170		<190		140	J	<180	
Bis(2-ethylhexyl) phthalate	50000	NS	<170		<190		110	J	79	J
Carbazole	NS	NS	140	J	<190		<190		110	J
Chrysene	1000	56000	810		20	J	140	J	520	
Dibenz(a,h)anthracene	330	560	120	J	<190		<190		76	J
Dibenzofuran	7000	350000	29	J	<190		120	J	34	J
Di-n-butyl phthalate	8100	NS	<170		<190		66	J	<180	
Fluoranthene	100000	500000	1600		26	J	160	J	970	
Fluorene	30000	500000	77	J	45	J	290		72	J
Indeno(1,2,3-cd)pyrene	500	5600	350		<190		<190		230	
Naphthalene	12000	500000	<170		<190		190		<180	
Pentachlorophenol	800	6700	<340		<380		<370		<350	
Phenanthrene	100000	500000	780		140	J	930		610	
Phenol	330	500000	<170		<190		<190		<180	
Pyrene	100000	500000	1200		42	J	240		640	
Total SVOC's	NS	NS	9012		354		5226		5834	

Notes:

- SVOCs analyzed for NYSDEC Target Compound List by USEPA method SW846 - 8270.
- Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.
- Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- < = not detected - below the laboratory's Reporting Limit (RL).
- ft. bgs = feet below ground surface.
- ug/kg = micrograms per kilogram.
- J = Detected below RL but greater than or equal to Method Detection Limit (MDL); therefore the result is an estimated concentration.
- NS = No standard available.
- ND = No compounds detected above reporting limits.
- B = Analyte is found in the associated analysis batch blank.

TABLE 11

SI Soil Sampling Results for SVOC's (June 2011)

1318 Niagara Street,

Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	SB-13	
Sample Designation			SB-13-0-4"	
Depth Interval (ft. bgs)			0 to 4"	
Date Sampled			6/20/2011	
Compound			Soil	
Units	ug/kg	ug/kg	ug/kg	
TCL Semi-volatile Compounds				
2-Methylnaphthalene	36400	NS	24	J
2-Methylphenol	330	500000	<200	
Acenaphthene	20000	500000	64	J
Acenaphthylene	100000	500000	15	J
Anthracene	100000	500000	200	
Benzo(a)anthracene	1000	5600	300	
Benzo(a)pyrene	1000	1000	260	
Benzo(b)fluoranthene	1000	5600	340	
Benzo(g,h,i)perylene	100000	500000	120	J
Benzo(k)fluoranthene	800	56000	140	J
Biphenyl	NS	NS	<200	
Bis(2-ethylhexyl) phthalate	50000	NS	75	J
Carbazole	NS	NS	65	J
Chrysene	1000	56000	290	
Dibenz(a,h)anthracene	330	560	42	J
Dibenzofuran	7000	350000	67	J
Di-n-butyl phthalate	8100	NS	<200	
Fluoranthene	100000	500000	710	
Fluorene	30000	500000	120	J
Indeno(1,2,3-cd)pyrene	500	5600	110	J
Naphthalene	12000	500000	<200	
Pentachlorophenol	800	6700	<390	
Phenanthrene	100000	500000	670	
Phenol	330	500000	<200	
Pyrene	100000	500000	470	
Total SVOC's	NS	NS	4082	

Notes:

- 1) SVOCs analyzed for NYSDEC Target Compound List by USEPA method SW846 - 8270.
- 2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.
- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- 4) < = not detected - below the laboratory's Reporting Limit (RL).
- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
- 7) J = Detected below RL but greater than or equal to Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.
- 9) ND = No compounds detected above reporting limits.
- 10) B = Analyte is found in the associated analysis batch blank.

TABLE 12

SI Soil Sampling Results for Metals (June 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	MW-01		MW-01		MW-02		MW-03	
Sample Designation			MW-01-0'-2'		MW-01-10'-12'		MW-02-16'-18'		MW-03-18'-20'	
Depth Interval (ft. bgs)			0.0' to 2.0'		10.0' to 12.0'		16.0' to 18.0'		18.0' to 20.0'	
Date Sampled			6/24/2011		6/24/2011		6/23/2011		6/27/2011	
Analyte			Soil		Soil		Soil		Soil	
Units	mg/kg	mg/kg	mg/kg		mg/kg		mg/kg		mg/kg	
TAL Metals and Cyanide										
Aluminum	NS	NS	7280		8610		7880		3730	
Antimony	NS	NS	<18.6		<17.3		<16.7		<15.0	
Arsenic	13	16	2.9		2.9		2.4		2.6	
Barium	350	400	41.8		102		66.7		23.1	
Beryllium	7.2	590	0.43		0.5		0.48		0.25	
Cadmium	2.5	9.3	0.23	JB	0.29	B	0.19	J	0.2	B
Calcium	NS	NS	20700	B	72300	B	71300	B	6.6	
Chromium	1	400	8.9		11.6		11.3		3.4	
Cobalt	NS	NS	4.9		5.7		5.9		9.6	
Copper	50	270	10.9		15		14.9		8770	B
Iron	NS	NS	11700	B	13800	B	12300	B	8.9	
Lead	63	1000	12.1		12		15		255	B
Magnesium	NS	NS	7600	B	32100	B	32200		8	
Manganese	1600	10000	265	B	360	B	383		1190	
Nickel	30	310	11.3		14		14.3		<4.0	
Potassium	NS	NS	1070		2240		2160		<0.50	
Selenium	3.9	1500	<4.9		<4.6		<4.5		178	B
Silver	2	1500	<0.62		<0.58		<0.56		<6.0	
Sodium	NS	NS	142	JB	305	B	277		9.4	
Thallium	NS	NS	<7.4		<6.9		<6.7		42.2	
Vanadium	NS	NS	14.5		17.2		17.3		126000	B
Zinc	109	10000	40.6		71.2		63.7		70000	B
Mercury	0.18	2.8	0.029		<0.022		0.018	J	0.048	
Total Cyanide	27	27	<1.2		<1.1		<1.1		<1.1	

Notes:

1) Target Analyte List Metals analyzed by USEPA method SW846 - 6010B.
Mercury analyzed by USEPA method SW846 - 7470A. Cyanide analyzed by
USEPA method SW846 - 9012A.

2) **Bold** values indicate that the concentration exceeds the applicable
Restricted Commercial Use SCO's from Part 375.

3) Underlined values indicate that the concentration exceeds the applicable
Unrestricted Use SCO's from Part 375.

4) < = not detected - below the laboratory's Reporting Limit (RL).

5) ft. bgs = feet below ground surface.

6) mg/kg = milligrams per kilogram.

7) J = Detected below the RL but greater than or equal to the Method
Detection Limit (MDL); therefore the result is an estimated concentration.

8) NS = No standard available.

9) B = Analyte is found in the associated analysis batch blank.

TABLE 12

SI Soil Sampling Results for Metals (June 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	MW-04		MW-04		MW-05		MW-05	
Sample Designation			MW-04-0-4		MW-04-2'-3.5'		MW-05-0-4"		MW-05-9'-11'	
Depth Interval (ft. bgs)			0" to 4"		2.0' to 3.5'		0" to 4"		9.0' to 11.0'	
Date Sampled			6/21/2011		6/20/2011		6/22/2011		6/22/2011	
Analyte			Soil		Soil		Soil		Soil	
Units	mg/kg	mg/kg	mg/kg		mg/kg		mg/kg		mg/kg	
TAL Metals and Cyanide										
Aluminum	NS	NS	11000		13900		10800		10600	
Antimony	NS	NS	16.8		<18.3		<16.8		<17.4	
Arsenic	13	16	4.6		8.5		4.7		3.6	
Barium	350	400	83.8		149		84		103	
Beryllium	7.2	590	0.62		0.83		0.67		0.63	
Cadmium	2.5	9.3	0.6		0.32		0.2	J	0.33	
Calcium	NS	NS	38600	B	30600	B	42200	B	57200	B
Chromium	1	400	15.4		19.5		15.8		14.4	
Cobalt	NS	NS	8.6		11.3		9.1		8.8	
Copper	50	270	17.4		44.7		22		17.9	
Iron	NS	NS	18300	B	23100	B	21200	B	15300	B
Lead	63	1000	33.8		<u>78.1</u>		39.6		26	
Magnesium	NS	NS	13800		12100		10600		21700	
Manganese	1600	10000	401	B	577	B	439		442	
Nickel	30	310	19.5		26		21.9		18.9	
Potassium	NS	NS	1750		2350		1360		2620	
Selenium	3.9	1500	<4.5		<4.9		<4.5		<4.7	
Silver	2	1500	<0.56		<0.61		<0.56		<0.58	
Sodium	NS	NS	201	B	210	B	120	J	344	
Thallium	NS	NS	<6.7		<7.3		<6.7		0.46	J
Vanadium	NS	NS	21.8		26.1		22.6		21.8	
Zinc	109	10000	63.6		<u>131</u>		78.4		69.2	
Mercury	0.18	2.8	0.079		0.092		0.055		0.045	
Total Cyanide	27	27	<1.1		<1.2		<1.1		<1.2	

Notes:

1) Target Analyte List Metals analyzed by USEPA method SW846 - 6010B.
Mercury analyzed by USEPA method SW846 - 7470A. Cyanide analyzed by
USEPA method SW846 - 9012A.

2) **Bold** values indicate that the concentration exceeds the applicable
Restricted Commercial Use SCO's from Part 375.

3) Underlined values indicate that the concentration exceeds the applicable
Unrestricted Use SCO's from Part 375.

4) < = not detected - below the laboratory's Reporting Limit (RL).

5) ft. bgs = feet below ground surface.

6) mg/kg = milligrams per kilogram.

7) J = Detected below the RL but greater than or equal to the Method
Detection Limit (MDL); therefore the result is an estimated concentration.

8) NS = No standard available.

9) B = Analyte is found in the associated analysis batch blank.

TABLE 12

SI Soil Sampling Results for Metals (June 2011)

1318 Niagara Street,

Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	SB-02		SB-02		SB-03		SB-03	
Sample Designation			SB-02-0-2'		SB-02-10.5-11.5'		SB-03-2		SB-03-11.0-12.0	
Depth Interval (ft. bgs)			0.0' to 2.0'		10.5' to 11.5'		0.0' to 2.0'		11' to 12'	
Date Sampled			6/21/2011		6/21/2011		6/22/2011		6/22/2011	
Analyte			Soil		Soil		Soil		Soil	
Units	mg/kg	mg/kg	mg/kg		mg/kg		mg/kg		mg/kg	
TAL Metals and Cyanide										
Aluminum	NS	NS	11900		6700		22200		7370	
Antimony	NS	NS	3.7	J	<17.8		<18.1		<17.5	
Arsenic	13	16	12.3		3.1		2.3	J	3.4	
Barium	350	400	<u>362</u>		102		210		72.6	
Beryllium	7.2	590	1.2		0.41		3.1		0.46	
Cadmium	2.5	9.3	0.15	J	0.2	J	0.25		0.25	
Calcium	NS	NS	50400	B	45100	B	98700	B	67200	B
Chromium	1	400	26.2		11		14		11.2	
Cobalt	NS	NS	10.9		6		6.1		6.4	
Copper	50	270	1520		17.2		21.7		17.2	
Iron	NS	NS	37200	B	11200	B	13500	B	12500	B
Lead	63	1000	<u>136</u>		<u>200</u>		48.1		11.4	
Magnesium	NS	NS	5880		19700		14900		28500	
Manganese	1600	10000	552	B	276	B	2250		433	
Nickel	30	310	18.5		11.3		14.1		14.8	
Potassium	NS	NS	2690		1430		1820		1900	
Selenium	3.9	1500	<5.0		<4.7		<4.8		<4.7	
Silver	2	1500	<0.62		<0.59		<0.60		<0.58	
Sodium	NS	NS	1760	B	313		2340		766	
Thallium	NS	NS	<7.5		<7.1		<7.3		<7.0	
Vanadium	NS	NS	48.8		16.7		18.9		16.8	
Zinc	109	10000	<u>133</u>		63.5		46.6		76.5	
Mercury	0.18	2.8	0.17		0.013	J	0.036		0.0096	J
Total Cyanide	27	27	<1.1		<1.1		<1.2		<1.1	

Notes:

1) Target Analyte List Metals analyzed by USEPA method SW846 - 6010B. Mercury analyzed by USEPA method SW846 - 7470A. Cyanide analyzed by USEPA method SW846 - 9012A.

2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.

3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.

4) < = not detected - below the laboratory's Reporting Limit (RL).

5) ft. bgs = feet below ground surface.

6) mg/kg = milligrams per kilogram.

7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.

8) NS = No standard available.

9) B = Analyte is found in the associated analysis batch blank.

TABLE 12

SI Soil Sampling Results for Metals (June 2011)

1318 Niagara Street,

Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	SB-07		SB-08		SB-08		SB-11	
Sample Designation			SB-07-0"-4"		SB-08-7.0-8.0		SB-08-10.5-11.5		SB-11-0-4"	
Depth Interval (ft. bgs)			0 to 4"		7.0' to 8.0'		10.5' to 11.5'		0 to 4"	
Date Sampled			6/20/2011		6/21/2011		6/21/2011		6/21/2011	
Analyte			Soil		Soil		Soil		Soil	
Units	mg/kg	mg/kg	mg/kg		mg/kg		mg/kg		mg/kg	
TAL Metals and Cyanide										
Aluminum	NS	NS	10400		9390		6310		7330	
Antimony	NS	NS	<15.5		<17.4		<15.9		<15.9	
Arsenic	13	16	5.5		4.2		3.7		3.5	
Barium	350	400	69.3		80.2		49.4		52.4	
Beryllium	7.2	590	0.59		0.47		0.32		0.42	
Cadmium	2.5	9.3	0.16	J	0.39		0.3		0.24	
Calcium	NS	NS	27900	B	61800	B	51900	B	29900	B
Chromium	1	400	15.2		13.1		9.3		11.1	
Cobalt	NS	NS	9.4		8.5		6		6.4	
Copper	50	270	18		15.8		14.4		16	
Iron	NS	NS	18000	B	13300	B	10900	B	13300	B
Lead	63	1000	26.5		16		11.6		20.9	
Magnesium	NS	NS	10600		25200		25900		9750	
Manganese	1600	10000	447	B	469	B	355	B	312	B
Nickel	30	310	20.4		18.1		12.7		15	
Potassium	NS	NS	1300		2420		1590		1030	
Selenium	3.9	1500	<4.1		<4.6		<4.2		<4.2	
Silver	2	1500	<0.52		<0.58		<0.53		<0.53	
Sodium	NS	NS	191	B	368		271		114	J
Thallium	NS	NS	<6.2		<7.0		<6.4		<6.3	
Vanadium	NS	NS	21.1		19.6		13.8		14.6	
Zinc	109	10000	62.3		52.4		76.3		51.3	
Mercury	0.18	2.8	0.05		0.01	J	0.012	J	0.029	
Total Cyanide	27	27	<1.0		<1.1		<1.1		<1.1	

Notes:

1) Target Analyte List Metals analyzed by USEPA method SW846 - 6010B. Mercury analyzed by USEPA method SW846 - 7470A. Cyanide analyzed by USEPA method SW846 - 9012A.

2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.

3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.

4) < = not detected - below the laboratory's Reporting Limit (RL).

5) ft. bgs = feet below ground surface.

6) mg/kg = milligrams per kilogram.

7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.

8) NS = No standard available.

9) B = Analyte is found in the associated analysis batch blank.

TABLE 12

SI Soil Sampling Results for Metals (June 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	SB-13	
Sample Designation			SB-13-0-4"	
Depth Interval (ft. bgs)			0 to 4"	
Date Sampled			6/20/2011	
Analyte			Soil	
Units	mg/kg	mg/kg	mg/kg	
TAL Metals and Cyanide				
Aluminum	NS	NS	17100	
Antimony	NS	NS	<18.3	
Arsenic	13	16	5.7	
Barium	350	400	169	
Beryllium	7.2	590	0.9	
Cadmium	2.5	9.3	0.18	J
Calcium	NS	NS	40100	B
Chromium	1	400	23.1	
Cobalt	NS	NS	13.5	
Copper	50	270	26.1	
Iron	NS	NS	26400	B
Lead	63	1000	33.8	
Magnesium	NS	NS	14300	
Manganese	1600	10000	505	B
Nickel	30	310	30.4	
Potassium	NS	NS	3140	
Selenium	3.9	1500	<4.9	
Silver	2	1500	<0.61	
Sodium	NS	NS	297	B
Thallium	NS	NS	<7.3	
Vanadium	NS	NS	32	
Zinc	109	10000	85.8	
Mercury	0.18	2.8	0.19	
Total Cyanide	27	27	<1.2	

Notes:

- 1) Target Analyte List Metals analyzed by USEPA method SW846 - 6010B. Mercury analyzed by USEPA method SW846 - 7470A. Cyanide analyzed by USEPA method SW846 - 9012A.
- 2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.
- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- 4) < = not detected - below the laboratory's Reporting Limit (RL).
- 5) ft. bgs = feet below ground surface.
- 6) mg/kg = milligrams per kilogram.
- 7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.
- 9) B = Analyte is found in the associated analysis batch blank.

TABLE 13

SI Soil Sampling Results for Pesticides (June 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	MW-01	MW-01	MW-02	MW-03
Sample Designation			MW-01-0'-2'	MW-01-10'-12'	MW-02-16'-18'	MW-03-18'-20'
Depth Interval (ft. bgs)			0.0' to 2.0'	10.0' to 12.0'	16.0' to 18.0'	18.0' to 20.0'
Date Sampled			6/24/2011	6/24/2011	6/23/2011	6/27/2011
Compound			Soil	Soil	Soil	Soil
Units	ug/kg	mg/kg	ug/kg	ug/kg	ug/kg	ug/kg
TCL Pesticides/Herbicides						
4,4'-DDD	3.3	92000	<96	<1.9	<38	<3.5
4,4'-DDE	3.3	62000	<96	<1.9	<38	<3.5
4,4'-DDT	3.3	47000	<96	<1.9	<38	<3.5
Aldrin	5	680	<96	<1.9	<38	<3.5
alpha-BHC	20	3400	<96	<1.9	<38	<3.5
alpha-Chlordane	94	24000	<96	<1.9	<38	<3.5
beta-BHC	36	3000	<96	<1.9	<38	<3.5
delta-BHC	40	500000	<96	<1.9	<38	<3.5
Dieldrin	5	1400	<96	<1.9	<38	<u>17</u>
Endosulfan I	2400	200000	<96	<1.9	<38	<3.5
Endosulfan II	2400	200000	<96	<1.9	<38	<3.5
Endosulfan sulfate	2400	200000	<96	<1.9	<38	<3.5
Endrin	14	89000	<96	<1.9	<38	<3.5
Endrin aldehyde	NS	NS	<96	<1.9	<38	<3.5
gamma-BHC (Lindane)	100	9200	<96	<1.9	<38	<3.5
gamma-Chlordane	NS	NS	<96	<1.9	<38	<3.5
Heptachlor	42	15000	<96	<1.9	<38	<3.5
Heptachlor epoxide	NS	NS	<96	<1.9	<38	<3.5
Methoxychlor	NS	NS	<96	<1.9	<38	<3.5

Notes:

- 1) Pesticides analyzed by USEPA method SW846 - 8081.
- 2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.
- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- 4) < = not detected - below the laboratory's Reporting Limit (RL).
- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
- 7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.

TABLE 13

SI Soil Sampling Results for Pesticides (June 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	MW-04	MW-04	MW-05	MW-05
Sample Designation			MW-04-0-4"	MW-04-2'-3.5'	MW-05-0-4"	MW-05-9'-11'
Depth Interval (ft. bgs)			0" to 4"	2.0' to 3.5'	0" to 4"	9.0' to 11.0'
Date Sampled			6/21/2011	6/20/2011	6/22/2011	6/22/2011
Compound			Soil	Soil	Soil	Soil
Units	ug/kg	mg/kg	ug/kg	ug/kg	ug/kg	ug/kg
TCL Pesticides/Herbicides						
4,4'-DDD	3.3	92000	<93	<20	<94	<39
4,4'-DDE	3.3	62000	<u>33</u> J	<20	<94	<u>25</u> J
4,4'-DDT	3.3	47000	<93	<20	<94	<39
Aldrin	5	680	<93	<u>7.9</u> J	<94	<39
alpha-BHC	20	3400	<93	<20	<94	<39
alpha-Chlordane	94	24000	<93	<20	<94	73
beta-BHC	36	3000	<93	<20	<94	<39
delta-BHC	40	500000	<93	<20	<94	<39
Dieldrin	5	1400	<u>41</u> J	<u>36</u>	<u>71</u> J	<u>25</u> J
Endosulfan I	2400	200000	<93	<20	<94	<39
Endosulfan II	2400	200000	<93	<20	<94	<39
Endosulfan sulfate	2400	200000	<93	<20	<94	<39
Endrin	14	89000	<u>61</u> J	<u>27</u>	<94	<39
Endrin aldehyde	NS	NS	<93	38	<94	<39
gamma-BHC (Lindane)	100	9200	<93	<20	<94	<39
gamma-Chlordane	NS	NS	<93	<20	<94	49
Heptachlor	42	15000	<93	<20	<94	15 J
Heptachlor epoxide	NS	NS	33 J	<20	<94	<39
Methoxychlor	NS	NS	<93	<20	<94	330

Notes:

- 1) Pesticides analyzed by USEPA method SW846 - 8081.
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- 4) < = not detected - below the laboratory's Reporting Limit (RL).
- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
- 7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.

TABLE 13

SI Soil Sampling Results for Pesticides (June 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	SB-07	SB-11	SB-13
Sample Designation			SB-07-0-4"	SB-11-0-4"	SB-13-0-4"
Depth Interval (ft. bgs)			0-4"	0-4"	0-4"
Date Sampled			6/20/2011	6/21/2011	6/20/2011
Compound			Soil	Soil	Soil
Units	ug/kg	mg/kg	ug/kg	ug/kg	ug/kg
TCL Pesticides/Herbicides					
4,4'-DDD	3.3	92000	<85	<88	<96
4,4'-DDE	3.3	62000	<85	<88	<96
4,4'-DDT	3.3	47000	<85	<88	<96
Aldrin	5	680	<85	<88	<96
alpha-BHC	20	3400	<85	<88	<96
alpha-Chlordane	94	24000	<85	<88	<96
beta-BHC	36	3000	<85	<88	<96
delta-BHC	40	500000	<85	<88	<96
Dieldrin	5	1400	<85	<u>110</u>	<u>44</u> J
Endosulfan I	2400	200000	<85	<88	<96
Endosulfan II	2400	200000	<85	<88	<96
Endosulfan sulfate	2400	200000	<85	<88	<96
Endrin	14	89000	<85	<u>91</u>	<u>48</u> J
Endrin aldehyde	NS	NS	<85	130	<96
gamma-BHC (Lindane)	100	9200	<85	<88	<96
gamma-Chlordane	NS	NS	<85	<88	<96
Heptachlor	42	15000	<85	<88	<96
Heptachlor epoxide	NS	NS	<85	<88	<96
Methoxychlor	NS	NS	<85	<88	<96

Notes:

- 1) Pesticides analyzed by USEPA method SW846 - 8081.
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- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- 4) < = not detected - below the laboratory's Reporting Limit (RL).
- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
- 7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.

TABLE 14

SI Soil Sampling Results for PCB's (June 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	MW-01	MW-01	MW-02	MW-03	MW-04
Sample Designation			MW-01-0'-2'	MW-01-10'-12'	MW-02-16'-18'	MW-03-18'-20'	MW-04-0-4"
Depth Interval (ft. bgs)			0.0' to 2.0'	10.0' to 12.0'	16.0' to 18.0'	18.0' to 20.0'	0" to 4"
Date Sampled			6/24/2011	6/24/2011	6/23/2011	6/27/2011	6/21/2011
Compound			Soil	Soil	Soil	Soil	Soil
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
PCBs							
PCB-1016	NS	NS	<96	<260	<260	<240	<220
PCB-1221	NS	NS	<96	<260	<260	<240	<220
PCB-1232	NS	NS	<96	<260	<260	<240	<220
PCB-1242	NS	NS	<96	<260	98	<240	<220
PCB-1248	NS	NS	<96	<260	<260	<240	<220
PCB-1254	NS	NS	<u>110</u>	<260	<260	<240	<220
PCB-1260	NS	NS	<96	<260	<u>120</u>	<u>250</u>	<u>560</u>
PCBs Total	100	1000	<u>110</u>	ND	<u>218</u>	<u>250</u>	<u>560</u>

Notes:

1) PCB's analyzed by USEPA method SW846 - 8082.

2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.

3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.

4) < = not detected - below the laboratory's Reporting Limit

5) ft. bgs = feet below ground surface.

6) ug/kg = micrograms per kilogram.

7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.

8) NS = No standard available.

TABLE 14

SI Soil Sampling Results for PCB's (June 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	MW-04	MW-05	MW-05	SB-01	SB-01
Sample Designation			MW-04-2'-3.5'	MW-05-0-4"	MW-05-9'-11'	SB-01-0-2	SB-01-10-11
Depth Interval (ft. bgs)			2.0' to 3.5'	0" to 4"	9.0' to 11.0'	0 to 2'	10.0' to 11.0'
Date Sampled			6/20/2011	6/22/2011	6/22/2011	6/21/2011	6/21/2011
Compound			Soil	Soil	Soil	Soil	Soil
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
PCBs							
PCB-1016	NS	NS	<280	<260	<240	<240	<270
PCB-1221	NS	NS	<280	<260	<240	<240	<270
PCB-1232	NS	NS	<280	<260	<240	<240	<270
PCB-1242	NS	NS	<280	<260	<240	<240	<270
PCB-1248	NS	NS	<280	<u>410</u>	<240	<240	<u>540</u>
PCB-1254	NS	NS	<280	<260	<240	<240	<270
PCB-1260	NS	NS	<u>1300</u>	<u>970</u>	<240	<u>2200</u>	<u>220</u> J
PCBs Total	100	1000	<u>1300</u>	<u>1380</u>	ND	<u>2200</u>	<u>760</u>

Notes:

1) PCB's analyzed by USEPA method SW846 - 8082.

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3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.

4) < = not detected - below the laboratory's Reporting Limit

5) ft. bgs = feet below ground surface.

6) ug/kg = micrograms per kilogram.

7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.

8) NS = No standard available.

TABLE 14

SI Soil Sampling Results for PCB's (June 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	SB-02		SB-02		SB-03		SB-03		SB-04	
Sample Designation			SB-02-0-2		SB-02-10.5-11.5		SB-03-2		SB-03-11.0-12.0		SB-04-13	
Depth Interval (ft. bgs)			0.0' to 2.0'		10.5' to 11.5'		0.0' to 2.0'		10.5' to 11.5'		13'	
Date Sampled			6/21/2011		6/21/2011		6/22/2011		6/22/2011		6/20/2011	
Compound			Soil		Soil		Soil		Soil		Soil	
Units	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
PCBs												
PCB-1016	NS	NS	<240		<250		<260		<240		<220	
PCB-1221	NS	NS	<240		<250		<260		<240		<220	
PCB-1232	NS	NS	<240		<250		<260		<240		<220	
PCB-1242	NS	NS	<240		<u>140</u>	J	<260		<240		<220	
PCB-1248	NS	NS	<240		<250		<260		<240		<u>310</u>	
PCB-1254	NS	NS	<240		<250		<260		<240		<220	
PCB-1260	NS	NS	<u>600</u>		<250		<260		<240		<u>1500</u>	
PCBs Total	100	1000	<u>600</u>		<u>140</u>		ND		ND		<u>1810</u>	

Notes:

1) PCB's analyzed by USEPA method SW846 - 8082.

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3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.

4) < = not detected - below the laboratory's Reporting Limit

5) ft. bgs = feet below ground surface.

6) ug/kg = micrograms per kilogram.

7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.

8) NS = No standard available.

TABLE 14

SI Soil Sampling Results for PCB's (June 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	SB-04	SB-04	SB-05	SB-05	SB-06
Sample Designation			SB-04-14	SB-04-15	SB-05-3	SB-05-4	SB-06-3
Depth Interval (ft. bgs)			14'	15'	3'	4'	3'
Date Sampled			6/20/2011	6/20/2011	6/20/2011	6/20/2011	6/20/2011
Compound			Soil	Soil	Soil	Soil	Soil
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
PCBs							
PCB-1016	NS	NS	<250	<1100	<1400	<270	<200
PCB-1221	NS	NS	<250	<1100	<1400	<270	<200
PCB-1232	NS	NS	<250	<1100	<1400	<270	<200
PCB-1242	NS	NS	<250	<1100	<1400	<270	<200
PCB-1248	NS	NS	<250	<1100	<1400	<270	<200
PCB-1254	NS	NS	<250	<1100	<1400	<270	<200
PCB-1260	NS	NS	<250	<u>4500</u>	<u>9500</u>	<u>200</u> J	<u>2900</u>
PCBs Total	100	1000	ND	<u>4500</u>	<u>9500</u>	<u>200</u>	<u>2900</u>

Notes:

1) PCB's analyzed by USEPA method SW846 - 8082.

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3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.

4) < = not detected - below the laboratory's Reporting Limit

5) ft. bgs = feet below ground surface.

6) ug/kg = micrograms per kilogram.

7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.

8) NS = No standard available.

TABLE 14

SI Soil Sampling Results for PCB's (June 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	SB-06	SB-07	SB-07	SB-08	SB-08
Sample Designation			SB-06-4	SB-07-0-4"	SB-07-1-2	SB-08-7-8'	SB-08-10.5-11.5'
Depth Interval (ft. bgs)			4'	0-4"	1-2'	7' to 8'	10.5' to 11.5'
Date Sampled			6/20/2011	6/20/2011	6/20/2011	6/21/2011	6/21/2011
Compound			Soil	Soil	Soil	Soil	Soil
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
PCBs							
PCB-1016	NS	NS	<1200	<240	<990	<270	<260
PCB-1221	NS	NS	<1200	<240	<990	<270	<260
PCB-1232	NS	NS	<1200	<240	<990	<270	<260
PCB-1242	NS	NS	<1200	<240	<990	89 J	<u>170</u> J
PCB-1248	NS	NS	<1200	<u>130</u> J	<990	<270	<260
PCB-1254	NS	NS	<1200	<240	<990	<270	<260
PCB-1260	NS	NS	<u>9900</u>	<u>330</u>	<u>5600</u>	<270	<260
PCBs Total	100	1000	<u>9900</u>	<u>460</u>	<u>5600</u>	89	<u>170</u>

Notes:

1) PCB's analyzed by USEPA method SW846 - 8082.

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3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.

4) < = not detected - below the laboratory's Reporting Limit

5) ft. bgs = feet below ground surface.

6) ug/kg = micrograms per kilogram.

7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.

8) NS = No standard available.

TABLE 14

SI Soil Sampling Results for PCB's (June 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	SB-10	SB-10	SB-10	SB-11	SB-11
Sample Designation			SB-10-0-4	SB-10-3	SB-10-5	SB-11-0-4"	SB-11-3
Depth Interval (ft. bgs)			0-4"	3'	5'	0-4"	3.0'
Date Sampled			6/20/2011	6/20/2011	6/20/2011	6/21/2011	6/21/2011
Compound			Soil	Soil	Soil	Soil	Soil
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
PCBs							
PCB-1016	NS	NS	<210	<300	<4200	<5100	<220
PCB-1221	NS	NS	<210	<300	<4200	<5100	<220
PCB-1232	NS	NS	<210	<300	<4200	<5100	<220
PCB-1242	NS	NS	<210	<300	<4200	<5100	<220
PCB-1248	NS	NS	<210	<300	<4200	<5100	<220
PCB-1254	NS	NS	<210	<300	<4200	<5100	<220
PCB-1260	NS	NS	<u>2200</u>	<300	<u>73000</u>	<u>7300</u>	<u>240</u>
PCBs Total	100	1000	<u>2200</u>	ND	<u>73000</u>	<u>7300</u>	<u>240</u>

Notes:

1) PCB's analyzed by USEPA method SW846 - 8082.

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3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.

4) < = not detected - below the laboratory's Reporting Limit

5) ft. bgs = feet below ground surface.

6) ug/kg = micrograms per kilogram.

7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.

8) NS = No standard available.

TABLE 14

SI Soil Sampling Results for PCB's (June 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	SB-11	SB-13	SB-13	SB-13	SS-13
Sample Designation			SB-11-4	SB-13-0-4"	SB-13-2	SB-13-5	SS-13
Depth Interval (ft. bgs)			4.0'	0-4"	2'	5'	0-4"
Date Sampled			6/21/2011	6/20/2011	6/20/2011	6/20/2011	6/24/2011
Compound			Soil	Soil	Soil	Soil	Soil
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
PCBs							
PCB-1016	NS	NS	<280	<280	<270	<260	<270
PCB-1221	NS	NS	<280	<280	<270	<260	<270
PCB-1232	NS	NS	<280	<280	<270	<260	<270
PCB-1242	NS	NS	<280	<280	<270	<260	<270
PCB-1248	NS	NS	<280	<280	<270	<260	<270
PCB-1254	NS	NS	<280	<280	<270	<260	<270
PCB-1260	NS	NS	<280	<280	<270	<260	<u>300</u>
PCBs Total	100	1000	ND	ND	ND	ND	<u>300</u>

Notes:

1) PCB's analyzed by USEPA method SW846 - 8082.

2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.

3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.

4) < = not detected - below the laboratory's Reporting Limit

5) ft. bgs = feet below ground surface.

6) ug/kg = micrograms per kilogram.

7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.

8) NS = No standard available.

TABLE 14

SI Soil Sampling Results for PCB's (June 2011)
 1318 Niagara Street,
 Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	SS-14		SS-15		SS-16	
Sample Designation			SS-14		SS-15		SS-16	
Depth Interval (ft. bgs)			0-4"		0-4"		0-4"	
Date Sampled			6/24/2011		6/24/2011		6/24/2011	
Compound			Soil		Soil		Soil	
Units	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg	
PCBs								
PCB-1016	NS	NS	<250		<290		<250	
PCB-1221	NS	NS	<250		<290		<250	
PCB-1232	NS	NS	<250		<290		<250	
PCB-1242	NS	NS	<250		<290		<250	
PCB-1248	NS	NS	<250		<290		<250	
PCB-1254	NS	NS	<250		<290		<250	
PCB-1260	NS	NS	<u>1600</u>		<u>340</u>		<u>1000</u>	
PCBs Total	100	1000	<u>1600</u>		<u>340</u>		<u>1000</u>	

Notes:

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- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- 4) < = not detected - below the laboratory's Reporting Limit
- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
- 7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.

TABLE 15

SI Groundwater Sampling Results for VOC's (July 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYS Ambient	MW-01	MW-02	MW-03	MW-04	MW-05
Sample Designation	Water Quality	1318-MW01-GW	1318-MW02-GW	1318-MW03-GW	1318-MW04-GW	1318-MW05-GW
Date Sampled	Standards and	7/21/2011	7/21/2011	7/25/2011	7/22/2011	7/21/2011
Compound	Guidance Values	Water	Water	Water	Water	Water
Units	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L
TCL Volatile Compounds						
1,1,1-Trichloroethane	5	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane	5	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	5	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	1	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane	5	1.2	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene	5	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-Trichlorobenzene	5	<1.0	1.6	18	<1.0	<1.0
1,2-Dibromo-3-Chloropropane	0.04	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dibromoethane	0.006	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichlorobenzene	3	<1.0	<1.0	1.2	<1.0	<1.0
1,2-Dichloroethane	0.6	<1.0	<1.0	0.78 J	<1.0	<1.0
1,2-Dichloropropane	1	<1.0	<1.0	<1.0	<1.0	<1.0
1,3-Dichlorobenzene	3	<1.0	<1.0	<1.0	<1.0	<1.0
1,4-Dichlorobenzene	3	1.1	<1.0	1.5	<1.0	1.1
2-Butanone (MEK)	50	<10	<10	<10	<10	<10
2-Hexanone	50	<5.0	<5.0	<5.0	<5.0	<5.0
Acetone	50	3.7 J	<10	21	<10	4.5 J
Benzene	1	<1.0	<1.0	1.2	<1.0	<1.0
Bromodichloromethane	50	<1.0	<1.0	<1.0	<1.0	<1.0
Bromoform	50	<1.0	<1.0	<1.0	<1.0	<1.0
Bromomethane	5	<1.0	<1.0	<1.0	<1.0	<1.0
Carbon disulfide	60	<1.0	<1.0	<1.0	<1.0	<1.0
Carbon tetrachloride	5	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene	5	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroethane	5	0.54 J	<1.0	<1.0	<1.0	<1.0
Chloroform	7	0.76 J	1.6	<1.0	<1.0	1.1
Chloromethane	5	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	5	3.5	1.6	<1.0	63	0.89 J
cis-1,3-Dichloropropene	0.4	<1.0	<1.0	<1.0	<1.0	<1.0
Dibromochloromethane	50	<1.0	<1.0	<1.0	<1.0	<1.0
Dichlorodifluoromethane	5	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	5	<1.0	<1.0	<1.0	<1.0	<1.0
Isopropylbenzene	5	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl tert-butyl ether	10	0.69 J	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	5	<1.0	0.66 J	<1.0	<1.0	<1.0
Styrene	5	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene	5	1.1	<1.0	<1.0	<1.0	<1.0
Toluene	5	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene	5	<1.0	<1.0	<1.0	1.3	<1.0
Trichloroethene	5	1.5	<1.0	<1.0	350	0.6 J
Trichlorofluoromethane	5	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl chloride	2	<1.0	<1.0	<1.0	<1.0	<1.0
Total VOC's	NS	14	5	44	414	8

Notes:

- 1) VOCs analyzed for NYSDEC Target Compound List by USEPA method SW846 - 8260.
- 2) Shaded areas indicate that the concentration exceeds the NYSDEC T.O.G.S 1.1.1 Ambient Water Quality Standards and Guidance Values.
- 3) < = not detected - below the laboratory's Reporting Limit (RL).
- 4) ug/L = micrograms per liter.
- 5) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 6) NS = No standard available.

TABLE 16
SI Groundwater Sampling Results for SVOC's (July 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYS Ambient Water Quality Standards and Guidance Values	MW-01		MW-02		MW-03		MW-04		MW-05	
Sample Designation		1318-MW01-GW		1318-MW02-GW		1318-MW-03-GW		1318-MW04-GW		1318-MW05-GW	
Date Sampled		7/21/2011		7/21/2011		7/25/2011		7/22/2011		7/21/2011	
Compound		Water		Water		Water		Water		Water	
Units	ug/L	ug/L		mg/L		ug/L		ug/L		ug/L	
TCL Semi-volatile Compounds											
2,4,5-Trichlorophenol	NS	<5.2		<4.7		0.6	J	<4.9		<5.5	
2,4-Dichlorophenol	5	<5.2		<4.7		<4.7		<4.9		<5.5	
2,4-Dimethylphenol	50	<5.2		<4.7		<4.7		<4.9		<5.5	
2,4-Dinitrophenol	10	<10		<9.4		<9.5		<9.8		<11	
2,4-Dinitrotoluene	5	<5.2		<4.7		<4.7		<4.9		<5.5	
2,6-Dinitrotoluene	5	<5.2		<4.7		<4.7		<4.9		<5.5	
2-Chloronaphthalene	10	<5.2		<4.7		<4.7		<4.9		<5.5	
2-Nitroaniline	5	<10		<9.4		<9.5		<9.8		<11	
3,3'-Dichlorobenzidine	5	<5.2		<4.7		<4.7		<4.9		<5.5	
3-Nitroaniline	5	<10		<9.4		<9.5		<9.8		<11	
4-Chloroaniline	5	<5.2		<4.7		<4.7		<4.9		<5.5	
4-Nitroaniline	5	<10		<9.4		<9.5		<9.8		<11	
Acenaphthene	20	<5.2		<4.7		<4.7		<4.9		<5.5	
Anthracene	50	<5.2		<4.7		<4.7		<4.9		<5.5	
Atrazine	7.5	<5.2		<4.7		<4.7		<4.9		<5.5	
Benzo(a)anthracene	0.002	<5.2		<4.7		<4.7		<4.9		<5.5	
Benzo(b)fluoranthene	0.002	<5.2		<4.7		<4.7		<4.9		<5.5	
Benzo(k)fluoranthene	0.002	<5.2		<4.7		<4.7		<4.9		<5.5	
Biphenyl	5	<5.2		<4.7		<4.7		<4.9		<5.5	
bis (2-chloroisopropyl) ether	5	<5.2		<4.7		<4.7		<4.9		<5.5	
Bis(2-chloroethoxy)methane	5	<5.2		<4.7		<4.7		<4.9		<5.5	
Bis(2-chloroethyl)ether	1	<5.2		<4.7		<4.7		<4.9		<5.5	
Bis(2-ethylhexyl) phthalate	5	<5.2		<4.7		<4.7		<4.9		<5.5	
Butyl benzyl phthalate	50	<5.2		<4.7		<4.7		<4.9		<5.5	
Chrysene	0.002	<5.2		<4.7		<4.7		<4.9		<5.5	
Diethyl phthalate	50	<5.2		<4.7		<4.7		<4.9		<5.5	
Dimethyl phthalate	50	<5.2		<4.7		<4.7		<4.9		<5.5	
Di-n-butyl phthalate	50	0.69	J	0.67	J	<4.7		0.46	JB	0.65	J
Fluoranthene	50	<5.2		<4.7		<4.7		<4.9		<5.5	
Fluorene	50	<5.2		<4.7		<4.7		<4.9		<5.5	
Hexachlorobenzene	0.04	<5.2		<4.7		<4.7		<4.9		<5.5	
Hexachlorobutadiene	0.5	<5.2		<4.7		<4.7		<4.9		<5.5	
Hexachlorocyclopentadiene	5	<5.2		<4.7		<4.7		<4.9		<5.5	
Hexachloroethane	5	<5.2		<4.7		<4.7		<4.9		<5.5	
Indeno(1,2,3-cd)pyrene	0.002	<5.2		<4.7		<4.7		<4.9		<5.5	
Isophorone	50	<5.2		<4.7		<4.7		<4.9		<5.5	
Naphthalene	10	<5.2		<4.7		<4.7		<4.9		<5.5	
Nitrobenzene	0.4	<5.2		<4.7		<4.7		<4.9		<5.5	
N-Nitrosodiphenylamine	50	<5.2		<4.7		<4.7		<4.9		<5.5	
Pentachlorophenol	1	<10		<9.4		<9.5		<9.8		<11	
Phenanthrene	50	<5.2		<4.7		<4.7		<4.9		<5.5	
Phenol	1	<5.2		<4.7		<4.7		<4.9		<5.5	
Pyrene	50	<5.2		<4.7		<4.7		<4.9		<5.5	
Total SVOC's	NS	1		1		1		1		1	

Note:

- 1) SVOCs analyzed for NYSDEC Target Compound List by USEPA method SW846 - 8270.
- 2) Shaded areas indicate that the concentration exceeds the NYSDEC T.O.G.S 1.1.1 Ambient Water Quality Standards and Guidance Values.
- 3) < = not detected - below the laboratory's Reporting Limit (RL).
- 4) ug/L = micrograms per liter.
- 5) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 6) NS = No standard available.
- 7) B = Analyte is found in the associated analysis batch blank.

TABLE 17
SI Groundwater Sampling Results for Metals (July 2011)
1318 Niagara Street,
Buffalo, NY

Page 1 of 1

Sample Location	NYS Ambient Water Quality Standards and Guidance Values	MW-01		MW-02		MW-03		MW-04		MW-05	
Sample Designation		1318-MW01-GW		1318-MW02-GW		1318-MW-03-GW		1318-MW04-GW		1318-MW05-GW	
Date Sampled		7/21/2011		7/21/2011		7/25/2011		7/22/2011		7/21/2011	
Analyte		Water		Water		Water		Water		Water	
Units	mg/L	mg/L		mg/L		mg/L		mg/L		mg/L	
TAL Metals and Cyanide											
Aluminum	NS	0.062	J	<0.20		3		0.22		<0.20	
Antimony	0.003	<0.020		<0.020		<0.020		<0.020		<0.020	
Arsenic	0.025	<0.010		<0.010		<0.010		<0.010		<0.010	
Barium	1	0.069		0.2		0.077		0.075		0.071	
Beryllium	0.003	<0.0020		<0.0020		0.00042	J	<0.0020		<0.0020	
Cadmium	0.005	0.00035	J	<0.0010		<0.0010		0.00033	J	<0.0010	
Calcium	NS	81.6		132		77.3		189		178	
Chromium	0.05	0.0015	J	0.0017	J	0.0049		0.0018	J	0.0012	J
Cobalt	NS	<0.0040		0.0014	J	0.0012	J	<0.0040		0.0017	J
Copper	0.2	0.0035	J	0.0036	J	0.004	J	0.1		0.0031	J
Iron	0.3	0.083		0.065		2.3		0.3		0.038	J
Lead	0.025	<0.0050		<0.0050		0.0043	J	<0.0050		<0.0050	
Magnesium	35	86.2		22.6		46.1		91.9		125	
Manganese	0.3	0.043	B	0.23	B	0.09	B	0.046	B	0.056	B
Nickel	0.1	0.002	J	0.0026	J	0.0049	J	0.0037	J	0.012	
Potassium	NS	3.9		3.2		6.4		6.9		6	
Selenium	0.01	<0.015		<0.015		<0.015		<0.015		<0.015	
Silver	0.05	<0.0030		<0.0030		<0.0030		<0.0030		<0.0030	
Sodium	20	111		48.9		41.5		123		111	
Thallium	0.0005	<0.020		<0.020		<0.020		<0.020		<0.020	
Vanadium	NS	<0.0050		<0.0050		0.0048	J	0.0012	J	<0.0050	
Zinc	2	0.004	J	0.0042	J	0.013		0.02		0.029	
Mercury	0.0007	<0.00020		<0.00020		<0.00020		<0.00020		<0.00020	
Cyanide, Total	0.2	<0.010		<0.010		<0.010		<0.010		<0.010	

Note:

- 1) TAL Metals analyzed by USEPA method SW846 - 6010B. Cyanide analyzed by USEPA Method SW846-9012A. Mercury analyzed by USEPA Method SW846-7470A.
- 2) Shaded areas indicate that the concentration exceeds the NYSDEC T.O.G.S 1.1.1 Ambient Water Quality Standards and Guidance Values.
- 3) < = not detected - below the laboratory's Reporting Limit (RL).
- 4) mg/L = milligrams per liter.
- 5) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 6) NS = No standard available.
- 7) B = Analyte is found in the associated analysis batch blank.

TABLE 18

SI Groundwater Sampling Results for Pesticides (July 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYS Ambient Water Quality Standards and Guidance Values	MW-01	MW-02	MW-03	MW-04	MW-05
Sample Designation		1318-MW01-GW	1318-MW02-GW	1318-MW-03-GW	1318-MW04-GW	1318-MW05-GW
Date Sampled		7/21/2011	7/21/2011	7/25/2011	7/22/2011	7/21/2011
Compound		Water	Water	Water	Water	Water
Units		ug/L	ug/L	ug/L	ug/L	ug/L
TCL Pesticides/Herbicides						
4,4'-DDD	0.3	<0.047	<0.047	<0.047	<0.047	<0.050
4,4'-DDE	0.2	<0.047	<0.047	<0.047	<0.047	<0.050
4,4'-DDT	0.2	<0.047	<0.047	<0.047	<0.047	<0.050
alpha-BHC	0.01	<0.047	<0.047	<0.047	<0.047	<0.050
beta-BHC	0.004	<0.047	<0.047	<0.047	<0.047	<0.050
delta-BHC	0.04	<0.047	<0.047	<0.047	<0.047	0.025 J
Dieldrin	0.004	<0.047	<0.047	0.25	<0.047	<0.050
Endrin	NS	<0.047	<0.047	0.18	<0.047	<0.050
Endrin aldehyde	5	<0.047	<0.047	<0.047	<0.047	<0.050
Endrin ketone	5	<0.047	<0.047	0.017 J	<0.047	<0.050
gamma-BHC (Lindane)	0.05	<0.047	<0.047	<0.047	<0.047	<0.050
Heptachlor	0.04	<0.047	<0.047	<0.047	<0.047	<0.050
Heptachlor epoxide	0.03	0.024 J	<0.047	0.19	<0.047	0.027 J
Toxaphene	0.06	<0.047	<0.047	<0.047	<0.047	<0.050

Note:

- 1) Pesticides analyzed by USEPA method SW846 - 8081.
- 2) Shaded areas indicate that the concentration exceeds the NYSDEC T.O.G.S 1.1.1 Ambient Water Quality Standards and Guidance Values.
- 3) < = not detected - below the laboratory's Reporting Limit (RL).
- 4) ug/L = micrograms per liter.
- 5) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 6) NS = No standard available.

TABLE 19

SI Groundwater Sampling Results for PCB's (July 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYS Ambient Water Quality Standards and Guidance Values	MW01	MW02	MW-03	MW04	MW05
Sample Designation		1318-MW01-GW	1318-MW02-GW	1318-MW-03-GW	1318-MW04-GW	1318-MW05-GW
Date Sampled		7/21/2011	7/21/2011	7/25/2011	7/22/2011	7/21/2011
Compound		Water	Water	Water	Water	Water
Units		ug/L	ug/L	ug/L	ug/L	ug/L
PCBs						
PCB-1016	NS	<0.47	<0.47	<0.47	<0.47	<0.50
PCB-1221	NS	<0.47	<0.47	<0.47	<0.47	<0.50
PCB-1232	NS	<0.47	<0.47	<0.47	<0.47	<0.50
PCB-1242	NS	<0.47	<0.47	<0.47	<0.47	<0.50
PCB-1248	NS	<0.47	<0.47	<0.47	<0.47	<0.50
PCB-1254	NS	<0.47	<0.47	3.9	<0.47	<0.50
PCB-1260	NS	<0.47	<0.47	4.8	<0.47	<0.50
Polychlorinated biphenyls, Total	0.09	<0.47	<0.47	8.7	<0.47	<0.50

Note:

- 1) PCBs analyzed by USEPA method SW846 - 8082.
- 2) Shaded areas indicate that the concentration exceeds the NYSDEC T.O.G.S 1.1.1 Ambient Water Quality Standards and Guidance Values.
- 3) < = not detected - below the laboratory's Reporting Limit (RL).
- 4) ug/L = micrograms per liter.
- 5) NS = No standard available.

TABLE 20

SI Soil Sampling Results for VOC's (November 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	GP-01		GP-01		GP-02		GP-06	
Sample Designation			GP-01(2-4)		GP-01(5-7)		GP-02(16-20)		GP-06(10-11.5)	
Depth Interval (ft. bgs)			2' to 4'		5' to 7'		16.0' to 20.0'		10' to 11.5'	
Date Sampled			11/9/2011		11/9/2011		11/8/2011		11/9/2011	
Compound			Soil		Soil		Soil		Soil	
Units	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg	
TCL Volatile Compounds										
1,1,1-Trichloroethane	680	500000	<6.8		<6		<5.9		<560	
1,1-Dichloroethane	270	240000	<6.8		<6		<5.9		<560	
1,1-Dichloroethene	330	500000	<6.8		<6		<5.9		<560	
1,2,4-Trichlorobenzene	NS	NS	<6.8		<6		<5.9		<560	
1,2-Dichlorobenzene	1100	500000	<6.8		<6		<5.9		<560	
1,2-Dichloroethane	20	30000	<6.8		<6		<5.9		<560	
1,3-Dichlorobenzene	2400	280000	<6.8		<6		<5.9		<560	
1,4-Dichlorobenzene	1800	130000	<6.8		<6		<5.9		<560	
2-Butanone (MEK)	120	500000	<34		<30		<29		<2800	
Acetone	50	500000	180		<30		<29		<2800	
Benzene	60	44000	<6.8		<6		<5.9		<560	
Carbon disulfide	NS	NS	<6.8		2.8	J	<5.9		<560	
Carbon tetrachloride	760	22000	<6.8		<6		<5.9		<560	
Chlorobenzene	1100	500000	<6.8		<6		<5.9		<560	
Chloroform	370	350000	<6.8		<6		<5.9		<560	
cis-1,2-Dichloroethene	250	500000	<6.8		<6		<5.9		<560	
Cyclohexane	NS	NS	<6.8		<6		<5.9		<560	
Ethylbenzene	1000	390000	<6.8		<6		<5.9		990	
Isopropylbenzene	NS	NS	<6.8		<6		<5.9		<560	
Methyl tert-butyl ether (MTBE)	930	500000	<6.8		<6		<5.9		<560	
Methylcyclohexane	NS	NS	<6.8		<6		<5.9		1200	
Methylene Chloride	50	500000	<6.8		2.8	J	<5.9		<560	
Styrene	NS	NS	<6.8		<6		<5.9		<560	
Tetrachloroethene	1300	150000	<6.8		<6		<5.9		<560	
Toluene	700	500000	<6.8		<6		<5.9		<560	
trans-1,2-Dichloroethene	190	500000	<6.8		<6		<5.9		<560	
Trichloroethene	470	200000	<6.8		<6		<5.9		<560	
Vinyl chloride	20	13000	<6.8		<6		<5.9		<560	
m/p-Xylenes	NS	NS	<6.8		<6		<12		1100	
o-Xylene	NS	NS	<6.8		<6		<5.9		1900	
Xylenes, Total	260	500000	<13.6		<12		<17.9		3000	
Total Volatile Organics	NS	NS	180		6		ND		5190	

Notes:

1) VOCs analyzed for NYSDEC Target Compound List by USEPA method SW846 - 8260.

2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.

3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.

4) < = not detected - below the laboratory's Reporting Limit (RL).

5) ft. bgs = feet below ground surface.

6) ug/kg = micrograms per kilogram.

7) J = Detected below RL but greater than or equal to Method Detection Limit (MDL); therefore the result is an estimated concentration.

8) NS = No standard available.

9) ND = No compounds detected above reporting limits.

10) D = The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.

TABLE 20

SI Soil Sampling Results for VOC's (November 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	GP-06		GP-07		GP-07		GP-13	
Sample Designation			GP-06(13-15)		GP-07(8-12)		GP-07(16-20)		GP-13(16-20)	
Depth Interval (ft. bgs)			13' to 15'		8' to 12'		16' to 20'		16.0' to 20.0'	
Date Sampled			11/9/2011		11/9/2011		11/9/2011		11/8/2011	
Compound			Soil		Soil		Soil		Soil	
Units	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg	
TCL Volatile Compounds										
1,1,1-Trichloroethane	680	500000	<5.7		<6		99		<5.6	
1,1-Dichloroethane	270	240000	<5.7		<6		46		<5.6	
1,1-Dichloroethene	330	500000	<5.7		<6		4.7	J	<5.6	
1,2,4-Trichlorobenzene	NS	NS	<5.7		910	D	16		<5.6	
1,2-Dichlorobenzene	1100	500000	68		47		120		<5.6	
1,2-Dichloroethane	20	30000	<5.7		<6		<5.7		<5.6	
1,3-Dichlorobenzene	2400	280000	7.2		1500	D	17		<5.6	
1,4-Dichlorobenzene	1800	130000	9.8		180		18		<5.6	
2-Butanone (MEK)	120	500000	<28		<6		<5.7		<28	
Acetone	50	500000	<28		19	J	32		<28	
Benzene	60	44000	4.2	J	33		<u>120</u>		<5.6	
Carbon disulfide	NS	NS	4.7	J	<6		5	J	<5.6	
Carbon tetrachloride	760	22000	<5.7		<6		<5.7		<5.6	
Chlorobenzene	1100	500000	11		13		27		<5.6	
Chloroform	370	350000	<5.7		<6		<5.7		<5.6	
cis-1,2-Dichloroethene	250	500000	<5.7		<6		210		<5.6	
Cyclohexane	NS	NS	69		44		170		<5.6	
Ethylbenzene	1000	390000	210		150		790	D	<5.6	
Isopropylbenzene	NS	NS	77		52		150		<5.6	
Methyl tert-butyl ether (MTBE)	930	500000	<5.7		<6		<5.7		<5.6	
Methylcyclohexane	NS	NS	190		100		700	D	<5.6	
Methylene Chloride	50	500000	<5.7		<6		<5.7		<5.6	
Styrene	NS	NS	<5.7		<6		<5.7		<5.6	
Tetrachloroethene	1300	150000	<5.7		<6		64		<5.6	
Toluene	700	500000	5.9		25		170		<5.6	
trans-1,2-Dichloroethene	190	500000	<5.7		<6		<5.7		<5.6	
Trichloroethene	470	200000	<5.7		<6		3.2	J	<5.6	
Vinyl chloride	20	13000	<5.7		<6		35		<5.6	
m/p-Xylenes	NS	NS	63		290		1100	JD	<11	
o-Xylene	NS	NS	50		170		1700	D	<5.6	
Xylenes, Total	260	500000	113		460		2800		<16.6	
Total Volatile Organics	NS	NS	770		3533		5597		ND	

Notes:

1) VOCs analyzed for NYSDEC Target Compound List by USEPA method SW846 - 8260.

2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.

3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.

4) < = not detected - below the laboratory's Reporting Limit (RL).

5) ft. bgs = feet below ground surface.

6) ug/kg = micrograms per kilogram.

7) J = Detected below RL but greater than or equal to Method Detection Limit (MDL); therefore the result is an estimated concentration.

8) NS = No standard available.

9) ND = No compounds detected above reporting limits.

10) D = The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.

TABLE 20

SI Soil Sampling Results for VOC's (November 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	GP-15		GP-16		GP-19		GP-20	
Sample Designation			GP-15(16-20)		GP-16(16-17.75)		GP-19(14-16)		GP-20(14-16)	
Depth Interval (ft. bgs)			16.0' to 20.0'		16.0' to 17.75'		14' to 16'		14.0' to 16.0'	
Date Sampled			11/8/2011		11/8/2011		11/9/2011		11/8/2011	
Compound			Soil		Soil		Soil		Soil	
Units	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg	
TCL Volatile Compounds										
1,1,1-Trichloroethane	680	500000	<5.8		<5.6		<5.8		<5.7	
1,1-Dichloroethane	270	240000	<5.8		<5.6		<5.8		<5.7	
1,1-Dichloroethene	330	500000	<5.8		<5.6		<5.8		<5.7	
1,2,4-Trichlorobenzene	NS	NS	<5.8		1900	D	<5.8		<5.7	
1,2-Dichlorobenzene	1100	500000	<5.8		5	J	<5.8		<5.7	
1,2-Dichloroethane	20	30000	<5.8		<5.6		<5.8		<5.7	
1,3-Dichlorobenzene	2400	280000	26		<5.6		<5.8		<5.7	
1,4-Dichlorobenzene	1800	130000	7.1		5.5	J	<5.8		<5.7	
2-Butanone (MEK)	120	500000	<29		<28		<29		<29	
Acetone	50	500000	19	J	<28		<29		<29	
Benzene	60	44000	<5.8		<5.6		<5.8		<5.7	
Carbon disulfide	NS	NS	<5.8		<5.6		<5.8		<5.7	
Carbon tetrachloride	760	22000	<5.8		<5.6		<5.8		<5.7	
Chlorobenzene	1100	500000	<5.8		<5.6		<5.8		<5.7	
Chloroform	370	350000	<5.8		<5.6		<5.8		<5.7	
cis-1,2-Dichloroethene	250	500000	<5.8		<5.6		<5.8		<5.7	
Cyclohexane	NS	NS	<5.8		<5.6		<5.8		<5.7	
Ethylbenzene	1000	390000	<5.8		<5.6		<5.8		<5.7	
Isopropylbenzene	NS	NS	<5.8		<5.6		<5.8		<5.7	
Methyl tert-butyl ether (MTBE)	930	500000	<5.8		<5.6		<5.8		<5.7	
Methylcyclohexane	NS	NS	4.6	J	<5.6		<5.8		<5.7	
Methylene Chloride	50	500000	6.3		<5.6		<5.8		<5.7	
Styrene	NS	NS	<5.8		<5.6		<5.8		<5.7	
Tetrachloroethene	1300	150000	<5.8		<5.6		<5.8		<5.7	
Toluene	700	500000	<5.8		<5.6		<5.8		<5.7	
trans-1,2-Dichloroethene	190	500000	<5.8		<5.6		<5.8		<5.7	
Trichloroethene	470	200000	<5.8		<5.6		<5.8		<5.7	
Vinyl chloride	20	13000	<5.8		<5.6		<5.8		<5.7	
m/p-Xylenes	NS	NS	<12		<11		<12		<11	
o-Xylene	NS	NS	<5.8		<5.6		<5.8		<5.7	
Xylenes, Total	260	500000	<17.8		<16.6		<17.8		<16.7	
Total Volatile Organics	NS	NS	63		1911		ND		ND	

Notes:

1) VOCs analyzed for NYSDEC Target Compound List by USEPA method SW846 - 8260.

2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.

3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.

4) < = not detected - below the laboratory's Reporting Limit (RL).

5) ft. bgs = feet below ground surface.

6) ug/kg = micrograms per kilogram.

7) J = Detected below RL but greater than or equal to Method Detection Limit (MDL); therefore the result is an estimated concentration.

8) NS = No standard available.

9) ND = No compounds detected above reporting limits.

10) D = The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.

TABLE 20

SI Soil Sampling Results for VOC's (November 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	GP-21		GP-24		GP-26	
Sample Designation			GP-21(18-20)		GP-24(4-8)		GP-26(10-12)	
Depth Interval (ft. bgs)			18.0' to 20.0'		4' to 8'		10' to 12'	
Date Sampled			11/8/2011		11/9/2011		11/10/2011	
Compound			Soil		Soil		Soil	
Units	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg	
TCL Volatile Compounds								
1,1,1-Trichloroethane	680	500000	<5.7		<6.2		<5.9	
1,1-Dichloroethane	270	240000	<5.7		<6.2		<5.9	
1,1-Dichloroethene	330	500000	<5.7		<6.2		<5.9	
1,2,4-Trichlorobenzene	NS	NS	<5.7		<6.2		4	J
1,2-Dichlorobenzene	1100	500000	<5.7		<6.2		<5.9	
1,2-Dichloroethane	20	30000	<5.7		<6.2		<5.9	
1,3-Dichlorobenzene	2400	280000	<5.7		<6.2		<5.9	
1,4-Dichlorobenzene	1800	130000	<5.7		<6.2		<5.9	
2-Butanone (MEK)	120	500000	<29		<31		<29	
Acetone	50	500000	<29		13	J	<29	
Benzene	60	44000	<5.7		<6.2		<5.9	
Carbon disulfide	NS	NS	<5.7		<6.2		<5.9	
Carbon tetrachloride	760	22000	<5.7		<6.2		<5.9	
Chlorobenzene	1100	500000	<5.7		<6.2		<5.9	
Chloroform	370	350000	<5.7		<6.2		<5.9	
cis-1,2-Dichloroethene	250	500000	<5.7		<6.2		<5.9	
Cyclohexane	NS	NS	<5.7		<6.2		<5.9	
Ethylbenzene	1000	390000	<5.7		<6.2		<5.9	
Isopropylbenzene	NS	NS	<5.7		<6.2		<5.9	
Methyl tert-butyl ether (MTBE)	930	500000	<5.7		<6.2		<5.9	
Methylcyclohexane	NS	NS	<5.7		<6.2		<5.9	
Methylene Chloride	50	500000	<5.7		<6.2		<5.9	
Styrene	NS	NS	<5.7		<6.2		<5.9	
Tetrachloroethene	1300	150000	<5.7		<6.2		<5.9	
Toluene	700	500000	<5.7		<6.2		<5.9	
trans-1,2-Dichloroethene	190	500000	<5.7		<6.2		<5.9	
Trichloroethene	470	200000	<5.7		<6.2		<5.9	
Vinyl chloride	20	13000	<5.7		<6.2		<5.9	
m/p-Xylenes	NS	NS	<11		<12		<12	
o-Xylene	NS	NS	<5.7		<6.2		<5.9	
Xylenes, Total	260	500000	<16.7		<18.2		<17.9	
Total Volatile Organics	NS	NS	ND		13		4	

Notes:

- VOCs analyzed for NYSDEC Target Compound List by USEPA method SW846 - 8260.
- Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.
- Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- < = not detected - below the laboratory's Reporting Limit (RL).
- ft. bgs = feet below ground surface.
- ug/kg = micrograms per kilogram.
- J = Detected below RL but greater than or equal to Method Detection Limit (MDL); therefore the result is an estimated concentration.
- NS = No standard available.
- ND = No compounds detected above reporting limits.
- D = The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.

TABLE 21

SI Soil Sampling Results for SVOC's (November 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	GP-02		GP-06		GP-06	
Sample Designation			GP-02(16-20)		GP-06(10-11.5)		GP-06(13-15)	
Depth Interval (ft. bgs)			16' to 20'		10' to 11.5'		13' to 15'	
Date Sampled			11/8/2011		11/9/2011		11/9/2011	
Compound			Soil		Soil		Soil	
Units	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg	
TCL Semi-volatile Compounds								
2-Methylnaphthalene	NS	NS	<390		950		<370	
2-Methylphenol	330	500000	<390		<370		<370	
3+4-Methylphenols	330	500000	<390		<370		<370	
Acenaphthene	20000	500000	<390		<370		<370	
Acenaphthylene	100000	500000	<390		<370		<370	
Anthracene	100000	500000	<390		<370		<370	
Benzo(a)anthracene	1000	5600	<390		<370		<370	
Benzo(a)pyrene	1000	1000	<390		<370		<370	
Benzo(b)fluoranthene	1000	5600	<390		<370		<370	
Benzo(g,h,i)perylene	100000	500000	<390		<370		<370	
Benzo(k)fluoranthene	800	56000	<390		<370		<370	
Chrysene	1000	56000	<390		<370		<370	
Dibenz(a,h)anthracene	330	560	<390		<370		<370	
Dibenzofuran	7000	350000	<390		<370		<370	
Fluoranthene	100000	500000	<390		<370		<370	
Fluorene	30000	500000	<390		<370		<370	
Indeno(1,2,3-cd)pyrene	500	5600	<390		<370		<370	
Naphthalene	12000	500000	<390		960		220	J
Pentachlorophenol	800	6700	<390		<370		<370	
Phenanthrene	100000	500000	<390		<370		190	J
Phenol	330	500000	<390		<370		<370	
Pyrene	100000	500000	<390		<370		<370	
Total SVOC's	NS	NS	ND		1910		410	

Notes:

1) SVOCs analyzed for NYSDEC Target Compound List by USEPA method SW846 - 8270.

2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.

3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.

4) < = not detected - below the laboratory's Reporting Limit (RL).

5) ft. bgs = feet below ground surface.

6) ug/kg = micrograms per kilogram.

7) J = Detected below RL but greater than or equal to Method Detection Limit (MDL); therefore the result is an estimated concentration.

8) NS = No standard available.

9) ND = No compounds detected above reporting limits.

10) B = Analyte is found in the associated analysis batch blank.

TABLE 21

SI Soil Sampling Results for SVOC's (November 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	GP-07		GP-07		GP-24	
Sample Designation			GP-07(8-12)		GP-07(16-20)		GP-24(4-8)	
Depth Interval (ft. bgs)			8' to 12'		16' to 20'		4' to 8'	
Date Sampled			11/9/2011		11/9/2011		11/9/2011	
Compound			Soil		Soil		Soil	
Units	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg	
TCL Semi-volatile Compounds								
2-Methylnaphthalene	NS	NS	370	J	2000		<410	
2-Methylphenol	330	500000	<390		<380		<410	
3+4-Methylphenols	330	500000	<390		<380		<410	
Acenaphthene	20000	500000	170	J	<380		<410	
Acenaphthylene	100000	500000	<390		<380		<410	
Anthracene	100000	500000	390	J	<380		<410	
Benzo(a)anthracene	1000	5600	660		<380		<410	
Benzo(a)pyrene	1000	1000	460		<380		<410	
Benzo(b)fluoranthene	1000	5600	620		<380		<410	
Benzo(g,h,i)perylene	100000	500000	210	J	<380		<410	
Benzo(k)fluoranthene	800	56000	190	J	<380		<410	
Chrysene	1000	56000	600		<380		<410	
Dibenz(a,h)anthracene	330	560	<390		<380		<410	
Dibenzofuran	7000	350000	<390		<380		<410	
Fluoranthene	100000	500000	1500		<380		<410	
Fluorene	30000	500000	230	J	<380		<410	
Indeno(1,2,3-cd)pyrene	500	5600	230	J	<380		<410	
Naphthalene	12000	500000	270	J	1400		<410	
Pentachlorophenol	800	6700	<390		<380		<410	
Phenanthrene	100000	500000	1300		300	J	<410	
Phenol	330	500000	<390		<380		<410	
Pyrene	100000	500000	1200		<380		<410	
Total SVOC's	NS	NS	8400		3700		ND	

Notes:

- 1) SVOCs analyzed for NYSDEC Target Compound List by USEPA method SW846 - 8270.
- 2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.
- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- 4) < = not detected - below the laboratory's Reporting Limit (RL).
- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
- 7) J = Detected below RL but greater than or equal to Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.
- 9) ND = No compounds detected above reporting limits.
- 10) B = Analyte is found in the associated analysis batch blank.

TABLE 22

SI Soil Sampling Results for Metals (November 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	GP-13		GP-02		GP-24	
Sample Designation			GP-13(16-20)		GP-02(16-20)		GP-24(4-8)	
Depth Interval (ft. bgs)			16' to 20'		16' to 20'		4' to 8'	
Date Sampled			11/8/2011		11/8/2011		11/9/2011	
Analyte			Soil		Soil		Soil	
Units	mg/kg	mg/kg	mg/kg		mg/kg		mg/kg	
TAL Metals and Cyanide								
Aluminum	NS	NS	5950		8460		13100	
Arsenic	13	16	<1.13		0.75	J	1.8	
Barium	350	400	71.4		70		118	
Beryllium	7.2	590	0.27	J	0.39		0.76	
Cadmium	2.5	9.3	0.48		0.81		0.12	J
Calcium	NS	NS	61600		25000		5180	
Chromium	1	400	7.36		10.1		20.2	
Cobalt	NS	NS	4.63		6.64		12.5	
Copper	50	270	8.26		10.1		28.1	
Iron	NS	NS	10100		12600		20900	
Lead	63	1000	8.6		13.4		11.8	
Magnesium	NS	NS	22000		15200		6320	
Manganese	1600	10000	312		198		211	
Nickel	30	310	10.5		16		26.9	
Potassium	NS	NS	1530		1530		1430	
Selenium	3.9	1500	<1.13		<0.77		2.23	
Silver	2	1500	<0.56		<0.39		<0.53	
Sodium	NS	NS	228		156		104	J
Vanadium	NS	NS	12.1		14.1		26.1	
Zinc	109	10000	58.3	N	83.4	N	63.8	
Mercury	0.18	2.8	0.016		0.043		0.012	
Total Cyanide	27	27	<0.281		<0.296		<0.313	

Notes:

1) Target Analyte List Metals analyzed by USEPA method SW846 - 6010B. Mercury analyzed by USEPA method SW846 - 7470A. Cyanide analyzed by USEPA method SW846 - 9012A.

2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.

3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.

4) < = not detected - below the laboratory's Reporting Limit (RL).

5) ft. bgs = feet below ground surface.

6) mg/kg = milligrams per kilogram.

7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.

8) NS = No standard available.

9) N = Presumptive evidence of a compound.

10) B = Analyte is found in the associated analysis batch blank.

TABLE 23

SI Soil Sampling Results for Pesticides (November 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	GP-02		GP-24	
Sample Designation			GP-02(16-20)		GP-24(4-8)	
Depth Interval (ft. bgs)			16' to 20'		4' to 8'	
Date Sampled			11/8/2011		11/9/2011	
Compound			Soil		Soil	
Units	ug/kg	ug/kg	ug/kg		ug/kg	
TCL Pesticides/Herbicides						
4,4'-DDD	3.3	92000	<2		<2.1	
4,4'-DDE	3.3	62000	<2		<2.1	
4,4'-DDT	3.3	47000	3.3		<2.1	
Aldrin	5	680	<2		<2.1	
alpha-BHC	20	3400	<2		<2.1	
alpha-Chlordane	94	24000	<2		<2.1	
beta-BHC	36	3000	<2		<2.1	
delta-BHC	40	500000	<2		<2.1	
Dieldrin	5	1400	<2		<2.1	
Endosulfan I	2400	200000	<2		<2.1	
Endosulfan II	2400	200000	<2		<2.1	
Endosulfan sulfate	2400	200000	<2		<2.1	
Endrin	14	89000	<2		<2.1	
gamma-BHC (Lindane)	100	9200	<2		<2.1	
Heptachlor	42	15000	<2		<2.1	

Notes:

- 1) Pesticides analyzed by USEPA method SW846 - 8081.
- 2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.
- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- 4) < = not detected - below the laboratory's Reporting Limit (RL).
- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
- 7) NS = No standard available.

TABLE 24

SI Soil Sampling Results for PCB's (November 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	GP-01		GP-01		GP-01		GP-02		GP-02	
Sample Designation			GP-01(0-2)		GP-01(2-4)		GP-01(5-7)		GP-02(2-4)		GP-02(4-6)	
Depth Interval (ft. bgs)			0' to 2'		2' to 4'		5' to 7'		2' to 4'		4' to 6'	
Date Sampled			11/10/2011		11/10/2011		11/10/2011		11/8/2011		11/8/2011	
Compound			Soil		Soil		Soil		Soil		Soil	
Units	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
PCBs												
PCB-1016	NS	NS	<21		<24		<21		<24		<22	
PCB-1221	NS	NS	<21		<24		<21		<24		<22	
PCB-1232	NS	NS	<21		<24		<21		<24		<22	
PCB-1242	NS	NS	<21		<24		<21		<24		<22	
PCB-1248	NS	NS	<21		<24		<21		<24		<22	
PCB-1254	NS	NS	<21		<24		<21		<24		<22	
PCB-1260	NS	NS	8.3	J	<24		<21		570	D	21000	D
PCBs Total	100	1000	8		ND		ND		570		21000	

Notes:

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- 4) < = not detected - below the laboratory's Reporting
- 5) ft. bgs = feet below ground surface.
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- 7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.
- 9) D = The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the
- 10) P = For dual column analysis, the percent difference between the quantitated concentrations on the two columns

TABLE 24

SI Soil Sampling Results for PCB's (November 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	GP-02	GP-03	GP-03	GP-04	GP-04
Sample Designation			GP-02(16-20)	GP-03(0-4)	GP-03(4-6)	GP-04(6-8)	GP-04(11-12)
Depth Interval (ft. bgs)			16' to 20'	0' to 4'	4' to 6'	6' to 8'	11' to 12'
Date Sampled			11/8/2011	11/10/2011	11/10/2011	11/9/2011	11/9/2011
Compound			Soil	Soil	Soil	Soil	Soil
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
PCBs							
PCB-1016	NS	NS	<20	<22	<21	<21	<22
PCB-1221	NS	NS	<20	<22	<21	<21	<22
PCB-1232	NS	NS	<20	<22	<21	<21	<22
PCB-1242	NS	NS	<20	<22	<21	<21	<22
PCB-1248	NS	NS	<20	<22	<21	<21	<22
PCB-1254	NS	NS	<20	<22	<21	<21	<22
PCB-1260	NS	NS	24	18 J	<21	<21	<22
PCBs Total	100	1000	24	18	ND	ND	ND

Notes:

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- 5) ft. bgs = feet below ground surface.
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- 7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.
- 9) D = The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the
- 10) P = For dual column analysis, the percent difference between the quantitated concentrations on the two columns

TABLE 24

SI Soil Sampling Results for PCB's (November 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	GP-05			GP-05			GP-05			GP-06			GP-06		
Sample Designation			GP-05(0-2)			GP-05(4-6)			GP-05(6-8)			GP-06(0-2)			GP-06(4-6)		
Depth Interval (ft. bgs)			0' to 2'			4' to 6'			6' to 8'			0' to 2'			4' to 6'		
Date Sampled			11/10/2011			11/10/2011			11/10/2011			11/9/2011			11/9/2011		
Compound			Soil			Soil			Soil			Soil			Soil		
Units	ug/kg	ug/kg	ug/kg			ug/kg			ug/kg			ug/kg			ug/kg		
PCBs																	
PCB-1016	NS	NS	<20			<21			<20			<19			<23		
PCB-1221	NS	NS	<20			<21			<20			<19			<23		
PCB-1232	NS	NS	<20			<21			<20			<19			<23		
PCB-1242	NS	NS	<20			<21			<20			<19			<23		
PCB-1248	NS	NS	<20			<21			<20			<19			<23		
PCB-1254	NS	NS	<20			<21			<20			<19			<23		
PCB-1260	NS	NS	<20			79			71			330			280		
PCBs Total	100	1000	ND			79			71			330			280		

Notes:

- 1) PCB's analyzed by USEPA method SW846 - 8082.
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- 4) < = not detected - below the laboratory's Reporting
- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
- 7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.
- 9) D = The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the
- 10) P = For dual column analysis, the percent difference between the quantitated concentrations on the two columns

TABLE 24

SI Soil Sampling Results for PCB's (November 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	GP-06	GP-07	GP-07	GP-07	GP-08
Sample Designation			GP-06(8-9)	GP-07(2-4)	GP-07(8-12)	GP-07(16-20)	GP-08(0-2)
Depth Interval (ft. bgs)			8' to 9'	2' to 4'	8' to 12'	16' to 20'	0' to 2'
Date Sampled			11/9/2011	11/9/2011	11/9/2011	11/9/2011	11/9/2011
Compound			Soil	Soil	Soil	Soil	Soil
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
PCBs							
PCB-1016	NS	NS	<20	<18	<20	<20	<21
PCB-1221	NS	NS	<20	<18	<20	<20	<21
PCB-1232	NS	NS	<20	<18	<20	<20	<21
PCB-1242	NS	NS	<20	<18	<20	<20	<21
PCB-1248	NS	NS	<20	<18	<20	<20	<21
PCB-1254	NS	NS	<20	<18	<20	<20	<21
PCB-1260	NS	NS	44	180	710 D	62	<21
PCBs Total	100	1000	44	180	710	62	ND

Notes:

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- 5) ft. bgs = feet below ground surface.
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- 7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.
- 9) D = The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the
- 10) P = For dual column analysis, the percent difference between the quantitated concentrations on the two columns

TABLE 24

SI Soil Sampling Results for PCB's (November 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	GP-08	GP-08	GP-09	GP-09	GP-09
Sample Designation			GP-08(5-7)	GP-08(12-14)	GP-09(0-2)	GP-09(2-4)	GP-09(4-6)
Depth Interval (ft. bgs)			5' to 7'	12' to 14'	0' to 2'	2' to 4'	4' to 6'
Date Sampled			11/9/2011	11/9/2011	11/9/2011	11/9/2011	11/9/2011
Compound			Soil	Soil	Soil	Soil	Soil
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
PCBs							
PCB-1016	NS	NS	<22	<20	<22	<22	<22
PCB-1221	NS	NS	<22	<20	<22	<22	<22
PCB-1232	NS	NS	<22	<20	<22	<22	<22
PCB-1242	NS	NS	<22	<20	<22	<22	<22
PCB-1248	NS	NS	<22	<20	<22	<22	<22
PCB-1254	NS	NS	<22	<20	<22	<22	<22
PCB-1260	NS	NS	<22	<20	8.2 J	18 J	<22
PCBs Total	100	1000	ND	ND	8	18	ND

Notes:

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- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
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- 9) D = The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the
- 10) P = For dual column analysis, the percent difference between the quantitated concentrations on the two columns

TABLE 24

SI Soil Sampling Results for PCB's (November 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	GP-10		GP-10		GP-10		GP-11		GP-11	
Sample Designation			GP-10(0-2)		GP-10(5-7)		GP-10(10-11)		GP-11(0-2)		GP-11(6-8)	
Depth Interval (ft. bgs)			0' to 2'		5' to 7'		10' to 11'		0' to 2'		6' to 8'	
Date Sampled			11/9/2011		11/9/2011		11/9/2011		11/10/2011		11/10/2011	
Compound			Soil		Soil		Soil		Soil		Soil	
Units	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
PCBs												
PCB-1016	NS	NS	<21		<21		<21		<20		<21	
PCB-1221	NS	NS	<21		<21		<21		<20		<21	
PCB-1232	NS	NS	<21		<21		<21		<20		<21	
PCB-1242	NS	NS	<21		<21		<21		<20		<21	
PCB-1248	NS	NS	<21		<21		<21		<20		<21	
PCB-1254	NS	NS	<21		<21		<21		<20		<21	
PCB-1260	NS	NS	160		<21		<21		200		180	
PCBs Total	100	1000	160		ND		ND		200		180	

Notes:

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- 10) P = For dual column analysis, the percent difference between the quantitated concentrations on the two columns

TABLE 24

SI Soil Sampling Results for PCB's (November 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	GP-11		GP-12		GP-12		GP-12		GP-13	
Sample Designation			GP-11(10-12)		GP-12(0-2)		GP-12(4-6)		GP-12(7-8)		GP-13(0-2)	
Depth Interval (ft. bgs)			10' to 12'		0' to 2'		4' to 6'		7' to 8'		0' to 2'	
Date Sampled			11/10/2011		11/9/2011		11/9/2011		11/9/2011		11/8/2011	
Compound			Soil		Soil		Soil		Soil		Soil	
Units	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
PCBs												
PCB-1016	NS	NS	<19		<20		<22		<21		<18	
PCB-1221	NS	NS	<19		<20		<22		<21		<18	
PCB-1232	NS	NS	<19		<20		<22		<21		<18	
PCB-1242	NS	NS	<19		<20		<22		<21		<18	
PCB-1248	NS	NS	<19		<20		<22		<21		<18	
PCB-1254	NS	NS	<19		<20		<22		<21		<18	
PCB-1260	NS	NS	17	J	25000	D	230		190		45	P
PCBs Total	100	1000	17		25000		230		190		45	

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- 10) P = For dual column analysis, the percent difference between the quantitated concentrations on the two columns

TABLE 24

SI Soil Sampling Results for PCB's (November 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	GP-13		GP-13		GP-14		GP-14		GP-14	
Sample Designation			GP-13(5-7)		GP-13(16-20)		GP-14(0-2)		GP-14(5-7)		GP-14(11-12)	
Depth Interval (ft. bgs)			5' to 7'		16' to 20'		0' to 2'		5' to 7'		11' to 12'	
Date Sampled			11/8/2011		11/8/2011		11/9/2011		11/9/2011		11/9/2011	
Compound			Soil		Soil		Soil		Soil		Soil	
Units	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
PCBs												
PCB-1016	NS	NS	<20		<19		<21		<21		<22	
PCB-1221	NS	NS	<20		<19		<21		<21		<22	
PCB-1232	NS	NS	<20		<19		<21		<21		<22	
PCB-1242	NS	NS	<20		<19		<21		<21		<22	
PCB-1248	NS	NS	<20		<19		<21		<21		<22	
PCB-1254	NS	NS	<20		<19		<21		<21		<22	
PCB-1260	NS	NS	12	J	51		16	JP	<21		<22	
PCBs Total	100	1000	12		51		16		ND		ND	

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TABLE 24

SI Soil Sampling Results for PCB's (November 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	GP-15	GP-15	GP-15	GP-16	GP-16
Sample Designation			GP-15(0-2)	GP-15(9-12)	GP-15(16-20)	GP-16(0-2)	GP-16(2-4)
Depth Interval (ft. bgs)			0' to 2'	9' to 12'	16' to 20'	0' to 2'	2' to 4'
Date Sampled			11/8/2011	11/8/2011	11/8/2011	11/8/2011	11/8/2011
Compound			Soil	Soil	Soil	Soil	Soil
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
PCBs							
PCB-1016	NS	NS	<20	<20	<20	<21	<22
PCB-1221	NS	NS	<20	<20	<20	<21	<22
PCB-1232	NS	NS	<20	<20	<20	<21	<22
PCB-1242	NS	NS	<20	<20	<20	<21	<22
PCB-1248	NS	NS	<20	<20	<20	<21	<22
PCB-1254	NS	NS	<20	<20	<20	<21	<22
PCB-1260	NS	NS	26	220	140	490 D	<22
PCBs Total	100	1000	26	220	140	490	ND

Notes:

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- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
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- 10) P = For dual column analysis, the percent difference between the quantitated concentrations on the two columns

TABLE 24

SI Soil Sampling Results for PCB's (November 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	GP-16		GP-17		GP-17		GP-17		GP-18	
Sample Designation			GP-16(16-17.75)		GP-17(0-2)		GP-17(5-7)		GP-17(7-8)		GP-18(0-2)	
Depth Interval (ft. bgs)			16' to 17.75'		0' to 2'		5' to 7'		7' to 8'		0' to 2'	
Date Sampled			11/8/2011		11/9/2011		11/9/2011		11/9/2011		11/9/2011	
Compound			Soil		Soil		Soil		Soil		Soil	
Units	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
PCBs												
PCB-1016	NS	NS	<19		<21		<21		<22		<20	
PCB-1221	NS	NS	<19		<21		<21		<22		<20	
PCB-1232	NS	NS	<19		<21		<21		<22		<20	
PCB-1242	NS	NS	<19		<21		<21		<22		<20	
PCB-1248	NS	NS	<19		<21		<21		<22		<20	
PCB-1254	NS	NS	<19		<21		<21		<22		<20	
PCB-1260	NS	NS	9900	D	200		160		180		330	
PCBs Total	100	1000	9900		200		160		180		330	

Notes:

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- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
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- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
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- 10) P = For dual column analysis, the percent difference between the quantitated concentrations on the two columns

TABLE 24

SI Soil Sampling Results for PCB's (November 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	GP-18	GP-18	GP-19	GP-19	GP-19
Sample Designation			GP-18(5-7)	GP-18(8-10)	GP-19(0-2)	GP-19(5-7)	GP-19(14-16)
Depth Interval (ft. bgs)			5' to 7'	8' to 10'	0' to 2'	5' to 7'	14' to 16'
Date Sampled			11/9/2011	11/9/2011	11/9/2011	11/9/2011	11/9/2011
Compound			Soil	Soil	Soil	Soil	Soil
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
PCBs							
PCB-1016	NS	NS	<22000	<21	<21	<21	<19
PCB-1221	NS	NS	<22000	<21	<21	<21	<19
PCB-1232	NS	NS	<22000	<21	<21	<21	<19
PCB-1242	NS	NS	<22000	<21	<21	<21	<19
PCB-1248	NS	NS	<22000	<21	<21	<21	<19
PCB-1254	NS	NS	<22000	<21	<21	<21	<19
PCB-1260	NS	NS	420000	29	2400 D	5400 D	2100 D
PCBs Total	100	1000	420000	29	2400	5400	2100

Notes:

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- 4) < = not detected - below the laboratory's Reporting
- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
- 7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.
- 9) D = The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the
- 10) P = For dual column analysis, the percent difference between the quantitated concentrations on the two columns

TABLE 24

SI Soil Sampling Results for PCB's (November 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	GP-20		GP-20		GP-20		GP-21		GP-21	
Sample Designation			GP-20(0-2)		GP-20(5-7)		GP-20(14-16)		GP-21(0-2)		GP-21(5-7)	
Depth Interval (ft. bgs)			0' to 2'		5' to 7'		14' to 16'		0' to 2'		5' to 7'	
Date Sampled			11/8/2011		11/8/2011		11/8/2011		11/8/2011		11/8/2011	
Compound			Soil		Soil		Soil		Soil		Soil	
Units	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
PCBs												
PCB-1016	NS	NS	<20		<23		<20		<20		<22	
PCB-1221	NS	NS	<20		<23		<20		<20		<22	
PCB-1232	NS	NS	<20		<23		<20		<20		<22	
PCB-1242	NS	NS	<20		<23		<20		<20		<22	
PCB-1248	NS	NS	<20		<23		<20		<20		<22	
PCB-1254	NS	NS	<20		<23		<20		<20		<22	
PCB-1260	NS	NS	54		660	D	40		670	D	120000	D
PCBs Total	100	1000	54		660		40		670		120000	

Notes:

1) PCB's analyzed by USEPA method SW846 - 8082.

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3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.

4) < = not detected - below the laboratory's Reporting

5) ft. bgs = feet below ground surface.

6) ug/kg = micrograms per kilogram.

7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.

8) NS = No standard available.

9) D = The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the

10) P = For dual column analysis, the percent difference between the quantitated concentrations on the two columns

TABLE 24

SI Soil Sampling Results for PCB's (November 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	GP-21	GP-22	GP-22	GP-22B	GP-23
Sample Designation			GP-21(18-20)	GP-22(0-2)	GP-22(5-7)	GP-22B(10-12)	GP-23(0-2)
Depth Interval (ft. bgs)			18' to 20'	0' to 2'	5' to 7'	10' to 12'	0' to 2'
Date Sampled			11/8/2011	11/9/2011	11/9/2011	11/9/2011	11/9/2011
Compound			Soil	Soil	Soil	Soil	Soil
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
PCBs							
PCB-1016	NS	NS	<19	<21	<23	<23	<21
PCB-1221	NS	NS	<19	<21	<23	<23	<21
PCB-1232	NS	NS	<19	<21	<23	<23	<21
PCB-1242	NS	NS	<19	<21	<23	<23	<21
PCB-1248	NS	NS	<19	<21	<23	<23	<21
PCB-1254	NS	NS	<19	<21	<23	<23	<21
PCB-1260	NS	NS	85	250	270000 D	310	490 D
PCBs Total	100	1000	85	250	270000	310	490

Notes:

- 1) PCB's analyzed by USEPA method SW846 - 8082.
- 2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.
- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- 4) < = not detected - below the laboratory's Reporting
- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
- 7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.
- 9) D = The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the
- 10) P = For dual column analysis, the percent difference between the quantitated concentrations on the two columns

TABLE 24

SI Soil Sampling Results for PCB's (November 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	GP-23		GP-23		GP-24		GP-24		GP-24	
Sample Designation			GP-23(5-7)		GP-23(10-12)		GP-24(0-2)		GP-24(2-4)		GP-24(4-8)	
Depth Interval (ft. bgs)			5' to 7'		10' to 12'		0' to 2'		2' to 4'		4' to 8'	
Date Sampled			11/9/2011		11/9/2011		11/9/2011		11/9/2011		11/9/2011	
Compound			Soil		Soil		Soil		Soil		Soil	
Units	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
PCBs												
PCB-1016	NS	NS	<22		<23		<21		<22		<21	
PCB-1221	NS	NS	<22		<23		<21		<22		<21	
PCB-1232	NS	NS	<22		<23		<21		<22		<21	
PCB-1242	NS	NS	<22		<23		<21		<22		<21	
PCB-1248	NS	NS	<22		<23		<21		<22		<21	
PCB-1254	NS	NS	<22		<23		<21		<22		<21	
PCB-1260	NS	NS	290		<23		61		<22		<21	
PCBs Total	100	1000	290		ND		61		ND		ND	

Notes:

1) PCB's analyzed by USEPA method SW846 - 8082.

2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.

3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.

4) < = not detected - below the laboratory's Reporting

5) ft. bgs = feet below ground surface.

6) ug/kg = micrograms per kilogram.

7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.

8) NS = No standard available.

9) D = The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the

10) P = For dual column analysis, the percent difference between the quantitated concentrations on the two columns

TABLE 24

SI Soil Sampling Results for PCB's (November 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	GP-25	GP-25	GP-25A	GP-26	GP-26
Sample Designation			GP-25(0-2)	GP-25(4-7)	GP-25A(11-12)	GP-26(0-2)	GP-26(5-7)
Depth Interval (ft. bgs)			0' to 2'	4' to 7'	11' to 12'	0' to 2'	5' to 7'
Date Sampled			11/10/2011	11/10/2011	11/10/2011	11/10/2011	11/10/2011
Compound			Soil	Soil	Soil	Soil	Soil
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
PCBs							
PCB-1016	NS	NS	<18	<21	<20	<22	<22
PCB-1221	NS	NS	<18	<21	<20	<22	<22
PCB-1232	NS	NS	<18	<21	<20	<22	<22
PCB-1242	NS	NS	<18	<21	<20	<22	<22
PCB-1248	NS	NS	<18	<21	<20	<22	<22
PCB-1254	NS	NS	<18	<21	<20	<22	<22
PCB-1260	NS	NS	42	<21	<20	<22	<22
PCBs Total	100	1000	42	ND	ND	ND	ND

Notes:

- 1) PCB's analyzed by USEPA method SW846 - 8082.
- 2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.
- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- 4) < = not detected - below the laboratory's Reporting
- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
- 7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.
- 9) D = The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the
- 10) P = For dual column analysis, the percent difference between the quantitated concentrations on the two columns

TABLE 24

SI Soil Sampling Results for PCB's (November 2011)
 1318 Niagara Street,
 Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	GP-26	
Sample Designation			GP-26(10-12)	
Depth Interval (ft. bgs)			10' to 12'	
Date Sampled			11/10/2011	
Compound			Soil	
Units	ug/kg	ug/kg	ug/kg	
PCBs				
PCB-1016	NS	NS	<20	
PCB-1221	NS	NS	<20	
PCB-1232	NS	NS	<20	
PCB-1242	NS	NS	<20	
PCB-1248	NS	NS	<20	
PCB-1254	NS	NS	6900	D
PCB-1260	NS	NS	<20	
PCBs Total	100	1000	6900	

Notes:

- 1) PCB's analyzed by USEPA method SW846 - 8082.
- 2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.
- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- 4) < = not detected - below the laboratory's Reporting
- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
- 7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.
- 9) D = The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the
- 10) P = For dual column analysis, the percent difference between the quantitated concentrations on the two columns

TABLE 25

SI Groundwater Sampling Results for VOC's (November 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYS Ambient Water Quality Standards and Guidance Values	MW-01	MW-02	MW-03	MW-04	MW-05
Sample Designation		1318-MW01-GW	1318-MW02-GW	1318-MW03-GW	1318-MW04-GW	1318-MW05-GW
Date Sampled		11/3/2011	11/2/2011	11/2/2011	11/2/2011	11/2/2011
Compound		Water	Water	Water	Water	Water
Units		ug/L	ug/L	ug/L	ug/L	ug/L
TCL Volatile Compounds						
1,1,1-Trichloroethane	5	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane	5	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	5	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	1	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane	5	1.3	<1.0	<1.0	<1.0	12
1,1-Dichloroethene	5	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-Trichlorobenzene	5	<1.0	0.88	J 24	<1.0	<1.0
1,2-Dibromo-3-Chloropropane	0.04	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dibromoethane	0.006	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichlorobenzene	3	<1.0	<1.0	1.2	<1.0	<1.0
1,2-Dichloroethane	0.6	<1.0	<1.0	0.94	J <1.0	3.6
1,2-Dichloropropane	1	<1.0	<1.0	<1.0	<1.0	<1.0
1,3-Dichlorobenzene	3	<1.0	<1.0	<1.0	<1.0	<1.0
1,4-Dichlorobenzene	3	<1.0	<1.0	1.9	<1.0	<1.0
2-Butanone (MEK)	50	<5.0	<5.0	<5.0	<5.0	<5.0
2-Hexanone	50	<5.0	<5.0	<5.0	<5.0	<5.0
Acetone	50	<5.0	<5.0	<5.0	<5.0	<5.0
Benzene	1	<1.0	<1.0	<1.0	<1.0	3.4
Bromodichloromethane	50	<1.0	<1.0	<1.0	<1.0	<1.0
Bromoform	50	<1.0	<1.0	<1.0	<1.0	<1.0
Bromomethane	5	<1.0	<1.0	<1.0	<1.0	<1.0
Carbon disulfide	60	<1.0	<1.0	<1.0	<1.0	<1.0
Carbon tetrachloride	5	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene	5	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroethane	5	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroform	7	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane	5	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	5	3.2	0.98	J <1.0	8.8	13
cis-1,3-Dichloropropene	0.4	<1.0	<1.0	<1.0	<1.0	<1.0
Dibromochloromethane	50	<1.0	<1.0	<1.0	<1.0	<1.0
Dichlorodifluoromethane	5	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	5	<1.0	<1.0	<1.0	<1.0	<1.0
Isopropylbenzene	5	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl tert-butyl ether	10	<1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	5	<1.0	<1.0	<1.0	<1.0	<1.0
Styrene	5	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene	5	2.6	<1.0	<1.0	<1.0	<1.0
Toluene	5	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene	5	<1.0	<1.0	<1.0	<1.0	0.82
Trichloroethene	5	2	<1.0	<1.0	65	2.1
Trichlorofluoromethane	5	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl chloride	2	<1.0	<1.0	<1.0	<1.0	26
Total VOC's	NS	9	2	28	74	61

Notes:

- VOCs analyzed for NYSDEC Target Compound List by USEPA method SW846 - 8260.
- Shaded areas indicate that the concentration exceeds the NYSDEC T.O.G.S 1.1.1 Ambient Water Quality Standards and Guidance Values.
- < = not detected - below the laboratory's Reporting Limit (RL).
- ug/L = micrograms per liter.
- J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- NS = No standard available.
- ND = No compounds detected above reporting limits.

TABLE 26

SI Groundwater Sampling Results for SVOC's (November 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYS Ambient Water Quality Standards and Guidance Values	MW-01	MW-02	MW-03	MW-04	MW-05
Sample Designation		1318-MW01-GW	1318-MW02-GW	1318-MW-03-GW	1318-MW04-GW	1318-MW05-GW
Date Sampled		11/3/2011	11/2/2011	11/2/2011	11/2/2011	11/2/2011
Compound		Water	Water	Water	Water	Water
Units		ug/L	mg/L	ug/L	ug/L	ug/L
TCL Semi-volatile Compounds						
2,4-Dichlorophenol	5	<13	<10	<10	<10	<10
2,4-Dimethylphenol	50	<13	<10	<10	<10	<10
2,4-Dinitrophenol	10	<13	<10	<10	<10	<10
2,4-Dinitrotoluene	5	<13	<10	<10	<10	<10
2,6-Dinitrotoluene	5	<13	<10	<10	<10	<10
2-Chloronaphthalene	10	<13	<10	<10	<10	<10
2-Nitroaniline	5	<13	<10	<10	<10	<10
3,3'-Dichlorobenzidine	5	<13	<10	<10	<10	<10
3-Nitroaniline	5	<13	<10	<10	<10	<10
4-Chloroaniline	5	<13	<10	<10	<10	<10
4-Nitroaniline	5	<13	<10	<10	<10	<10
Acenaphthene	20	<13	<10	<10	<10	<10
Anthracene	50	<13	<10	<10	<10	<10
Atrazine	7.5	<13	<10	<10	<10	<10
Benzo(a)anthracene	0.002	<13	<10	<10	<10	<10
Benzo(b)fluoranthene	0.002	<13	<10	<10	<10	<10
Benzo(k)fluoranthene	0.002	<13	<10	<10	<10	<10
Biphenyl	5	<13	<10	<10	<10	<10
bis (2-chloroisopropyl) ether	5	<13	<10	<10	<10	<10
Bis(2-chloroethoxy)methane	5	<13	<10	<10	<10	<10
Bis(2-chloroethyl)ether	1	<13	<10	<10	<10	<10
Bis(2-ethylhexyl) phthalate	5	<13	<10	<10	<10	<10
Butyl benzyl phthalate	50	<13	<10	<10	<10	<10
Chrysene	0.002	<13	<10	<10	<10	<10
Diethyl phthalate	50	<13	<10	<10	<10	<10
Dimethyl phthalate	50	<13	<10	<10	<10	<10
Di-n-butyl phthalate	50	<13	<10	<10	<10	<10
Fluoranthene	50	<13	<10	<10	<10	<10
Fluorene	50	<13	<10	<10	<10	<10
Hexachlorobenzene	0.04	<13	<10	<10	<10	<10
Hexachlorobutadiene	0.5	<13	<10	<10	<10	<10
Hexachlorocyclopentadiene	5	<13	<10	<10	<10	<10
Hexachloroethane	5	<13	<10	<10	<10	<10
Indeno(1,2,3-cd)pyrene	0.002	<13	<10	<10	<10	<10
Isophorone	50	<13	<10	<10	<10	<10
Naphthalene	10	<13	<10	<10	<10	<10
Nitrobenzene	0.4	<13	<10	<10	<10	<10
N-Nitrosodiphenylamine	50	<13	<10	<10	<10	<10
Pentachlorophenol	1	<13	<10	<10	<10	<10
Phenanthrene	50	<13	<10	<10	<10	<10
Phenol	1	<13	<10	<10	<10	<10
Pyrene	50	<13	<10	<10	<10	<10
Total SVOC's	NS	ND	ND	ND	ND	ND

Note:

- 1) SVOCs analyzed for NYSDEC Target Compound List by USEPA method SW846 - 8270.
- 2) Shaded areas indicate that the concentration exceeds the NYSDEC T.O.G.S 1.1.1 Ambient Water Quality Standards and Guidance Values.
- 3) < = not detected - below the laboratory's Reporting Limit (RL).
- 4) ug/L = micrograms per liter.
- 5) NS = No standard available.
- 6) ND = No compounds detected above reporting limits.
- 8) B = Analyte is found in the associated analysis batch blank.

TABLE 27

SI Groundwater Sampling Results for Metals (November 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYS Ambient Water Quality Standards and Guidance Values	MW-02		MW-03		MW-04		MW-05	
Sample Designation		1318-MW02-GW		1318-MW-03-GW		1318-MW04-GW		1318-MW05-GW	
Date Sampled		11/2/2011		11/2/2011		11/2/2011		11/2/2011	
Analyte		Water		Water		Water		Water	
Units		mg/L		mg/L		mg/L		mg/L	
TAL Metals and Cyanide									
Aluminum	NS	0.02	J	0.0301	J	0.0791		0.0884	
Antimony	0.003	<0.025		<0.025		<0.025		<0.025	
Arsenic	0.025	<0.01		<0.01		<0.01		<0.01	
Barium	1	0.233		0.0492	J	0.0307	J	0.0474	J
Beryllium	0.003	<0.003		<0.003		<0.003		<0.003	
Cadmium	0.005	<0.003		<0.003		<0.003		<0.003	
Calcium	NS	141		66.2		151		119	
Chromium	0.05	<0.005		<0.005		<0.005		<0.005	
Copper	0.2	<0.01		<0.01		<0.01		<0.01	
Iron	0.3	0.0777		0.173		0.334		0.345	
Lead	0.025	0.00341	J	0.006		0.006		0.006	
Magnesium	35	24.6		36.8		76.4		74.5	
Manganese	0.3	0.322		0.0689		0.145		0.0578	
Nickel	0.1	<0.02		<0.02		<0.02		<0.02	
Potassium	NS	2.91		6.44		4.51		3.05	
Selenium	0.01	<0.01		<0.01		<0.01		<0.01	
Silver	0.05	<0.005		<0.005		<0.005		<0.005	
Sodium	20	51.2		40		78.9		87.8	
Thallium	0.0005	<0.02		<0.02		<0.02		<0.02	
Zinc	2	0.00683	J	0.02		0.0277		0.0205	
Mercury	0.0007	<0.0002		<0.0002		<0.0002		<0.0002	
Cyanide, Total	0.2	Not Analyzed		Not Analyzed		Not Analyzed		Not Analyzed	

Note:

- 1) TAL Metals analyzed by USEPA method SW846 - 6010B. Mercury analyzed by USEPA Method SW846-7470A.
- 2) Shaded areas indicate that the concentration exceeds the NYSDEC T.O.G.S 1.1.1 Ambient Water Quality Standards and Guidance Values.
- 3) < = not detected - below the laboratory's Reporting Limit (RL).
- 4) mg/L = milligrams per liter.
- 5) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 6) NS = No standard available.

TABLE 28

SI Groundwater Sampling Results for Pesticides (November 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYS Ambient Water Quality Standards and Guidance Values	MW-02		MW-03		MW-04		MW-05	
Sample Designation		1318-MW02-GW		1318-MW03-GW		1318-MW-04-GW		1318-MW05-GW	
Date Sampled		11/2/2011		11/2/2011		11/2/2011		11/2/2011	
Compound		Water		Water		Water		Water	
Units		ug/L		ug/L		ug/L		ug/L	
TCL Pesticides/Herbicides									
4,4-DDD	0.3	<0.053		<0.054		<0.1		<0.051	
4,4-DDE	0.2	<0.053		<0.054		<0.1		<0.051	
4,4-DDT	0.2	<0.053		<0.054		<0.1		<0.051	
alpha-BHC	0.01	<0.053		<0.054		<0.1		<0.051	
beta-BHC	0.004	<0.053		<0.054		<0.1		<0.051	
delta-BHC	0.04	<0.053		<0.054		<0.1		<0.051	
Dieldrin	0.004	<0.053		<0.054		<0.1		<0.051	
Endrin aldehyde	5	<0.053		<0.054		<0.1		<0.051	
Endrin ketone	5	<0.053		<0.054		<0.1		<0.051	
gamma-BHC (Lindane)	0.05	<0.053		<0.054		<0.1		<0.051	
Heptachlor	0.04	<0.053		<0.054		<0.1		<0.051	
Heptachlor epoxide	0.03	<0.053		<0.054		<0.1		<0.051	
Toxaphene	0.06	<0.53		<0.54		<1		<0.51	

Note:

- 1) Pesticides analyzed by USEPA method SW846 - 8081.
- 2) Shaded areas indicate that the concentration exceeds the NYSDEC T.O.G.S 1.1.1 Ambient Water Quality Standards and Guidance Values.
- 3) < = not detected - below the laboratory's Reporting Limit (RL).
- 4) ug/L = micrograms per liter.
- 5) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 6) NS = No standard available.

TABLE 29

SI Groundwater Sampling Results for PCB's (November 2011)
1318 Niagara Street,
Buffalo, NY

Sample Location	NYS Ambient Water Quality Standards and Guidance Values	MW01	MW02	MW-03	MW04	MW05
Sample Designation		1318-MW01-GW	1318-MW02-GW	1318-MW-03-GW	1318-MW04-GW	1318-MW05-GW
Date Sampled		11/3/2011	11/2/2011	11/2/2011	11/2/2011	11/2/2011
Compound		Water	Water	Water	Water	Water
Units		ug/L	ug/L	ug/L	ug/L	ug/L
TCL PCBs						
PCB-1016	NS	<0.66	<0.53	<0.54	<1	<0.51
PCB-1221	NS	<0.66	<0.53	<0.54	<1	<0.51
PCB-1232	NS	<0.66	<0.53	<0.54	<1	<0.51
PCB-1242	NS	<0.66	<0.53	<0.54	<1	<0.51
PCB-1248	NS	<0.66	<0.53	<0.54	<1	<0.51
PCB-1254	NS	<0.66	<0.53	<0.54	<1	<0.51
PCB-1260	NS	<0.66	<0.53	1.3	<1	<0.51
Polychlorinated biphenyls, Total	0.09	<0.66	<0.53	1.3	<1	<0.51

Note:

- 1) PCBs analyzed by USEPA method SW846 - 8082.
- 2) Shaded areas indicate that the concentration exceeds the NYSDEC T.O.G.S 1.1.1 Ambient Water Quality Standards and Guidance Values.
- 3) < = not detected - below the laboratory's Reporting Limit (RL).
- 4) ug/L = micrograms per liter.
- 5) NS = No standard available.

TABLE 30

IRM - 2 (2013) - Area A West Excavation Final Endpoint Soil Sampling Results for PCB's
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	Area A West		Area A West		Area A West		Area A West		Area A West	
Sample Designation			Bottom-1 Area A West		Northwall-2 Area A West		Eastwall-2 Area A West		Southwall-1 Area A West		Westwall-2 Area A West	
Depth Interval (ft. bgs)			N/A		N/A		N/A		N/A		N/A	
Date Sampled			1/8/2013		1/14/2013		1/14/2013		1/8/2013		1/14/2013	
Compound			Soil		Soil		Soil		Soil		Soil	
Units	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Polychlorinated biphenyls												
PCB-1016	NS	NS	<300		<5700		<2800		<250		<1500	
PCB-1221	NS	NS	<300		<5700		<2800		<250		<1500	
PCB-1232	NS	NS	<300		<5700		<2800		<250		<1500	
PCB-1242	NS	NS	<300		<5700		<2800		<250		<1500	
PCB-1248	NS	NS	<300		<5700		<2800		<250		<1500	
PCB-1254	NS	NS	<300		<5700		<2800		<250		<1500	
PCB-1260	NS	NS	<300		44000		28000		1100		13000	
PCB's, Total ppb (ug/kg)	100	1000	ND		44000		28000		1100		13000	
PCB's, Total ppm (mg/kg)	0.1	1	ND		44		28		1.1		13	

Notes:

- 1) PCB's analyzed by USEPA method SW846 - 8082.
- 2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.
- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- 4) < = not detected - below the laboratory's Reporting Limit
- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
- 7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.
- 9) ND = No detection above the laboratory's RL.

TABLE 31

IRM - 2 (2013) - Area A East Excavation Final Endpoint Soil Sampling Results for PCB's
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	Area A East		Area A East		Area A East		Area A East		Area A East	
Sample Designation			Bottom-1 Area A East		Northwall-1 Area A East		Eastwall-2 Area A East		Southwall-2Area A East		Westwall-1 Area A East	
Depth Interval (ft. bgs)			N/A		N/A		N/A		N/A		N/A	
Date Sampled			1/9/2013		1/9/2013		1/15/2013		1/15/2013		1/9/2013	
Compound			Soil		Soil		Soil		Soil		Soil	
Units	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Polychlorinated biphenyls												
PCB-1016	NS	NS	<290		<290		<270		<280		<290	
PCB-1221	NS	NS	<290		<290		<270		<280		<290	
PCB-1232	NS	NS	<290		<290		<270		<280		<290	
PCB-1242	NS	NS	<290		<290		<270		<280		<290	
PCB-1248	NS	NS	<290		<290		<270		<280		<290	
PCB-1254	NS	NS	<290		<290		<270		<280		<290	
PCB-1260	NS	NS	<290		1300		<270		180	J	5200	
PCB's, Total ppb (ug/kg)	100	1000	ND		1300		ND		180		5200	
PCB's, Total ppm (mg/kg)	0.1	1	ND		1.3		ND		0.18		5.2	

Notes:

- 1) PCB's analyzed by USEPA method SW846 - 8082.
- 2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.
- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- 4) < = not detected - below the laboratory's Reporting Limit
- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
- 7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.
- 9) ND = No detection above the laboratory's RL.

TABLE 32

IRM - 2 (2013) - Area B Excavation Final Endpoint Soil Sampling Results for PCB's
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	Area B		Area B		Area B		Area B		Area B	
Sample Designation			Bottom-1 Area B		Bottom-1 Area B		Northwall-2		Eastwall-2 Area		Southwall-3	
Depth Interval (ft. bgs)			West		East		Area B		B		Area B	
Date Sampled			N/A		N/A		N/A		N/A		N/A	
Compound			1/8/2013		1/8/2013		1/10/2013		1/10/2013		1/14/2013	
			Soil		Soil		Soil		Soil		Soil	
Units	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Polychlorinated biphenyls												
PCB-1016	NS	NS	<290		<280		<290		<5800		<13000	
PCB-1221	NS	NS	<290		<280		<290		<5800		<13000	
PCB-1232	NS	NS	<290		<280		<290		<5800		<13000	
PCB-1242	NS	NS	<290		<280		<290		<5800		<13000	
PCB-1248	NS	NS	<290		<280		<290		<5800		<13000	
PCB-1254	NS	NS	<290		<280		<290		<5800		<13000	
PCB-1260	NS	NS	1200		6600		5600		26000		150000	
PCB's, Total ppb (ug/kg)	100	1000	1200		6600		5600		26000		150000	
PCB's, Total ppm (mg/kg)	0.1	1	1.2		6.6		5.6		26		150	

Notes:

- 1) PCB's analyzed by USEPA method SW846 - 8082.
- 2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.
- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- 4) < = not detected - below the laboratory's Reporting Limit
- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
- 7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.
- 9) ND = No detection above the laboratory's RL.

TABLE 32

IRM - 2 (2013) - Area B Excavation Final Endpoint Soil Sampling Results for PCB's
 1318 Niagara Street,
 Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	Area B	
Sample Designation			Westwall-2 Area B	
Depth Interval (ft. bgs)			N/A	
Date Sampled			1/10/2013	
Compound			Soil	
Units	ug/kg	ug/kg	ug/kg	
Polychlorinated biphenyls				
PCB-1016	NS	NS	<290	
PCB-1221	NS	NS	<290	
PCB-1232	NS	NS	<290	
PCB-1242	NS	NS	<290	
PCB-1248	NS	NS	<290	
PCB-1254	NS	NS	<290	
PCB-1260	NS	NS	6700	
PCB's, Total ppb (ug/kg)	100	1000	6700	
PCB's, Total ppm (mg/kg)	0.1	1	6.7	

Notes:

- 1) PCB's analyzed by USEPA method SW846 - 8082.
- 2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.
- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- 4) < = not detected - below the laboratory's Reporting Limit
- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
- 7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.
- 9) ND = No detection above the laboratory's RL.

TABLE 33

IRM - 2 (2013) - Area C Excavation Final Endpoint Soil Sampling Results for PCB's
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	Area C		Area C		Area C		Area C		Area C	
Sample Designation			Bottom-1 Area C		Northwall-2 Area C		Eastwall-2 Area C		Southwall-2 Area C		Westwall-1 Area C	
Depth Interval (ft. bgs)			N/A		N/A		N/A		N/A		N/A	
Date Sampled			1/9/2013		1/14/2013		1/14/2013		1/14/2013		1/9/2013	
Compound			Soil		Soil		Soil		Soil		Soil	
Units	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Polychlorinated biphenyls												
PCB-1016	NS	NS	<280		<300		<29000		<29000		<250	
PCB-1221	NS	NS	<280		<300		<29000		<29000		<250	
PCB-1232	NS	NS	<280		<300		<29000		<29000		<250	
PCB-1242	NS	NS	<280		<300		<29000		<29000		<250	
PCB-1248	NS	NS	<280		<300		<29000		<29000		<250	
PCB-1254	NS	NS	<280		<300		<29000		<29000		<250	
PCB-1260	NS	NS	<280		590		530000		300000		520	
PCB's, Total ppb (ug/kg)	100	1000	ND		590		530000		300000		520	
PCB's, Total ppm (mg/kg)	0.1	1	ND		0.59		530		300		0.52	

Notes:

- 1) PCB's analyzed by USEPA method SW846 - 8082.
- 2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.
- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- 4) < = not detected - below the laboratory's Reporting Limit
- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
- 7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.
- 9) ND = No detection above the laboratory's RL.

TABLE 34

IRM - 2 (2013) - Area D Excavation Final Endpoint Soil Sampling Results for PCB's
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	Area D		Area D		Area D		Area D		Area D	
Sample Designation			Bottom-1 Area D		Northwall-2 Area D		Eastwall-1 Area D		Southwall-1 Area D		Westwall-1 Area D	
Depth Interval (ft. bgs)			N/A		N/A		N/A		N/A		N/A	
Date Sampled			1/9/2013		1/14/2013		1/9/2013		1/9/2013		1/9/2013	
Compound			Soil		Soil		Soil		Soil		Soil	
Units	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Polychlorinated biphenyls												
PCB-1016	NS	NS	<270		<5200		<290		<240		<270	
PCB-1221	NS	NS	<270		<5200		<290		<240		<270	
PCB-1232	NS	NS	<270		<5200		<290		<240		<270	
PCB-1242	NS	NS	<270		<5200		<290		<240		<270	
PCB-1248	NS	NS	<270		<5200		<290		<240		<270	
PCB-1254	NS	NS	<270		<5200		<290		<240		<270	
PCB-1260	NS	NS	130	J	39000		3300		<240		1300	
PCB's, Total ppb (ug/kg)	100	1000	130		39000		3300		ND		1300	
PCB's, Total ppm (mg/kg)	0.1	1	0.13		39		3.3		ND		1.3	

Notes:

- 1) PCB's analyzed by USEPA method SW846 - 8082.
- 2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.
- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- 4) < = not detected - below the laboratory's Reporting Limit
- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
- 7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.
- 9) ND = No detection above the laboratory's RL.

TABLE 35

IRM - 2 (2013) - Area E Excavation Final Endpoint Soil Sampling Results for PCB's
1318 Niagara Street,
Buffalo, NY

Sample Location	NYSDEC Unrestricted Use SCO's	NYSDEC Restricted Commercial Use SCO's	Area E		Area E		Area E		Area E		Area E	
Sample Designation			Bottom-1 Area E		Northwall-1 Area E		Eastwall-1 Area E		Southwall-1 Area E		Westwall-1 Area E	
Depth Interval (ft. bgs)			N/A		N/A		N/A		N/A		N/A	
Date Sampled			1/11/2013		1/11/2013		1/11/2013		1/11/2013		1/11/2013	
Compound			Soil		Soil		Soil		Soil		Soil	
Units	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Polychlorinated biphenyls												
PCB-1016	NS	NS	<280		<260		<280		<280		<250	
PCB-1221	NS	NS	<280		<260		<280		<280		<250	
PCB-1232	NS	NS	<280		<260		<280		<280		<250	
PCB-1242	NS	NS	<280		<260		<280		<280		<250	
PCB-1248	NS	NS	<280		<260		<280		<280		<250	
PCB-1254	NS	NS	<280		<260		<280		<280		<250	
PCB-1260	NS	NS	<280		890		<280		260	J	140	J
PCB's, Total ppb (ug/kg)	100	1000	ND		890		ND		260		140	
PCB's, Total ppm (mg/kg)	0.1	1	ND		0.89		ND		0.26		0.14	

Notes:

- 1) PCB's analyzed by USEPA method SW846 - 8082.
- 2) **Bold** values indicate that the concentration exceeds the applicable Restricted Commercial Use SCO's from Part 375.
- 3) Underlined values indicate that the concentration exceeds the applicable Unrestricted Use SCO's from Part 375.
- 4) < = not detected - below the laboratory's Reporting Limit
- 5) ft. bgs = feet below ground surface.
- 6) ug/kg = micrograms per kilogram.
- 7) J = Detected below the RL but greater than or equal to the Method Detection Limit (MDL); therefore the result is an estimated concentration.
- 8) NS = No standard available.
- 9) ND = No detection above the laboratory's RL.

TABLE 36
POTENTIALLY APPLICABLE STANDARDS, CRITERIA AND GUIDANCE

Division/ Agency	Title	Standard or Guidance	Requirements
DAR/ NYSDEC	Air Guide 1 – Guidelines for the Control of Toxic Ambient Air Contaminants	G	▪ Control of toxic air contaminants ▪ Screening analysis for ambient air impacts ▪ Toxicity classifications ▪ Ambient standards – short term/annual
DAR/ NYSDEC	6 NYCRR Part 200 (200.6) – General Provisions	S	▪ Prohibits contravention of Ambient Air Quality Standards or causes of <u>air pollution</u>
DAR/ NYSDEC	6 NYCRR Part 201 - Permits & Certificates	S	▪ Prohibits construction/operation without a permit/certificate
DAR/ NYSDEC	6 NYCRR Part 211 (211.1) – General Prohibitions	S	▪ Prohibits emissions which are injurious to human, plant, or animal <u>life, or causes a nuisance</u>
DAR/ NYSDEC	6 NYCRR Part 212 – General Process Emission Sources	S	▪ Establishes control requirements
DAR/ NYSDEC	6 NYCRR Part 257 – Air Quality Standards	S	▪ Applicable air quality standards
DER/ NYSDEC	TAGM HWR-89-4031 Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Waste Sites	G	▪ Dust suppression during Interim Remedial Measures/Remedial Actions
DER/ NYSDEC	TAGM HWR-92-4030 Selection of Remedial Actions at Inactive Hazardous Waste Sites	G	▪ Remedy selection criteria/evaluations
DER/ NYSDEC	TAGM HWR-92-4042 Interim Remedial Measures	G	▪ Define and track Interim Remedial Measures (IRMs)
DER/ NYSDEC	TAGM 4061 – Management of Coal Tar Waste and Coal Tar Contaminated Sediment From Former Manufactured Gas Plants (MGPs)	G	▪ Coal tar waste and coal tar contaminated soils and sediment that exhibit the toxicity characteristic for Benzene (D018) may be conditionally exempt from 6 NYCRR Parts 370 – 374 and 376 when they are destined for permanent thermal treatment

TABLE 36 (Continued)

DER/ NYSDEC	6 NYCRR Part 375 – Inactive Hazardous Waste Disposal Site Remediation Program and NYSDEC Policy Document CP-51	S	▪ Remedial program requirements ▪ Private party programs; state funded programs; state assistance to municipalities
DFW/ NYSDEC	Fish and Wildlife Impact Analysis for Inactive Hazardous Waste Sites (FWIA)	G	▪ Habitat assessments ▪ Contaminant impact assessments ▪ Ecological effects of remedies ▪ Remedial requirements ▪ Monitoring ▪ Checklist
DOW/ NYSDEC	Analytical Services Protocols (ASP)	G	▪ Analytical procedures
DOW/ NYSDEC	TOGS 1.1.2 – Groundwater Effluent Limitations	G	▪ Guidance for developing effluent limitations
DOW/ NYSDEC	TOGS 1.1.1 – Ambient Water Quality Standards and Guidance Values	G	▪ Compilation of ambient water quality standards and guidance values
DOW/ NYSDEC	TOGS 1.2.1 – Industrial SPDES Permit Drafting Strategy for Surface Waters	G	▪ Guidance for developing effluent and monitoring limits for point source releases to surface water
DOW/ NYSDEC	TOGS 1.3.8 – New Discharges to Publicly Owned Treatment Works	G	▪ Limits on new or changed discharges to POTWs; strict requirements regarding bioaccumulative and persistent substances; plus other considerations
DOW/ NYSDEC	6 NYCRR Part 702-15(a), (b), (c), (d) & (e)	S	▪ Empowers NYSDEC to apply and enforce guidance where there is no promulgated standard
DOW/ NYSDEC	6 NYCRR Part 700-705 – NYSDEC Water Quality Regulations for Surface Waters and Groundwater	S	▪ 700 – Definitions, Samples and Tests; ▪ 701 – Classifications for Surface Waters and Groundwaters; ▪ 702 – Derivation and Use of Standards and Guidance Values; ▪ 703 – Surface Water and Groundwater Quality Standards and Groundwater Effluent Standards

TABLE 36 (Continued)

DOW/ NYSDEC	6 NYCRR Part 750-757 – Implementation of NPDES Program in NYS	S	Regulations regarding the SPDES program
DSHM/ NYSDEC	6 NYCRR Part 364 – Waste Transporter Permits	S	Regulates collection, transport, and delivery of regulated waste
DSHM/ NYSDEC	6 NYCRR Part 360 – Solid Waste Management Facilities	S	Solid waste management facility requirements; landfill closures; construction & demolition (C&D) landfill requirements; used oil; medical waste; etc.
DSHM/ NYSDEC	6 NYCRR Part 370 – Hazardous Waste Management System: General	S	Definitions and terms and general standards applicable to Parts 370-374 and 376
DSHM/ NYSDEC	6 NYCRR Part 371 – Identification and Listing of Hazardous Wastes	S	Hazardous waste determinations
DSHM/ NYSDEC	6 NYCRR Part 372 – Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities	S	Manifest system and record keeping; certain management standards
DSHM/ NYSDEC	6 NYCRR Part 376 – Land Disposal Restrictions	S	Identifies hazardous waste restricted from land disposal
DSHM/ NYSDEC	6 NYCRR Subpart 373-1 – Hazardous Waste Treatment, Storage and Disposal Facility Permitting Requirements	S	Hazardous waste permitting requirements; includes substantive requirements
DSHM/ NYSDEC	6 NYCRR Subpart 373-2 – Final Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities	S	Hazardous waste management standards such as contingency plans; releases from SWMUs; closure/post closure; container management; tank management; surface impoundments; waste piles; landfills; incinerators; etc.
DSHM/ NYSDEC	6 NYCRR subpart 373-3 – Interim Status Standards for Owners and Operators of Hazardous Waste Facilities	S	Similar to 373-2

TABLE 36 (Continued)

OSHA/ PESH	29 CFR Part 1910.120; Hazardous Waste Operations and Emergency Response	S	▪ Health and safety
USEPA	40 CFR Part 261 – Hazardous Waste Management System; Definition of Solid Waste; Toxicity Characteristic; Final Rule; Response to Court Order Vacating Regulatory Provisions	S	▪ TCLP may not be used for determining whether MGP waste is hazardous under RCRA

NOTES:

DAR – Division of Air Resources
 DER – Division of Environmental Remediation
 DFW – Division of Fish and Wildlife
 DOW – Division of Water
 DSHM – Division of Solid and Hazardous Materials
 HWR – Hazardous Waste Remediation
 NPDES – National Pollution Discharge Elimination System
 NYSDEC – New York State Department of Environmental Conservation
 OSHA – Occupational Safety and Health Administration
 POTW – Publicly Owned Treatment Work
 PESH – New York State Department of Labor’s Public Employee Safety and Health
 RCRA - – Resource Conservation and Recovery Act
 SWMUs – Solid Waste Management Units
 TCLP – Toxicity Characteristic Leaching Procedure
 USEPA – United States Environmental Protection Agency

TABLE 37
GENERAL RESPONSE ACTIONS AND REMEDIAL TECHNOLOGY SCREENING

General Response Actions for Soil and Air/Soil Vapor	Remedial Technologies	Description	Screening Comments
No Action	Site Management Plan	Deed Restrictions – Restrictions and controls on future site use and vapor intrusion monitoring and mitigation Excavation Protocols - Identify health and safety measures for future excavation considering residual contamination.	Applicable, Retained.
Containment	Capping	Newly-constructed low permeability cap or asphalt cap Use of existing subsurface slabs as caps	Not suitable for the proposed future use of the Site. Would not address the majority of Site contamination.
Source Removal	Soil Excavation with Offsite Disposal/ Treatment	Excavate contaminated soil and transport offsite for disposal/treatment.	Applicable, Retained.
Treatment	In Situ Biological Treatment	Microorganisms, oxygen, and/or nutrients added to subsurface to reduce the toxicity of contaminants in soil.	Not proven for PCBs. Not retained.
	In Situ Thermal Treatment	Various processes use heat to increase contaminant mobilization via volatilization and viscosity reduction. Off-gases may be collected and treated. Groundwater control may be needed to retain heat during treatment.	Not suitable for the proposed future use of the Site. No reduction in contaminant mass. Not retained.
	In Situ Solidification	Using large augers or other injection/mixing technology, contaminated soil is mixed in situ with binders isolating and immobilizing contaminants. All subsurface infrastructures would have to be removed.	Large energy requirements needed and relatively high costs to create the high heat conditions necessary to destroy PCBs. Not retained.
	In Situ Chemical Treatment	Various processes using chemicals to destroy organic contaminants or convert them to non-toxic compounds by introducing chemicals to the subsurface through infiltration.	Not applicable for PCBs. Not retained.
	Ex Situ Treatment	Excavate contaminated soil, treat onsite and replace onsite as fill material or dispose offsite.	Relatively high costs to create the high heat conditions necessary to destroy PCBs. Not retained..

TABLE 37 CONTINUED
GENERAL RESPONSE ACTIONS AND REMEDIAL TECHNOLOGY SCREENING

General Response Actions for Groundwater	Remedial Technologies	Description	Screening Comments
No Action	Monitored Natural Attenuation	Naturally-occurring processes would continue to reduce contaminant levels. Groundwater monitoring would be performed in existing wells for PAHs and metals.	Applicable, Retained
	Site Management Plan	Deed Restrictions - Groundwater use restrictions as a source of potable water.	Applicable, Retained.
		Excavation Protocols - Identify health and safety measures for future excavation considering residual contamination.	Applicable, Retained.

TABLE 38**PRELIMINARY ANNUAL COST ESTIMATE****No Action****1318 Niagara Street**

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT COST	TOTAL COST
1	Monitoring and Maintenance				
1a	Labor (1 event per year) for Groundwater Sampling	MH	24	\$75	\$1,800
1b	Equipment for Groundwater Sampling	LS	1	\$500	\$500
1c	Groundwater analysis (TCL/TAL)	EA	5	\$600	\$3,000
1d	Labor (1/3 event per year) for Soil Sampling	MH	24	\$75	\$1,800
1e	Soil Analysis (PCB - 12 samples every 3 years)	EA	4	\$75	\$300
1f	Maintenance (grass cutting)	EA	6	\$200	\$1,200
1g	Reporting	LS	1	\$2,800	\$2,800
	Annual O&M Cost				\$11,400

TABLE 39

**PRELIMINARY CAPITAL COST ESTIMATE
EXCAVATION AND OFFSITE DISPOSAL OF PCB CONTAMINATED SOILS ABOVE 1 PPM
1318 Niagara Street**

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT COST	TOTAL COST
1	Excavation and Disposal/Treatment				
1a	Remove and Dispose of PCB (<50 ppm) contaminated soils	Ton	6,600	\$69	\$455,400
1b	Remove and Dispose of PCB (>50 ppm) contaminated soils	Ton	3,500	\$138	\$483,000
1c	Back Fill Excavation with clean fill and rough grade site	CY	6,400	\$38	\$243,200
1d	Top Soil (0.5 ft) supply, place and final grading	CY	630	\$45	\$28,350
1e	Hydro-seed	LS	1	\$3,500	\$3,500
	Item 1 subtotal				\$1,213,450
2	Environmental				
2a	Engineering Design and Reporting	LS	1	\$85,000	\$85,000
2b	Contractor Plans and Submittals	LS	1	\$7,500	\$7,500
2c	Material sampling for disposal/imported (Assume 1 test every 500 CY)	LS	30	\$725	\$21,750
2d	Contractor Health and Safety	Day	30	\$875	\$26,250
2e	Air monitoring, material tracking during excavation, field oversight	Day	30	\$975	\$29,250
2f	Verification sampling	EA	60	\$75	\$4,500
	Item 2 subtotal				\$174,250
	Capital Cost Subtotal (Excludes OM&M)				\$1,387,700
	Contingency (20%)				\$277,540
				TOTAL	\$1,666,000

TABLE 40

**PRELIMINARY CAPITAL COST ESTIMATE
EXCAVATION AND OFFSITE DISPOSAL OF PCB CONTAMINATED SOILS ABOVE 10 PPM
1318 Niagara Street**

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT COST	TOTAL COST
1	Excavation and Disposal/Treatment				
1a	Remove and Dispose of PCB (<50 ppm) contaminated soils	Ton	600	\$58	\$34,800
1b	Remove and Dispose of PCB (>50 ppm) contaminated soils	Ton	3,500	\$138	\$483,000
1c	Back Fill Excavation with clean fill and rough grade site	CY	2,600	\$38	\$98,800
1d	Clean Fill (0.5 ft.) supply, place, compact and grade	CY	630	\$38	\$23,940
1e	Top Soil (0.5 ft) supply, place and final grading	CY	630	\$45	\$28,350
1f	Hydro-seed	LS	1	\$3,500	\$3,500
	Item 1 subtotal				\$672,390
2	Environmental				
2a	Engineering Design and Reporting	LS	1	\$65,000	\$65,000
2b	Contractor Plans and Submittals	LS	1	\$7,500	\$7,500
2c	Material sampling for disposal/imported (Assume 1 test every 500 CY)	LS	12	\$725	\$8,700
2d	Contractor Health and Safety	Day	20	\$875	\$17,500
2e	Air monitoring, material tracking during excavation, field oversight	Day	20	\$975	\$19,500
2f	Verification sampling	EA	40	\$75	\$3,000
	Item 2 subtotal				\$121,200
	Capital Cost Subtotal (Excludes OM&M)				\$793,590
	Contingency (20%)				\$158,718
				TOTAL	\$953,000

TABLE 41

**PRELIMINARY CAPITAL COST ESTIMATE
EXCAVATION AND OFFSITE DISPOSAL OF PCB CONTAMINATED SOILS ABOVE 25 PPM
1318 Niagara Street**

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT COST	TOTAL COST
1	Excavation and Disposal/Treatment				
1a	Remove and Dispose of PCB (<50 ppm) contaminated soils	Ton	400	\$58	\$23,200
1b	Remove and Dispose of PCB (>50 ppm) contaminated soils	Ton	3,500	\$138	\$483,000
1c	Back Fill Excavation with clean fill and rough grade site	CY	2,200	\$38	\$83,600
1d	Clean Fill (0.5 ft.) supply, place, compact and grade	CY	630	\$38	\$23,940
1e	Top Soil (0.5 ft) supply, place and final grading	CY	630	\$45	\$28,350
1f	Hydro-seed	LS	1	\$3,500	\$3,500
	Item 1 subtotal				\$645,590
2	Environmental				
2a	Engineering Design and Reporting	LS	1	\$65,000	\$65,000
2b	Contractor Plans and Submittals	LS	1	\$7,500	\$7,500
2c	Material sampling for disposal/imported (Assume 1 test every 500 CY)	LS	14	\$725	\$10,150
2d	Contractor Health and Safety	Day	18	\$875	\$15,750
2e	Air monitoring, material tracking during excavation, field oversight	Day	18	\$975	\$17,550
2f	Verification sampling	EA	30	\$75	\$2,250
	Item 2 subtotal				\$118,200
	Capital Cost Subtotal (Excludes OM&M)				\$763,790
	Contingency (20%)				\$152,758
				TOTAL	\$917,000

TABLE 42
SUMMARY OF REMEDIAL ALTERNATIVE COST ESTIMATES

	Alternative 1 No Action, MNA, SMP	Alternative 2 Source Removal (1 ppm) and SMP	Alternative 3 Source Removal (10 ppm) and SMP	Alternative 4 Source Removal (25 ppm) and SMP
Capital Cost SMP (including Environmental Easement)	\$15,000	\$15,000	\$15,000	\$15,000
Capital Cost Excavation/Cover	-	\$1,660,000	\$953,000	\$917,000
Total Capital Cost	\$15,000	\$1,670,000	\$968,000	\$932,000
Annual OM&M	\$11,400	\$9,300	\$9,300	\$9,300
Present Worth of OM&M	\$175,000	\$40,000	\$40,000	\$143,000
Years of OM&M	30	5	5	30
Total Present Worth	\$190,000	\$1,710,000	\$1,010,000	\$1,080,000

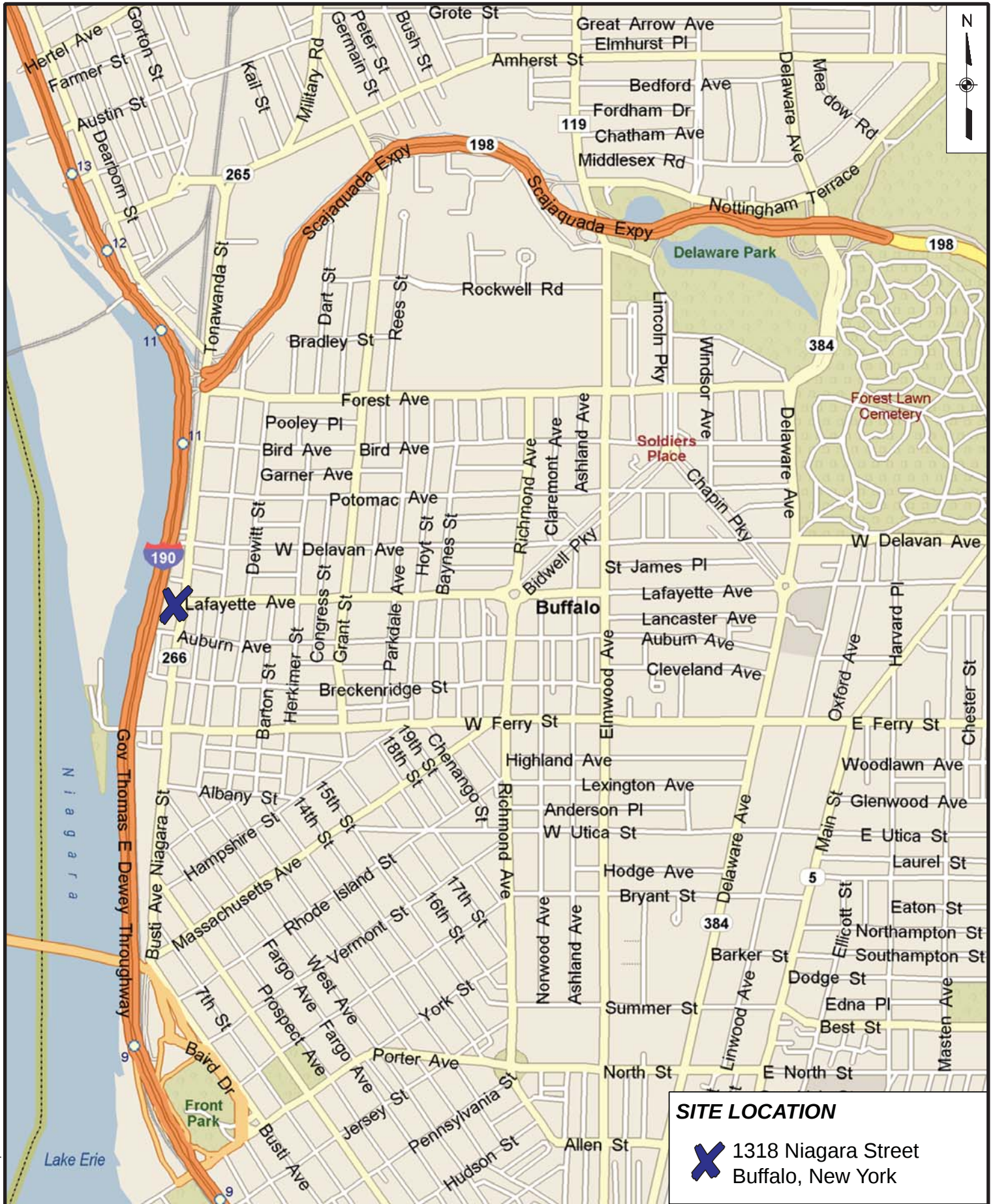
Notes:

Present worth calculated using Uniform Series Present Worth Factor of 15.37 (5% for 30 year period) for Alternative 1 and Alternative 4

Present worth calculated using Uniform Series Present Worth Factor of 4.33 (5% for 5 year period) for Alternative 2 and Alternative 3

Annual OM&M for Alternative 1 includes periodic (once per 3 years) soil sampling. Annual OM&M costs for Alternatives 2, 3, and 4 do not include periodic soil sampling.

FIGURES



SITE LOCATION

X 1318 Niagara Street
Buffalo, New York

1318 NIAGARA STREET SITE LOCATION MAP

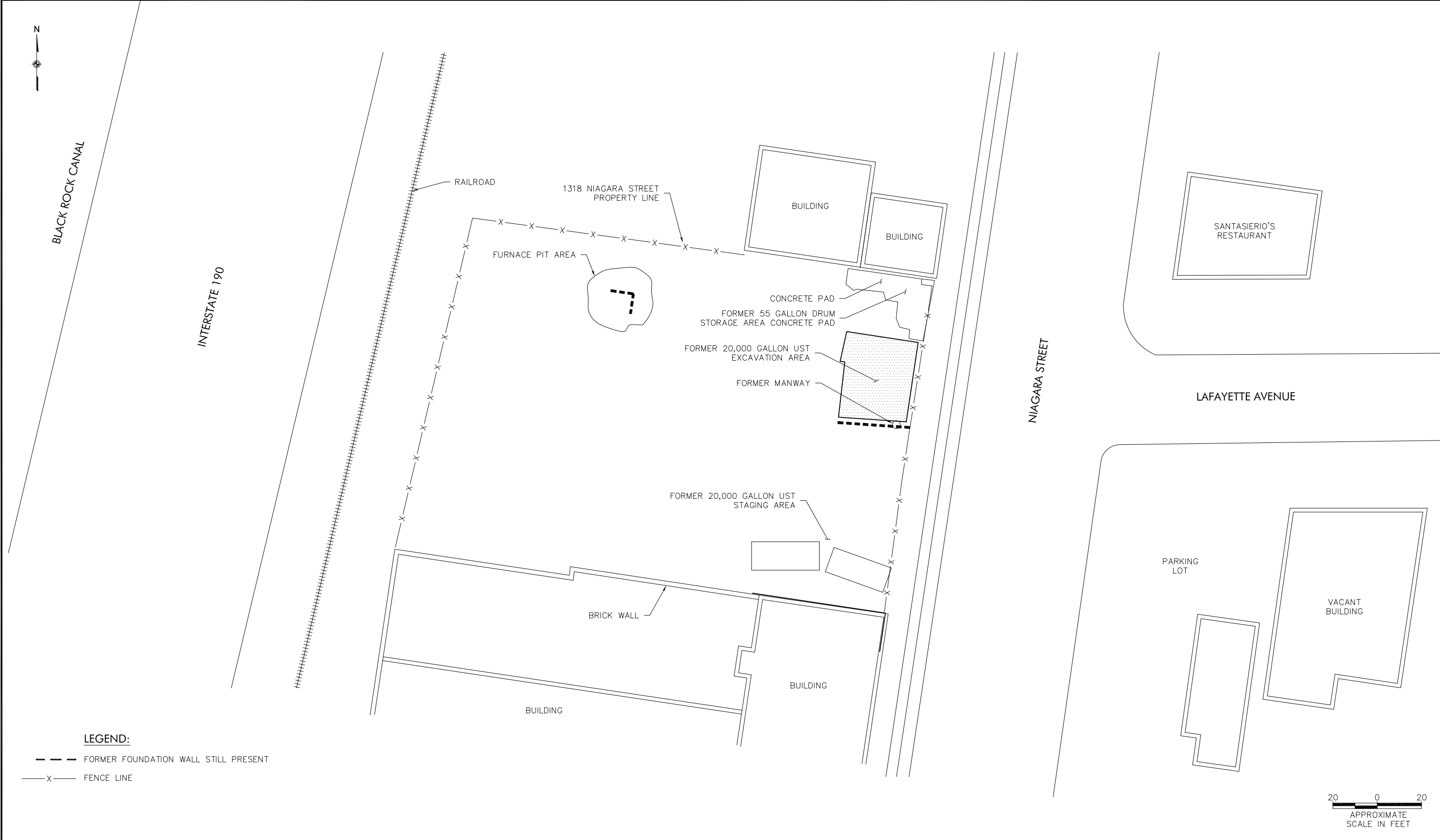
FIGURE NO.

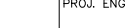
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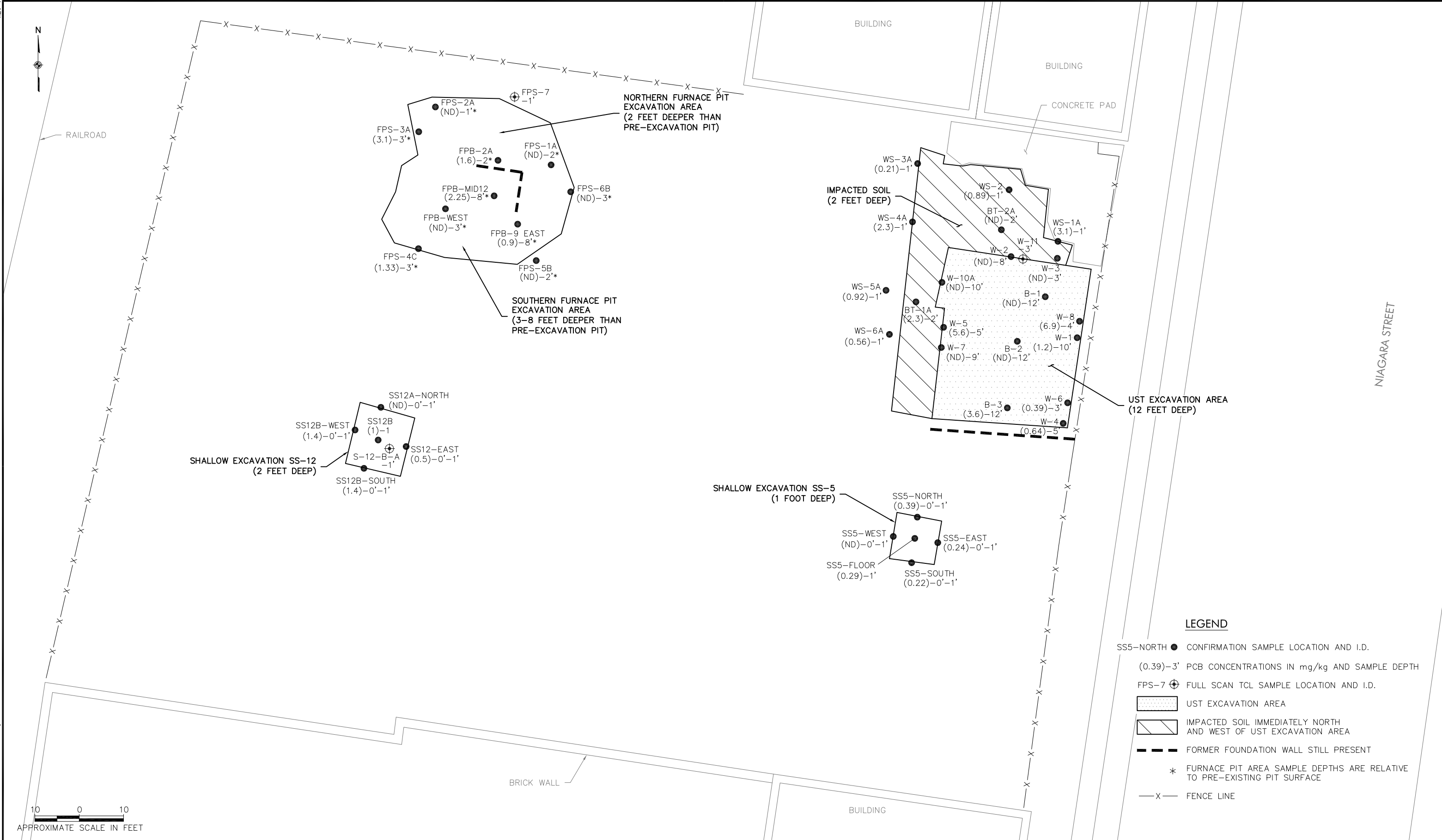


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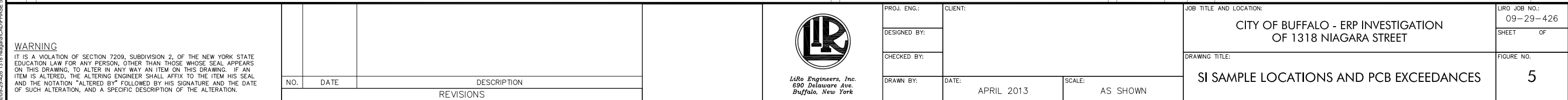
REV-1
4/09/20-4/26 1318 NiagaraCAD/PHASE 5/1318 NIAGARA STREET SITE PLAN.dwg 4/29/2013 10:15:59 AM ALK



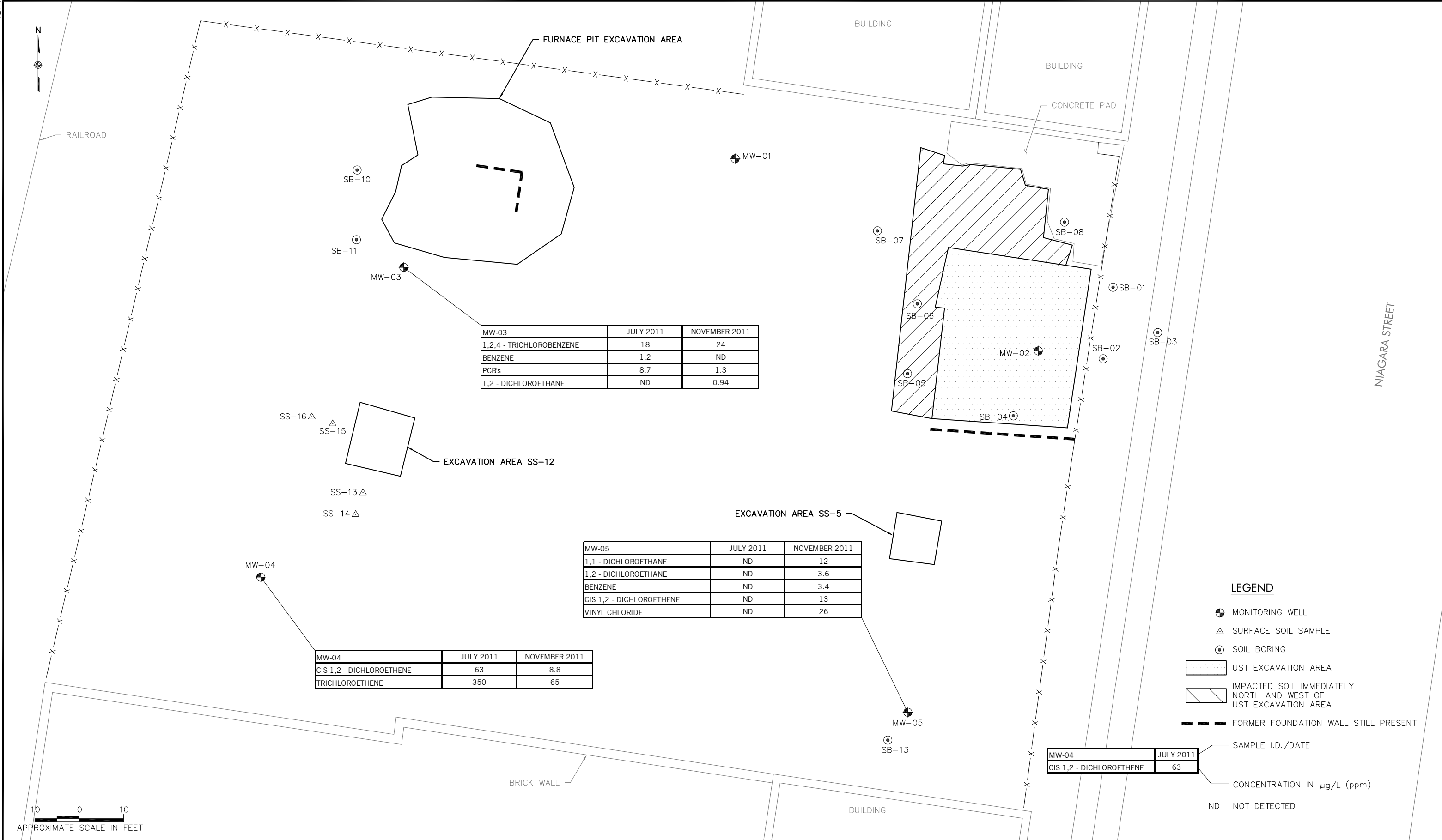
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					DESIGNED BY:					SHEET OF	
					CHECKED BY:						
					DRAWN BY:	DATE:	SCALE:	SITE PLAN		FIGURE NO. 2	
						APRIL 2013	AS SHOWN				
	NO.	DATE	DESCRIPTION								
	REVISIONS										



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					DESIGNED BY:					SHEET OF	
					CHECKED BY:					FIGURE NO.	
	NO.	DATE	DESCRIPTION		DRAWN BY:	DATE:	SCALE:	IRM-1 EXCAVATION AREAS AND ENDPOINT PCB RESULTS		4	
	REVISIONS					APRIL 2013	AS SHOWN				



REV-1
4/29/2013 11:15:33 AM, ANK
4/29/2013 11:15:33 AM, ANK



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DRAWN BY:	DATE: APRIL 2013
	SCALE: AS SHOWN

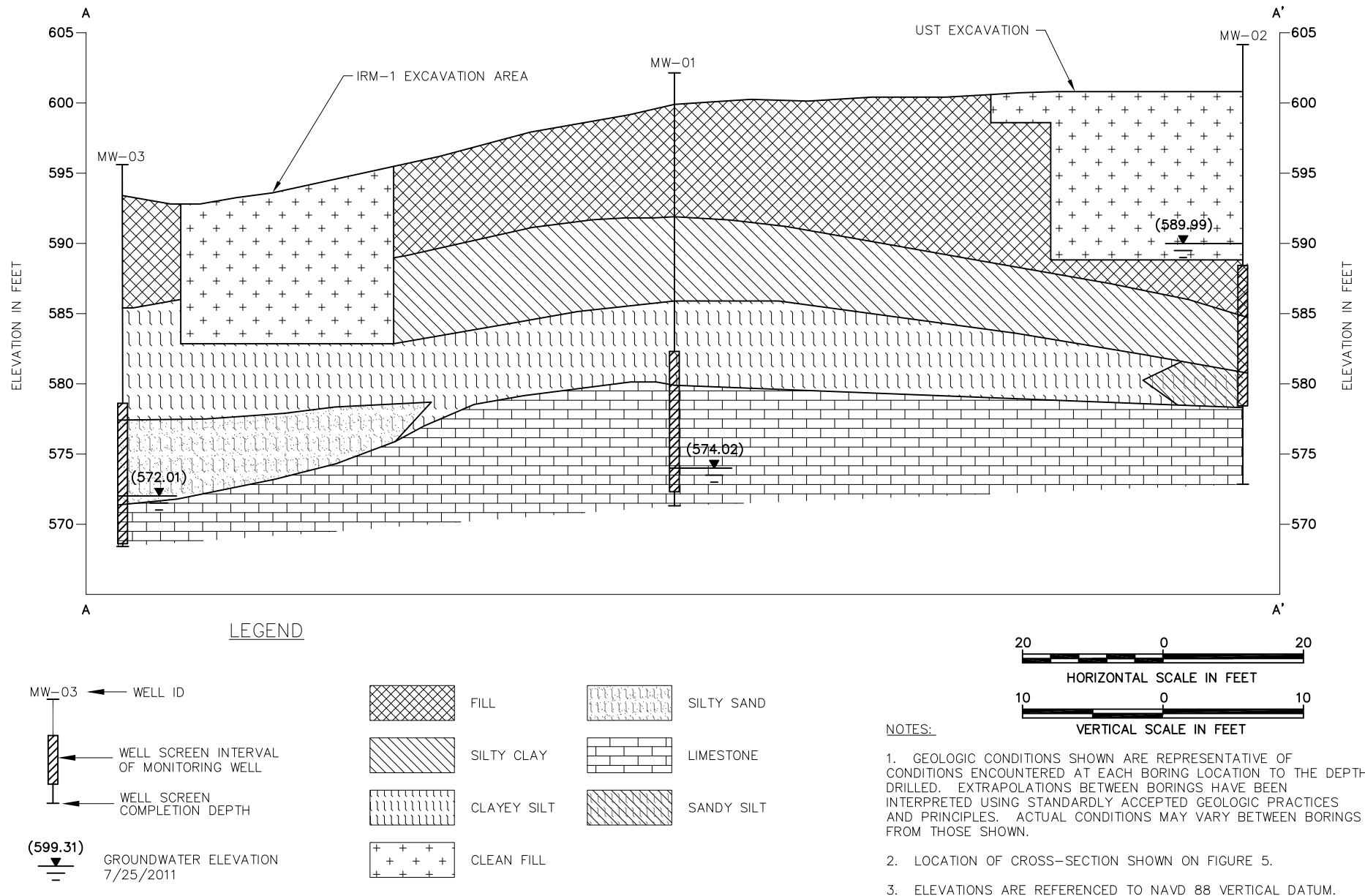
JOB TITLE AND LOCATION:

CITY OF BUFFALO - ERP INVESTIGATION
OF 1318 NIAGARA STREET

DRAWING TITLE:

SI AND SUPPLEMENTAL SI GROUNDWATER
SAMPLE RESULTS ORGANICS EXCEEDANCES

LIRO JOB NO.:	09-29-426
SHEET	OF
FIGURE NO.	6

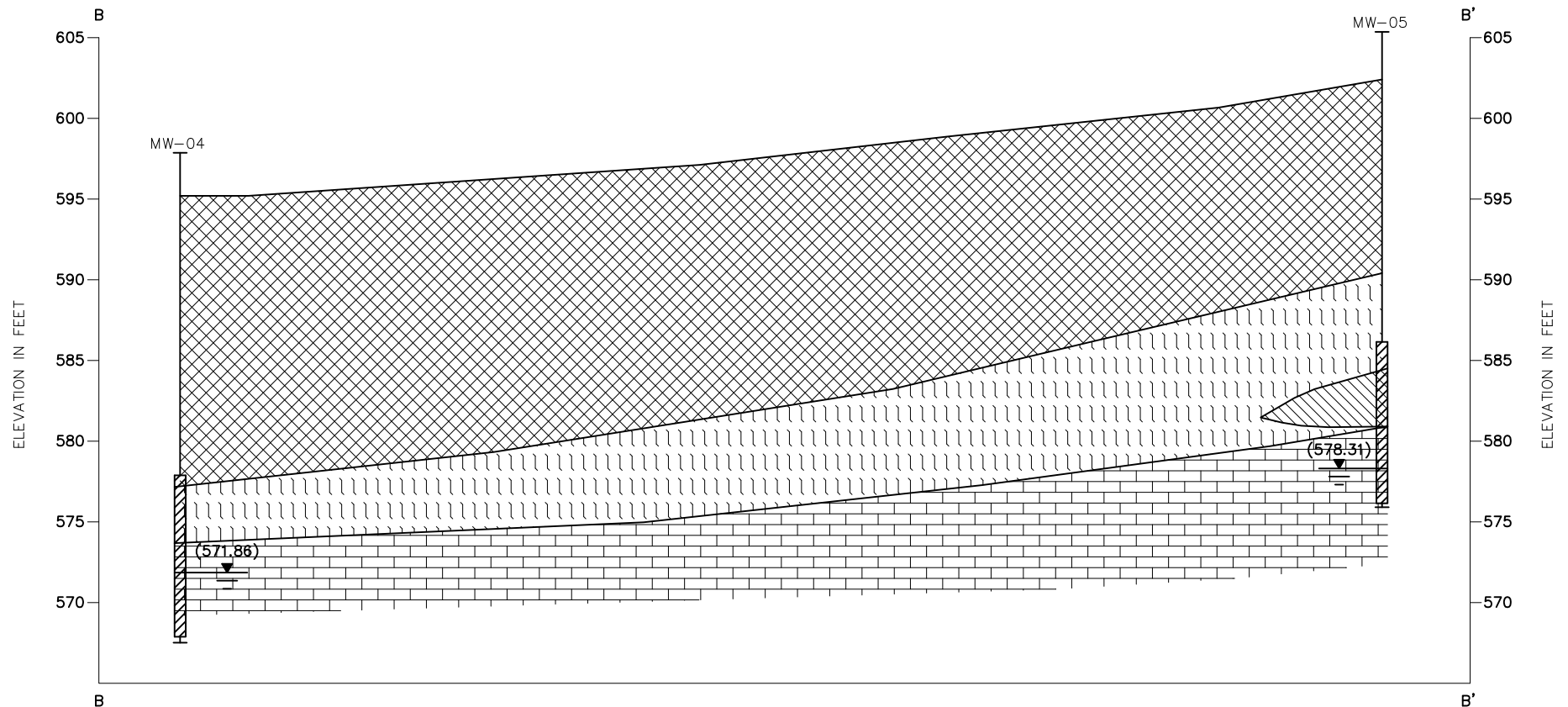


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CITY OF BUFFALO - ERP INVESTIGATION OF 1318 NIAGARA STREET GEOLOGICAL CROSS-SECTION A-A'

FIGURE NO.

7



LEGEND

MW-04 ← WELL ID

← WELL SCREEN INTERVAL OF MONITORING WELL

← WELL SCREEN COMPLETION DEPTH

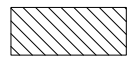
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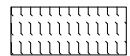
GROUNDWATER ELEVATION
7/25/2011



FILL



SILTY CLAY



CLAYEY SILT



LIMESTONE



HORIZONTAL SCALE IN FEET



VERTICAL SCALE IN FEET

NOTES:

1. GEOLOGIC CONDITIONS SHOWN ARE REPRESENTATIVE OF CONDITIONS ENCOUNTERED AT EACH BORING LOCATION TO THE DEPTH DRILLED. EXTRAPOLATIONS BETWEEN BORINGS HAVE BEEN INTERPRETED USING STANDARDLY ACCEPTED GEOLOGIC PRACTICES AND PRINCIPLES. ACTUAL CONDITIONS MAY VARY BETWEEN BORINGS FROM THOSE SHOWN.
2. LOCATION OF CROSS-SECTION SHOWN ON FIGURE 5.
3. ELEVATIONS ARE REFERENCED TO NAVD 88 VERTICAL DATUM.



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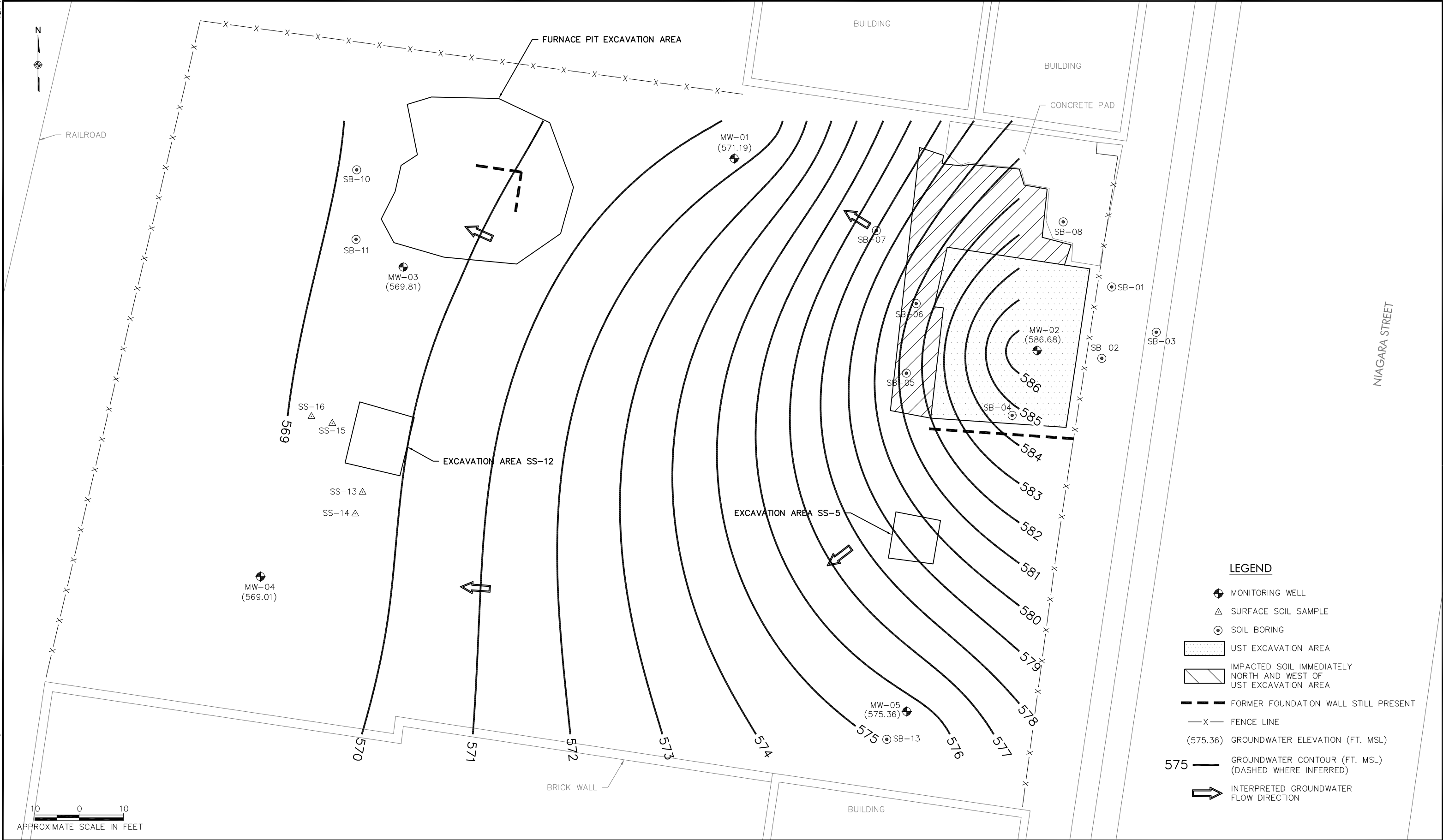
CITY OF BUFFALO - ERP INVESTIGATION OF 1318 NIAGARA STREET GEOLOGICAL CROSS-SECTION B-B'

FIGURE NO.

8

REV-1

400-29-426 1318 Niagara Street CW Contour.dwg 4/29/2013 10:17:45 AM AMK



LEGEND

- MONITORING WELL
- SURFACE SOIL SAMPLE
- SOIL BORING
- UST EXCAVATION AREA
- IMPACTED SOIL IMMEDIATELY NORTH AND WEST OF UST EXCAVATION AREA
- FORMER FOUNDATION WALL STILL PRESENT
- FENCE LINE
- GROUNDWATER ELEVATION (FT. MSL)
- GROUNDWATER CONTOUR (FT. MSL) (DASHED WHERE INFERRED)
- INTERPRETED GROUNDWATER FLOW DIRECTION

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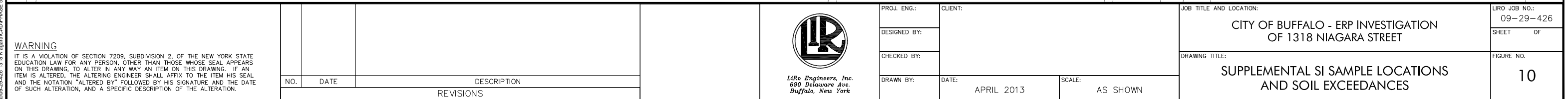
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REVISIONS		

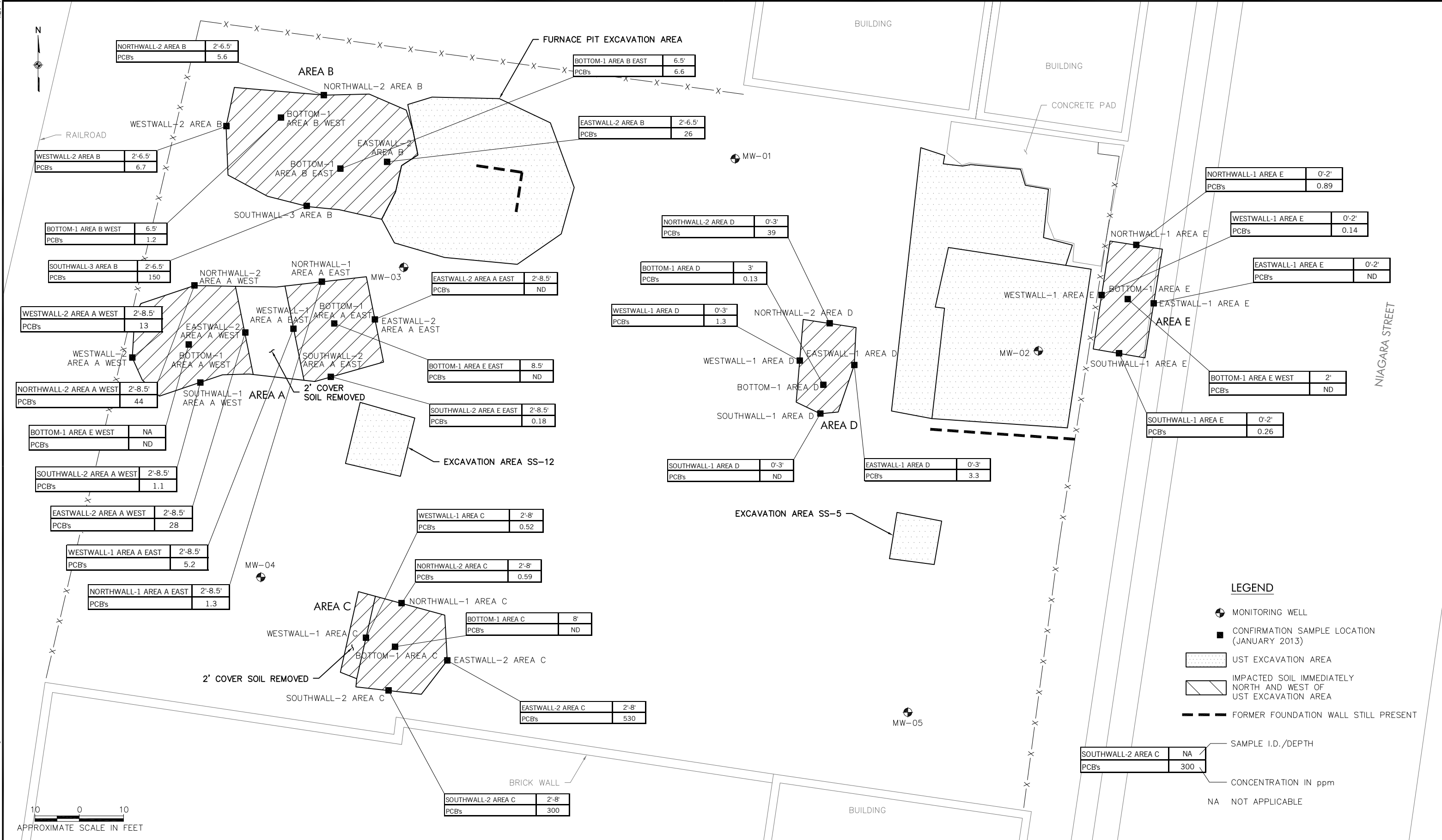


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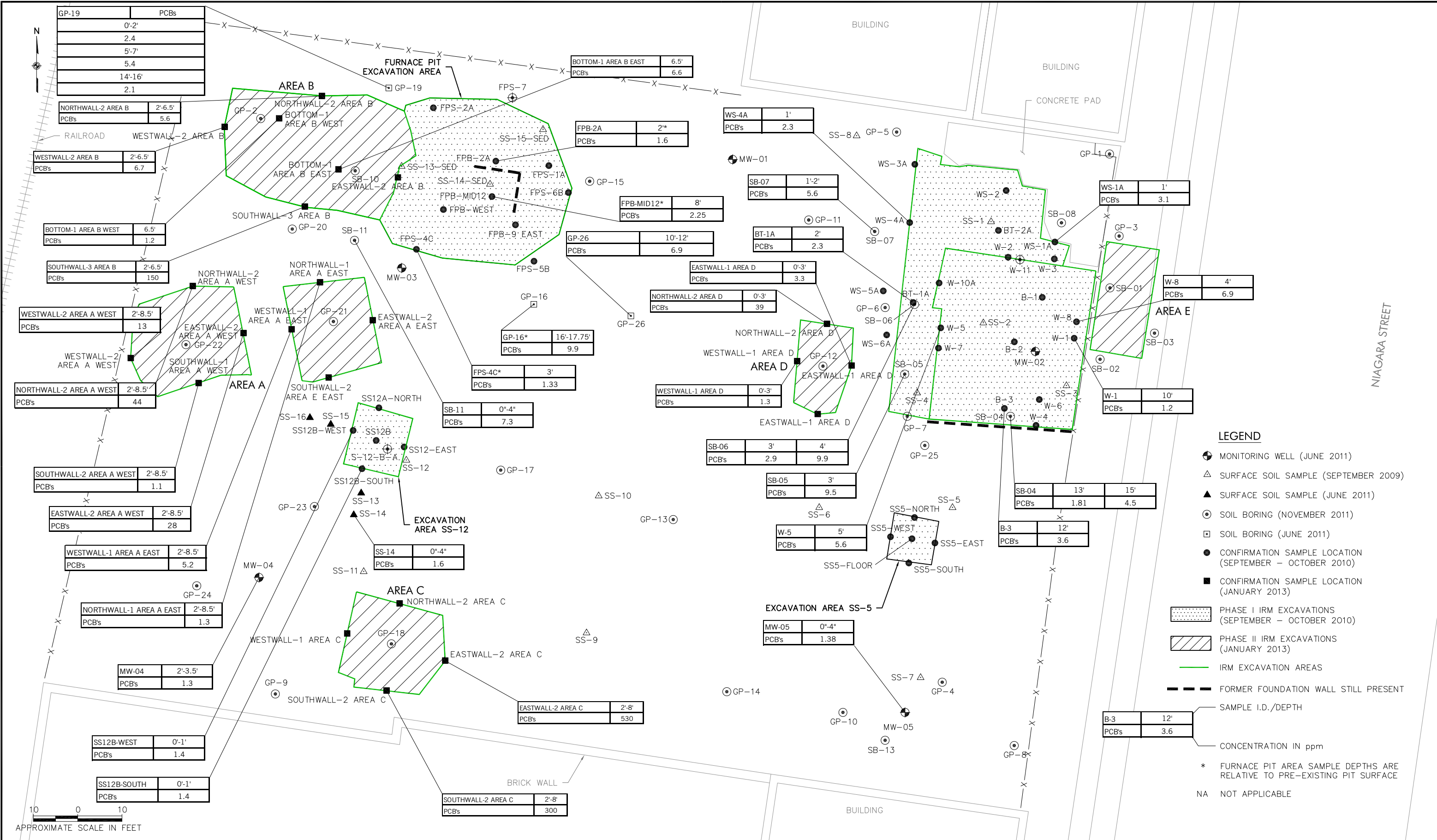
PROJ. ENG.:	CLIENT:
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	SCALE: AS SHOWN

JOB TITLE AND LOCATION:	LIRO JOB NO.:
CITY OF BUFFALO - ERP INVESTIGATION OF 1318 NIAGARA STREET	09-29-426
DRAWING TITLE:	SHEET OF
GROUNDWATER ELEVATION CONTOUR MAP JULY 2011	FIGURE NO. 9





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	REVISIONS				
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	DESIGNED BY:				
	CHECKED BY:			DRAWING TITLE: IRM-2 EXCAVATION AREAS AND LIMITS	FIGURE NO. 11
	DRAWN BY:	DATE: APRIL 2013	SCALE: AS SHOWN		



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NO.	DATE	DESCRIPTION
REVISIONS		

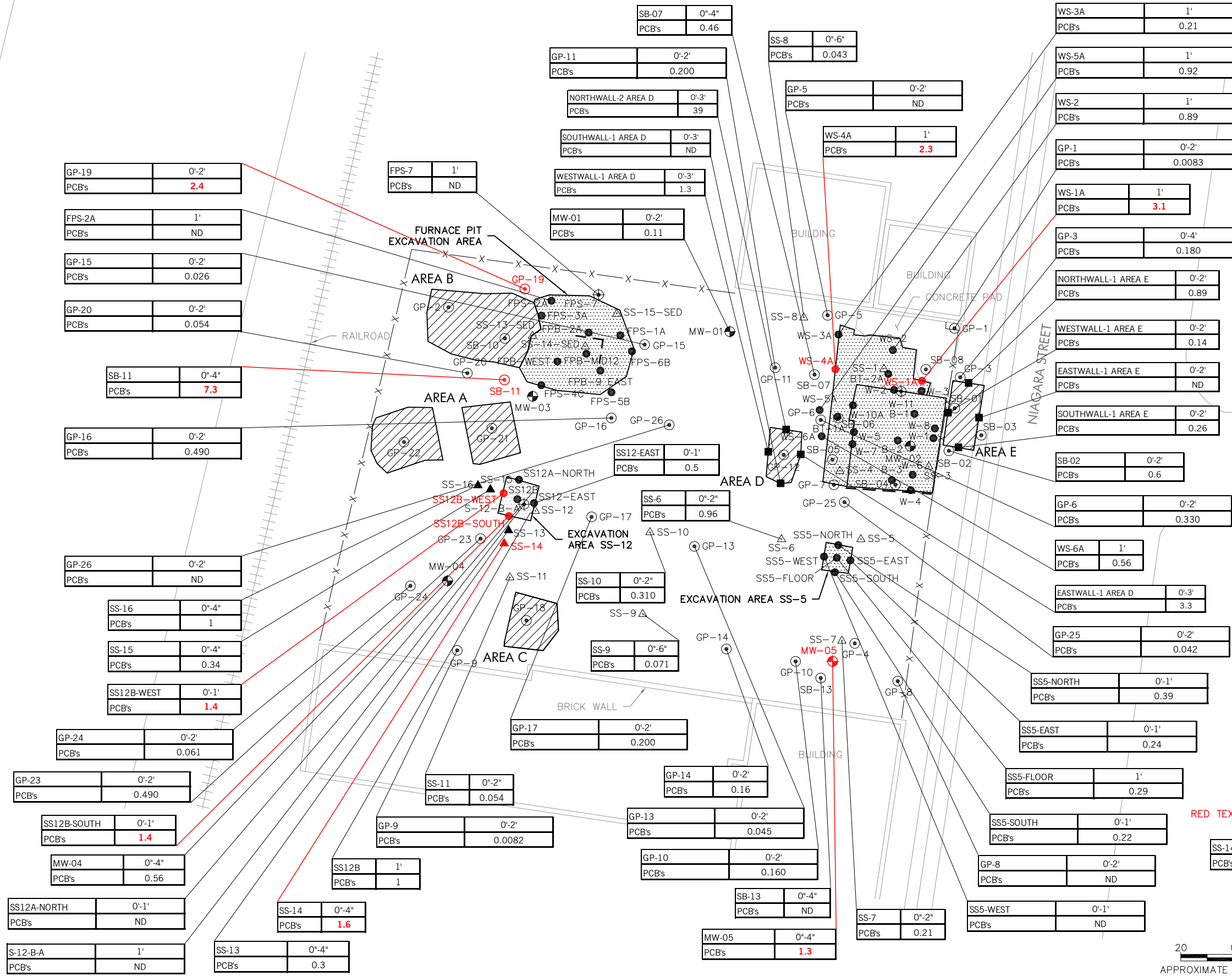


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	SCALE: AS SHOWN

JOB TITLE AND LOCATION:	LIRO JOB NO.:
CITY OF BUFFALO - ERP INVESTIGATION OF 1318 NIAGARA STREET	09-29-426
DRAWING TITLE:	SHEET OF
COMMERCIAL SCO EXCEEDANCES	FIGURE NO.
	12

BLACK ROCK CANAL



SANTASIERIO'S RESTAURANT

LAFAYETTE AVENUE

PARKING LOT

RED TEXT/SAMPLE LOCATIONS

SS-14	0'-4"
PCB's	1.6

* FURNACE PIT AREA SAMPLE DEPTHS ARE RELATIVE TO PRE-EXISTING PIT SURFACE
ND NOT DETECTED

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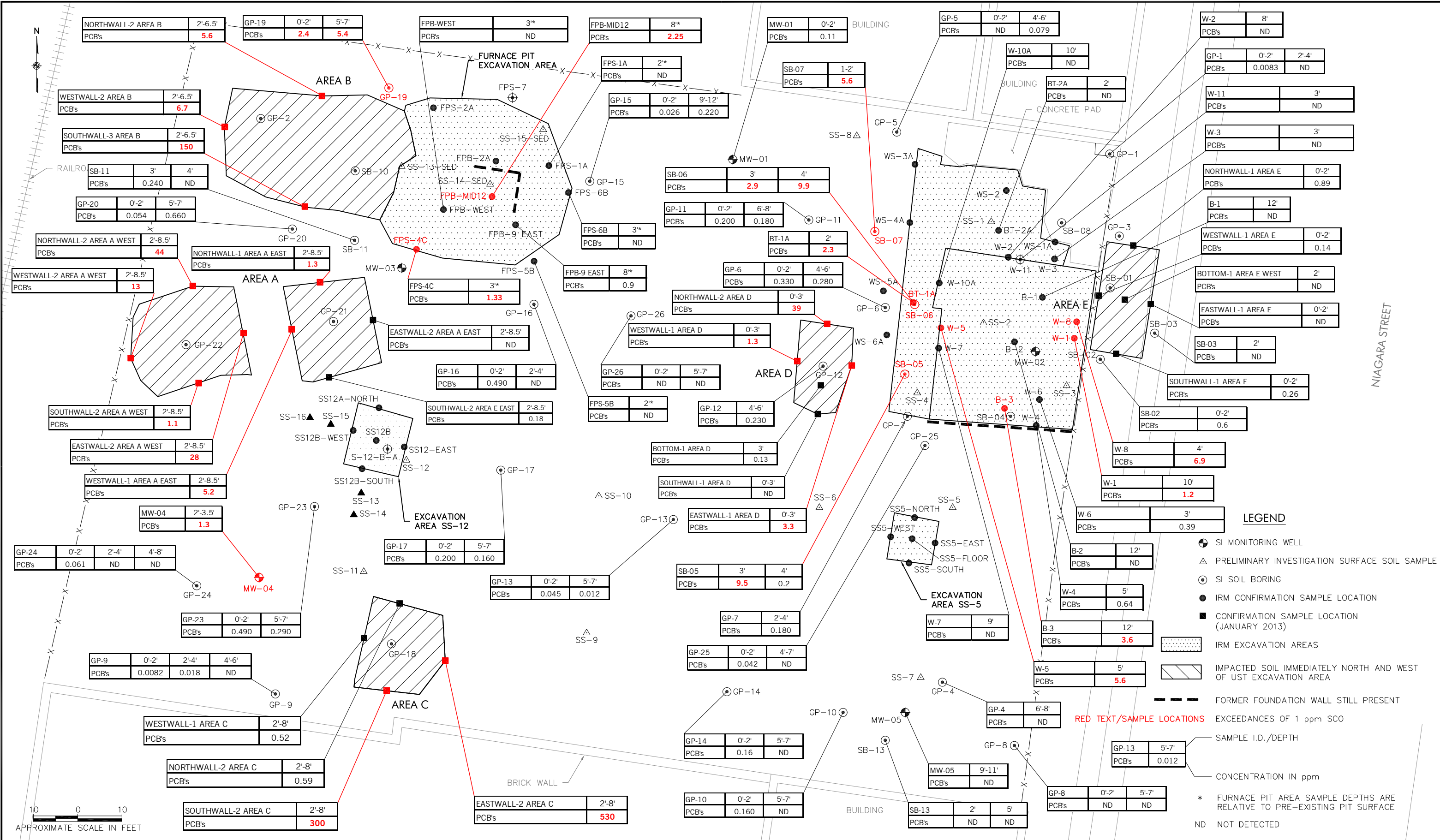
NO.	DATE	DESCRIPTION
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PROJ. ENG.:	CLIENT:
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CHECKED BY:	
DRAWN BY:	DATE: MAY 2013
	SCALE: AS SHOWN

JOB TITLE AND LOCATION:	JLRO JOB NO.:
CITY OF BUFFALO - ERP INVESTIGATION OF 1318 NIAGARA STREET	09-29-426
DRAWING TITLE:	SHEET OF
PCBs IN SHALLOW SOIL SAMPLES (0-1')	FIGURE NO.
	13



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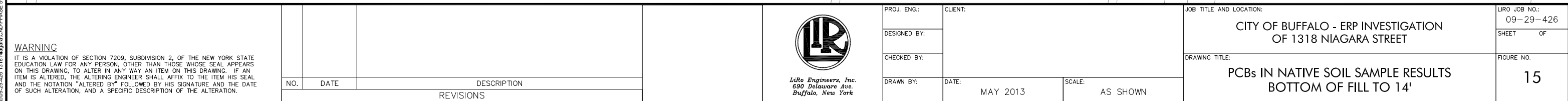
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REVISIONS		

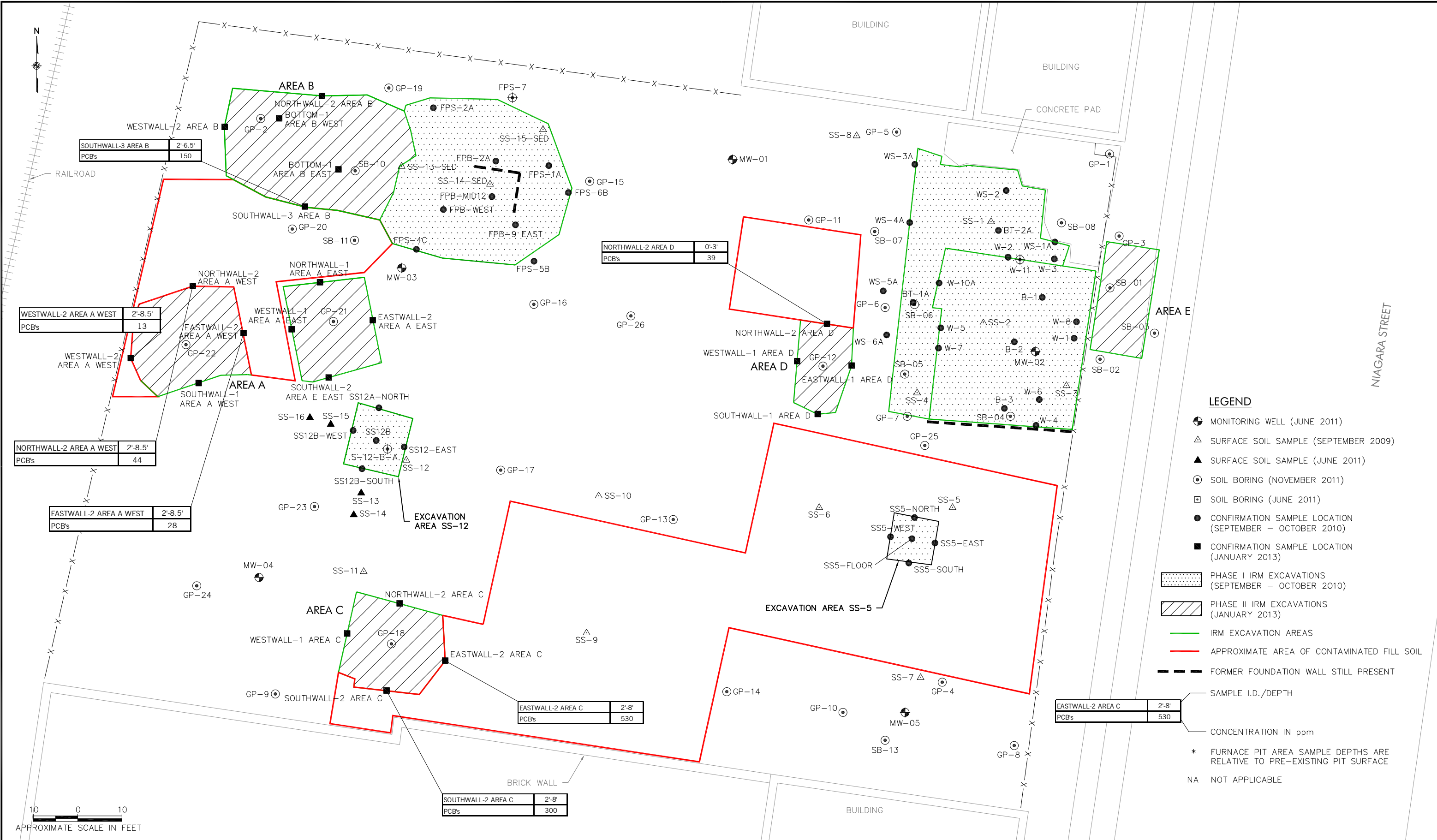


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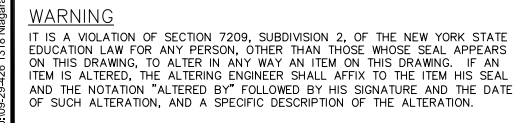
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DESIGNED BY:	
CHECKED BY:	
DRAWN BY:	DATE: MAY 2013
	SCALE: AS SHOWN

JOB TITLE AND LOCATION:	LIRO JOB NO.:
CITY OF BUFFALO - ERP INVESTIGATION OF 1318 NIAGARA STREET	09-29-426
DRAWING TITLE:	SHEET OF
PCBs IN FILL SAMPLE RESULTS 1' TO BOTTOM OF FILL	FIGURE NO.
	14

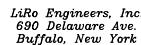




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NO.		DATE		DESCRIPTION		REVISIONS		DRAWING TITLE: ALTERNATIVE 3 - EXCAVATION/DISPOSAL OF SOILS OVER 10 PPM		FIGURE NO.: 17									



NO.	DATE	DESCRIPTION
REVISIONS		



PROJ. ENG.:	CLIENT:	
DESIGNED BY:		
CHECKED BY:		
DRAWN BY:	DATE: JUNE 2013	SCALE: AS SHOWN

JOB TITLE AND LOCATION: CITY OF BUFFALO - ERP INVESTIGATION OF 1318 NIAGARA STREET	LIR0 JOB NO.: 09-29-426
DRAWING TITLE: ALTERNATIVE 4 - EXCAVATION/DISPOSAL OF SOILS OVER 25 PPM	SHEET OF FIGURE NO. 18

ATTACHMENT A



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: 1318 Niagara Street

CLIENT: City of Buffalo

BORING CONTRACTOR: Buffalo Well Drilling

GROUNDWATER: 21.5'

CAS.

SAMPLER

TUBE

BORING NO: MW-01

SHEET: 1 of 1

JOB NO.: 09-29-426

LOCATION: 1318 Niagara Street, Buffalo, NY

GROUND ELEVATION:

DATE

TIME

LEVEL

TYPE

TYPE

split spoon

DATE STARTED: June 24, 2011

DATE FINISHED: June 24, 2011

DRILLER: Joe Gardner

GEOLOGIST: Kris Charney

REVIEWED BY:

DEPTH FEET	SAMPLE					DESCRIPTION			USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
0-2				3 5	5 1'	Br		Sandy SILT	Fill	0-2' sampled at 10:30 for VOCs, SVOCs, PCBs, Metals, & Pests
2-4				4 5	4 5	9"	Br	Clayey SILT w gravel	Fill	
4-6				3 3	3 5	1'	Br	Clayey SILT w gravel	Fill	
6-8				5 10	6 14	1'	Br	Clayey SILT w more gravel than previous depths	Fill	
8-10				5 12	7 12	1.5'	Br	stiff Silty CLAY, moderate plasticity	CL	
10-12				14 24	14 24	2'	Br	stiff Silty CLAY, moderate plasticity	CL	10-12' sampled at 11:30 for VOCs, SVOCs, PCBs, Metals, & Pests
12-14				7 14	7 18	1.5'	Br	stiff Silty CLAY, moderate plasticity	CL	
14-16				10 19	14 22	1.75'	Br	low Clayey SILT w gravel	ML	
16-18				21 30	31 33	1.5'	Br	low Clayey SILT w gravel	ML	
18-20				10	50/5	9"	Br	low Clayey SILT w gravel	ML	
20-28				50/0		0"	Gr	No recovery, bedrock refusal at 20'. Roller bit through bedrock (limestone) to 28'		Most of drilling fluids recovered during bedrock drilling
								End of Boring at 28'	Bed rock	
									Bed rock	

COMMENTS: Due to weather, PID was not working properly

PROJECT NO.:

09-29-426

BORING NO.:

MW-01



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: 1318 Niagara Street

CLIENT: City of Buffalo

BORING CONTRACTOR: Buffalo Well Drilling

GROUNDWATER: 21.5'

CAS.

SAMPLER

TUBE

BORING NO:

MW-02

SHEET:

1 of 1

JOB NO.:

09-29-426

LOCATION:

1318 Niagara Street, Buffalo, NY

GROUND ELEVATION:

DATE

TIME

LEVEL

TYPE

TYPE

DIA.

WT.

FALL

split spoon

2"

DATE STARTED:

June 23, 2011

DATE FINISHED:

June 23, 2011

DRILLER:

Joe Gardner

GEOLOGIST:

Kris Charney

REVIEWED BY:

DEPTH FEET	SAMPLE						DESCRIPTION			USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS		REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
				PER 6"							
0-10									backfill from excavation work	Fill	
10-12				7 2	3 2	8"	Br-Gr		Sandy SILT w gravel, red brick, moist	Fill	1.8 ppm
12-14				1 4	2 6	8"	Br		Clayey SILT w gravel, wet	Fill	3.9 ppm
14-16				1 20	11 26	1'	Br		Silty CLAY, moist to wet	CL	110 ppm
16-18				18	50/3	8"	Br		Silty CLAY w gravel, moist to wet	CL	253 ppm / Sampled at 9:45 for VOCs, Pest, Metals, PCBs, SVOCs
18-20				7	50/3	6"	Br		Sandy SILT w gravel	SM	45.3 ppm /. 19.5 refusal (bedrock) / rollerbit to 28'
20-28							Gr		Roller bit through bedrock (limestone) to 28'	Bed rock	Most of drilling fluids recovered during bedrock drilling
									End of Boring at 28'	Fill	
										Bed rock	
										Bed rock	

COMMENTS: Hole would not stay open, even after flushing,
hole caved in to 23'

PROJECT NO.:

09-29-426

BORING NO.:

MW-02



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: 1318 Niagara Street

CLIENT: City of Buffalo

BORING CONTRACTOR: Buffalo Well Drilling

GROUNDWATER: 21.5'

CAS.

SAMPLER

TUBE

BORING NO: MW-03

SHEET: 1 of 1

JOB NO.: 09-29-426

LOCATION: 1318 Niagara Street, Buffalo, NY

GROUND ELEVATION:

DATE	TIME	LEVEL	TYPE	TYPE
				DIA.
				WT.
				FALL

split spoon
2"

DATE STARTED:	June 27, 2011
DATE FINISHED:	June 27, 2011
DRILLER:	Joe Gardner
GEOLOGIST:	Kris Charney
REVIEWED BY:	

DEPTH FEET	SAMPLE					DESCRIPTION			USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
0-2				3 3	4 3	1'	Br	Sandy SILT w gravel	Fill	0.0 ppm
2-4				4 3	6 3	1'	Br	Sandy SILT w gravel	Fill	0.0 ppm
4-6				6 9	7 10	1.5'	Br	Sandy SILT w gravel, red brick	Fill	2.9 ppm
6-8				10 11	10 12	3"	Br	Sandy SILT w gravel, red brick, concrete pieces	Fill	3.3 ppm
8-10				6 5	5 5	1'	Br	Clayey SILT, tr gravel	ML	3.7 ppm
10-12				6 15	12 15	1'	Br	Clayey SILT, tr gravel, moist	ML	6.7 ppm
12-14				4 7	6 11	1.5'	Br	Clayey SILT, tr gravel, moist	ML	6.2 ppm
14-16				5 11	6 15	2'	Br	Clayey SILT, tr gravel, moist, slight mottling	ML	1.8 ppm
16-18				28 50/3	33	2'	Br	Sandy SILT, moist, cobbles	SM	7.5 ppm
18-20				30 68	34 40	1.25'	Tn-Br	Silty SAND, pieces of rock/gravel	SM	8.9 ppm / 18-20' sampled @ 11:25 for VOCs, SVOCs, Pests, PCBs, & Metals
20-21				17 50/3	52	1'	Tn-Br	Silty SAND, pieces of rock/gravel		3.2 ppm / bedrock refusal at 21'
21-25							Gr	Cored through bedrock (limestone) to 25'		Loss of recirculating water around 23'
								End of Boring at 25'	Bed rock	
									Bed rock	

COMMENTS:

PROJECT NO.: 09-29-426

BORING NO.: MW-03



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: 1318 Niagara Street

CLIENT: City of Buffalo

BORING CONTRACTOR: Buffalo Well Drilling

GROUNDWATER: 21.5'

CAS.

SAMPLER

TUBE

BORING NO: MW-04

SHEET: 1 of 1

JOB NO.: 09-29-426

LOCATION: 1318 Niagara Street, Buffalo, NY

GROUND ELEVATION:

DATE	TIME	LEVEL	TYPE	TYPE		split spoon	
				DIA.		2"	
				WT.			
				FALL			

DATE STARTED: June 20, 2011

DATE FINISHED: June 20, 2011

DRILLER: Joe Gardner

GEOLOGIST: Jeff Rowley

REVIEWED BY:

DEPTH FEET	SAMPLE					DESCRIPTION			USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
0-2				6 5	6 4	17"	Br	0-2' - Br med dense sandy SILT (no plasticity), trace red brick, gravel, moist	Fill	1.8 ppm / 0-2' Sampled at 8:30 for VOCs, Pest, Metals, PCBs, & SVOCs
2-4				4 8	12 9	19"	Dk Br - Gr	2-2.5' - SAA / 2.5-3' - Br silty CLAY (med plasticity, soft) tr gravel / 3-3.5' - wood (black staining at 3') / 3.5-4' - Gr silty CLAY (med plasticity, soft, tr gravel), moist	Fill	1.1 ppm / 2-3.5' sampled at 1:45 for VOCs, Pests, Metals, PCBs, & SVOCs
4-6				27 5	7 10	0"	N/A	4-6' - No recovery, wood in shoe	Fill	
6-8				32 10	22 12	0"	N/A	6-8' - No recovery, wood in shoe	Fill	water at 8'
8-10				12 10	8 12	0"	N/A	8-10' No recovery	SM	
10-12				6 10	6 12	0"	N/A	10-12' No recovery	Fill	
12-14				6 11	8 12	0.4"	R Br	12-14' - Med dense, no plasticity, silty CLAY, tr gravel & wood, wood in bottom of shoe, moist	Fill	1.5 ppm
14-16				7 12	8 12	19.5"	R Br	SAA - 14-16'	Fill	0.0 ppm
16-18				12 8	12 10	0"	N/A	No recovery @ 14:42 wood in bottom of shoe	Fill	
18-20				5 11	6 16	0.6"	L Br	Clayey SILT (no plasticity, moist, tr sand and gravel)	ML	0.0 ppm
20-22				7 34	28 32	0.8"	L Br	Silty SAND, med fine, moist to wet	SM	0.0 ppm / GW at 21.5'
22-23				12 50/3	12	0.5"	Gr	Clayey SAND, silt (low plasticity, dense, moist)	SC	
23-27.5							Gr	Roller bit through bedrock (limestone), void at 25.5 through 26 ft bgs	Bed rock	No drilling fluids recovered after 25.5 ft bgs
								End of Boring at 27.5 ft bgs	Bed rock	

COMMENTS:

PROJECT NO.: 09-29-426

BORING NO.: MW-04

 LiRo Engineers, Inc.										TEST BORING LOG			
PROJECT: 1318 Niagara Street										BORING NO: MW-05			
CLIENT: City of Buffalo										SHEET: 1 of 1			
BORING CONTRACTOR: Buffalo Well Drilling										JOB NO.: 09-29-426			
GROUNDWATER:										LOCATION: 1318 Niagara Street, Buffalo, NY			
CAS.										GROUND ELEVATION:			
SAMPLER										DATE STARTED: June 22, 2011			
TUBE										DATE FINISHED: June 22, 2011			
DATE										DRILLER: Joe Gardner			
TIME										GEOLOGIST: Jeff Rowley			
LEVEL										REVIEWED BY:			
TYPE													
DIA.													
WT.													
FALL													
DEPTH FEET	SAMPLE					DESCRIPTION			USCS	REMARKS			
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION					
0-2				3 9	4 11	0.85"	Br	Med Dense	0-0.5' - Silty gravelly SAND (coarse, med fine) moist / 0.5-2' - Sandy clayey SILT (no plasticity, moist)	Fill	0-4" sampled at 9:00 for VOCs, SVOCs, PCB's, Metals, & Pests		
2-4				10 10	11 9	14"	R Br	Stiff	2-4' - Silty CLAY (no plasticity, moist)	Fill			
4-6				3 6	6 6	3"	R Br	Stiff	SAA	Fill			
6-8				7 8	7 8	23"	Dk Br / R Br	Stiff	6-6.5' - SAA / 6.5-7' - Dk brown clayey SILT (no plasticity, moist) tr gravel, red brick / 7-8' - R Br silty CLAY (no plasticity, stiff, moist)	Fill			
8-10				2 4	2 5	5"	Br / R Br	Dense	8-9' - Brown silty SAND (med fine, wet) tr clay and gravel / 9-10' - Red Brown silty CLAY (no plasticity, stiff, wet)	SM	9-11' sampled at 10:30 for VOCs, SVOCs, PCB's, Metals, & Pests		
10-12				11 18	16 12	13"	R Br / Br / R Br	Dense	10-10.5' - SAA / 10.5-11' - Brown silty SAND (coarse to med fine, moist) tr red brick / 11-12' Red brown silty CLAY (no plasticity, stiff, moist)	Fill			
12-14				4 8	6 15	18"	R Br / Br / R Br	Dense	12-13.5' - Red brown silty CLAY (low plasticity, stiff, dense, moist) tr gravel / 13.5-13.75' - Brown silty SAND (med fine density, wet sand lens) / 13.75-14' - Red brown silty CLAY (low plasticity, stiff, dense, moist) tr gravel	CL/ SM/ CL			
14-16				3 9	7 15	17"	R Br	Dense - Med dense-Dense	14-14.5' - SAA / 14.5-15.5' - Red brown clayey SILT (no plasticity, med density, moist) tr gravel / 15.5-16' - Red brown silty CLAY (no plasticity, very stiff, dense, moist)	CL/ SC/C L			
16-18				20 17	19 15	18"	R Br / Br / R Br	Dense - Med dense-Dense	16-16.5' - SAA / 16.5-17' - Brown silty SAND (med to fine, med density, moist) Sand lens) / 17-18' - Red brown gravelly silty CLAY (no plasticity, stiff, dense, moist) till	CL/ SM/ GC			
18-20				6 26	15 50/3	N/A	R Br	Dense	18-20.5' - SAA	GC			
20-21.5				28 40	30 50/1	N/A	Lt Br	Med Dense	20.5-21.5' - Light brown silty SAND (fine, wet), auger refusal at 21.5'	SM			
21.5-29.5							Gr		Roller bit through bedrock (limestone)	Bed rock	Most of drilling fluids recovered during bedrock drilling		
End of Boring 29.5 ft bgs													
COMMENTS: Boring was advanced to 29.5, but would not stay open.										PROJECT NO.: 09-29-426			
Driller flushed boring and well was set at 26 ft bgs. PID not operating correctly										BORING NO.: MW-05			



BORING NO:	SB-01
SHEET:	1 of 1
JOB NO.:	09-29-426
LOCATION:	1318 Niagara Street, Buffalo, NY
GROUND ELEVATION:	
DATE STARTED:	June 20, 2011
DATE FINISHED:	June 20, 2011
DRILLER:	N/A
GEOLOGIST:	Kris Charney
REVIEWED BY:	

CLIENT: City of Buffalo

LOCATION:	1318 Niagara Street, Buffalo, NY
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GROUND ELEVATION: _____

DATE STARTED: June 20, 2011

DATE STARTED:	June 20, 2011
DATE FINISHED:	June 20, 2011

DATE FINISHED:	JUNE 20, 2011
DRILLER:	N/A

DRILLER:	N/A
GEOLOGIST:	Kris Charney

GEOLOGIST:	RHS Chanley
REVIEWED BY:	

[illegible]

PROJECT NO.:	09-29-426
BORING NO.:	SB-01



BORING NO:	SB-02
SHEET:	1 of 1
JOB NO.:	09-29-426
LOCATION:	1318 Niagara Street, Buffalo, NY
GROUND ELEVATION:	
DATE STARTED:	June 20, 2011
DATE FINISHED:	June 20, 2011
DRILLER:	N/A
GEOLOGIST:	Kris Charney
REVIEWED BY:	

CLIENT: City of Buffalo

LOCATION:	1318 Niagara Street, Buffalo, NY
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GROUND ELEVATION: _____

DATE STARTED: June 20, 2011

DATE FINISHED: June 30, 2011

DATE FINISHED:	JUNE 29, 2022
DRILLER:	N/A

GEOLOGIST: Kris Charney

REVIEWED BY: _____

[illegible]

PROJECT NO.:	09-29-426
BORING NO.:	SB-02

LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: 1318 Niagara Street

CLIENT:	City of Buffalo
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BORING CONTRACTOR: Buffalo Well Drilling

GROUNDWATER:

CAS.

SAMPLER

TUBE

BORING NO: SB-04

SHEET: 1 of 1

JOB NO.: 09-29-426

LOCATION: 1318 Niagara Street, Buffalo, NY

GROUND ELEVATION:

DATE STARTED: June 20, 2011

DATE FINISHED: June 20, 2011

DRILLER:	N/A
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GEOLOGIST: Kris Charney

REVIEWED BY:

DATE	TIME	LEVEL	TYPE	TYPE
				DIA.
				WT.
				FALL

[illegible]

COMMENTS:

PROJECT NO.:

09-29-426

BORING NO.:

SB-04

LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: 1318 Niagara Street

CLIENT: City of Buffalo

BORING CONTRACTOR: Buffalo Well Drilling

GROUNDWATER:

DATE	TIME	LEVEL	TYPE	TYPE
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				DIA.
--	--	--	--	------

				WT.
--	--	--	--	-----

				FALL
--	--	--	--	------

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BORING NO: SB-05

SHEET: 1 of 1

JOB NO.:	09-29-426
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LOCATION: 1318 Niagara Street, Buffalo, NY

GROUND ELEVATION:

DATE STARTED: June 20, 2011

DATE FINISHED: June 20, 2011

DRILLER:	N/A
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GEOLOGIST: Kris Charney

REVIEWED BY:

[illegible]

COMMENTS:

PROJECT NO.:

09-29-426

BORING NO.:

SB-05

LiRo Engineers, Inc.

TEST BORING LOG

PROJECT:	1318 Niagara Street
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CLIENT: City of Buffalo

BORING CONTRACTOR: Buffalo Well Drilling

GROUNDWATER:

CAS.

SAMPLER

TUBE

BORING NO: SB-06

SHEET: 1 of 1

JOB NO.:	09-29-426
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LOCATION: 1318 Niagara Street, Buffalo, NY

GROUND ELEVATION:

DATE	TIME	LEVEL	TYPE	TYPE
------	------	-------	------	------

				DIA.
--	--	--	--	------

				WT.
--	--	--	--	-----

				FALL
--	--	--	--	------

DATE STARTED:	June 20, 2011
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DATE FINISHED:	June 20, 2011
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DRILLER:	N/A
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GEOLOGIST: Kris Charney

REVIEWED BY:

	SAMPLE
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DESCRIPTION

DEPTH		"S"	"N"	BLOWS	REC%
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	CONSISTENCY
--	-------------

MATERIAL

USCS

REMARKS

FEET	STRATA	NO.	NO.	PER 6"	RQD%
------	--------	-----	-----	--------	------

COLOR	HARDNESS
-------	----------

DESCRIPTION

--	--

0-2						1.5'
-----	--	--	--	--	--	------

Tn	
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Gravelly SAND w re

Fill

3', 4' sampled for PCBs at 3:00

COMMENTS:

PROJECT NO.:

09-29-426

BORING NO.:

SB-06



BORING NO:	SB-10
SHEET:	1 of 1
JOB NO.:	09-29-426
LOCATION:	1318 Niagara Street, Buffalo, NY
GROUND ELEVATION:	
DATE STARTED:	June 20, 2011
DATE FINISHED:	June 20, 2011
DRILLER:	N/A
GEOLOGIST:	Kris Charney
REVIEWED BY:	

CLIENT: City of Buffalo

LOCATION:	1318 Niagara Street, Buffalo, NY
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GROUND ELEVATION: _____

DATE STARTED:	June 30, 2011
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DATE STARTED:	June 20, 2011
DATE FINISHED:	June 30, 2011

DATE FINISHED:	JUNE 20, 2011
DRILLER:	N/A

DRILLER:	N/A
GEOLOGIST:	Kris Charney

GEOLOGIST:	RHS Chanley
REVIEWED BY:	

[illegible]

PROJECT NO.:	09-29-426
BORING NO.:	SB-10



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: 1318 Niagara Street

CLIENT: City of Buffalo

BORING CONTRACTOR: Buffalo Well Drilling

GROUNDWATER:

DATE	TIME	LEVEL	TYPE	TYPE
				DIA.
				WT.
				FALL

CAS.

SAMPLER

TUBE

BORING NO: SB-14

SHEET: 1 of 1

JOB NO.: 09-29-426

LOCATION: 1318 Niagara Street, Buffalo, NY

GROUND ELEVATION:

DATE STARTED: June 22, 2011

DATE FINISHED: June 22, 2011

DRILLER: N/A

GEOLOGIST: Kris Charney

REVIEWED BY:

DEPTH FEET	SAMPLE					DESCRIPTION			USCS	REMARKS
	STRATA	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION		
0-4					3'	Br-Rd Br- Br		0-1' - Br sandy SILT w gravel / 1-2' - Rd Br silty CLAY / 2-4' - Br clayey SILT w black asphalt like materia	FILL	0.0 ppm
4-8					4'	Br		Silty SAND, wet		0.7-1.0 ppm
8-12					4'	Br		8-10' - Med SAND w gravel / clayey SILT		0.0 ppm

COMMENTS:

PROJECT NO.:

09-29-426

BORING NO.:

SB-14

DRILLING SUMMARY		MONITORING WELL CONSTRUCTION LOG	
Geologist: K. Charney		Top of Casing Elevation (602.35 feet) Top of Riser Elevation (602.14 feet) Ground Elevation (599.31 feet) Protective Casing and Lockable Cap Ground Level AUGERHOLE 6 inch dia. 28 feet length PVC CASING 2 inch dia. 20 feet length PVC SCREEN 2 inch dia. 10 feet length Bottom of Well Elevation 572.31 feet Bottom of Boring 28.0 feet	
Drilling Company: Buffalo Drilling			
Driller: Joe Gardner			
Rig Make/Model: Dietrich D50			
Date: 6/24/2011 15:00			
GEOLOGIC LOG			
Depth(ft.)	Description		
	See Log		
WELL DESIGN			
CASING MATERIAL		SCREEN MATERIAL	FILTER MATERIAL
Surface: Above Ground Steel Protective Casing	Type: Sch. 40 PVC	Type: #2 Sand	Setting: 15 ft to 17 ft below ground surface
Monitor: Sch. 40 PVC	Slot Size: 0.010"	SEAL MATERIAL	
		Type: Bentonite	Setting: 13 ft to 15 ft
		Type: Cement	Setting: 0 ft to 13 ft below ground surface
COMMENTS:		LEGEND	
15:00 hours bentonite seal placed. 1 bag bentonite chips Groundwater Levels obtained on 7/25/2011 Well Located at 1064140.86 Northing, 1063691.85 Easting Coordinates are referenced to NYS Plane Coordinate System, West Zone, No. 83. Elevations are referenced to the NAVD 88 vertical datum Survey Performed by Foit Albert Associates June 16, July 6, and July 29, 2011		Cement/Bentonite Grout Bentonite Seal Silica Sandpack	
Client: City of Buffalo	Location: 1318 Niagara St. Buffalo, NY	Project No.: 09-29-426	
LiRo Engineers, Inc.	MONITORING WELL CONSTRUCTION DETAILS	Well Number: MW-01	

DRILLING SUMMARY		MONITORING WELL CONSTRUCTION LOG	
Geologist: K. Charney		Top of Casing Elevation 604.20 feet Top of Riser Elevation 604.16 feet Ground Elevation 600.85 feet Protective Casing with Locking Cap Ground Level AUGERHOLE 6 inch dia. 28 feet length PVC CASING 2 inch dia. 16 feet length Groundwater Elevation 589.99 feet PVC SCREEN 2 inch dia. 10 feet length Bottom of Well Elevation 577.85	
Drilling Company: Buffalo Drilling			
Driller: Joe Gardner			
Rig Make/Model: Dietrich D50			
Date: 6/23/2011 16:30			
GEOLOGIC LOG			
Depth(ft.)	Description		
	See Log		
WELL DESIGN		Bottom of Boring 28.0 feet, bore hole colapsed to 23 feet Not to Scale	
CASING MATERIAL		SCREEN MATERIAL	FILTER MATERIAL
Surface: Above Ground Steel Protective Casing		Type: Sch. 40 PVC	Type: #2 Sand Setting: 11 ft to 23 ft below ground surface
Monitor: Sch. 40 PVC		Slot Size: 0.010"	SEAL MATERIAL
			Type: Bentonite Setting: 9 ft to 11ft
			Type: Cement Setting: 0 ft to 9ft below ground surface
COMMENTS:		LEGEND	
Bore hole colapsed to 23 feet due to running sands		Cement/Bentonite Grout	
16:30 hours bentonite seal placed. 1 bag bentonite chips		Bentonite Seal	
Groundwater Levels obtained on 7/25/2011		Silica Sandpack	
Well Located at 1064097.52 Northing, 1063760.20 Easting			
Corrdinates are referenced to NYS Plane Coordinate System, West Zone, No. 83.			
Elevations are referenced to the NAVD 88 verticle datum			
Survey Performed by Foit Albert Associates June 16, July 6, and July 29, 2011			
Client: City of Buffalo	Location: 1318 Niagara St. Buffalo, NY	Project No.: 09-29-426	
LiRo Engineers, Inc.	MONITORING WELL CONSTRUCTION DETAILS	Well Number: MW-02	

DRILLING SUMMARY		MONITORING WELL CONSTRUCTION LOG	
Geologist: J. Rowley		The diagram shows a cross-section of a monitoring well. Key features include: Top of Casing Elevation 595.91 feet and Top of Riser Elevation 595.61 feet at the surface. Ground Elevation 593.41 feet indicated by a horizontal line. Protective Casing and Lockable Cap at the top. AUGERHOLE with a diameter of 6 inch and length of 25 feet. PVC CASING with a diameter of 2 inch and length of 18 feet. PVC SCREEN with a diameter of 2 inch and length of 10 feet. Groundwater Elevation 572.01 feet shown as a blue line. Bottom of Well Elevation 568.41 feet at the base. Bottom of Boring 25.0 feet from the surface. - Vertical dimensions on the left: 11.0' (casing), 13.0' (grout), 15.0' (screen), and 25.0' (total depth). Not to Scale note at the bottom.	
Drilling Company: Buffalo Drilling			
Driller: Joe Gardner			
Rig Make/Model: Dietrich D50			
Date: 6/27/2011 14:45:00 PM			
GEOLOGIC LOG		D E P T H	
Depth(ft.)	Description		
	See Log		
WELL DESIGN			
<i>CASING MATERIAL</i>		<i>SCREEN MATERIAL</i>	<i>FILTER MATERIAL</i>
Surface: Above Ground Steel Protective Casing	Type: Sch. 40 PVC	Type: #2 Sand Setting: 13 ft to 25 ft below ground surface	<i>SEAL MATERIAL</i>
Monitor: Sch. 40 PVC	Slot Size: 0.010"	Type: Bentonite Setting: 11 ft to 13 ft Type: Cement Setting: 0 ft to 11 ft below ground surface	
<i>COMMENTS:</i>			<i>LEGEND</i>
14:45 hours bentonite seal placed. 1 bag bentonite chips Groundwater Levels obtained on 7/25/2011 Well Located at 1064116.36 Northing, 1063617.13 Easting Coordinates are referenced to NYS Plane Coordinate System, West Zone, No. 83. Elevations are referenced to the NAVD 88 vertical datum Survey Performed by Foit Albert Associates June 16, July 6, and July 29, 2011			Cement/Bentonite Grout Bentonite Seal Silica Sandpack
Client: City of Buffalo	Location: 1318 Niagara St. Buffalo, NY	Project No.: 09-29-426	
LiRo Engineers, Inc.	MONITORING WELL CONSTRUCTION DETAILS	Well Number: MW-03	

DRILLING SUMMARY		MONITORING WELL CONSTRUCTION LOG	
Geologist: J. Rowley		The diagram shows a cross-section of a monitoring well. Key elevations and components are labeled: Top of Casing Elevation 598.02 feet, Top of Riser Elevation 597.87 feet, Ground Elevation 595.02 feet, Ground Level, AUGERHOLE (6 inch dia., 27.5 feet length), PVC CASING (2 inch dia., 20 feet length), PVC SCREEN (2 inch dia., 10 feet length), Bottom of Well Elevation 568.02 feet, and Bottom of Boring 27.5 feet. Depth markers on the left indicate 13.0', 15.0', 17.0', and 27.0'.	
Drilling Company: Buffalo Drilling			
Driller: Joe Gardner			
Rig Make/Model: Dietrich D50			
Date: 6/21/2011 14:00			
GEOLOGIC LOG		DEPTH Groundwater Elevation 571.86 feet Not to Scale	
Depth(ft.)	Description		
	See Log		
WELL DESIGN			
CASING MATERIAL		SCREEN MATERIAL	FILTER MATERIAL
Surface: Above Ground Steel Protective Casing	Type: Sch. 40 PVC	Type: #2 Sand Setting: 15 ft to 27 ft below ground surface	SEAL MATERIAL
Monitor: Sch. 40 PVC	Slot Size: 0.010"	Type: Bentonite Setting: 13 ft to 15 ft Type: Cement Setting: 0 ft to 13 ft below ground surface	
COMMENTS:		LEGEND	
14:00 hours bentonite seal placed. 1 bag bentonite chips Groundwater levels obtained on 7/25/2011 Well Located at 1064046.47 Northing, 1063584.90 Easting Coordinates are referenced to NYS Plane Coordinate System, West Zone, No. 83. Elevations are referenced to the NAVD 88 vertical datum Survey Performed by Foit Albert Associates June 16, July 6, and July 29, 2011		Cement/Bentonite Grout Bentonite Seal Silica Sandpack	
Client: City of Buffalo	Location: 1318 Niagara St. Buffalo, NY	Project No.: 09-29-426	
LiRo Engineers, Inc.	MONITORING WELL CONSTRUCTION DETAILS	Well Number: MW-04	

DRILLING SUMMARY		MONITORING WELL CONSTRUCTION LOG	
Geologist: J. Rowley		Top of Casing Elevation 605.54 feet Top of Riser Elevation 605.36 feet Ground Elevation 602.41 feet Protective Casing and Lockable Cap Ground Level AUGERHOLE 6 inch dia. 29.5 feet length PVC CASING 2 inch dia. 19 feet length PVC SCREEN 2 inch dia. 10 feet length Bottom of Well Elevation 576.41 feet	
Drilling Company: Buffalo Drilling			
Driller: Joe Gardner			
Rig Make/Model: Dietrich D50			
Date: 6/22/2011 16:00			
GEOLOGIC LOG			
Depth(ft.)	Description		
	See Log		
WELL DESIGN		12.0' 14.0' 16.0' 26.0' Groundwater Elevation 571.86 feet Bottom of Boring 29.5 feet Not to Scale	
CASING MATERIAL		SCREEN MATERIAL	FILTER MATERIAL
Surface: Above Ground Steel Protective Casing	Type: Sch. 40 PVC	Type: #2 Sand Setting: 14 ft to 26 ft below ground surface	SEAL MATERIAL
Monitor: Sch. 40 PVC	Slot Size: 0.010"	Type: Bentonite Setting: 12 ft to 14 ft Type: Cement Setting: 0 ft to 12 ft below ground surface	
COMMENTS:		LEGEND	
16:00 hours bentonite seal placed. 1 bag bentonite chips Groundwater level obtained on 7/25/2011 Well Located at 1064015.99 Northing, 1063730.77 Easting Coordinates are referenced to NYS Plane Coordinate System, West Zone, No. 83. Elevations are referenced to the NAVD 88 vertical datum Survey Performed by Foit Albert Associates June 16, July 6, and July 29, 2011		Cement/Bentonite Grout Bentonite Seal Silica Sandpack	
Client: City of Buffalo	Location: 1318 Niagara St. Buffalo, NY	Project No.: 09-29-426	
LiRo Engineers, Inc.	MONITORING WELL CONSTRUCTION DETAILS	Well Number: MW-05	

LiRo Engineers, Inc.

TEST BORING LOG

BORING NO: GP-01

PROJECT: 1318 Niagara Street

SHEET: 1 of 1

CLIENT: City of Buffalo

JOB NO.:	09-29-426
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BORING CONTRACTOR: Buffalo Drilling Company

LOCATION:

GROUNDWATER: N/A

CAS.

SAMPLER

TUBE

GROUND ELEVATION:

DATE	TIME	LEVEL	TYPE	TYPE
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DATE STARTED:	November 10, 2011
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				DIA.
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DATE FINISHED:	November 10, 2011
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				WT.
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DRILLER:

				FALL
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GEOLOGIST: Kris Charney

REVIEWED BY:

[illegible]

COMMENTS: _____

PROJECT NO.:	09-29-426
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BORING NO.: GP-01



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: 1318 Niagara Street

CLIENT: City of Buffalo

BORING CONTRACTOR: Buffalo Drilling Company

GROUNDWATER: N/A

CAS.

SAMPLER

TUBE

BORING NO: GP-02

SHEET: 1 of 1

JOB NO.: 09-29-426

LOCATION:

GROUND ELEVATION:

DATE	TIME	LEVEL	TYPE	TYPE				DATE STARTED:	November 8, 2011
				DIA.				DATE FINISHED:	November 8, 2011
				WT.				DRILLER:	
				FALL				GEOLOGIST:	Kris Charney
								REVIEWED BY:	

DEPTH FEET	SAMPLE					MATERIAL DESCRIPTION	USCS	REMARKS
	PID (ppm)	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%			
0-4'	0.0					brown sandy SILT, fill (tan medium sand layers, red brick, wood, cobbles) black staining at 3.75'	FILL	2-4' @ 405
	0.0							
	0.0							
	0.0							
4-6'	0.0					gravel and crushed concrete		4-6' @ 420
	0.0							
6-8'	0.0					red-brown clayey SILT, with sand lenses		
	0.0							
8-12'	0.0					red-brown clayey SILT, with gravel		
	0.0							
	0.0							
	0.0							
12-20'	0.0					red-brown clayey SILT, with more gravel than 8-12'		16-20' @ 435
	0.0							
	0.0							
	0.0							
	0.0							
	0.0							
	0.0							
	0.0							
						end of boring at 20'		

COMMENTS: _____

PROJECT NO.: 09-29-426

BORING NO.: GP-02



BORING NO: GP-07

PROJECT: 1318 Niagara Street

SHEET: 1 of 1

CLIENT: City of Buffalo

JOB NO.: 09-29-426

BORING CONTRACTOR: Buffalo Drilling Company

LOCATION:

GROUNDWATER: N/A

GROUND ELEVATION:

DATE	TIME	LEVEL	TYPE	TYPE
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DATE STARTED: November 9, 2011

				DIA.
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DATE FINISHED:	November 9, 2011
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				WT.
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DRILLER:

				FALL
--	--	--	--	------

GEOLOGIST: Kris Charney

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REVIEWED BY:

COMMENTS: _____

PROJECT NO.:	09-29-426
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BORING NO.: GP-07



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: 1318 Niagara Street

CLIENT: City of Buffalo

BORING CONTRACTOR: Buffalo Drilling Company

GROUNDWATER: N/A

CAS.

SAMPLER

TUBE

DATE

TIME

LEVEL

TYPE

TYPE

DIA.

WT.

FALL

BORING NO:

GP-09

SHEET:

1 of 1

JOB NO.:

09-29-426

LOCATION:

GROUND ELEVATION:

DATE STARTED:

November 9, 2011

DATE FINISHED:

November 9, 2011

DRILLER:

GEOLOGIST:

Kris Charney

REVIEWED BY:

DEPTH FEET	SAMPLE					MATERIAL DESCRIPTION	USCS	REMARKS
	PID (ppm)	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%			
0-2'	0.0 0.0					brown sandy SILT with gravel/asphalt	SM	0-2' @ 1050
2-4'	0.0 0.0							
4-12'	0.0					brown silty CLAY, mottling	ML	4-6' @ 1100
	0.0							
	0.0							
	0.0							
	0.0							
	0.0							
	0.0							
	0.0							
						end of boring @ 12'		

COMMENTS:

PROJECT NO.:

09-29-426

BORING NO.:

GP-09



TEST BORING LOG

BORING NO: GP-10

PROJECT: 1318 Niagara Street

SHEET: 1 of 1

CLIENT: City of Buffalo

JOB NO.:	09-29-426
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BORING CONTRACTOR: Buffalo Drilling Company

LOCATION:

GROUNDWATER:	N/A
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CAS.

SAMPLER

TUBE

GROUND ELEVATION:

DATE	TIME	LEVEL	TYPE	TYPE
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DATE STARTED: November 9, 2011

				DIA.
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DATE FINISHED: November 9, 2011

				WT.
--	--	--	--	-----

DRILLER:

				FALL
--	--	--	--	------

GEOLOGIST: Kris Charney

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REVIEWED BY:

COMMENTS:	PROJECT NO.:	09-29-426
	BORING NO.:	GP-10



BORING NO: GP-14

PROJECT: 1318 Niagara Street

SHEET: 1 of 1

CLIENT: City of Buffalo

JOB NO.:	09-29-426
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BORING CONTRACTOR: Buffalo Drilling Company

LOCATION:

GROUNDWATER: N/A

GROUND ELEVATION:

DATE	TIME	LEVEL	TYPE	TYPE
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DATE STARTED:	November 9, 2011
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				DIA.
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DATE FINISHED:	November 9, 2011
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				WT.
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DRILLER:

				FALL
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GEOLOGIST: Kris Charney

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REVIEWED BY:

COMMENTS:	PROJECT NO.:	09-29-426
	BORING NO.:	GP-14

		LiRo Engineers, Inc.				TEST BORING LOG			
		BORING NO: GP-15							
PROJECT: 1318 Niagara Street						SHEET: 1 of 1			
CLIENT: City of Buffalo						JOB NO.: 09-29-426			
BORING CONTRACTOR: Buffalo Drilling Company						LOCATION:			
GROUNDWATER:						CAS.	SAMPLER	TUBE	GROUND ELEVATION:
DATE	TIME	LEVEL	TYPE	TYPE				DATE STARTED: November 8, 2011	
				DIA.				DATE FINISHED: November 8, 2011	
				WT.				DRILLER:	
				FALL				GEOLOGIST: Kris Charney	
								REVIEWED BY:	
DEPTH FEET	SAMPLE					MATERIAL DESCRIPTION	USCS	REMARKS	
	PID (ppm)	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%				
0-1'	0.0					3'	tan-brown sandy SILT	SM	0-2' @ 1025
1-2'	0.0						tan-brown sandy SILT, with crushed asphalt and concrete	FILL	
2-4'	0.0 0.0						red-brown silty CLAY with gravel, fill (coal fragments), mottling	CL	
4-8'	0.0 0.0 0.0 0.0					2.5'	red-brown clayey SILT with clay layers, fill (wood, red brick, gravel, ash, coal fragments).	ML	
8-12'	5.2 4.0 6.6 3.7						red-brown clayey SILT with clay layers, fill (less fill observed than 4-8').		
12-20'	0.0					4'	brown clayey SILT, stiff, low plasticity, around 15' small red brick fragment, 15-16' moist, around 19' fine black sand layer with fuel/chemical odor	OL	slight odor
	4.4								
	3.3								
	2.5								
	0.9					4'			
	0.8								
	1.1								
	9.1								
	0.0					refusal @ 20.25'			
	0.0								
	0.0								
24	0.0								
	0.0								
	0.0								
	0.0								
28	0.0								
	0.0								
	0.0								
	0.0								
	0.0								
32	0.0								
	0.0								
	0.0								
	0.0								

COMMENTS:	PROJECT NO.: 09-29-426 BORING NO.: GP-15
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LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: 1318 Niagara Street

CLIENT: City of Buffalo

BORING CONTRACTOR: Buffalo Drilling Company

GROUNDWATER:

DATE	TIME	LEVEL	TYPE	TYPE
				DIA.
				WT.
				FALL

CAS.

SAMPLER

TUBE

BORING NO: GP-19

SHEET: 1 of 1

JOB NO.: 09-29-426

LOCATION:

GROUND ELEVATION:

DATE STARTED: November 9, 2011

DATE FINISHED: November 9, 2011

DRILLER:

GEOLOGIST: Kris Charney

REVIEWED BY:

DEPTH FEET	SAMPLE					MATERIAL DESCRIPTION	USCS	REMARKS
	PID (ppm)	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%			
0-3'	0.0					brown sandy SILT, fill (crushed concrete, red brick, gravel)	FILL	0-2' @ 815
	0.0							
	0.0							
3-5'	0.0					red-brown silty CLAY, moderate plasticity, moist	CL	
	0.0							
5-7'	0.0					fill (crushed concrete, gray-black sand)	FILL	5-7' @ 825
	0.0							
7-16'	0.0					brown-tan silty CLAY with mottling and some sand, wet at 10', more gravel towards the bottom of the boring	CL	14-16' @ 835
	0.0							
	0.0							
	0.0							
	0.0							
	0.0							
	0.0							
	0.0							
	0.0							
						end of boring at 16'		

COMMENTS: _____

PROJECT NO.: 09-29-426

BORING NO.: GP-19



LiRo Engineers, Inc.

TEST BORING LOG

PROJECT: 1318 Niagara Street

CLIENT: City of Buffalo

BORING CONTRACTOR: Buffalo Drilling Company

BORING NO: GP-21A

SHEET: 1 of 1

JOB NO.: 09-29-426

LOCATION:

GROUNDWATER:

CAS.

SAMPLER

TUBE

GROUND ELEVATION:

DATE	TIME	LEVEL	TYPE	TYPE
				DIA.
				WT.
				FALL

DATE STARTED:	November 8, 2011
DATE FINISHED:	November 8, 2011
DRILLER:	
GEOLOGIST:	Kris Charney
REVIEWED BY:	

DEPTH FEET	SAMPLE					MATERIAL DESCRIPTION	USCS	REMARKS
	PID (ppm)	"S" NO.	"N" NO.	BLOWS PER 6"	REC% RQD%			
0-2'	0.0					brown silty SAND, fill (red brick, concrete)	FILL	
	0.0							
2-8'	0.0					brown sandy SILT, fill (concrete, ash, red brick, gravel)	FILL	
	0.0							
	2.2							
	3.5							
	0.0							
	0.0							
8-10'	0.0					red-gray-brown silty CLAY, moderate plasticity	CL	
	0.0							
10-12'	0.0					red-brown clayey SILT		
	0.0							
12-20'	0.0					brown sandy SILT with some clay and gravel, slight chemical odor	SM	18-20' @ 245
	0.0							
	0.0							
	0.0							
	0.0							
	0.0							
	0.0							
	0.0							
						end of boring at 20'		

COMMENTS: offset from GP-21 by 3' to the west

PROJECT NO.: 09-29-426
BORING NO.: GP-21A



BORING NO:	GP-22
SHEET:	1 of 3
JOB NO.:	09-29-426
LOCATION:	
GROUND ELEVATION:	
DATE STARTED:	Nov 2009
DATE FINISHED:	Nov 2009
DRILLER:	
GEOLOGIST:	KR
REVIEWED BY:	

GROUNDWATER:					CAS.	SAMPLER	TUBE
DATE	TIME	LEVEL	TYPE	TYPE			
				DIA.			
				WT.			
				FALL			

DATE STARTED:	November 9, 2011
DATE FINISHED:	November 9, 2011
DRILLER:	
GEOLOGIST:	Kris Charney
REVIEWED BY:	

COMMENTS:	Refusal at 10', offset 3' to the east	PROJECT NO.:	09-29-426
		BORING NO.:	GP-22

LiRo Engineers, Inc.

TEST BORING LOG

BORING NO: GP-25

PROJECT:	1318 Niagara Street
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SHEET: 1 of 1

CLIENT: City of Buffalo

JOB NO.:	09-29-426
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BORING CONTRACTOR: Buffalo Drilling Company

LOCATION:

GROUNDWATER:	N/A
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CAS.

SAMPLER

TUBE

GROUND ELEVATION:

DATE	TIME	LEVEL	TYPE	TYPE
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				DIA.
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DRILLER:

REVIEWED BY:



BORING NO:	GP-25A
SHEET:	1 of 1
JOB NO.:	09-29-426
LOCATION:	
GROUND ELEVATION:	
DATE STARTED:	November 2009
DATE FINISHED:	November 2009
DRILLER:	
GEOLOGIST:	Kr
REVIEWED BY:	

GROUNDWATER:	N/A	CA
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DATE	TIME	LEVEL	TYPE	TYPE			
				DIA.			
				WT.			
				FALL			

COMMENTS:	Offset 4' to South of G-25
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PROJECT NO.:	09-29-426
BORING NO.:	GP-25A



BORING NO: GP-26

PROJECT: 1318 Niagara Street

SHEET: 1 of 1

CLIENT:	City of Buffalo
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JOB NO.:	09-29-426
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BORING CONTRACTOR: Buffalo Drilling Company

LOCATION:

GROUNDWATER:	N/A
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CAS.

SAMPLER

TUBE

GROUND ELEVATION:

DATE	TIME	LEVEL	TYPE	TYPE
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DATE STARTED:	November 10, 2011
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DATE FINISHED:	November 10, 2011
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				WT.
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DRILLER:

				FALL
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GEOLOGIST: Kris Charney

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REVIEWED BY:

COMMENTS: _____

PROJECT NO.:	09-29-426
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BORING NO.: GP-26

ATTACHMENT B

Data Usability Summary Report

Vali-Data of WNY, LLC
1514 Davis Rd.
West Falls, NY 14170

1318 Niagara St.
CHEMTECH # C4597
January 11, 2012
Sampling date: 11/10/11

Prepared by

Jodi Zimmerman, B.S.
Vali-Data of WNY, LLC
1514 Davis Rd.
West Falls, NY 14170

1318 Niagara St.
#C4597

DELIVERABLES

This Data Usability Summary Report (DUSR) was prepared by evaluating the analytical data package for LiRo Engineers, project at 1318 Niagara St., CHEMTECH SDG ID#C4597, submitted to Vali-Data of WNY, LLC on December 21, 2011. This DUSR has been prepared in general compliance with NYSDEC Analytical Services Protocol and USEPA National Functional Guidelines. The laboratory performed the analyses using USEPA methods, 8081(Pesticides), 6010 (Inorganics), 7470 (Mercury) and 9012 (Cyanide).

PESTICIDES

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Surrogate Spike Recoveries
- Method Blank
- Field Duplicate Precision
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

SURROGATE SPIKE RECOVERIES

All criteria were met.

1318 Niagara St.

#C4597

METHOD BLANK

All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION

No field duplicate was acquired.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

No MS/MSD were performed on the sample. The MS/MSD performed in sequence was compliant.

COMPOUND QUANTITATION

All criteria were met.

INITIAL CALIBRATION

All criteria were met.

CONTINUING CALIBRATION

All criteria were met except the %D of beta-BHC was outside QC limits in PEM01 off column 1. This PEM is not associated with the sample, so no further action is required.

METALS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Method Blank
- Laboratory Control Sample
- MS/MSD
- Duplicate
- Field Duplicate
- Serial Dilution
- Compound Quantitation
- Calibration

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times were met.

METHOD BLANK

All criteria were met.

LABORATORY CONTROL SAMPLE

All criteria were met except the %Rec of Se was outside laboratory QC limits.

MS/MSD

All criteria were met except the %Rec of Mg and Na were outside ASP QC limits, high in 1318 MW01-GWMSD. The %Rec of Ca was outside QC limits, high, in 1318-MW01-GWMS. The %Rec of Se was outside laboratory QC limits, high, in 1318-MW01-GWMS/MSD.

A post digest spike was run for Se and continued to produce %Rec outside laboratory QC limits, high. No qualification is required because Se was not detected in the sample.

DUPLICATE

All criteria were met except Cr was detected in 1318-MW01-GW, above the MDL, below the reporting limit, but not in the duplicate.

FIELD DUPLICATE

No field duplicate was acquired.

SERIAL DILUTION

All criteria were met.

COMPOUND QUANTITATION

All criteria were met.

CALIBRATION

All criteria were met except Cu was detected above the MDL, below the reporting limit in the CCB's; 03, 07, 09, 12, 13, 14, 15, 16, 17. Cu was detected in the sample above the reporting limit, so it would be considered biased high.

K was detected above the MDL, below the reporting limit in CCB-11. This CCB is not associated with the sample, so no further action is required.

Tl was detected above the MDL, below the reporting limit in CCB-15. This CCB is not associated with the sample, so no further action is required.

MERCURY

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Method Blank
- Laboratory Control Samples
- MS/MSD
- Duplicate
- Field Duplicate
- Compound Quantitation
- Calibration

The items listed above were technically in compliance with the method and SOP criteria with any exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

METHOD BLANK

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

No MS/MSD were performed on the sample. The MS/MSD performed in sequence was compliant.

DUPLICATE

No duplicate was performed on the sample. The duplicate performed in sequence was compliant.

FIELD DUPLICATE

No field duplicate was acquired.

COMPOUND QUANTITATION

All criteria were met.

CALIBRATION

All criteria were met.

CYANIDE

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Method Blank
- Laboratory Control Samples
- MS/MSD
- Duplicate
- Field Duplicate
- Compound Quantitation
- Calibration

The items listed above were technically in compliance with the method and SOP criteria with any exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

METHOD BLANK

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

No MS/MSD were performed on the sample. The MS/MSD performed in sequence was compliant.

DUPLICATE

No duplicate was performed on the sample. The duplicate performed in sequence was compliant.

FIELD DUPLICATE

No field duplicate was acquired.

COMPOUND QUANTITATION

All criteria were met.

CALIBRATION

All criteria were met.

Data Usability Summary Report

Vali-Data of WNY, LLC
1514 Davis Rd.
West Falls, NY 14170

1318 Niagara St.
CHEMTECH # C4536
January 13, 2012
Sampling date: 11/8/11

Prepared by

Jodi Zimmerman, B.S.
Vali-Data of WNY, LLC
1514 Davis Rd.
West Falls, NY 14170

1318 Niagara St.
#C4536

DELIVERABLES

This Data Usability Summary Report (DUSR) was prepared by evaluating the analytical data package for LiRo Engineers, project at 1318 Niagara St., CHEMTECH SDG ID#C4536, submitted to Vali-Data of WNY, LLC on December 21, 2011. This DUSR has been prepared in general compliance with NYSDEC Analytical Services Protocol and USEPA National Functional Guidelines. The laboratory performed the analyses using USEPA methods, 8260 (Volatile Organics), 8270 (Semi Volatile Organics), 8081(Pesticides), 8082 (PCBs), 6010 (Inorganics), 7470 (Mercury) and 9012 (Cyanide).

VOLATILE ORGANIC COMPOUNDS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Internal Standard (IS) Area Performance
- Surrogate Spike Recoveries
- Method Blank
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration
- GC/MS Performance Check

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use but are qualified below in Internal Standard and Surrogate Spike Recoveries.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met except sample GP-21(18-20) was recorded twice on the 'Volatile Internal Standard Area and RT Summary' page. An updated page is attached.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

1318 Niagara St.

#C4536

INTERNAL STANDARD (IS)

The IS met criteria except Chlorobenzene-d₅ and 1,4-Dichlorobenzene-d₄ were outside the QC limits, low, in GP-15(16-20). 1,4-Dichlorobenzene-d₄ was outside the QC limits, low, in GP-15(16-20)RE. Detected associated target analytes should be qualified as estimated and non-detected target analytes are unusable.

SURROGATE SPIKE RECOVERIES

All criteria were met except the %Rec of 4-Bromofluorobenzene and Toluene-d₈ in GP-15(16-20) and GP-15(16-20)RE were outside ASP QC limits, low. The associated target analytes should be qualified as estimated.

METHOD BLANK

All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

All the criteria were met except the %RPD of Bromomethane, Chloroethane and 2-Hexanone was outside laboratory QC limits.

COMPOUND QUANTITATION

All criteria were met.

INITIAL CALIBRATION

All criteria were met except the %RSD of Bromomethane and Vinyl Chloride were outside QC limits off the F instrument. The %RSD of Chloroethane was outside ASP outer QC limits off the F instrument. These target analytes fell within QC limits when alternate forms of regression were used. The %RSD of Vinyl Chloride was outside the QC limits off the H instrument. This target analyte fell within QC limits when alternate forms of regression were used. Alternate forms of regression were used on all target analytes whose %RSD >15%.

CONTINUING CALIBRATION

All criteria were met.

GC/MS PERFORMANCE CHECK

All criteria were met.

SEMIVOLATILE ORGANIC COMPOUNDS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms

1318 Niagara St.

#C4536

- Chain of Custody and Traffic Reports
- Holding Times
- Internal Standard (IS) Area Performance
- Surrogate Spike Recoveries
- Method Blank
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration
- GC/MS Performance Check

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use but are qualified below in Laboratory Control Samples.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

INTERNAL STANDARD (IS)

The IS did meet criteria.

SURROGATE SPIKE RECOVERIES

All criteria were met except the %Rec of 2-Fluorophenol was outside ASP QC limits low in 1318-MW04-GW. ASP allows for one surrogate/fraction to be outside QC limits without further action.

METHOD BLANK

All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met except the concentration of Benzaldehyde and Caprolactum were detected above the MDL, below the reporting limit and were qualified as estimated. The concentration of Hexachlorocyclopentadiene, 2,4-Dinitrophenol and Pentachlorophenol exceeded the calibration limit

1318 Niagara St.

#C4536

and were qualified with an 'E'. These target analytes were not detected in the samples, so no further action is required.

MS/MSD

All criteria were met except the %RPD of 3,3-Dichlorobenzadine, 4-Chloroaniline, Hexachlorocyclopentadiene, 2,4-Dinitrophenol and 4,6-Dinitro-2-methylphenol were outside laboratory QC limits in GP-13(16-20)MS/MSD. The %Rec of 2,4-Dinitrophenol was outside ASP QC limits, high, in GP-13(16-20)MS.

Pentachlorophenol exceeded the calibration limits in GP-13(16-20)MS/MSD.

Hexachlorocyclopentadiene, 2,4-Dinitrophenol and 4-Nitrophenol exceeded the calibration limits in GP-13(16-20)MSD.

COMPOUND QUANTITATION

All criteria were met.

INITIAL CALIBRATION

All criteria were met except 2,4-Dinitrophenol was outside ASP outer QC limits. An alternate form of regression was with acceptable results, so no further action is required.

Alternate forms of regression were used on all target analytes whose %RSD >15%.

CONTINUING CALIBRATION

All criteria were met except the %D of 2,4-Dinitrophenol was outside ASP outer QC limits in continuing calibration file #BF051110. An alternate form of regression was used for this target analyte with acceptable results.

GC/MS PERFORMANCE CHECK

All criteria were met.

PESTICIDES

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Surrogate Spike Recoveries
- Method Blank
- Field Duplicate Precision
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use.

The column with the larger concentration was used in reporting of the results.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met except some of the incorrect extraction log was included in the original package.

The correct pages are attached.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

SURROGATE SPIKE RECOVERIES

All criteria were met.

METHOD BLANK

All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

All criteria were met except the %RPD between GP-13(16-20)MS and GP-13(16-20)MSD of Methoxychlor and Endrin Ketone were outside laboratory QC limits.

The %RPD between the columns was outside QC limits for Endosulfan Sulfate, 4,4'-DDD, Endrin Ketone and Endrin aldehyde in GP-13(16-20)MSD. The column with the larger concentrations was used.

COMPOUND QUANTITATION

All criteria were met.

INITIAL CALIBRATION

All criteria were met.

CONTINUING CALIBRATION

All criteria were met except the %D of beta-BHC was outside QC limits in PEM01 and PEM02 off column 1.

1318 Niagara St.

#C4536

This target analyte was not detected in the samples and the %D had acceptable results off column 2, so no further action is required.

POLYCHLORINATED BIPHENYLS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Surrogate Spike Recoveries
- Method Blank
- Field Duplicate Precision
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use.

Due to high concentration of target analyte, samples GP-16(0-2), GP-16(16-17.75), GP-21(0-2), GP-21(5-7), GP-20(5-7), GP-02(2-4), GP-02(4-6) and GP-DUP-02.

The column with the larger concentration was used in reporting of the results.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

SURROGATE SPIKE RECOVERIES

All criteria were met except the surrogates were diluted out of samples GP-21(5-7)DL and GP-20(5-7)DL.

The %Rec of DCBP in several samples fell outside laboratory QC limits. CHEMTECH reanalyzed these samples with similar results.

The %Rec of DCBP was outside ASP and laboratory QC limits off column 2 in GP-02(4-6)DL. ASP allows for one surrogate to be outside QC limits without further action.

METHOD BLANK

All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met except the %Rec of Aroclor 1016 was outside ASP QC limits, high. Aroclor 1016 would be considered biased high, but was not detected in the samples.

MS/MSD

All criteria were met except the %RPD between GP-13(16-20)MS and GP-13(16-20)MSD of Aroclor 1260 was outside laboratory and ASP QC limits. The %Rec of Aroclor 1260 was outside laboratory QC limits, low, in GP-13(16-20)MS.

COMPOUND QUANTITATION

All criteria were met except the %D between the columns was outside QC limits for Aroclor 1260 in sample GP-13(0-2).

INITIAL CALIBRATION

All criteria were met.

CONTINUING CALIBRATION

All criteria were met except the %D was outside QC limits off column 1 for Aroclor 1260 in ccal03 and ccal06. The %D of TCMX was outside QC limits off column 2 in ccal05, ccal08 and ccal09. Results from the alternate column should be used.

METALS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Method Blank
- Laboratory Control Sample
- MS/MSD
- Duplicate
- Field Duplicate

1318 Niagara St.

#C4536

- Serial Dilution
- Compound Quantitation
- Calibration

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use but are qualified below in MS/MSD and Serial Dilution.

DATA COMPLETENESS

All criteria were met.

NARATIVE AND DATA REPORTING FORMS

All criteria were met except the incorrect spike values were recorded on Form 5a for MS/MSD. Updated pages are attached.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times were met.

METHOD BLANK

All criteria were met except TI was detected above the MDL, below the reporting limit in ICB01, CCB01, CCB02 and CCB04. TI was not detected in the samples so no further action is required.

LABORATORY CONTROL SAMPLE

All criteria were met.

MS/MSD

All criteria were met except the %Rec of Al, Ca, Fe, Mg and Mn were outside QC limits, low in GP-13(16-20)MS/MSD. The concentration of these target analytes was > 4x spike amount, so no further action is required. The %Rec of Zn was outside QC limits, low, in GP-13(16-20)MS and should be qualified as estimated in GP-13(16-20).

A post digest spike was run for Zn with acceptable results.

DUPLICATE

All criteria were met except Sb was detected in GP-13(16-20)dupe, above the MDL, below the reporting limit, but not in the original sample.

The %RPD of Na was outside the QC limits between GP-13(16-20) and it's duplicate and should be qualified as estimated in the samples.

FIELD DUPLICATE

All criteria were met.

SERIAL DILUTION

All criteria were met except the %D of Fe and Mg were outside QC limits and should be qualified as estimated in the samples.

COMPOUND QUANTITATION

All criteria were met.

CALIBRATION

All criteria were met

MERCURY

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Method Blank
- Laboratory Control Samples
- MS/MSD
- Duplicate
- Field Duplicate
- Compound Quantitation
- Calibration

The items listed above were technically in compliance with the method and SOP criteria with any exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use.

DATA COMPLETENESS

All criteria were met.

1318 Niagara St.

#C4536

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

METHOD BLANK

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

All criteria were met.

DUPLICATE

All criteria were met.

FIELD DUPLICATE

All criteria were met.

COMPOUND QUANTITATION

All criteria were met.

CALIBRATION

All criteria were met.

CYANIDE

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Method Blank
- Laboratory Control Samples
- MS/MSD

1318 Niagara St.

#C4536

- Duplicate
- Field Duplicate
- Compound Quantitation
- Calibration

The items listed above were technically in compliance with the method and SOP criteria with any exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

METHOD BLANK

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

No MS/MSD were performed on the sample. The MS/MSD performed in sequence was compliant.

DUPLICATE

No duplicate was performed on the sample. The duplicate performed in sequence was compliant.

FIELD DUPLICATE

No field duplicate was acquired.

COMPOUND QUANTITATION

All criteria were met.

CALIBRATION

All criteria were met.

1318 Niagara St.

#C4536

Data Usability Summary Report

Vali-Data of WNY, LLC
1514 Davis Rd.
West Falls, NY 14170

1318 Niagara St.
CHEMTECH # C4593
January 19, 2012
Sampling date: 11/9/11

Prepared by

Jodi Zimmerman, B.S.
Vali-Data of WNY, LLC
1514 Davis Rd.
West Falls, NY 14170

1318 Niagara St.
#C4593

DELIVERABLES

This Data Usability Summary Report (DUSR) was prepared by evaluating the analytical data package for LiRo Engineers, project at 1318 Niagara St., CHEMTECH SDG ID#C4593, submitted to Vali-Data of WNY, LLC on December 21, 2011. This DUSR has been prepared in general compliance with NYSDEC Analytical Services Protocol and USEPA National Functional Guidelines. The laboratory performed the analyses using USEPA methods, 8260 (Volatile Organics), 8270 (Semi Volatile Organics), 8081(Pesticides), 8082 (PCBs), 6010 (Inorganics), 7470 (Mercury) and 9012 (Cyanide).

VOLATILE ORGANIC COMPOUNDS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Internal Standard (IS) Area Performance
- Surrogate Spike Recoveries
- Method Blank
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration
- GC/MS Performance Check

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

INTERNAL STANDARD (IS)

The IS met criteria.

1318 Niagara St.
#C4593

SURROGATE SPIKE RECOVERIES

All criteria were met.

METHOD BLANK

All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

All the criteria were met except the %RPD of Bromomethane, Chloroethane and 2-Hexanone was outside laboratory QC limits for GP-13(16-20)MS/MSD. The MS/MSD was not performed on a sample within this SDG, but was performed within sequence.

COMPOUND QUANTITATION

All criteria were met.

INITIAL CALIBRATION

All criteria were met except the %RSD of Bromomethane and Vinyl Chloride were outside QC limits. The %RSD of Chloroethane was outside ASP outer QC limits. These target analytes fell within QC limits when alternate forms of regression were used.

Alternate forms of regression were used on all target analytes whose %RSD >15%.

CONTINUING CALIBRATION

All criteria were met except the %D of Dichlorodifluoromethane, Chloromethane, Chloroethane, Vinyl Chloride and Bromomethane were outside QC limits in VF029477.D.

Alternate forms of regression were used on all target analytes whose %RSD >15%.

GC/MS PERFORMANCE CHECK

All criteria were met.

SEMIVOLATILE ORGANIC COMPOUNDS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Internal Standard (IS) Area Performance
- Surrogate Spike Recoveries
- Method Blank
- Laboratory Control Samples

1318 Niagara St.

#C4593

- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration
- GC/MS Performance Check

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

INTERNAL STANDARD (IS)

The IS did meet criteria.

SURROGATE SPIKE RECOVERIES

All criteria were met.

METHOD BLANK

All the criteria were met except 1 TIC was detected in PB59226B.

FIELD DUPLICATE SAMPLE PRECISION

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met except the %Rec of 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 4-Chloro-3Methylphenol and Dimethylphenol were outside the QC limits. The concentration of 4-Chloroaniline was detected above the MDL, below the reporting limit and was qualified as estimated. These target analytes were not detected in the samples, so no further action is required.

MS/MSD

All criteria were met except the %RPD of several target analytes were outside laboratory QC limits in 124-MW-1R(22-23.7)MS/MSD. The MS/MSD was not performed on a sample within this SDG, but was performed within sequence.

1318 Niagara St.

#C4593

The concentration of Pentachlorophenol exceeded the calibration limit and was qualified with an 'E' in 124-MW-1R(22-23.7)MS/MSD. The concentration of 4-Nitrophenol exceeded the calibration limit and was qualified with an 'E' in 124-MW-1R(22-23.7)MS.

COMPOUND QUANTITATION

All criteria were met.

INITIAL CALIBRATION

All criteria were met except 2,4-Dinitrophenol was outside ASP outer QC limits. An alternate form of regression was with acceptable results, so no further action is required.

Alternate forms of regression were used on all target analytes whose %RSD >15%.

CONTINUING CALIBRATION

All criteria were met except the %D of 2,4-Dinitrophenol was outside ASP outer QC limits in continuing calibration file #BF051110 and BF051239. An alternate form of regression was used for this target analyte with acceptable results.

GC/MS PERFORMANCE CHECK

All criteria were met.

PESTICIDES

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Surrogate Spike Recoveries
- Method Blank
- Field Duplicate Precision
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use.

The column with the larger concentration was used in reporting of the results.

1318 Niagara St.

#C4593

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

SURROGATE SPIKE RECOVERIES

All criteria were met.

METHOD BLANK

All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

All the criteria were met. The MS/MSD was performed on sample GP-24-(4-8). The %D between the columns was outside QC limits for 4,4'-DDE in GP-24-(4-8)MS/MSD.

The column with the larger concentrations was used.

COMPOUND QUANTITATION

All criteria were met.

INITIAL CALIBRATION

All criteria were met.

CONTINUING CALIBRATION

All criteria were met except the %D of beta-BHC was outside QC limits in PEM01 off column 1.

This target analyte was not detected in the samples and the %D had acceptable results off column 2, so no further action is required.

POLYCHLORINATED BIPHENYLS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Surrogate Spike Recoveries
- Method Blank
- Field Duplicate Precision
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use but are qualified below in MS/MSD.

Due to high concentration of target analyte, samples GP-19-(0-2), GP-19-(5-7), GP-19-(14-16), GP-22-(5-7) and GP-23(0-2).

Due to the matrix, sample GP-18-(5-7) was diluted.

The column with the larger concentration was used in reporting of the results.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

SURROGATE SPIKE RECOVERIES

All criteria were met except the surrogates were diluted out of samples GP-19-(0-2)DL, GP-19-(5-7)DL, GP-18-(5-7), GP-22-(5-7)DL and GP-23(0-2)DL.

The %Rec of DCBP in samples GP-23-(5-7) and GP-23-(10-12) fell outside laboratory QC limits off column 2. The %Rec of DCBP in sample GP-19-(14-16)DL fell outside laboratory QC limits off column 1. The %Rec of DCBP in sample GP-22B-10-12MSD fell outside laboratory QC limits off both columns. The %Rec's were within ASP QC limits so no further action is required.

1318 Niagara St.

#C4593

METHOD BLANK

All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

All criteria were met except the %RPD between GP-22B-10-12MS and GP-22B-10-12MSD of Aroclor 1016 and Aroclor 1260 were outside laboratory and ASP QC limits. The %Rec of Aroclor 1260 was outside laboratory and ASP QC limits, low, in GP-22B-10-12MS/MSD and should be qualified as estimated in sample GP-22B-10-12. The %Rec of Aroclor 1016 was outside laboratory and ASP QC limits, high, in GP-22B-10-12MS. The laboratory control samples were within QC limits, so no further action is required for the other samples within the SDG.

The %D between columns was outside QC limits for Aroclor 1016 in GP-22B-10-12MSD. The larger concentration was recorded.

COMPOUND QUANTITATION

All criteria were met except the %D between the columns was outside QC limits for Aroclor 1260 in sample GP-22-(5-7). The larger concentration was recorded.

INITIAL CALIBRATION

All criteria were met.

CONTINUING CALIBRATION

All criteria were met except the %D was outside QC limits off column 1 for DCBP in ccal06. Results from the alternate column should be used. The %D of Aroclor 1016 peak 2 was outside QC limits off column 2 in ccal05. ASP requires three peaks to be within QC limits, so no further action is required.

METALS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Blanks
- Laboratory Control Sample
- MS/MSD
- Duplicate

1318 Niagara St.

#C4593

- Field Duplicate
- Serial Dilution
- Compound Quantitation
- Calibration

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use.

DATA COMPLETENESS

All criteria were met.

NARATIVE AND DATA REPORTING FORMS

All criteria were met except calibration graphs for some metals were not included in the original package. Those pages are attached.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times were met.

BLANKS

All criteria were met except TI was detected above the MDL, below the reporting limit in ICB01, CCB01 and CCB03. TI was not detected in the samples so no further action is required.

Al was detected above the MDL, below the reporting limit in CCB01. Al was detected more than 10x above the reporting limit, so no further action is required.

K was detected above the MDL, below the reporting limit in CCB03, CCB04 and CCB05. K was detected more than 10x above the reporting limit, so no further action is required.

Ag was detected above the MDL, below the reporting limit in CCB05. This CCB is not associated with the samples, so no further action is required.

LABORATORY CONTROL SAMPLE

All criteria were met.

MS/MSD

All criteria were met except the %Rec of Ca, Fe and Mg were outside QC limits, low in 124-MW-1R(22-23.7)S/SD. The MS/MSD was not performed on a sample within this SDG, but was performed within sequence, so no further action is required.

1318 Niagara St.

#C4593

No post digest spike was performed.

DUPLICATE

All criteria were met except the %RPD of Sb and Be were outside the QC limits because they were only detected in the sample or duplicate. The duplicate was not performed on a sample within this SDG, but was performed within sequence, so no further action is required.

FIELD DUPLICATE

All criteria were met.

SERIAL DILUTION

All criteria were met except the %D of Ba, Pb, V and Na were outside QC limits. The serial dilution was not performed on a sample within this SDG, but was performed within sequence, so no further action is required.

COMPOUND QUANTITATION

All criteria were met.

CALIBRATION

All criteria were met.

MERCURY

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Method Blank
- Laboratory Control Samples
- MS/MSD
- Duplicate
- Field Duplicate
- Compound Quantitation
- Calibration

The items listed above were technically in compliance with the method and SOP criteria with any exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

METHOD BLANK

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

All criteria were met.

DUPLICATE

All criteria were met.

FIELD DUPLICATE

All criteria were met.

COMPOUND QUANTITATION

All criteria were met.

CALIBRATION

All criteria were met.

CYANIDE

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Method Blank
- Laboratory Control Samples
- MS/MSD
- Duplicate
- Field Duplicate
- Compound Quantitation
- Calibration

The items listed above were technically in compliance with the method and SOP criteria with any exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

METHOD BLANK

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

No MS/MSD were performed on the sample. The MS/MSD performed in sequence was compliant.

DUPLICATE

No duplicate was performed on the sample. The %RPD of the duplicate performed in sequence was outside QC limits because Cn was detected above the MDL, below the reporting limit in the sample but was undetected in the duplicate.

FIELD DUPLICATE

All criteria were met.

COMPOUND QUANTITATION

All criteria were met. CHEMTECH reports all results to the LOQ.

CALIBRATION

All criteria were met.

Data Usability Summary Report

Vali-Data of WNY, LLC
1514 Davis Rd.
West Falls, NY 14170

1318 Niagara St.
CHEMTECH # C4594
January 20, 2012
Sampling date: 11/9/11

Prepared by

Jodi Zimmerman, B.S.
Vali-Data of WNY, LLC
1514 Davis Rd.
West Falls, NY 14170

1318 Niagara St.
#C4594

DELIVERABLES

This Data Usability Summary Report (DUSR) was prepared by evaluating the analytical data package for LiRo Engineers, project at 1318 Niagara St., CHEMTECH SDG ID#C4594, submitted to Vali-Data of WNY, LLC on December 21, 2011. This DUSR has been prepared in general compliance with NYSDEC Analytical Services Protocol and USEPA National Functional Guidelines. The laboratory performed the analyses using USEPA methods, 8260 (Volatile Organics), 8270 (Semi Volatile Organics) and 8082 (PCBs).

VOLATILE ORGANIC COMPOUNDS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Internal Standard (IS) Area Performance
- Surrogate Spike Recoveries
- Method Blank
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration
- GC/MS Performance Check

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use but are qualified below in Surrogate Spike Recoveries. Samples GP-07-(8-12) and GP-07-(16-20) were diluted due to high target analyte concentrations.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

INTERNAL STANDARD (IS)

The IS met criteria.

1318 Niagara St.
#C4594

SURROGATE SPIKE RECOVERIES

All criteria were met except the %Rec of 4-Bromofluorobenzene in GP-07-(16-20) was outside ASP QC limits, high. The associated detected target analytes should be qualified as estimated.

The %Rec of 4-Bromofluorobenzene was calculated using linear regression. That page is attached.

METHOD BLANK

All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

All the criteria were met except the %Rec of several target analytes were outside laboratory QC limits.

The MS/MSD was not performed on a sample within this SDG, but was performed within sequence, so no further action is required.

COMPOUND QUANTITATION

All criteria were met.

INITIAL CALIBRATION

All criteria were met except the %RSD of Vinyl Chloride was outside the QC limits off the H instrument.

The %RSD of Bromomethane was outside QC limits off the T instrument. These target analytes fell within QC limits when alternate forms of regression were used.

Alternate forms of regression were used on all target analytes whose %RSD >15%.

CONTINUING CALIBRATION

All criteria were met.

GC/MS PERFORMANCE CHECK

All criteria were met.

SEMIVOLATILE ORGANIC COMPOUNDS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Internal Standard (IS) Area Performance
- Surrogate Spike Recoveries
- Method Blank
- Laboratory Control Samples
- MS/MSD

1318 Niagara St.

#C4594

- Compound Quantitation
- Initial Calibration
- Continuing Calibration
- GC/MS Performance Check

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use but are qualified below in Laboratory Control Samples.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

INTERNAL STANDARD (IS)

The IS did meet criteria.

SURROGATE SPIKE RECOVERIES

All criteria were met.

METHOD BLANK

All the criteria were met except a TIC was detected in PB59226B.

FIELD DUPLICATE SAMPLE PRECISION

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met except the concentration of 4-Chloroaniline was detected above the MDL, below the reporting limit and was qualified as estimated.

The %Rec of 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 4-Chloro-3-Methylphenol and Dimethylphthalate were outside QC limits, low. These target analytes should be qualified as estimated in the samples.

MS/MSD

All criteria were met except the %RPD of several target analytes were outside QC limits. The concentration of 4-Nitrophenol and Pentachlorophenol exceeded the calibration limits and were qualified with an 'E'. The MS/MSD was not performed on a sample within this SDG, but was performed within sequence, so no further action is required.

1318 Niagara St.

#C4594

COMPOUND QUANTITATION

All criteria were met.

INITIAL CALIBRATION

All criteria were met except 2,4-Dinitrophenol was outside ASP outer QC limits. An alternate form of regression was with acceptable results, so no further action is required.

Alternate forms of regression were used on all target analytes whose %RSD >15%.

CONTINUING CALIBRATION

All criteria were met except the %D of 2,4-Dinitrophenol was outside ASP outer QC limits in continuing calibration file #BF051239. An alternate form of regression was used for this target analyte with acceptable results.

GC/MS PERFORMANCE CHECK

All criteria were met.

POLYCHLORINATED BIPHENYLS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Surrogate Spike Recoveries
- Method Blank
- Field Duplicate Precision
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use but are qualified below in MS/MSD.

Due to high concentration of target analyte, GP-07-(8-12) was diluted.

Samples GP-14-(0-2), GP-14-(5-7), GP-04-(11-12) and GP-08-(0-2) were reanalyzed due to the %Rec of DCBP falling outside laboratory QC limits off both columns.

The column with the larger concentration was used in reporting of the results.

DATA COMPLETENESS

All criteria were met.

1318 Niagara St.

#C4594

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

SURROGATE SPIKE RECOVERIES

All criteria were met except the %Rec of DCBP off both columns was outside laboratory QC limits in samples GP-14-(0-2), GP-14-(5-7), GP-04-(11-12), GP-08-(0-2), GP-07-(8-12), GP-07(8-12)DL, GP-14-(0-2)RE, GP-14-(5-7)RE, GP-04-(11-12)RE and GP-08-(0-2)RE. The surrogate recovery was within ASP QC limits, so no further action is required.

The %Rec of DCBP off column 2 was outside laboratory QC limits in samples GP-03MS, GP-17-(7-8), GP-10-(0-2), GP-10-(5-7) and GP-10-(10-11).

The %Rec of DCBP off column 1 was outside laboratory QC limits in samples GP-DUP-04 and GP-04-(6-8). ASP allows for one surrogate to be outside QC limits without further action.

METHOD BLANK

All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

All criteria were met except Aroclor 1260 exceeded the calibration range in GP-03MS/MSD. The %Rec of Aroclor 1260 was outside laboratory and ASP QC limits, high, in GP-03MS/MSD. Detected target analytes should be qualified as estimated in GP-03.

The %RPD of Aroclor 1016 was outside QC limits in GP-03MS/MSD.

COMPOUND QUANTITATION

All criteria were met except Aroclor 1260 was detected above the MDL, below the reporting limit in GP-14-(0-2)RE but not in GP-14-(0-2). The %RPD between the columns was outside QC limits in sample GP-14-(0-2)RE. The column with the larger concentration was recorded.

INITIAL CALIBRATION

All criteria were met.

CONTINUING CALIBRATION

All criteria were met except the %D was outside QC limits for Aroclor 1016 peak 2 off column 2 in ccal01, ccal02, ccal03 and ccal05. ASP only requires three peaks for Aroclor 1016 and Aroclor 1260, so no further action is required.

1318 Niagara St.

#C4594

1318 Niagara St.

#C4594

Data Usability Summary Report

Vali-Data of WNY, LLC

1514 Davis Rd.

West Falls, NY 14170

1318 Niagara St.

CHEMTECH # C4595

January 24, 2012

Sampling date: 11/9, 10/11

Prepared by

Jodi Zimmerman, B.S.

Vali-Data of WNY, LLC

1514 Davis Rd.

West Falls, NY 14170

1318 Niagara St.

#C4595

DELIVERABLES

This Data Usability Summary Report (DUSR) was prepared by evaluating the analytical data package for LiRo Engineers, project at 1318 Niagara St., CHEMTECH SDG ID#C4595, submitted to Vali-Data of WNY, LLC on December 21, 2011. This DUSR has been prepared in general compliance with NYSDEC Analytical Services Protocol and USEPA National Functional Guidelines. The laboratory performed the analyses using USEPA methods, 8260 (Volatile Organics), 8270 (Semi Volatile Organics) and 8082 (PCBs).

VOLATILE ORGANIC COMPOUNDS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Internal Standard (IS) Area Performance
- Surrogate Spike Recoveries
- Method Blank
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration
- GC/MS Performance Check

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use but are qualified below in Surrogate Spike Recoveries.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

INTERNAL STANDARD (IS)

The IS met criteria.

1318 Niagara St.
#C4595

SURROGATE SPIKE RECOVERIES

All criteria were met except the %Rec of 4-Bromofluorobenzene in GP-06(13-15) was outside ASP QC limits, high. Detected associated target analytes should be qualified as estimated.

The %Rec of 4-Bromofluorobenzene was calculated using linear regression. That page is attached.

METHOD BLANK

All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met except the %Rec of Tetrachloroethene was outside QC limits, high in BST1117S2.

Tetrachloroethene was not detected in the samples so no further action is required.

MS/MSD

All the criteria were met except the %Rec of Tetrachloroethene was outside laboratory QC limits, high, in GP-06-(13-15)MS/MSD. Tetrachloroethene was not detected in GP-06-(13-15), so no further action is required. The %Rec of Trichlorofluoromethane was outside laboratory QC limits, low, in GP-06-(13-15)MSD.

COMPOUND QUANTITATION

All criteria were met.

INITIAL CALIBRATION

All criteria were met except the %RSD of Vinyl Chloride was outside the QC limits off the H instrument.

The %RSD of Bromomethane was outside QC limits off the T instrument. These target analytes fell within QC limits when alternate forms of regression were used.

Alternate forms of regression were used on all target analytes whose %RSD >15%.

CONTINUING CALIBRATION

All criteria were met.

GC/MS PERFORMANCE CHECK

All criteria were met.

SEMIVOLATILE ORGANIC COMPOUNDS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Internal Standard (IS) Area Performance
- Surrogate Spike Recoveries
- Method Blank

1318 Niagara St.

#C4595

- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration
- GC/MS Performance Check

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use but are qualified below in Laboratory Control Samples.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

INTERNAL STANDARD (IS)

The IS did meet criteria.

SURROGATE SPIKE RECOVERIES

All criteria were met.

METHOD BLANK

All the criteria were met except a TIC was detected in PB59226B.

FIELD DUPLICATE SAMPLE PRECISION

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met except the concentration of 4-Chloroaniline was detected above the MDL, below the reporting limit and was qualified as estimated.

The %Rec of 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 4-Chloro-3-Methylphenol and Dimethylphthalate were outside QC limits, low. These target analytes should be qualified as estimated in the samples.

MS/MSD

All criteria were met except the %RPD of several target analytes was outside QC limits. The concentration of 4-Nitrophenol and Pentachlorophenol exceeded the calibration limits and were

qualified with an 'E'. The MS/MSD was not performed on a sample within this SDG, but was performed within sequence, so no further action is required.

COMPOUND QUANTITATION

All criteria were met.

INITIAL CALIBRATION

All criteria were met except 2,4-Dinitrophenol was outside ASP outer QC limits. An alternate form of regression was with acceptable results, so no further action is required.

Alternate forms of regression were used on all target analytes whose %RSD >15%.

CONTINUING CALIBRATION

All criteria were met except the %D of 2,4-Dinitrophenol was outside ASP outer QC limits in continuing calibration file #BF051239. An alternate form of regression was used for this target analyte with acceptable results.

GC/MS PERFORMANCE CHECK

All criteria were met.

POLYCHLORINATED BIPHENYLS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Surrogate Spike Recoveries
- Method Blank
- Field Duplicate Precision
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use but are qualified below in MS/MSD.

Due to high concentration of target analyte, GP-12-(0-2) was diluted.

The column with the larger concentration was used in reporting of the results.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

SURROGATE SPIKE RECOVERIES

All criteria were met except DCBP off both columns and TCMX off column 2 were outside ASP QC limits, high, in sample GP-12-(0-2)DL. Since this was a 100x dilution, no further action is required.

The %Rec of DCBP off column 2 was outside laboratory QC limits, low, in samples GP-06-(4-6), GP-06-(8-9), GP-12-(4-6), GP-12-(4-6)MS, GP-11-(6-8), GP-05-(6-8) and GP-01-(5-7).

ASP allows for one surrogate to be outside QC limits without further action.

METHOD BLANK

All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

All criteria were met except the %Rec of Aroclor 1260 and Aroclor 1016 were outside laboratory and ASP QC limits in GP-12-(4-6)MS/MSD. Detected target analytes should be qualified as estimated in GP-12-(4-6).

The %RPD of Aroclor 1016 between the columns was outside QC limits in GP-12-(4-6)MS/MSD. The larger concentration was recorded.

COMPOUND QUANTITATION

All criteria were met.

INITIAL CALIBRATION

All criteria were met.

CONTINUING CALIBRATION

All criteria were met except the %D was outside QC limits for Aroclor 1260 peak 3 off column 1 and for Aroclor 1016 peaks 3 and 4 and TCMX off column 2 in ccal03. The %D was outside QC limits for Aroclor 1260 peak 5 off column 1 ccal02. ASP only requires three peaks for Aroclor 1016 and Aroclor 1260, so no further action is required. ASP allows for one surrogate to be outside QC limits without further action.

1318 Niagara St.

#C4595

Data Usability Summary Report

Vali-Data of WNY, LLC
1514 Davis Rd.
West Falls, NY 14170

1318 Niagara St.
CHEMTECH # C4596
January 24, 2012
Sampling date: 11/10/11

Prepared by

Jodi Zimmerman, B.S.
Vali-Data of WNY, LLC
1514 Davis Rd.
West Falls, NY 14170

1318 Niagara St.
#C4596

DELIVERABLES

This Data Usability Summary Report (DUSR) was prepared by evaluating the analytical data package for LiRo Engineers, project at 1318 Niagara St., CHEMTECH SDG ID#C4596, submitted to Vali-Data of WNY, LLC on December 21, 2011. This DUSR has been prepared in general compliance with NYSDEC Analytical Services Protocol(ASP) and USEPA National Functional Guidelines(NFG). The laboratory performed the analyses using USEPA methods, 8260 (Volatile Organics) and 8082 (PCBs).

VOLATILE ORGANIC COMPOUNDS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Internal Standard (IS) Area Performance
- Surrogate Spike Recoveries
- Method Blank
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration
- GC/MS Performance Check

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

INTERNAL STANDARD (IS)

The IS met criteria.

1318 Niagara St.

#C4596

SURROGATE SPIKE RECOVERIES

All criteria were met.

The %Rec of 4-Bromofluorobenzene was calculated using linear regression. That page is attached.

METHOD BLANK

All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION

No field duplicate was acquired.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

All the criteria were met except the %Rec of Bromomethane and cis-1,3-Dichloropropene were outside laboratory QC limits. The %RPD of 2-Butanone, Acetone and Methyl acetate was outside QC limits between CreekcompMS and CreekcompMSD. The MS/MSD was not performed on a sample within this SDG, but was performed within sequence, so no further action is required.

COMPOUND QUANTITATION

All criteria were met.

INITIAL CALIBRATION

All criteria were met except the %RSD of Bromomethane was outside QC limits off the T instrument. This target analyte fell within QC limits when alternate forms of regression were used. Alternate forms of regression were used on all target analytes whose %RSD >15%.

CONTINUING CALIBRATION

All criteria were met.

GC/MS PERFORMANCE CHECK

All criteria were met.

POLYCHLORINATED BIPHENYLS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Surrogate Spike Recoveries
- Method Blank
- Field Duplicate Precision
- Laboratory Control Samples

1318 Niagara St.

#C4596

- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use but are qualified below in Compound Quantitation. Due to high concentration of target analyte, GP-26-(10-12) was diluted. The column with the larger concentration was used in reporting of the results.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

SURROGATE SPIKE RECOVERIES

All criteria were met except the %Rec and retention times of both surrogates off both columns was outside laboratory and ASP QC limits in sample GP-26-(10-12) due to dilution, so no further action is required.

METHOD BLANK

All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION

No field duplicate was acquired.

LABORATORY CONTROL SAMPLES

All criteria were met except the %RPD between the columns was outside QC limits for Aroclor 1016 in PB59295BS. The column with the larger concentration was recorded.

MS/MSD

All criteria were met.

COMPOUND QUANTITATION

All criteria were met except Aroclor 1260 was detected above the MDL, below the reporting limit in GP-14-(0-2)RE but not in GP-14-(0-2). The %RPD between the columns was outside QC limits in sample GP-14-(0-2)RE. The column with the larger concentration was recorded.

1318 Niagara St.

#C4596

Aroclor 1254 was detected in GP-26-(10-12) and GP-26-(10-12)dl. A 5-point calibration was not performed for Aroclor 1254 and since both NFG and ASP require a 5-point calibration for all detected Aroclors, Aroclor 1254 in this sample should be qualified as estimate.

INITIAL CALIBRATION

All criteria were met. (see Compound Quantitation, above)

CONTINUING CALIBRATION

All criteria were met except the %D was outside QC limits for Aroclor 1016 peak 2 off column 2 in ccal01, ccal01, ccal02 and ccal04. ASP only requires three peaks for Aroclor 1016 and Aroclor 1260, so no further action is required.

Data Usability Summary Report

Vali-Data of WNY, LLC

1514 Davis Rd.

West Falls, NY 14170

1318 Niagara St.

TestAmerica Laboratories # 480-6342-1

August 27, 2011

Sampling date: 6/20-24,27/11

Prepared by

Jodi Zimmerman, B.S.

Vali-Data of WNY, LLC

1514 Davis Rd.

West Falls, NY 14170

1318 Niagara St.

480-6342-1

DELIVERABLES

This Data Usability Summary Report (DUSR) was prepared by evaluating the analytical data package for LiRo Engineers, project at 1318 Niagara St., TestAmerica Laboratories SDG ID#480-6342-1, submitted to Vali-Data of WNY, LLC on August 5, 2011. This DUSR has been prepared in general compliance with NYSDEC Analytical Services Protocol and USEPA National Functional Guidelines. The laboratory performed the analyses using USEPA methods, 8260 (Volatile Organics), 8270 (Semi Volatile Organics), 8081(Pesticides), 8082 (PCBs), 6010 (Inorganics) and 7470 and 7471 (Mercury).

VOLATILE ORGANIC COMPOUNDS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Internal Standard (IS) Area Performance
- Surrogate Spike Recoveries
- Method Blank
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration
- GC/MS Performance Check

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use but are qualified below in Surrogate Spike Recoveries, Method Blanks and Continuing Calibration.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met except medium level analysis was performed on sample 1318 Niagara- MW03-18-20 due to abundance of target analytes.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met except no Trip Blank was recorded on the Chain of Custody. Sample SB-MSMSD-02 on the Chain of Custody is labeled as 1318 Niagara-SB11-0-4 throughout the report. All but one of the

relinquish times were recorded on the Chain of Custody dated 6/21/11. These do not affect the usability of the data.

HOLDING TIMES

All holding times for the samples were met.

INTERNAL STANDARD (IS)

The IS did meet criteria.

SURROGATE SPIKE RECOVERIES

All criteria were met except the %Rec of 4-Bromofluorobenzene was outside ASP QC limits, high, in SB08-7-8, SB08-10.5-11.5, MW05-0-4, MW03-18-20, MB 480-21167/4, MB 480-22252/2, LCS 480-22254/2, LCS-480-21235/3 and LCS 480-21628/3. The %Rec of 1,2-Dichloroethane-d₁₄ was outside ASP QC limits, high, in 1318 Niagara 480-RB-SB and Trip Blank. Detected target analytes associated with these surrogates should be qualified as estimated.

METHOD BLANK

All the criteria were met except Methylene Chloride was detected above the MDL, below the reporting limit and is qualified as estimated in MB 480-21167, -21235, -21751 and associated samples. Toluene was detected above the MDL, below the reporting limit and is qualified as estimated in MB 480-21034, -21235, -21613, -21751 and associated samples. Acetone was detected above the MDL, below the reporting limit and is qualified as estimated in MB 480-21034 and associated samples. Methylene Chloride was detected above the reporting limit and is qualified as estimated in in MB 480-21034 and the associated samples. Several target analytes were detected above the MDL, below the reporting limit and are qualified as estimated in MB 480-21628 and the associated samples.

FIELD DUPLICATE SAMPLE PRECISION

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

All criteria were met except the %Rec several target analytes were outside laboratory QC limits but within ASP QC limits in 1318 Niagara SB-07-0-4MS/MSD. The %Rec of 1,2-Dichlorobenzene was outside laboratory QC limits in 1318 Niagara SB11-0-4 but within ASP QC limits. No further action is required.

COMPOUND QUANTITATION

All criteria were met.

INITIAL CALIBRATION

All criteria were met except linear regression was used for Acetone and Methylene Chloride in the initial calibration performed on 6/14/11.

Quadratic regression was used on Bromomethane and Bromoform in the initial calibration performed on 6/23/11. Linear regression was used on 1,2-Dibromo-3-chloropropane in the initial calibration performed on 6/23/11. The RRF of Trichloroethene was outside ASP QC limits in the initial calibration performed on 6/23/11. ASP allows for up to two target analytes to be outside QC limits without further action.

1318 Niagara St.
480-6342-1

Linear regression was performed on Dibromochloromethane, Methylene Chloride, Chloroethane and Bromoform in the initial calibration performed on 6/22/11.

Linear regression was performed on Methylene Chloride, 1,1,2-Trichloroethane and Bromoform in the initial calibration performed on 5/27/11. The RRF of Bromomethane was outside ASP QC limits in the initial calibration performed on 5/27/11. ASP allows for up to two target analytes to be outside QC limits without further action.

These target analytes fell within QC limits when the alternate forms of regression were used.

CONTINUING CALIBRATION

All criteria were met except linear and quadratic regressions were used on the target analytes listed above in Initial Calibration associated with each continuing calibration.

The %D of Bromoform was outside ASP outer QC limits in CCVIS 480-21613/3 and should be qualified as estimated in the associated blanks, samples and spikes.

The %D of Dibromochloromethane was outside ASP QC limits in CCVIS 480- 21034/2, -21167/2, -21235/2, -21628/2. ASP allows for up to two target analytes to be outside QC limits without further action.

The %D of Bromomethane was outside ASP QC limits in CCVIS 480-21167/2. ASP allows for up to two target analytes to be outside QC limits without further action.

The RRF of Trichloroethene was outside ASP QC limits in CVIS 480-21613/3. The RRF of Bromomethane was outside ASP QC limits in CVIS 480-21034/2. ASP allows for up to two compounds to be outside QC limits without further action.

The %D's were recorded incorrectly for CCVIS 480-21613/3. Updated pages are attached.

GC/MS PERFORMANCE CHECK

All criteria were met.

SEMIVOLATILE ORGANIC COMPOUNDS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Internal Standard (IS) Area Performance
- Surrogate Spike Recoveries
- Method Blank
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration
- GC/MS Performance Check

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

1318 Niagara St.
480-6342-1

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use.

1318 Niagara MW05-0-4 was diluted due to viscosity.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met. (see VOC above)

HOLDING TIMES

All holding times for the samples were met.

INTERNAL STANDARD (IS)

The IS did meet criteria except the retention times of all the internal standards were outside QC limits in CCVIS 480-21595/2, -22149/2 and CCVIS 480-21921/2 in relation to the Initial Calibration. The retention times of the sample and spikes were within limits in relation to the continuing calibrations, so no further action is required.

SURROGATE SPIKE RECOVERIES

All criteria were met.

METHOD BLANK

All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met except 2,4-Dimethylphenol and 3,3-Dichlorobenzidine were detected above the MDL, below the reporting limit and are qualified as estimated in LCSD 480-21614/3A.

MS/MSD

All criteria were met.

COMPOUND QUANTITATION

All criteria were met.

INITIAL CALIBRATION

All criteria were met except linear regression was used for Hexachlorocyclopentadiene, Caprolactum, 2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol and Pentachlorophenol in the initial calibration performed on 6/22/11. Linear regression was used for Caprolactum, 2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol and Pentachlorophenol in the initial calibration performed on 5/25/11. Linear regression

was used for Caprolactum, 2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol, Atrazine and Di-n-octyl phthalate in the initial calibration performed on 6/17/11.
These target analytes fell within QC limits when linear regression was used.

CONTINUING CALIBRATION

All criteria were met except the %D Bis (2-chloroisopropyl) ether was outside QC limits in CCVIS 480-22149/2 and is qualified throughout. ASP allows up to four target analytes to be outside QC limits without further action.

GC/MS PERFORMANCE CHECK

All criteria were met.

PESTICIDES

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Surrogate Spike Recoveries
- Method Blank
- Field Duplicate Precision
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use except where qualified below in Laboratory Control Samples.

Several samples were diluted due to the matrix.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met. (see VOC above)

HOLDING TIMES

All holding times for the samples were met.

SURROGATE SPIKE RECOVERIES

All criteria were met except the %Rec of both surrogates were outside QC limits in several samples due to dilution.

METHOD BLANK

All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met except the %Rec of Endosulfan Sulfate was outside ASP QC limits, low, in LCS 480-21216/2-A. Associated samples with detects of this target analyte should qualify it as estimated. Non-detects would be unusable.

MS/MSD

All criteria were met except the %Rec of 4,4'-DDT and Heptachlor were outside laboratory and ASP QC limits, high, in 1318 Niagara-SB-11-0-4MS/MSD. The %Rec of Dieldrin and Endrin were outside ASP QC limits in 1318 Niagara-SB-11-0-4MSD. All other target analytes, except Dieldrin and Endrin in 1318 Niagara-SB-11-0-4MSD, were either not detected or had a %Rec outside laboratory limits. The %RPD was outside QC limits for several target analytes. Several target analytes were detected above the MDL, below the reporting limit and are qualified as estimated. These results appear to be due to dilution. Methoxychlor was detected in 1318 Niagara-SB-11-0-4MS/MSD but not in 1318 Niagara-SB-11-0-4. Endrin aldehyde was detected in 1318 Niagara-SB-11-0-4 and 1318 Niagara-SB-11-0-4MS but not in 1318 Niagara-SB-11-0-4MSD.

COMPOUND QUANTITATION

All criteria were met except the %D between the columns was outside QC limits for Dieldrin, Endrin and Endrin Aldehyde in 1318 Niagara MW04-2-3.5 and 1318 Niagara SB11-0-4.

The %D between the columns was outside QC limits for Dieldrin in 1318 Niagara SB13-0-4, 1318 Niagara MW05-0-4 and 1318 Niagara MW03-18-2.

The %D between the columns was outside QC limits for Dieldrin, Endrin and 4,4'-DDE in 1318 Niagara MW04-0-4.

The %D between the columns was outside QC limits for Methoxychlor, Dieldrin, Endrin and Endrin Aldehyde in 1318 Niagara SB11-0-4MS.

The %D between the columns was outside QC limits for Methoxychlor, Dieldrin and Endrin in 1318 Niagara SB11-0-4MSD.

The %D between the columns was outside QC limits for Dieldrin and alpha-Chlordane in 1318 Niagara MW05-9-11.

TestAmerica used the results off the primary column.

INITIAL CALIBRATION

All criteria were met except linear regression was used for all target analytes.

CONTINUING CALIBRATION

All criteria were met except linear regression was used for all target analytes.

The %D of 4,4'-DDE and 4,4'-DDT off column I were outside QC limits in CCVRT 480-21411/15. This CCVRT was used as a closing continuing calibration and thus falls within QC limits, so no further action is required.

The %D of alpha-BHC off column I was outside QC limits in CCVRT 480-21750/3. Column II was the primary column for the associated sample, so no further action is required.

POLYCHLORINATED BIPHENYLS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Surrogate Spike Recoveries
- Method Blank
- Field Duplicate Precision
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use except where identified below in Compound Quantitation and qualified below in Continuing Calibration.

Sample 1318 Niagara SB11-0-4 and its associated matrix spike and matrix spike duplicate were diluted due to elevated target analytes.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met except the client ID was not complete on Form X for samples 1318 Niagara SB-02-10.5-11.5 and 1318 Niagara SB-08-10.5-11.5.

1318 Niagara St.
480-6342-1

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met. (see VOC above)

HOLDING TIMES

All holding times for the samples were met.

SURROGATE SPIKE RECOVERIES

All criteria were met except the %Rec of several of the surrogates in 1318 Niagara SB11-0-4 and its associated matrix spike and matrix spike duplicate were outside QC limits due to dilution.

The %Rec of TCMX was outside QC limits off column I in MB 480-21892/1-A and LCS 480-21892/2-A and off column II in LSC 480-21422/2-A and LCS 480-21892/2-A. The %Rec of DCBP was within QC limits, so no further action is required.

The %Rec of DCBP was outside laboratory QC limits off column II in MB 480-21422/1-A.

The %Rec of DCBP was outside laboratory and ASP QC limits off column I in LCS 480-21892/2-A and off column II in LCS 480-21422/2-A. Results off column II and column I, respectively, should be used for these.

METHOD BLANK

All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met except the %Rec of Aroclor 1016 was outside ASP QC limits, high, in LCS 480-21238/2-A and LCS 480-21892/2. No further action is required since no associated target analytes were detected.

MS/MSD

All criteria were met except the %Rec of Aroclor 1016 was outside ASP QC limits, high in 1318 Niagara SB11-0-4.

The sample concentration was recorded incorrectly on Form III for 1318 Niagara-SB11-0-4 MS/MSD resulting in %Rec outside QC limits. Updated pages are attached, in which the %Rec is within limits.

COMPOUND QUANTITATION

All criteria were met except a five point calibration was not performed for Aroclor 1242, Aroclor 1248 and Aroclor 1254. ASP and National Functional Guidelines requires a 5 point calibration be performed on all detected PCB's within 72 hours of analysis. Since they were not performed, the concentrations of those Aroclor's in the samples cannot be used. However, these Aroclor's have been identified as present in those samples.

The %RPD between the columns was outside QC limits for Aroclor 1260 in samples 1318 Niagara MW04-0-4, 1318 Niagara MW04-2-3.5, 1318 Niagara SB02-0-2, 1318 Niagara SB11-0-4, 1318 Niagara SB11-0-4MS/MSD, 1318 Niagara MW03-18-20, LCS 480-21238/2-A, LCS 480-21422/2-A and LCS 480-21892/2-A.

The %RPD between the columns was outside QC limits for Aroclor 1248 in sample 1318 Niagara SB-07-0-4.

The %RPD between the columns was outside QC limits for Aroclor 1242 in sample 1318 Niagara MW02-16-18 and 1318 Niagara SB08-10.5-11.5.

INITIAL CALIBRATION

All criteria were met except linear regression was used for all target analytes and surrogates except DCBP off column II in initial calibration performed on 5/21/11.

CONTINUING CALIBRATION

All criteria were met except linear regression was used for all target analytes and surrogates except DCBP off column II in initial calibration performed on 5/21/11.

The %D of Aroclor 1260 peak 4 off column I was outside QC limits in CCVRT 480-21832/2. Column II was the primary column.

The %D of DCBP off both columns and Aroclor 1016 peak 4 and Aroclor 1260 peaks 1-4 off column I were outside QC limits in CCVRT 480-21832/15. Column II was used as prime. Target analytes associated with DCBP should be qualified as estimated.

The %D of Aroclor 1260 peak 4 off column I were outside QC limits in CCVRT 480-21832/27. ASP allows 3 peaks to be within QC limits without further action.

The %D of Aroclor 1016 peaks 1,2 off column I and all target analytes and surrogates off column II were outside QC limits in CCVRT 480-23685/60. Aroclor 1016 should be qualified in the associated blank, spikes and samples.

The %D of Aroclor 1016 peak 2, Aroclor 1260 peaks 1, 2 and TCMX off column I and all PCB's and surrogates except Aroclor 1260 peak 4 off column II were outside QC limits in CCVRT 480-23685/42. This continuing calibration was within limits for a closing calibration.

The %D of Aroclor 1016 peak 1 off column I and all PCB's and surrogates except TCMX off column II were outside QC limits in CCVRT 480-22237/48. ASP allows 3 peaks to be within QC limits without further action.

The %D of Aroclor 1260 peaks 1-4 off column I and Aroclor 1016 peaks 1-4 and TCMX off column II were outside QC limits in CCVRT 480-22237/10. Aroclor 1260 should be qualified as estimated in associated blanks, spikes and samples.

The %D of Aroclor 1016 peak 1 and Aroclor 1260 peaks 1, 2 off column I and all PCB's and surrogates off column II were outside QC limits in CCVRT 480-22237/19. Aroclor 1260 should be qualified as estimated in associated blanks, spikes and samples.

The %D of Aroclor 1016 peak 1 off column I and all PCB's and surrogates off column II were outside QC limits in CCVRT 480-22237/30. This continuing calibration was within limits for a closing calibration.

The %D of Aroclor 1016 peaks 1, 2 and Aroclor 1260 peak 2 off column I and all PCB's and surrogates off column II were outside QC limits in CCVRT 480-21989/2. Aroclor 1016 should be qualified as estimated in associated spikes, blanks and samples.

The %D of Aroclor 1016 peaks 1, 2 off column I and all PCB's and surrogates off column II were outside QC limits in CCVRT 480-21989/22. This continuing calibration was within limits for a closing calibration.

METALS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Method Blank
- Laboratory Control Sample
- MS
- Field Duplicate
- Serial Dilution
- Compound Quantitation
- Calibration

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use but are qualified below in Method Blank, Laboratory Control Samples, Serial Dilution, MS/MSD and Calibration.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met. (see VOC above)

HOLDING TIMES

All holding times were met.

METHOD BLANK

All criteria were met except Ca, Fe, Mn and Na were detected in MB 480-21098/1-A.

Ca, Fe and Mn were detected in MB 480-21266/1-A.

Ca and Fe were detected in MB 480-21457/1-A.

Na was detected in MB 480-21696/1-A.

Cd, Ca, Fe, Mg, Mn and Na were detected in MB 480-21863/1-A.
These target analytes were qualified with a 'B' in the samples.

LABORATORY CONTROL SAMPLE

All criteria were met except the %Rec of Al and Fe were outside ASP QC limits, low in LCSSRM 480-21098/2-A, LCSSRM 480-21266/2-A and LCSSRM 480-21457/2-A. These target analytes should be considered biased low.

MS/MSD

All criteria were met except the %Rec of Al was outside QC limits, high in 1318 Niagara SB11-0-4MS/MSD. The %Rec of Zn was outside QC limits, high in 1318 Niagara SB11-0-4MS. The %Rec of Sb, Ca and Mg were outside QC limits, low in 1318 Niagara SB11-0-4MS/MSD.

The post digest spike for 1318 Niagara SB11-0-4 was within QC limits for all target analytes except Al, Fe and Mn, which were qualified with a 'W'. These target analytes should be qualified with an 'N' in the associated samples in which the concentrations are less than 4 times the spiked amount, per ASP.

The %Rec of Al, K and Mg were outside QC limits, high in 1318 Niagara MW05-0-4MS/MSD. The %Rec of Ca was outside QC limits, high in 1318 Niagara MW05-0-4MSD and Mn was outside QC limits, high in 1318 Niagara MW05-0-4MS. The %Rec of Sb and Fe were outside QC limits, low in 1318 Niagara MW05-0-4MS/MSD. The %Rec of Ca was outside QC limits, low in 1318 Niagara MW05-0-4MS and Mn was outside QC limits, low in 1318 Niagara MW05-0-4MSD.

The post digest spike for 1318 Niagara MW05-0-4 was within QC limits for all target analytes except Fe, Mg and Mn, which were qualified with a 'W'. These target analytes should be qualified with an 'N' in the associated samples in which the concentrations are less than 4 times the spiked amount, per ASP.

FIELD DUPLICATE

All criteria were met.

SERIAL DILUTION

All criteria were met except the %D of Al, Ba, Ca, Fe, Mn, K and Zn were outside QC limits in the serial dilution associated with 1318 Niagara SB11-0-4.

The %D of Al, Ba, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, V and Zn were outside QC limits in the serial dilution associated with 1318 Niagara MW05-0-4.

The target analytes in the associated samples should be qualified as estimated if their concentrations are >50xMDL.

COMPOUND QUANTITATION

All criteria were met.

CALIBRATION

All criteria were met except Fe and Mn were detected above the MDL, below the reporting limit and are qualified as estimated in CCB- 480-21477/13.

Mn was detected above the MDL, below the reporting limit and is qualified as estimated in CCB- 480-21477/21.

Mg and Cd were detected above the MDL, below the reporting limit and are qualified as estimated in CCB- 480-21477/32.

Cd was detected above the MDL, below the reporting limit and is qualified as estimated in CCB- 480-21925/6, -21925/13 and CCB-480-22119/17, -22119/29.

Co was detected above the MDL, below the reporting limit and is qualified as estimated in CCB- 480-21925/22, -21925/34 and CCB-480-21925-42.

Cd was detected above the MDL, below the reporting limit and is qualified as estimated in CCB- 480-21925/22.

Cd was detected above the reporting limit in CCB- 480-21925/34 and CCB 480-21925/42.

Na was detected above the MDL, below the reporting limit and is qualified as estimated in CCB- 480-21300/50.

No further action is required because the above mentioned target analytes were either not present in the samples or would be considered biased high.

MERCURY

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Method Blank
- Laboratory Control Samples
- MS
- Compound Quantitation
- Calibration

The items listed above were technically in compliance with the method and SOP criteria with any exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use.

1318 Niagara St.

480-6342-1

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY

All criteria were met. (see VOC above)

HOLDING TIMES

All holding times for the samples were met.

METHOD BLANK

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

All criteria were met except the %Rec of Hg was outside QC limits, low in 1318 Niagara MW01-0'02'MSD. The %Rec of Hg in 1318 Niagara MW05-0-4MSD was outside QC limits, high. The %RPD between 1318 Niagara MW05-0-4MS/MSD was outside QC limits.

Hg was not detected in the serial dilutions.

COMPOUND QUANTITATION

All criteria were met.

CALIBRATION

All criteria were met.

GENERAL CHEMISTRY

The following items/criteria were reviewed for this analytical suite:

- Dry Weight
- Cyanide(Cn)

The items listed above were technically in compliance with the method and SOP criteria with any exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above.

DRY WEIGHT

The percent moisture was recorded on a summary page but no Form 1's were submitted.

1318 Niagara St.
480-6342-1

CYANIDE

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Method Blank
- Laboratory Control Samples
- MS
- Duplicate
- Compound Quantitation
- Calibration

The items listed above were technically in compliance with the method and SOP criteria with any exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use but are qualified below in Holding Times and Laboratory Control Samples.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY

All criteria were met. (see VOC above)

HOLDING TIMES

All holding times for the samples were met.

METHOD BLANK

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met except the %Rec of LCS 480-21537/2-A and LCS 480-22271/2-A were outside ASP QC limits, low, Cn in associated samples should be qualified as estimated.

1318 Niagara St.

480-6342-1

MS

All criteria were met.

DUPLICATE

All criteria were met

COMPOUND QUANTITATION

All criteria were met.

CALIBRATION

All criteria were met.

Data Usability Summary Report

Vali-Data of WNY, LLC

1514 Davis Rd.

West Falls, NY 14170

1318 Niagara St.

TestAmerica Laboratories # 480-7574-1

September 1, 2011

Sampling date: 7/21, 22, 25/11

Prepared by

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Vali-Data of WNY, LLC

1514 Davis Rd.

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1318 Niagara St.

480-7574-1

DELIVERABLES

This Data Usability Summary Report (DUSR) was prepared by evaluating the analytical data package for LiRo Engineers, project at 1318 Niagara St., TestAmerica Laboratories SDG ID#480-7574-1, submitted to Vali-Data of WNY, LLC on August 29, 2011. This DUSR has been prepared in general compliance with NYSDEC Analytical Services Protocol and USEPA National Functional Guidelines. The laboratory performed the analyses using USEPA methods, 8260 (Volatile Organics), 8270 (Semi Volatile Organics), 8081(Pesticides), 8082 (PCBs), 6010 (Inorganics), 7470 (Mercury) and 9012 (Cyanide).

VOLATILE ORGANIC COMPOUNDS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Internal Standard (IS) Area Performance
- Surrogate Spike Recoveries
- Method Blank
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration
- GC/MS Performance Check

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use but are qualified below in Surrogate Spike Recoveries and MS/MSD.

Sample 1318-MW04-GW was diluted due to elevated target analytes.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met except no Trip Blank was recorded on the Chain of Custody. Sample 1318-MSMSD01-GW on the Chain of Custody is labeled as 1318-MW04-GWMS/MSD throughout the report.

HOLDING TIMES

All holding times for the samples were met except samples 1318-MW02-GW and 1318-MW01-GW fell outside holding times for ASP QC limits but within QC limits for the National Functional Guideline.

INTERNAL STANDARD (IS)

The IS did meet criteria.

SURROGATE SPIKE RECOVERIES

All criteria were met except the %Rec of 1,2-Dichloroethane-d₁₄ was outside ASP QC limits, high, in 1318-MW04-GW, 1318-MW04-GWdl, 1318-MW04-GWMS, MB 480-24830/5, MB 480-24916/5 and LCS 480-24916/4.

The %Rec of Toluene-d₈ was outside ASP QC limits, high, in 1318-MW04-GW, 1318-MW04-GWdl, 1318-MW04-GWMS/MSD, MB 480-24830/5, MB 480-24916/5, Trip Blank(480-7621-2TB) and LCS 480-24916/4.

Detected target analytes associated with these surrogates should be qualified as estimated.

METHOD BLANK

All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

All criteria were met except the %Rec Trichloroethene was outside ASP QC limits, low, in 1318-MW04-GWMS/MSD. Trichloroethene should be qualified as undetected estimated in sample 1318-MW04-GW.

COMPOUND QUANTITATION

All criteria were met.

INITIAL CALIBRATION

All criteria were met except linear regression was used for Trichlorofluoromethane, Carbon tetrachloride, Dibromochloromethane, Bromoform, 12-Dibromo-3-Chloropropane and Methylene Chloride in the initial calibration performed on 7/21/11 instrument N. The RRF of Trichloroethene was outside ASP QC limits in the initial calibration performed on 7/21/11 instrument N. ASP allows for up to two target analytes to be outside QC limits without further action.

Linear regression was performed on Naphthalene and 2-Chloroethyl vinyl ether in the initial calibration performed on 7/21/11 instrument T.

These target analytes fell within QC limits when the alternate forms of regression were used.

CONTINUING CALIBRATION

All criteria were met except linear regression was used on the target analytes listed above in Initial Calibration associated with each continuing calibration.

The RRF of Trichloroethene was outside ASP QC limits in the continuing calibration CCVIS 480-24916/2. ASP allows for up to two target analytes to be outside QC limits without further action.

GC/MS PERFORMANCE CHECK

All criteria were met.

SEMIVOLATILE ORGANIC COMPOUNDS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Internal Standard (IS) Area Performance
- Surrogate Spike Recoveries
- Method Blank
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration
- GC/MS Performance Check

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use but are qualified below in Method Blank.

1318 Niagara MW05-0-4 was diluted due to viscosity.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met. (see VOC above)

HOLDING TIMES

All holding times for the samples were met except samples 1318-MW02-GW, 1318-MW05-GW, 1318-Dup01-GW, 1318-MW04-GW and 1318-MW01-GW fell outside holding times for ASP QC limits but within QC limits for the National Functional Guideline.

INTERNAL STANDARD (IS)

The IS did meet criteria except the retention times of all the internal standards were outside QC limits in CCVIS 480-21595/2, -22149/2 and CCVIS 480-21921/2 in relation to the Initial Calibration. The retention

1318 Niagara St.

480-7574-1

times of the sample and spikes were within limits in relation to the continuing calibrations, so no further action is required.

SURROGATE SPIKE RECOVERIES

All criteria were met.

METHOD BLANK

All the criteria were met except Di-n-Butyl phthalate was detected above the MDL, below the reporting limit and is qualified as estimated in MB 480-25216/1-A (batch 26111) and MB 480-25346/1-A.

FIELD DUPLICATE SAMPLE PRECISION

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met except the %Rec of Fluorene was outside QC limits, high, in LCS 480-25346/2-A. The %RPD of Fluorene and Bis(2-ethylhexyl) phthalate were outside QC limits in LCS/SD 480-25346/2-A. The %RPD of Bis(2-ethylhexyl) phthalate was outside QC limits in LCS/SD 480-25521/2-A.

MS/MSD

All criteria were met except the %Rec of 2,4-Dinitrotoluene and 4-Chloro-3-methylphenol were outside ASP QC limits, high, in 1318-MW04-GWMS/MSD. The %Rec of Pentachlorophenol was outside ASP QC limits, high, in 1318-MW04-GWMSD.

COMPOUND QUANTITATION

All criteria were met.

INITIAL CALIBRATION

All criteria were met except linear regression was used for Caprolactum, 2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol and Benzo(g,h,i)perylene in the initial calibration performed on 7/13/11.

Linear regression was used for 3-Nitroaniline, 4-Nitrophenol, 4-Nitroaniline, 4,6-Dinitro-2-methylphenol and Pentachlorophenol in the initial calibration performed on 7/22/11.

Quadratic regression was used on 2,4-Dinitrophenol, Dibenzofuran, Fluorene and 4-Chlorophenyl phenyl ether in the initial calibration performed on 7/22/11.

Linear regression was used for 4-Nitrophenol, 4,6-Dinitro-2-methylphenol, Pentachlorophenol and Di-n-octyl phthalate in the initial calibration performed on 8/1/11.

Quadratic regression was used on 2,4-Dinitrophenol in the initial calibration performed on 8/1/11.

Linear regression was used for 2-Nitroaniline, Caprolactum, 4,6-Dinitro-2-methylphenol and Di-n-octyl phthalate in the initial calibration performed on 7/18/11.

These target analytes fell within QC limits when linear regression was used.

CONTINUING CALIBRATION

All criteria were met except the %D of N-Nitrosodiphenylamine was outside QC limits in CCVIS 480-25325/2. The %D of 2,4-Dinitrophenol was outside QC limits in CCVIS 480-25689/2. ASP allows up to four target analytes to be outside QC limits without further action.

Alternate forms of regression were used on the target analytes listed above in the initial calibration for the corresponding continuing calibrations.

GC/MS PERFORMANCE CHECK

All criteria were met.

PESTICIDES

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Surrogate Spike Recoveries
- Method Blank
- Field Duplicate Precision
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use except where qualified below in Method Blank and Continuing Calibration.

Column RTX-CLP1 was used as the primary column for all samples except 1318 MW03-GW.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met. (see VOC above)

HOLDING TIMES

All holding times for the samples were met.

SURROGATE SPIKE RECOVERIES

All criteria were met.

METHOD BLANK

All the criteria were met except Endrin aldehyde was detected above the MDL, below the reporting limit and is qualified as estimated in MB 480-25091/1-A.

FIELD DUPLICATE SAMPLE PRECISION

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

All criteria were met.

COMPOUND QUANTITATION

All criteria were met except the %D between the columns was outside QC limits for Heptaclor in 1318-MW01-GW.

The %D between the columns was outside QC limits for Heptaclor epoxide, Dieldrin, Endrin and Endrin Ketone in 1318 MW-03-GW.

The %D between the columns was outside QC limits for Endrin aldehyde in MB 480-25091.

TestAmerica used the results off the primary column.

INITIAL CALIBRATION

All criteria were met except linear regression was used for all target analytes off both columns.

CONTINUING CALIBRATION

All criteria were met except linear regression was used for all target analytes.

The %D of several target analytes were outside QC limits in the continuing calibrations.

The %D of Endrin aldehyde off column I was outside QC limits in CCV 480-25221/32. This target analyte should be qualified as estimated in the corresponding samples, blank and spikes.

The %D of 4,4'-DDT, Endosulfan sulfate, Methoxychlor and DCBP off column II were outside QC limits in CCV 480-25619/20. These target analytes should be qualified as estimated in the corresponding samples, blank and spikes.

POLYCHLORINATED BIPHENYLS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Surrogate Spike Recoveries
- Method Blank
- Field Duplicate Precision
- Laboratory Control Samples

- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use except where indicated in Compound Quantitation.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met except the raw data for CCV 480-25709/2 and CCV 480-25709/10 were not included in the original package. Those pages are attached.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met. (see VOC above)

HOLDING TIMES

All holding times for the samples were met.

SURROGATE SPIKE RECOVERIES

All criteria were met.

METHOD BLANK

All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

All criteria were met.

COMPOUND QUANTITATION

All criteria were met except a five point calibration was not performed for Aroclor 1254. ASP and National Functional Guidelines requires a 5 point calibration be performed on all detected PCB's within 72 hours of analysis. Since it was not performed, the concentrations of Aroclor 1254 in the samples cannot be used. However, Aroclor 1254 has been identified as present in those samples.

INITIAL CALIBRATION

All criteria were met except linear regression was used for all target analytes and surrogates.

1318 Niagara St.

480-7574-1

CONTINUING CALIBRATION

All criteria were met except linear regression was used for all target analytes and surrogates.

The %D of Aroclor 1016 peak 1 off column I and Aroclor 1260 peaks 1-4 off column II were outside QC limits in CCV 480-25123/11. Column I was used as prime. ASP requires three peaks to be within QC limits, so no further action is required.

The %D of Aroclor 1260 peak 4 off column II was outside QC limits in CCV 480-25123/28. Column I was used as prime, so no further action is required.

The %D of Aroclor 1016 peak 1 and Aroclor 1260 peaks 1-4 off column II were outside QC limits in CCV 480-25709/2. Results from column I were used so no further action is required.

The %D of Aroclor 1260 peaks 1, 3 and 4 off column II were outside QC limits in CCV 480-25709/10. Results from column I were used so no further action is required.

METALS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Method Blank
- Laboratory Control Sample
- MS
- Field Duplicate
- Serial Dilution
- Compound Quantitation
- Calibration

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use but are qualified below in Method Blank, MS/MSD and Calibration.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met. (see VOC above)

HOLDING TIMES

All holding times were met.

METHOD BLANK

All criteria were met except Mn was detected above the MDL, below the reporting limit and is qualified as estimated in MB 480-248846/1-A, -25164/1-A and MB 480-25245/1-A.

This target analyte was qualified with a 'B' in the samples.

LABORATORY CONTROL SAMPLE

All criteria were met.

MS/MSD

All criteria were met except the %Rec of Cu was outside QC limits, low in 1318 MW-04-GWMS/MSD and should be qualified as estimated in sample 1318 MW-04-GW. The %Rec of Ca was outside QC limits, low, in 1318 MW-04-GWMSD

The post digest spike for 1318 MW-04-GW was within QC limits for all target analytes except As, Cd and Se, which were qualified with a 'W'. These target analytes should be qualified with an 'N' in the associated samples in which the concentrations are less than 4 times the spiked amount, per ASP.

FIELD DUPLICATE

All criteria were met.

SERIAL DILUTION

All criteria were met.

COMPOUND QUANTITATION

All criteria were met.

CALIBRATION

All criteria were met except Cu was detected above the MDL, below the reporting limit and is qualified as estimated in CCB 480-25313/44.

Be was detected above the MDL, below the reporting limit and is qualified as estimated in ICB 480-25523/6 and CCB 480-25523/11.

Al was detected above the MDL, below the reporting limit and is qualified as estimated in CCB 480-25523/28

No further action is required because the above mentioned target analytes were either not present in the samples or would be considered biased high.

MERCURY

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Method Blank
- Laboratory Control Samples
- MS
- Compound Quantitation
- Calibration

The items listed above were technically in compliance with the method and SOP criteria with any exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY

All criteria were met. (see VOC above)

HOLDING TIMES

All holding times for the samples were met.

METHOD BLANK

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

All criteria were met.

COMPOUND QUANTITATION

All criteria were met.

CALIBRATION

All criteria were met.

GENERAL CHEMISTRY

The following items/criteria were reviewed for this analytical suite:

- Dry Weight
- Cyanide(Cn)

The items listed above were technically in compliance with the method and SOP criteria with any exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above.

DRY WEIGHT

The percent moisture was recorded on a summary page but no Form 1's were submitted.

CYANIDE

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Method Blank
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Calibration

The items listed above were technically in compliance with the method and SOP criteria with any exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY

All criteria were met. (see VOC above)

HOLDING TIMES

All holding times for the samples were met.

METHOD BLANK

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

All criteria were met except the %Rec of Cn was outside QC limits, high, in 1318 MW04-GWMSD.

COMPOUND QUANTITATION

All criteria were met.

CALIBRATION

All criteria were met.

Data Usability Summary Report

Vali-Data of WNY, LLC
1514 Davis Rd.
West Falls, NY 14170

1318 Niagara St.
CHEMTECH # C4479
December 30, 2011
Sampling date: 11/2/11

Prepared by

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1514 Davis Rd.
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1318 Niagara St.
#C4479

DELIVERABLES

This Data Usability Summary Report (DUSR) was prepared by evaluating the analytical data package for LiRo Engineers, project at 1318 Niagara St., CHEMTECH SDG ID#C4479, submitted to Vali-Data of WNY, LLC on December 21, 2011. This DUSR has been prepared in general compliance with NYSDEC Analytical Services Protocol and USEPA National Functional Guidelines. The laboratory performed the analyses using USEPA methods, 8260 (Volatile Organics), 8270 (Semi Volatile Organics), 8081(Pesticides), 8082 (PCBs), 6010 (Inorganics) and 7470 (Mercury).

VOLATILE ORGANIC COMPOUNDS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Internal Standard (IS) Area Performance
- Surrogate Spike Recoveries
- Method Blank
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration
- GC/MS Performance Check

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

1318 Niagara St.

#C4479

INTERNAL STANDARD (IS)

The IS did meet criteria.

SURROGATE SPIKE RECOVERIES

All criteria were met.

METHOD BLANK

All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

All criteria were met.

COMPOUND QUANTITATION

All criteria were met.

INITIAL CALIBRATION

All criteria were met except the %RSD for several target analytes was outside QC limits. These target analytes fell within QC limits when alternate forms of regression were used. The RRF of Carbon Tetrachloride was outside ASP QC limits. ASP allows for the RRF to be outside QC limits for up to two compounds without further action.

Alternate forms of regression were used on all target analytes whose %RSD >15%.

CONTINUING CALIBRATION

All criteria were met. Alternate forms of regression were used for several target analytes with acceptable results.

The RRF of Carbon Tetrachloride was outside ASP QC limits in continuing calibration file #VR001831.

The ASP allows for the RRF to be outside QC limits for up to two compounds without further action.

GC/MS PERFORMANCE CHECK

All criteria were met.

SEMIVOLATILE ORGANIC COMPOUNDS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Internal Standard (IS) Area Performance
- Surrogate Spike Recoveries

1318 Niagara St.

#C4479

- Method Blank
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration
- GC/MS Performance Check

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use but are qualified below in Laboratory Control Sample and MS/MSD.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

INTERNAL STANDARD (IS)

The IS did meet criteria.

SURROGATE SPIKE RECOVERIES

All criteria were met except the %Rec of 2-Fluorophenol was outside ASP QC limits low in 1318-MW04-GW. ASP allows for one surrogate/fraction to be outside QC limits without further action.

METHOD BLANK

All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met except the concentration of Benzaldehyde and Caprolactum were detected above the MDL, below the reporting limit and were qualified as estimated. The concentration of Hexachlorocyclopentadiene, 2,4-Dinitrophenol and Pentachlorophenol exceeded the calibration limit and are qualified with an 'E'. These target analytes were not detected in the samples, so no further action is required.

1318 Niagara St.

#C4479

MS/MSD

All criteria were met except the %Rec of Benzaldehyde was outside laboratory QC limits, low, in 1318-MW02-GWMS/MSD. The %Rec of Pentachlorophenol was outside ASP QC limits, high, in 1318-MW02-GWMS/MSD. These target analytes were within limits in the Laboratory Control Samples, so no further action is required.

The concentration of Benzaldehyde and Caprolactum were detected above the MDL, below the reporting limit and were qualified as estimated in 1318-MW02-GWMS/MSD. The concentration of 2,4-Dinitrophenol and Pentachlorophenol exceeded the calibration limit in 1318-MW02-GWMS/MSD and are qualified with an 'E'. The concentration of Hexachlorocyclopentadiene, in 1318-MW02-GWMS, exceeded the calibration limit and is qualified with an 'E'. These target analytes were not detected in the samples, so no further action is required.

COMPOUND QUANTITATION

All criteria were met.

INITIAL CALIBRATION

All criteria were met except 2,4-Dinitrophenol was outside ASP outer QC limits. An alternate form of regression was with acceptable results, so no further action is required.

Alternate forms of regression were used on all target analytes whose %RSD >15%.

CONTINUING CALIBRATION

All criteria were met except the %D of Pentachlorophenol was outside ASP QC limits in continuing calibration file #BF051047. ASP allows up to four target analytes to be outside QC limits without further action.

Alternate forms of regression were used for several target analytes with acceptable results.

GC/MS PERFORMANCE CHECK

All criteria were met.

PESTICIDES

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Surrogate Spike Recoveries
- Method Blank
- Field Duplicate Precision
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration

1318 Niagara St.

#C4479

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

SURROGATE SPIKE RECOVERIES

All criteria were met.

METHOD BLANK

All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

All criteria were met except the %Rec of gamma-BHC, Aldrin, Endrin and 4,4'-DDT were outside ASP QC limits, high, in 1318-MW02-GWMS.

The %RPD between the columns was outside QC limits for alpha-BHC, beta-BHC, delta-BHC, gamma-BHC, Heptachlor, Aldrin, Heptachlor epoxide, Endosulfan I, Dieldrin, 4,4'-DDE, Endosulfan II, Methoxychlor, alpha-Chlordane and gamma-Chlordane in 1318-MW02-GWMS. The %RPD between the columns was outside QC limits for of the above these target analytes, except Methoxychlor and Heptachlor epoxide, in 1318-MW02-GWMSD.

COMPOUND QUANTITATION

All criteria were met.

INITIAL CALIBRATION

All criteria were met.

CONTINUING CALIBRATION

All criteria were met except the %D of 4,4'-DDT was outside QC limits in PEM01 off column 1.

1318 Niagara St.

#C4479

The %D of 4,4'-DDT and Methoxychlor were outside QC limits in PEM02 off column 1. This target analyte was not detected in the samples and the %D had acceptable results off column 2, so no further action is required.

POLYCHLORINATED BIPHENYLS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Surrogate Spike Recoveries
- Method Blank
- Field Duplicate Precision
- Laboratory Control Samples
- MS/MSD
- Compound Quantitation
- Initial Calibration
- Continuing Calibration

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above and qualified accordingly.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use except there were calculation errors throughout the PCB package. CHEMTECH revised the package with acceptable results.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

SURROGATE SPIKE RECOVERIES

All criteria were met.

METHOD BLANK

All the criteria were met.

FIELD DUPLICATE SAMPLE PRECISION

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

All criteria were met except the %RPD between the columns was outside QC limits for Aroclor 1016 in 1318-MW02-GWMS/MSD. Aroclor 1016 was not detected in the samples so no further action is required.

COMPOUND QUANTITATION

All criteria were met.

INITIAL CALIBRATION

All criteria were met.

CONTINUING CALIBRATION

All criteria were met.

METALS

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Method Blank
- Laboratory Control Sample
- MS/MSD
- Duplicate
- Field Duplicate
- Serial Dilution
- Compound Quantitation
- Calibration

The items listed above were technically in compliance with the method and SOP criteria with the exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use but are qualified below in Method Blank, Laboratory Control Sample, and Calibration.

DATA COMPLETENESS

All criteria were met.

NARATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY AND TRAFFIC REPORTS

All criteria were met.

HOLDING TIMES

All holding times were met.

METHOD BLANK

All criteria were met except Al was detected above the MDL, below the reporting limit and is qualified as estimated in PB59073BL. Samples in which Al is detected above the MDL but below the reporting limit should be recorded as the reporting limit and 'U'.

LABORATORY CONTROL SAMPLE

All criteria were met except the concentration of Ca in PB59047BS was above the MDL, below the reporting limit and qualified as estimated.

MS/MSD

All criteria were met except the %Rec of Mg and Na were outside QC limits, high in 1318 MW02-GWMS. The %Rec of Ca was outside QC limits, high, in 1318-MW02-GWMS/MSD and would be considered biased high.

DUPLICATE

All criteria were met except Pb and Zn were detected in sample 1318-MW02-GW, above the MDL, below the reporting limit, but not in the duplicate.

FIELD DUPLICATE

All criteria were met.

SERIAL DILUTION

All criteria were met.

COMPOUND QUANTIFICATION

All criteria were met.

1318 Niagara St.

#C4479

CALIBRATION

All criteria were met except Al, Cd, K and TI were detected above the MDL, below the reporting limit and are qualified as estimated in ICB-01.

Al, Ba, Cd and TI were detected above the MDL, below the reporting limit and are qualified as estimated in CCB-01.

TI was detected above the MDL, below the reporting limit and is qualified as estimated in CCB-02.

K, Na and TI were detected above the MDL, below the reporting limit and are qualified as estimated in CCB-03, CCB-04 and CCB-05.

Samples in which these target analytes are detected above the MDL but below the reporting limit should be recorded as the reporting limit and 'U'.

MERCURY

The following items/criteria were reviewed for this analytical suite:

- Data Completeness
- Narrative and Data Reporting Forms
- Chain of Custody and Traffic Reports
- Holding Times
- Method Blank
- Laboratory Control Samples
- MS/MSD
- Duplicate
- Field Duplicate
- Compound Quantitation
- Calibration

The items listed above were technically in compliance with the method and SOP criteria with any exceptions discussed in the text below. The data have been reviewed according to the procedures outlined above.

OVERALL EVALUATION OF DATA AND POTENTIAL USABILITY ISSUES

The data are acceptable for use.

DATA COMPLETENESS

All criteria were met.

NARRATIVE AND DATA REPORTING FORMS

All criteria were met.

CHAIN OF CUSTODY

All criteria were met.

HOLDING TIMES

All holding times for the samples were met.

METHOD BLANK

All criteria were met.

LABORATORY CONTROL SAMPLES

All criteria were met.

MS/MSD

All criteria were met.

DUPLICATE

All criteria were met.

FIELD DUPLICATE

All criteria were met.

COMPOUND QUANTITATION

All criteria were met.

CALIBRATION

All criteria were met.

ATTACHMENT C

Laboratory data is available on CD.