

# FINAL ENGINEERING REPORT

## BROWNFIELD CLEANUP PROGRAM

For

Pierce Arrow Business Center

155-157 Chandler, Buffalo, New York 14207

BCP # C915312



Prepared For:

**R & M Leasing LLC**

391 Washington Street, Buffalo, New York 14203

HEI Project No: e1601

Prepared By:

**Hazard Evaluations, Inc.**

3636 North Buffalo Road

Orchard Park, New York 14127

(716) 667-3130

**Schenne & Associates**

391 Washington Street, Suite 800

Buffalo, NY 14203

(716) 655-4991

December 14, 2017

**HAZARD  
EVALUATIONS**



## CERTIFICATION

I, John A. Schenne, certify that I am a NYS registered professional engineer, I had primary direct responsibility for the implementation of the subject construction program, and I certify that the Interim Remedial Measures was implemented and that construction activities were completed in substantial conformance with the DER-approved Remedial Investigation, Interim Remedial Measures, Alternative Analysis Report (RI-IRM-AAR Work Plan).

I certify that the data submitted to DER demonstrates that the remediation requirements set forth in the RI-IRM-AAR Work Plan and in all applicable statutes and regulations have been or will be achieved in accordance with the time frames, if any, established for the remedy.

I certify that all use restrictions, institutional controls, engineering controls, and/or operation and maintenance requirements applicable to the site are contained in an environmental easement created and recorded pursuant to ECL 71-3605 and that any affected local governments, as defined in ECL 71-3603, have been notified that such easement has been recorded.

I certify that a Site Management Plan (SMP) has been submitted for the continual and proper operation, maintenance, and monitoring of any engineering controls employed at the site, including the property maintenance of any remaining monitoring wells, and that such plan has been approved by DER.

I certify that documents generated in support of this report have been submitted in accordance with DER's electronic submission protocols and have been accepted by the Department.

I certify that data generated in support of this report have been submitted in accordance with the Department's electronic data deliverable (EDD) requirements.

I certify that information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, John A. Schenne, of Schenne & Associates, am certifying as Volunteer's Designed Site Representative.



John August Schenne, P.E.  
Schenne & Associates  
New York License Number 059307

12/14/17  
Date



## TABLE OF CONTENTS

	<u>Page</u>
1.0 INTRODUCTION .....	1
1.1 Site Background .....	1
1.2 Site Conditions.....	2
1.3 Summary of Environmental Conditions.....	2
1.4 Geology and Hydrogeology. ....	3
1.5 Constituents of Primary Concern (COPCs).....	3
2.0 SUMMARY OF SITE REMEDY .....	5
2.1 Remedial Action Objectives .....	5
2.1.1 Groundwater RAOs .....	5
2.1.1 Soil RAOs.....	5
2.1.3 Soil Vapor RAOs .....	5
2.2 Description of Interim Remedial Measures .....	5
3.0 SUMMARY OF INTERIM REMEDIAL MEASURES .....	7
3.1 Materials Removal .....	8
3.1.1 Asbestos Containing Materials .....	9
3.1.2 Radiation Survey .....	9
3.1.3 Drum and Container Disposal .....	9
3.2 Courtyard IRM Activities .....	10
3.2.1 ACM and PCB Impacted Soil Removal .....	11
3.2.2 PCB Soil Removal .....	12
3.2.3 2,000-gallon UST removal.....	13
3.2.4 10,000-gallon AST vault .....	14
3.2.5 Sewer Drain and Pit Areas .....	14
3.3 Parking Lot IRM Activities .....	15
3.4 Interior IRM Activities.....	17
3.4.1 Building Sub-floor Soil Removal.....	17
3.4.2 Concrete Floor Removal.....	18
3.4.3 Soil Sample Analysis – Below Removed Concrete Floor .....	19
3.5 Air Monitoring.....	20
3.6 Nuisance Controls .....	21
3.7 On-site Contractors.....	22
3.8 Governing Documents .....	23
3.8.1 Quality Assurance Project Plan (QAPP).....	23
3.8.2 Site Specific Health & Safety Plan (HASP).....	23
3.8.3 Community Air Monitoring Project Plan (CAMP) .....	23
3.5.4 Citizens Participation Plan (CPP) .....	23
3.9 Record Keeping and Reporting.....	24
3.10 Deviations from Work Plan .....	24
3.11 On-site Reuse.....	24
3.12 Imported Backfill .....	24



## TABLE OF CONTENTS

	<b><u>Page</u></b>
4.0 SOIL VAPOR INTRUSION.....	26
5.0 CONTAMINATION REMAINING AT THE SITE .....	27
5.1 Institutional Controls .....	27
5.2 Engineering Controls .....	28
6.0 ADDITIONAL SOIL DISTURBANCES .....	29
7.0 REFERENCES.....	30



## TABLE OF CONTENTS

### FIGURES

Figure 1	Locus Plan
Figure 2	Site Plan
Figure 3	Groundwater Isopotential Map
Figure 4	Post IRM Courtyard Soil Sample Locations
Figure 5	Post IRM Parking Lot Soil Sample Locations
Figure 6	Post IRM Interior Soil Sample Locations
Figure 7	Post IRM Concrete Floor Sample Locations
Figure 8	Groundwater Monitoring Well Exceedances
Figure 9	SSD System Location
Figure 10	SSD System As-Built

### TABLES

Table 1	Courtyard Unrestricted Use SCO Exceedances
Table 2	Parking Lot Unrestricted Use SCO Exceedances
Table 3	Unrestricted Use SCO Exceedances under Building Floor Slab
Table 4	PCB Unrestricted Use SCO Exceedances – Concrete Floor
Table 5	Backfill Material Source and Quantity
Table 6	Clay Backfill Testing Results
Table 7	Soil Vapor Intrusion Decision Matrix

### APPENDIX

Appendix A	Environmental Easement
Appendix B	NYSDEC Work Plan Approvals
Appendix C	Fact Sheets
Appendix D	ACM Closeout Reports
Appendix E	Daily Field Notes
Appendix F	Material Disposal Manifests
Appendix G	Site Laboratory Testing Data (CD Only)
Appendix H	Data Validation Reports
Appendix I	CAMP – Air Monitoring Data (CD Only)
Appendix J	Soil Disposal Manifest (CD Only)
Appendix K	Imported Material Documentation
Appendix L	SSD System As-Built and Documentation
Appendix M	Project Photo Log
Appendix N	Storm Water Management Report
Appendix O	Digital Copy of FER (CD)



## **List of Acronyms**

AAR	Alternative Analysis Report
ACM	Asbestos Containing Material
ASP	Analytical Services Protocol
AST	Aboveground Storage Tank
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
CAMP	Community Air Monitoring Plan
C&D	Construction and Demolition
CLP	Contract Laboratory Program
COC	Certificate of Completion
COPC	Constituents of Primary Concern
CP	Citizen Participation
DER	Division of Environmental Remediation
DUSR	Data Usability Summary Report
EC	Engineering Control
EDD	Electronic Data Deliverable
EE	Environmental Easement
ELAP	Environmental Laboratory Approval Program
FER	Final Engineering Report
HASP	Health and Safety Plan
IC	Institutional Control
IRM	Interim Remedial Measure
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOL	New York State Department of Labor
NYCRR	New York Codes, Rules and Regulations
O&M	Operation and Maintenance
OSHA	Occupational Safety and Health Administration
PCB	Polychlorinated Biphenyls
PID	Photoionization Detector
ppb	Parts Per Billion
ppm	Parts Per Million
PRR	Periodic Review Report
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
RAO	Remedial Action Objectives
RI	Remedial Investigation
ROD	Record of Decision
RRUSCO	Restricted Residential Use Soil Cleanup Objectives
RUSCO	Residential Use Soil Cleanup Objectives
SCG	Standards, Criteria and Guidelines

SCO	Soil Cleanup Objective
SMP	Site Management Plan
SPDES	State Pollutant Discharge Elimination System
SSD	Sub-slab Depressurization
SVOC	Semi-Volatile Organic Compounds
TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristic Leachate Procedure
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
UUSCO	Unrestricted Use Soil Cleanup Objectives
VOC	Volatile Organic Compounds



## **1.0 INTRODUCTION**

Schenne & Associates (S&A), in association with Hazard Evaluations Inc. (HEI), on behalf of R&M Leasing, LLC has prepared this Final Engineering Report (FER) for the future Pierce Arrow Business Center at 155-157 Chandler Street located in the City of Buffalo, Erie County, New York (Site) under the Brownfield Cleanup Program (BCP) Site Number C915312.

A Brownfield Cleanup Agreement (BCA Index No. C915312-02-17) was executed on April 24, 2017 for the Site, identified as Site No. C915312 with New York State Department of Environmental Conservation (NYSDEC), under the BCP. Hazard Evaluations Inc. (HEI) in association with Schenne & Associates (S&A) completed RI activities, as well as IRM activities, in accordance with an RI/IRM Work Plan, which was approved by NYSDEC on April 20, 2017. RI and IRM work was done concurrently, with additional investigation or IRM work completed, as needed.

Site development work was conducted simultaneously with RI/IRM activities. R & M Leasing LLC is redeveloping the property as a business incubator in cooperation with the State of New York's START-UP NY program and Buffalo State College. The proposed \$18,000,000+ development has been approved by City of Buffalo Planning Department and is on a fast track for development, with scheduled tenant move-in tentatively in December 2017.

### **1.1 Site Background**

The Site is addressed as 155-157 Chandler Street in the City of Buffalo, Erie County, New York and consists of two contiguous parcels totaling approximately 2.37 acres of land. The Site is bound to the north by Chandler Street, to the west by Manton Place and to the south by Grote Street and residential properties. Commercial property is located to the east. The property is located within an urban area, utilized for industrial, commercial, and residential purposes.

The 155 Chandler parcel is improved with one 65,000 square foot building which surrounds an approximate 22,000 square foot brick and gravel courtyard. Various debris, fill, roofing and soil piles were present throughout the courtyard area. Similarly, approximately 70% of the building contained various debris and abandoned equipment from past operations. The 157 Chandler parcel was a vacant gravel lot which was overgrown and contained several fill/debris piles.

The Site building was originally constructed in 1907 and utilized as a factory occupied by Linde Air Products until the early 1950s. Bell Aircraft Corp. was located at the Site in the early/mid 1950s. In 1958, the building was purchased by Donald Rosen, who utilized the property for G & R Machinery (machine shop) from approximately 1959



through at least the 1990s. The property was owned by Donald Rosen from 1958 through 1990, and by Irving Rosen from 1990 through 2005. The Site was purchased by Ontario Equipment Co. in 2005. Prior uses that appeared to have led to Site contamination including machining, gas manufacturing, and metal products manufacturing.

## **1.2 Site Conditions**

The Site includes two separate parcels. The 155 Chandler parcel is occupied by an approximate 65,000-square foot building present to the property line. A courtyard is located in the central portion of the building. Initial surface features within the courtyard included brick pavers, concrete, and soil areas. The 157 Chandler parcel is identified as the “parking lot”, located on the eastern portion of the Site. The parking lot was overgrown with vegetation including trees and various weeds. Areas of fill piles and general debris including pallets, bricks, scrap metal, etc., were present within the parking lot

The Site is generally flat, with the surface covered by buildings, asphalt driveway, brick courtyard and broken asphalt/gravel vacant parcel. Based on a review of the Site topographic conditions, as depicted on the USGS 7.5 minute Topographic Quadrangle Map of Buffalo NW, New York. Scajaquada Creek is located approximately 0.35 miles south and the Niagara River is present approximately 1.25 miles west of the Site.

The Site does not have state or federal wetlands within property limits, nor is the Site located within a flood plain. Wetlands and/or floodplains, which include the floodplain along Scajaquada Creek, are located approximately 0.35 miles south of the Site.

The Site is currently serviced by municipal utilities, including potable water, sanitary and storm sewers from the City of Buffalo, natural gas and electric. There are no known groundwater supply wells on-Site and the surrounding area is serviced with potable water.

## **1.3 Summary of Environmental Conditions**

During due diligence work prior to property purchase, HEI completed a limited Phase II investigation for R&M Leasing LLC at the property in September of 2016. The work included completion of 23 soil borings and collection of soil and groundwater samples. Based on the limited investigation, the primary contaminants of concern in the soil/fill profile include semi-volatile organic compounds (SVOCs), metals and polychlorinated biphenyls (PCBs), while SVOCs and chlorinated solvents were detected in the groundwater. A final report was not created for the Phase II work.

The Phase II testing identified SVOCs in the fill areas of the courtyard and vacant parcel at concentrations exceeding restricted residential, commercial, and industrial standards (one compound – benzo(a)pyrene). Additionally, PCBs were detected at five locations selected for analysis. Detected concentrations exceeded commercial values at three locations and industrial standards at two locations. The total PCBs concentration

at one location in the courtyard was 171 ppm, exceeding the industrial standard of 25 ppm. Elevated levels of cadmium, chromium, mercury and lead were also identified within the granular fill in and vacant lot. Lead was present in the sample from the vacant lot at a concentration of 6,280 ppm, which exceeded the industrial standard of 3,900 ppm.

Trichloroethylene (TCE) was identified in two perched groundwater samples at concentrations of 9.7 ppb and 19.9 ppb, which slightly exceeds groundwater standard of 5 ppb. The perched groundwater was located in the northern portion of the courtyard and southwest area of the building. Groundwater was not encountered at the remaining soil boring locations.

Historical records identified a permit dated November 30, 1953 for the installation of a 10,000-gallon #6 bunker oil tank identified within “bricked in enclosure abutting boiler room basement area” for Bell Aircraft Corp. The tank was identified as 6 feet above ground and 4 feet underground. No record of tank removal or registration was identified.

Additionally, a permit dated April 30, 1959 was identified for a 2,000-gallon gasoline underground storage tank (UST) installed for J&R Machine Co. A figure with the permit application identified the tank within the courtyard area. A possible vent pipe was observed by HEI during the Phase II investigation in the 2,000-gallon tank area. No record of tank removal or registration was identified.

#### **1.4 Geology and Hydrogeology.**

Based on observations from the soil borings completed during the RI work, subsurface conditions generally included approximately 2 to 4 feet of granular and cohesive fill material overlying native silty and clay which extended the full depth drilled to 22.5 feet.

Four monitoring well locations were installed MW-1 to MW-4 and initially measured in July 2017. Initial estimated groundwater flow direction generally appeared to be a northwesterly to westerly direction. IRM activities as well as construction activities, which included newly constructed roof drains was completed during the summer and fall months in 2017. Groundwater depth were again measured in October 2017, in which a perched groundwater condition was present in what appeared to be the fill/native interceptor at the five monitoring well locations, generally at one to three feet below the ground surface, as shown on Figure 3. The site groundwater does not appear to flow in a direction, but be stagnant under the building, due to on-going construction activities.

#### **1.5 Constituents of Primary Concern (COPCs)**

Based on initial investigation information, the COPCs in the courtyard fill/soil were identified as PCBs and the parking lot area was identified as lead. The RI work focused on these COPCs, as well as evaluation for volatile organic compounds (VOCs), SVOCs and metals based on the historical use at the Site. The IRM approach focused on PCBs

within the courtyard, lead impacts within the parking lot, and areas of concern identified during the RI work.

## **2.0 SUMMARY OF SITE REMEDY**

### **2.1 Remedial Action Objectives**

Based on the results of the Remedial Investigation (RI), the following Remedial Action Objectives (RAOs) were identified for the site.

#### **2.1.1 Groundwater RAOs**

RAOs for groundwater include:

- Prevent ingestion/direct contact with groundwater containing concentrations of contaminants exceeding groundwater quality standards.

#### **2.1.2 Soil RAOs**

RAOs for soil/fill include:

- Removal of impacted soil/fill to levels protective of human health for intended use of Restricted Residential Soil Cleanup Objectives (RRSCO).
- Prevention of ingestion/direct contact with contaminated soil that poses a potential risk given the current and future intended RRSCO of the site.

#### **2.1.3 Soil Vapor RAOs**

RAOs for soil vapor include:

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

### **2.2 Description of Interim Remedial Measures**

The site was remediated in accordance with RI/IRM work plan (April 2017). The factors considered during the selection of the IRM/remedy are listed in 6 NYCRR 375-1.8. The following are the components of the IRM/remedy.

1. Asbestos survey for asbestos containing materials (ACM) in for the site building. The asbestos survey and all asbestos work was contracted directly by the owner. S&A and HEI were not involved or associated with the ACM work.
2. Asbestos abatement of ACMs identified within the site building and courtyard area. As indicated above, S&A and HEI were not involved or associated with the ACM work, as that was contracted directly through the property owner.
  - a. On-site excavation of ACM soil from the courtyard area. ACM soil also contained PCBs, resulting in 119 tons of soil disposed of as ACM soil containing greater than 50 parts per million (ppm) of PCBs, as well as 45 tons of ACM soil containing less than 50 ppm of PCBs. The soil was excavated by ACM contractor retained by owner as part of ACM abatement requirements.

3. Lead based paint (LBP) survey and removal. S&A and HEI were not involved or associated with the LBP work, as that was contracted directly through the property owner.
4. Inventory, consolidation, collection and disposal of various drums and miscellaneous waste present throughout the site.
5. Completion of IRM, including excavation and off-site disposal of soil/fill exceeding RRSCO. Impacted soil/fill was removed from the courtyard, parking lot, under the building, and concrete floor, as needed. The excavations were extended into native clay at each area.
6. Removal of 2,000-gallon underground storage tank (UST).
7. Placement of approved backfill within the courtyard, parking lot, and under the building. Additionally, the entire concrete floor was replaced.
8. Execution and recording of an Environmental Easement (EE) to restricted land use to Restricted Residential and prevent future exposure to any contamination remaining at the site.
9. Development and implementation of a Site Management Plan (SMP) for long term management of any remaining contamination as may be required by the EE, operation and maintenance.
10. Periodic certification of the institutional and engineering controls listed above.

Upon completion of the IRM activities, no additional remedial work was required to meet Restricted Residential Use Soil Cleanup Objective (RRUSCO). The data supporting this condition is included in the RI/IRM/AAR. The remedy for the site was completed as a single project, with no additional IRM or separate construction projects completed.

### 3.0 SUMMARY OF INTERIM REMEDIAL MEASURES

The remedial work was completed at the site as an IRM and conducted in accordance with the RI/IRM Work Plan approved by NYSDEC in April 2017. Based on the work completed, the RI/IRM Work Plan became the remedial remedy.

ACM work was done by the owner's contractor in April – November 2017. Excavation work of the courtyard, parking lot, and interior of the building was started in May 2017 and completed in October 2017. Construction work within the courtyard, parking lot and interior of the building was done during remedial work, and completed in November/December 2017. Remedial work was conducted in accordance with the following documents and addendum.

- Remedial Investigation – Interim Remedial Action – Alternative Analysis Report Work Plan; prepared by HEI and S&A revised May 22, 2017
- Soil Disposal Characterization Work Plan, prepared by HEI and S&A, dated April 19, 2017
- Top 2-Inch Characterization Work Plan, prepared by HEI and S&A, dated May 16, 2017
- Soil Stabilization Plan, Lead Impacted Soil Removal, Pierce Arrow Business Center, 157 Chandler Street, Buffalo, NY, BCP #C915312 prepared for HEI by Severson Environmental Services, Inc, dated August 2017
- Letter dated August 24, 2017 – re: RI-IRM Addendum
- Letter dated October 6, 2017 – re: RI-IRM Addendum 2
- Letter dated October 18, 2017 – re: RI-IRM Addendum 3

The following table summarizes the handling and disposal of soil and concrete excavated during the IRM activities. In summary, the following approximate quantities of soil were shipped off-site for disposal.

Profile Number	General Location	General Description	Total Amount	Disposal Facility
404490AL	Courtyard	Soil – ACM and over 50 ppm PCBs	119 tons	Waste Management Emelle, AL
404490AL	Courtyard	Soil – over 50 ppm PCBs	291 tons	Waste Management Emelle, AL
117978NY	Courtyard	Soil – ACM; non-hazardous	45 tons	Waste Management Chaffee, NY
118129NY	Interior/Courtyard	Concrete and Brick Pavers	1,216 tons	Waste Management

Profile Number	General Location	General Description	Total Amount	Disposal Facility
				Chaffee, NY
118169NY	Interior	Soil from Under Building – non-hazardous	375 tons	Waste Management Chaffee, NY
118170NY	Courtyard	Soil – non-hazardous	721 tons	Waste Management Chaffee, NY
118194NY	Courtyard	Soil – UST Excavation, non-hazardous	96 tons	Waste Management Chaffee, NY
118211NY	Parking Lot	Soil – non-hazardous; treated	1,678 tons	Waste Management Chaffee, NY
118289NY	Parking Lot	Soil – non-hazardous	531 tons	Waste Management Chaffee, NY

Analytical results from the initial testing results and RI work identified several areas of concern, including PCBs in the courtyard area; lead impacts within parking lot area; and SVOCs or metals at limited locations under the building floor. The contaminants of concern were identified at concentrations greater than Site cleanup goals of RRUSCO. The IRM was completed to immediately address known environmental impacts. In general, approach for the implementation of the IRM included:

- Removal and off-site disposal of impacted soil/fill within the areas of concern;
- Post-excavation field screening/sampling to assure impacted area has been addressed;
- Backfill/material placement as needed to meet site development criteria.

Upon completion of IRM activities, the RI/IRM/AAR was prepared documenting the activities and confirming a Track 2 cleanup meeting RRUSCO was achieved. In combination with the IC and EC, this report noted that the IRM activities would comprise the final remedy for the site. In the December 2017 Decision Document, NYSDEC confirmed that the remedy was complete and no further remediation was necessary.

The following sections summarize the work performed as the IRM.

### 3.1 Materials Removal

The interior of the building has been used for storage by the previous owner, with various pieces of equipment, unused materials, files, shelving, and miscellaneous solid waste throughout the building. Additionally, the building was deemed to be asbestos



containing, resulting in a full asbestos abatement. The following work was completed as part of Site and building preparation.

### **3.1.1 Asbestos Containing Materials**

Asbestos survey was completed that identified asbestos containing materials (ACM) throughout the entire building, as well within the courtyard area. Asbestos removal activities were completed at the Site from April 2017 to October 2017 by owner retained asbestos removal contractor. Every portion of the building required asbestos removal.

### **3.1.2 Radiation Survey**

During building cleanout activities, scrap metal was removed from the building and taken to a scrap metal recycling facility. One scrap metal dumpster was rejected at the scrap metal recycling facility and returned to the Site. The dumpster was then dumped in the courtyard area. Multiple radium-coated-dial gauges were recovered by a NYSDEC representative from the rejected load of scrap metal. NYSDEC placed the gauges into a plastic sealable container. HEI retained MJW Corporation to arrange for off-site disposal of the dial gauges, which were ultimately disposed of at the Energy Solutions Site in Clive, Utah.

MJW completed follow-up radiation survey of the material pile within the courtyard area due to concern that additional gauges may be present. A NYSDEC representative was present during the survey. A walk around survey was completed to assess ambient radiation levels. The initial survey over the residual scrap metal material pile did not identify noticeable elevated areas. An excavator was utilized to pick through the remaining materials. The spread debris and uncovered areas did not identify further radiation readings and no further presence of radium gauges or associated objects were identified.

The gauges were initially identified in one room within the northern portion of the building. Greater Radiological Dimensions, Inc. (GRD) completed a radiological survey of three small rooms within the building, one of which was the original storage room. GRD indicated readings were within normal background levels and no radiological contamination was identified. The radiation survey results and disposal records were included in the RI-IRM-AAR.

### **3.1.3 Drum and Container Disposal**

Numerous containers/drums were identified within the building during cleanout activities, or generated during RI/IRM work. The various materials were analyzed, as needed, for proper disposal. In summary, the following materials were removed and disposed off-site.

- (1) Drum Lacquer Thinner - Blue Dow Drum
- (1) Drum Lacquer Thinner - Black Drum w/ Flam Sticker

- (2) Drums Petroleum Contaminated Water - Fuel Oil
- (1) Drum Petroleum Based Oil - Garbage Can
- (1) Drum Petroleum Based Oil - Red and Black Drums
- (6) Drums Petroleum Based Oil
- (2) Drums Non PCB Transformer Oil
- (14) Drums Non Hazardous Water White Polys
- (1) Drums Non Hazardous Water - Brown Rusty Drum
- (15) & (26) Automotive Tires & Air Plane Tires/Misc. Tires
- (3) CYB's Non Hazardous Products
- (6) Units Empty Propane Cylinders
- Lab Pack Packing And Disposal of Chemicals
  - (1) 5 gal Aquanil Plus 55 IPA, Solvent Based Resin
  - (1) 1 Qt Stripper
  - (2) 4 oz PVC Primer
  - (1) Qt 704 PVC
  - (2) 2 Gal Sikadur 32 Part B, Amine Based Resin
  - (1) 1 Gal Xylol, Xylene
  - (10) Aerosols
  - (2) 2 Gal Sikadur 32 Part B
  - (42) 5 Gal pails (Water-based Sealers, Latex Paints and Motor Oils)
- (4) Units Empty Water Filter Units
- (3) Units 3 Transformers
- (1) Drums Petroleum Contaminated Water (Solids) Tank Cleaning
- (900) Gals. Petroleum Contaminated Water Tank Cleaning
- (2660) Gals. Non Hazardous Water
- (11) 55-gallon drums containing soils with PCBs >50 ppm
- (1) 55-gallon drum of PCB impacted PPE
- (1) 55-gallon drum of purge/development water from on-site wells (non-hazardous)
- (3) 55-gallon drums of truck wash water (non-hazardous)

### 3.2 Courtyard IRM Activities

The courtyard area was initially identified with PCBs at one location at a concentration of 171 ppm. Concentrations of metals and SVOCs were also identified within the fill materials in the courtyard soils. Additionally, one 2,000-gallon UST and one possible 10,000-gallon AST in a vaulted area were identified. IRM activities included soil removal, as well as removal of one 2,000-gallon tank. At completion of courtyard IRM activities, the entire courtyard was excavated to depths of 2 to 4 feet below grade, which included removal of concrete slabs and footers, as well as brick pavers. Approximately 275 cubic yards (cy) of PCBs-impacted soil as well as 721 cy of non-hazardous soil was removed from the courtyard area.

### **3.2.1 ACM and PCBs Impacted Soil Removal**

During Site preparation work and removal of on-site equipment, asbestos containing materials (ACM) were identified which caused the Site work to cease and ACM survey and evaluation to be completed. Based on survey results, the courtyard area was deemed as asbestos-contaminated. An ACM Variance Proposal was completed by Yehl Environmental, Inc. for the property owner to develop a solution to remove ACM contamination at the Site, including the courtyard and other areas of the Site building.

The ACM variance identified several conditions required for the cleanup in the courtyard, including areas associated with soil cleanup requirements, including:

- All debris in the courtyard has been deemed contaminated and shall be disposed of as Regulated ACM (RACM);
- The earth surface below the rubble and/or contaminated areas shall be scraped clean of any residual asbestos contamination. This material shall be removed and disposed as asbestos contaminated waste.

In preparation of removal of the soil below the rubble, as well as various fill piles at the Site, one composite sample was collected from six grab locations, and analyzed for landfill characterization requirements for landfill disposal.

The soil samples from the six grab locations were collected by ACM project manager retained by the property owner, the six samples were composited for laboratory analysis on April 24, 2017. Under chain of custody, the sealed containers were transferred to HEI to provide to analytical laboratory. PCBs were identified in the composite sample, including 18.9 ppm of Aroclor 1242 and 34.4 ppm of Aroclor 1260 for a total PCBs concentration of 53.3 ppm.

Due to the detection of PCBs, additional delineation work was completed to assess location of the PCBs over 50 ppm using field test kits to assess potential locations for PCBs over 50 ppm.

Based on the test kit screening results, the presence of PCBs over 50 ppm within the top 2-inches of soil was generally located within the central area of the Site, where as the outlining courtyard areas and fill soil piles appeared to have lower PCBs concentrations.

As required by the variance, the owner-retained ACM contractor completed soil removal below the rubble and/or ACM-contaminated areas, which was scraped clean of any residual asbestos contaminated and disposed. The ACM cleanup within the courtyard generally included the following:

- The scrap metal, tires, dumpsters, equipment and other miscellaneous materials on-site were decontaminated and removed from the Site.
- The brick pavers were power-washed, pushing overlying soil onto the central portion of the Site.
- Approximately 2-inches of soil was removed from the central portion of the Site. This soil has been identified to contain over 50 ppm of PCBs; therefore, it was disposed at Waste Management facility in Emelle, Alabama.
- ACM was determined to be present within the fill piles within the central area of the Site. Additionally, test kits also identified positive readings from the soil within the fill piles. Therefore, the fill piles were removed and disposed at Waste Management facility in Emelle, Alabama.
- Based on field test kit results and laboratory test results, a limited area along the southern and western portion of the Site identified PCBs under 50 ppm. Therefore, a limited area of soil was excavated and disposed at Waste Management facility in Chaffee, New York.
- A total of approximately 80 cubic yards (cy) or 119 tons of soil were removed during the ACM work.

### **3.2.2 PCBs Soil Removal**

After the ACM soil removal activities were completed, and the courtyard deemed no longer ACM-containing, field testing kits and analytical testing was completed to assess of PCBs soils remained on-site. Fourteen (14) analytical samples were collected throughout the courtyard area to assess Site concentrations. Analytical testing identified PCBs at concentrations ranging from 7.1 ppm to 204 ppm. PCBs were found at concentrations over 50 ppm within the soil areas, as well as under the northern area below the underlying brick pavers. IRM work was completed throughout the courtyard areas that included:

- Soil excavation to depths of approximately 1.5 to 2 feet below grade;
- Removal of brick pavers;
- Removal of concrete slabs/footers located throughout the courtyard area.

A total of 291 tons (approximately 194 cy) of soil containing greater than 50 ppm of PCBs was disposed at Waste Management facility in Emelle, Alabama. The brick and concrete materials from the courtyard were analyzed and determined to be less than 50 ppm of PCBs. Therefore, the brick and concrete were disposed at Waste Management facility in Chaffee, New York.

Following removal of PCBs-impacted soil, confirmatory soil samples were collected throughout the courtyard area to confirm soil with PCBs over 50 ppm have been removed. Sample location EX 1 Bottom to EX 16 Bottom were collected and analyzed for PCBs, which ranged from non-detect to 10.8 ppm, confirming the soils over 50 ppm have been removed.

To further address remaining PCBs impacts under 50 ppm, as well as potential for metals and SVOCs within the fill materials in the courtyard, additional soil removal activities were completed that generally included removal of an additional 2 to 3 feet of soil throughout the courtyard area. Approximately 721 tons (approximately 480 cy) of soil was disposed at Waste Management facility in Chaffee, New York.

Initially, due to chimney structural issues, the bricks and concrete within 20-feet of the chimney could not be removed. The chimney was re-built and stabilized, allowing for further brick and concrete removal. The bricks, concrete and underlying soil within proximity of the chimney were removed in September/October 2017. The concrete was removed to the limits allowed due to structural integrity of the chimney. Approximately 120 square feet of concrete was required to remain in place due to structural/foundation integrity of the chimney. Sidewall soil samples were collected from the soil sidewalls, below the removed concrete, additionally, soil samples CY-CS-2a and CY-CS-3a were collected below the removed concrete, approximately 10 feet from the chimney, and analyzed for PCBs, which were detected at a concentration below Residential Use Soil Cleanup Objectives (RUSCO).

Confirmatory soil samples CY-CS-1 to CY-CS-15 were collected to confirm impacts within the courtyard have been properly addressed. Initial sample results identified four locations, including CY-CS-2, CY-CS-6, CY-CS-11 and CY-CS-12 that exhibited concentrations of PCBs or metals in excess of RUSCO. An additional one to two feet of soil was removed in these areas, and two additional samples were collected to assure impacts have been addressed. The final sample results confirmed the impacts throughout the courtyard have been addressed with soil analytical testing results below RUSCO.

### **3.2.3 2,000-gallon UST removal**

One 2,000-gallon UST was identified within the courtyard area. The UST was initially pumped of all liquids, which were disposed off-site by Environmental Service Group (ESG). The tank was removed from the ground and also cleaned by ESG. After a clean tank certification was issued, the tank was disposed within a scrap metal dumpster and delivered to the Niagara Metals LLC Buffalo facility for recycling by the owner's contractor.

Impacted soil was present in the vicinity of the UST, which was excavated and disposed off-site at Waste Management facility in Chaffee, New York. Following excavation efforts, four sidewall and one bottom sample were collected for confirmatory analysis. Each sample was analyzed for VOCs, SVOCs and metals. No VOCs, SVOCs or metals were detected at concentrations exceeding their respective RUSCOs. Approximately 96 tons (approximately 64 cy) of soil was

disposed at Waste Management facility in Chaffee, NY, associated with the UST removal.

#### **3.2.4 10,000-gallon AST vault**

Historical records identified the potential for a 10,000-gallon AST vault to be present near the former boiler room. During concrete pad removal, the vault area was discovered under the pad. Once the concrete was removed, the vault was found to be filled with brick and sand. A sample of the sand material was analyzed for PCBs, indicating a concentration over 50 ppm. The sand and brick material were removed from the vault and materials disposed off-site at Waste Management facility in Emelle, Alabama.

The concrete footer for the vault is approximately 18-inches wide and extended over four feet below grade. The vault had a concrete floor/base that was approximately 6-inches thick. Due to the vault's proximity to the chimney, the vault footer was required to remain in place, because removal would risk comprising the chimney foundation and structural stability. Concrete samples were collected from the base of the vault as well as the sidewall of the vault. Samples included a concrete core sample collected from 0-2" deep, composited from 2 to 3 locations. Concrete samples were non-detect for PCBs.

Soil samples were collected from the soil immediately south and west of the vault, as well as a soil sample from under the vault, identified as CY-Fuel Oil-EX South Sidewall, CY-Fuel Oil-EX West Sidewall, and CY-Fuel Oil-Ex Bottom. Each soil sample was analyzed for VOCs, SVOCs, metals and PCBs. No VOCs, SVOCs, or metals were detected at concentrations above RUSCO. PCBs were not detected in the two sidewall samples, although PCBs were detected in the sample CY-Fuel Oil-Ex Bottom at a concentration of 1.05 ppm, slightly exceeding the RUSCO of 1 ppm. The concrete floor of the vault was removed to allow access to the underlying soil. Approximately 18-inches of soil was removed from below the vault floor, identified as sample CY-Fuel Oil-Ex Bottom-2, and analyzed for PCBs. The sample results identified PCBs as non-detect.

#### **3.2.5 Sewer Drain and Pit Areas**

After removal of concrete surface features, concrete pads, bricks, and soil from the courtyard area, one sewer drain and two pits were identified. The waters within the drain and pits were analyzed and determined to be non-hazardous, and pumped out by ESG for off-site disposal.

The drain and pit areas generally consisted of concrete walls and bottom. The concrete was removed and limited soil excavated from around the structures. Concrete and soil were disposed at Waste Management facility in Chaffee, New York.



A sewer drain was located in the northeastern portion of the courtyard. The total excavation area was approximately 5 feet by 5 feet by 4 feet deep. Due to the small size of the excavation of the sewer drain (less than 5 by 5 feet), as well as no visual or olfactory evidence of impacts, no PID readings, and presence of native clay soils, a composite side wall sample was collected. Additionally, a bottom sample was collected for laboratory analysis and analyzed for VOCs, SVOCs, and PCBs. No compounds were detected at concentrations above RUSCO.

A northern pit was present in the central portion of the courtyard area. The total excavation area was approximately 5 feet by 5 feet by 4 feet deep. Due to the small size of the excavation of the northern pit (less than 5 by 5 feet), as well as no visual or olfactory evidence of impacts, no PID readings and presence of native clay soils, a composite side wall sample was collected. Additionally, a bottom sample was collected for laboratory analysis and analyzed for VOCs, SVOCs, metals and PCBs. No VOCs, SVOCs or PCBs were detected in the soil samples at concentrations above RUSCO. CY-North Pit-Ex Sidewall sample identified copper at a concentration of 322 ppm, which slightly exceeded the RUSCO of 270 ppm. Additionally, CY-North Pit – Ex Bottom sample identified mercury at a concentration of 1.4 ppm, which exceeds its RUSCO of 0.81 ppm. Due to the detection of the metals, the northern pit was re-excavated on September 27, 2017, increased the size to about 7 feet by 8 feet by 5 feet deep. After additional excavation, an additional bottom sample identified as CY-North Pit-Ex Bottom-1 and a composite sidewall sample identified as CY-North Pit-Ex Sidewalls-1, were collected and analyzed for metals. A sidewall composite sample was collected due to the small size of the additional excavation, as well as no visual or olfactory evidence of impacts and presence of native clay soils. Laboratory testing results of the sidewall sample and the bottom sample did not identify metals at concentrations above the RUSCO.

A concrete pit was also present in the southeastern area of the courtyard. The concrete pit was approximately 5 feet by 4 feet in size, extending approximately 3 feet deep. After removal of the water within the pit, the concrete sidewalls and bottom were removed. Due to the small size of the excavation of the concrete pit (less than 5 by 5 feet), as well as no visual or olfactory evidence of impacts, no PID readings, and presence of native clay soils, a composite side wall sample was collected, identified as CY-South Pit-Ex Sidewalls and one sample from the bottom of the pit, identified as CY-South Pit-Ex Bottom, were analyzed for VOCs, SVOCs, metals and PCBs. Soil sample results were detected at a concentration below RUSCO.

### **3.3 Parking Lot IRM Activities**

Based on initial sampling results, semi-volatile organic compounds (SVOCs) and



metals impacts were identified within the granular fill materials in the parking lot area. Waste characterization samples were collected via soil borings in order to pre-characterize the soil for landfill approval. Toxicity characteristic leaching procedure (TCLP) testing results identified lead within two areas at concentrations above 5 micro-gram per liter (mg/l). Additional testing was completed, including the collection of 12 fill samples for total lead analysis and TCLP lead analysis. The sample results identified lead concentrations above the hazardous waste toxicity characteristic limit of 5 mg/L in seven of the twelve sample locations.

On-site stabilization was completed of the historical urban fill throughout the parking area to prevent further leaching of the lead. In general, work included mixing of the chosen reagent, MAECTITE®, a proprietary reagent by Severson Environmental Services, Inc. (reagent) within the fill soils. The reagent was shipped to the Site and temporarily stored within poly-tanks. Severson provided a technical person during the on-site treatment.

In general, the areas requiring treatment were turned over/mixed in place to allow the soil to be easily moved. The calculated volume of reagent was applied to area via hoses and gravity, or with the excavator bucket. The reagent and soil were mixed with an excavator. Mixing is generally described as back-and-fourth folding motion, to create a homogeneous mix to the depth ranging from approximately 3 to 4 feet below grade. After application of the reagent, the soil/reagent characteristics were similar to wet cement.

The MAECTITE® process has a theoretical cure time of 3 - 5 hours. Upon reagent application, the treated soils were allowed to set for the theoretical cure time, prior to verification of treatment sampling. Four composite samples were collected with the treated areas and analyzed for TCLP lead. The testing results confirmed the lead had been stabilized, as TCLP lead results in the four samples ranged from 0.224 mg/l to 0.724 mg/l. The testing results were provided to Waste Management and deemed acceptable for non-hazardous soil disposal.

Soil was excavated to depths ranging from approximately 3 to 4.5 feet from the entire parking lot area on September 25 through September 29, 2017. The soil was transported for off-site disposal to Waste Management facility in Chaffee, New York. 531 tons (approximately 354 cy) of non-hazardous soil, as well as 1,678 tons (approximately 1,118 cy) of treated non-hazardous soil, were excavated and disposed from the parking lot area, resulting in a total of 1,473 cy of soil.

Confirmatory soil samples were collected from the sidewalls and bottom of the parking lot excavation area. Side walls were collected from the north, east and southern sidewalls. Western sidewalls were not collected as the building footer was exposed along the western wall. Excavation was completed to approximately 3 to 4 feet below

grade throughout the parking lot area. The final sample results did not identify VOCs, SVOCs, metals, PCBs or pesticides/herbicides at concentration above RUSCO, confirming the impacts throughout the parking lot area have been addressed.

### **3.4 Interior IRM Activities**

During RI work, three soil boring locations identified metals and SVOCs at concentrations exceeding their respective RUSCO. Additionally, concrete samples also identified PCBs above RUSCO.

#### **3.4.1 Building Sub-floor Soil Removal**

IRM activities which were completed within the building. Additionally, soil samples were collected from future water line areas identified as WLT-001, WLT-002, WLT-003, and WLT-004. A sample was also collected from a location in the southeastern portion of the building identified as SE Interior SS1. Subsequent confirmation analytical testing was based on exceedances identified in the initial sampling results, specific to each limited IRM area. Only compounds which identified initial exceedances above RRUSCO were analyzed as part of confirmation sampling.

- SB-124 – Copper was detected at a concentration of 3,920 ppm and mercury at 1.3 ppm, both of which exceed their respective RUSCO. An approximately 10 foot by 10 foot by 3 feet deep was excavated around SB-124. Four sidewall and one bottom samples were collected, identified as Interior Ex-1 East Wall, Interior Ex-1 West Wall, Interior Ex-1 North Wall, and Interior Ex-2 South Wall. Analytical testing results did not identify metals above RUSCO in the sidewall or bottom samples, with the exception of copper present in the southern wall at a concentration of 936 ppm. Additional soil removal was completed in September along the southern wall, and a sample collected on September 7, 2017, analyzed for metals. Analytical results did not identify metals at concentrations exceeding RUSCO.
- SB-133 – Several SVOCs and PCBs were detected at concentrations above their respective RUSCO. An approximate 15 foot by 15 foot by 3 feet deep excavation was completed around SB-133. Four sidewall and one bottom samples were collected, identified as Interior Ex-3 East Wall, Interior Ex-3 West Wall, Interior Ex-3 North Wall, Interior Ex-3 South Wall, and Interior Ex-3 Bottom. The sidewall and bottom samples were analyzed for SVOCs and PCBs. Analytical results did not identify SVOCs or PCBs at concentrations exceeding RUSCO.
- SB-135 – One SVOC, indeno(1,2,3-cd)pyrene, was detected in the soil sample at a concentration of 1,100 ppb, which exceeds the RUSCO of 500

ppb. An approximate 10 foot by 10 foot by 4 foot area was excavated in the vicinity of SB-135. Four sidewall and one bottom samples were collected, identified as Interior Ex-2 East Wall, Interior Ex-2 West Wall, Interior Ex-2 North Wall, Interior Ex-2 South Wall, and Interior Ex-2 Bottom. The sidewall and bottom samples were analyzed for SVOCs. Analytical results did not identify SVOCs at concentrations exceeding RUSCO.

- WLT003 and SE Interior SS-1 – Metals were detected in the soil samples identified as WLT-003a and WLT-003b, as well as SE Interior SS1 including copper, lead, mercury and manganese. The sampling locations were in close proximity, and based on visual impacts, the two areas merged together. An approximate 30 foot by 25 foot by 2.5 foot deep area of soil was excavated. Four sidewall and one bottom samples were collected, identified as Interior Ex-4 East Wall, Interior Ex-4 West Wall, Interior Ex-4 North Wall, Interior Ex-4 South Wall, and Interior Ex-4 Bottom. The sidewall and bottom samples were analyzed for metals. Analytical results did not identify metals at concentrations exceeding RUSCO.

### **3.4.2 Concrete Floor Removal**

Due to the presence of PCBs within the courtyard area, and based on historical Site usage as a machine shop, NYSDEC requested samples of the concrete slab be collected in order to assess presence of PCBs. As requested, each sample was collected from the top 2-inches of concrete with a concrete drill hammer, and analyzed for PCBs. Sample collection was initiated in areas of proposed water line and construction concrete cut areas. The initial sample, identified as Interior Concrete Sample, had PCBs identified at a concentration of 1.35 ppm. As such, subsequent testing of the concrete floor was completed. Several areas of concrete were identified with PCBs over 1 ppm, the RUSCO. The concrete in areas identified with PCBs present at a concentration above 1 ppm was removed and disposed at Waste Management facility in Chaffee, New York.

- Interior Concrete Sample – Initial sample result was identified as 1.35 ppm of PCBs. The sample was collected within a future water line area, in which concrete was removed for construction purposes. An additional sample, EB-WCC-001, did not identify PCBs at concentrations above RUSCO.
- EB-NWC-001 – Concrete sample identified PCBs at a concentration of 2.5 ppm. An approximate 600 square foot area was removed in the vicinity, and confirmation concrete samples were collected. Samples EB-NWC-001NE, EB-NWC-001 S 092117, and EB-NWC-001 W were collected and analyzed in which PCBs were detected at concentrations below RUSCO.
- EB-ECC-001 – Concrete sample identified PCBs at a concentration of 25.5

ppm. An approximate 530 square foot area was removed in the vicinity, and confirmation concrete samples were collected. Samples EB-ECC-001-N, EB-ECC-001 E, EB-ECC-001 S, and EB-ECC-001 W were collected and analyzed in which PCBs were detected at concentrations below RUSCO.

- EB-SEC-001 – Concrete sample identified PCBs at a concentration of 2.94 ppm. An approximate 606 square foot area was removed in the vicinity, and confirmation concrete samples were collected. Samples EB-SEC-001-N, EB-SEC-001-S 092117, and EB-SEC-001 W were collected and analyzed in which PCBs were detected at concentrations below RUSCO. An eastern sample was not collected, as the concrete was removed to the building wall along the eastern portion.
- North western Building Area – Two samples were collected including WB-NEC-001 and WB-CWC-001, at which PCBs were detected at concentrations of 2.42 ppm and 3.05 ppm, respectively. Due to the proximity of the two samples, concrete removal activities merged, resulting in an approximately 1,430 square foot area, and confirmation concrete samples were collected. WB-NWC-001, WBWB-NEC-001-N, WB-NEC-001-E 100217, WB-CWC-001-E 100217, WB-CWC-001-S, WB-CWC-001W were collected and analyzed in which PCBs were detected at concentrations below RUSCO.
- WB-SWC-001 – Concrete sample identified PCBs at a concentration of 25.1 ppm. Concrete within the area ranged in thickness from 6 inches to 3 feet in some areas. An approximate 4,790 square foot area was removed in the vicinity, and confirmation concrete samples were collected. WB-SWC-001N-100617 and WB-SWC-001E-100617 collected from the north and western extent of concrete removal and analyzed in which PCBs were detected at concentrations below RUSCO. A western and southern sample was not collected, as the concrete was removed to the building wall along the both the western and southern limits of the building.

### **3.4.3 Soil Sample Analysis – Below Removed Concrete Floor**

At the request of NYSDEC, fill/soil samples were collected from the fill material immediately below the removed concrete areas. Soil samples were identified as EB-NWC-SS-1, EB-ECC-SS-1, EB-SEC-SS-1 and WB-SWC-SS-1. As soil boring SB-135 was completed in a concrete removal area, and a PCBs sample was collected and analyzed from that location, with PCBs detected at a concentration below Unrestricted Use Soil Cleanup Objectives (UUSCO), a further sample was not needed from that location.

PCBs concentrations in the fill soils collected below the removed concrete area

ranged from non-detect to 0.159 parts per million, below the UUSCO. However, PCBs were detected a concentration of 2.5 ppm in the soil sample WB-SWC-SS-1 in the southwestern corner of the building. Due to the PCBs detection, the fill material was removed from the excavation area, extending an additional 6 to 12 inches below grade, to the underlying native soils. Approximately 106 cubic yards or 150 tons of fill was removed from the area. Six confirmatory samples, identified as sample number WB-SWC-SS-2 to WB-SWC-SS-7, were collected which indicated that PCBs were no longer present at concentrations above RUSCO.

#### **3.4.4 Sub-Slab Vapor Mitigation System**

A sub-slab depressurization (SSD) system was installed in the southwestern portion of the site, as shown in Figures 13 and 14. The SSD was installed in response to NYSDOH decision matrices requirements. Soil analysis did not identify compounds at concentrations above RRUSCO. The objective of the system included the following elements:

- Reduce and maintain indoor air concentrations of below levels of the NYSDOH Soil Vapor Guidance Document Matrix A.
- Maintain a minimum of 0.25-inches of water column in the four SSD Systems measured in the exhaust piping manometer located 5-feet above the finished floor, so as to prevent vapors from entering the indoor air of the building, while also releasing the trapped vapors beneath the slab
- Demonstrate system effectiveness while maintaining for continuous operation of the SSDS, with no significant non-operating time.

Effectiveness of the system will be evaluated once the new concrete floors are poured. The indoor air will be re-sampled during the 2017-2018 heating season from areas throughout the building, to continue to the document the effectiveness of the SSDS, as identified in the Site Management Plan (SMP).

### **3.5 Health & Safety and Air Monitoring**

Remedial activities were performed in accordance with the project Health and Safety Plan, included as Appendix C of the RI-IRM Work Plan. Additionally, on-site air monitoring was conducted during soil excavation activities consistent with the requirements of the Community Air Monitoring Program (CAMP) located as an appendix in the HASP. In accordance with the CAMP, air monitoring stations were established in an up-wind and down-wind direction of the courtyard and parking lot areas during soil excavation work, as well as inside the building during interior excavation work. Due to the project schedule and excavation work, the locations of the air monitoring equipment was changed with the scope of each excavation.



Each monitoring station was equipped with a PID to measure VOCs, and a min-Rae dust monitor to measure particulate emissions less than 10 micrometers in size. Readings were collected continuously during intrusive activities and recorded. Construction activities were being completed around the courtyard area, such as roofing tear down and masonry reconstruction, during excavation work. For courtyard work, specifically during PCB soil removal, soils were wetted to prevent dust migration. Additionally, various interior construction work was also done simultaneously during excavation work. Interior work included floor cutting, waterline/sewer line installations, masonry work, interior demolition, iron work, welding and carpentry work. Additionally, portions of the building were portioned off for asbestos work. Particulate meters would sporadically identify elevated particulate readings. In these cases, the particulates appeared to be related to construction activities, and not associated with dust generation during excavation work. During parking lot work, particulate meters were placed in upwind and downwind directions. The upwind direction was typically near the houses, and also located downwind of construction activities within the building which included masonry work and wall/roofing tear down. Particulate meters would sporadically identify elevated particulate readings, specifically the downwind meters which were stationed adjacent to the roadway. Roadway was active with construction vehicles as well as large delivery trucks for the site and adjoining properties. These vehicles were frequent and often generated dust during operation which elevated the meter readings. No visible dust was apparent during excavation work.

PID monitoring was also conducted during the CAMP program, as well as within the work zones with a hand-held PID meter. The HASP established a PID action level of 5 ppm for 15 minutes. Exterior excavations did not identify PID readings that exceeded 5 ppm. Sporadic readings of greater than 5 ppm were identified during interior work, and appeared to be related plumbing work within the area as well as operation of construction heavy equipment in the building including skid-steers, mini-excavators and forklifts. The VOCs detected by the various meters were not related to VOCs within the site soil.

### **3.6 Nuisance Controls**

Nuisance controls associated with soil excavation work at the site generally consisted of dust and odor control, truck routing and egress and truck washing.

Dust control was performed in the courtyard area, as well as the parking lot area during excavation work. The courtyard soils were wetted as an abundance of caution during excavation work due to potential ACMs as well as high PCBs concentrations. After the courtyard was deemed non-ACM containing, the excavation soils were continued to be wetted, as needed, throughout soil removal. The lead impacted parking lot soils were initially saturated due to the treatment methodology, which limited potential for dust.

During excavation and off-site transportation activities, inspection and cleaning of the exit/entrances to the site was done. A temporary truck wash station was constructed

in the alleyway leading to the courtyard area. Trucks entering the courtyard were limited to the alley area. The truck and equipment were deconned after loading or exiting the alley area.

The southern portion of the alley as well as the entrance into the parking lot was excavated in a manner which allowed truck to enter on newly placed #2 crushed concrete as means to control dust and also to assure trucks did not come in contact with impacted soil.

At the request of NYSDEC, tarps were erected around the southern and eastern fence lines of the parking lot area, in order to limit dust/odors generated during soil excavation. Additionally, silt fencing was installed along the south, east and northern limits of the parking lot area.

No odors were generated during IRM activities which required odor control. No nuisance complaints from the public were received during IRM activities.

### **3.7 On-site Contractors**

Various contractors, transporters and laboratories were utilized during the site work, for both remedial and construction purposes.

- Schenne & Associates served as Engineer of Record.
- Hazard Evaluations Inc. in association with Schenne & Associates, completed project oversight, inspected work by contractors, corresponded with NYSDEC, and collected samples for analysis.
- Severson Environmental Services, Inc. provided consulting services associated with soil stabilization.
- TREC Environmental provided drilling services and remedial excavation services.
- Empire Building Diagnostics, Inc. (EBDI) completed asbestos abatement services, as well as remedial excavation services.
- Carmen M Pariso Inc. provided trucking services.
- LaFarge Aggregates provided #1 washed stone.
- Swift River Lancaster facility provided #2 crushed concrete.
- New Enterprise Wehrle Drive Quarry provided #1 and #2 washed stone.
- Waste Management Emelle Alabama facility provided landfill disposal services.
- Waste Management Chafee New York facility provided landfill disposal services.
- The MJW Companies provided on-site radiological field screening and disposal of the radiological gauges.
- Greater Radiological Dimensions, Inc. (GRD) completed on-site radiological field screening.
- Alpha Analytical Labs provided laboratory analytical services.
- Centek Laboratories LLC provided laboratory analytical services.
- Paradigm Environmental provided laboratory analytical services.



- Data Validation services review and validated analytical data packages.
- Contractors retained by owner for concrete and/or soil work associated with construction activities:
  - Lazarus Industries
  - WNY Plumbing
  - On-Trac Construction
  - Kimil Construction.

### **3.8 Governing Documents**

Soil excavation activities were performed in accordance with RI-IRM-AAR Work Plan. Placement of backfill was done due to contractor and site development specifications. Oversight of the excavations with impacted soil was performed by HEI.

#### **3.8.1 Quality Assurance Project Plan (QAPP)**

The QAPP describes the specific policies, objectives, organization, functional activities and quality assurance/quality control (QA/QC) activities to achieve the project data objectives. The QAPP was included as Appendix B within the RI/IRM Work Plan.

#### **3.8.2 Site Specific Health & Safety Plan (HASP)**

Remedial work completed as part of the IRM was in compliance with governmental requirements, including site and worker safety requirements mandated by federal OSHA. The HASP was complied with during remedial work performed at the site and was included as Appendix C within the RI/IRM Work Plan.

#### **3.8.3 Community Air Monitoring Plan (CAMP)**

A Community Air Monitoring Plan was including with the HASP that described particulate and vapor monitoring to protect the neighboring community during intrusive site investigation and remedial activities. Real-time community air monitoring was performed during remedial activities. The CAMP follows procedures outlined in NYSDEC DER-10 Appendix 1A (NYSDOH Generic Community Air Monitoring Plan) and Appendix 1B – Fugitive Dust and Particulate Monitoring. CAMP results are included in Appendix D.

#### **3.8.4 Citizens Participation Plan (CPP)**

Citizen Participation activities were guided by standard NYSDEC procedures throughout the course of the project. A CPP was prepared by HEI and approved by NYSDEC, which followed the NYSDEC's template for BCP sites. As required for the BCP, copies of the BCP application, CPP, RI-IRM-AAR Work Plan which include the QAPP, HASP, and CPP, and the RI-IRM-AAR for the site were provided to the Erie County Public Library North Park Branch for public review.

As part of the process, fact sheets were prepared prior to start of IRM work and

after submittal of the RI-IRM-AAR. Copies of the fact sheets are included in Appendix C. To date, no public comments have been received by NYSDEC.

### **3.9 Record Keeping and Reporting**

The Pierce Arrow Business Center development project was on a fast-paced schedule for development with RI, IRM and construction work completed simultaneously and within weeks to months timeframe. As such, monthly progress reports were not necessary or generated. Constant communication with HEI and the Department was completed via phone calls or emails on a regular basis. Copies of daily field notes is included in Appendix E. A photographic log identifying key project activities is provided in Appendix M.

### **3.10 Deviations from Work Plan**

During initial implementation of the IRM work, limited areas of PCBs were expected within the courtyard areas at concentrations exceeding 50 ppm. However, based on field testing results and analytical confirmation, the area with PCBs over 50 ppm was extended, resulting in generation of additional soil disposal. Although the scope of work was not altered, the amount of soil removed was dependent on site conditions.

Initial field testing results of the parking lot area identified lead within TCLP testing results at concentrations requiring on-site stabilization prior to soil disposal. This condition was not addressed in the RI-IRM Work Plan. Therefore, an addendum to the RI-IRM Work Plan was prepared by HEI and approved by NYSDEC for the on-site stabilization prior to off-site disposal.

Areas of limited impact were identified under the building slab as well as on the concrete floor within the building. These area were previously not identified, but addressed, as needed, as part of IRM work. Addendum letters were issued for these conditions, which were approved by NYSDEC, for removal of impacted soil and/or concrete.

### **3.11 On-site Reuse**

No materials were reused or relocated on site as a result of IRM activities. All impacted material was removed from the site and disposed at landfill.

### **3.12 Imported Backfill**

Prior to bringing imported backfill materials onsite, analytical sample results and/or stone sieve analysis were provided to the department for review and approval, in accordance with DER-10 requirements. The following backfill materials have been used on-site related to remediation and/or construction activities. Due to gradation requirements with less than 10% passing the 80 sieve, analytical analysis was not

required for approval of these materials. Table 5 summarizes the backfill stone source and quantity. Additionally, NYSDEC approval and sieve analysis are included in Appendix K.

**#1 Washed Stone from LaFarge Plant** – Approximately 152

tons of washed stone was used for plumbing trench backfill material. Please note, the gradation analysis was provided to NYSDEC on August 10, 2017, with a verbal approval for use of this soil provided on August 10, 2017.

**#1 Washed Stone from New Enterprise** – Approximately 168 tons of #1 washed stone from New Enterprise Wehrle Drive Quarry was used within the courtyard areas, associated with utility installation. Additionally, the #1 washed stone will be used to level the concrete floor throughout the facility.

**#2 Washed Stone from New Enterprise** – Approximately 1,835 tons of #2 washed stone from New Enterprise Wehrle Drive Quarry was used for backfill associated with the construction of the underground stormwater retention basins in both the courtyard and parking lot areas.

**Pea Gravel from Schwab Aggregates** – Pea gravel from Schwab Aggregates in Delevan, New York was an approved source of stone, with planned usage in the courtyard. However, the pea gravel was not used or brought on-to the site.

**#2 Crushed Concrete** – Approximately 1,148 tons of #2 crushed concrete generated from Swiftriver Lancaster facility, specifically SP-17-3 was utilized on site for backfill. This material was used for backfill of interior excavation areas, backfill of UST excavation, as well as construction of driveways in the alley and parking lot. Additionally, the #2 crushed concrete was used for general site grading in the courtyard and parking lot areas, as needed.

**Crusher Run #2 from Countyline Stone** – Approximately 1,208 tons of crusher run #2 stone from Countyline stone was used during parking lot construction and grading.

**Tom Rall Contracting – Clay Soil** – One additional source was considered for backfill material. The source of soil was identified as new sewer line construction work on Baseline road in Grand Island, New York. The soil was stored on Tom Rall Contracting facility in Grand Island. In accordance with DER-10 requirements, soil samples were collected from the clay source and analyzed. Table 6 summarizes the testing results. The clay source was approved by NYSDEC for re-use on the site. However, as of the date of this report, the clay source has not been brought on-site for fill material.

A new concrete floor was poured throughout the entire building. No additional backfill material was brought on-site.

## 4.0 SOIL VAPOR INTRUSION

Soil vapor samples were collected on-site in September 2017. Vapor intrusion air samples were analyzed from five sub-slab locations, six ambient air locations and one outdoor locations. Please note that one sub-slab location was destroyed during sample collection; therefore, a sample was not able to be analyzed.

Based on Decision Matrices summarized on Table 7, no further work was needed associated with samples SS-1/IA-1, SS-2/IA-2, SS-5/IA-5, or SS-6/IA-6. However, due to TCE concentrations in the sub-slab samples from SS-3 and SS-4, mitigation was required in these areas, located in the southwestern portion of the site.

**TCE** – TCE was detected in three of the sub-slab samples at concentrations ranging from 2.2 ug/m<sup>3</sup> at SS-2 to 3,500 ug/m<sup>3</sup> at SS-4. TCE was also detected at the indoor samples at concentrations ranging from 0.38 ug/m<sup>3</sup> at SS-2 to 1.7 ug/m<sup>3</sup> at SS-4. However, all indoor air sample results for TCE were below the NYSDOH AGV of 2 ug/m<sup>3</sup>. The decision matrix from the NYSDOH guidance indicates that no further action or to identify source(s) for locations SS-1/IA-1, SS-2/IA-2, SS-5/IA-5 and SS-6/IA-6. However, based on the TCE concentration of 730 ug/m<sup>3</sup> and 3500 ug/m<sup>3</sup> in the subslab sample from SS-3 and SS-4, respectively, the decision matrix indicates these locations/areas would require mitigation.

A subslab depressurization (SSD) system was installed in the southwestern portion of the site, as shown in Figure 9. The SSD was installed in response to NYSDOH decision matrices requirements. Soil analysis did not identify compounds at concentrations above RRUSCO. The objective of the system included the following elements:

- Reduce and maintain indoor air concentrations of below levels of the NYSDOH Soil Vapor Guidance Document Matrix A.
- Maintain a minimum of 0.25-inches of water column in the four SSD Systems measured in the exhaust piping manometer located 5-feet above the finished floor, so as to prevent vapors from entering the indoor air of the building, while also releasing the trapped vapors beneath the slab
- Demonstrate system effectiveness while maintaining for continuous operation of the SSDS, with no significant non-operating time.

The indoor air should be re-sampled during the 2017-2018 heating season to continue to the document the effectiveness of the SSDS and to report the results in the annual periodic review report (PRR) for the Property.

## 5.0 CONTAMINATION REMAINING AT THE SITE

Based on the post-IRM soil analytical results for the site, the Pierce Arrow Business Center BCP parcels comply with 6NYCRR Part 375 Restricted Residential Use SCOs. Limited locations remain on site with soils exceeding Unrestricted Use SCOs. Remaining contamination present at concentrations above UUSCO but below RRUSCO are present on the following figures:

- Figure 4 – Courtyard Unrestricted Use SCO Exceedances
- Figure 5 – Parking Lot Unrestricted Use SCO Exceedances
- Figure 6 – Unrestricted Use SCO Exceedances under Building Floor Slab
- Figure 7 – PCB Unrestricted Use SCO Exceedances – Concrete Floor

Groundwater testing data indicated that majority of analytes were detected below Class GA Criteria. Select VOCs, SVOCs and metals were detected slightly above guidance values. No PCBs, pesticides or herbicides were detected above Class GA Criteria. Figure 8 identifies groundwater exceedances.

### 5.1 Institutional Controls

The site remedy requires that an environmental easement be placed on the property to (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination; and, (3) limit the use and development of the site to Restricted Residential, commercial or industrial uses only. Adherence to these ICs on the site is required by the Environmental Easement and will be implemented under the Site Management Plan (SMP). The site ICs are:

- The property may be used for : Restricted Residential use;
- All ECs must be operated and maintained as specified in this SMP;
- All ECs must be inspected at a frequency and in a manner defined in the SMP;
- The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Erie County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;
- Groundwater and other environmental or public health monitoring must be performed as defined in this SMP;
- Data and information pertinent to site management must be reported at the frequency and in a manner as defined in this SMP;
- All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP;
- Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP;
- Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in this SMP;

- Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement.
- The potential for vapor intrusion must be evaluated for any buildings developed in the area within the IC boundaries, and any potential impacts that are identified must be monitored or mitigated; and
- Vegetable gardens and farming on the site are prohibited.

## **5.2 Engineering Controls**

The only engineering control required was the installation of a sub-slab depressurization (SSD) system installed in the southwestern portion of the site, in proximity to SS-3/AI-3 and SS-4/AI-4 sample locations. The system objectives and performance goals include the following elements:

- Reduce and maintain indoor air concentrations of below levels of the NYSDOH Soil Vapor Guidance Document Matrix A.
- Maintain a minimum of 0.25-inches of water column in the four SSD Systems measured in the exhaust piping manometer located 5-feet above the finished floor, so as to prevent vapors from entering the indoor air of the building, while also releasing the trapped vapor beneath the slab;
- Demonstrate system effectiveness while maintaining for continuous operation of the SSDS, with no significant non-operating time.

The SSD system was installed in November 2017, with a system start date of November 8, 2017. A figure identifying the SSD system locations within the building is included as Figure 9.



## 6.0 ADDITIONAL SOIL DISTURBANCES

The soil excavation IRM work was substantially completed by October 20, 2017. Soil excavation work prior to this date was included within the RI-IRM-AAR. Additional soil disturbance work continued after this date for purposes of site redevelopment.

The soil disturbance work completed at the site due to construction and development activities generally included the following:

- Infrastructure work for site utilities such as water, sewer and electric within the building;
- Construction of an underground stormwater retention basin within courtyard area;
- Site grading within courtyard area;
- Construction of an underground stormwater retention basin in parking lot area;
- Site grading within courtyard area.

The underground storm water retention basin construction was approved by the City of Buffalo. The approved plans and Storm Water Management Report area included in Appendix N. The storm water retention basins were constructed within the native clay soils, utilized for storm water drainage prior to discharge to the municipal system. The additional soils removed as part of construction activities was managed in accordance with the SMP. The following estimated volumes of material have been removed from the site as part post-remediation construction activities.

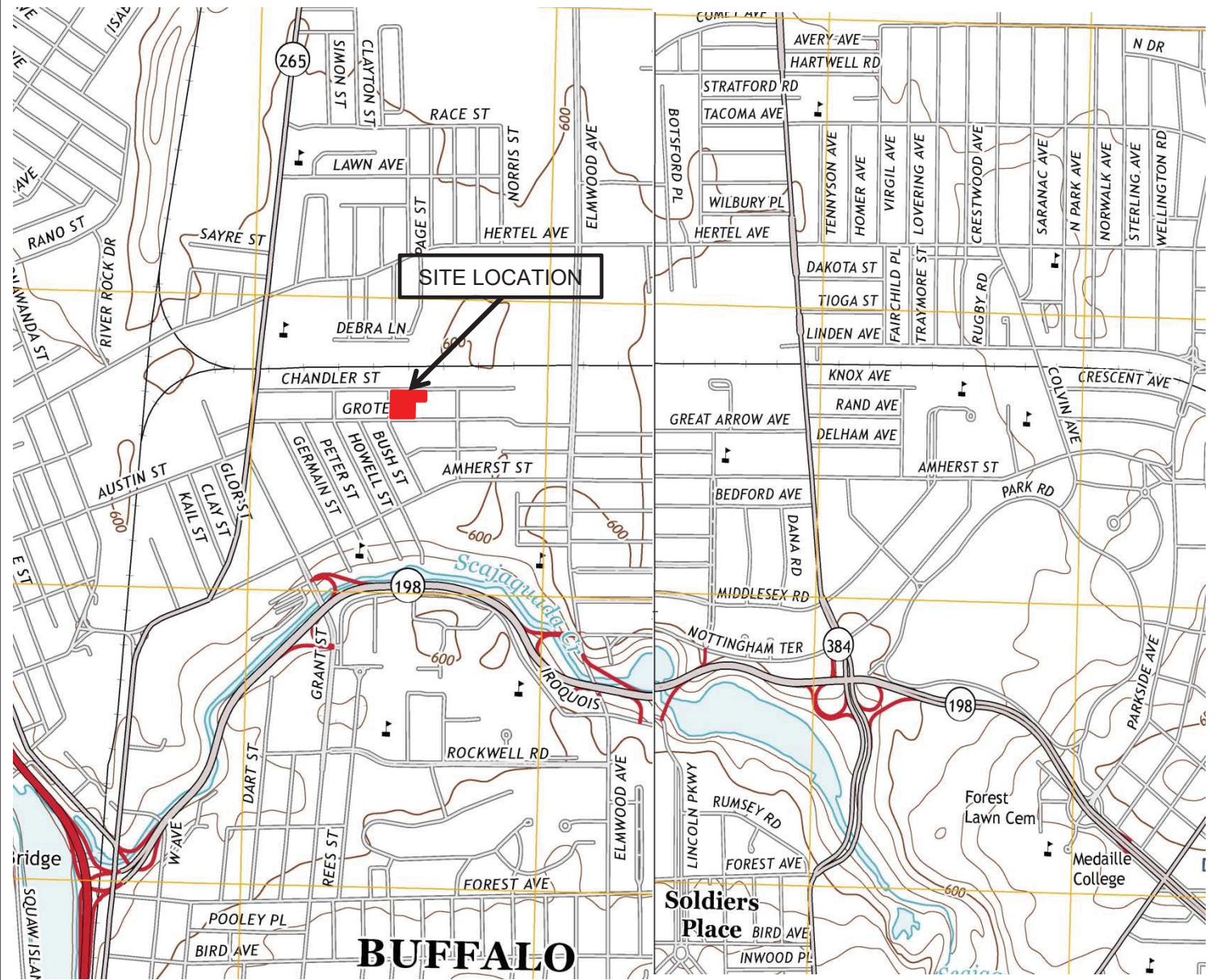
Profile Number	General Location	General Description	Total Amount	Disposal Facility
118129NY	Interior/Courtyard	Concrete and Brick Pavers	151 tons	Waste Management Chaffee, NY
118169NY	Interior	Soil from Under Building – non-hazardous	259 tons	Waste Management Chaffee, NY
118170NY	Courtyard	Soil – non-hazardous	1,028 tons	Waste Management Chaffee, NY
118450NY	Parking Lot	Soil – non-hazardous	1,400 tons	Waste Management Chaffee, NY



## 7.0 REFERENCES

1. Hazard Evaluations Inc. and Schenne & Associates, *Remedial Investigation - Interim Remedial Action – Alternative Analysis Report Work Plan, Brownfields Cleanup Program for Pierce Arrow Business Center, 155-157 Chandler, Buffalo, New York 14207, BCP #C915312*, November 11, 2016 – revised May 22, 2017.
2. RI-IRM - Addendum, Pierce Arrow Business Center, 155-157 Chandler, Buffalo, New York 14207, BCP Site No. C915312 dated August 24, 2017
3. RI-IRM - Addendum 2, Pierce Arrow Business Center, 155-157 Chandler, Buffalo, New York 14207, BCP Site No. C915312 dated October 6, 2017
4. RI-IRM - Addendum 3, Pierce Arrow Business Center, 155-157 Chandler, Buffalo, New York 14207, BCP Site No. C915312 dated October 18, 2017
5. Hazard Evaluations Inc. and Schenne & Associates, *Remedial Investigation - Interim Remedial Action – Alternative Analysis Report, Brownfield Cleanup Program for Pierce Arrow Business Center, 155-157 Chandler, Buffalo, New York 14207, BCP #C915312*, October 24, 2017
6. New York State Department of Environmental Conservation, *DER-10/Technical Guidance for Site Investigation and Remediation*, dated May 3, 2010
7. New York State Department of Environmental Conservation, *6NYCRR Part 375 Environmental Remediation Programs, Subparts 375-1 to 375-4 & 375-6*, dated December 14, 2006

## FIGURES



THIS DRAWING IS FOR ILLUSTRATIVE AND INFORMATIONAL PURPOSES ONLY  
AND WAS ADAPTED FROM USGS, BUFFALO NE & NW, NEW YORK 2013 QUADRANGLE.



### HAZARD EVALUATIONS, INC.

*Phase I/II Audits – Site Investigations – Facility Inspections*

#### SITE LOCATION MAP

155 and 157 CHANDLER STREET  
BUFFALO, NEW YORK

**R & M LEASING LLC**  
BUFFALO, NEW YORK

DRAWN BY: LSH

SCALE: NOT TO SCALE

PROJECT: e1601

CHECKED BY: EB

DATE: 11/17

FIGURE NO: 1





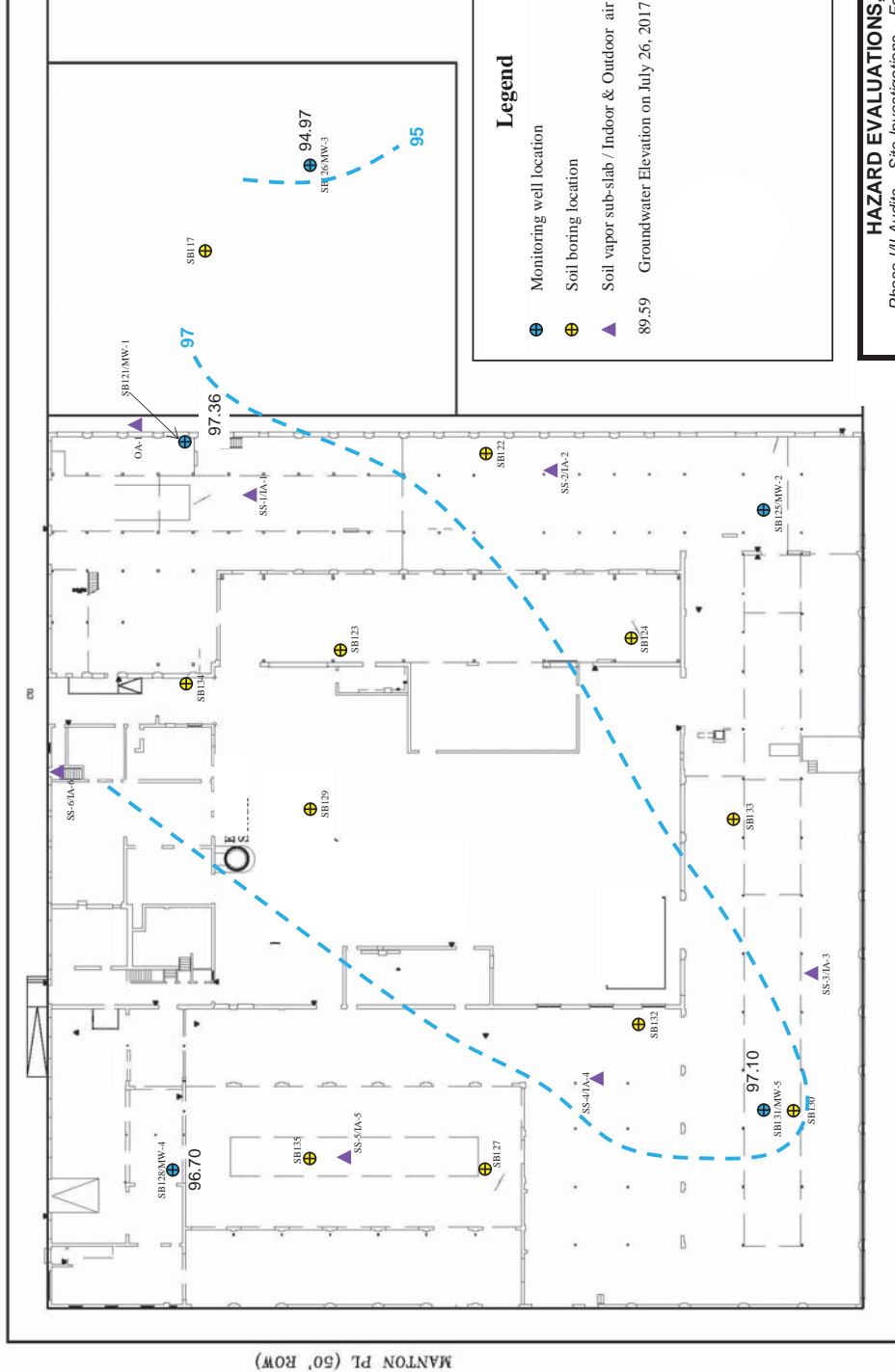
HAZARD EVALUATIONS, INC.			
Phase I/II Audits – Site Investigations – Facility Inspections			
SITE BOUNDARY LIMITS			
155 and 157 CHANDLER STREET			
BUFFALO, NEW YORK			
R & M LEASING LLC			
BUFFALO, NEW YORK			
DRAWN BY: LSH	SCALE: NOT TO SCALE	PROJECT: e1601	
CHECKED BY: EB	DATE: 11/17	FIGURE NO: 2	



BCP Boundary Limits



CHANDLER ST. (60' ROW)



### Legend

- Monitoring well location
  - Soil boring location
  - Soil vapor sub-slab / Indoor & Outdoor air sample location
- 89.59 Groundwater Elevation on July 26, 2017

### HAZARD EVALUATIONS, INC.

Phase III Audits - Site Investigations - Facility Inspections

### GROUNDWATER ISOPOTENTIAL MAP

OCTOBER 6, 2017

155 and 157 CHANDLER STREET  
BUFFALO, NEW YORK

R & M LEASING LLC  
BUFFALO, NEW YORK

DRAWN BY: LSH	SCALE: 1" = 40'	PROJECT: e1601
CHECKED BY: MMW	DATE: 11/17	FIGURE NO: 3



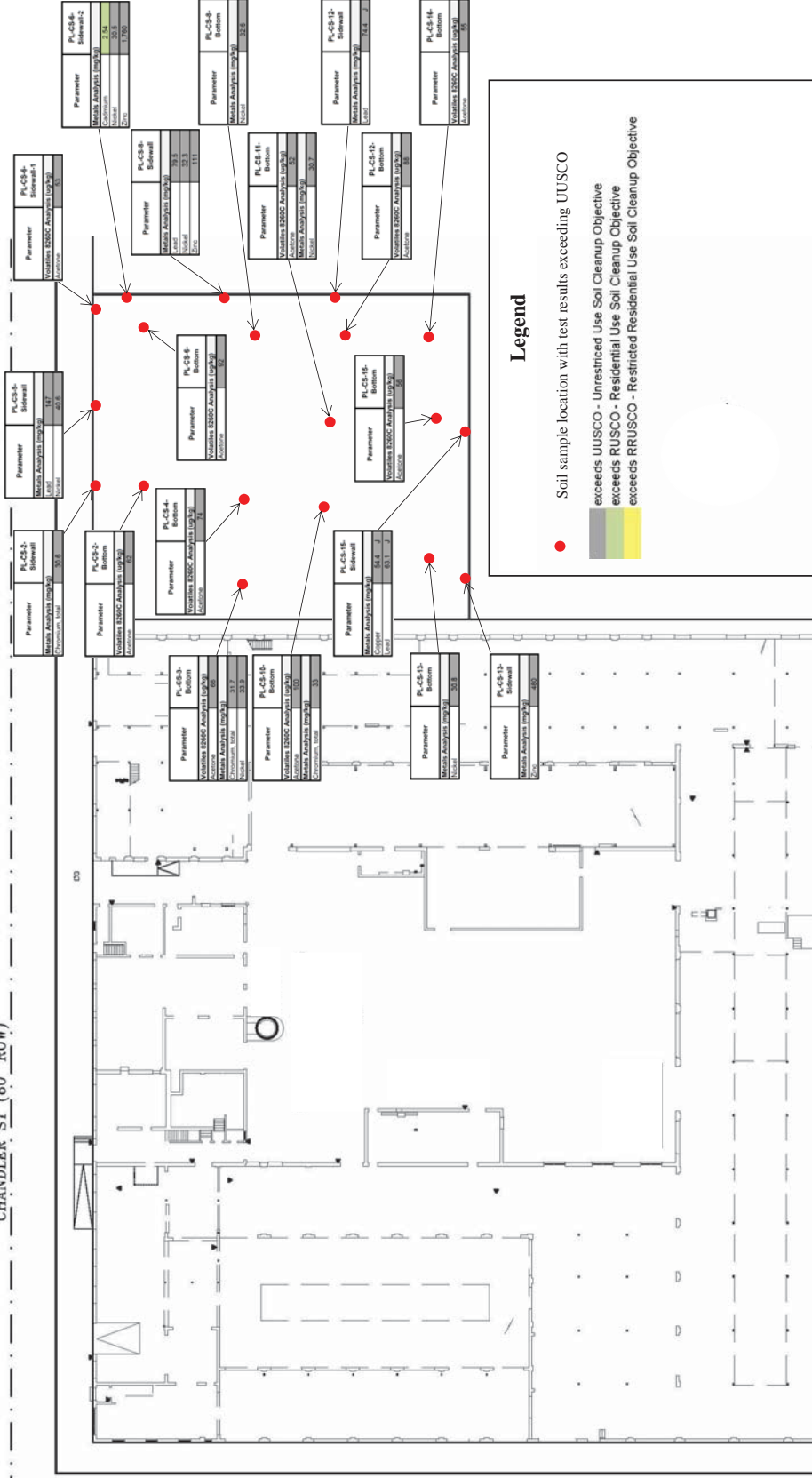




CHANDLER ST (60' ROW)

MANTON PL (60' ROW)

GROTE ST (60' ROW)



### Legend

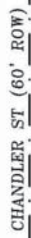
- Soil sample location with test results exceeding UUSCO
- exceeds UUSCO - Unrestricted Use Soil Cleanup Objective
- exceeds RUSCO - Residential Use Soil Cleanup Objective
- exceeds RRUSCO - Restricted Residential Use Soil Cleanup Objective

**HAZARD EVALUATIONS, INC.**  
Phase III Audits - Site Investigations - Facility Inspections  
**Parking Lot Unrestricted Use SCO Exceedances**  
155 and 157 CHANDLER STREET  
BUFFALO, NEW YORK

**R & M LEASING LLC**  
BUFFALO, NEW YORK

DRAWN BY: SS  
CHECKED BY: MMW

PROJECT: e1601  
SCALE: 1" = 40'  
DATE: 11/17  
FIGURE NO: 5



## HAZARD EVALUATIONS, INC.

and 137 CHANDLER STREET  
BUFFALO, NEW YORK

BUFFALO, NEW YORK

CHECKED BY: MMW	DATE: 11/17	FIGURE NO: 6
-----------------	-------------	--------------





CHANDLER ST (60' ROW)

MANTON PL (50' ROW)

GROTE ST (60' ROW)

Parameter	SB121 / MW-1
Sampling Date	07/28/17
Semivolatile E270D Analysis (ug/L)	2.4
Benz(a)anthracene	4.6
Benz(b)fluoranthene	1.8
Benz(e)pyrene	5.2
Benzo(a)pyrene	3
Chrysene	2.8
Indeno(1,2,3-cd)pyrene	2.8
Metal Analysis (ug/L) - total metal	956
Iron	951,000
Magnesium	1,011
Sodium	285,000

Parameter	SB128 / MW-4
Sampling Date	07/27/17
Semivolatile E270D Analysis (ug/L)	2.7
Benz(a)anthracene	4.2
Benz(b)fluoranthene	1.5
Benzo(a)pyrene	3
Chrysene	2.1
Indeno(1,2,3-cd)pyrene	2.1
Metal Analysis (ug/L) - total metal	2,375
Iron	2,375
Magnesium	80,000
Sodium	45,000
Sulfur	138,000

Parameter	SB125 / MW-2
Sampling Date	07/28/17
Metal Analysis (ug/L) - total metal	1,960
Iron	842,000
Magnesium	4,497
Sodium	210,550

SB131/MW-5  
(destroyed during construction work on-site)

Parameter	SB126 / MW-3
Sampling Date	07/27/17
Semivolatile E270D Analysis (ug/L)	10/18/17
Benz(a)anthracene	24
Benz(b)fluoranthene	7.5
Benz(e)pyrene	130
Benzo(a)pyrene	1.2
Chrysene	11
Indeno(1,2,3-cd)pyrene	11
Metal Analysis (ug/L) - total metal	ND
Iron	ND
Magnesium	0.05
Sodium	6.9
Sulfur	ND
Chrysene	0.09
Indeno(1,2,3-cd)pyrene	1.1
Benzo(a)pyrene	84
Metal Analysis (ug/L) - total metal	84
Iron	4,840
Magnesium	971,000
Sodium	1,410
Sulfur	2,037
Sulfate	334

### Legend

Monitoring well location

Shading indicates parameter exceeds Class GA Criteria

### HAZARD EVALUATIONS, INC.

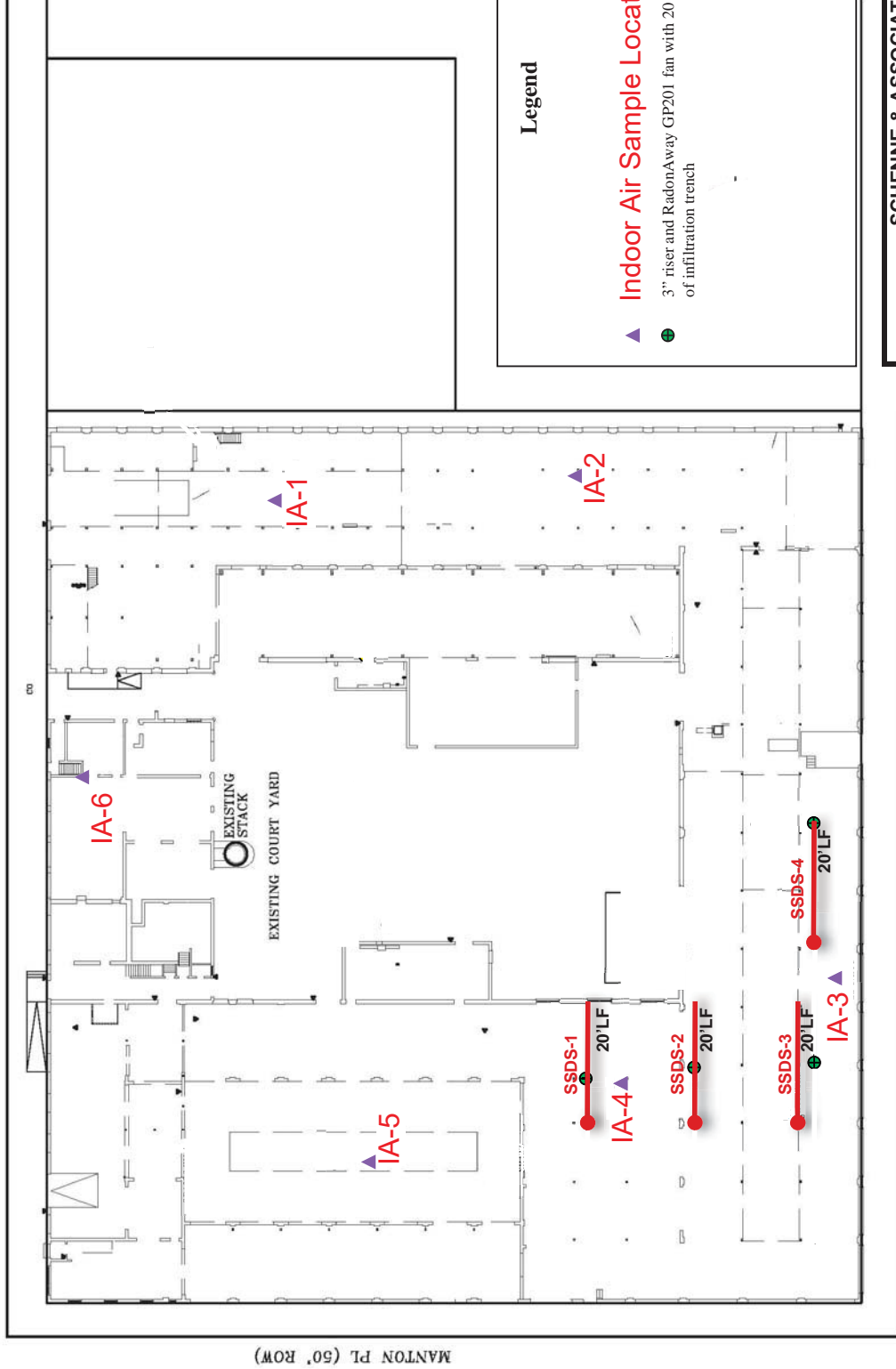
Phase III Audits - Site Investigations - Facility Inspections  
Groundwater Monitoring Well Exceedances  
155 and 157 CHANDLER STREET  
BUFFALO, NEW YORK

R & M LEASING LLC  
BUFFALO, NEW YORK

DRAWN BY: SS  
CHECKED BY: MMW  
PROJECT: e1601  
SCALE: 1" = 40'  
DATE: 11/17  
FIGURE NO: 8



CHANDLER ST (60' ROW)



Legend

Indoor Air Sample Location

3" riser and RadonAway GP201 fan with 20 LF. of infiltration trench

GROTE ST (60' ROW)

SUB-SLAB MIGRATION SYSTEM

AS-BUILT

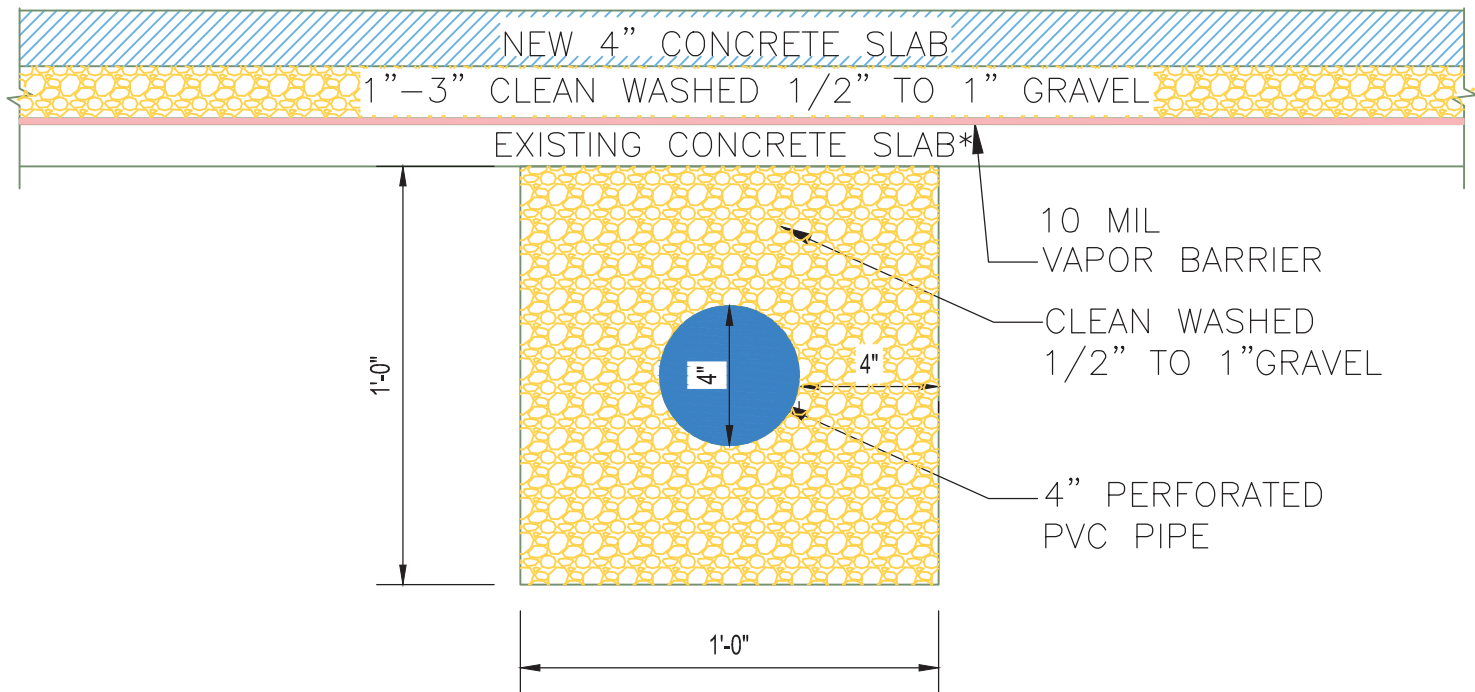
N.T.S.

SCHENNE & ASSOCIATES  
Consulting Engineers & Geologists

SUB-SLAB MITIGATION DESIGN  
155 and 157 CHANDLER STREET  
BUFFALO, NEW YORK

R & M LEASING LLC  
BUFFALO, NEW YORK

Figure 9

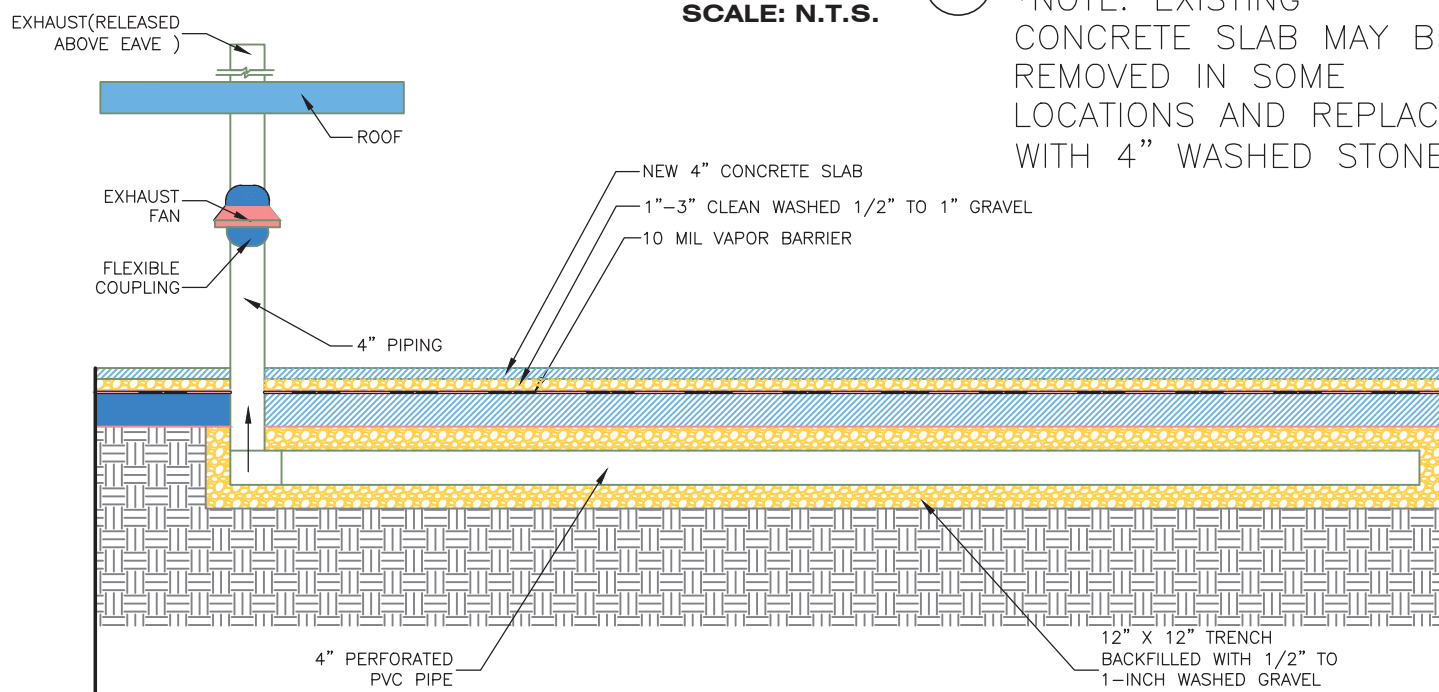


**TYPICAL CROSS-SECTION OF  
SSDS TRENCH AND PIPING**

SCALE: N.T.S.

1  
SK-1

\*NOTE: EXISTING  
CONCRETE SLAB MAY BE  
REMOVED IN SOME  
LOCATIONS AND REPLACED  
WITH 4" WASHED STONE



**TYPICAL SSDS TRENCH PROFILE**

SCALE: N.T.S.

2  
SK-1



IT IS A VIOLATION OF SECTION 7209, SUBDIVISION 2, OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON, OTHER THAN THOSE WHOSE SEAL APPEARS ON THIS DRAWING, TO ALTER IN ANY WAY AN ITEM ON THIS DRAWING. IF AN ITEM IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE ITEM HIS SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

**SCHENNE & ASSOCIATES**

CONSULTING ENGINEERS

391 Washington Street Suite 800  
Buffalo, NY 14203

(716) 655-4991 JOHN@SCHENNE.COM

OWNER

166 CHANDLER HOLDINGS LLC  
391 WASHINGTON ST,  
SUITE 800  
BUFFALO NY

PROJECT

PIERCE ARROW BUSINESS PARK  
155 CHANDLER ST  
BUFFALO NY

JOB:17-1725

DRAWN BY WX

SUB-SLAB MITIGATION DESIGN

DWG. SK-7

SCALE: AS NOTED

DATE: 12/05/2017



## TABLES

Table 1  
Courtyard Unrestricted Use SCO Exceedances  
155 Chandler Street, Buffalo, NY

Parameter	UUSCO	Residential USCO	Restricted Residential USCO	CY-CS-2A	Ex-UST-East Wall	CY-North Pit-Ex Sidewalls	CY-CS-1	CY-CS-2-2	CY-CS-2 Sidewall	CY-CS-3	CY-CS-3 Sidewall	CY-CS-5	CY-CS-8	CY-CS-14	CY-CS-15
Alpha Job Number															
Sampling Date															
Volatiles 8260C Analysis (ug/kg)															
cis-1,2-Dichloroethene	250	59,000	100,000	NT	ND	0.70 J	960 J	NT	2.4	NT	ND	NT	42	NT	0.52 J
Trichloroethene	470	10,000	21,000	NT	2.3	1.5	1,100 J	NT	50	NT	0.74 J	NT	1.8	NT	1.5
Semivolatiles 8270D Analysis (ug/kg)															
No semi-volatile organic compounds detected at concentrations above unrestricted use soil cleanup objectives															
Metals Analysis (mg/kg)															
Copper	50	270	270	NT	17.8	Area re-excavated	53 J	NT	25	NT	25.9	NT	23.4	NT	15.2
Mercury (total)	0.18	0.81	0.81	NT	0.42 J		0.05 J	NT	0.22	NT	ND	ND	NT	ND	0.02 J
Nickel	30	140	310	NT	16.9		30.3 J	NT	29.8	NT	31.4	NT	30.8 J	NT	30.3
PCB Analysis (ug/kg)															
Aroclor 1248	100	1,000	1,000	ND	NT	ND	ND	ND	ND	ND	ND	170 J	64.7 J	ND	ND
Aroclor 1260	100	1,000	1,000	29.2 J	NT	261 J	39.1 J	222	28.8 J	118	8.88 J	504	4.24 J	76	ND
PCBs, total	100	1,000	1,000	174 J	NT	342 J	70.4 J	222	60.9	118	8.88	674	4.24	141	ND
Pesticides Analysis (ug/kg)															
No pesticides/herbicides detected at concentrations above unrestricted use soil cleanup objectives															

**Notes:**

1. Only compounds and samples presented where analytical results exceeded Unrestricted Use Soil Cleanup Objectives (UUSCO) are presented on table
2. Analytical testing performed by Alpha Analytical. Compounds detected in one or more samples at concentrations above UUSCO are presented in this table.

Refer to RI-HRM-AAR report for sample locations and full analytical report.

3. ug/kg = parts per billion; mg/kg = parts per million.

4. ND = not detected; NT = not tested; NV = no value.

5. Analytical results compared to NYSDEC Part 375-6; Remedial Program Soil Cleanup Objectives.

Table 375-(a) Unrestricted Use Soil Cleanup Objective; and Table 375-6.8(b): Restricted Use Soil Cleanup Objectives.

6. J = Estimated value.

7. Shading indicates:

	exceeds UUSCO - Unrestricted Use Soil Cleanup Objective
	exceeds RUSCO - Residential Use Soil Cleanup Objective
	exceeds RRUSCO - Restricted Residential Use Soil Cleanup Objective

Table 2  
Parking Lot Unrestricted Use SCO Exceedances  
157 Chandler Street, Buffalo, NY

Parameter	UUSCO	Residential USCO	Restricted Residential USCO	PL-CS-2- Bottom	PL-CS-2- Sidewall	PL-CS-3- Bottom	PL-CS-4- Bottom	PL-CS-5- Sidewall	PL-CS-6- Bottom	PL-CS-6- Sidewall-1	PL-CS-6- Sidewall-2	PL-CS-8- Bottom	PL-CS-8- Sidewall	PL-CS-10- Bottom	PL-CS-11- Bottom	PL-CS-12- Bottom	PL-CS-12- Sidewall	PL-CS-13- Bottom	PL-CS-13- Sidewall	PL-CS-15- Bottom	PL-CS-15- Sidewall	PL-CS-16- Bottom
Alpha Job Number				L1734877	L1734877	L1734877	L1734877	L1734877	L1734877	L1734877	L1734877	L1734877	L1734877	L1734877	L1734877	L1734877	L1734877	L1734168	L1734168	L1734168	L1734168	L1734168
Sampling Date				09/29/17	09/29/17	09/29/17	09/29/17	09/29/17	09/29/17	09/29/17	09/29/17	09/29/17	09/29/17	09/29/17	09/28/17	09/29/17	09/29/17	09/25/17	09/25/17	09/26/17	09/26/17	09/26/17
Volatiles 8260C Analysis (ug/kg)																						
Acetone	50	100,000	100,000	62	ND	ND	74	ND	92	53	ND	34	ND	100	52	88	ND	ND	ND	56	ND	55
Semivolatile 8270D Analysis (ug/kg)																						
No semi-volatile organic compounds detected at concentrations above unrestricted use soil cleanup objectives																						
Metals Analysis (mg/kg)																						
Cadmium	2.5	2.5	4.3	1.00	1.08	0.847	J	0.800	J	0.814	J	0.796	J	0.810	J	0.739	J	0.738	J	0.665	J	1.26
Chromium, total	30	36	180	25.4	30.6	31.7	28.0	24.1	25.0	24.4	17.8	23.6	29.7	33	24.6	22.3	18.3	25	18.3	20.3	1.06	1.17
Copper	50	270	270	24.5	16.9	20.8	24.1	30.6	15.7	21.1	34.8	16.2	29.5	21.8	18.8	14.0	7.42	21.1	33.6	8.68	54.4	J
Lead	63	400	400	15.0	10.6	12.4	10.6	147	21.4	34.5	76.8	11.0	79.5	16.2	18.0	18.4	74.4	J	27.2	10.7	63.1	J
Nickel	30	140	310	29.7	23.5	33.9	28.7	40.6	25.0	28.6	30.5	32.6	32.3	26.7	30.7	21.2	14.1	30.8	16.8	14.8	21.2	14.5
Zinc	109	2,200	10,000	85.0	63.6	87.9	88.5	71.6	71.0	66.5	1,760	61.2	111	65.5	99.6	59.6	62.0	69.8	490	47.8	106	J
PCB Analysis (ug/kg)																						
No PCBs detected at concentrations above unrestricted use soil cleanup objectives																						
Pesticides Analysis (ug/kg)																						
No Pesticides/Insecticides detected at concentrations above unrestricted use soil cleanup objectives																						

Notes:

1. Only compounds and samples presented where analytical results exceeded Unrestricted Use Soil Cleanup Objectives (UUSCO) are presented on table
2. Analytical testing performed by Alpha Analytical. Compounds detected in one or more samples at concentrations above UUSCO are presented in this table. Refer to RI-RM-AAR report for sample locations and full analytical report.
3. ug/kg = parts per billion; mg/kg = parts per million.
4. ND = not detected; NT = not tested; NV = no value.
5. Analytical results compared to NYSDDEC Part 375-6; Remedial Program Soil Cleanup Objectives, Table 375-6(a) Unrestricted Use Soil Cleanup Objective; and Table 375-6.8(b): Restricted Use Soil Cleanup Objectives.
6. J = Estimated value.
7. Shading indicates:  

exceeds UUSCO - Unrestricted Use Soil Cleanup Objective  
 exceeds RUSCO - Residential Use Soil Cleanup Objective  
 exceeds RRUSCO - Restricted Residential Use Soil Cleanup Objective

Table 3  
Unrestricted Use SCO Exceedances under Building Slab  
155 Chandler Street, Buffalo, NY

Parameter	UUSCO	Residential USCO	Restricted Residential USCO	Interior Ex-1 East Wall	Interior Ex-1 West Wall	Interior Ex-1 North Wall	Interior Ex-1 South Wall 090717	WLT-003b Bottom	WLT-001 (6-10")	WLT-001 (10-14")	WLT-002 Southeast wall (0.5-2.5')	EB-ECC-SS-1
Alpha Job Number				L1728034	L1728034	L1728034	L1731834	L1733847	L1723390	L1723390	L1728332	L1735281
Sampling Date				08/10/17	08/10/17	08/10/17	09/07/17	09/21/17	07/10/17	07/10/17	08/10/17	10/02/17
<b>Volatiles 8260C Analysis (ug/kg)</b>												
No volatile organic compounds detected at concentrations above unrestricted use soil cleanup objectives												
<b>Semivolatile 8270D Analysis (ug/kg)</b>												
No semi-volatile organic compounds detected at concentrations above unrestricted use soil cleanup objectives												
<b>Metals Analysis (mg/kg)</b>												
Copper	50	270	270	18.4 J	112	189	22.4	18.1 J	64.4	81.3	70	NT
Lead	63	400	400	11.9 J	91.3	50.5	8.88 J	11.5 J	172	34.2	38.2	NT
Mercury (total)	0.18	0.81	0.81	0.03 J	0.18	0.41	0.04 J	0.05 J	0.17	0.06 J	0.08 J	NT
Nickel	30	140	310	25.3	26.5	17.6	33.2 J	30.8 J	16.6	17.8	31	NT
Zinc	109	2,200	10,000	252	411	464	84.1 J	65.4 J	157	113	459	NT
<b>PCB Analysis (ug/kg)</b>												
Aroclor 1254	100	1,000	1,000	NT	NT	NT	NT	NT	ND	ND	NT	61.3
Aroclor 1260	100	1,000	1,000	NT	NT	NT	NT	NT	ND	ND	NT	98
PCBs, total	100	1,000	1,000	NT	NT	NT	NT	NT	ND	ND	NT	159
<b>Pesticides Analysis (ug/kg)</b>												
No pesticide/herbicide detected at concentrations above unrestricted use soil cleanup objectives												

**Notes:**

1. Only compounds and samples presented where analytical results exceeded Unrestricted Use Soil Cleanup Objectives (UUSCO) are presented on table
2. Analytical testing performed by Alpha Analytical. Compounds detected in one or more samples at concentrations above UUSCO are presented in this table.  
Refer to RI/IRM-AAR report for sample locations and full analytical report.
3. ug/kg = parts per billion; mg/kg = parts per million.
4. ND = not detected; NT = not tested; NV = no value.
5. Analytical results compared to NYSDEC Part 375-6; Remedial Program Soil Cleanup Objectives,  
Table 375-(a) Unrestricted Use Soil Cleanup Objective; and Table 375-6.8(b): Restricted Use Soil Cleanup Objectives.
6. J = Estimated value.
7. Shading indicates:

exceeds UUSCO - Unrestricted Use Soil Cleanup Objective

exceeds RUSCO - Residential Use Soil Cleanup Objective

exceeds RRUSCO - Restricted Residential Use Soil Cleanup Objective

Table 4  
PCB Unrestricted Use SCO Exceedances - Concrete Slab  
155 Chandler Street, Buffalo, NY

Parameter	UUSCO	Residential USCO	Restricted Residential USCO	Interior-SCC- 001	EB-WCC-001	EB-NWC-001- NE	EB-NWC-001- W	EB-ECC-001-N	EB-SEC-001-N	WB-NWC-001	WB-NEC-001-N	WB-CWC-001- S	WB-CWC-001- W	WB-SWC-001- E
Alpha Job Number				L1727779	L1730220	L1731834	L1731834	L1731834	L1731834	L1728334	L1733847	L1732935	L1732935	L1735281
Sampling Date				08/09/17	08/28/17	09/13/17	09/13/17	09/13/17	09/13/17	08/14/17	09/20/17	09/15/17	09/15/17	10/06/17
PCB Analysis (ug/kg)														
Aroclor 1254	100	1,000	1,000	ND	171	247	ND	ND	212	278	117	661	473	577
Aroclor 1260	100	1,000	1,000	161 P	161	500 J	298 J	228	417 J	274 P	ND	294	293 J	370
PCBs, total	100	1,000	1,000	161	332	747	298	228	629	552	117	955	766	947

Notes:

1. Only compounds and samples presented where analytical results exceeded Unrestricted Use Soil Cleanup Objectives (UUSCO) are presented on table

2. Analytical testing performed by Alpha Analytical. Compounds detected in one or more samples at concentrations above UUSCO are presented in this table.  
Refer to RI-IRM-AAR report for sample locations and full analytical report.

3. ug/kg = parts per billion; mg/kg = parts per million.

4. ND = not detected; NT = not tested; NV = no value.

5. Analytical results compared to NYSEDEC Part 375-6; Remedial Program Soil Cleanup Objectives,

Table 375-(a) Unrestricted Use Soil Cleanup Objective; and Table 375-6.8(b): Restricted Use Soil Cleanup Objectives.

6. J = Estimated value.

7. Shading indicates:

exceeds UUSCO - Unrestricted Use Soil Cleanup Objective  
exceeds RUSCO - Residential Use Soil Cleanup Objective  
exceeds RRUSCO - Restricted Residential Use Soil Cleanup Objective

Table 5  
Backfill Quantities and Sources  
155 Chandler Street, Buffalo, NY

Clean Fill Sources	Clean Fill Type	Approximate amount used on-site
Lafarge	#1 Washed Stone	152 tons
New Enterprise Stone and Lime Co.	#1 Washed Stone	168 tons
New Enterprise Stone and Lime Co.	#2 Washed Stone	1,835 tons
Schwab Aggregates	Pea Gravel	0 tons
Swift River	#2 Crushed Concrete	1,148 tons
Crusher Run #2	County Line Stone	1,208 tons
Tom Rall Contracting	Clay	0 tons



**Table 6**  
**Clay Backfill Testing Results**  
**Baseline Road, Grand Island, New York**  
**Sample Collected - 08/22/2017**

Parameter	STOCK PILE 001	STOCK PILE 002	STOCK PILE 003	RESTRICTED RESIDENTIAL
<b>GC/MS Semi-volatiles 8270D Analysis (mg/kg)</b>				
Acenaphthene	0.055 J	ND	0.084 J	98
Fluoranthene	1	0.2	1.2	100
Benzo(a)anthracene	0.46	0.093 J	0.58	1
Benzo(a)pyrene	0.47	0.088 J	0.56	1
Benzo(b)fluoranthene	0.65	0.14	0.72	1
Benzo(k)fluoranthene	0.22	0.036 J	0.22	1.7
Chrysene	0.42	0.088 J	0.53	1
Acenaphthylene	0.086 J	ND	ND	100
Anthracene	0.16	ND	0.17	100
Benzo(ghi)perylene	0.31	0.058 J	0.37	100
Fluorene	0.059 J	ND	0.093 J	100
Phenanthrene	0.6	0.11	0.84	100
Dibenzo(a,h)anthracene	0.081 J	0.02 J	0.095 J	0.33
Indeno(1,2,3-cd)pyrene	0.36	0.072 J	0.4	0.5
Pyrene	0.78	0.15	0.95	100
Dibenzofuran	0.026 J	ND	0.042 J	NA
Carbazole	0.092 J	0.017 J	0.11 J	NA
<b>CHLORINATED HERBICIDES BY GC (mg/kg)</b>				
	ND	ND	ND	NA
<b>ORGANOCHLORINE PESTICIDES BY GC (mg/kg)</b>				
4,4'-DDE	0.00251 PI	ND	0.0054 P	8.9
4,4'-DDD	0.0108	ND	0.0062	13
4,4'-DDT	0.0154	ND	0.0118	7.9
cis-Chlordane	0.00459 P	ND	0.00117 J	NA
trans-Chlordane	0.00159 JPI	ND	ND	NA
<b>POLYCHLORINATED BIPHENYLS BY GC (mg/kg)</b>				
Aroclor 1248	ND	0.0512	ND	1
Aroclor 1254	ND	0.0352	ND	1
Aroclor 1260	0.012 J	ND	0.00648 J	1
PCBs, Total	0.012 J	0.0864	0.00648 J	1
<b>TOTAL METALS (mg/kg)</b>				
Aluminum, Total	11500	7900	11400	NA
Arsenic, Total	3.97	4.51	3.99	16
Barium, Total	88.1	82.8	76.4	400
Beryllium, Total	0.448	0.305 J	0.439 J	47
Cadmium, Total	0.958	0.908	0.946 J	4.3
Calcium, Total	34400	38400	19700	NA
Chromium, Total	16.9	13.8	16.2	180
Cobalt, Total	9.15	6.73	6.93	NA
Copper, Total	17.2	21	15.5	270
Iron, Total	18300	16100	16900	NA
Lead, Total	43.2	57.8	25.6	400
Magnesium, Total	10200	11100	6750	NA
Manganese, Total	511	414	317	2000
Mercury, Total	0.05 J	0.27	0.05 J	0.73
Nickel, Total	17.8	14.9	17.1	130
Potassium, Total	1060	836	847	NA
Silver, Total	ND	ND	3.27	8.3
Sodium, Total	92.9 J	123 J	67.7 J	NA
Thallium, Total	ND	ND	ND	NA
Vanadium, Total	23.4	18	21.7	NA
Zinc, Total	63.3	81.9	65.8	2480

Notes:

- Analytical testing performed by Alpha Analytical. Compounds detected in one or more samples are presented in this table.
- mg/kg = parts per million
- ND = not detect
- B = Indicates analyte found in associated method blank; J - Estimated concentration; I - The lower value for the two columns has been reported due to obvious interference; P - The RPD between the results for the two columns exceeds the method-specified criteria.
- Analytical results compared to NYSDEC Part 375 - Restricted Residential Use.

Table 7  
Soil Vapor Intrusion Decision Matrices  
155 Chandler Street, Buffalo, NY

Sample ID	Parameter	Sub-slab Vapor Concentrations (ug/m <sup>3</sup> )	Indoor Air Concentration (ug/m <sup>3</sup> )	Recommended Action
<b>Matrix A</b> Trichloroethene (TCE); cis-1,2-dichloroethene (cis-DCE); 1,1-dichloroethene (1,1-DCE); Carbon Tetrachloride				
SS-1/IA-1	TCE	ND	ND	No further action
	cis-DCE	ND	ND	No further action
	1,1-DCE	ND	ND	No further action
	Carbon Tetrachloride	2	0.63	No further action
SS-2/IA-2	TCE	2.2 J	0.38	No further action
	cis-DCE	ND	ND	No further action
	1,1-DCE	ND	ND	No further action
	Carbon Tetrachloride	ND	0.69	No further action
SS-3/IA-3	TCE	730	0.27	Mitigate
	cis-DCE	ND	ND	No further action
	1,1-DCE	ND	ND	No further action
	Carbon Tetrachloride	41	0.63	Monitor
SS-4/IA-4	TCE	3500	1.7	Mitigate
	cis-DCE	3.3 J	ND	No further action
	1,1-DCE	ND	ND	No further action
	Carbon Tetrachloride	23	0.57	Monitor
SS-5/IA-5	TCE	Sample destroyed	ND	No further action
	cis-DCE		ND	No further action
	1,1-DCE		ND	No further action
	Carbon Tetrachloride		ND	No further action
SS-6/IA-6	TCE	ND	0.64	No further action
	cis-DCE	ND	ND	No further action
	1,1-DCE	ND	ND	No further action
	Carbon Tetrachloride	1.4 J	0.63	No further action
<b>Matrix B</b> Methylene Chloride (MC); 1,1,1- Trichloroethane (1,1,1-TCA); Tetrachloroethylene (PCE)				
SS-1/IA-1	MC	2	3	No further action
	1,1,1-TCA	ND	ND	No further action
	PCE	1.3	0.75	No further action
SS-2/IA-2	MC	2.9	2.2	No further action
	1,1,1-TCA	ND	ND	No further action
	PCE	0.95	1.0	No further action
SS-3/IA-3	MC	2.4	1.6	No further action
	1,1,1-TCA	ND	ND	No further action
	PCE	9.7	1.2	No further action
SS-4/IA-4	MC	2.6 J	150	Identify source(s) and Resample or Mitigate
	1,1,1-TCA	62	ND	No further action
	PCE	340	0.95	No further action
SS-5/IA-5	MC	Sample destroyed	2.5	No further action
	1,1,1-TCA		ND	No further action
	PCE		0.68	No further action
SS-6/IA-6	MC	2.4 J	3.9	No further action
	1,1,1-TCA	ND	ND	No further action
	PCE	ND	0.81	No further action
<b>Matrix C</b> Vinyl Chloride (VC)				
SS-1/IA-1	VC	ND	ND	No further action
SS-2/IA-2	VC	ND	ND	No further action
SS-3/IA-3	VC	ND	ND	No further action
SS-4/IA-4	VC	ND	ND	No further action
SS-5/IA-5	VC	Sample destroyed	ND	No further action
SS-6/IA-6	VC	0.66J	ND	No further action

## **Appendix A**

### **Environmental Easement**

ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36  
OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

**THIS INDENTURE** made this 20<sup>th</sup> day of November, 2017, between Owner(s) R & M Leasing, LLC, having an office at 391 Washington Street, Suite 800, Buffalo, New York 14203-2108, County of Erie, State of New York (the "Grantor"), and The People of the State of New York (the "Grantee"), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

**WHEREAS**, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

**WHEREAS**, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

**WHEREAS**, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

**WHEREAS**, Grantor, is the owner of real property located at the address of 155 Chandler Street in the City of Buffalo, County of Erie and State of New York, known and designated on the tax map of the County Clerk of Erie as tax map parcel numbers: Section 77.84 Block 1 Lot 4, being a portion of the property conveyed to Grantor by deed dated January 4, 2017 and recorded in the Erie County Clerk's Office in Liber and Page 11310/7306. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 1.96 +/- acres, and is hereinafter more fully described in the Land Title Survey dated September 21, 2016 and last revised September 1, 2017 prepared by Mark J. Andrews, L.L.S. of GPI Engineering, Landscape Architecture and Surveying, LLP, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

**WHEREAS**, Grantor, is the owner of real property located at the address of 157 Chandler Street in the City of Buffalo, County of Erie and State of New York, known and designated on the tax map of the County Clerk of Erie as tax map parcel numbers: Section 77.84 Block 1 Lot 5,

being a portion of the property conveyed to Grantor by deed dated January 4, 2017 and recorded in the Erie County Clerk's Office in Liber and Page 11310/7306. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 0.39 +/- acres, and is hereinafter more fully described in the Land Title Survey dated September 21, 2016 and last revised September 1, 2017 prepared by Mark J. Andrews. L.L.S. of GPI Engineering, Landscape Architecture and Surveying, LLP, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

**WHEREAS**, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

**NOW THEREFORE**, in consideration of the mutual covenants contained herein and the terms and conditions of Brownfield Cleanup Agreement Index Number: C915312-02-17, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement").

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

**Restricted Residential as described in 6 NYCRR Part 375-1.8(g)(2)(ii),  
Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial  
as described in 6 NYCRR Part 375-1.8(g)(2)(iv)**

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without

necessary water quality treatment as determined by the NYSDOH or the Erie County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Residential purposes as defined in 6NYCRR 375-1.8(g)(2)(i), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section  
Division of Environmental Remediation  
NYSDEC  
625 Broadway  
Albany, New York 12233  
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement



is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

**This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation Law.**

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

- (1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).
- (2) the institutional controls and/or engineering controls employed at such site:
  - (i) are in-place;
  - (ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and
  - (iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;
- (3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;
- (4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;
- (5) the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;
- (6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and
- (7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:      Site Number: C915312  
Office of General Counsel  
NYSDEC  
625 Broadway  
Albany New York 12233-5500

With a copy to:

Site Control Section  
Division of Environmental Remediation  
NYSDEC  
625 Broadway  
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

**Remainder of Page Intentionally Left Blank**

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

R & M Leasing, LLC:

By: [Signature]

Print Name: Rocco Termini

Title: Managing member Date: 11-8-17

**Grantor's Acknowledgment**

STATE OF NEW YORK     )  
                                          ) ss:  
COUNTY OF Erie     )

On the 8<sup>th</sup> day of November, in the year 20 17, before me, the undersigned, personally appeared Rocco Termini, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Katherine M. Lonsbery  
Notary Public - State of New York

KATHERINE M. LONSBERY  
Notary Public, State of New York  
Qualified in Erie County  
My Commission Expires 12/27/20 17

**THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK**, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner,

By:

  
Robert W. Schick, Director  
Division of Environmental Remediation

**Grantee's Acknowledgment**

STATE OF NEW YORK     )  
                                          ) ss:  
COUNTY OF ALBANY     )

On the 20<sup>th</sup> day of November, in the year 2017, before me, the undersigned, personally appeared Robert W. Schick, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

  
Notary Public - State of New York

David J. Chiusano  
Notary Public, State of New York  
No. 01CH5032146  
Qualified in Schenectady County  
Commission Expires August 22, 2018

**SCHEDULE "A" PROPERTY DESCRIPTION**

**DEED AND EASEMENT DESCRIPTION**  
**155 CHANDLER STREET, TAX MAP # 77.84-1-4**

All that tract or parcel of land, together with building and improvements erected thereon, situate in the City of Buffalo, County of Erie and State of New York, being Lots Nos. 1 to 10 inclusive and Lots Nos. 23 to 32 inclusive, in Block "I", of the subdivision of a part of Lot 88, Black Rock, Township 11, Range 8, of the Holland Land Company's Survey, as shown on Cover Map No. 196, filed in the Erie County Clerk's Office, Buffalo, New York and more particularly described as follows:

Beginning at the intersection of the southerly line of Chandler Street and the easterly line of Manton Place, said point of beginning being also the northwesterly corner of Lot No. 1 in the above referred to subdivision, running thence southerly along the easterly line of Manton Place a distance of 280 feet to the northerly line of Grote Street, which point is also the southwesterly corner of Lot No. 23 in the above referred to subdivision; thence easterly along the northerly line of Grote Street, 305.27 feet to the easterly line of Lot No. 32 in said subdivision, which point is also the southwesterly corner of lands owned now or formerly by Anthony Young and Caroline Young his wife; thence northerly along the easterly line of Lots 32 and 10, being also along the westerly line of land now or formerly of Anthony Young and wife and lands of Barcola Manufacturing Company a distance of 280.00 feet to the southerly line of Chandler Street, said point being also the northeasterly corner of Lot No. 10 and the northwesterly corner of lands now or formerly of Barcola Manufacturing Company; thence westerly along the southerly side of Chandler Street a distance of 306.70 feet to the easterly line of Manton Place, the point and place of beginning, containing 1.96 acres of land, being the same more or less.

**DEED AND EASEMENT DESCRIPTION**  
**157 CHANDLER STREET, TAX MAP # 77.84-1-5**

All that tract or parcel of land, situate in the City of Buffalo, County of Erie and State of New York, being part of Lot No. 88, Township 11 and Range 8 of the Holland Land Company's Survey, and according to a map filed in the Erie County Clerk's Office under Cover No. 228 is known and distinguished as Subdivision Lots Nos. 16, 17, 18 and the westerly part of Subdivision Lot No. 19 in Block "I", bounded and described as follows:

Beginning at a point in the southerly line of Chandler Street 392.21 feet west of its intersection with the westerly line of Bridgeman Street, which point of beginning is the northwesterly corner of subdivision Lot No. 16; running thence easterly along the southerly line of Chandler Street 120.48 feet; thence southerly and parallel with the westerly line of Bridgeman Street 140 feet; thence westerly and parallel with Chandler Street and along the southerly line of Subdivision Lots Nos. 16, 17, 18 and the westerly part of Lot No. 19, 120.48 feet to the southwesterly corner of Subdivision Lot No. 16; and thence northerly and along the westerly line of Subdivision Lot No. 16, 140 feet to the southerly line of Chandler Street at the point or place of beginning, containing 0.39 acres more or less.



PEGGY A. LAGREE, ACTING ERIE COUNTY CLERK  
REF:

DATE:11/29/2017  
TIME:2:15:05 PM  
RECEIPT: 17208510

HOPKINS SORGI & ROMANOWSKI PLLC- BOX 460  
ACCOUNT #: 9074

ITEM - 01 785  
RECD: 11/29/2017 2:17:31 PM  
FILE: 2017240959 BK/PG D 11322/1373  
Deed Sequence: TT2017009359  
R&M LEASING LLC  
PEOPLE OF THE STATE OF NEW YORK (THE)  
Recording Fees 90.50  
TP584 10.00

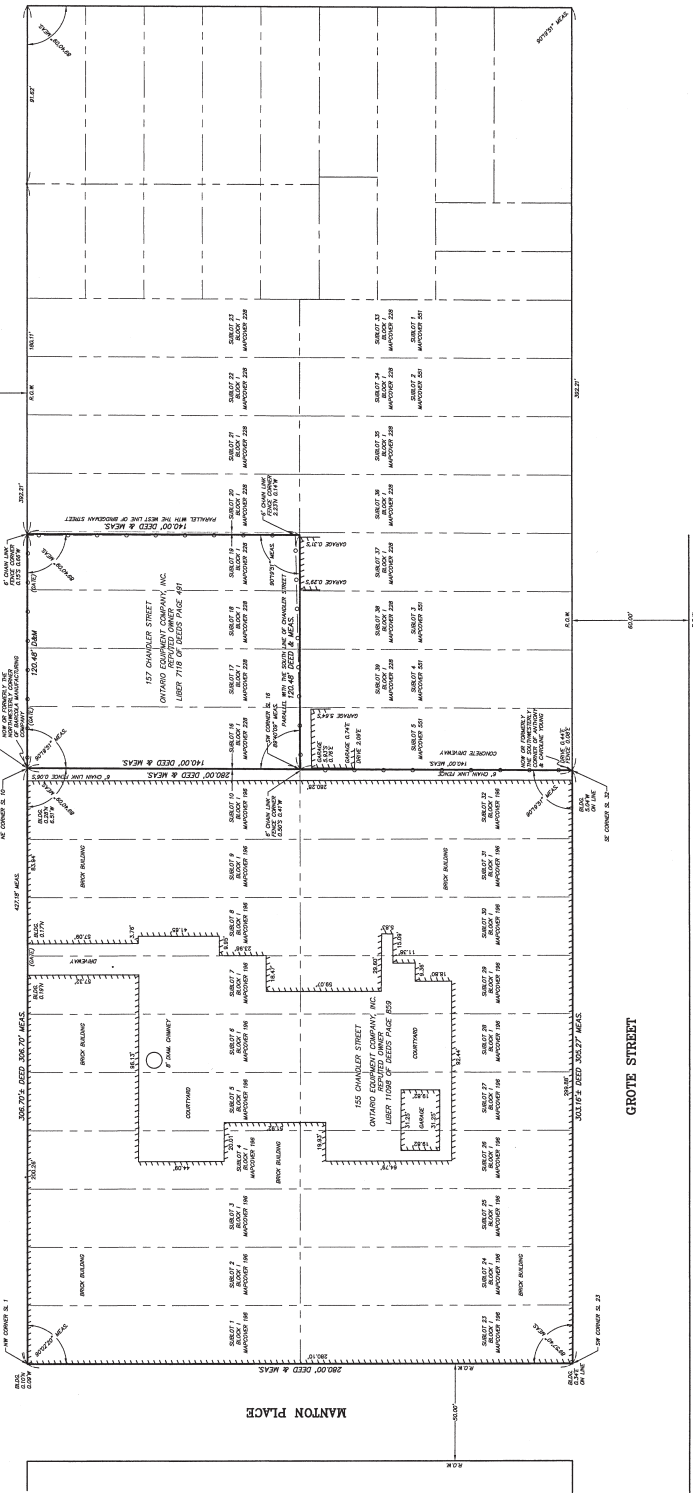
Subtotal 100.50

TOTAL DUE	\$100.50
PAID TOTAL	\$100.50
PAID CHECK	\$100.00
Check #2934:	100.00
PAID ESCROW	\$0.50

-----  
REC'D BY: David RB  
COUNTY RECORDER

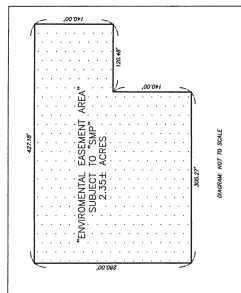


CHANDLER STREET



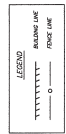
THE ENGINEERING AND INSTITUTIONAL CONTROLS FOR THE EASEMENT ARE SET FORTH IN MORE DETAIL IN THE SITE MANAGEMENT PLAN ("SMP"). A COPY OF THE SMP MUST BE OBTAINED BY ANY PARTY WITH AN INTEREST IN THE PROPERTY. THE SMP MAY BE OBTAINED FROM NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, DIVISION OF ENVIRONMENTAL REMEDIATION, SITE CONTROL SECTION, 625 BROADWAY, ALBANY, NY 12233 OR AT DERWEB@DEC.NY.GOV.

This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the New York Environmental Conservation Law.



LIBER 11008 OF DEEDS AT PAGE 859  
LIBER 7718 OF DEEDS AT PAGE 491

DATE	REVISION/TYPE
8/2/77	ADDITIONAL ENVIRONMENTAL NOTES



GRAPHIC SCALE 1" = 30'

SURVEY OF TOWNSHIP 11 RANGE 8  
PART OF LOT 10 (OLD LAND SURVEY)  
CITY OF BUFFALO, ERIE COUNTY, NEW YORK



Scale: 1" = 30'