

1132-1146 Seneca Street Site

ERIE COUNTY, NEW YORK

Final Engineering Report

NYSDEC Site Number: C915228

Prepared for:

Flexo-Transparent, Inc.

28 Wasson Street, Buffalo, NY

Prepared by:

Malcolm Pirnie, Inc.

50 Fountain Plaza, Suite 600, Buffalo, NY 14202

716-667-0900

DECEMBER 2010

CERTIFICATION

I, Kent R. McManus, am currently a registered professional engineer licensed by the State of New York, I had primary direct responsibility for implementation of the remedial program activities, and I certify that the Remedial Action Work Plan was implemented and that all construction activities were completed in substantial conformance with the Department-approved Remedial Action Work Plan.

I certify that the data submitted to the Department with this Final Engineering Report demonstrates that the remediation requirements set forth in the Remedial Action 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 any operation and maintenance requirements applicable to the Site are contained in an environmental easement created and recorded pursuant to ECL 71-3605 and that all 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 has been submitted for the continual and proper operation, maintenance, and monitoring of all Engineering Controls employed at the Site, including the proper maintenance of all remaining monitoring wells, and that such plan has been approved by Department.

I certify that all 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, Kent McManus, of Malcolm Pirnie, Inc. a business located at 50 Fountain Plaza, Buffalo, NY, am certifying as Owner's Designated Site Representative have been authorized and designated by all site owners to sign this certification for the site.

01348
NYS Professional Engineer # - Stamp

12/8/10
Date

Kent McManus
Signature

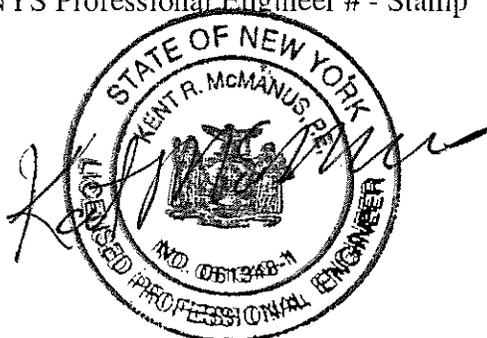


TABLE OF CONTENTS

CERTIFICATION	II
TABLE OF CONTENTS	III
LIST OF ACRONYMS	VII
FINAL ENGINEERING REPORT.....	1
1.0 BACKGROUND AND SITE DESCRIPTION.....	1
2.0 SUMMARY OF SITE REMEDY	2
2.1 REMEDIAL ACTION OBJECTIVES	2
2.2 DESCRIPTION OF SELECTED REMEDY	3
3.0 INTERIM REMEDIAL MEASURES	5
3.1 INTERIM REMEDIAL MEASURES	5
3.1.1 Objective	6
3.1.2 IRM Methods	6
3.1.3 Soil Removal/ UST Closure	7
3.1.4 Post Excavation Sampling	9
3.1.5 Sample Results	9
3.1.6 Volume Removed	10
3.1.7 Backfilling	11
3.1.8 Conclusions	11
4.0 DESCRIPTION OF REMEDIAL ACTIONS PERFORMED	13
4.1 GOVERNING DOCUMENTS	14
4.1.1 Site Specific Health & Safety Plan (HASP)	14
4.1.2 Quality Assurance Project Plan (QAPP).....	14
4.1.3 Storm-Water Pollution Prevention Plan (SWPPP)	15

4.1.4 Community Air Monitoring Plan (CAMP)	15
4.1.5 Community Participation Plan	15
4.2 REMEDIAL PROGRAM ELEMENTS	15
4.2.1 Contractors and Consultants.....	15
4.2.2 Site Preparation	15
4.2.3 General Site Controls	16
4.2.4 CAMP results.....	16
4.3 CONTAMINATED MATERIALS REMOVAL.....	16
4.3.1 Disposal Details	17
4.3.2 On-Site Reuse	18
4.4 REMEDIAL PERFORMANCE/DOCUMENTATION SAMPLING	18
4.5 IMPORTED BACKFILL.....	20
4.6 CONTAMINATION REMAINING AT THE SITE	20
4.7 INSTITUTIONAL CONTROLS.....	20

LIST OF TABLES

Table 1 Summary of Analytical Results -RemedialConfirmation Samples

Table 2 Summary of Materials Disposal

LIST OF FIGURES

Figure 1 BCP Site Location Map

Figure 2 Site Base Map

Figure 3 Areas of Excavated Soil Remediation

Figure 4 PCB Remediation Confirmatory Sample Locations and Results

Figure 5 PCB Site Boundary Confirmatory Sample Locations and Results

Figure 6 Petroleum and BAP Impacted Soil Remediation and Boundary Sample
Results

LIST OF APPENDICES

- A Survey Map, Metes and Bounds
- B Environmental Easement
- C Remediation-Related Permits
- D Project Photo Log
- E Soil/Waste Characterization Documentation
 - Acceptance Letters
 - Load Summaries
 - Scale Tickets
 - Hazardous Waste Profile Sheet
 - Hazardous Waste Manifests
 - Non-Hazardous Waste Manifests
- F. CAMP Field Data Sheets and Air Monitoring Data
 - Upwind
 - Downwind
- G. Laboratory Analytical Data (CD)
- H. Data Usability Summary Reports (DUSRs)
- I. Imported Materials Documentation
- J. Storm Water Pollution Prevention Plan (SWPPP)

LIST OF ACRONYMS

Acronym	Definition
BAP	Benzo (a) Pyrene
BGS	Below Ground Surface
EE	Environmental Easement
EWP	Excavation Work Plan
PCBs	Poly Chlorinated Biphenyls
PRR	Periodic Review Report
RAO	Remedial Action Objective
RAWP	Remedial Action Work Plan
RI	Remedial Investigation
RWP	Remedial Work Plan
SCO	Soil Cleanup Objective
SFMP	Soil Fill Management Plan
SMP	Site Management Plan
SRI	Supplemental Remedial Investigation

FINAL ENGINEERING REPORT

1.0 BACKGROUND AND SITE DESCRIPTION

Flexo-Transparent, Inc. entered into a Brownfield Cleanup Agreement (BCA), with the New York State Department of Environmental Conservation (NYSDEC) in December 2008, to investigate and remediate a 4.2-acre property located in Buffalo, New York. A property survey map with a metes and bounds description is provided in Appendix A. The property was remediated to Track 2 protocols for, restricted industrial use and will be used for the expansion of the existing facility that will include light industrial, warehouse, office and related parking.

The site is located in the County of Erie, New York and is identified as Lot numbers 123.29-1-10, 123.29-1-11, and 123.29-1-12 on the Buffalo Tax Map # 123.29. The site is situated on an approximately 4.2-acre area bounded by a vacant lot to the north, Seneca Street to the south, light industrial and residential properties to the east, and the City of Buffalo Highway garage to the west (see Figure 1). The boundaries of the site are fully described in Appendix A.

2.0 SUMMARY OF SITE REMEDY

2.1 REMEDIAL ACTION OBJECTIVES

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

Poly-chlorinated Biphenyls (PCBs) and benzo(a)pyrene (BAP) -impacted soil/fill were the media of primary concern at the Site. The PCB-impacted soil/fill of concern was that which was located on each of the three properties, at 1122, 1132 and 1146 Seneca Street, at concentrations above 25 PPM (the restricted industrial SCO). The BAP-impacted soil materials were surface soils identified in the upper 2-inches located on some areas of the 1146 Seneca Street property, at concentrations above 1.1 mg/kg (the restricted industrial SCO). Also, petroleum-impacted soil/fill was present in the immediate vicinity of a UST identified on the 1132 property, immediately northeast of the railroad loading dock.

The Remedial Action Objectives for the Site included:

1. Removal of potential exposure risks associated with direct contact with soil/fill that has been significantly impacted by PCBs and BAP (i.e. concentrations above the industrial SCOs of 25 mg/kg and 1.1 mg/kg respectively).
2. Removal of potential risks associated with the contents of the UST and surrounding impacted soil/fill

In order to achieve the RAOs, the PCB-impacted soil/fill material and BAP-impacted surface soil were removed and properly disposed off-Site prior to Site re-development. The excavations resulting from the disposal of PCB-impacted soil and implementation of IRMs were backfilled with documented clean stone in accordance with the Site Management Plan (SMP). The UST and associated impacted soil/fill were removed and backfilled with the same clean stone prior to Site redevelopment. Surface soil with elevated concentrations of BAP were removed to a minimum depth of 3-inches and disposed off-Site at a DEC-permitted disposal facility.

Relatively low concentrations of PCBs, below the cleanup objective of 25 mg/kg, remain in on Site in the upper two feet of soil/fill in a few areas of the 1122 and 1132 Seneca Street parcels. The PCB concentrations in these areas are within acceptable limits

for the industrial Site use as determined by the Department. These areas are scheduled to be paved over as part of the Site redevelopment which will further minimize potential for direct contact. Contact with soil/fill during potential future excavation will be managed by the implementation of the Department-approved Site Management Plan. The potential public exposure to the low concentrations of PCBs in on-Site soil/fill is limited by several means including; pavement, limited Site access by fencing and site security, and active industrial use of the property which discourages trespassing.

2.2 DESCRIPTION OF SELECTED REMEDY

The site was remediated in accordance with the remedy selected by representatives of Flexo-Transparent and the NYSDEC in the RWP dated September, 2010. The factors considered during the selection of the remedy are those listed in 6NYCRR 375-1.8. The following are the components of the selected remedy:

Removal and off-Site disposal of PCB-impacted soil/fill, BAP-impacted surface soil and soil/fill associated with the UST is the focus of the remedial alternative ultimately selected for the Site for the following reasons:

- The effectiveness of simple excavation/removal methods at eliminating the potential hazards posed by the contamination.
- The relative accessibility of the contamination in the upper two feet of soil/fill.
- The limited effectiveness of in-situ treatment technologies on PCBs because of their low volatility, recalcitrance in the environment, and resistance to chemical and biological breakdown.
- The desire to complete Site redevelopment during the year 2010.

Removal and off-Site disposal of impacted soil materials was evaluated under several different Cleanup Track scenarios which vary by cleanup levels and/or engineering controls. The selected remedy required the excavation of soil materials to achieve a Track 2 Cleanup with Industrial SCOs.

Track 2 Cleanup – Industrial SCOs - Under a Track 2 Industrial cleanup, PCBs, BAP, and other constituents present in soil/fill above the restricted industrial SCOs were removed and where necessary for redevelopment, were replaced with documented clean soil. Aspects of the remedy included:

- Excavation of soil/fill exceeding restricted industrial SCO was performed. Contingent on the results of location-specific analytical testing, PCB impacted

soil materials were excavated to nominal depths that ranged from a minimum of 6-inches to a maximum of 3.0 feet below ground surface (BGS).

- BAP- impacted soil materials were excavated from the 1146 property to a minimum depth of 3 inches below ground surface (BGS).
- An underground storage tank (UST) was also removed along with related petroleum-impacted soil and concrete to a total depth of approximately 10 feet below grade.
- PCB-containing dry floor sediments were removed from a concrete-lined pipe chase within the warehouse building floor.
- Execution and recording of an Environmental Easement to restrict land use and prevent future exposure to any contamination remaining at the Site.
- Development and implementation of a Site Management Plan for long term management of remaining contamination as required by the Environmental Easement, which includes plans for: (1) Institutional Controls, and (2) reporting, The SMP contains the Environmental Easement, an Excavation Work Plan (EWP), and an Engineering Control/Institutional Controls (EC/IC) Certification Form for inclusion with the Periodic Review Reports (PRR).
- Periodic certification of the institutional controls listed above, by use of the EC/IC Certification Form.

As further discussed in the Department-approved Remedial Investigation Report/Remedial Work Plan, groundwater was not remediated at the Site for the following reasons:

- Analytical results of groundwater samples indicate little impact to groundwater from Site contamination
- The presence of groundwater is seasonal and discontinuous across the Site
- Groundwater is not used for human consumption on Site or near the Site
- Potential limited dermal contact with groundwater during future excavations will be managed by implementation of provisions included in the Department-approved Site Management Plan

3.0 INTERIM REMEDIAL MEASURES

The information in the Remedial Investigation/Interim Remedial Measures Work Plan (July, 2009) and the Remedial Investigation Report/Remedial Work Plan, September, 2010 were relied upon to remediate the Site, to prepare this report, and certify that the remediation requirements for the Site have been met.

3.1 INTERIM REMEDIAL MEASURES

Based on Phase I and Phase II investigation results, two specific areas of the 1132 Seneca Street property were identified for Interim Remedial Measures because of their acute and believed isolated extent of PCB contamination. The IRMs included the interior rail loading dock (IRM-1) and an area approximately 30-feet x 50-feet located directly north of the warehouse building with known PCBs present in the soil/fill (IRM-2). The planned remedy for both IRMs was excavation and removal of the PCB-impacted soil/fill and related concrete, with off Site disposal. IRM-2 and most of IRM-1 were completed in October, 2009, concurrent with the performance of the Remedial Investigation of the overall BCP Site.

Subsequent to completion of the RI and based on its findings, two additional localized areas of contamination were discovered. The first was a 15,000 gallon steel underground storage tank (UST) discovered approximately 30 feet to the north east of the loading dock. This tank had several holes from rusting and the surrounding soils contained residual petroleum contamination.

The second area of contamination was an interior pipe chase which contained PCB contaminated dry floor sediments. These two issues of concern were not specifically designated as IRMs, but were completed as such, concurrent with the overall Site remedy in October 2010, as was the second and final phase of IRM-1 at the loading dock.

Post excavation samples collected in relation to IRM-1, IRM-2, and the UST are presented in this report along with those collected in relation to the overall Site remedy.

Post excavation confirmation samples were collected from excavation sidewalls and bottoms at the loading dock (IRM-1) and the north area (IRM-2) as well as from the UST excavation. Table 1 provides a summary of analytical results of all confirmation

samples collected as part of the IRMs and the overall Site remedy. Figure 4 illustrates the locations of the confirmation samples collected from the 1132 Seneca Street property and a summary of total PCB concentrations detected in these samples. Figure 5 includes the locations and results of sidewall samples collected in relation to the UST removal.

The IRM actions were completed by representatives of the site owner (Op-Tech) using protocols developed for the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP). The IRMs were completed per the DEC-approved RI/IRM Work Plan and the RIR/RWP under the observation of Malcolm Pirnie, Inc. with periodic oversight by the NYSDEC.

Results of IRM-2 and the first phase of IRM-1 were reported in detail in the Remedial Investigation Report / Remedial Work Plan (RWP) dated September 2010 and are summarized herein.

This FER presents all remedial work completed under the BCP, including that which was reported previously in the RI/RWP. The site base map (Figure 2) shows the location of impacted soil/fill removals including IRM-1, IRM-2 as well as the UST and pipe chase remedial focus areas. Although not specifically designated as IRMs, the work completed at the UST and pipe chase are IRM-type actions and therefore are presented in this IRM Section.

3.1.1 Objective

The objectives of the completed IRM actions are the same as those of the overall Site remedy, to reduce the potential for human exposure by direct contact to soils/materials containing elevated concentrations of contaminants of concern and to prepare the site for redevelopment. These objectives were met through removal and off-site disposal of PCB-impacted soil/fill at IRMs 1 and 2 and the pipe chase and the removal of petroleum-impacted soil/fill and concrete at the UST location.

3.1.2 IRM Methods

A large backhoe/excavator and multiple dump trucks were used to complete the IRM actions and UST removal. Impacted sediment in the pipe chase was removed using hand shovels and high pressure water. The impacted soil/fill was pre-characterized analytically so that excavation and removal was performed concurrently. Post-excavation sidewall and bottom confirmatory samples were collected at excavations

leading in some cases to multiple phases of excavation and removal until remedial objectives (restricted industrial SCOs) were achieved. The impacted soil/fill was excavated and transported off-site for disposal at one of three permitted landfills, depending on constituent type and concentration.

3.1.3 Soil Removal/ UST Closure

The loading dock IRM involved the removal of PCB impacted soil/fill and concrete and was completed in two phases, the first of which was completed in October 2009 and reported in the RIR/RWP dated September 2010. OP-TECH removed and disposed of approximately 72.9 tons of hazardous PCB-impacted soil/fill and concrete at the Chemical Waste Management facility in Model City, New York during the first phase of this IRM. Also, PCB-impacted water from the loading dock excavation was temporarily staged on site in a holding tank which was later also disposed at Chemical Waste Management in Model City. A second phase of excavation was performed at the loading dock in September 2010. The lateral extent of excavation along the eastern perimeter of the loading dock IRM was limited to the concrete building sidewall and supporting pier structure(s). The north and south limits of excavation were limited to the areal extent of the loading dock within the warehouse building. The depth of the excavation was at the base of the fill unit at the top of the underlying native clayey silt unit identified at approximately 3 feet below the loading dock original floor grade. During Phase II of IRM-1, an estimated 20 tons of PCB-impacted soil and concrete were removed, transported, and disposed as hazardous waste at the Chemical Waste Management facility in Model City, New York. The soil/fill and concrete were excavated all the way to the easternmost building wall of the loading dock. All final post-excavation confirmation samples were below the industrial SCO for total PCBs of 25 mg/kg. See Table 1 and Figure 4.

A focused remedial action involving the removal of piping and contaminated sediment material from a pipe chase centrally located within the warehouse facility. The pipe chase was subsequently pressure washed with high pressure hot water to verify removal of the PCB-impacted soil material. PCB-impacted sediments were removed from the interior floor pipe-chase and disposed as hazardous waste along with other similarly impacted soil/fill from other on-site PCB remedial actions at Chemical Waste Management, per the NYSDEC-approved RWP. The total volume of PCB-impacted floor sediments was not measured but is estimated at less than 0.1 cubic yards. The steel pipes were observed to be free of product, and free of evidence of contamination. These

pipes were cleaned with high pressure hot water and added to Flexo's dumpster for metals recycling at Metallico, Inc., the PCB-impacted floor sediments were removed and transported to a NYSDEC permitted waste handling facility, no confirmatory samples were collected from the pressure washed concrete walls or concrete bottom of the pipe chase and no evidence of deterioration or contaminant staining was observed on the concrete sides or bottom surfaces of the pipe chase.

The removal of the UST and associated BTEX-contaminated soil required the excavation of a concrete cradle that encapsulated the UST and soil/fill material impacted with BTEX constituents.

The source of the petroleum contamination in the soil/fill was identified as a 15,000 gallon steel underground storage tank (UST), located directly to the northeast of the railroad loading dock. The tank was found to be filled with water with residual petroleum fuel product. The liquids were pumped from the UST and through a portable carbon treatment plant to remove organic contaminants. This water was then pumped to a man-hole of the municipal sanitary sewer system under provisions of a permit from the Buffalo Sewer Authority, see Appendix C. Volume of water pumped to the sanitary sewer system as well as pumping rates, weather conditions during pumping were not recorded by the remedial contractor. The used carbon from the temporary on-Site treatment facility was characterized and later disposed with the final load of BAP-impacted soil/fill at the Tonawanda Landfill. Analytical results of the characterization sample of the used carbon is provided in Appendix G. No other paperwork was required or generated by Tonawanda Landfill for this small volume of non-hazardous material. Once confirmed free of measurable organic vapors, the tank was removed from the excavation site and placed on plastic sheeting. The tank was severely pitted and no identification markings or tag were found on the tank. The tank was cut open, crushed, and transported off-site for metal recycling at Metallico, Inc. by Flexo. See Appendix E for documentation of tank recycling. Photographs of the removed UST and removal operations are provided in Appendix D.

Subsequent to removal of the UST, excavation of the BTEX contaminated soil/fill and concrete continued. Visually impacted soil material was removed from the sidewall areas adjacent to, and beneath the UST. The extent of visually impacted material was clearly identified along the base and sidewalls of the UST excavation.

3.1.4 Post Excavation Sampling

A total of 11 confirmation samples were collected as part of the first phase of IRM-1. After Phase II of IRM-1, two additional samples (LDE-1N and LDE-1S) were collected from the east wall.

Following completion of IRM-2 in 2009, five confirmation samples were collected. The samples were collected from depths at which impacted soil had been removed. Each of the soil/fill samples collected from IRMs 1 and 2 were analyzed for PCBs, see Table 1.

Per the NYSDEC-approved RWP, confirmation sampling was not performed at the pipe chase. The impacted material was dry sediments which settled into the concrete lined pipe chase. Once all of the loose sediment had been removed and disposed as hazardous waste off-site and the pipe chase pressure washed to be free of loose sediment material. None of the impacted loose sediment remained to be sampled.

Per the NYSDEC- approved RWP, confirmation sampling was performed at the UST excavation. Two samples were collected from each long sidewall (east and west walls) and one from each shorter side wall (north and south walls). Bottom samples were not collected because the tank was resting on bedrock. Sample analytical results are provided in Appendix G and summarized in Table 1. A sample of the water in the excavation was also collected for disposal purposes.

Sampling protocols implemented in accordance with DER-10 were used to collect soil samples from the vertical face of the excavation. Accordingly, six samples designated UST-SWWN, UST-SWWS, UST-SWEN, UST-SWES, UST-SWN, and UST-SWS were collected to characterize the soil remaining within the UST excavation. The six soil/fill samples were submitted for STARS VOC / STARS SVOC analyses.

Table 1 provides a summary of 2010 post-excavation confirmation sample results.

3.1.5 Sample Results

Table 1 provides a summary of analytical results of all 2009 and 2010 remedial post excavation samples. Where PCB concentrations exceeded restricted industrial SCOs as indicated in the yellow shaded table cells, subsequent excavation and sampling was performed until the remedial goals were met.

VOCs and SVOCs were not detected in any of the six post-excavation confirmation soil samples collected at the UST location. Appendix G contains the sample results as provided by the analytical laboratory on the Form 1 data sheets.

All analytical data collected as part of the BCP remediation was submitted to a qualified third-party data validator (Environmental Quality Associates) for determination of data usability and preparation of a Data Usability Summary Report (DUSR) per NYSDEC guidance. All analytical results were determined by the third-party data validator to be useable as qualified and no data was rejected. Copies of all 11 DUSR reports are provided in Appendix H.

3.1.6 Volume Removed

IRM – 1 (Loading Dock) The loading dock IRM was completed in two phases, the first in 2009 and the second in 2010. The first phase resulted in the removal of 72.9 tons of impacted soil/fill and concrete. The second Phase is estimated to have resulted in approximately 20 tons of impacted soil/fill and concrete. The volume of the second phase is estimated because it was not weighed separately but mixed and disposed of along with similarly impacted soil/fill material from the overall site remedial measure.

Documentation of the first phase was provided in the DEC-approved RIR/RWP. Figure 4 illustrates the location and size of the loading dock IRM and details the narrow area of the second phase of excavation along the eastern side of the loading dock. This area is 51 feet long, 4-feet wide, and was excavated to a depth of 3-feet. See Appendix D for post excavation photos of the loading dock IRM. Appendix E provides copies of hazardous waste manifests and the acceptance letter from Chemical Waste Management.

IRM - 2 (North Area) The 30-feet by 50-feet by 3-feet deep area excavated as IRM-2 in 2009 resulted in 274.64 tons of non-hazardous PCB-impacted soil/fill. This material was disposed as non-hazardous waste at the Tonawanda landfill for use as alternate grading material (AGM). Complete documentation of IRM-2 was provided in the DEC-approved RIR/RWP.

UST - Petroleum-impacted soil/fill and concrete generated from the excavation of the UST was characterized to be non-hazardous and was transported to Modern Landfill along with other non-hazardous soil/fill impacted with PCBs. These materials were pre-approved by the landfill and mixed with other non-hazardous waste soils from the Site during the loading and transport process for purposes of bulking shipments to minimize

costs caused by transporting truck loads that are less than full. For this reason, specific volume or weights are not available for the petroleum impacted materials. Impacted materials were segregated as excavated and placed on polyethylene sheeting to prevent contamination of non-impacted materials and to prevent mixing with impacted materials from other sources until after each material was characterized separately and pre-approved by the appropriate disposal facility for disposal.

Pipe Chase - PCB-impacted dry sediment was removed from the interior pipe chase using hand shovels. This material was added to and handled with the pile of hazardous PCB-impacted soil/fill that was excavated from other areas of the Site and therefore not quantified separately. The estimated volume of this material is less than 0.1 cubic yard. After the dry sediments were removed from the pipe chase, the pipe chase was rinsed using high pressure water. This rise water was collected and treated with the on-site carbon treatment system before discharging to the sanitary sewer system by permit. The condition of the washed concrete sides and bottom of the pipe chase were observed to be in good condition with no cracks or suspect staining noted.

Table 2 provides a summary of materials disposed off-site as well as volumes and destinations.

3.1.7 Backfilling

Subsequent to the excavation and disposal of impacted soils removed during the two IRM and UST removal actions, the excavations were backfilled with documented clean natural #2 crusher run stone provided by Buffalo Crushed Stone from their Wehrle Drive plant (source #5-3R) in Lancaster, New York. Also included as backfill in the UST excavation was concrete that had been removed from above the UST during removal actions. This upper concrete cap was segregated from deeper stained concrete from along the sides of the UST. The upper cap concrete was sampled and determined to be acceptable for use as backfill on the site. Appendix G contains the analytical results of this concrete sample (sample SFMP-2)

3.1.8 Conclusions

The two IRMs and two IRM-like actions were successful in removing the targeted PCB impacted soil and sediment and the petroleum impacted soil/fill from the Site. Backfilling of the excavation with clean fill and redevelopment of the Site in accordance

with the Remedial Work Plan and Excavation Work Plan will successfully mitigate the potential for impacts associated with residual contaminants.

4.0 DESCRIPTION OF REMEDIAL ACTIONS PERFORMED

In addition to completion of IRMs 1 and 2, the UST removal action, and the removal of PCB-impacted sediments from the interior pipe chase as discussed in Section 3, Site-wide remedial actions were completed. Based on the known environmental conditions at the Site and the planned Site industrial use, PCBs and other constituents present in soil/fill at concentrations greater than restricted industrial SCOs were removed and replaced with documented clean stone in accordance with the Remedial Work Plan. Site cleanup under Track 2 was achieved by the removal and off-Site disposal of PCB-impacted soil/fill and concrete to meet the restricted industrial SCO of 25 mg/kg and replacement with documented clean stone. The PCB-impacted soil/fill of concern was located on the 1122, 1132 and 1146 Seneca Street properties. In addition, BAP-impacted surface soils were removed from the upper 3-inches minimum on the 1146 Seneca Street property and disposed off-Site at a DEC-permitted waste disposal facility. Figure 3 illustrates the areas at which impacted soil/fill was removed. Figure 6 illustrates the areas from which BAP-impacted soil was removed. In addition, because of the presence of residual constituents of concern in the subsurface soil/fill of the 1146 Seneca property, land use and groundwater use restriction institutional controls have been implemented. These controls include limiting future use to restricted industrial use and restricting the use of groundwater from beneath the Site without prior treatment and written permission of the Department.

To verify protection, soil/fill materials encountered during redevelopment and determined to be significantly more contaminated than what has been previously characterized, will be properly disposed off-Site. The restricted industrial use SCOs will be used to assess soil/fill excavations or disturbances and to define levels for the Site contaminants, above which off-Site disposal will be required as specified in the NYSDEC approved Site Management Plan.

During clearing, grading, excavating, and stockpiling of excavated soil, dust suppression and air monitoring was conducted in accordance with NYSDEC TAGM HWR-89-4031, Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Waste Sites.

Soil/fill material containing analytes above the SCOs were further classified for disposal purposes with respect to hazardous characteristics, as outlined in 6 NYCRR Part 371, Identification and Listing of Hazardous Wastes. Soil/fill material determined to be a

hazardous waste was handled in accordance with the requirements of: 6 NYCRR Part 372, Hazardous Waste Manifest System and Related Standards for Generators, Transporters, and Facilities; and 49 CFR 107-171, DOT Rules for Hazardous Materials Transport.

The Site remediation resulted in the removal of a total of 1431.93 tons of hazardous PCB-impacted soil/fill and concrete, 1302.22 tons of non-hazardous PCB-impacted soil/fill and 1641.15 tons of BAP-impacted surface soil. As part of the PCB-impacted soil/fill removal, excavation, confirmation sampling, and backfilling with clean soil was performed in accordance with DER-10 (DEC November 2009).

Remedial activities completed at the Site were conducted in accordance with the NYSDEC-approved Remedial Work Plan (RWP) for the 1132-1146 Seneca Street site (September 2010).

Although confirmed not contaminated, see analytical results in Appendix G, rain water that collected in an interior equipment floor sump when the building roof leaked, was pumped out by OpTech and discharged to the ground surface in the PCB-impacted area north of the building and allowed to infiltrate prior to excavation. This area north of the building was later the primary focus of soil/fill removal. Quantity of this non-impacted water was not measured. Neither sediment nor sludge was present in the bottom of the floor sump and the concrete sidewalls and bottom were observed to be in good condition with no cracks or suspect staining noted.

4.1 GOVERNING DOCUMENTS

4.1.1 Site Specific Health & Safety Plan (HASP)

All remedial work performed under this Remedial Action was performed in compliance with governmental requirements, including Site and worker safety requirements mandated by Federal OSHA. A Health and Safety Plan (HASP) was prepared for use by the remedial contractor.

4.1.2 Quality Assurance Project Plan (QAPP)

The QAPP was included as Section 6 of the RI/IRM Work Plan dated July 2009 approved by the NYSDEC. The QAPP describes the specific policies, objectives, organization, functional activities and quality assurance/ quality control activities

designed to achieve the project data quality objectives.4.1.3 Storm-Water Pollution Prevention Plan (SWPPP)

The erosion and sediment controls for all remedial construction were performed in conformance with requirements presented in the New York State Guidelines for Urban Erosion and Sediment Control and the site-specific Storm Water Pollution Prevention Plan September 2010. See Appendix J.

4.1.4 Community Air Monitoring Plan (CAMP)

The remedial contractor prepared and implemented the CAMP during excavation and soil handling operations. Particulates in the air were measured at the Site perimeter using electronic random aerosol monitoring equipment. Dust monitoring results are provided in Appendix F and discussed in Section 4.2.4.

4.1.5 Community Participation Plan

A Fact Sheet was prepared and mailed to local and other interested parties prior to the start of remedial operations. A copy of the draft RWP was placed in the public repository and made available for review and comment prior to finalization. Once made final, the RWP was placed in the same public repository.

4.2 REMEDIAL PROGRAM ELEMENTS

4.2.1 Contractors and Consultants

OP-TECH of Tonawanda, New York was the remedial contractor, directly under contract to Flexo Transparent, and performed all of the remedial work under the BCA.

Kent R. McManus of Malcolm Pirnie, Inc. – Buffalo, New York office was the New York State licensed professional engineer under whom the observation work was performed and certified.

4.2.2 Site Preparation

A pre-proposal meeting was held on site with the NYSDEC, Flexo, Malcolm Pirnie, and remedial contractor representatives on August 4, 2009 to view the site and discuss the planned remedial program. Initial IRM and RI field work was performed between October 14, 2009 and December 16, 2009. Additional IRM and site-wide remedial measures were performed between September 13 and October 20, 2010

A NYSDEC-approved project sign was erected at the project entrance and remained in place during all phases of the Remedial Action. A photograph of the sign is included in Appendix D.

4.2.3 General Site Controls

Site access was controlled during remedial operations by chain link fencing and locked gates. Remedial work was documented by both the contractor and the Engineer.

Erosion and sediment controls as dictated by the Site-specific SWPPP were provided prior to start and throughout the remedial operations. A copy of the SWPPP is provided in Appendix J.

Construction vehicles were cleaned of soil prior departing the site using high pressure hot water. Soil was direct loaded to transport trucks based on pre-characterization analytical results.

4.2.4 CAMP results

Real-time air monitoring was performed by the remedial contractor during remedial operations that involved movement and/or excavation of soil/fill material in accordance with the Community Air Monitoring Plan (Appendix 1A of the Health and Safety Plan found in the NYSDEC-Approved RI Work Plan (Malcolm Pirnie, July 2009).

Air particulate measurements were recorded at 1-minute intervals at both upwind and downwind locations of the work site. Due to the moisture content of the soil/fill and weather conditions before and during the remedial program, airborne dust was not observed during soil movement operations. Also, downwind particulate monitoring results confirm that particulate content of the downwind air never exceeded the action level of 150 mcg/m³ of particulates greater than that measured upwind. Copies of field data sheets relating to the CAMP are provided in Appendix F.

The photo log is included in Appendix D.

4.3 CONTAMINATED MATERIALS REMOVAL

A list of the soil cleanup objectives (SCOs) for the contaminants of concern for this project is provided in NYCRR Subpart 375.6.8 restricted industrial SCOs.

A figure of the location of original sources and areas where excavations were performed is shown in Figure 3.

4.3.1 Disposal Details

PCB Removal:

PCB-impacted soil/fill of various concentrations was removed from the 1122, 1132 and 1146 Seneca Street properties and properly disposed off-site. In 2009 72.0 tons of hazardous, PCB-impacted, soil/fill and concrete from the loading dock were taken to Chemical Waste Management in Model City, New York (CWM). Also in 2009, 274.64 tons of non-hazardous, PCB-impacted, soil/fill from the northern area (IRM-2) was transported off Site for disposal at the Tonawanda Landfill.

In 2010, 1432 tons of hazardous, PCB-impacted, soil/fill was brought to CWM. Also in 2010, 1302 tons of soil/fill with PCB concentrations below 50 PPM were brought to Modern Landfill in Model City, New York.

BAP Removal:

In 2010, 1641 tons of soil/fill with benzo(a)pyrene at concentrations above 1.1 PPM were removed from the upper 3+ inches from most of the 1146 Seneca Street property, see Figure 3. These soils were brought to the Tonawanda Landfill in the Town of Tonawanda, New York.

Petroleum-Impacted Soil/Fill and Concrete Removal :

After removal of the 15,000 gallon UST in 2010, petroleum-impacted soil/fill and concrete was excavated from the UST Site. Visual and air monitoring readings were used to determine the lateral termination points of excavation and bedrock refusal determined the vertical extent of the excavation. The volume of petroleum impacted soil/fill and concrete was not measured because it was co-mingled with the non-hazardous PCB-impacted soil/fill from other areas of the Site.

As summary of materials disposal is provided in Table 2.

Transport of above-discussed impacted materials was provided by multiple trucking firms, including:

- Fournier Trucking
- Price Trucking
- Lewiston Trucking
- Pariso Hauling

Appendix E provides documentation of transport and receipt of impacted materials removed from the site and disposed at the three DEC-permitted facilities. Letters of acceptance from the three disposal facility owners are included in Appendix E. The 15,000 gallon steel UST that was removed from the 1132 Seneca Street property was cleaned and removed by Flexo for recycling at Metalico, Inc. See Appendix E for documentation.

4.3.2 On-Site Reuse

A limited volume of concrete was re-used as clean backfill after receipt of analytical results indicating constituent levels below the restricted industrial SCOs. The concrete was from a surface cap above the UST. See Appendix G for analytical results of the composite concrete sample (SFM-2). The re-used concrete was placed into the UST excavation as backfill along with the clean crushed stone backfill.

4.4 REMEDIAL PERFORMANCE/DOCUMENTATION SAMPLING

Confirmatory sampling was performed at all PCB soil excavations. Sidewall and excavation bottom samples were collected and analyzed for PCBs. Where on-Site analytical results exceeded the restricted industrial SCO of 25 PPM, further excavation, removal, and subsequent sampling was performed until PCB concentrations below the SCO were reached. Remedial confirmation samples were also collected for PCB analysis along the western and northern Site perimeters where excavations ended at these perimeters, See Figure 5 and Table 1. Some of the perimeter sample results indicate the presence of PCBs at the Site boundaries at concentrations greater than the industrial SCOs, and in some cases above the hazardous waste concentration of 50 mg/kg. As presented in Section 8.3 of the Human Health Evaluation (HHE) contained in the

RIR/RWP, soil and groundwater samples collected from the 1070 Seneca Street property, located north of the Site, contain similar PCB contaminants as those found on the Site and at the northern Site boundary. Although off Site sampling is not required under the BCP, these boundary sample results indicate that similar, potential hazardous, concentrations of PCBs as that formerly present on the BCP Site may be present in the soil/fill on the 1070 Seneca Street property directly north of the BCP Site. If such PCB contamination is present in the upper soil/fill, similar potential human health risks may exist on this property as did on the BCP Site, prior to completion of the remedial program.

Additional investigation and sampling of the soil/fill on the 1070 Seneca Street property would be necessary to confirm if the level and extent of contamination is a concern and to determine the nature, extent, and potential risks of such contamination if confirmed present. Access to the 1070 Seneca Street property is essentially unrestricted to trespassers from multiple directions.

Per the NYSDEC-approved RIR/RWP, confirmatory samples were not collected from the soil/fill beneath the BAP removal area of the 1146 Seneca Street property. Sufficient pre-characterization surface and sub-surface sampling was performed as part of the RI to not require additional sampling. Samples were collected however from the northern and eastern perimeters of the BAP removal area to document the concentrations at the property boundaries. Figure 6 provides a map of the BAP excavation along with the locations and BAP concentrations of the nine composite samples collected from the northern and eastern excavation boundaries.

All but one of the perimeter samples contained BAP at a concentration above the industrial SCO of 1.1 mg/kg. BAP concentrations as high as 4.31 mg/kg were detected along the northern boundary of the 1146 Seneca Street property and as high as 4.16 mg/kg along the eastern property boundary which, in the area sampled, adjoins residential properties.

A table summarizing all end-point sampling is included in Table 1 and all exceedances of SCOs are highlighted. Data Usability Summary Reports (DUSRs) were prepared by a qualified third-party data validator (Environmental Quality Associates) for all data generated in this remedial performance evaluation program. Copies of all of the DUSRs are provided in Appendix H, raw data is provided in Appendix G.

4.5 IMPORTED BACKFILL

With the exception of the 3-inch depth of soil removed from the surface of the 1146 Seneca Street property, all IRM and other remedial excavations were backfilled with #2 run of crusher limestone from Buffalo Crushed Stone's Wherle Drive plant, Figure 3 illustrates the location and thickness of the clean stone backfilled areas.

4.6 CONTAMINATION REMAINING AT THE SITE

The remedial actions completed at the subject Site have fulfilled the requirements of the NYSDEC-Approved RWP. Site contaminants in the soil/fill at concentrations above the industrial SCO have been removed and properly disposed off-Site at permitted treatment, storage, and disposal facilities. Table 2 provides a summary of materials removed from the Site to fulfill the Site remedy as well as the volumes disposed and facilities at which the materials were disposed. Concentrations of PCBs and SVOCs remain on the site in soil/fill at concentrations below the industrial SCOs. Based on the findings of the RI and remedial confirmation samples, contamination is limited to the uppermost 2 to 3 feet upper soil/fill layer and is generally not in the underlying clay soil.

With the exception of those areas and thicknesses at which clean stone backfill has been placed, certain soil/fill handling requirements are to be followed when digging into the remaining upper soil/fill layer. These requirements are provided in detail in the Excavation Work Plan found in the Site Management Plan.

Since contaminated soil remains beneath the surface of the Site after completion of the Remedial Actions, Institutional Controls are required to protect human health and the environment. These Institutional Controls (ICs) are described in the following sections. Long-term management of these ICs and of the residual contamination will be performed under the Site Management Plan (SMP) approved by the NYSDEC.

4.7 INSTITUTIONAL CONTROLS

The site remedy requires that an environmental easement be placed on the property to (1) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and, (2) limit the use and development of the site to industrial uses only.

The environmental easement for the site was executed by the Department on September 30, 2010, and filed with the Erie County Clerk on October 14, 2010. The County Recording Identifier number for this filing is 2010186492. A copy of the easement and proof of filing is provided in Appendix B.

Table 1
Summary of Analytical Results
Remedial Confirmation Samples
1132-1146 Seneca Street Site
Buffalo, New York

Sample Number	Sample Date	Sample Depth Feet below grade	Total PCB Results	BAP Results	STARS VOC Results	STARS SVOC Results
Analytical Results (mg/Kg)						
SWA-1W	10/1/2010	0 - 0.5	29.8	---	---	---
SWA-1S	10/1/2010	0 - 0.5	30.9	---	---	---
SWA-2S	10/11/2010	0 - 0.5			---	---
SWA-1N	10/1/2010	0 - 0.5	42.7	---	---	---
BA-1E	10/1/2010	0.5	1.21	---	---	---
BA-1W	10/1/2010	0.5	1.66	---	---	---
SWB-1N	9/21/2010	0 - 0.5	33.2	---	---	---
BB-1E	9/23/2010	0.5	167	---	---	---
BB-2E	10/6/2010	1	0.38	---	---	---
BB-1W	9/23/2010	0.5	0.24	---	---	---
SWC-1N	9/22/2010	0 - 2.0	3.53	---	---	---
SWC-1E	9/22/2010	0 - 2.0	3.48	---	---	---
SWC-1W	9/22/2010	0 - 2.0		---	---	---
BC-1W	9/22/2010	2		---	---	---
BC-1E	9/22/2010	2		---	---	---
SWD-1N	9/21/2010	0 - 0.5	332	---	---	---
SWD-1E	9/21/2010	0 - 0.5	329	---	---	---
BD-1E	9/23/2010	0.5	261	---	---	---
BD-2E	10/6/2010	1		---	---	---
Dupl 1	10/6/2010	1		---	---	---
BD-1W	9/23/2010	0.5	813	---	---	---
BD-2W	10/6/2010	1		---	---	---
SWD ₁ -1N	10/6/2010	0 - 0.5	218	---	---	---
BD ₁ -1	10/6/2010	0.5		---	---	---
SWF-1N	9/20/2010	0 - 2.0	0.90	---	---	---
SWF-1W	9/20/2010	0 - 0.2		---	---	---
BF-1W	9/20/2010	2		---	---	---
BF-1E	9/20/2010	2		---	---	---
SWG-1S	9/22/2010	0 - 2.0		---	---	---
SWG-1E	9/22/2010	0 - 2.0	12.3	---	---	---
BG-1E	9/21/2010	2		---	---	---
BG-1W	9/21/2010	2		---	---	---
SWH-1E	9/21/2010	0 - 0.5	225	---	---	---
BH-1E	9/23/2010	0.5	478	---	---	---
BH-2E	10/6/2010	1		---	---	---
BH-1W	9/23/2010	0.5	5.87	---	---	---
SWI-1N	10/1/2010	0 - 0.5	59.4	---	---	---
SWI-2N	10/11/2010	0 - 0.5	10.2	---	---	---
SWI-1S	10/1/2010	0 - 0.5	21.8	---	---	---
SWI-1W	10/1/2010	0 - 0.5	12.1	---	---	---
BI-1E	10/1/2010	0.5	82.9	---	---	---
BI-2E	10/11/2010	1	29.1	---	---	---

Table 1
Summary of Analytical Results
Remedial Confirmation Samples
1132-1146 Seneca Street Site
Buffalo, New York

Sample Number	Sample Date	Sample Depth Feet below grade	Total PCB Results	BAP Results	STARS VOC Results	STARS SVOC Results
BI-3E	10/15/2010	1.5		---	---	---
BI-1W	10/1/2010	0.5	31.3		---	---
BI-2W	10/11/2010	1	17.4	---	---	---
SWK-1W	9/23/2010	0 - 2.0	19.9	---	---	---
SWK-1N	9/23/2010	0 - 2.0	1.79	---	---	---
SWK-1E	9/23/2010	0 - 2.0	10.6	---	---	---
BK-1W	9/23/2010	2		---	---	---
BK-1E	9/23/2010	2		---	---	---
SWL-1E	9/23/2010	0 - 2.0	541	---	---	---
SWL-1S	9/23/2010	0 - 2.0	988	---	---	---
SWL-2S	10/6/2010	0 - 2.0	1550	---	---	---
SWL-3S	10/11/2010	0 - 2.0		---	---	---
BL-1E	9/23/2010	2	6.53	---	---	---
BL-1W	9/23/2010	2	0.19	---	---	---
BL ₁ -1	10/6/2010	0.5		---	---	---
L ₁ - L	3/18/2010	0.5 - 1.5		---	---	---
SWO-1N	10/11/2010	0 - 2.0		---	---	---
SWO-1E	10/11/2010	0 - 2.0		---	---	---
BO-1E	10/11/2010	2		---	---	---
BO-1W	10/11/2010	2		---	---	---
SWP-1S	10/11/2010	0 - 0.5	0.99	---	---	---
SWP-1E	10/11/2010	0 - 0.5		---	---	---
BP-1E	10/11/2010	0.5		---	---	---
BP-1W	10/11/2010	0.5		---	---	---
LD-NORTH	10/28/2009	2.5	0.54	---	---	---
LD-EAST-N	10/28/2009	2.5	360	---	---	---
LD-EAST-N1	5/24/2010	2.5	460	---	---	---
LD-EAST-N2	5/24/2010	2.5	380	---	---	---
LDE-1N	9/22/2010	2.5 - 3.0	1.42	---	---	---
LD-EAST-S	10/28/2009	2.5	5.80	---	---	---
LD-EAST-S1	5/24/2010	2.5	147	---	---	---
LD-EAST-S2	5/24/2010	2.5	19.0	---	---	---
LDE-1S	9/22/2010	2.5 - 3.0	9.14	---	---	---
LD-SOUTH	12/16/2009	0.5	17.4	---	---	---
LD-WEST	12/16/2009	0.5	15.0	---	---	---
LD-BTM(NO)	10/28/2009	3.0	0.02	---	---	---
LD-BTM(SO)	10/28/2009	3.0		---	---	---
IRM2-NORTH	10/29/2009	2.5	1.81	---	---	---
IRM2-EAST	10/29/2009	2.5	0.95	---	---	---
IRM2-SOUTH	10/29/2009	2.5	0.53	---	---	---
IRM2-WEST	10/29/2009	2.5	0.27	---	---	---
IRM2-BTM	10/29/2009	3.0	0.01	---	---	---
BAP-1N	10/1/2010	0 - 0.3	---	1.47	---	---
BAP-2N	10/1/2010	0 - 0.3	---	4.31	---	---

Table 1
Summary of Analytical Results
Remedial Confirmation Samples
1132-1146 Seneca Street Site
Buffalo, New York

Sample Number	Sample Date	Sample Depth Feet below grade	Total PCB Results	BAP Results	STARS VOC Results	STARS SVOC Results
BAP-3N	10/6/2010	0 - 0.3	---	2.02	---	---
BAP-4N	10/6/2010	0 - 0.3	---	2.64	---	---
BAP-1E	10/8/2010	0 - 0.3	---	1.27	---	---
BAP-2E	10/8/2010	0 - 0.3	---	2.16	---	---
BAP-3E	10/8/2010	0 - 0.3	---	1.35	---	---
BAP-4E	10/8/2010	0 - 0.3	---	0.76	---	---
BAP-5E	10/8/2010	0 - 0.3	---	4.16	---	---
UST-SWWN	10/11/2010	2.0 - 10.0	---	---		
UST-SWWS	10/11/2010	2.0 - 10.0	---	---		
UST-SWS	10/11/2010	2.0 - 10.0	---	---		
UST-SWN	10/11/2010	2.0 - 10.0	---	---		
UST-SWEN	10/11/2010	2.0 - 10.0	---	---		
UST-SWES	10/11/2010	2.0 - 10.0	---	---		

Notes:

PCB = polychlorinated biphenyl

BAP = benzo(a)pyrene

VOC = volatile organic compound

SVOC = semi-volatile organic compound

STARS = spills technology and remediation series

SWA-1E = indicative of composite sidewall sample collected from east wall in grid A

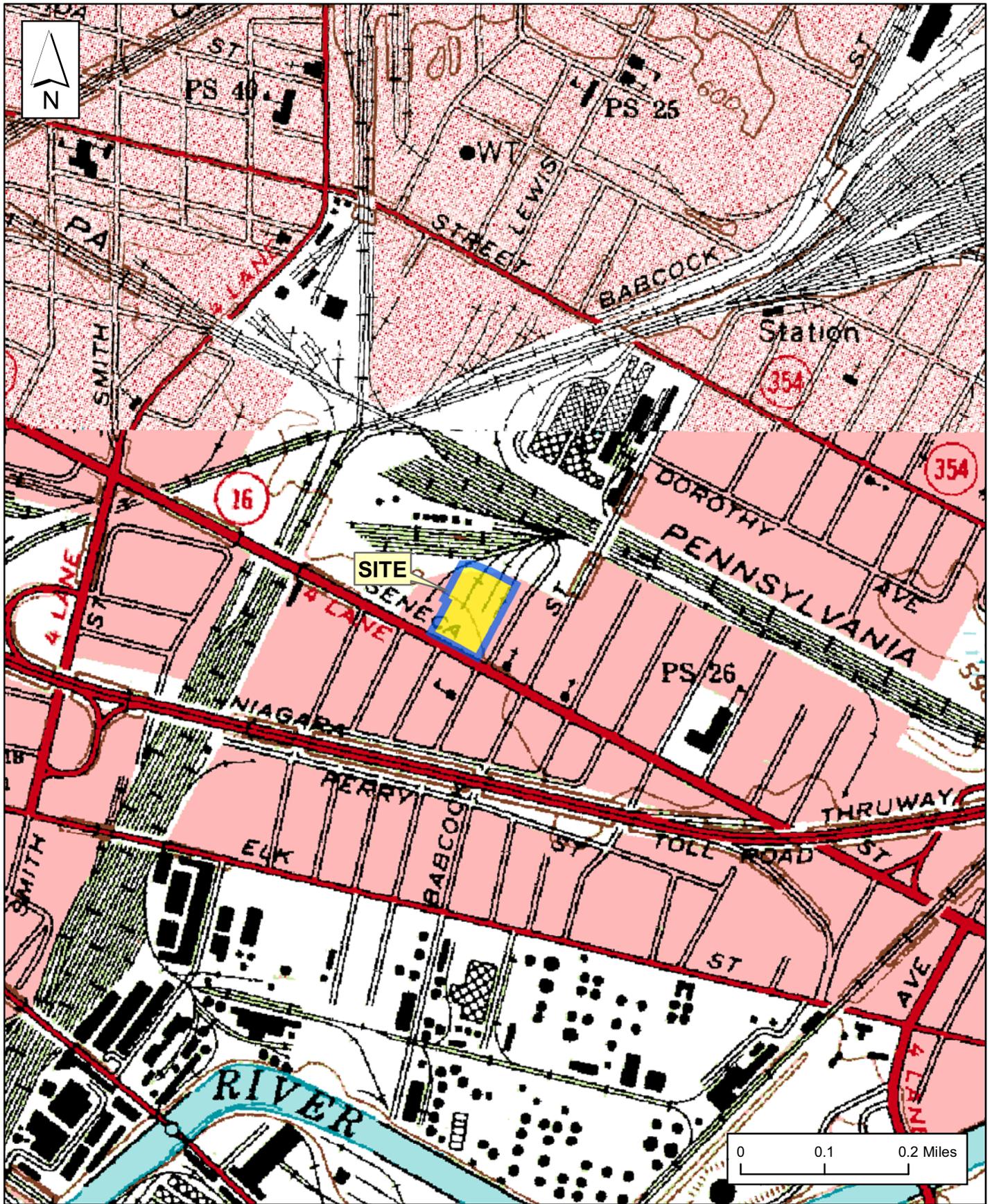
BA-1E = indicative of composite bottom sample collected from eastern half of grid A

 = Analytical result exceed SCO of 25 mg/Kg PCB or 1.1 mg/Kg BAP

SCO exceedances are all either located at the Site boundary or have been removed based on subsequent adjacent sample results.

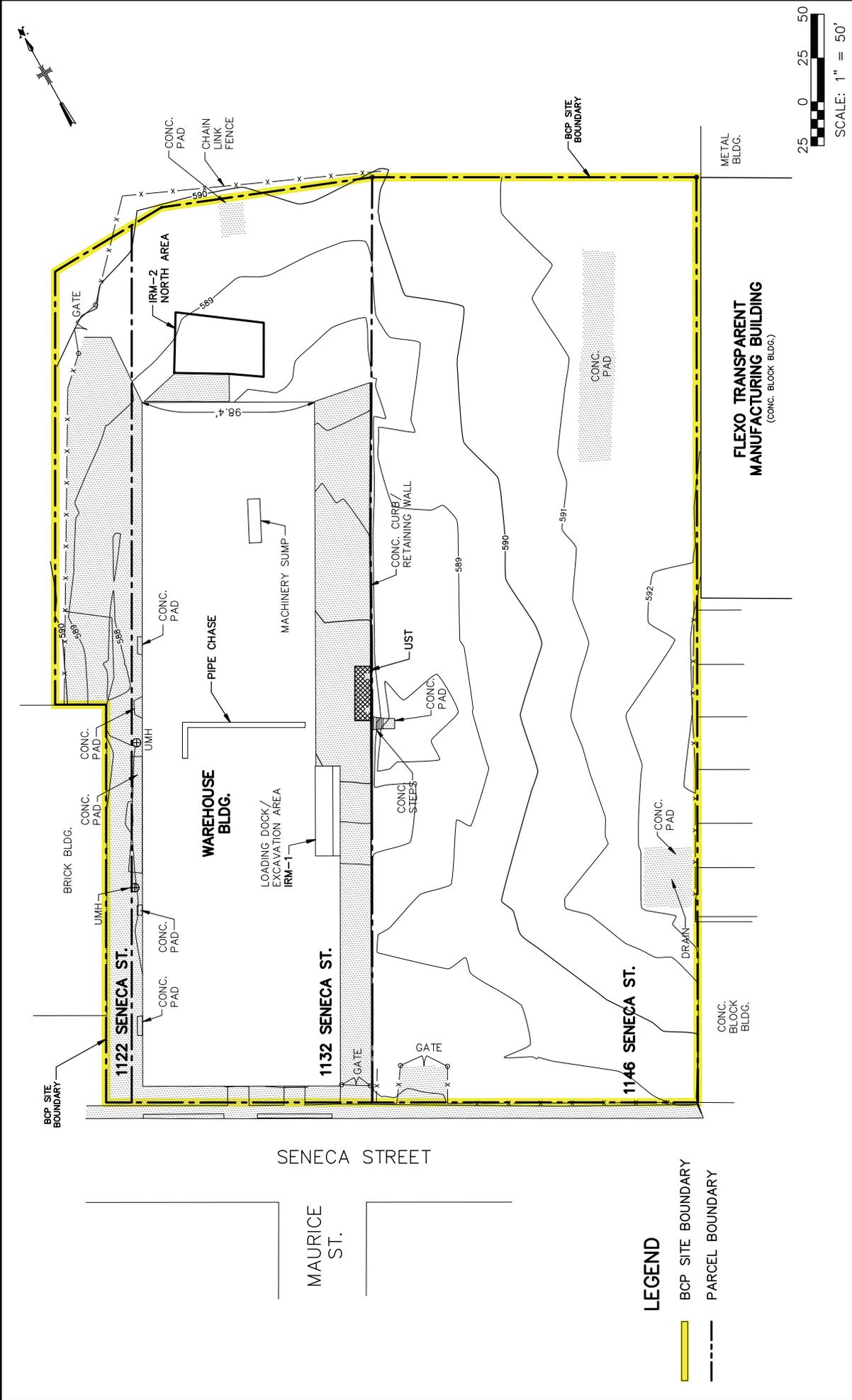
--- = indicative of sample not analyzed

 = Blank cells indicate non detect result

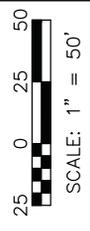


BCP SITE LOCATION MAP
 1132-1146 SENECA STREET, BUFFALO, NY

FIGURE 1



- LEGEND**
- BCP SITE BOUNDARY
 - PARCEL BOUNDARY



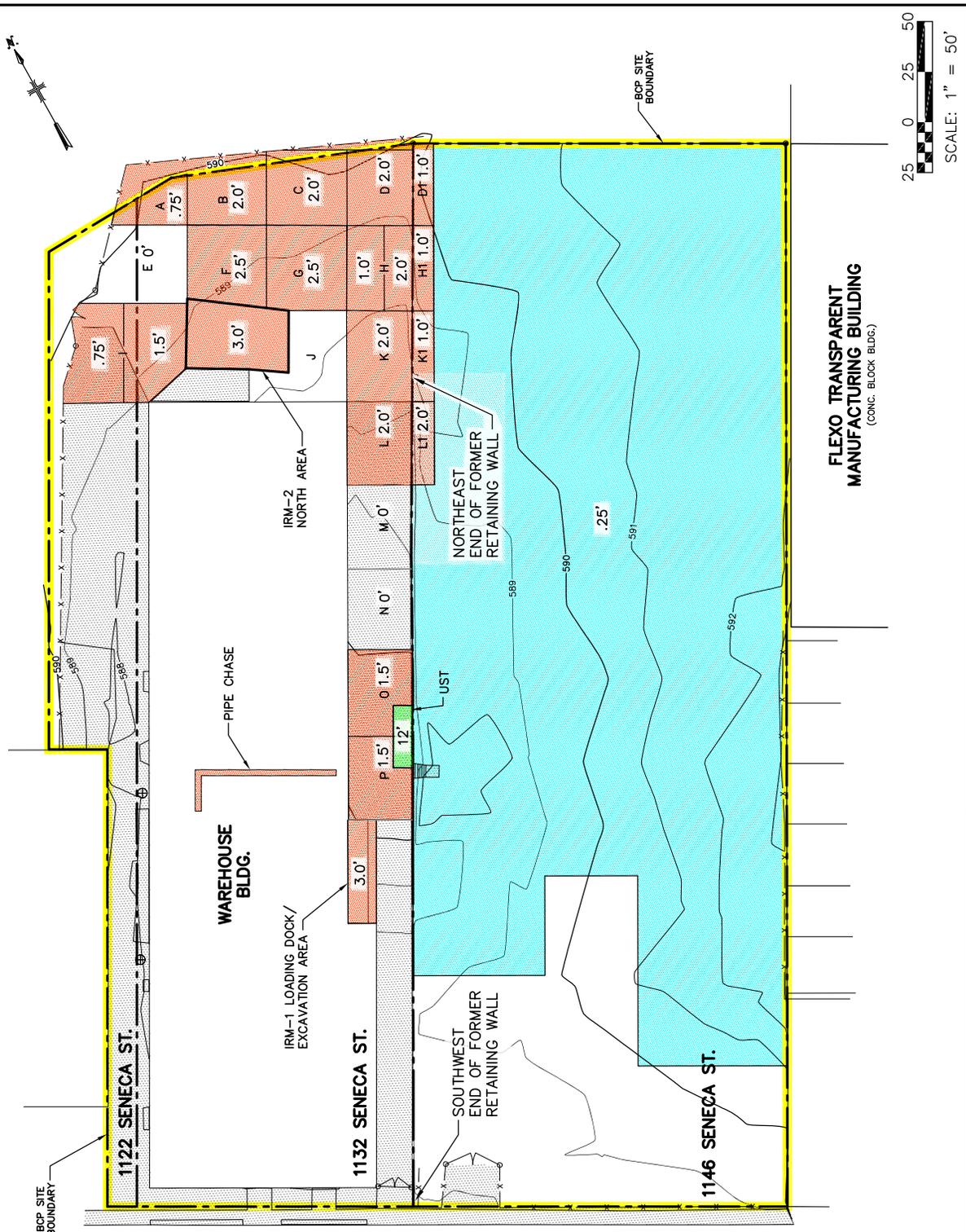
MALCOLM PIRNIE

FLEXO TRANSPARENT, INC.
 BUFFALO, NEW YORK

FINAL ENGINEERING REPORT
 1132-1146 SENECA STREET BCP REDEVELOPMENT

SITE BASE MAP
 SCALE: 1"=50'

MALCOLM PIRNIE, INC.
 NOVEMBER 2010
 FIGURE 2



SENECA STREET

MAURICE ST.

LEGEND

- BCP SITE BOUNDARY
- PARCEL BOUNDARY
- PCB IMPACTED SOIL AREA W/ DEPTH OF EXCAVATION
- BAP IMPACTED SOIL AREA W/ DEPTH OF EXCAVATION
- UST AREA

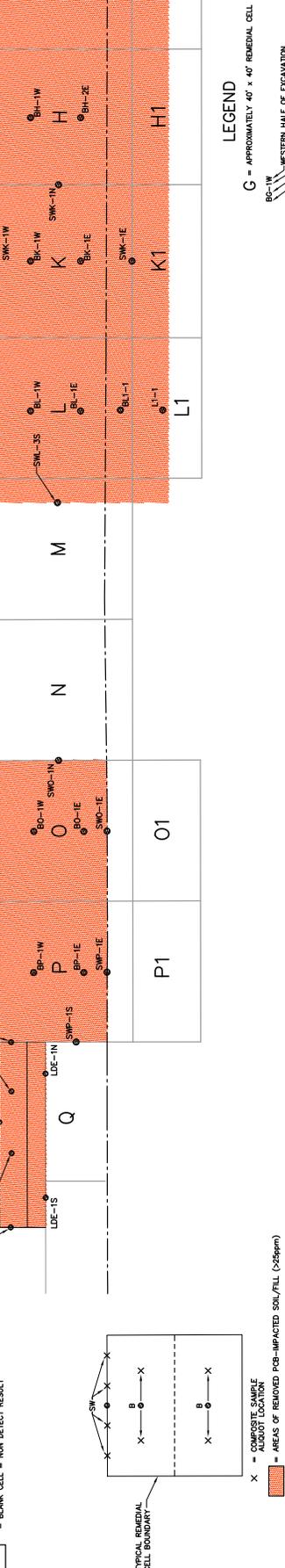
NOTES:

1. PCB IMPACTED SOIL AREAS BACKFILLED WITH CRUSHED STONE.
2. UST EXCAVATION BACKFILLED WITH CRUSHED STONE AND CLEAN CRUSHED CONCRETE.

PCB REMEDIATION CONFIRMATORY SAMPLE RESULTS

SAMPLE IDENTIFICATION	SAMPLE DEPTH FEET BELOW GROUND	TOTAL PCB RESULT (MG/KG)	SAMPLE IDENTIFICATION	SAMPLE DEPTH FEET BELOW GROUND	TOTAL PCB RESULT (MG/KG)
SWA-25	0 - 2.00	19.94	SWK-1W	0 - 2.00	0.50
BA-1E	0.50	1.21	SWK-1N	0 - 2.00	1.79
BA-1W	0.50	1.66	BC-1W	0 - 2.00	10.61
BB-1W	0.50	0.29	BC-1E	2.00	0.50
SWK-1W	0 - 2.00	3.46	SWK-3S	0 - 2.00	6.53
BC-1W	0 - 2.00	2.00	BL-1E	2.00	0.19
BC-1E	2.00	0.19	BL-1W	2.00	0.19
BB-2E	1.00	0.00	BL-1E MSJ	2.00	0.00
BB-2W	1.00	0.00	BL-1W	0.50	1.50
BB-1E	0.50	0.00	BL-1N	0.50 - 1.50	0.00
SWK-1N	0 - 2.00	0.8	SWK-1N	0 - 2.00	0.00
SWK-1W	0 - 2.00	0.00	SWK-1E	0 - 2.00	0.00
BF-1E	2.00	0.00	BO-1W	2.00	0.00
SWK-1S	0 - 2.00	12.26	SWP-1S	0 - 0.50	0.99
BB-1E	0.50	0.00	SWP-1E	0 - 0.50	0.00
BB-1W	0.50	0.00	BP-1E	0.50	0.00
BB-2E	1.00	0.00	LD-SOUTH	0.50	0.62
BB-2W	1.00	0.00	LD-SOUTH	0.50	17.40
SWK-1W	0 - 2.00	5.87	LD-SOUTH	0.50	0.00
SWK-1N	0 - 2.00	15.00	LD-SOUTH	0.50	0.02
SWK-1E	0 - 2.00	21.83	LD-SOUTH	0.50	0.00
SWK-1S	0 - 2.00	14.12	LD-SOUTH	2.5 - 3.0	1.42
BB-1E	0.50	1.50	LD-E-N	2.5 - 3.0	9.14
BB-1W	0.50	1.50			
RMZ-NORTH	2.50	1.80			
RMZ-EAST	2.50	1.00			
RMZ-WEST	2.50	0.27			
RMZ-BTM	3.00	0.01			

SWA-1E - INDICATIVE OF COMPOSITE BOTTOM SAMPLE COLLECTED FROM EAST WALL IN GRID A
 BA-1E - INDICATIVE OF COMPOSITE BOTTOM SAMPLE COLLECTED FROM EASTERN HALF OF GRID A
 SWK-1E - NON DETECT RESULT
 - BLANK CELL = NON DETECT RESULT



LEGEND

- G = APPROXIMATELY 40' x 40' REMEDIAL CELL
- BP-1W WESTERN HALF OF EXCAVATION CELL 1
- BP-1E EASTERN HALF OF EXCAVATION CELL 1
- BP-2W WESTERN HALF OF EXCAVATION CELL 2
- BP-2E EASTERN HALF OF EXCAVATION CELL 2
- SW-1W NORTH WALL OF EXCAVATION CELL 1
- SW-1E NORTH WALL OF EXCAVATION CELL 1
- SW-2W NORTH WALL OF EXCAVATION CELL 2
- SW-2E NORTH WALL OF EXCAVATION CELL 2
- SW-1W EXCAVATION SIDE WALL SAMPLE
- SW-1E EXCAVATION SIDE WALL SAMPLE
- SW-2W EXCAVATION SIDE WALL SAMPLE
- SW-2E EXCAVATION SIDE WALL SAMPLE

ANALYTICAL RESULTS (MG/KG)

SAMPLE IDENTIFICATION	SAMPLE DEPTH FEET BELOW GROUND	TOTAL PCB RESULT (MG/KG)
SWA-25	0 - 2.00	19.94
BA-1E	0.50	1.21
BA-1W	0.50	1.66
BB-1W	0.50	0.29
SWK-1W	0 - 2.00	3.46
BC-1W	0 - 2.00	2.00
BC-1E	2.00	0.19
BB-2E	1.00	0.00
BB-2W	1.00	0.00
BB-1E	0.50	0.00
SWK-1N	0 - 2.00	0.8
SWK-1W	0 - 2.00	0.00
BF-1E	2.00	0.00
SWK-1S	0 - 2.00	12.26
BB-1E	0.50	0.00
BB-1W	0.50	0.00
BB-2E	1.00	0.00
BB-2W	1.00	0.00
SWK-1W	0 - 2.00	5.87
SWK-1N	0 - 2.00	15.00
SWK-1E	0 - 2.00	21.83
SWK-1S	0 - 2.00	14.12
BB-1E	0.50	1.50
BB-1W	0.50	1.50
RMZ-NORTH	2.50	1.80
RMZ-EAST	2.50	1.00
RMZ-WEST	2.50	0.27
RMZ-BTM	3.00	0.01

REVISIONS

NO.	BY	DATE	DESCRIPTION

NOTES:

- EXCAVATION SIDEWALL (SW) SAMPLES WERE 3-POINT COMPOSITES.
- EXCAVATION BOTTOM (B) SAMPLES WERE 2-POINT COMPOSITES.

SAMPLE COMPOSITE SCHEME
NOT TO SCALE

REVISIONS

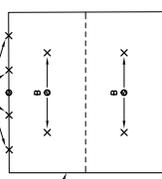
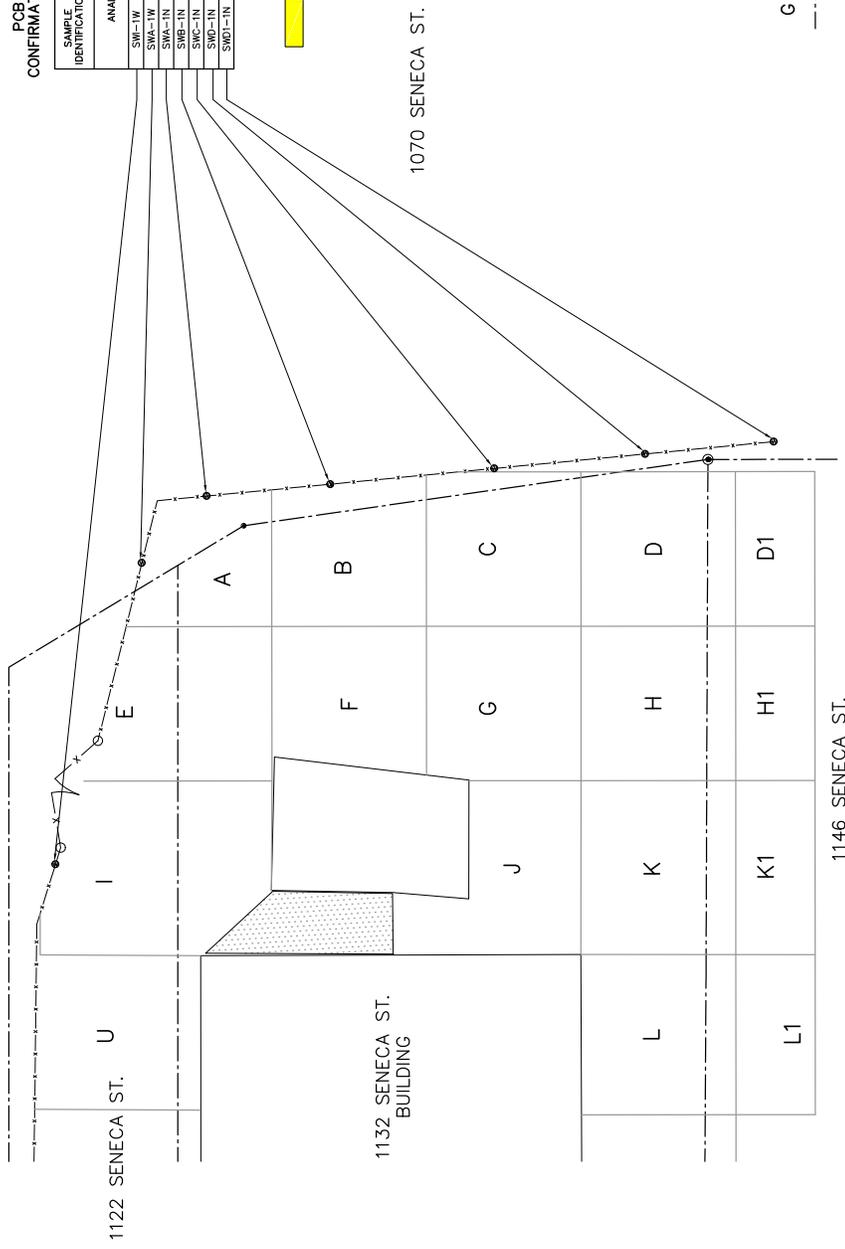
NO.	BY	DATE	DESCRIPTION



**PCB SITE BOUNDARY
CONFIRMATORY SAMPLE RESULTS**

SAMPLE IDENTIFICATION	SAMPLE DEPTH (FEET) BELOW GRADE	TOTAL PCB RESULT
SW-TW	0 - 0.50	12.12
SWA-TW	0 - 0.50	29.81
SWB-TW	0 - 0.50	42.70
SWC-TW	0 - 2.00	33.18
SWD-TW	0 - 0.50	332.00
SWD1-TW	0 - 0.50	218.00

= TOTAL PCB'S GREATER THAN THE SITE CLEANUP OBJECTIVE OF 25ppm.



X = COMPOSITE SAMPLE ALIQUOT LOCATION

SAMPLE COMPOSITE SCHEME
NOT TO SCALE

- NOTES:
 1. EXCAVATION SIDEWALL (SW) SAMPLES WERE 3-POINT COMPOSITES.
 2. EXCAVATION BOTTOM (B) SAMPLES WERE 2-POINT COMPOSITES.

NO.	BY	DATE	REVISIONS

DES	DWN	CRD



FLECO TRANSPARENT INC.
 BUFFALO, NEW YORK
FINAL ENGINEERING REPORT
 1132-1146 SENECA STREET BCP REDEVELOPMENT

**PCB SITE BOUNDARY CONFIRMATORY
SAMPLE LOCATIONS AND RESULTS**

FIGURE 5
 NOT TO SCALE

COPYRIGHT © 2010
 MALCOLM PIRNIE, INC.
 DATE: DECEMBER, 2010
 SHEET: G OF
 CAD REF. NO. 6105E027.DWG

