Flexo Transparent, Inc.
28 Wasson Street • Buffalo, New York 14140

REMEDIAL INVESTIGATION REPORT/ REMEDIAL WORK PLAN

1132 – 1146 Seneca Street Site
Buffalo, New York 14240
(BCP Site C915228)

JULY 2010

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6105002

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1. Introduction

Flexo-Transparent, Inc. (Flexo) voluntarily entered into a Brownfield Cleanup Agreement with the New York State Department of Environmental Conservation (NYSDEC) under the Department's voluntary Brownfield Cleanup Program (BCP). The agreement was signed on December 8, 2008 and includes a requirement that a remedial investigation (RI) be completed of the entire BCP site. The BCP site comprises three adjacent properties located at 1122, 1132 and 1146 Seneca Street, Buffalo, New York (The Site). See Figure 1-1. All three parcels have been characterized under this RI and data from all three parcels reported herein. Under the BCP, Flexo is redeveloping the Site for expansion of their current business which involves the manufacture of plastic wraps and bags for food and other product packaging. The Site properties include a former electrical transformer manufacturing facility on the west (1122 and 1132 Seneca Street) and former brick and lumber manufacturing facilities (now vacant land) on the east (1146 Seneca Street). The three-parcel Site totals approximately 4.2 acres. Flexo plans to redevelop the Site for light industrial, warehouse, office, and related parking uses.

This Remedial Investigation/Remedial Work Plan (RI/RWP) was prepared by Malcolm Pirnie, Inc. (Malcolm Pirnie) for Flexo and includes the following:

- Site history
- Description of physical Site features and hydrogeologic conditions
- Summary of previous environmental investigations and remediation
- Interim remedial measures completed
- Remedial investigation methods and results
- Data usability
- Site contaminant characterization
- Discussion of potential human health risk
- Conclusions and recommendations
- Site Redevelopment Plan
- Remedial Goals and Objectives
- Remedial Alternatives
- Alternative Analysis

1.1. Site History

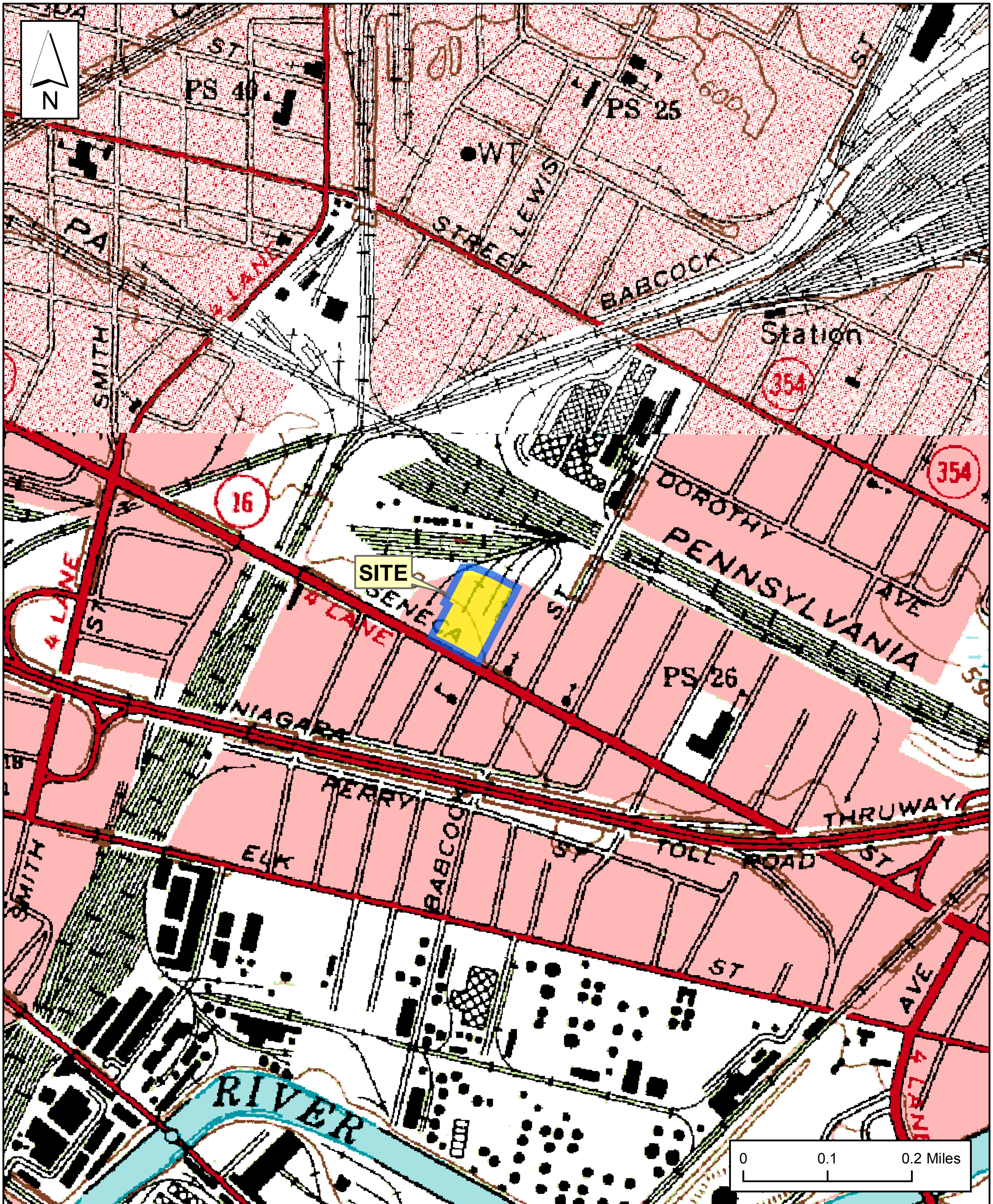
1122 and 1132 Seneca Street

According to Erie County GIS data, April 2008, 1122 and 1132 Seneca Street are lot numbers 123.29-1-12 123.29-1-11 respectively. The combined property is approximately 2.02 acres in size and is zoned for "Manufacturing and Processing". The property improvements include a former manufacturing building that once housed office, warehouse, and manufacturing areas. The building foot print is approximately 41,000 square feet and occupies the majority of the property. The construction date of the Site building is estimated to be 1920.

Site operations on the 1122/1132 property included lumber and railroad yards, manufacture of electrical transformers and machines (Westinghouse and Eastern Electric), and most recently, the manufacture of fiberglass railroad transfer platforms (Fibreright). The northern and western portions of the Site are enclosed within a chain link fence. A chain link fence that once separated the 1132 and 1146 properties was removed by Flexo soon after Flexo took ownership of these properties. Paved access roads that lead to an unpaved dirt/gravel area on the north side of the building are located along the western and eastern property boundaries. The northern area is vacant and covered with crushed stone and grass. This area once contained fiberglass platforms, a dumpster, and plastic and metal refuse when owned by Fibreright. A rail spur enters the manufacturing building from the north and ends at a loading platform within the eastern side of the building. The southern boundary of the Site is Seneca Street, where two large garage doors provide access to the manufacturing building.

1146 Seneca Street,

The eastern property, located at 1146 Seneca Street, consists of one parcel identified by Erie County's GIS website as Parcel 83422 and lot number 123.29-1-10. The property which is approximately 2 acres in size is zoned "Vacant Industrial" and, when purchased by Flexo, contained overgrown shrubs and tall grass. Two concrete slab foundations, one measuring approximately 125 feet N/S and 20 feet E/W and the other measuring 40 N/S and 35 E/W are located on the property, see Figure 1-2. Information obtained during a Phase I Environmental Site Assessment file review indicated that a bioremediation pad was formerly located on the 1146 Seneca Street property and was used for remediation of petroleum impacted soils excavated from an adjacent property (1070 Seneca Street) to the north. The larger 125'x20' pad may be the pad referred to in the Phase I ESA. The smaller pad shows evidence that it may be the former foundation of a two bay auto repair garage. A floor sump was located in the depressed center of the foundation and concrete ramping is present on the western edge of the foundation as would be used at the vehicle entrance of a garage.



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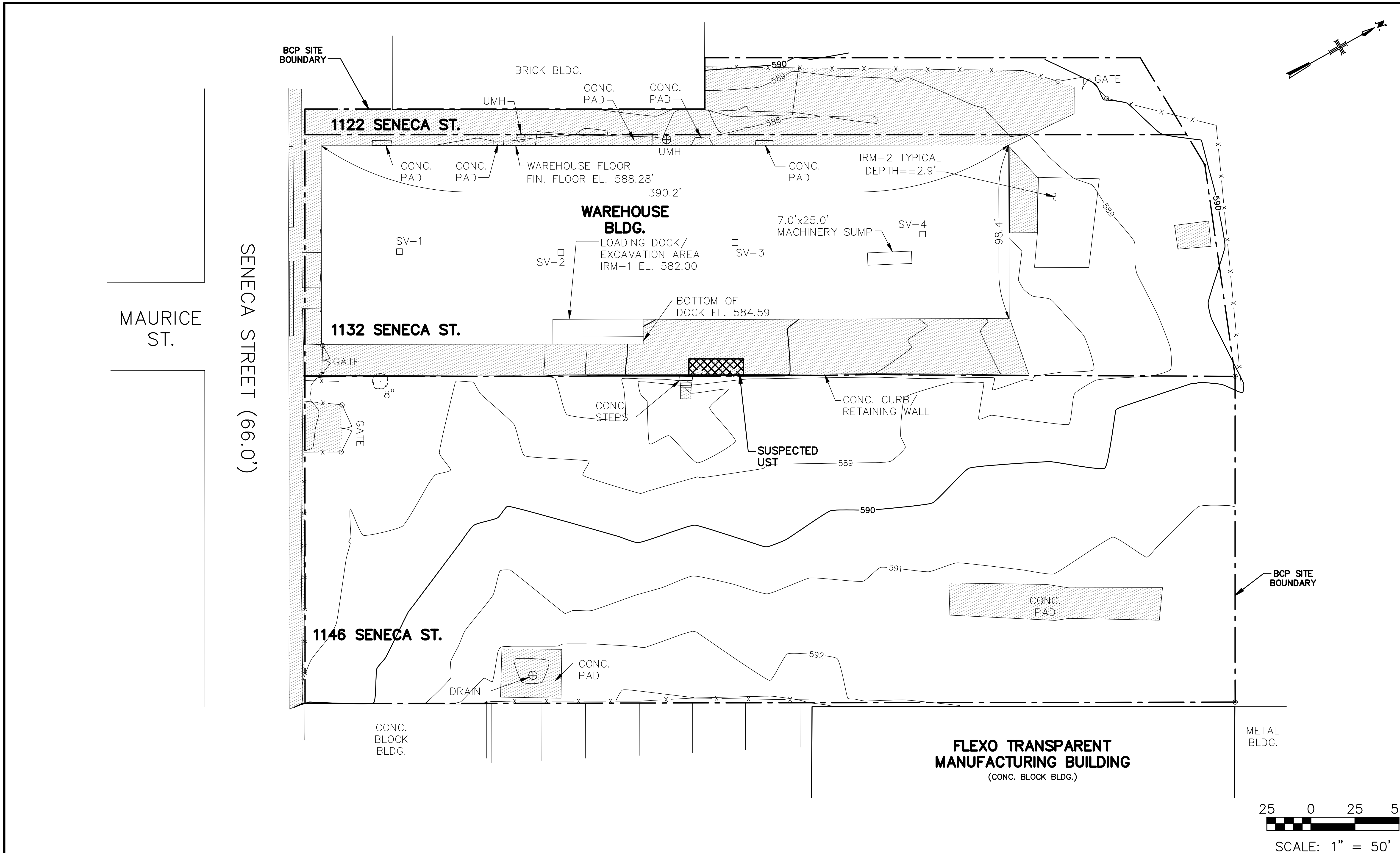
BCP SITE LOCATION MAP
1132-1146 SENECA STREET, BUFFALO, NY

FIGURE 1-1



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SITE BASE MAP

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FIGURE 1–2

Historic operations on the 1146 property include lumber and railroad yards, clay/brick products manufacturing, and a gasoline filling station. A portion of the property may also have been used by Westinghouse and Eastern Electric for manufacture of transformers and machines. Existing conditions at the Site include a surrounding chain link fence and a locked access gate located along the southern boundary. Abandoned playground equipment associated with the Seneca-Babcock Community Center was located but since removed from the southeastern portion of the property adjacent to the smaller (40’x35’)foundation remnants, potentially of a former gas filling station or two-bay auto service garage. Flexo’s manufacturing building is located adjacent to the northeastern portion of the 1146 Seneca Street property.

2. Physical Setting

This Section contains a description of the physical setting based upon information provided in regional and site-specific reports, USGS Topographic Maps, visual observations, and information obtained from the remedial investigation which included drilling 88 soil borings, excavation of 19 test pits, a topographic survey, and measurement of groundwater elevation at five well locations.

2.1. Topography and Surface Waters

The Site is located in an area of generally flat terrain with a topographic gradient sloping slightly from east to west. A Site low point is located near the center of the Site where a former rail loading dock is located.

Site elevations were measured by a licensed survey subcontractor (Wendell Duchscherer) to Malcolm Pirnie during the RI. Site elevations range from approximately 584' to 592' above mean sea level. The 1122/1132 parcels are mostly flat and covered by the former manufacturing building. The 1146 parcel slopes from east to west from elevations of 592 to 589 at a slope of approximately 0.016 feet per foot.

According to the EDR report, provided in the Phase I ESA report, the Site is located outside 100-year and 500-year flood zones. EDR did identify wetland areas located approximately one-half mile to the south of the Site and others east and south of the Site within one mile. No wetlands were observed on Site and none were listed as present on Site according to the National Wetland Inventory.

No surface water bodies were identified on the Site. The Buffalo River is located approximately one-half mile south of the Site.

2.2. Geology

Overburden

The Erie County Soil Survey (USDA) identifies the Site as being Urban Land, containing undifferentiated and disturbed soil/ fill.

Over one hundred boreholes and test pits have been drilled/excavated on the 1122/1132 property and 34 on the 1146 property as part of multiple environmental site characterizations since 2001.

Based on observations of the overburden materials encountered at each of these soil boring and test pit locations, the overburden is described as glaciolacustrine silty sand and clay deposits overlain with soil/fill deposits described as follows:

Soil/Fill

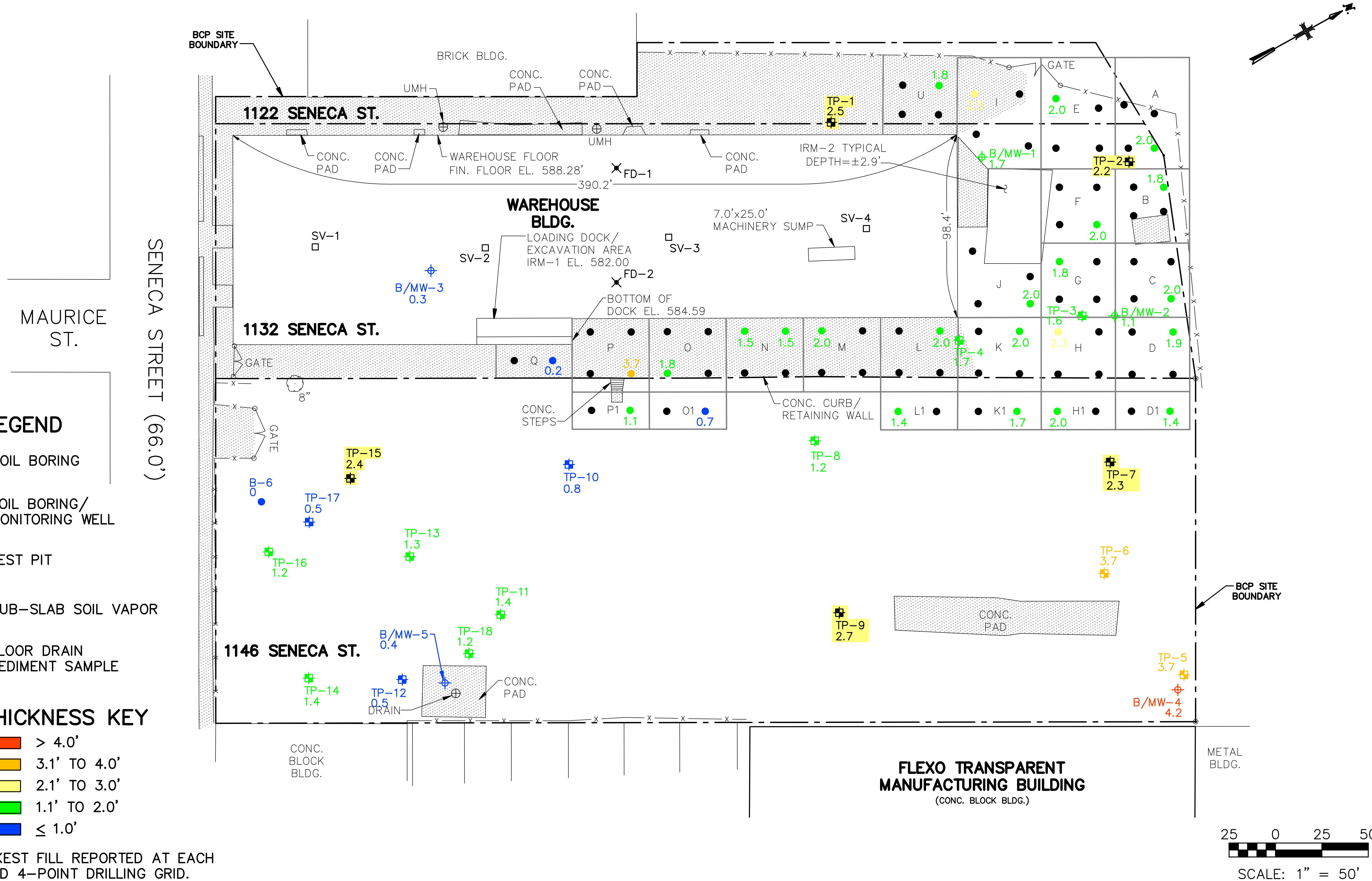
The soil/fill was present at every location drilled on the Site, even where concrete pavement was present. Therefore the soil/fill layer is believed to be continuous across the Site. The soil/fill was generally described as black-gray, fine to coarse grain sand with silt and trace clay admixed with Construction and Demolition (C&D) debris comprised of wood, concrete, brick and gravel. The measured fill thickness beneath the warehouse building ranged from 0.3 feet at RI boring B/MW-3 to 1.3 feet at Pirnie Phase II boring B-10. The maximum thickness of fill encountered located on the west side of the 1132 building in a former underground storage tank (UST) area that had been removed and backfilled. The fill thickness here is 11.0 feet as measured at Evergreen Phase II borehole PH-1. Outside of the former UST backfill area, the thickness of soil/fill encountered across the Site ranged between 0 at only one boring (RI boring B-6) and 4.2 feet at RI Boring B/MW-4. In general, fill thicknesses were typically between 1.0 and 2.0 feet. Thickest fill was found at the northeastern corner of the Site and thinnest fill at the southern end of the Site. Figure 2-1 provides a map illustration of soil/fill thicknesses encountered.

Native Silt and Clay

Beneath the soil/fill layer, native glacial deposits of silt/sand and clay are present throughout the Site. Thin lenticular silt/sand deposits were encountered directly below the soil/fill layer at some drilling/excavation locations. These are described as gray-brown/black sand and silt with clay and fine gravel. A stiff, dense, red to light-brown, clay unit was encountered below the thin sand/silt lenses and is generally correlative across the Site. The clay unit is characterized as having weak to moderate plasticity and containing trace amounts of silt and fine sand that are typical of local glacio-lacustrine deposits. The native clay layer is relatively thick (up to 9.9 feet) and was present at all boring locations drilled on Site. This native clay layer has been demonstrated to restrict downward migration of groundwater and contaminants in the soil/fill layer from migrating the underlying soils and bedrock. For this reason, the focus of this and previous environmental investigations of the Site have focused primarily on the upper soil/fill layer and uppermost native soils and not the deeper clay and bedrock.

Bedrock

Two of the soil borings drilled as part of the RI (B-5 and B-6) were drilled deeper than other borings to test the overburden stratigraphy and depth to bedrock. Both borings



LEGEND

B-6	SOIL BORING
B/MW-5	SOIL BORING/ MONITORING WELL
TP-17	TEST PIT
SV-1	SUB-SLAB SOIL VAPOR
FD-2	FLOOR DRAIN SEDIMENT SAMPLE

FILL THICKNESS KEY

- > 4.0'
- 3.1' TO 4.0'
- 2.1' TO 3.0'
- 1.1' TO 2.0'
- ≤ 1.0'

NOTE: THICKEST FILL REPORTED AT EACH 2 AND 4-POINT DRILLING GRID.

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THICKNESS OF SOIL / FILL LAYER

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FIGURE 2-1

were located on the 1146 Seneca Street property and encountered bedrock at 9.8 feet and 9.9 feet respectively.

The bedrock beneath the Site is reportedly the Moorehouse Member of the Middle Devonian age Onondaga Limestone (Tesmer 1963). The Moorehouse is described as course to very finely crystalline limestone, dark gray to tan in color, with chert present.

The bedrock in this area is reportedly nearly horizontally bedded with a very slight southward dip. Differential erosion caused by glaciers often results in a bedrock surface that is dissimilar to the bedrock bedding direction and angle.

Figure 2-2 provides geologic cross sections of the Site. Locations of the cross-section lines are illustrated on the sample location map, Figure 5-1.

2.3. Hydrogeology

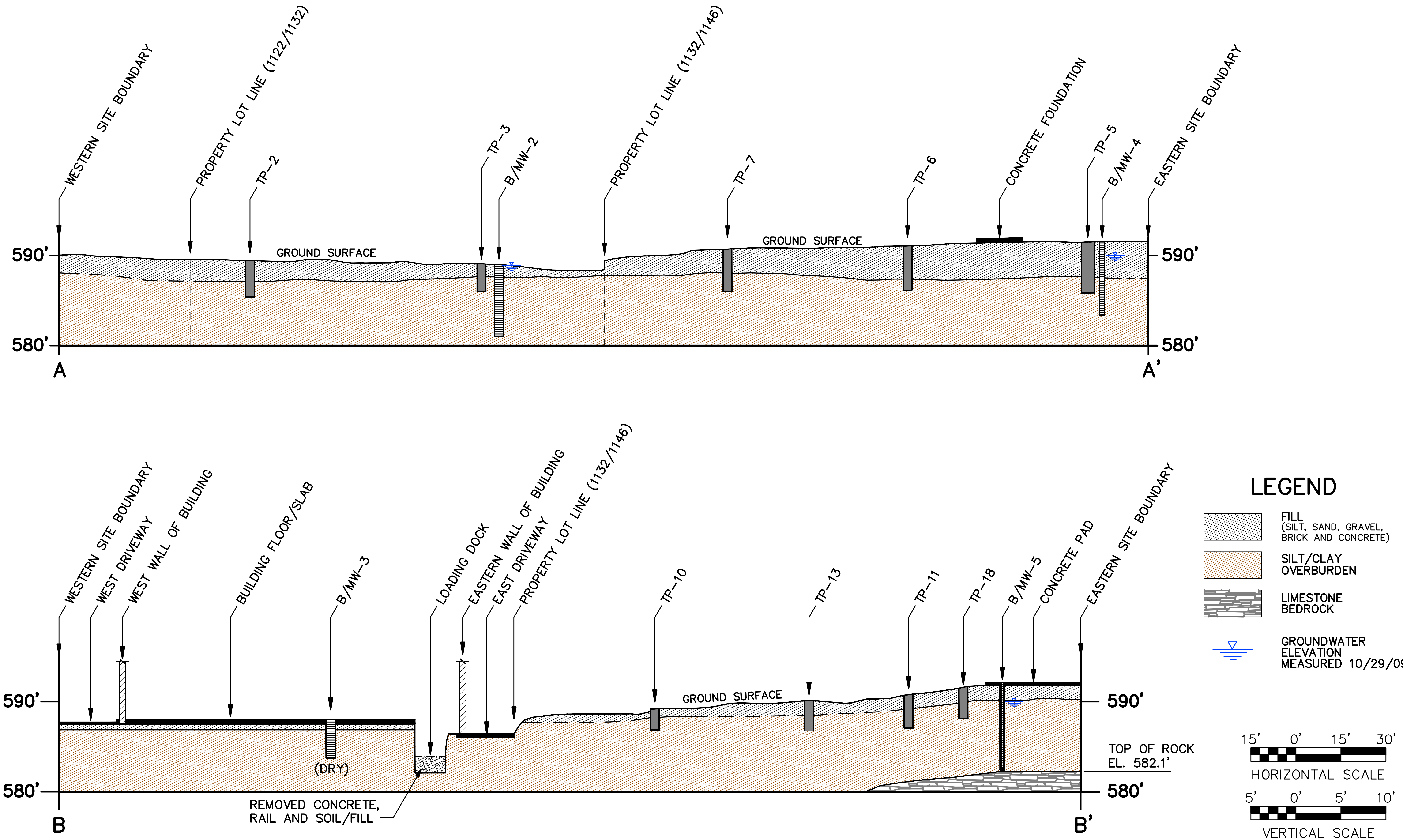
Based on observations made and data collected during the RI and Phase II investigations of the Site, overburden groundwater, when present, is perched on the native silt/clay layer. Overburden groundwater is discontinuous across the Site and only ephemerally present, dependent upon the degree of seasonal and periodic precipitation and snow melt.

Of the five temporary monitoring wells installed on Site, one, B/MW-3, located inside the building, was dry on all four occasions tested. Another well, B/MW-4, located at the northeast corner of the Site, was dry at the time of installation but subsequently contained measureable water. Overburden groundwater has been found to be consistently present in areas where the soil/fill layer is relatively thin and low in elevation, such as the area north of the 1132 building. The two wells located in this area, wells B/MW-1 and B/MW-2, consistently contain water.

Water levels were measured in the five wells on four occasions during the RI between the dates of October 29, 2009 and April 14, 2010. These water level data are provided in Table 2-1. Water elevations were mapped for each measurement event and found to be very similar between events. Groundwater elevation data collected on October 29, 2009 were chosen to prepare an isopotential map of the overburden groundwater, See Figure 2-3. As illustrated on Figure 2-3, overburden groundwater flow generally reflects the Site topography, flowing from east to west across the 1146 property and having a southwesterly component at the northern, low elevation, area of the 1132 property.

Based on local topography and the location of the nearest major surface water body, the Buffalo River, deep bedrock groundwater at the Site is expected to flow towards the south/southwest.

Five Federal USGS wells and two State wells were identified in the database information obtained from EDR within a one-mile radius of the Site. The EDR report, included in the



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GEOLOGIC CROSS SECTIONS

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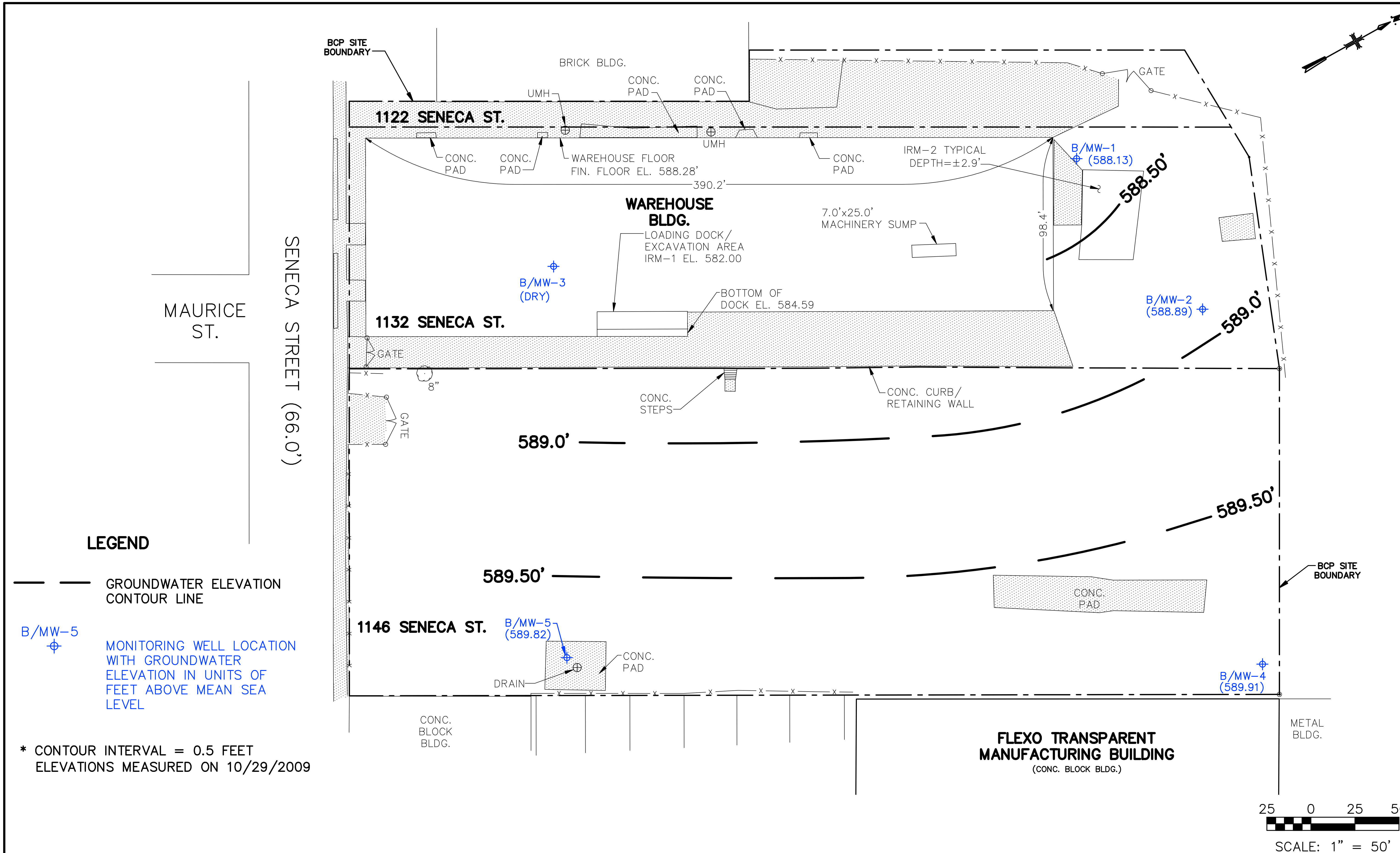
FIGURE 2–2



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SHALLOW GROUNDWATER ISOPOTENTIAL MAP

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FIGURE 2-3

TABLE 2-1
GROUNDWATER ELEVATION MEASUREMENTS
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1123-1146 SENECA STREET SITE
BUFFALO, NEW YORK

Well No.	PVC Riser Elev. (ft AMSL)	Water Level 10/21/2009 (ft BTOR)	Groundwater Elev. (ft AMSL)	Water Level 10/29/2009 (ft BTOR)	Groundwater Elev. (ft AMSL)	Water Level 11/3/2009 (ft BTOR)	Groundwater Elev. (ft AMSL)	Water Level 4/14/2010 (ft BTOR)	Groundwater Elev. (ft AMSL)
B/MW-1	591.15	3.28	587.87	3.02	588.13	3.34	587.81	3.2	587.95
B/MW-2	591.61	2.80	588.81	2.62	588.99	2.66	588.95	2.80	588.81
B/MW-3 (1)	588.28	DRY	NA	DRY	NA	DRY	NA	DRY	NA
B/MW-4	594.73	DRY	NA	4.82	589.91	5.10	589.63	5.34	589.39
B/MW-5	593.88	6.12	587.76	4.06	589.82	4.24	589.64	5.30	588.58

Notes:
AMSL - Above Mean Sea Level
BTOR - Below Top of Riser
(1) B/MW-3 Has been dry since intallation.

Phase II Report, provides the location of these wells but does not provide any information related to groundwater quality or depth to groundwater information. No public water supply wells were identified in the EDR report.

3. Summary of Previous Investigations

3.1. Previous Investigations and Remediation

The following is a summary of previous environmental investigations and remediation performed at the 1122, 1132 & 1146 Seneca Street properties. Information for this summary was obtained from reports prepared by Malcolm Pirnie and others. Figure 3-1 shows the approximate locations soil borings drilled and sampled during the following investigations that were completed leading up to the remedial investigation.

3.1.1. 1989-1990 Removal of PCB Sludge Piles

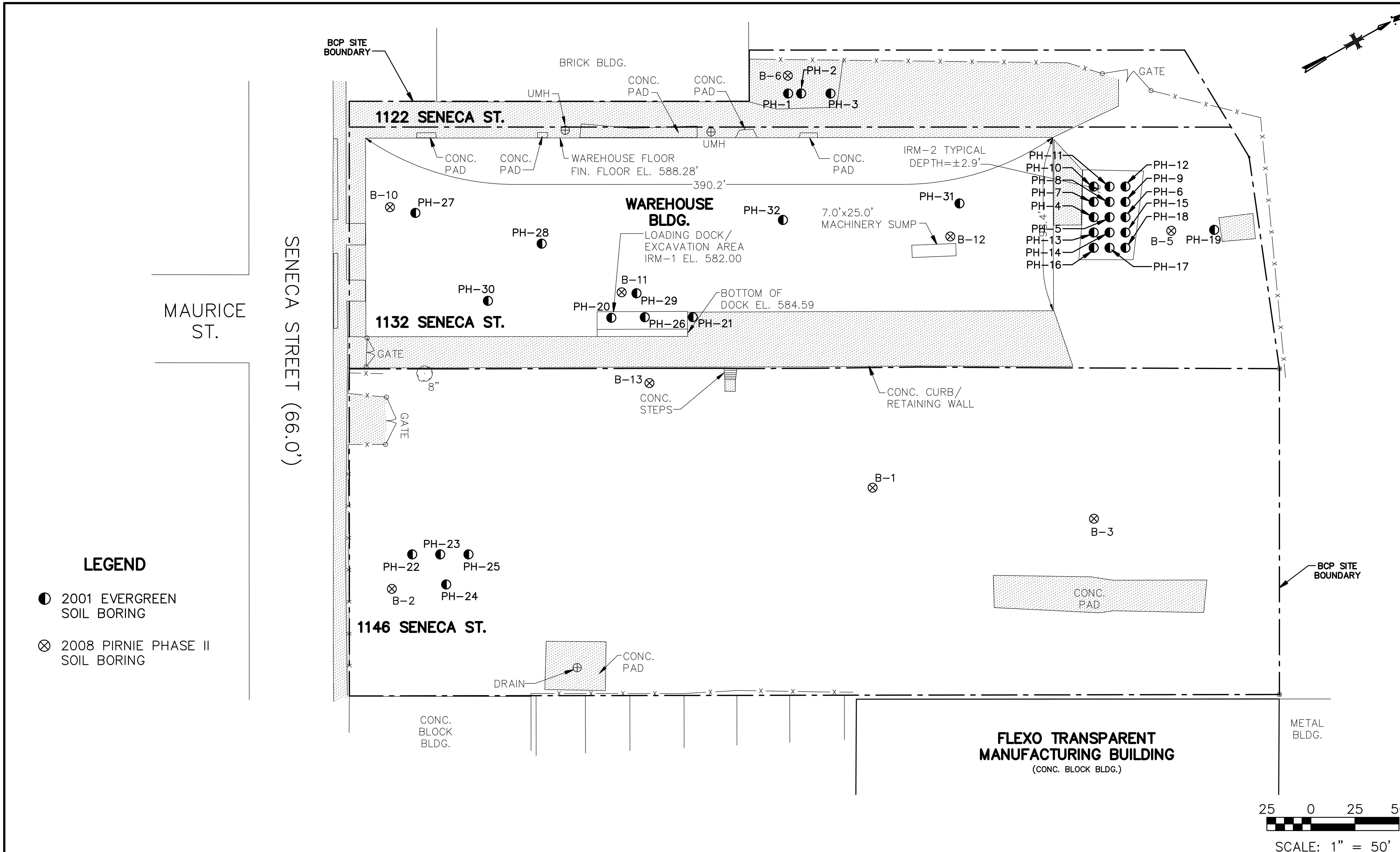
On behalf of Westinghouse Electric Corporation (then owner of the 1132 Seneca Street property) Dames & Moore performed an environmental investigation and remedial action on the 1132 Seneca Street property between October 1989 and November 1990. The investigation and remediation were completed with NYSDEC oversight. The October 1991 Dames& Moore report documents the remediation of two PCB-containing sludge piles partially located in the northeastern corner of the 1132 Seneca Street property. Most of the larger of the two piles was located off and north of the 1132 Seneca Street property.

The Dames & Moore report details three phases of soil sampling and removal at the two sludge pile locations. The work resulted in the removal and off-Site disposal of both sludge piles and soils underlying the piles to a maximum depth of 44 inches. A total of 120 cubic yards of PCB-impacted soil was removed and the excavations backfilled with clean soil. The third and final phase of soil excavation and disposal was completed during October 1990. Appendix A provides documentation of the above described remedial action.

3.1.2. July 2001 Evergreen Focused Environmental Investigation

On behalf of Fibreright Manufacturing, Inc., (then owner of the 1122, 1132 and 1146 Seneca Street properties) Evergreen Testing and Environmental Services, Inc. performed a limited environmental sampling and subsurface investigation of the 1122/1132 and 1146 Seneca Street properties.

The Evergreen sampling primarily focused on four main areas of potential concern. Two of the four areas were known or suspected former underground storage tank (UST) areas. One of these a known former UST location immediately west of the manufacturing building and the other a suspected former UST area located on the 1146 property, immediately adjacent to Seneca Street, potentially a former gas filling station. The other



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HISTORIC SAMPLES LOCATION MAP

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FIGURE 3–1

two main areas of potential concern were areas of potent PCBs in soil/fill, one an interior loading dock at the eastern side of the 1132 building, the other the rear, northern, yard of the 1132 building.

Results

Western Former UST Area - VOCs and SVOCs were present in soil/fill samples collected from three borings at this location but at concentrations below STARS guidance criteria and TAGM cleanup objectives. A groundwater sample from this area did not contain parameters of concern at concentrations above NYSDEC Class "GA" groundwater quality standards. Backfill and groundwater conditions encountered indicate that the UST(s) have been removed at this location and the excavation backfilled with clean soil.

Suspected Former Gas Station UST Area – at two of four borings drilled in the area of suspected gas station USTs on the 1146 property, petroleum odors were noted in the soil/fill. Analytical results of soil/fill samples collected there identified low concentrations of select VOCs at concentrations above NYSDEC STARS guidance criteria but below current Soil Cleanup Objectives.

North PCB Area - Fifteen soil borings were drilled and sampled in a grid pattern in an area approximately 50' wide (west to east) x 30' deep (north to south) near and to the north of the former manufacturing building on the 1132 property. Borings were advanced to 6 and 8 feet below grade. Soil/fill material was encountered in all borings and measured between 2.5 and 4.5 feet in thickness. Samples were collected from the upper four feet and from the interval from four feet to total depth (six or eight feet). Twenty seven samples were collected from the 15 borings and analyzed for PCBs. PCBs were detected in 12 of the 27 samples with the highest total PCB concentration being 17 PPM in boring PH-18. PCBs above 1 PPM were present in four other samples from this area.

Loading Dock PCB Area - Three soil borings were drilled at the interior loading dock of 1132 building to a maximum depth of seven feet. Three samples were collected from two of these borings and analyzed for PCBs. One of the samples from boring PH-20 (0-4' depth) contained total PCBs at a concentration of 3500 PPM in the soil/fill, above the EPAs 50 PPM hazardous waste classification. The other two samples contained 4.1 PPM and 0.66 PPM of total PCBs.

Groundwater was encountered in only four of 32 borings advanced on the 1132 and 1146 Seneca Street properties. The saturated conditions were identified in borings PH-2, PH-3 (the backfilled UST site) and at borings PH-4 and PH-5 at the north PCB area.

A native soil unit consisting of clay or silty clay with interbedded sand was identified below the fill unit in all borings drilled by Evergreen.

Figure 3-1 illustrates the locations of all 32 soil borings that were drilled and sampled within the Site as part of the Evergreen investigation. A copy of the 2001 Evergreen Investigation report was included in the Phase I ESA.

3.1.3. November 2006 Soil/Fill Removal

On November 28, 2006, Flexo voluntarily removed 390.64 tons of ink-contaminated soil/fill from the western boundary of their property at 28 Wasson Street extending onto the 1070 and 1146 Seneca street properties.

The contamination was first reported by LCS in a Phase I Environmental Site Assessment (ESA) prepared for First Niagara Bank (LCS, 4/2006). The Phase I reported historic dumping/discharge of waste ink/solvent mixtures by previous owners of the property. First Niagara Bank hired Hazard Evaluations, Inc., of Orchard Park, NY to perform a Phase II Environmental ESA of the area of concern, (Hazard Evaluations, July 2006). Hazard Evaluations excavated five test trenches from which soil screening and sampling was performed. Based on field observations and screening results, four soil/fill samples were collected and submitted for analysis of VOCs, SVOCs, RCRA metals, and PCBs.

Results

Samples were found to contain a few SVOCs (PAHs) at concentrations above the 1994 TAGM Recommended Soil Cleanup Objectives (RSCOs). The results of the Phase II were reported to the NYSDEC. Based on the field observations and analytical results the samples, the Department assigned the site a spill number (0650733) and an “inactive” status in the Spill Report Database.

Flexo hired Hazard Evaluations to remove and dispose of the impacted soil/fill, (Hazard Evaluations, December 2006). The extent of the excavation was determined visually by the presence or absence of colored inks. The excavation work resulted in the removal of mostly soil/fill material and some native silty clay soil to a total depth ranging between 3 and 5 feet below grade. The foot print of the resultant excavation was isosceles triangular in shape with one side approximately 2.5 feet from and parallel to the western wall of the Flexo Transparent manufacturing building. Five conformation samples were collected from the sidewalls and bottom of the excavation and analyzed for VOCs, SVOCs, and the RCRA list of metals. Concentrations of VOCs, SVOCs, and metals, were below the current SCOs for industrial properties in all five samples. The 390.64 tons of impacted soil/fill was brought to the Tonawanda Landfill and the excavation was backfilled with soil/fill from other areas of the site generated from other site work. Based on the nature and amount of impacted soil/fill removed and the results of confirmatory samples, Hazard Evaluations stated in their report that the remediation of the printing-related wastes along Flexo's western boundary have been adequately completed. Appendix A provides documentation of the above described remedial action.

3.1.4. Sept 2007 Phase I Environmental Site Assessments (ESA)

A Phase I Environmental Site Assessment (ESA) was completed by Malcolm Pirnie, Inc. in September 2007 for the three Site properties. The Phase I ESA identified Recognized Environmental Conditions (RECs) and de minimis conditions at the Site. The RECs and de minimis conditions found during the ESA are listed below by the property tract in which they were identified:

1122/1132 SENECA STREET

- Significant staining and cracking of the concrete floor within the manufacturing building was evident.
- "Oily-greasy" stained soil was observed in the grassed area located north of the manufacturing building. The stained soil was found proximate to an area of PCB impacted soil/sludge piles for which there is documentation of remedial action.
- A limited subsurface investigation completed in 2001 (see Section 1.2.2) identified elevated PCB concentrations in soil samples collected in the northern grassed staging area discussed above and in the interior railroad loading dock area.
- Based on the age and condition of the manufacturing building, asbestos containing materials (ACM) and lead-based paint may be present as a de minimis condition.

  At the time that the Phase I was performed, the property owner at that time (Fibreright) was in the process of vacating the building and much debris, products, and equipment was present and being prepared for removal. At the time that Malcolm Pirnie subsequently performed a Phase II ESA (see Section 3.1.5) and later the RI, the interior of the building was emptied of these materials and the floor cleaned. No significant floor staining was observed during the Phase II or RI and therefore no samples were collected based on floor staining.

1146 SENECA STREET

- Based on sparse reporting records an "oily-greasy" soil was observed in the northeast portion of the 1146 property.
- Soil samples collected in an area reported to possible be a former gasoline filling station in the southeast quadrant of the 1146 property identified slightly elevated VOC concentrations in excess of STARS criteria.

3.1.5. March 2008 Phase II Investigation

Malcolm Pirnie performed a Phase II investigation of the properties located at 1122/1132 and 1146 Seneca Street in support of the BCP application. Surface and subsurface soil/fill samples were collected from direct-push soil borings drilled to maximum depths of 12 feet. Samples were analyzed for TCL VOCs, SVOCs, TAL metals and PCBs.

The Phase II provided additional data for better characterization of the physical and chemical nature of the Site surface and subsurface soil/fill material. As shown on Figure 3-1, a total of nine borings were advanced and discrete soil samples were collected based on PID screening results coupled with visual and olfactory observations. Groundwater samples were not collected during the 2008 investigation since all borings advanced during this investigation were dry.

3.1.5.1. Phase II Results - 1132 Seneca Street

Elevated concentrations of PCBs were detected at the boreholes B-5 (20.6 PPM) near the northern property boundary and at boring B-11 at the railroad loading dock (16.9 PPM). Arsenic was detected at a concentration above the restricted industrial SCO at B-10, located within the Site building near the southwest corner.

3.1.5.2. Phase II Results - 1146 Seneca Street

Several SVOCs were detected at concentrations below the soil cleanup objectives for commercial use property in three of the four samples collected at the 1146 property.

PCB (Aroclor 1260) was detected in one sample (B-3) at a concentration of 0.6 mg/kg.

Arsenic and barium were detected in one or more samples above the restricted industrial and/or commercial SCOs.

4. Interim Remedial Measures

4.1. Background

As discussed in Section 3 above, analytical results of previous Site investigations identified elevated PCB concentrations in soil/fill material at two Areas of Concern (AOCs) located on the 1132 Seneca Street property. PCB-impacted soil/fill material appeared to be limited to a depth range from the surface, directly below the concrete pavement of the loading dock, to a depth of approximately two feet below the base of the concrete. At the second area of concern located in the exterior back yard to the north (rear) of the building, the depth of PCB impact was potentially up to six feet based on vertical composite sampling.

Based on the known concentrations of PCBs which exceeded Commercial Soil Cleanup Objectives (SCOs), the impacted soil/fill was removed at these two locations as interim remedial measures (IRMs) completed concurrent with performance of the RI. The locations of the two IRMs are illustrated on Figure 1-2.

Upon Department approval of the RIR/RWP, both IRM excavations will be backfilled with clean soil concurrent with other remedial actions and redevelopment activities planned forthe Site.

4.2. Objectives

The objectives of the IRMs were to:

- Reduce the potential for exposure to PCB contaminated soil/fill at or near the surface.
- Reduce the potential for Site contamination to impact groundwater beneath the Site and off-Site locations.

4.3. Methods

4.3.1. Loading Dock IRM Methods

The PCB impacted soil/fill at the interior loading dock was located on and beneath the concrete floor of the loading dock which contained one pair of steel rail lines. The IRM at this location involved the removal and off-Site disposal of steel rails and concrete flooring followed by excavation of the underlying impacted soil/fill. The excavation continued until the soil/fill beneath the rails and concrete slab was removed within the loading dock. The resulting excavation bottom was in the native clay soil.

Once excavation had been completed, post-excavation confirmation samples were collected from all four sides of the rectangular excavation and from the excavation floor.

The concrete, steel, and soil/fill were characterized by the remedial contractor (OpTech) prior to off-Site disposal. Table 4-1 provides a listing of all field samples collected during the RI and IRMs with analyses performed. Appendix B contains photos of the IRM work and sampling.

4.3.2. North Area IRM Methods

Based on analytical data from 15 soil borings performed by Green Environmental, an approximately 30’ by 50’ area marked for excavation of the entire soil/fill layer. Soil/fill material was removed over the pre-determined 30”x50’ area to an average depth of approximately three feet, which was approximately six inches into the underlying native silty clay material.

With Department oversight, composite post-excavation confirmation samples were collected from each of the four excavation walls and excavation bottom. Side-wall samples from the longer north and south walls were composited from five points and samples of the shorter west and east walls were composited from three points. Sidewall samples were collected from the approximate vertical mid-points at each wall. The excavation floor sample was composited from four quadrants.

4.4. Results

4.4.1. Loading Dock IRM Results

The steel rail, concrete pavement and impacted soil/fill were removed within the loading dock. Confirmatory samples collected from the excavation bottom and north, west, and south excavation walls contained PCBs at concentrations below the SCO for industrial sites. One of the two samples collected from the east excavation wall however contained PCBs above the industrial SCO of 25 PPM. Subsequently, additional samples were collected at the two east wall sample locations at lateral depths of one foot and two feet to determine the lateral extent of the PCB-impacted soil/fill at this east wall. Results of these samples indicates that the PCB-impacted soil/fill extents from the east excavation face all the way (3-feet) to the sub-grade footer of the east building wall. Table 4-2 provides a summary of analytical results of the post-excavation confirmatory samples. Appendix C provides documentation of pre-disposal sample results obtained by OpTech and manifests for the materials disposed off Site.

The steel rail was pressure washed and sent to Niagara Metals for recycling.

At total of 73 tons of soil/fill and concrete were removed from the loading dock IRM area and disposed at Model City as hazardous waste. The remaining (51’ x 3’ x 3’) of PCB-impacted soil/fill and overlying concrete slab will be removed during Site remediation.

Table 4-1
Summary of Samples Collected
Remedial Investigation/Interim Remedial Measures
1132-1146 Seneca Street BCP Site
Buffalo, New York

RI Surface Soil Samples	Depth	VOC	SVOC	PCBs	TAL Metals	Cyanide
TP-2	0 - 2"	X	X	X	X	X
TP-3	0 - 2"	X	X	X	X	X
TP-5	0 - 2"	X	X	X	X	X
TP-7	0 - 2"	X	X	X	X	X
TP-9	0 - 2"	X	X	X	X	X
TP-10	0 - 2"	X	X	X	X	X
TP-13	0 - 2"	X	X	X	X	X
TP-14	0 - 2"	X	X	X	X	X
B-2	0 - 2"		X	X	X	X
RI SubSurface Soils	**Depth**					
TP-1	1.4'-2.0'	X	X	X	X	X
TP-2	1.5'-2.0'	X	X	X	X	X
TP-3	1.0'-1.5'	X	X	X	X	X
TP-4	1.0'-1.5'	X	X	X	X	X
TP-5	3.5'-4.5'	X	X	X	X	X
TP-Dup#1 (of TP-5)	3.5'-4.5'	X	X	X	X	X
TP-8	0.5'-1.2'	X	X	X	X	X
TP-18	0.5'-1.0'	X	X	X	X	X
B-2	0.5'-1.0'	X	X	X	X	X
B-3	0.6'-0.9'		X	X		
B-5	0.5'-2.0'	X	X	X	X	X
RI Groundwater						
RIB-1		X	X	X	X	X
RIB-2		X	X	X	X	X
RIB-4		X	X	X	X	X
RIB-5		X	X	X	X	X
B-Dup#1 (of B-1)		X	X	X	X	X
RI Sub-Slab Soil Vapor						
SV-1		X				
SV-2		X				
SV-3		X				
SV-4		X				
SV-Dup(of SV-4)		X				
Floor Trench Sediment						
FD-1	1.0'			X		
FD-2	1.0'			X		
Precharacterization Soil/Fill Samples						
24 Upper (U) soil/fill samples (0-0.5' depth)						
A,B,C,D,D1,E,F,G,H,H1,I,J,K,K1,L,L1,M,N,O,O1,P,P1,Q,U				X		
23 Lower (L) soil/fill Samples (0.5' to base of fill)						
A,B,C,D,D1,E,F,G,H,H1,I,J,K,K1,L,L1,M,N,O,O1,P,P1,,U				X		
North IRM Confirmatory Samples						
IRM2-North	2.5'			X		
IRM2-East	2.5'			X		
IRM2-South	2.5'			X		
IRM2-West	2.5'			X		
IRM2-BTM	3.0'			X		
IRM2-Dup#1 (of North)	2.5'			X		
Loading Dock IRM Confirmatory Samples						
RILD-North	2.5'			X		
RILD-East -N	2.5'			X		
RILD-East -N1	2.5'/1' latterally			X		
RILD-East -N2	2.5'/2' latterally			X		
RILD-East -S	2.5'			X		
RILD-East -S1	2.5'/1' latterally			X		
RILD-East -S2	2.5'/2' latterally			X		
LD-S (wood wall)	0.5'			X		
LD-W (Concrete wall)	0.5'			X		
RILD-BTM(No)	3.0'			X		
RILD-BTM(So)	3.0'			X		

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TABLE 4-2
Summary of Analytical Results
Loading Dock IRM Confirmatory Samples
1132-1146 Seneca Street Site
Buffalo, NY

Sample ID Sample Depth (inches BGS) Sample Date	Restricted Use Soil Cleanup Objectives - Commercial	Restricted Use Soil Cleanup Objectives - Industrial	LD-NORTH 10/28/2009	LD-EAST-N 10/28/2009	LD-EAST-N1 50/24/2010	LD-EAST-N2 5/24/2010	LD-EAST-S 10/28/2009	LD-EAST-S1 5/24/2010	LD-EAST-S2 5/24/2010	LD-SOUTH 12/16/2009	LD-WEST 12/16/2009	LD-BTM(NO) 10/28/2009	LD-BTM(SO) 10/28/2009
PCB (µg/kg)													
Aroclor 1242												10 J	
Aroclor 1248								37,000		0	3,500		
Aroclor 1254										8,400	4,900		
Aroclor 1260			540 D08	360,000 D08	460,000	380,000	5,800 D08	110,000	19,000	9,000	6,600	8 J	
Total PCBs	1,000	25,000	540	**360,000**	**460,000**	**380,000**	5,800	**147,000**	19,000	17,400	15,000	18	

Notes:

Only those analytes detected at a minimum of one location are shown. Blank cells indicate non-detect.

D08 - Dilution required due to high concentration of target analyte

J - Estimated value, analyte less than reporting limit but greater than method detection limit

-Bold value indicates exceedance of Industrial SCO.

-Shaded value indicates exceedance of Commercial SCO.

Appendix C contains manifests for all materials transported and disposed off-Site from the two IRMs.

4.4.2. North Area IRM Results

Based on the analytical results of the post-excavation sidewall and bottom confirmation samples, the excavation was determined sufficient to achieve the IRM objective and did not require widening or deepening. Table 4-3 provides a summary of PCB analytical results of the IRM confirmation samples.

A total of 277 tons of PCB-impacted soil/fill from the north IRM excavation were removed from the Site and transported to the Tonawanda Landfill as non-hazardous waste via Ensol. Appendix C contains manifests for all materials transported and disposed off-Site from the two IRMs.

TABLE 4-3
Summary of Analytical Results
North Area IRM Confirmatory Samples
1132-1146 Seneca Street Site
Buffalo, NY

Sample ID Sample Depth (inches BGS) Sample Date	Restricted Use Soil Cleanup Objectives - Commercial	Restricted Use Soil Cleanup Objectives - Industrial	IRM2-NORTH 10/29/2009	IRM2-DUP#1 (NORTH) 10/29/2009	IRM2-EAST 10/29/2009	IRM2-SOUTH 10/29/2009	IRM2-WEST 10/29/2009	IRM2-BTM 10/29/2009
PCB (µg/kg)								
Aroclor 1248			310 D08,QSU	290 QSU,D08	120 D08,QSU,J	79 QSU	44 QSU	
Aroclor 1260			1,500 D08,QSU	1,700 QSU,D08	830 D08,QSU	450 QSU	230 QSU	14 QSU,J
Totoal PCBs	1,000	25,000	1,810	1,990	950	529	274	14

Notes:

Only those analytes detected at a minimum of one location are shown. Blank cells indicate non-detect.

B - Analyte detected in assocaited method blank

D08 - Dilution required due to high concentration of target analyte

J - Estimated value, analyte less than reporting limit but greater than method detection limit

QSU - Sulfur clean-up performed on extract

-Bold value indicates exceedance of Industrial SCO.

-Shaded value indicates exceedance of Commercial SCO.

5. Remedial Investigation Methods and Results

Field activities of the Remedial Investigation were completed between October 14 and December 16, 2009. Tasks were conducted in accordance with the NYSDEC-approved RI/IRM Work Plan (Malcolm Pirnie, July 2009).

The Remedial Investigation included the following field tasks:

- Excavation and sampling of 18 test pits.
- Drilling and sampling of 88 soil borings.
- Installation and development of five groundwater monitoring wells.
- Collection and analysis of soil vapor, surface and subsurface soil/fill, solid waste, and groundwater samples for laboratory analysis.
- Site survey for creation of a to-scale Site base map with Site features, topography, and well and sample locations.
- Water level measurement and mapping.

Detailed discussions of the purpose, methodologies, and results of each of the investigative activities completed are presented in the following subsections. Analytical results are presented and discussed in Section 7.0. Photographs of the Site were taken during the Site investigation field tasks, some of which are presented in Appendix B.

5.1. Test Pit Excavation

5.1.1. Purpose

Test pits were excavated to provide visual observation of the thickness and composition of the soil/fill material, the underlying native soil, groundwater conditions, and to obtain samples of the soil/fill material for chemical analysis.

5.1.2. Methods

A subcontracted excavator and crew excavated test pits at 19 pre-determined locations through the soil/fill material. Test pits were terminated at just beneath the contact with the underlying native soil. A Malcolm Pirnie geologist was present during all excavation activities to monitor the atmosphere for VOCs using a photoionization meter (PID), to observe and record the composition of the fill material and hydrogeologic conditions and to collect samples of the soil/fill for chemical analysis. Upon completion of field logs and sample collection at each test pit location, the pit was backfilled with the same soil/fill material as was removed.

5.1.3. Results

Test pit depths ranged from three to five feet. Soil/fill was encountered at each of the 18 test pit locations at thicknesses between 0.5 foot and 3.7 feet. The visual appearance and composition of the Soil/fill was generally similar across the Site as described in Section 2.2. One notable exception to this was at Test Pit #5 located in the extreme northeastern corner of the Site, on the 1146 Seneca Street property. At this location the soil/fill was thicker and more similar in color and composition as the underlying soil. Also, a distinct solvent/phenolic odor was noted during excavation of this test pit. Additional samples were collected of the soil/fill at this location but neither VOCs nor SVOCs were detected at concentrations above SCOs for restricted commercial use. It was revealed by the BCP applicant that the location of this test pit is within an area of past soil/fill remediation. See Appendix A for a copy of the investigation and soil removal action that was completed in this area.

Test pit locations are illustrated on Figure 5-1 and test pit findings including fill thickness and PID readings are provided in Table 5-1. Analytical results of the 16 surface and subsurface soil/fill samples collected from test pits are presented and discussed in Section 7.

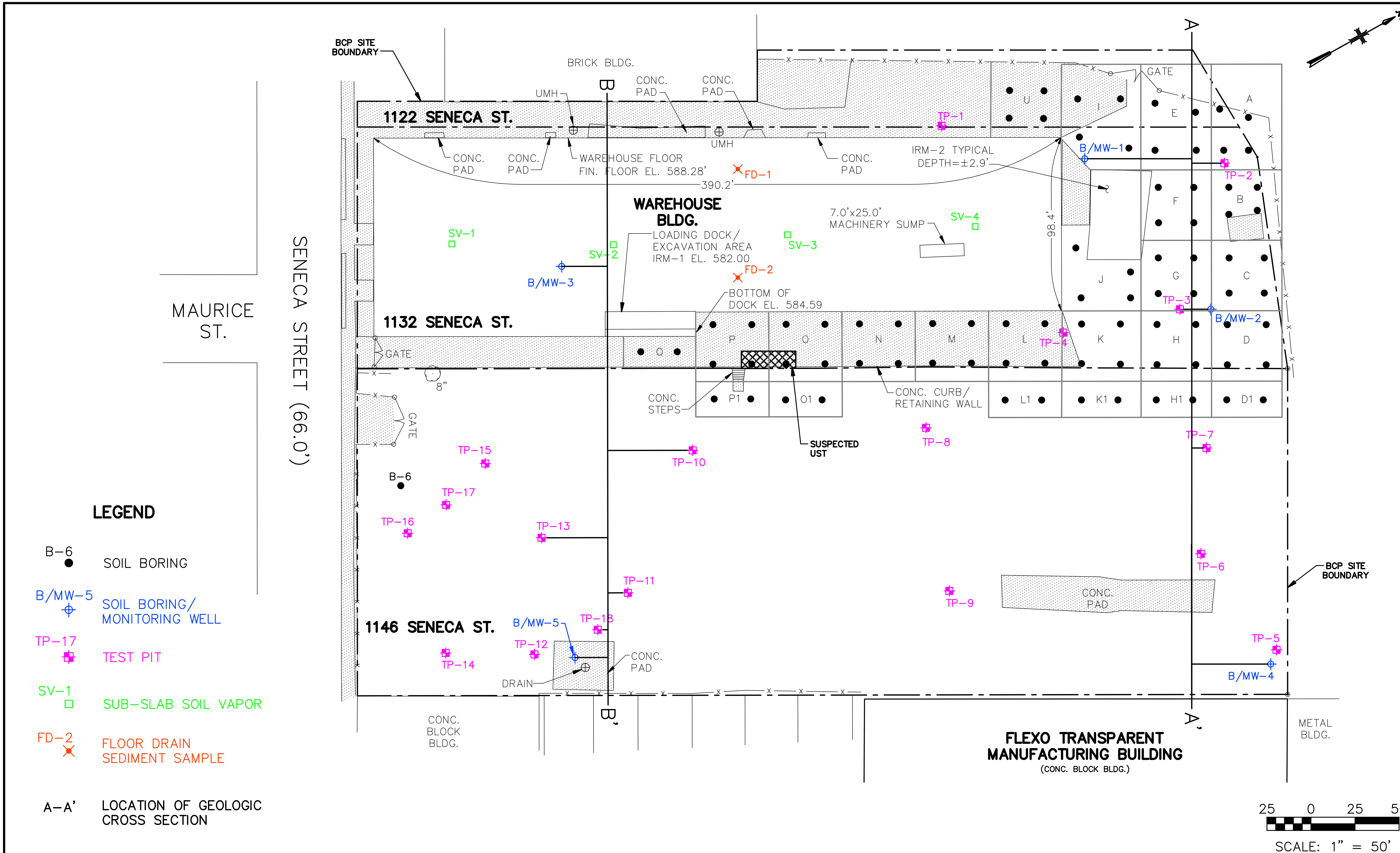
5.2. Drilling and Sampling of Soil Borings

5.2.1. Purpose

A soil boring program was conducted to establish the thickness and physical and chemical composition of the fill material present at the Site as well as to install temporary groundwater monitoring wells to assess groundwater quality and hydrogeologic conditions.

5.2.2. Methods

Six soil borings were advanced through unconsolidated overburden fill and soils using 3-¼-inch inside diameter (ID) hollow stem augers. Locations of the test borings are shown on Figure 5-1. The drilling rig used to complete the test borings was provided and operated by a subcontractor to Malcolm Pirnie. At each test boring location, continuous two-inch outer diameter (OD) split-spoon samplers were used to collect soil cores which were screened with a photo ionization detector (PID) to obtain a qualitative estimate of total volatile organic compounds (VOCs) emitted from the subsurface soil/fill. The on-Site Malcolm Pirnie geologist recorded the PID measurements, physical characteristics of the soil, depth to groundwater, and other notable conditions on Field -Boring Log forms at each test boring location. The split spoon samplers were decontaminated prior to each use using a solution of Alconox and water followed by a clean potable water rinse. All soil borings not converted to monitoring wells were backfilled with the drill cuttings.



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FLEXO TRANSPARENT, INC.
BUFFALO, NEW YORK
REMEDIAL INVESTIGATION REPORT
1132–1146 SENECA STREET BCP REDEVELOPMENT

REMEDIAL INVESTIGATION
SAMPLE LOCATION MAP

MALCOLM PIRNIE, INC.
APRIL 2010
FIGURE 5–1

XREFS: ..\XREF\6105BASE.dwg F:\Projects\6105002 – Flexo Phase II\CADD\XREF\610511X17.dwg IMAGES: None
User: DEWYER Spec: PIRNIE STANDARD File: F:\Projects\6105002 – Flexo Phase II\CADD\GEN\6105F007.DWG Scale: 1:1 Date: 04/20/2010 Time: 14:00 Layout: Layout1

Table 5-1
Test Pit and Borehole Summary
1132-1146 Seneca Street Site
Buffalo, NY

Test Pit/ Borehole Number	Date Excavated/Drilled	Fill Thickness (ft)	Total Depth (ft)	Approx. Depth to Groundwater	Maximum PID Measurement / Comments
TP-1	10/14/2009	2.5	3.3	NA	0 PPM
TP-2	10/14/2009	2.2	3.2	2.2	0 PPM/Perched water at native soil contact
TP-3	10/14/2009	1.6	3.1	1.6	0 PPM/Perched water at native soil contact
TP-4	10/14/2009	1.7	2.4	1.7	0 PPM/Perched water at native soil contact
TP-5	10/14/2009	3.7	5.1	3.7	0 PPM but strong solvent odor in fill/2.1 PPM in native soil less odor/Perched water at native soil contact
TP-6	10/14/2009	3.7	4.8	3.7	0 PPM/Perched water at native soil contact
TP-7	10/15/2009	2.3	4.5	2.3	0 PPM/Perched water at native soil contact
TP-8	10/15/2009	1.2	2.7	1.2	0 PPM/Perched water at native soil contact
TP-9	10/15/2009	2.7	3.8	NA	0 PPM
TP-10	10/15/2009	0.8	2.5	NA	0 PPM
TP-11	10/15/2009	1.4	2.8	NA	0 PPM
TP-12	10/15/2009	0.5	3	NA	0 PPM
TP-13	10/15/2009	1.5	3.2	NA	0 PPM/ N-S trending 2" diam. Soil filled Steel pipe encountered
TP-14	10/15/2009	1.4	3.8	NA	0 PPM
TP-15	10/16/2009	2.4	3.4	NA	0 PPM
TP-16	10/16/2009	1.2	3.2	NA	0 PPM
TP-17	10/16/2009	0.5	3.2	NA	0 PPM
TP-18	10/16/2009	1.2	3.4	NA	0 PPM
B-1	10/19/2009	1.7	8.0'	NA	0 PPM
B-2	10/19/2009	1.1	8	NA	0 PPM
B-3	10/19/2009	0.3 bc	4	NA	0 PPM
B-4	10/19/2009	4.2	8	NA	0 PPM
B-5	10/19/2009	0.4 bc	9.8	5	0 PPM/ Bedrock refusal at 9.8'
B-6	10/19/2009	0	9.9	4	0 PPM/Bedrock refusal at 9.9'
PRE-CHARACTERIZATION BORINGS					
A1	12/16/2009	1.2	4		0 PPM
A2	12/16/2009	2	4		0 PPM
A3	12/16/2009	1.1	4		0 PPM
A4	12/16/2009	1	4		0 PPM
B1	12/15/2009	1.8	4		0 PPM
B2	12/15/2009	1.3	4		0 PPM
B3	12/15/2009	1.2	4		0 PPM
B4	12/15/2009	1	4		0 PPM
C1	12/15/2009	1.5	4		0 PPM
C2	12/15/2009	2	4		0 PPM
C3	12/15/2009	1	4		0 PPM
C4	12/15/2009	1	4		0 PPM
D1	12/15/2009	1.9	4		0 PPM
D2	12/15/2009	1.3	4		0 PPM
D3	12/15/2009	1.8	4		0 PPM
D4	12/15/2009	0.6	4		0 PPM
E1	12/16/2009	1.6	4		0 PPM
E2	12/16/2009	1.2	4		0 PPM
E3	12/16/2009	1.7	4		0 PPM
E4	12/16/2009	2	4		0 PPM, petro sheen at 0.8' to 1.1' , sampled for PCBs, VOCs, and SVOCs.
F1	12/15/2009	1	4		0 PPM
F2	12/15/2009	2	4		0 PPM
F3	12/15/2009	2	4		0 PPM
F4	12/15/2009	1	4		0 PPM
G1	12/15/2009	1	4		0 PPM
G2	12/15/2009	1	4		0 PPM
G3	12/15/2009	1.8	4		0 PPM
G4	12/15/2009	1.5	4		0 PPM

Prepared by JRR Date:04/06/10

Table 5-1
Test Pit and Borehole Summary
1132-1146 Seneca Street Site
Buffalo, NY

Test Pit/ Borehole Number	Date Excavated/Drilled	Fill Thickness (ft)	Total Depth (ft)	Approx. Depth to Groundwater	Maximum PID Measurement / Comments
H1	12/15/2009	1.5	4		0 PPM
H2	12/15/2009	1	4		0 PPM
H3	12/15/2009	2.3	6		0 PPM
H4	12/15/2009	0.5	4		0 PPM
I1	12/16/2009	2.3	4		0 PPM
I2	12/16/2009	2	4		0 PPM
I3	12/16/2009	2.5	4		0 PPM
I4	12/16/2009	1.6	4		0 PPM
J1	12/15/2009	1.3	4		0 PPM
J2	12/15/2009	2	4		0 PPM
J3	12/15/2009	1.5	4		0 PPM
J4	12/15/2009	1	4		0 PPM
K1	12/15/2009	2	4		0 PPM
K2	12/15/2009	0.3	4		0 PPM
K3	12/15/2009	1.5	4		0 PPM
K4	12/15/2009	0.2 bc	4		0 PPM
L1	12/15/2009	2	4		0 PPM
L2	12/15/2009	0.3 bc	4		0 PPM
L3	12/15/2009	1	4		0 PPM
L4	12/15/2009	0.5 bc	4		0 PPM
M1	12/14/2009	1.5 bc	4		0 PPM
M2	12/14/2009	0.2 bc	4		0 PPM
M3	12/14/2009	2	4		0 PPM
M4	12/14/2009	0.3 bc	4		0 PPM
N1	12/14/2009	1.5	4		0 PPM
N2	12/14/2009	0.3 bc	4		0 PPM
N3	12/14/2009	1.5	4		0 PPM
N4	12/14/2009	0.4	4		0 PPM
O1	12/14/2009	1 bc	4		0 PPM
O2	12/14/2009	0.2 bc	4		0 PPM
O3	12/14/2009	1 bc	4		0 PPM
O4	12/14/2009	1.8 bc	4		0 PPM
P1	12/14/2009	2	4		0 PPM
P2	12/14/2009	3.7 bc	4.5		0 PPM
P3	12/14/2009	2.6	6		0 PPM
P4	12/14/2009	1.2	4		0 PPM
D1-1	3/18/2010	1.4	4		0 PPM
D1-2	3/18/2010	1.3	4		0 PPM
H1-1	3/18/2010	1.4	4		0 PPM
H1-2	3/18/2010	2	4		0 PPM
K1-1	3/18/2010	1.7	4		0 PPM
K1-2	3/18/2010	1.6	4		0 PPM
L1-1	3/18/2010	1.2	4		0 PPM
L1-2	3/18/2010	1.4	4		0 PPM
O1-1	3/18/2010	0.7	4		0 PPM
O1-2	3/18/2010	0.6	4		0 PPM
P1-1	3/18/2010	1.1	4		0 PPM
P1-2	3/18/2010	0.7	4		0 PPM
Q1	3/18/2010	0.2 bc	4		0 PPM
Q2	3/18/2010	0.1 bc	4		0 PPM
U1	3/18/2010	1.8	4		0 PPM
U2	3/18/2010	1.8	4		0 PPM
U3	3/18/2010	1.6	4		0 PPM
U4	3/18/2010	1.5	4		0 PPM
bc = thickness of fill beneath concrete pavement.					

Borehole depths ranged from 4.0 feet to 9.9 feet below ground surface (bgs). A description of the geologic conditions encountered during the drilling program is provided in Section 2, and borehole logs with detailed overburden descriptions and other observations are provided in Appendix D. A summary of the total depths of each soil boring, as well as the fill thickness and intervals selected for analytical sampling are presented in Table 5-1.

5.2.3. Results

Soil/fill was encountered at each of the six soil boring locations, including B-3 which was located within the Site building. Fill thicknesses encountered at drilling locations ranged from as thin as 0.3 feet beneath the building concrete floor slab at B-3, to 4.2 feet at B-4. Perched groundwater was present at boring locations B-1, B-2, B-5, and B-6. Borings B-3 and B-4 were dry at the time of drilling. Bedrock was encountered at the two deepest borings, B-5 and B-6, at depths of 9.8 feet and 9.9 feet respectively.

5.3. Installation, Development, and Sampling of Groundwater Monitoring Wells

5.3.1. Purpose

Temporary shallow groundwater monitoring wells were installed throughout the site to provide means to collect groundwater samples for chemical analysis and to measure groundwater elevations.

Five groundwater monitoring wells were installed during the RI to provide hydrogeologic and water quality data at the Site. Groundwater samples and elevation data were collected from these on-Site wells.

Monitoring wells were constructed of 1-inch ID, flush joint, Schedule 40 PVC, with 0.010-inch slotted screen ranging in lengths between three and eight feet. A silica sand filter pack was placed up to two feet above the top of the screened interval. A one-foot thick layer of bentonite granules was placed above the sand pack to grade as a seal to prevent the downward infiltration of surface water.

Monitoring wells were installed in overburden with the upper most part of the screened interval within the soil/fill layer. Total well depths range from 4.0 to 9.8 feet bgs. A summary of well construction details is presented in Table 5-2. Detailed well construction diagrams and borehole logs with geologic descriptions for the wells are presented in Appendix D.

The newly installed wells were developed to flush the well and sand pack of fine sediments, create wells that will yield water samples that are representative of the groundwater quality at that location, and to provide accurate measurement points for groundwater elevations. Wells were developed using a peristaltic pump attached to

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TABLE 5-2
SUMMARY OF MONITORING WELL CONSTRUCTION DETAILS
REMEDIAL INVESTIGATION REPORT
1132-1146 SENECA STREET SITE
BUFFALO, NEW YORK

Well No.	Screen Diam. *(in)*	Slot Size *(in)*	Well Material	Borehole Diameter *(in)*	Borehole Depth *(ft bgs)*	Screened Interval *(ft bgs)*	Date Installed
B-1	1	0.010	PVC	6.5	8.0	1.0 - 8.0	10/19/2009
B-2	1	0.010	PVC	6.5	8.0	1.0 - 7.0	10/19/2009
B-3	1	0.010	PVC	3.0	4.0	1.0 - 4.0	10/19/2009
B-4	1	0.010	PVC	6.5	8.0	3.0 - 8.0	10/19/2009
B-5	1	0.010	PVC	6.5	9.8	1.8 - 9.8	10/19/2009

bgs - below ground surface.

dedicated polyethylene tubing. Groundwater evacuated from each well during development was monitored for pH, specific conductivity, temperature, dissolved oxygen, ORP, and turbidity. Development water was discharged to the ground surface. Well Development/Purging Logs are included in Appendix E.

5.4. Sampling of Environmental Media

5.4.1. Surface and Subsurface Soil/Fill

5.4.1.1. Surface Soil Sampling

Purpose

To better characterize surface soils within the BCP Site boundaries, the uppermost 2 inches of soil/fill was sampled at nine sampling locations chosen to represent conditions unique to specific areas and/or proximity to known contaminant impacts.

Method

Surface soil samples were collected from split spoon samplers at soil boring locations or from excavation sidewalls at test pit locations. Surface soil samples were submitted for analysis of Target Compound List (TCL) Volatile Organic Compounds (VOCs), Semi Volatile Organic Compounds (SVOCs), polychlorinated biphenyls (PCBs) and target analyte list (TAL) metals with cyanide. Surface soil samples were collected at test pit locations TP-2, TP-3, TP-5, TP-7, TP-9, TP-10, TP-13, and TP-14 and at soil boring B-2. Figure 5-1 shows the locations of all test pits and soil borings sampled as part of the RI.

Results

The uppermost material at each location sampled was disturbed soil/fill material, not native soil deposits. No PID readings above background or other evidence of contamination was noted during the collection of the surface soil/fill samples. Presentation of sample analytical results is provided in Section 7.

Based on the analytical results of surface soil samples collected from the 1146 Seneca Street property from which three of six samples contained benzo(a)pyrene (BAP) at concentrations greater than the industrial SCO of 1.1 mg/kg, additional surface soil samples were collected from this property to further characterize the extent of BAP contamination in the surface soil. The entire 1146 Seneca Street property was divided into 44 equal sized grid squares of approximately 45 feet x 46 feet. A single grab sample was collected from the surface soil (upper 2”depth) from within each grid square, with the exception of the six grid squares that were previously sampled during the RI. Each sample was submitted for analysis of benzo(a)pyrene. Analytical results are presented and discussed in Section 7

5.4.1.2. Subsurface Soil

Purpose

A test pit and soil boring program was completed to further characterize areas of concern identified during previous Site investigations and to better characterize the overall Site soil/fill material and shallow groundwater, where present.

Methods

As part of the original RI scope of work, 18 test pits were excavated and six soil borings drilled at predetermined Areas of Concern (AOCs) and at other locations of the BCP Site that have not yet been fully characterized. Test pits and borings were advanced through the soil/fill layer and into native silt/clay. At two boring locations (B-5 and B-6) the borehole was extended to bedrock refusal. Subsurface soil samples were submitted for analysis of TCL VOCs, SVOCs, PCBs and TAL metals with cyanide. Subsurface soil samples were collected at test pit locations TP-1, TP-2, TP-3, TP-4, TP-5, TP-8, and TP-18 and at soil borings B-2, B-3, and B-5. After logging and sampling the overburden materials at each test pit location, the test pits were backfilled using the materials removed. Figure 5-1 shows the locations of all test pits and soil borings sampled as part of the RI.

Results

Based on the analytical results of the above mentioned subsurface samples, further delineation of PCB-impacted soil/fill was warranted. Second and third phases of characterization were performed primarily on the 1132 property. At total of 82 additional soil borings were drilled and sampled on a grid pattern to the north, west, and east of the former manufacturing building to quantify the magnitude and delineate the extent of PCB contamination. Borings were drilled at approximate 20-feet spacing and samples composited one per every four borings. Figure 5-1 shows the location of the pre-characterization sampling grid and borings. Based on the analytical results of the initial RI test pit and boring samples, the uppermost six inches of soil was sampled separately from the underlying fill material. Results of the third sampling event indicated that the extent had been sufficiently delineated to identify and evaluate remedial alternatives. Complete discussion of the analytical results of subsurface soil samples is provided in Section 7.

At one of the pre-characterization soil boring locations (P-2) in the general area of the rail access loading dock, thick (3-feet) concrete pavement was encountered beneath which a six feet void was present. The void was water filled and a slight petroleum odor was noted and a PID reading of 23.9 measured at the boring. It is assumed that there is a buried underground storage tank at this location.

5.4.2. Groundwater

5.4.2.1. Purpose

Where present in temporary groundwater monitoring wells, groundwater samples were collected to characterize the groundwater quality.

5.4.2.2. Method

Wells were purged and sampled using low flow sampling techniques by dedicated plastic flex tubing and a peristaltic pump. New dedicated disposable bailers were used to collect the VOC portion of the groundwater samples. Each was sampled for TCL VOCs, SVOCs, Pesticides, PCBs, TAL metals, and cyanide.

Groundwater field parameters were monitored during well purging prior to sampling including pH, specific conductivity, temperature, turbidity, dissolved oxygen, appearance and ORP.

Groundwater samples were collected in precleaned and pre-preserved laboratory sample bottles in accordance with protocols for the applicable analyses. Appropriate QA/QC samples were collected for the groundwater sampling event including one trip blank, one MS, one MSD, and one field duplicate sample. Subsequent to sample collection, groundwater samples were placed on ice and shipped under chain of custody to Test America Laboratory.

5.4.2.3. Results

Groundwater was not present in well B/MW-3 located inside of the manufacturing building. Also, well B/MW-4 was initially dry but when checked for water on a subsequent day, water was present and so sampled. Analytical results are presented in Section 7.

5.4.3. Soil Vapor

5.4.3.1. Purpose

Soil vapor was sampled from beneath the concrete floor slap of the Site building to determine of VOCs are present in the soil vapor beneath the building and if so if their concentrations are elevated to pose a potential migration pathway to indoor air.

5.4.3.2. Method

Soil vapor samples were collected at four locations (SV-1 through SV-4) from beneath the concrete floor slab foundation of the building at 1132 Seneca Street. Samples were collected in accordance with the Department-approved work plan using a 6-liter Summa canister sampling train, which consists of a stainless steel Summa canister, flow controller, particulate filter, pressure gage, and fittings. Canisters were evacuated and certified as analyte-free by the analytical laboratory (Test America Laboratories) prior to use in the field. Flow regulators supplied by the analytical laboratory were used to allow for continuous sampling over the one-hour period. Each flow regulator was equipped with a filter to prevent particulate matter from entering the canister.

5.4.3.3. Results

The concrete floor was observed to be in good condition with no cracks or holes noted. Trace levels of various VOCs were detected, see Section 7 for a detailed discussion of analytical findings.

5.4.4. Floor Drain/Pipe Chase Debris

5.4.4.1. Purpose

At the request of the Department, loose dry sediment/debris was sampled from within a east/west oriented concrete lined trough-like feature within the floor of the manufacturing building. This trough contained a series of parallel steel pipes approximately two to three inches in diameter. The bottom of the concrete trough contained loose soil-like debris such as floor sweepings or sediment. Samples were collected to determine if PCBs were present in this material.

5.4.4.2. Method

Two samples (FD-1 and FD-2) of the sediment material were collected at opposite ends of the trough using dedicated stainless steel spoons to fill sample containers provided by the Laboratory. Figure 5-1 shows the locations at which the two samples were collected and Appendix B contains photos of the floor trough and sample locations.

5.4.4.3. Results

The material sampled from beneath the pipes was medium gray in color, very dry, very loose, and light weight. The trough did not appear to be used for drainage for the building floor but to house pipes below grade. The trough was covered with a multiple segmented removable steel cover. Analytical results of the two samples indicate that elevated concentrations of PCBs are present in this “sediment” material.

Sample FD-1 (west) contained 1804 PPM of total PCBs and sample FD-2 (east) contained 25 PPM of total PCBs.

5.5. Site Survey and Base Map Preparation

Upon completion of all Remedial Investigation field tasks, Wendel Duchscherer of Lockport, New York, performed a land survey of the Site that included Site property boundaries, relevant Site features, topography, and drilling, excavation, and sample points. This information was used to generate a Site base map and report figures for the RI report. Ground control was established on Site that includes USGS vertical control and NY State Plane Coordinates for horizontal control. The base map developed for the

Site, Figure 1-2, covers the entire Site area of 4-acre study area, including the pending 1122 Seneca Street parcel.

6. Data Usability

Environmental samples were collected from on-Site oil/fill, groundwater, and soil vapor media during the Remedial Investigation and the two Interim Remedial Measures. The samples were collected for purposes of Site-wide characterization, confirmation of IRMs, and pre-characterization for anticipated removal of impacted soil/fill.

Site-Wide Characterization - Soil/fill and groundwater samples collected for Site-wide characterization were analyzed for target compound list (TCL) VOCs, TCL SVOCs, PCBs, target analyte list (TAL) metals, and cyanide. Sub-slab soil vapor samples were analyzed for VOCs.

Confirmation of IRMs - Soil/fill samples collected for confirmation of IRM removal actions (excavation sidewall and bottom samples) were analyzed for PCBs.

Pre-Characterization Samples – Soil/fill samples collected for pre-characterization of areas where additional removal of impacted material is likely were analyzed for PCBs on the 1122 and 1132 Seneca Street properties and for BAP on the 1146 Seneca Street property.

All soil and groundwater samples, except those collected for the second of two phases of the PCB pre-characterization sampling and the BAP pre-characterization , were sent to Test America, of Buffalo, New York. Soil samples collected during the second phase of the PCB pre-characterization and the BAP pre-characterization were analyzed by Paradigm Environmental, Inc. of Rochester, New York.

Subsurface soil vapor samples were submitted to Test America Laboratories of Burlington, Vermont for VOC analysis.

Environmental Quality Associates, Inc. (EQA), a qualified data validator, performed third-party validation of the soil, groundwater, and soil vapor analytical results collected during the RI. The data validation was conducted in accordance with the guidelines established by NYSDEC's Data Usability Summary Review (DUSR) process. The DUSR process was performed to provide a determination of whether the data meets the project specific criteria for data quality and data use.

Laboratory data summary forms were reviewed by the validator for application of validation qualifiers, per the USEPA Region 2 validation SOPs and the USEPA National Functional Guidelines for Data Review, with consideration of the requirements of the project Work Plan. The following criteria were reviewed:

- Laboratory narrative discussions.
- Case narratives
- Custody Documentation
- Holding times
- Surrogate and internal standard recoveries
- Matrix spike recoveries/duplicate correlations
- Field duplicate correlations
- Preparation/calibration blanks
- Matrix spiked blanks/laboratory control samples
- Calibration/CRI/CRA standards
- ICP interference check standards
- ICP serial dilution correlations
- Method compliance
- Sample result verification

Data Review Reports were prepared for sample delivery groups (SDGs) and are attached to this report as Appendix F. The Data Review Reports provide copies of the laboratory analytical results and descriptions of the criteria used to review the laboratory results and supporting quality control documentation. Analytical and validation results of the BAP pre-characterization sampling had not been received prior to submittal of this Draft report but will be included in the final RIR/RWP.

All data were deemed acceptable by the data validator, incorporating data qualifiers as appropriate.

The usability of the data, as assessed by the data validator, is presented in detail in the Data Usability Summary Reports provided in Appendix F. The data summary tables presented in Section 7 of the report use analytical results that have been validated, and when used in conjunction with historical data, provide the basis for Site evaluation and recommendations.

7. Site Contaminant Characterization

7.1. Introduction

The nature and extent of contamination at the1132-1146 Seneca Street Site was characterized through collection and analysis of surface and subsurface soil/fill, groundwater, and soil vapor samples as part of this remedial investigation. Sampling methodologies were performed in accordance with the NYSDEC and NYSDOH-approved Remedial Investigation/Interim Remedial Measures Work Plan (Malcolm Pirnie, Inc., July, 2009). Sampling protocols and methodologies for each sampled media are described in Section 4.0 of this report. Subsurface soil/fill and groundwater samples collected during the RI sampling events completed during October 2009 were submitted for analyses under chain-of-custody to Severn Trent Laboratory of Buffalo, New York. Soil vapor samples collected during the investigation were submitted for analyses under chain-of-custody to Severn Trent Laboratories of Burlington, Vermont. Phase II RI soil/fill characterization samples both PCBs and benzo(a)pyrene were analyzed by Paradigm Environmental Services, Inc. of Rochester, New York. Analytical services provided by all three laboratories were performed in accordance with the most current SW-846 and ASP2000 analytical methods and protocols. Appendix F contains Data Usability Summary Reports and a compact disc (CD) with analytical results as presented by the laboratories for all data collected under the RI and IRMs. Sampling locations and frequency of collection were based on observed Site conditions and review of the historical environmental data described in Section 3. Sampling locations for all media are provided on Figure 5-1.

The RI investigation included collection of nine surface soil/fill samples (0 to 2" depth) 10 subsurface soil/fill samples (> 2" depths), four shallow groundwater samples, four sub slab soil vapor samples, and two sediment/waste samples from a sub-grade pipe chase. Analytical results were utilized for overall Site contaminant characterization. Based on the results of the initial surface and subsurface soil/fill samples, some of which contained unexpectedly elevated levels of PCBs, a two-phased focused pre-characterization of the magnitude and extent of the impacted soil/fill was completed. This pre-characterization included the collection of 47 samples for PCBs as described in Section 5. Also, elevated concentrations of BAP prompted a similar pre-characterization sampling for BAP on the 1146 Seneca Street parcel involving an additional 38 surface soil samples collected in a grid pattern over the entire parcel. Analytical results of all samples collected during the RI and pre-characterization are discussed in this section and are presented in Tables 7-1 through 7-7.

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TABLE 7-1
Remedial Investigation Surface Soil - Organic Results
1132-1146 Seneca Street Site
Buffalo, NY

Sample ID Sample Depth (inches BGS) Sample Date	Restricted Use Soil Cleanup Objectives - Commercial	Restricted Use Soil Cleanup Objectives - Industrial	TP-2 0-2 10/14/2009	TP-3 0-2 10/14/2009	TP-5 0-2 10/14/2009	TP-7 0-2 10/15/2009	TP-9 0-2 10/15/2009	TP-10 0-2 10/15/2009	TP-13 0-2 10/15/2009	TP-14 0-2 10/15/2009	B-2 0.0-2 10/19/2009
Volatiles Organic Compounds (µg/kg)											
1,2,4-Trichlorobenzene					4.6 J						—
Methylene Chloride	500,000 [b]	1,000,000 [c]	20	3.6 J	1.5 J						—
Semi-Volatiles Organic Compounds (µg/kg)											
2-Methylnaphthalene					910 D12,J						
4-Methylphenol	500,000 [b]	1,000,000 [c]							4,800 D10		
Acenaphthene	500,000 [b]	1,000,000 [c]			2,600 D12,J						
Anthracene	500,000 [b]	1,000,000 [c]			4,300 D12,J					180 D10,J	
Benzo(a)anthracene	5,600	11,000	4,400 T10,D12,J	890 D12,J	7,900 D12,J	430 D10,J	1,800 D12,M4,J	750 D10,J	240 D10,J	660 D10,J	460 D10,J
Benzo(a)pyrene	1,000 [f]	1,100		970 D12,L1,J	**6,100 D12,L1,J**	500 D10,J	**3,300 D12,M4,J**	**1,500 D10,J**	250 D10,J	700 D10,J	
Benzo(b)fluoranthene	5,600	11,000	6,900 T10,D12,J	1,600 D12,J	9,900 D12,J	660 D10,J	3,100 D12,M4,J	1,000 D10,J	370 D10,J	1,100 D10,J	640 D10,ID4,J
Benzo(ghi)perylene	500,000 [b]	1,000,000 [c]		740 D12,J	3,200 D12,J	490 D10,J	2,100 D12,M4,J	1,100 D10,J		430 D10,J	
Benzo(k)fluoranthene	56,000	110,000						310 D10,J			
Carbazole					2,200 D12,J						
Chrysene	56,000	110,000	3,700 T10,D12,J	780 D12,J	7,800 D12,J	470 D10,J	3,100 D12,M4,J	940 D10,J	220 D10,J	670 D10,J	370 D10,J
Dibenzofuran	350,000	1,000,000 [c]			1,600 D12,J						
Fluoranthene	500,000 [b]	1,000,000 [c]	9,300 T10,D12,J	1,400 D12,J	18,000 D12	490 D10,J	2,200 D12,M4,J	1,000 D10,J	350 D10,J	1,300 D10,J	690 D10,J
Fluorene	500,000 [b]	1,000,000 [c]			2,600 D12,J						
Indeno(1,2,3-cd)pyrene	5,600	11,000		630 D12,J	2,900 D12,J	260 D10,J	1,000 D12,M4,J	450 D10,J	120 D10,J	360 D10,J	
Phenanthrene	500,000 [b]	1,000,000 [c]	5,700 T10,D12,J	600 D12,J	21,000 D12	290 D10,J	1,500 D12,M4,J	650 D10,J	270 D10,J	920 D10,J	440 D10,J
Pyrene	500,000 [b]	1,000,000 [c]	7,500 T10,D12,J	1,200 D12,J	15,000 D12	550 D10,J	4,000 D12,M4,J	990 D10,J	270 D10,J	1,100 D10,J	570 D10,J
PCB (µg/kg)											
Aroclor 1248											7,800 D08,J
Aroclor 1254				17,000 D08,QSU	68 QSU	880 D08	270	160	56	65	
Aroclor 1260			140,000 D08,QSU	33,000 D08,QSU	30 QSU	550 D08	240	94	24	48	40,000 D08
Totoal PCBs	1,000	25,000	**140,000**	**50,000**	98	1,430	510	254	80	113	**47,800**

Notes:

Only those analytes detected at a minimum of one location are shown. Blank cells indicate non-detect.

D08 - Dilution required due to high concentration of target analyte

D10 - Dilution required due to sample color

D12 - dilution required due to sample viscosity

J - Estimated value, analyte less than reporting limit but greater than method detection limit

QSU - Sulfur clean-up performed on extract

T10 - Sample had an adjusted final volume during extraction due to extract matrix or viscosity

-Bold value indicates exceedance of Industrial SCO.

-Shaded value indicates exceedance of Commercial SCO.

Restricted Use Footnotes

b - The SCOs for commercial use were capped at a maximum value of 500 ppm (500,000 ppb).

c - The SCOs for industrial use and the protection of groundwater were capped at a maximum value of 1000 ppm (1,000,000 ppb).

f - For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the Department of Health rural soil survey, the rural soil back ground concentration is used as the Track 2 SCO value for this site.

TABLE 7-2
Remedial Investigation Surface Soil - Metal Results
1132-1146 Seneca Street Site
Buffalo, NY

Sample ID Sample Depth (inches BGS) Sample Date	Restricted Use Soil Cleanup Objectives - Commercial	Restricted Use Soil Cleanup Objectives - Industrial	TP-2 0-2 10/14/2009	TP-3 0-2 10/14/2009	TP-5 0-2 10/14/2009	TP-7 0-2 10/15/2009	TP-9 0-2 10/15/2009	TP-10 0-2 10/15/2009	TP-13 0-2 10/15/2009	TP-14 0-2 10/15/2009	B-2 0.0-2 10/19/2009
Metals (mg/kg)											
Aluminum			5,460	5,100	10,800	9,560 B	9,840 B	9,040 B	8,550 B	9,090 B	7,960
Antimony			5 J	1 J			1 J				
Arsenic	16 [f]	16 [f]	8.4 B	4.5 B	7.8 B	11.2	15.8	11.6	7.5	14.9	8.0
Barium	400 [f]	10,000 [f]	79.5	113	108	91.7	157	131	72.2	130	92.2
Beryllium	590	2,700	0.795	0.622	0.795	0.798 B	0.960 B	0.932 B	0.532 B	0.648 B	0.614
Cadmium	9.30	60	1.120	0.625	0.428	0.195 J	0.796	0.163 J		0.426	0.399
Calcium			106,000 D08	159,000 D08	60,300	17,500	21,400	64,600	35,400	15,300	71,400
Chromium	400	800	11.8	7.00	15.2	12.8	16.8	12.8	11.6	15.8	12.5 B
Cobalt			3.00	2.61	6.32	5.37	5.61	5.15	5.72	4.78	6.87
Copper	270	10,000	185.0	48.8	37.5	36.4	61.0	54.8	27.8	34.4	44.8
Iron			12,800	8,540	16,400	18,000	20,100	17,800	15,300	14,600	16,800 B3
Lead	1,000	3,900	99.8	102	122	104	195	114	69.3	141	81.5
Magnesium			15,800 B	10,200 B	10,100 B	3,230	4,050	5,850	7,060	4,760	8,040
Manganese	10,000 [d]	10,000 [d]	484 B	321 B	581 B	626	786	492	308	371	385 B
Nickel	310 [b]	10,000 [c]	10.6	9.5	16.2	14.6	18.7	16	15.8	13.7	19.3
Potassium			815	847	1,660	1,040	1,400	1,240	1,420	1,130	1,320
Silver	1,500	6,800	1.090	2.070		0.152 J	0.286 J	0.210 J		0.181 J	1.080
Sodium			233	298	132 J	187 J	205	219 J	117 J	126 J	182
Thallium						2.2 J	2.1 J	2 J	1.2 J	1.4 J	
Vanadium			9.310	9.070	19.7	21.8	24.3	18.9	18.6	19.6	15.8
Zinc	10,000 [d]	10,000 [d]	207 B	143 B	131 B	150 B	283 B	132 B	90.1 B	206 B	90.7 B
Mercury	2.8 [j]	5.7 [j]	0.119	0.061	0.128	0.192	0.242	0.124	0.208	0.167	0.113

Notes:

Only those analytes detected at a minimum of one location are shown. Blank cells indicate non-detect.

B - Analyte detected in assocaited method blank

D08 - Dilution required due to high concentration of target analyte

J - Estimated value, analyte less than reporting limit but greater than method detection limit

-Bold value indicates exceedance of Industrial SCO.

-Shaded value indicates exceedance of Commercial SCO.

Restricted Use Footnotes

b - The SCOs for commercial use were capped at a maximum value of 500 ppm (500,000 ppb).

c - The SCOs for industrial use and the protection of groundwater were capped at a maximum value of 1000 ppm (1,000,000 ppb).

d - The SCOs for the metals were at a maximum value of 10,000 ppm.

f - For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the Department of Health rural soil survey, the rural soil back ground concentration is used as the Track 2 SCO value for this site.

j - This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts).

TABLE 7-3
Remedial Investigation Subsurface Soil - Organic Results
1132-1146 Seneca Street Site
Buffalo, NY

Sample ID Sample Depth (ft. BGS) Sample Date	Restricted Use Soil Cleanup Objectives - Commercial	Restricted Use Soil Cleanup Objectives - Industrial	TP-1 1.4-2.0 10/14/2009	TP-2 1.5-2 10/14/2009	TP-3 1-1.5 10/14/2009	TP-4 1-1.5 10/14/2009	TP-5 3.5-4.5 10/14/2009	TP-DUPL #1 (TP-5) 10/14/2009	TP-8 0.5-1.2 10/15/2009	TP-18 0.5-1.0 10/16/2009	B-2 0.5-1.0 10/19/2009	B-3 0.6-0.9 10/19/2009	B-5 0.5-2.0 10/19/2009
Volatiles Organic Compounds (µg/kg)													
1,2,4-Trichlorobenzene						250 D08						–	
1,2-Dichlorobenzene	500,000 [b]	1,000,000 [c]				3.8 J						–	
1,3-Dichlorobenzene	280,000	560,000				5.9 D08,J						–	
1,4-Dichlorobenzene	130,000	250,000				3.7 J						–	
2-Butanone	500,000 [b]	1,000,000 [c]	13 J	11 J	46		120 J	14 J				–	
Acetone	500,000 [b]	1,000,000 [c]	78	54	260	36 D08,J	410	86			14 J	–	
Methylene Chloride	500,000 [b]	1,000,000 [c]		2.7 J	2.9 J	2.8 J	24 J	2.3 J	6 J,B	11 B	11 B	–	4.8 J,B
Semi-Volatiles Organic Compounds (µg/kg)													
2-Methylnaphthalene													100 J,B
Acenaphthene	500,000 [b]	1,000,000 [c]											10 J
Benzo(a)anthracene	5,600	11,000			790 D12,J					220 D10,J			
Benzo(a)pyrene	1,000 [f]	1,100			630 D12,L1,J					200 D10,J			
Benzo(b)fluoranthene	5,600	11,000			1,100 D12,J					330 D10,J			
Chrysene	56,000	110,000			710 D12,J					230 D10,J			
Fluoranthene	500,000 [b]	1,000,000 [c]		400 D10,J	1,300 D12,J				210 D10,J	330 D10,J			
Indeno(1,2,3-cd)pyrene	5,600	11,000			380 D12,J								
Naphthalene	500,000 [b]	1,000,000 [c]											540 B
Phenanthrene	500,000 [b]	1,000,000 [c]			700 D12,J					250 D10,J			
Pyrene	500,000 [b]	1,000,000 [c]		280 D10,J	1,100 D12,J	140 D10,J				250 D10,J			
PCB (µg/kg)													
Aroclor 1248												1,500 D08,J	
Aroclor 1254			12 QSU,J		2,100 D08	23,000 D08	31 QSU	15 QSU,J					
Aroclor 1260			11 QSU,J	180 QSU	2,500 D08	5,100 D08	26 QSU	13 QSU,J			180 D08,J	4,200 D08	
Totoal PCBs	1,000	25,000	23	180	4,600	**28,100**	57	28			180	5,700	

Notes:

Only those analytes detected at a minimum of one location are shown. Blank cells indicate non-detect.

B - Analyte detected in assocaited method blank

D08 - Dilution required due to high concentration of target analyte

D10 - Dilution required due to sample color

D12 - dilution required due to sample viscosity

J - Estimated value, analyte less than reporting limit but greater than method detection limit

L1 -

QSU - Sulfur clean-up performed on extract

T10 - Sample had an adjusted final volume during extraction due to extract matrix or viscosity

-Bold value indicates exceedance of Industrial SCO.

-Shaded value indicates exceedance of Commercial SCO.

Restricted Use Footnotes

b - The SCOs for commercial use were capped at a maximum value of 500 ppm (500,000 ppb).

c - The SCOs for industrial use and the protection of groundwater were capped at a maximum value of 1000 ppm (1,000,000 ppb).

f - For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the Department of Health rural soil survey, the rural soil back ground concentration is used as the Track 2 SCO value for this site.

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TABLE 7-4
Remedial Investigation Soil PCB Precharacterization Results
1132-1146 Seneca Street Site
Buffalo, NY

Sample ID	RUSCO - Commercial	RUSCO - Industrial	A-U	A-L	B-U	B-L	C-U	C-L	Dup-L (C-L)
PCB (µg/kg)									
Aroclor 1242							14,000 D08	3,500 D08	2,800 D08
Aroclor 1248			1,900 D08, J		6,500 D08	380 D08, J			
Aroclor 1254			11,000 D08, B	250 QSU, B	16,000 D08, B	2,500 D08, B	34,000 D08,B	14,000 D08,B	11,000 D08,B
Aroclor 1260			27,000 D08	450 QSU	54,000 D08	6,000 D08	72,000 D08	22,000 D08	16,000 D08
Totoal PCBs	1,000	25,000	**39,900**	700	76,500	8,880	**120,000**	**39,500**	**29,800**

Sample ID	RUSCO - Commercial	RUSCO - Industrial	D-U	D-L	E-U	E-L	F-U	F-L	G-U
PCB (µg/kg)									
Aroclor 1242			5,900 D08				180,000 D08,J	24,000 D08	2,200 D08
Aroclor 1248				1,000		83 D08,			
Aroclor 1254			47,000 D08,B	3,200	7,000 D08,B	550 D08, QSU, B	780,000 D08,B	77,000 D08,B	17,000 D08,B
Aroclor 1260			53,000 D08	5,100	11,000 D08	1,100 D08,	1,100,000 D08	100,000 D08	28,000 D08
Totoal PCBs	1,000	25,000	**105,900**	9,300	18,000	1,733	**2,060,000**	**201,000**	**47,200**

Sample ID	RUSCO - Commercial	RUSCO - Industrial	G-L	H-U	H-L	I-U	I-L	J-U	J-L
PCB (µg/kg)									
Aroclor 1242									
Aroclor 1248			8,600 D08	9,600 D08	370 D08				
Aroclor 1254			26,000 D08,B	33,000 D08,B	2,100 D08,B	11,000 D08,QSU, B	6,000 D08,B	7,000 D08,B	4,000 D08,B
Aroclor 1260			16,000 D08	28,000 D08	2,400 D08	18,000 D08,QSU	6,000 D08	11,000 D08	6,000 D08
Totoal PCBs	1,000	25,000	**50,600**	**70,600**	4,870	**29,000**	12,000	18,000	10,000

Sample ID	RUSCO - Commercial	RUSCO - Industrial	K-U	K-L	L-U	Dup-U (L-U)	L-L	M-U	M-L
PCB (µg/kg)									
Aroclor 1242									
Aroclor 1248									
Aroclor 1254			260,000 D08,B	32,000 D08,B	2,800,000 D08,B	960,000 D08,B	27,000 D08,B	16,000 D08,B	13,000 D08,B
Aroclor 1260			74,000 D08,B	8,500 D08,B	290,000 D08,B	90,000 D08	4,400 D08,B	2,500 D08,B	2,400 D08,B
Totoal PCBs	1,000	25,000	**334,000**	**40,500**	**3,090,000**	**1,050,000**	**31,400**	18,500	15,400

Notes:

RSUCO - Industrial + NYSDEC Restricted Use Soil Cleanup Objectives for Industrial Use

RSUCO - Commercial = NYSDEC Restricted Use Soil Cleanup Objectives for Commercial Use

Only those analytes detected at a minimum of one location are shown. Blank cells indicate non-detect.

B - Analyte detected in assocaited method blank

D08 - Dilution required due to high concentration of target analyte

J - Estimated value, analyte less than reporting limit but greater than method detection limit

QSU - Sulfur clean-up performed on extract

Bold value indicates exceedance of Industrial SCO.

Shaded value indicates exceedance of Commercial SCO.

Shaded value indicates exceedance of 50,000 ug/kg Hazardous Waste Cleanup Level.

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TABLE 7-4
Remedial Investigation Soil PCB Precharacterization Results
1132-1146 Seneca Street Site
Buffalo, NY

Sample ID	RUSCO - Commercial	RUSCO - Industrial	N-U	N-L	O-L	O-L	P-U	P-L
PCB (µg/kg)								
Aroclor 1242					2,400 D08,B	1,800 D08,B	4,300 D08,B	700 D08,B
Aroclor 1248								
Aroclor 1254			14,000 D08,B	5,400 D08,B	17,000 D08,B	17,000 D08,B	16,000 D08,B	5,200 D08,B
Aroclor 1260			3,800 D08,B	1,500 D08,B	11,000 D08,B	9,200 D08,B	18,000 D08,B	5,900 D08,B
Totoal PCBs	1,000	25,000	17,800	6,900	**30,400**	**28,000**	**38,300**	11,800

Sample ID	RUSCO - Commercial	RUSCO - Industrial	D1-U	D1-L	H1-U	H1-L	K1-U	K1-L
PCB (µg/kg)								
Aroclor 1242								
Aroclor 1248								
Aroclor 1254			1,780	29	550		121	
Aroclor 1260			1,790		504		121	
Totoal PCBs	1,000	25,000	3,570	29	1,054	0	242	0

Sample ID	RUSCO - Commercial	RUSCO - Industrial	L1-U	Dup2-U (L1-U)	L1-L	O1-U	O1-L	P1-U	P1-L
PCB (µg/kg)									
Aroclor 1242									
Aroclor 1248									
Aroclor 1254									
Aroclor 1260			148	67.4		46.2		46.3	
Totoal PCBs	1,000	25,000	148	67	0	46	0	46	0

Sample ID	RUSCO - Commercial	RUSCO - Industrial	Q-U	U-U	U-L
PCB (µg/kg)					
Aroclor 1242					
Aroclor 1248					
Aroclor 1254				2,630	1,810
Aroclor 1260			186	2,670	2,010
Totoal PCBs	1,000	25,000	186	5,300	3,820

Notes:

RSUCO - Industrial + NYSDEC Restricted Use Soil Cleanup Objectives for Industrial Use

RSUCO - Commercial = NYSDEC Restricted Use Soil Cleanup Objectives for Commercial Use

Only those analytes detected at a minimum of one location are shown. Blank cells indicate non-detect.

B - Analyte detected in assocaited method blank

D08 - Dilution required due to high concentration of target analyte

J - Estimated value, analyte less than reporting limit but greater than method detection limit

QSU - Sulfur clean-up performed on extract

Bold value indicates exceedance of Industrial SCO.

Shaded value indicates exceedance of Commercial SCO.

Shaded value indicates exceedance of 50,000 ug/kg Hazardous Waste Cleanup Level.

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TABLE 7-5
Remedial Investigation Subsurface Soil - Metal Results
1132-1146 Seneca Street Site
Buffalo, NY

Sample ID Sample Depth (ft. BGS) Sample Date	Restricted Use Soil Cleanup Objectives - Commercial	Restricted Use Soil Cleanup Objectives - Industrial	TP-1 1.4-2.0 10/14/2009	TP-2 1.5-2 10/14/2009	TP-3 1-1.5 10/14/2009	TP-4 1-1.5 10/14/2009	TP-5 3.5-4.5 10/14/2009	TP-DUPL #1 (TP-5) 10/14/2009	TP-8 0.5-1.2 10/15/2009	TP-18 0.5-1.0 10/16/2009	B-2 0.5-1.0 10/19/2009	B-5 0.5-2.0 10/19/2009
Metals (mg/kg)												
Aluminum			15,700	4,820	11,900	5,100	24,800	24,200	20,300 B	7,410 B	3,720	6,540
Antimony				1 J		2 J						
Arsenic	16 [f]	16 [f]	13.5 B	9.7 B	8.2 B	**21.3 B**	12.6 B	13.2 B	9.0	13.6	10.7	2.3 J
Barium	400 [f]	10,000 [f]	111	261	119	134	195	113	123	130	194	58.9
Beryllium	590	2,700	0.741	0.635	0.759	0.850	1.580	1.790	1.080 B	0.665 B	0.599	0.296
Cadmium	9.30	60	0.259 J	0.593	0.555	1.210	0.510	0.489			0.134 J	0.120 J
Calcium			5,430	2,640	5,140	4,000	4,630	4,240	57,700	5,510	17,500	55,700
Chromium	400	800	16.2	8.28	12.2	7.29	26.8	28.1	18.6	10.6	4.94 B	9.26 B
Cobalt			8.73	4.59	8.94	18.3	28.4	30.6	3.23	7.86	3.35	4.30
Copper	270	10,000	34.6	35.9	20.4	44.4	14.6	9.6	14.7	47.5	27.8	10.9
Iron			25,400	15,800	29,900	24,300	75,200	101,000 D08	16,200	13,900	11,500 B3	10,400 B3
Lead	1,000	3,900	27	46.5	53	26.4	43.2	44.6	55.2	683	58.1	28.3
Magnesium			2,300 B	404 B	1,990 B	1,040 B	3,070 B	2,900 B	1,910	2,280	686	17,400
Manganese	10,000 [d]	10,000 [d]	230 B	111 B	1,710 B	1,520 B	1,730 B	1,570 B	2,510	235	78.7 B	289 B
Nickel	310 [b]	10,000 [c]	18.8	11.4	16.3	38.7	17.8	16.3	6.9	18.6	9.01	10.0
Potassium			947	464	768	761	1,150	1,030	2,300	1,230	321	1,220
Selenium	1,500	6,800	1.1 J	2 J	1 J						1.4 J	
Silver	1,500	6,800			0.134 J	0.221 J	0.154 J	0.139 J	0.124 J	0.172 J		
Sodium			899	100 J	145 J	118 J	329	251	695	224	106 J	126 J
Thallium				0.6 J					2.1 J	1 J		
Vanadium			26.8	23.9	23.1	14.3	66.4	82.2	33.1	20	13.1	13.3
Zinc	10,000 [d]	10,000 [d]	89.1 B	153 B	109 B	176 B	172 B	175 B	53.6 B	100 B	50.5 B	48.6 B
Mercury	2.8 [j]	5.7 [j]	0.146	0.0882	0.299	0.0867	0.100	0.0557	0.0947	0.486	0.0635	0.0691

Notes:

Only those analytes detected at a minimum of one location are shown. Blank cells indicate non-detect.

B - Analyte detected in assocaited method blank

D08 - Dilution required due to high concentration of target analyte

D10 - Dilution required due to sample color

D12 - dilution required due to sample viscosity

J - Estimated value, analyte less than reporting limit but greater than method detection limit

QSU - Sulfur clean-up performed on extract

T10 - Sample had an adjusted final volume during extraction due to extract matrix or viscosity

-Bold value indicates exceedance of Industrial SCO.

-Shaded value indicates exceedance of Commercial SCO.

Restricted Use Footnotes

b - The SCOs for commercial use were capped at a maximum value of 500 ppm (500,000 ppb).

c - The SCOs for industrial use and the protection of groundwater were capped at a maximum value of 1000 ppm (1,000,000 ppb).

d - The SCOs for the metals were at a maximum value of 10,000 ppm.

f - For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the Department of Health rural soil survey, the rural soil back ground concentration is used as the Track 2 SCO value for this site.

j - This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts).

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TABLE 7-6
Remedial Investigation Groundwater Sampling Results
1132-1146 Seneca Street Site
Buffalo, NY

Sample ID Sample Date	NYSDEC Class GA Groundwater Quality Standards	B-1 10/22/2009	B-DUP#1 (B-1) 10/22/2009	B-2 10/22/2009	B-4 11/3/2009 and 11/4/2009 [1]	B-5 10/22/2009
Volatiles Organic Compounds (µg/l)						
Acetone						10
Benzene	1					0.59 J
Cyclohexane						0.61 J
Methylcyclohexane						0.9 J
Methylene Chloride	5				1.2 J	
Toluene	5					3.6
Xylenes, total	5					2.2
Semi-Volatiles Organic Compounds (µg/l)						
2-Methylnaphthalene						0.58 H4,J
Acetophenone						2.4 H4,J
Anthracene			0.3 J			
Benzaldehyde						3.5 J
Benzo(a)anthracene		0.44 H4,J				
Benzo(a)pyrene	ND		0.46 J			
Benzo(b)fluoranthene		0.27 H4,J	0.49 J			
Benzo(ghi)perylene			0.34 J			
Benzo(k)fluoranthene		0.2 H4,J	0.32 J			
Bis(2-ethylhexyl) phthalate	5				4.9	
Chrysene		0.38 H4,J				
Diethyl phthalate		0.42 H4,J	0.33 J,B			1.2 L,J
Di-n-butyl phthalate	50	0.44 J	0.55 J	0.36 J	1.7 J	0.72 J
Fluoranthene		0.5 H4,J	1 J			
Indeno(1,2,3-cd)pyrene			0.29 J			
Phenanthrene			0.71 J			0.75 J
Phenol	1		7.4			0.92 H4,J
PCBs (µg/l)						
Aroclor 1242						
Aroclor 1248						
Aroclor 1254						
Aroclor 1260						
Totoal PCBs	0.09					
Metals (mg/l)						
Aluminum		0.775	0.616	2.45	4.26	1.18
Arsenic	0.025			0.0136	0.0081 J	
Barium	1	0.149	0.152	0.12	0.0976	0.0673
Beryllium			0.0003 J	0.0004 J		
Calcium		176	180	302	193	145
Chromium	0.05	0.0012 J	0.0011 J	0.0023 J	0.0074	0.0023 J
Cobalt				0.0043	0.0032 J	0.0044
Copper	0.2	0.0016 J		0.0032 J	0.0133	0.0022 J
Iron	0.3	6.55	6.6	11.2	5.02	1.1
Lead	0.025				0.0074	
Magnesium		41.8	42.2	54.2	32.2	31
Manganese	0.3	1.79	1.82	2.27	1.97	0.285
Nickel	0.1	0.0021 J	0.0026 J	0.0089 J	0.0079 J	0.0057 J
Potassium		6.78	7.04	9.54	13.4	17.5
Sodium	20	147	150	51.7	40.3	15.4
Vanadium		0.0021 J	0.0019 J	0.0055	0.0087	0.0027 J
Zinc		0.0043 J	0.0036 J	0.0256	0.0187	0.0067 J

Notes:

[1] Due to low recharge rates at B-4, the sample was collected over the course of two days. Two samples were submitted for SVOC analysis. The

Only those analytes detected at a minimum of one location are shown. Blank cells indicate non-detect.

B - Analyte detected in assocaited method blank

H4 - Sample was extraced past holding time, but analyzed within analysis holding time.

J - Estimated value, analyte less than reporting limit but greater than method detection limit

-Shaded value indicates exceedance of NYSDEC Class GA Groundwater Quality Standards (6 NYCRR Part 703).

Prepared by:BW on 11/25/2009
Checked by:JR on 11/30/2009

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TABLE 7-7
Remedial Investigation Soil Vapor Results
1132-1146 Seneca Street Site
Buffalo, NY

Sample ID Sample Date	SV-1 10/21/2009	SV-2 10/21/2009	SV-3 10/21/2009	SV-4 10/21/2009	DUP (at SV-4) 10/21/2009
Volatiles Organic Compounds (µg/m^3)					
1,1,1-Trichloroethane	20	82	6.0		
1,2,4-Trimethylbenzene	2.0	4.6		1.2	1.4
1,3,5-Trimethylbenzene	0.98				
1,3-Butadiene			1.8		
Acetone	29	260	55	76	76
Benzene	1.3	3.5	4.2	1.8	2.3
Carbon Disulfide	2.3	8.1	14		
Chloromethane				1.3	1.3
Cyclohexane	10	10	7.6	1.5	3.8
Dichlorodifluoromethane				2.7	2.7
Ethylbenzene	23		1.7	4.8	4.1
Methyl Ethyl Ketone	2.6	9.4	6.2	2.2	2.4
Methylene Chloride				2.0	
n-Heptane	3.6	41	15	2.3	5.7
n-Hexane	56	74	27	6.3	11
Styrene				6.0	7.7
Toluene	4.5	11	3.1	4.1	5.3
Trichlorofluoromethane	3.6		2.4	2.4	2.6
Xylene (m,p)	120	10	8.3	26	22
Xylene (o)	41	4.0	3.2	11	9.6
Xylene (total)	160	13	11	36	30

Notes:
Only those analytes detected at a minimum of one location are shown. Blank cells indicate non-detect.
Samples collected from four sub slab sampling points and analyzed for VOCs by the analytical Laboratory using USEPA Compendium Method TO-15.

Prepared by:BW on 11/25/2009
Checked by:JR on 11/30/2009

Analytical parameters and comparison standards/criteria for each media samples are summarized as follows:

- Surface and subsurface soil/fill samples were analyzed for VOCs, SVOCs, PCBs, TAL metals and cyanide. Analytical results have been compared to the NYS Recommended Soil Cleanup Objectives (Restricted Commercial and Restricted Industrial) (NYSDEC, 2006).
- Groundwater samples were analyzed for VOCs, SVOCs, PCBs, TAL metals and cyanide and have been compared to NYSDEC Class GA groundwater standards and guidance values, (6NYCRR Part 360) (NYSDEC, 1998).
- Soil vapor samples were analyzed for VOCs and analytical results have been compared to NYSDOH Air Guideline Values (NYSDOH, 2006 and Litwin, 2007).

7.2. Surface Soil/Fill Sample Results

Chemical analyses of nine surface soil samples collected at the Site during the 2009 RI identified PCBs at concentrations that exceed NYSDEC Restricted Commercial and Residential Industrial Soil Cleanup Objectives (SCOs). The RI samples were collected at select soil boring and test pit locations throughout the Site.

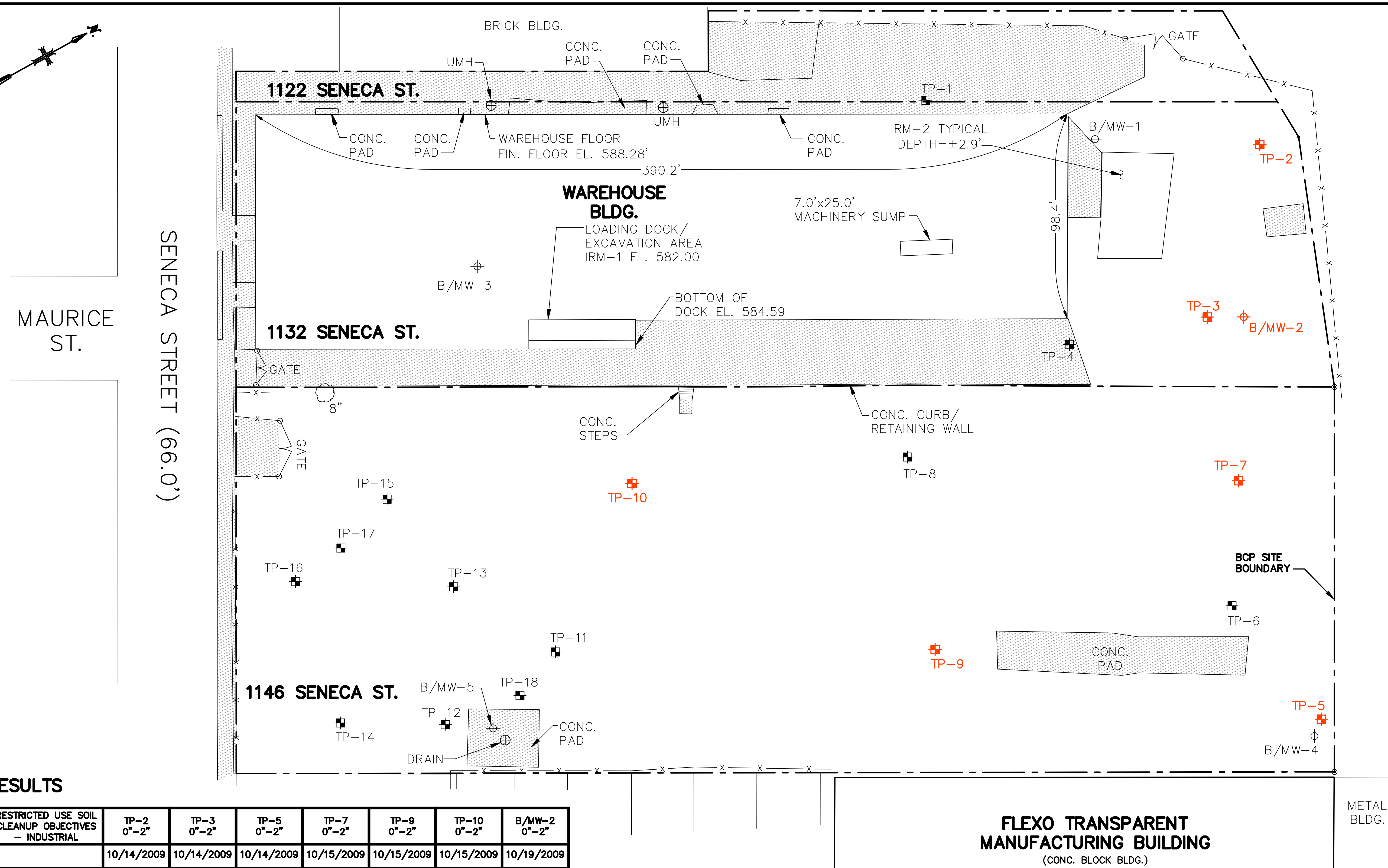
Analytical results for the surface soil samples are summarized in Tables 7-1 and 7-2 and SCO exceedances illustrated on Figure 7-1.

VOCs

VOCs were not detected in surface soil samples at concentrations in excess of NYSDEC SCOs. Low concentrations of methylene chloride and 1,2,4-trichlorobenzene analytes were detected at three and one location respectively. Methylene chloride is a common lab contaminant and its detection at very low concentrations is believed to represent a laboratory contaminant and not Site related, See Table 7-1.

SVOCs

Several SVOCs were detected in all surface soil samples collected during the RI. Examination of Table 7-1 identified just three SVOCs, all polycyclic aromatic hydrocarbons (PAHs) including; benzo(a)anthracene, benzo(a)pyrene, and benzo(b)flouranthene at concentrations in excess of NYSDEC SCO for restricted commercial use. Benzo(a)pyrene, at three sample locations, was detected above the restricted industrial SCO of 1,100 ug/kg, See Table 7-1. Additional characterization of the elevated benzo(a)pyrene was performed on the 1146 Seneca Street property to determine necessary remedial measures. Of the 38 additional samples collected for BAP, 18 contained BAP at a concentration greater than the industrial SCO Table 7-1A provides a summary of analytical results of the pre-characterization surface soil sampling for BAP.



SURFACE SOIL SAMPLING RESULTS

SAMPLE ID SAMPLE DEPTH (INCHES BSG)	RESTRICTED USE SOIL CLEANUP OBJECTIVES – COMMERCIAL	RESTRICTED USE SOIL CLEANUP OBJECTIVES – INDUSTRIAL	TP-2 0"-2"	TP-3 0"-2"	TP-5 0"-2"	TP-7 0"-2"	TP-9 0"-2"	TP-10 0"-2"	B/MW-2 0"-2"
SAMPLE DATE			10/14/2009	10/14/2009	10/14/2009	10/15/2009	10/15/2009	10/15/2009	10/19/2009
VOLATILES ORGANIC COMPOUNDS (mg/kg)									
SEMI-VOLATILES ORGANIC COMPOUNDS (mg/kg)									
BENZO(A)ANTHRACENE	5.6	11	–	–	7.9	–	–	–	–
BENZO(A)PYRENE	1	1.1	–	–	6.1	–	3.3	1.5	–
BENZO(B)FLUORANTHENE	5.6	11	6.9	–	9.9	–	–	–	–
PCBs (mg/kg)									
TOTAL PCBs	1	25	140	50	–	1.4	–	–	47.8

25 0 25 50
SCALE: 1" = 50'

MALCOLM PIRNIE

FLEXO TRANSPARENT, INC.
BUFFALO, NEW YORK
REMEDIAL INVESTIGATION REPORT
1132–1146 SENECA STREET BCP REDEVELOPMENT

ANALYTICAL EXCEEDENCES IN SURFACE SOIL

MALCOLM PIRNIE, INC.
APRIL 2010
FIGURE 7–1

MALCOLM PIRNIE

TABLE 7-1A
Remedial Investigation Subsurface Soil - Benzo (a) Pyrene Results
1132-1146 Seneca Street Site
Buffalo, NY

Sample ID	Sample Depth (inches BGS)	Sample Collection Date	Benzo (a) pyrene (mg/kg)
Restricted Use Soil Cleanup Objective - Commercial			1.00 [f]
Restricted Use Soil Cleanup Objective - Industrial			1.10
SS-1	0-2	7/1/2010	
SS-2	0-2	7/1/2010	0.23 J
SS-3	0-2	7/1/2010	0.48
SS-3 (DUP-1)	0-2	7/1/2010	0.52
SS-4	0-2	7/1/2010	**1.32**
SS-5	0-2	7/1/2010	1.09
SS-6	0-2	7/1/2010	1.00
SS-7	0-2	7/1/2010	**1.39**
SS-8	0-2	7/1/2010	0.84
SS-9	0-2	7/1/2010	0.35 J
SS-10	0-2	7/1/2010	0.62
SS-11	0-2	7/1/2010	0.69
SS-12	0-2	7/1/2010	
SS-13	0-2	7/1/2010	0.76
SS-14	0-2	7/1/2010	**3.22**
SS-15	0-2	7/1/2010	**2.35**
SS-16	0-2	7/1/2010	**1.45**
SS-17	0-2	7/1/2010	**2.20**
SS-18	0-2	7/1/2010	**8.93**
SS-19	0-2	7/1/2010	0.85
SS-20	0-2	7/1/2010	**1.45**
SS-21	0-2	7/1/2010	0.57 J
SS-22	0-2	7/1/2010	0.38
SS-23	0-2	7/1/2010	0.66
SS-24	0-2	7/1/2010	**2.54**
SS-25	0-2	7/1/2010	0.66
SS-25 (DUP-2)	0-2	7/1/2010	1.09
SS-26	0-2	7/1/2010	**2.86**
SS-27	0-2	7/1/2010	0.73
SS-28	0-2	7/1/2010	**1.95**
SS-29	0-2	7/1/2010	**21.70**
SS-30	0-2	7/1/2010	
SS-31	0-2	7/1/2010	**1.92**
SS-32	0-2	7/1/2010	0.87
SS-33	0-2	7/1/2010	**1.38**
SS-34	0-2	7/1/2010	1.08
SS-35	0-2	7/1/2010	**1.35**
SS-36	0-2	7/1/2010	**2.02**
SS-37	0-2	7/1/2010	**1.31**
SS-38	0-2	7/1/2010	**3.26**

Notes:

Blank cells indicate non-detect.

J - Estimated value, analyte less than reporting limit but greater than method detection limit

-Shaded value indicates exceedance of Commercial SCO.

-Bold value indicates exceedance of Industrial SCO.

Restricted Use Footnotes

b - The SCOs for commercial use were capped at a maximum value of 500 ppm (500,000 ppb).

c - The SCOs for industrial use and the protection of groundwater were capped at a maximum value of 1000 ppm (1,000,000 ppb).

f - For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the Department of Health rural soil survey, the rural soil back ground concentration is used as the Track 2 SCO value for this site.

PCBs

PCBs were detected in all surface soil samples collected as part of the RI. All surface soil samples collected from the 1146 Seneca Street property contained PCBs at concentrations below the restricted commercial SCO of 1 PPM.

All surface soil/fill samples collected from the 1132 Seneca Street property contained PCBs at concentrations above the restricted commercial SCO of 1 PPM and three of four RI samples exceed the restricted industrial SCO of 25 PPM, See Figure 7-1 and Table 7-1.

Metals

All surface soil samples contained several metals, all at concentrations below restricted commercial and industrial SCOs, See Table 7-2.

7.3. Subsurface Soil Results

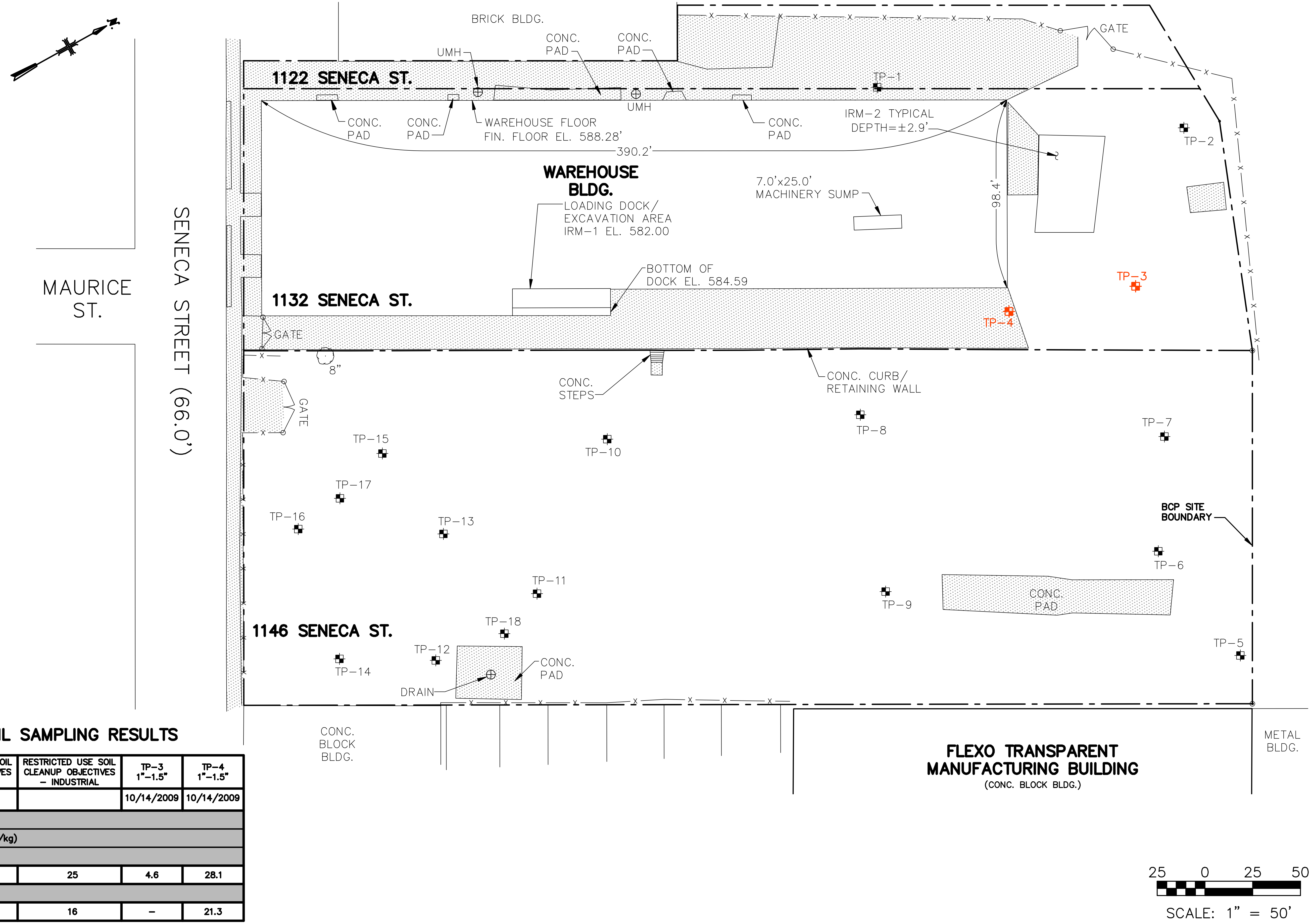
Subsurface soil/fill samples, (samples collected below the 2" depth), were collected at 10 test pit or soil boring locations throughout the Site during the RI investigation, see Figures 7-2, and 7-3 and Tables 7-3, 7-4, and 7-5.

Each sample was analyzed for VOCs, SVOCs, PCBs, metals, and cyanide. Based on the analytical results of these 10 samples which revealed unexpectedly high PCB concentrations at some locations on the 1132 Seneca Street property, additional sampling was performed to delineate the extent of the PCB impacted soil fill.

VOCs

None of the 10 subsurface soil samples collected for VOC analysis contained VOCs at concentrations above restricted commercial or industrial SCOs. Nearly all of the subsurface soils collected contained low concentrations of 2-butanone, acetone, and methylene chloride. These compounds, when found at such low levels, are often attributable to laboratory sample container and/or equipment cleaning operations. The only other VOCs detected in subsurface soil samples were four chlorobenzenes that were detected at low concentrations at sample location TP-4. Sample TP-4 was collected near the northeast corner of the former manufacturing building on the 1132 Seneca street parcel.

SVOCs



SUBSURFACE SOIL SAMPLING RESULTS

SAMPLE ID SAMPLE DEPTH (INCHES BSG)	RESTRICTED USE SOIL CLEANUP OBJECTIVES – COMMERCIAL	RESTRICTED USE SOIL CLEANUP OBJECTIVES – INDUSTRIAL	TP-3 1"-1.5"	TP-4 1"-1.5"
SAMPLE DATE			10/14/2009	10/14/2009
VOLATILES ORGANIC COMPOUNDS (mg/kg)				
SEMI-VOLATILES ORGANIC COMPOUNDS (mg/kg)				
PCBs (mg/kg)				
TOTAL PCBs	1	25	4.6	28.1
METALS (mg/kg)				
ARSENIC	16	16	–	21.3

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ANALYTICAL EXCEEDENCES IN SUBSURFACE SOIL

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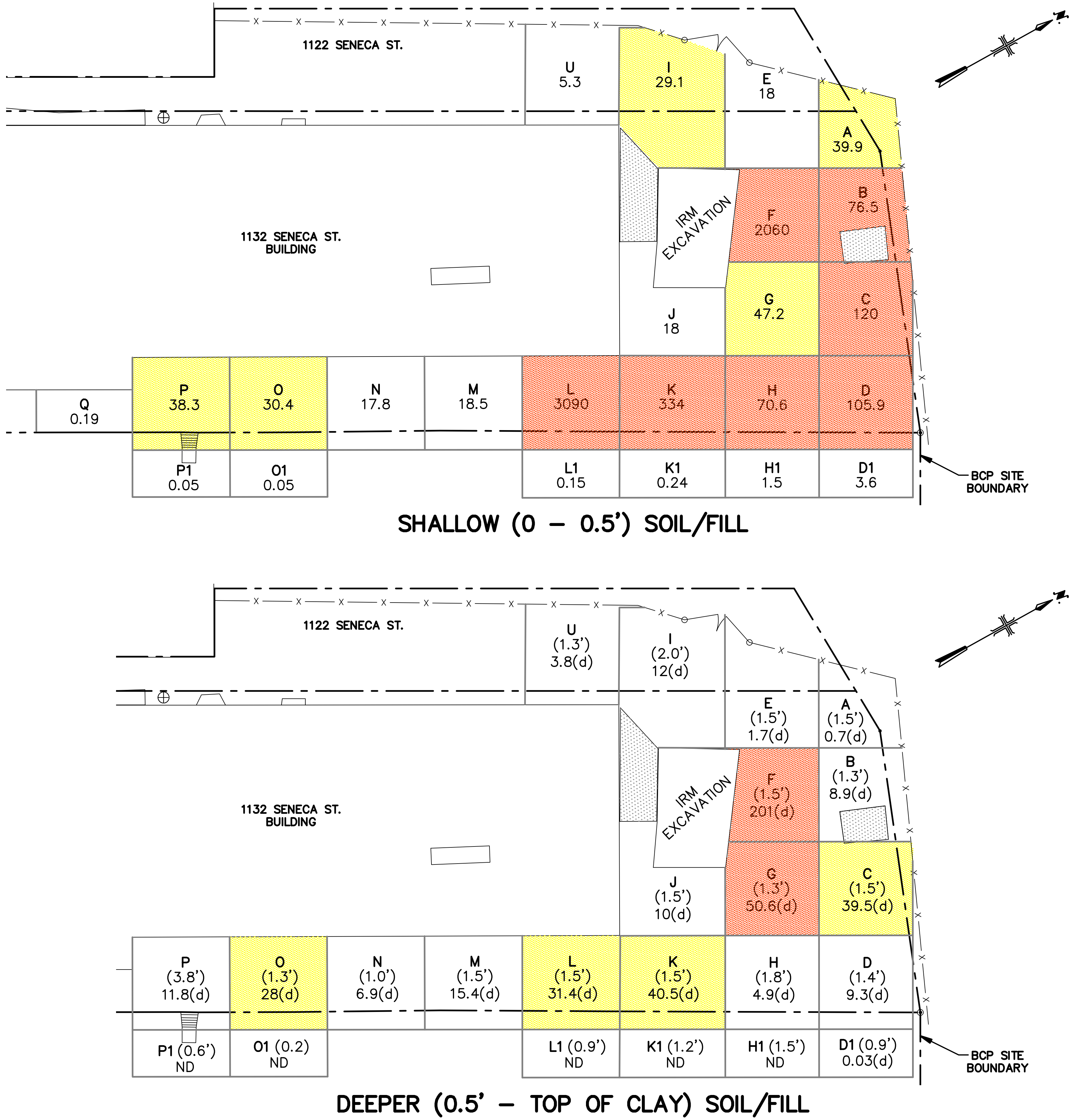
FIGURE 7-2



LEGEND

TOTAL PCB's > 25 PPM (INDUSTRIAL SOIL CLEANUP OBJECTIVE)

TOTAL PCB's > 50 PPM (HAZARDOUS WASTE – CLEANUP LEVEL)

PROPERTY LINE

EXISTING FENCE

A — CELL ID

P1 — ADJACENT CELL ID

39.9 — TOTAL PCB CONCENTRATION IN THE UPPER 6" OF FILL (UNITS OF PPM)

0.7(d) — TOTAL PCB CONCENTRATION IN FILL BELOW UPPER 6" OF FILL (UNITS OF PPM)

(1.5') — THICKNESS OF FILL BELOW UPPER 6" AND BELOW CONCRETE IF PRESENT

25 0 25 50

SCALE: 1" = 50'

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EXTENT OF PCB–IMPACTED SOIL/FILL

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FIGURE 7–3

Low concentrations of one or more SVOCs were detected in six of the 10 subsurface soil samples analyzed for SVOCs, none at concentrations above restricted commercial or industrial SCOs.

PCBs

Elevated concentrations of PCBs, were detected in subsurface soil/fill initially at two locations (Test pits TP-3 and TP-4) on the 1132 Seneca Street property. These locations contained concentrations of 4.6 PPM and 28.1 PPM respectively. Most of the eight samples collected on the 1146 Seneca Street property did contain PCBs but at concentrations less than the restricted residential SCO of 1 PPM.

With the highest allowable SCO for PCBs being the restricted industrial SCO of 25 PPM, and the presence of PCBs above that level confirmed on the 1132 Seneca Street property, a two-phased focused, pre-characterization sampling program was implemented to characterize the magnitude and extent of PCB impacted soil fill. As described in Section 5.4.1.2, composite samples were collected from two depths within the soil/fill layer. Upper (U) samples were collected from the top six inches of soil/fill and the lower (L) samples collected from six inches to the base of the soil/fill unit, at the interface with the native silty clay. All pre-characterization samples were analyzed for PCBs only.

Table 7-4 provides the PCB analytical results of the pre-characterization sampling program, and Figure 7-3 provides a color graphic presentation of these same data.

As illustrated on Figure 7-3, most of the area to the north and some areas east of the former manufacturing building on the 1132 Seneca Street property contain PCBs in the upper six inches of soil/fill at concentrations above the restricted industrial SCO of 25 PPM and some of these areas above 50 PPM, thus considered hazardous waste.

As also depicted on Figure 7-3, approximately half of the area containing PCBs above the SCO in the upper six inches also contains such elevated PCB concentrations in the deeper soil/fill, between the six inch depth and the base of soil/fill. This deeper interval averages approximately 1.5 feet thick.

The extent of PCB-impacted soil/fill requiring remedial action was determined to be limited to the 1132 (and 1122) Seneca Street properties, and limited to the soil/fill material above the native silty clay.

Metal

All surface soil samples contained several metals at concentrations below restricted commercial and industrial SCOs. Just one sample (TP-4), located on the 1146 Seneca Street property, contained one metal (arsenic) at a concentration of 21.3 mg/kg, slightly above the restricted commercial and industrial SCO of 16 mg/kg, See Figure 7-2 and Table 7-5.

7.4. Groundwater Results

VOCs

With the exception of a trace concentration of methylene chloride in monitoring well B/MW-4 (sample B-4), only one groundwater sample contained detectable VOCs. The groundwater sample collected from well B/MW-5, located along the eastern boundary of the Site within what is believed to be the foundation of a two-bay former auto repair garage, contained low concentrations of six VOCs. Most of the VOC compounds detected in this sample are BTEX compounds that are commonly found associated with petroleum filling stations and auto servicing facilities where gasoline and lubricating oils are present. None of the VOCs detected were present at concentrations above the Class GA groundwater standards, see Table 7-6 and Figure 7-4.

SVOCs

Each of the four groundwater samples collected contained one or more SVOCs, most of which were in the PAH sub-group of SVOCs. Just two of these compounds were present at concentrations above the Class GA groundwater standards. Benzo(a)pyrene and phenol in the duplicate sample collected from well B/MW-1 slightly exceeded their respective standards. This well is located near the northwest corner of the former manufacturing building on the 1132 Seneca Street property.

PCBs

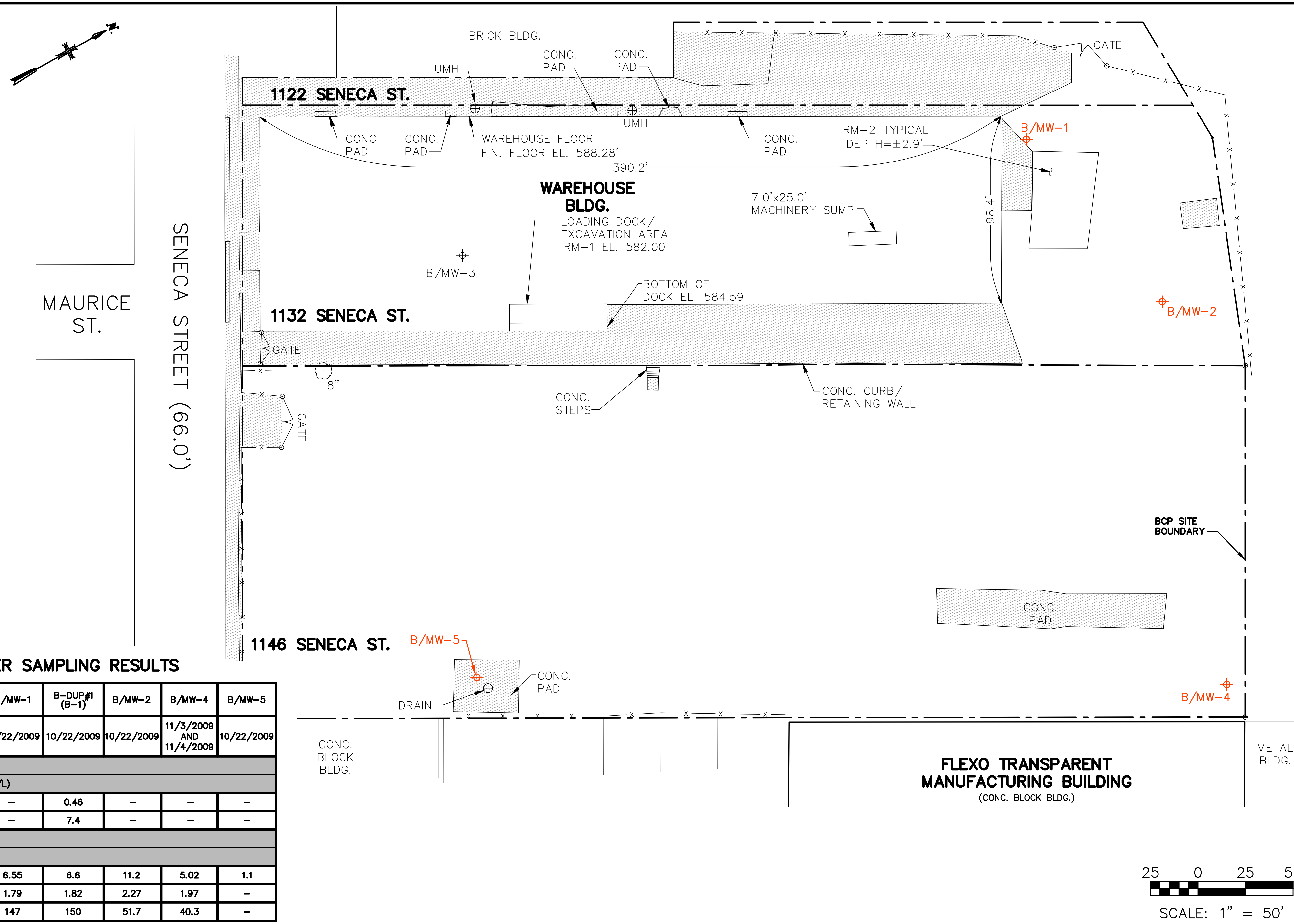
PCBs were not present above analytical detection limits in any of the groundwater samples collected.

Metals

Several metals were present in all groundwater samples collected. Iron, manganese, and sodium concentrations were present at concentrations above the Class GA groundwater standards in most wells. These analytes are locally naturally occurring at such levels and iron and sodium are common nutrients necessary for human health.

7.5. Sub-Slab Soil Vapor Results

The concentrations of VOCs measured in soil vapor samples were compared to NYSDOH air guidance values for tetrachloroethene (PCE); trichloroethene (TCE); 1,1,1-trichloroethane (1,1,1-TCA); and cis-1,2-dichloroethylene (cis-1,2-DCE); as outlined in Matrices 1 and 2 in the draft guidance (NYSDOH, 2006 and Litwin, 2007). Since no



GROUNDWATER SAMPLING RESULTS

SAMPLE ID	NYSDEC CLASS GA GROUNDWATER QUALITY STANDARDS	B/MW-1	B-DUP#1 (B-1)	B/MW-2	B/MW-4	B/MW-5
SAMPLE DATE		10/22/2009	10/22/2009	10/22/2009	11/3/2009 AND 11/4/2009	10/22/2009
VOLATILES ORGANIC COMPOUNDS (ug/L)						
SEMI-VOLATILES ORGANIC COMPOUNDS (ug/L)						
BENZO(A)PYRENE	ND	–	0.46	–	–	–
PHENOL	1	–	7.4	–	–	–
PCBs (ug/L)						
METALS (mg/L)						
IRON	0.3	6.55	6.6	11.2	5.02	1.1
MANGANESE	0.3	1.79	1.82	2.27	1.97	–
SODIUM	20	147	150	51.7	40.3	–

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ANALYTICAL EXCEEDENCES IN GROUNDWATER

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FIGURE 7-4

indoor air samples were collected, the evaluation of VOCs in the soil vapor to NYSDOH guidelines was limited to only one axis of the NYSDOH Matrices. Using only one axis to the air matrices results in an evaluation based strictly on the potential recommended action. The recommended actions are divided into the need to monitor / mitigate, or mitigate. The monitor/mitigate action is recommended for sub-slab soil vapor concentrations that are greater than 50 mcg/m^3 but less than 250 mcg/m^3, for compounds included in decision matrix 1 (TCE); and greater than 100 mcg/m^3 but less than 1000 mcg/m^3 for those compounds in decision matrix 2 (PCE, 1,1,1-TCA, cis-1,2-DCE). Compounds in Matrix 1 with concentrations greater than 250 mcg/m^3 have a recommended action of mitigation, while compounds in Matrix 2 with concentrations greater than 1,000 mcg/m^3 have a recommended action of mitigation.

All VOC concentrations detected in sub-slab soil vapor collected at the Site were less than the NYSDOH air guideline value for mitigation or monitoring (NYSDOH, 2006), See Table 7-7.

Vapor Intrusion Pathway Assessment

The NYSDEC and NYSDOH do not currently provide specific guidance values for allowable concentrations of most VOCs in soil vapor or indoor air. The NYSDOH guidance considers concentrations of VOCs in both subsurface soil vapor and indoor air in order to identify requirements for further assessment of exposure risks and/or exposure pathways. Because VOCs were detected in the sub-slab soil vapor, even at trace levels, the human health assessment in Section 8 includes a soil vapor intrusion pathway as a conservative practice.

8. Human Health Evaluation

This section presents a qualitative evaluation of the potential for exposure and adverse human health effects associated with chemicals detected in sampled environmental media at the Brownfield Cleanup Program (BCP) Site. The human health evaluation (HHE) supplements the Remedial Investigation (RI) that was performed from October to December 2009 to characterize soil/fill, groundwater, and sub-slab soil vapor at the Site and to support the Site's future re-use. For the purposes of this HHE, it was assumed the volunteer will redevelop the Site as an expansion to their current business. The Site will have light industrial, office, and related parking uses.

8.1. Overview

Although qualitative, the HHE follows the four-step process typically used to assess potential human health risks:

<u>Data evaluation</u>: relevant analytical data from the RI are compiled and evaluated to determine their usability and to select chemicals of potential concern (COPC) representative of Site conditions. Additional soil/fill data from Phase II Site Assessments (SA) conducted at 1132 and 1146 Seneca Street in March 2008 were included in data summaries presented in this HHE.

<u>Exposure Assessment</u>: actual and/or potential chemical release mechanisms and migration pathways are evaluated and potentially exposed human populations, possible exposure pathways, and potential exposure routes are identified.

<u>Toxicity Assessment</u>: qualitative toxicity information is presented for each COPC identified for the Site.

<u>Risk Characterization</u>: the potential for adverse human health effects, in terms of both non-carcinogenic hazard and carcinogenic risk, is evaluated, currently and for the future, in the absence of further Site remediation. The uncertainties in this qualitative evaluation are also briefly discussed.

8.2. Site Description

The Site is composed of three adjoining properties located at 1122, 1132 and 1146 Seneca Street, Buffalo, Erie County, New York (Figure 1-2). The Site is located in a mixed commercial/light industrial and residential area. The Site is bounded by vacant property to the north, by Seneca Street to the south, by the City of Buffalo Engineering Garage to the west, and by mixed-use properties (i.e., commercial, residential, and light industrial buildings along Wasson Street) to the east. The volunteer, Flexo-Transparent, Inc., is located adjacent and northeast of the 1146 Seneca Street property at 28 Wasson Street. Residential properties are also south and east of the site, on the opposite sides of Seneca Street and Wasson Street, respectively.

The Site consists of a former manufacturing building on the 1132 Seneca Street property and vacant land immediately to the west (1122 Seneca Street) and to the east (1146 Seneca Street). The former manufacturing building once housed office, warehouse, and manufacturing spaces. Historic operations at 1132 Seneca Street include lumber and railroad yards, manufacture of electrical transformers and machines (Westinghouse and Eastern Electric), and most recently, the manufacture of fiberglass railroad transfer platforms (Fiberight). The building occupies the majority of the 1132 Seneca Street property area. However, paved access roads lead from Seneca Street along the eastern and western sides of the building to an unpaved dirt/gravel area on the northern side of the building. The northern area is vacant and was covered with crushed stone and grass.

The vacant land at 1146 Seneca Street is approximately 2 acres and is covered with mowed patchy grass and two concrete pads. Historic operations on the 1146 property include lumber and railroad yards, clay products manufacturing, and a two-bay auto service garage. A portion of the property may also have been used by Westinghouse and Eastern Electric for the manufacture of transformers and machines.

The Site is surrounded by a chain-link fence on the southern, eastern, and western sides, and there are locked access gates along the southern boundary with Seneca Street. A chain-link fence is present along the northern side of 1132 Seneca Street. The northern side of 1146 Seneca Street is not fenced but is difficult to access because of overgrown vegetation.

There are no surface water bodies or wetlands on the Site. Site topography and that of the surrounding area are generally flat with a perceptible gentle westerly slope towards Lake Erie. In the broad scope of localized surface water discharge, the westward-flowing Buffalo River is located approximately 0.5-mile south of the Site and discharges to Lake Erie approximately three miles west of the Site.

Soils on the Site are classified as Urban Land, containing undifferentiated and disturbed soil/fill. Site investigations have revealed soil/fill is generally black-gray, fine to coarse grain sand with silt and trace clay admixed with construction and demolition debris composed of wood, concrete, brick and gravel. Fill thicknesses in test pits excavated during the RI ranged between 0.5 and 3.7 feet across the Site. Native glacial deposits of silt/sand and clay are present beneath the soil/fill. The native clay layer restricts the potential downward migration of groundwater and chemicals in the soil/fill layer to the underlying soils and bedrock.

Overburden groundwater, when present, is perched on the native silt/clay layer and is discontinuous across the Site. The depth to shallow groundwater has been measured in temporary monitoring wells on the Site as 0.1 to 4.1 feet below ground surface (bgs). Based on local topography and the location of the nearest major surface water body (i.e., the Buffalo River), deep bedrock groundwater is expected to flow south/southwest. Groundwater is not a source of potable water to the Site; potable water is supplied by the City of Buffalo Water Authority.

Flexo plans to use the former manufacturing building on the 1132 Seneca Street Parcel as a warehouse for storage and shipping of their products that are manufactured in the plant located nearby at 28 Wasson Street. Also, most of the 1146 Seneca Street parcel will be paved and used for parking and in support of a loading dock planned on the east side of the warehouse building. Improvements to the property will include paved walkways, new lawn and landscaping. Figure 8-2 provides a color figure depicting the location of these planned Site features.

8.3. Data Evaluation

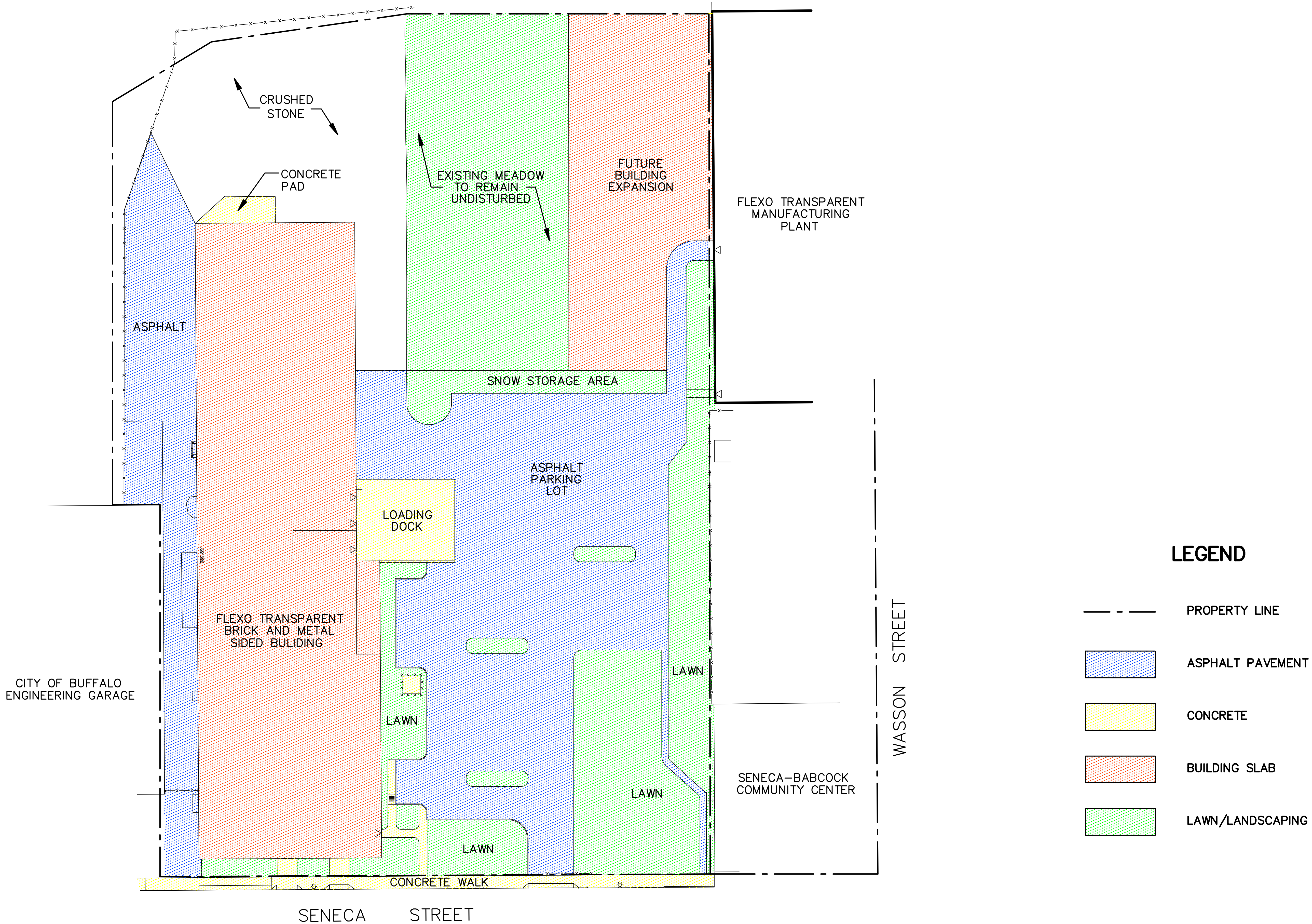
The data evaluation focuses on the compilation of analytical data to assess the potential for human exposure and to select COPCs. This process identifies the detected chemicals that, if exposed to, may pose human health risks.

Environmental Media of Concern

The environmental media of concern at the Site are soil/fill, groundwater, and soil gas. Data are available from soil/fill, groundwater, and sub-slab soil vapor samples collected during the RI from October to December 2009. Additional soil/fill samples are available from Phase II SAs conducted at 1132 and 1146 Seneca Street in March 2008. The RI data were third-party validated. The Phase II SA data were not validated but the samples analyzed and reported with full Category B data deliverables per DER-10 and deemed acceptable for the purposes of this HHE.

Selection of COPC

COPCs were selected in soil/fill and groundwater by comparing the maximum concentration of each detected chemical to applicable screening criteria. Chemicals with maximum detected concentrations greater than the screening criteria were selected as COPCs. Chemicals without a corresponding screening criterion were also selected as COPCs. However, where the maximum concentration of a metal detected in soil/fill was



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PLANNED SITE COVER BY REDEVELOPMENT

SCALE: 1'=60'

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8-2

within the range of rural soil background concentrations[1], the metal was eliminated as a COPC in soil/fill, regardless of the comparison to screening criteria. In addition, inorganic chemicals regarded as essential nutrients (i.e., calcium, iron, magnesium, potassium, and sodium) were categorically eliminated as COPCs.

Because the New York State Department of Health (NYSDOH) does not advocate the use of a risk-based, screening-level approach for evaluating soil gas data, all chemicals detected in sub-slab soil vapor were identified as COPCs. Nonetheless, for discussion purposes only, the maximum concentration of each volatile chemical detected in sub-slab soil vapor was compared to human health risk-based Regional Screening Levels (RSLs) for industrial air derived by the U.S. Environmental Protection Agency (USEPA) (USEPA, 2010).

The following sub-sections describe the soil/fill, groundwater, and sub-slab soil vapor samples and identify the COPCs in each data set. While the entire data sets from RI samples were discussed previously, data summary tables are presented in Tables 8-1 to 8-6 to facilitate this HHE. The COPCs are summarized in Table 8-7.

8.3.1. Soil/Fill

As described in Section 5 of this report, soil/fill samples were collected during the RI from eighteen test pits and 88 soil borings on the Site. The test pit and soil boring locations are depicted on Figure 5-1.

The locations of six soil borings were predetermined as part of the initial scope of the RI, while 82 additional soil borings were installed in a grid pattern to further characterize environmental conditions in the back and side yards of the former manufacturing building at 1132 Seneca Street. Analytical results from the eighteen test pits and six predetermined soil borings are considered representative of Site-wide soil/fill and are described as such in this HHE. The Site-wide soil/fill data summaries, presented in Tables 8-1 and 8-2, include the Phase II SA soil/fill data.

Separate soil/fill data summary tables were prepared to evaluate the results of:

- The additional “pre-characterization” samples collected in December 2009 and March 2010 to further characterize soil/fill and evaluate remedial alternatives at 1132 Seneca Street (Table 8-3). These data were not combined with the soil/fill data summaries in Tables 8-1 and 8-2, because they are from four-point composite samples and are biased towards one property. These data are therefore not comparable with the

[1] Rural soil background concentrations are from the rural soil survey conducted by the NYSDEC and New York State Department of Health (Appendix D; NYSDEC, 2006).

TABLE 8-1
Site-wide Surface Soil/Fill Data Summary and Comparison to Screening Values
Human Health Evaluation
1132 and 1146 Seneca Street, Buffalo, New York

Chemical	Frequency of Detection	Range of Detected Concentrations	New York State Brownfield Cleanup Program Soil Cleanup Objectives (1) Restriced Use - Industrial	Chemical of Potential Concern (COPC)?	Range of Concentrations in New York State Rural Soils (2)
Volatile Organic Compounds (µg/kg)					
Acetone	9 / 26	8 J - 260	1,000,000 [a]	No	Not applicable
Benzene	1 / 26	3 J	89,000	No	Not applicable
2-Butanone (Methyl ethyl ketone)	3 / 26	11 J - 46	1,000,000 [a]	No	Not applicable
Chlorobenzene	1 / 26	240	1,000,000 [a]	No	Not applicable
1,2-Dichlorobenzene	1 / 26	3.8 J	1,000,000 [a]	No	Not applicable
1,3-Dichlorobenzene	2 / 26	5.9 J - 34	560,000	No	Not applicable
1,4-Dichlorobenzene	2 / 26	3.7 J - 58	250,000	No	Not applicable
Isopropylbenzene	1 / 26	6 J	NA	**Yes**	Not applicable
Methylcyclohexane	1 / 26	2 J	NA	**Yes**	Not applicable
Methylene chloride	14 / 26	1.5 J - 20	1,000,000 [a]	No	Not applicable
1,2,4-Trichlorobenzene	3 / 26	2 J - 250	NA	**Yes**	Not applicable
Semi-volatile Organic Compounds (µg/kg)					
Acenaphthene	4 / 26	10 J - 2,600 J	1,000,000 [a]	No	< 8 - 110
Acenaphthylene	2 / 26	16 J - 17 J	1,000,000 [a]	No	< 10 - 590
Anthracene	6 / 26	18 J - 4,300 J	1,000,000 [a]	No	< 8 - 150
Benzo(a)anthracene	17 / 26	57 J - 7,900 J	11,000	No	< 5 - 2,600
Benzo(a)pyrene	16 / 26	39 J - **6,100 J**	1,100	**Yes**	< 6 - 3,400
Benzo(b)fluoranthene	17 / 26	68 J - 9,900 J	11,000	No	< 18 - 4,600
Benzo(g,h,i)perylene	12 / 26	33 J - 3,200 J	1,000,000 [a]	No	< 15 - 1,500
Benzo(k)fluoranthene	6 / 26	22 J - 390 J	110,000	No	< 12 - 1,700
1,1-Biphenyl	1 / 26	50 J	NA	**Yes**	NA
Carbazole	2 / 26	30 J - 2,200 J	NA	**Yes**	< 8 - 150
Chrysene	17 / 26	63 J - 7,800 J	110,000	No	< 11 - 2,400
Dibenzo(a,h)anthracene	4 / 26	9 J - 170 J	1,100	No	< 10 - 230
Dibenzofuran	2 / 26	120 J - 1,600 J	1,000,000 [a]	No	< 11 - 93
bis(2-Ethylhexyl)phthalate	1 / 26	78 J	NA	**Yes**	NA
Fluoranthene	19 / 26	120 J - 18,000	1,000,000 [a]	No	< 5 - 1,800
Fluorene	4 / 26	19 J - 2,600 J	1,000,000 [a]	No	< 10 - 130
Indeno(1,2,3-cd)pyrene	14 / 26	18 J - 2,900 J	11,000	No	< 8 - 1,400
2-Methylnaphthalene	5 / 26	24 J - 910 J	NA	**Yes**	< 6 - 53
4-Methylphenol (p-Cresol)	1 / 26	4,800	1,000,000 [a]	No	NA
Naphthalene	3 / 26	18 J - 540 B	1,000,000 [a]	No	< 0.3 - 26.0
Phenanthrene	16 / 26	78 J - 21,000	1,000,000 [a]	No	< 8 - 1,100
Pyrene	19 / 26	95 J - 15,000	1,000,000 [a]	No	< 6 - 2,900
Polychlorinated biphenyls (PCB) (µg/kg)					
Total PCBs	19 / 26	23 J - **140,000 J**	25,000	**Yes**	Not applicable
Metals (mg/kg)					
Aluminum	25 / 26	3,720 - 20,300 B	NA	**Yes**	561 - 20,000
Antimony	5 / 26	1 J - 5 J	NA	No	< 0.6 - 5.0
Arsenic	24 / 26	2.3 J - 28.8 N	16 [b]	No	< 0.2 - 69
Barium	25 / 26	58.9 - 704 N*	10,000 [c]	No	4 - 743
Beryllium	25 / 26	0.27 - 1.9	2,700	No	0.1 - 2.5
Cadmium	21 / 26	0.12 J - 1.2	60	No	< 0.05 - 4.2
Calcium ^	25 / 26	2,640 J - 159,000	NA	No	245 - 74,500
Chromium	25 / 26	4.9 B - 23.1	800 [d]	No	1 - 36
Cobalt	25 / 26	2.6 - 18.3	NA	**Yes**	0.3 - 15.1
Copper	25 / 26	4 N - 777 N*	10,000 [c]	No	2 - 98
Iron ^	25 / 26	8,540 - 39,000	NA	No	783 - 29,500
Lead	25 / 26	9.2 N - 865 E	3,900	No	3 - 110
Magnesium ^	25 / 26	404 J - 17,400	NA	No	177 - 46,000
Manganese	25 / 26	42.5 N* - 2,510	10,000 [c]	No	13 - 4,550
Mercury	24 / 26	0.049 N - 0.486 J	5.7 [e]	No	0.01 - 0.34
Nickel	25 / 26	6.3 E - 38.7	10,000 [c]	No	0 - 49
Potassium ^	25 / 26	321 - 2,300	NA	No	116 - 2,440
Selenium	5 / 26	1 J - 20	6,800	No	< 0.4 - 6.5
Silver	11 / 26	0.124 J - 2.07	6,800	No	< 0.1 - 1.6
Sodium ^	21 / 26	100 J - 899	NA	No	< 39 - 422
Thallium	8 / 26	0.6 J - 2.2 J	NA	**Yes**	< 1.6
Vanadium	25 / 26	9.1 - 33	NA	No	2 - 38
Zinc	25 / 26	35 E - 499 E	10,000 [c]	No	10 - 454
Other (mg/kg)					
Cyanide, total	1 / 26	0.062	10,000 [c]	No	< 2.4

Notes

The surface soil data set comprises samples from depths less than 2 feet below ground surface. This data set includes eight samples from the Phase II Site Assessments for 1132 and 1146 Seneca Street and eighteen samples collected during the Remedial Investigation.

^Chemical is an essential nutrient and was categorically eliminated as a COPC.

NA - Not Available

Data Qualifiers:

J - Estimated value.

B - For organics, analyte was detected in associated method blank. For inorganics, estimated value.

N - Spike sample recovery is not within the quality control limits.

* Spike or duplicate sample analysis is not within the quality control limits.

E - Indicates a value estimate or not reported due to presence of interferences

(1) Soil Cleanup Objectives (SCO) are from Table 11-2 (NYSDEC, 2006), unless otherwise noted.

[a] The SCOs for industrial use were capped at a maximum value of 1,000,000 ppm.

[b] SCO is the rural soil background concentration as determined by the NYSDEC/NYSDOH rural soil survey (Appendix D; NYSDEC, 2006).

[c] The SCOs for metals were capped at a maximum value of 10,000 ppm.

[d] SCO is based on toxicity of Chromium VI, as opposed to Chromium III.

[e] SCO is for inorganic mercury salts, as opposed to elemental mercury.

(2) Range of rural soil background concentrations are from source-distant data set, in Tables 5a and 6a of Appendix D (NYSDEC, 2006).

Bold concentration exceeds the SCO for restricted use - industrial.

TABLE 8-2
Site-wide Subsurface Soil/Fill Data Summary and Comparison to Screening Values
Human Health Evaluation
1132 and 1146 Seneca Street, Buffalo, New York

Chemical	Frequency of Detection	Range of Detected Concentrations	New York State Brownfield Cleanup Program Soil Cleanup Objectives (1) Restriced Use - Industrial	Chemical of Potential Concern (COPC)?	Range of Concentrations in New York State Rural Soils (2)
Volatile Organic Compounds (µg/kg)					
Acetone	2 / 2	29 J - 248 J	1,000,000 [a]	No	Not applicable
2-Butanone (Methyl ethyl ketone)	1 / 2	67 J	1,000,000 [a]	No	Not applicable
Methylcyclohexane	1 / 2	8	NA	**Yes**	Not applicable
Methylene chloride	2 / 2	7 - 13.15 J	1,000,000 [a]	No	Not applicable
Toluene	1 / 2	2 J	1,000,000 [a]	No	Not applicable
Semi-volatile Organic Compounds (µg/kg)					
Anthracene	1 / 2	57 J	1,000,000 [a]	No	< 8 - 150
Benzo(a)anthracene	1 / 2	120 J	11,000	No	< 5 - 2,600
Benzo(a)pyrene	1 / 2	81 J	1,100	No	< 6 - 3,400
Benzo(b)fluoranthene	1 / 2	83 J	11,000	No	< 18 - 4,600
Benzo(g,h,i)perylene	1 / 2	52 J	1,000,000 [a]	No	< 15 - 1,500
Benzo(k)fluoranthene	1 / 2	41 J	110,000	No	< 12 - 1,700
Chrysene	1 / 2	97 J	110,000	No	< 11 - 2,400
Fluoranthene	1 / 2	250 J	1,000,000 [a]	No	< 5 - 1,800
Fluorene	1 / 2	20 J	1,000,000 [a]	No	< 10 - 130
Indeno(1,2,3-cd)pyrene	1 / 2	46 J	11,000	No	< 8 - 1,400
Phenanthrene	1 / 2	190 J	1,000,000 [a]	No	< 8 - 1,100
Pyrene	1 / 2	210 J	1,000,000 [a]	No	< 6 - 2,900
Polychlorinated biphenyls (PCB) (µg/kg)					
Total PCBs	2 / 2	42.5 J - 137	25,000	No	Not applicable
Metals (mg/kg)					
Aluminum	2 / 2	8,040 * - 24,500	NA	**Yes**	561 - 20,000
Arsenic	2 / 2	4.8 N - 12.9 B	16 [b]	No	< 0.2 - 69
Barium	2 / 2	68.4 N* - 154 J	10,000 [c]	No	4 - 743
Beryllium	2 / 2	0.36 - 1.7	2,700	No	0.1 - 2.5
Cadmium	2 / 2	0.42 - 0.50	60	No	< 0.05 - 4.2
Calcium ^	2 / 2	4,435 - 23,500 *	NA	No	245 - 74,500
Chromium	2 / 2	12.5 - 27	800 [d]	No	1 - 36
Cobalt	2 / 2	7 - 30	NA	**Yes**	0.3 - 15.1
Copper	2 / 2	12.1 J - 19.1 N*	10,000 [c]	No	2 - 98
Iron ^	2 / 2	15,700 - 88,100	NA	No	783 - 29,500
Lead	2 / 2	20.7 E - 44	3,900	No	3 - 110
Magnesium ^	2 / 2	2,985 B - 7,620 E	NA	No	177 - 46,000
Manganese	2 / 2	343 - 1,650 B	10,000 [c]	No	13 - 4,550
Mercury	2 / 2	0.062 N - 0.078 J	5.7 [e]	No	0.01 - 0.34
Nickel	2 / 2	17.05 - 17.6 E	10,000 [c]	No	0 - 49
Potassium ^	2 / 2	1,090 - 1,470	NA	No	116 - 2,440
Silver	1 / 2	0.15 J	6,800	No	< 0.1 - 1.6
Sodium ^	2 / 2	225 - 290	NA	No	< 39 - 422
Vanadium	2 / 2	15.4 E - 74	NA	**Yes**	2 - 38
Zinc	2 / 2	53.8 E - 174	10,000 [c]	No	10 - 454

Notes
The subsurface soil data set comprises samples from depths greater than 2 feet below ground surface. This data set includes only two samples: B-6 (10-11.4) from the Phase II Site Assessment (SA) for 1132 Seneca Street and TP-5 (3.5-4.5) from the Remedial Investigation (RI). Results of the duplicate sample TP-DUPL #1 were averaged with those of the corresponding sample, TP-5 (3.5-4.5).
^ Chemical is an essential nutrient and was categorically eliminated as a COPC.
NA - Not Available
Data Qualifiers:
J - Estimated value.
* Spike or duplicate sample analysis is not within the quality control limits.
N - Spike sample recovery is not within the quality control limits.
B - For organics, analyte was detected in associated method blank. For inorganics, estimated value.
E - Indicates a value estimate or not reported due to presence of interferences
(1) Soil Cleanup Objectives (SCO) are from Table 11-2 (NYSDEC, 2006), unless otherwise noted.
[a] The SCOs for industrial use were capped at a maximum value of 1,000,000 ppm.
[b] SCO is the rural soil background concentration as determined by the NYSDEC/NYSDOH rural soil survey (Appendix D; NYSDEC, 2006).
[c] The SCOs for metals were capped at a maximum value of 10,000 ppm.
[d] SCO is based on toxicity of Chromium VI, as opposed to Chromium III.
[e] SCO is for inorganic mercury salts, as opposed to elemental mercury.
(2) Range of rural soil background concentrations are from source-distant data set, in Tables 5a and 6a of Appendix D (NYSDEC, 2006).
Bold concentration exceeds the SCO for restricted use - industrial.

TABLE 8-3
Interim Remedial Measures (IRM) Soil/Fill Data Summaries and Comparison to Screening Values
Human Health Evaluation
1132 and 1146 Seneca Street, Buffalo, New York

Loading Dock IRM Area (IRM1) Post-Excavation Soil/Fill Sample Data (1)				
Chemical	**Frequency of Detection**	**Range of Detected Concentrations**	**New York State Brownfield Cleanup Program Soil Cleanup Objectives (2)**	**Chemical of Potential Concern (COPC)?**
			Restriced Use - Industrial	
Polychlorinated biphenyls (PCB) (µg/kg)				
Total PCBs	6 / 7	17.8 J - **360,000 J**	25,000	Yes

North IRM Area (IRM2) Post-Excavation Soil/Fill Sample Data (3)				
Chemical	**Frequency of Detection**	**Range of Detected Concentrations**	**New York State Brownfield Cleanup Program Soil Cleanup Objectives (2)**	**Chemical of Potential Concern (COPC)?**
			Restriced Use - Industrial	
PCBs (µg/kg)				
Total PCBs	5 / 5	14 J - 1,900 J	25,000	No

Notes

(1) Post-excavation samples were collected in October 2009 from the four walls and bottom of the excavation near the loading dock at the back of the former manufacturing building at 1132 Seneca Street. The composition of the south wall is wood; the west wall is concrete.

(2) Soil Cleanup Objectives (SCO) are from Table 11-2 (NYSDEC, 2006), unless otherwise noted.

(3) Post-excavation samples were collected from the four walls and bottom of the excavation in the back yard of the former manufacturing building at 1132 Seneca Street. Sidewall samples were collected from depths of 0-2 feet bgs. The bottom sample was collected from native soil at 2.9 feet bgs. Results of the duplicate sample IRM2-DUP#1 were averaged with those of the corresponding sample, IRM2-North.

J - Estimated value.

Bold concentration exceeds the SCO for restricted use - industrial.

TABLE 8-4
Pre-Characterization Soil/Fill Data [1] Summary and Comparison to Screening Values
Human Health Evaluation
1132 and 1146 Seneca Street, Buffalo, New York

Chemical	**Frequency of Detection**	**Range of Detected Concentrations**	**New York State Brownfield Cleanup Program Soil Cleanup Objectives [2]**	**Chemical of Potential Concern (COPC)?**
			Restriced Use - Industrial	
Polychlorinated biphenyls (PCB) (µg/kg)				
Total PCBs ^	40 / 45	29 - **2,070,000 J**	25,000	Yes
Total PCBs ^^	2 / 2	4,870 J - 11,800 J	25,000	No

Notes
(1) Pre-Characterization soil/fill samples were collected in December 2009 and March 2010 to further characterize environmental conditions in the back and side yards of the former manufacturing building at 1132 Seneca Street.
(2) Soil Cleanup Objectives (SCO) are from Table 11-2 (NYSDEC, 2006), unless otherwise noted.
^ Sample depth intervals are within 0-2 feet below ground surface (bgs).
^^ Sample depth intervals are greater than 2 feet bgs.
J - Estimated value.
Bold concentration exceeds the SCO for restricted use - industrial.

TABLE 8-5
Shallow Groundwater Data Summary and Comparison to Screening Values
Human Health Evaluation
1132 and 1146 Seneca Street, Buffalo, New York

Chemical	Frequency of Detection	Range of Detected Concentrations	NYSDEC Class GA Standards (1)	Chemical of Potential Concern (COPC)?
Volatile Organic Compounds (µg/L)				
Acetone	1 / 4	10	50 [a]	No
Benzene	1 / 4	0.59 J	1	No
Cyclohexane	1 / 4	0.61 J	NA	**Yes**
Methylcyclohexane	1 / 4	0.9 J	NA	**Yes**
Methylene chloride	1 / 4	1.2 J	5	No
Toluene	1 / 4	3.6	5	No
Xylenes, total	1 / 4	2.2	5	No
Semi-volatile Organic Compounds (µg/L)				
Acetophenone	1 / 4	2.4 J	NA	**Yes**
Anthracene	1 / 4	1.38 J	50 [a]	No
Benzaldehyde	1 / 4	3.5 J	NA	**Yes**
Benzo(a)anthracene	1 / 4	**1.42 H4, J**	0.002 [a]	**Yes**
Benzo(a)pyrene	1 / 4	**1.46 J**	Non-detect	**Yes**
Benzo(b)fluoranthene	1 / 4	**0.38 H4, J**	0.002 [a]	**Yes**
Benzo(g,h,i)perylene	1 / 4	1.4 J	NA	**Yes**
Benzo(k)fluoranthene	1 / 4	**0.26 H4, J**	0.002 [a]	**Yes**
Chrysene	1 / 4	**1.4 H4, J**	0.002 [a]	**Yes**
Diethyl phthalate	2 / 4	0.17 J - 1.2 J	50 [a]	No
Di-n-butyl phthalate	4 / 4	0.36 J - 1.7 J	50	No
bis(2-Ethylhexyl)phthalate	1 / 4	4.9	5	No
Fluoranthene	1 / 4	0.75 H4, J	50 [a]	No
Indeno(1,2,3-cd)pyrene	1 / 4	**1.37 J**	0.002 [a]	**Yes**
2-Methylnaphthalene	1 / 4	0.58 H4, J	NA	**Yes**
Phenanthrene	2 / 4	0.75 J - 1.58 J	50 [a]	No
Phenol	2 / 4	0.92 H4, J - **4.93**	1	**Yes**
Metals (µg/L)				
Aluminum	4 / 4	696 - 4,260	NA	**Yes**
Arsenic	2 / 4	8.1 J - 14	25	No
Barium	4 / 4	67 - 151	1,000	No
Beryllium	2 / 4	0.25 J - 0.4 J	3 [a]	No
Calcium^	4 / 4	145,000 - 302,000	NA	No
Chromium	4 / 4	1.15 J - 7.4	50 [b]	No
Cobalt	3 / 4	3.2 J - 4.4	NA	**Yes**
Copper	4 / 4	2.2 J - 13	200	No
Iron^	4 / 4	**1,100 - 11,200**	300	No
Lead	1 / 4	7.4	25	No
Magnesium^	4 / 4	31,000 - **54,200**	35,000 [a]	No
Manganese	4 / 4	285 - **2,270**	300	**Yes**
Nickel	4 / 4	2.4 J - 8.9 J	100	No
Potassium^	4 / 4	6,910 J - 1,7500 J	NA	No
Sodium^	4 / 4	15,400 - **148,500**	20,000	No
Vanadium	4 / 4	2.0 J - 8.7	NA	**Yes**
Zinc	4 / 4	4.0 J - 26	2,000 [a]	No

Notes

The groundwater data set consists of four samples that were collected from monitoring wells installed during the Remedial Investigation. Results of one duplicate sample were averaged with those of the corresponding sample, B-1.

Polychlorinated biphenyls were also analyzed for but were not detected.

^Chemical is an essential nutrient and was categorically eliminated as a COPC.

NA - Not Available

(1) Class GA ambient water quality standards and guidance values are from Technical & Operational Guidance Series (TOGS) 1.1.1 (NYSDEC, 1998)

a - Guidance Value

b - Groundwater quality standard applies to both Cr III and Cr VI.

Data Qualifiers:

J - Estimated value.

Bold concentration exceeds applicable groundwater quality standard or guidance value.

TABLE 8-6
Sub-slab Soil Vapor Data Summary and Comparison to Screening Values
Human Health Evaluation
1132 and 1146 Seneca Street, Buffalo, New York

Chemical	Frequency of Detection	Range of Detected Concentrations	NYSDOH Air Guideline Value [1]	USEPA RSL for Industrial Air [2]
Volatile Organic Compounds (µg/m^3)				
Acetone	4 / 4	29 - 260	NA	140,000
Benzene	4 / 4	1.3 - 4.2	NA	0.41
1,3-Butadiene	1 / 4	1.8	NA	0.41
Carbon disulfide	3 / 4	2.3 - 14	NA	3,100
Chloromethane	1 / 4	1.3	NA	390
Cyclohexane	4 / 4	2.65 - 10	NA	26,000
Dichlorodifluoromethane	1 / 4	2.7	NA	880
Ethylbenzene	3 / 4	1.7 - 23	NA	4.9
n-Heptane	4 / 4	3.6 - 41	NA	NA
n-Hexane	4 / 4	8.65 - 74	NA	3,100
Methyl ethyl ketone	4 / 4	2.3 - 9.4	NA	22,000
Methylene chloride	1 / 4	1.4	60	26
Styrene	1 / 4	6.85	NA	4,400
Toluene	4 / 4	3.1 - 11	NA	22,000
1,1,1-Trichloroethane	3 / 4	6 - 82	NA	22,000
Trichlorofluoromethane	3 / 4	2.4 - 3.6	NA	3,100
1,2,4-Trimethylbenzene	3 / 4	1.3 - 4.6	NA	31
1,3,5-Trimethylbenzene	1 / 4	0.98	NA	NA
Xylene (m,p)	4 / 4	8.3 - 120	NA	3,100
Xylene (o)	4 / 4	3.2 - 41	NA	3,100

Notes
The soil vapor data set comprises four sub-slab soil vapor samples collected during the Remedial Investigation.
Results of one duplicate sample were averaged with those of the corresponding sample, SV-4.

NA = Not Available

(1) New York State Department of Health Air Guideline Values (Table 3.1; NYSDOH, 2006)

TABLE 8-7
Summary of Chemicals of Potential Concern
Human Health Evaluation
1132 and 1146 Seneca Street, Buffalo, New York

Exposure Medium:	Surface Soil/Fill	Subsurface Soil/Fill	Loading Dock IRM (IRM1) Soil/Fill	IRM North (IRM2) Soil/Fill	Pre-characterization Soil/Fill Data	Shallow Groundwater	Sub-slab Soil Vapor
Volatile Organic Compounds							
Acetone	•	•	N/A	N/A	N/A	•	X
Benzene	•	--	N/A	N/A	N/A	•	X
1,3-Butadiene	--	--	N/A	N/A	N/A	--	X
Carbon disulfide	--	--	N/A	N/A	N/A	--	X
Chloromethane	--	--	N/A	N/A	N/A	--	X
Cyclohexane	--	--	N/A	N/A	N/A	X	X
Dichlorodifluoromethane	--	--	N/A	N/A	N/A	--	X
Ethylbenzene	--	--	N/A	N/A	N/A	--	X
n-Heptane	--	--	N/A	N/A	N/A	--	X
n-Hexane	--	--	N/A	N/A	N/A	--	X
Isopropylbenzene	X	--	N/A	N/A	N/A	--	--
Methylcyclohexane	X	X	N/A	N/A	N/A	X	--
Methylene chloride	•	•	N/A	N/A	N/A	•	X
Methyl ethyl ketone	•	•	N/A	N/A	N/A	--	X
Styrene	--	--	N/A	N/A	N/A	--	X
Toluene	--	•	N/A	N/A	N/A	•	X
1,2,4-Trichlorobenzene	X	--	N/A	N/A	N/A	--	--
1,1,1-Trichloroethane	--	--	N/A	N/A	N/A	--	X
Trichlorofluoromethane	--	--	N/A	N/A	N/A	--	X
1,2,4-Trimethylbenzene	--	--	N/A	N/A	N/A	--	X
1,3,5-Trimethylbenzene	--	--	N/A	N/A	N/A	--	X
Xylene (m,p)	--	--	N/A	N/A	N/A	•	X
Xylene (o)	--	--	N/A	N/A	N/A	•	X
Semi-Volatile Organic Compounds							
Acetophenone	--	--	N/A	N/A	N/A	X	N/A
Benzaldehyde	--	--	N/A	N/A	N/A	X	N/A
Benzo(a)anthracene	•	•	N/A	N/A	N/A	X	N/A
Benzo(a)pyrene	X	•	N/A	N/A	N/A	X	N/A
Benzo(b)fluoranthene	•	•	N/A	N/A	N/A	X	N/A
Benzo(g,h,i)perylene	•	•	N/A	N/A	N/A	X	N/A
Benzo(k)fluoranthene	•	•	N/A	N/A	N/A	X	N/A
1,1-Biphenyl	X	--	N/A	N/A	N/A	--	N/A
Carbazole	X	--	N/A	N/A	N/A	--	N/A
Chrysene	•	•	N/A	N/A	N/A	X	N/A
bis(2-Ethylhexyl)phthalate	X	--	N/A	N/A	N/A	•	N/A
Indeno(1,2,3-cd)pyrene	•	•	N/A	N/A	N/A	X	N/A
2-Methylnaphthalene	X	--	N/A	N/A	N/A	X	N/A
Phenol	--	--	N/A	N/A	N/A	X	N/A
Polychlorinated biphenyls							
PCBs, total	X	•	X	•	X	--	N/A
Metals							
Aluminum	X	X	N/A	N/A	N/A	X	N/A
Cobalt	X	X	N/A	N/A	N/A	X	N/A
Manganese	•	•	N/A	N/A	N/A	X	N/A
Thallium	X	--	N/A	N/A	N/A	--	N/A
Vanadium	•	X	N/A	N/A	N/A	X	N/A

Notes
X : Selected as a Chemical of Potential Concern (COPC).
Shaded entries are COPCs selected based on exceedance of the screening criteria.
Unshaded entries are COPCs for which no screening criteria are available.
• : Detected, but not selected as a COPC.
-- : Not Detected.
N/A : Not Analyzed or Not Applicable

discrete sample results presented in Tables 8-1 and 8-2 and are not representative of conditions across the Site.

- Post-excavation samples collected at the loading dock Interim Remedial Measure (IRM) Area (IRM1) and the North IRM Area (IRM2), both of which are located at 1132 Seneca Street (Table 8-4). These data were not combined with the soil/fill data summaries in Tables 8-1 and 8-2, because they are from four-point composite samples and/or were biased toward individual areas of concern.

Site-wide Surface Soil/Fill

For the purposes of this HHE, soil/fill data from across the Site were separated into surface and subsurface soil/fill data sets. The surface soil/fill data set is composed of samples collected between 0-2 feet bgs. As such, eighteen surface soil/fill samples were collected during the RI in October 2009. In addition, eight surface soil/fill samples were collected for the Phase II SAs in March 2008. Surface soil/fill samples from both sampling events were analyzed for Target Compound List (TCL) volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), and polychlorinated biphenyls (PCB, as Aroclors), target analyte list (TAL) metals, and total cyanide.

Table 8-1 presents a combined surface soil/fill data summary, with the frequency of detection and range of detected concentrations for each detected chemical. The screening criteria used to select COPCs in surface soil/fill are the NYSDEC BCP's recommended soil cleanup objectives (SCO) for restricted-industrial use (NYSDEC, 2006). The restricted-industrial SCOs are chemical-specific, risk-based concentrations in soil derived to be protective of human exposure on properties that have the "primary purpose of manufacturing, production, fabrication or assembly process and ancillary services" (NYSDEC, 2006). This end use is consistent with the planned future use of the Site as an expansion to Flexo-Transparent, Inc.'s current business. The SCOs consider the ingestion, inhalation, and dermal contact exposure routes and are based on an excess lifetime cancer risk of 10^{-6} (i.e., one in a million) and a non-cancer hazard quotient of 1 (NYSDEC, 2006). The SCOs also consider background chemical concentrations in rural soils and maximum acceptable levels of chemicals in soils (e.g., the soil saturation concentration).

Based on the approach outlined in Section 6.3, the following chemicals were selected as COPCs in surface soil/fill:

- VOCs: isopropylbenzene, methylcyclohexane, and 1,2,4-trichlorobenzene.
- SVOCs: benzo(a)pyrene, 1,1-biphenyl, carbazole, bis(2-ethylhexyl)phthalate, and 2-methylnaphthalene.
- PCBs: total PCBs (i.e., sum of the detected Aroclors).

- Metals: aluminum, cobalt, and thallium.

Seven of the nine organic chemicals [i.e., isopropylbenzene, methylcyclohexane, 1,2,4-trichlorobenzene, 1,1-biphenyl, carbazole, bis(2-ethylhexyl)phthalate, and 2-methylnaphthalene] were identified as COPCs based on the lack of corresponding screening criteria. However, United States Environmental Protection Agency (USEPA) Regional Screening Levels (RSL) (USEPA, 2010) for industrial soil are available for five of them. The RSLs are chemical-specific human health risk-based screening levels based on comparable risk levels (i.e., target cancer risk of 10^{-6} and a target hazard quotient of 1). As shown in the following table, the maximum detected concentration of each of these chemicals in surface soil/fill is less than the corresponding RSL for industrial soil.

Chemical of Potential Concern	Maximum Detected Concentration (µg/kg)	USEPA Regional Screening Level for Industrial Soil (µg/kg)
Isopropylbenzene	6 J	11,000,000
1,2,4-Trichlorobenzene	250	99,000
1,1-Biphenyl	50 J	51,000,000
bis(2-Ethylhexyl)phthalate	78 J	120,000
2-Methylnaphthalene	910 J	4,100,000

The three metals were identified as COPCs based on the lack of corresponding screening criteria and because their maximum detected concentrations were greater than rural soil background concentrations. However, USEPA RSLs are available for aluminum and cobalt. As shown in the following table, the maximum detected concentrations of these metals are less than the corresponding USEPA RSL for industrial soil.

Chemical of Potential Concern	Maximum Detected Concentration (mg/kg)	USEPA Regional Screening Level for Industrial Soil (mg/kg)
Aluminum	20,300 B	990,000
Cobalt	18.3	300

Site-wide Subsurface Soil/Fill

Only two samples were collected during the RI or Phase II SAs from soil/fill material at depths greater than 2 feet bgs and therefore comprise the subsurface soil/fill data set. Subsurface soil/fill samples were analyzed for TCL VOCs, SVOCs, and PCBs (as Aroclors), TAL metals, and total cyanide. Table 8-2 presents a subsurface soil/fill data summary, with the frequency of detection and range of detected concentrations for each detected chemical.

The screening criteria used to select COPCs in subsurface soil/fill are the NYSDEC BCP's recommended SCOs for restricted-industrial use, referenced above. Based on the approach outlined in Section 6.3, the following chemicals were selected as COPCs in subsurface soil/fill:

- VOCs: methylcyclohexane.
- Metals: aluminum, cobalt, and vanadium.

Methylcyclohexane was identified as a COPC based on the lack of a corresponding screening criterion. The metals were identified as COPCs based on the lack of corresponding screening criteria and because their maximum detected concentrations were greater than rural soil background concentrations. However, as shown below, the maximum detected metals concentrations are less than the corresponding USEPA RSLs for industrial soil.

Chemical of Potential Concern	Maximum Detected Concentration (mg/kg)	USEPA Regional Screening Level for Industrial Soil (mg/kg)
Aluminum	24,500	990,000
Cobalt	30	300
Vanadium	74	5,200

IRM Area Soil/Fill

Confirmation soil samples were collected from two excavation areas: the loading dock IRM Area (IRM1) and North IRM Area (IRM2). As described in Section 4, four-point composite samples were collected from the four walls and bottom of IRM north and discrete samples from the loading dock IRM. All IRM samples were analyzed for PCBs (as Aroclors). At IRM1, two grab samples were collected from each of the east wall and the bottom of the excavation and one grab sample collected from the west, north, and south walls.

Table 8-3 presents the frequency of detection and range of total PCB concentrations detected in samples from each IRM Area. The SCO for restricted-industrial use was used to screen the maximum detected total PCB concentrations. As shown, total PCBs was identified as a COPC in soil/fill at the loading dock IRM Area but not in soil/fill at the North IRM Area.

Pre-Characterization Soil/Fill

As described in Section 5, a total of 82 soil borings were advanced (in two phases) to further characterize soil/fill at 1132 Seneca Street. Borings were drilled at approximate 20-feet spacing on a grid pattern to the north, west, and east of the former manufacturing building. Four-point composite samples were collected and analyzed for PCBs (as Aroclors). Figure 5-1 depicts the relative location of the pre-characterization sampling grid and soil borings. Based on the analytical results of the initial RI test pit and soil boring samples, the uppermost six inches of soil was sampled separately from the underlying fill material.

Table 8-4 presents the frequency of detection and range of total PCB concentrations detected in the pre-characterization samples. The SCO for restricted-industrial use was used to screen the maximum detected total PCB concentrations. As shown, total PCBs was identified as a COPC in surface soil/fill (0 to 2-feet) but not in subsurface soil/fill (> 2.0 feet) samples.

8.3.2. Groundwater

Temporary shallow groundwater monitoring wells were installed at five borehole locations (B/MW-1 to B/MW-5) on the Site. Total well depths ranged from 4.0 to 9.8 feet bgs. One round of groundwater samples was collected from three wells (B/MW-1, B/MW-2 and B/MW-5) on October 22, 2009 and from B/MW-4 on November 3-4, 2009.[2] Depths to shallow groundwater during sample collection ranged from 2.6 to 6.1 feet bgs. Groundwater samples were analyzed for TCL VOCs, SVOCs, pesticides, and PCBs (as Aroclors), TAL metals, and cyanide.

Table 8-5 presents a groundwater data summary, with the frequency of detection and range of detected concentrations for each chemical. As shown, no PCBs were detected in groundwater. The detection frequency of almost all of the VOCs and SVOCs was one in four samples, and almost all of the detected concentrations were qualified as estimated.

The screening criteria used to select COPCs are the NYSDEC "Class GA" ambient water quality standards and guidance values (NYSDEC, 1998). Based on the approach outlined in Section 6.3, the following chemicals were selected as COPCs in groundwater at the Site:

- VOCs: cyclohexane and methylcyclohexane.
- SVOCs: acetophenone, benzaldehyde, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, indeno(1,2,3-cd)pyrene, 2-methylnaphthalene, and phenol.
- Inorganics: aluminum, cobalt, manganese, and vanadium.

Six of the thirteen organic chemicals [i.e., cyclohexane, methylcyclohexane, acetophenone, benzaldehyde, benzo(g,h,i)perylene, and 2 methylnaphthalene] and three of the four metals (aluminum, cobalt, and vanadium) were identified as COPCs based on the lack of corresponding screening criteria. However, USEPA RSLs for tapwater are available for seven of them. As shown in the following table, the maximum detected concentration of each of these chemicals in groundwater is less than the corresponding RSL for tapwater.

[2] B/MW-3 has been dry since monitoring well installation and therefore was not sampled.

Chemical of Potential Concern	Maximum Detected Concentration (ug/L)	USEPA Regional Screening Level for Tapwater (ug/L)
Cyclohexane	0.61 J	13,000
Acetophenone	2.4 J	3,700
Benzaldehyde	3.5 J	3,700
2-Methylnaphthalene	0.58 J	150
Aluminum	4,260	37,000
Cobalt	4.4	11
Vanadium	8.7	180

8.3.3. Sub-slab Soil Vapor

Soil vapor samples were collected at four locations (SV-1 to SV-4) from beneath the concrete floor slab foundation of the building at 1132 Seneca Street on October 22, 2009.

Table 8-6 presents a sub-slab soil vapor summary, with the frequency of detection and range of detected chemical concentrations for each chemical.

New York State does not have criteria or guidance values to evaluate detected concentrations of VOCs in sub-slab soil vapor. Instead, the *Guidance for Evaluating Soil Vapor Intrusion in the State of New York* (NYSDOH, 2006) recommends evaluation of soil vapor data in conjunction with indoor and outdoor air data. The soil vapor data can also be directly compared to air guideline values derived by the New York State Department of Health (NYSDOH); however, this is a conservative approach because it assumes no attenuation, and guidelines are only available for one detected chemical: methylene chloride. USEPA RSLs for industrial air are presented in the data summary table to benchmark the detected VOC concentrations in sub-slab soil gas in a similarly conservative approach. However, since the NYSDOH does not advocate the use of a risk-based, screening-level approach for evaluating soil gas data, all detected VOCs in soil gas are retained as COPC.

8.4. Exposure Assessment

The objective of the exposure assessment is to estimate the type of and potential for human exposure to the COPCs that are present in, or may migrate from, environmental media at the Site. The exposure assessment considers human populations that may be exposed to COPCs at the Site, currently and in the future, and evaluates the pathways and routes by which these receptors may be exposed.

The exposure assessment is facilitated through the development of a conceptual Site model (CSM), designated Figure 8-1. The CSM is a graphic illustration that outlines chemical source areas, chemical release mechanisms, environmental media that currently show or may show the presence of chemicals in the future, possible exposure pathways, potentially-exposed human receptor populations, and exposure routes to those receptors. It considers current exposure scenarios, as well as the most likely future exposure scenarios based on the anticipated re-use of the Site as a light industrial facility with associated asphalt-paved driveways and parking areas. The CSM is used to facilitate evaluation of all potentially complete exposure pathways and routes through which humans may be exposed to COPCs in sampled environmental media.

8.4.1. Potentially Exposed Populations

The potential for human exposure was considered under both current/future and future land use scenarios based on the Site description in Section 6.1. The following categories of human receptors (termed “potentially exposed populations”) were identified:

Current/Future

- **Trespassers:** (adults and adolescents) who may live in the vicinity of the Site. While trespassing may occur on the Site, there are access restrictions that would deter potential trespassers, such as the chain-link fence along the southern, eastern, and western sides of the Site and along the northern side of the 1132 property. In addition, overgrown vegetation impedes access from the northern side of the 1146 property. It is not expected that trespassers would obtain access to the inside of the currently vacant former industrial building on the Site.

Future

- **Construction Workers:** (adults) who may perform future work at the Site to re-develop the Site and/or renovate the existing building.
- **Construction/Utility Workers:** (adults) who may perform future work at the Site to install and/or maintain buried utilities.
- **Indoor Site Workers/Visitors:** (adults and adolescents, aged 16-18 years) who may visit or work inside buildings on the Site in the future. The exposure frequency of visitors would be less than that of indoor Site workers.

8.4.2. Exposure Pathways

Chemical release mechanisms under current/future and future land use scenarios and in the absence of Site remediation are summarized in Table 8-8. The potential human receptors and the likelihood of receptor exposure to COPCs in soil/fill, groundwater, and sub-slab soil vapor are summarized, with descriptions justifying the inclusion of

Primary Source	Release Mechanisms	Exposure Media	Exposure Routes	Scenario Timeframe and Potential Receptors			
				Current/Future	Future		
				Trespasser	Construction Worker	Construction / Utility Worker	Indoor Site Worker / Visitor
On-Site Soil/Fill		Surface Soil/Fill	Ingestion	⊕	⊕	⊕	
			Dermal Contact	⊕	⊕	⊕	
			Inhalation	⊕	⊕	⊕	⊕
		Subsurface Soil/Fill	Ingestion		⊕	⊕	
			Dermal Contact		⊕	⊕	
			Inhalation		⊕	⊕	⊕
		Loading dock IRM Area Soil/Fill	Ingestion		⊕	⊕	⊕
			Dermal Contact		⊕	⊕	⊕
			Inhalation		⊕	⊕	⊕
		Pre-Characterization Soil/Fill	Ingestion	⊕	⊕	⊕	
			Dermal Contact	⊕	⊕	⊕	
			Inhalation	⊕	⊕	⊕	
	Leaching to Groundwater	Groundwater	Dermal Contact			⊕	
			Inhalation			⊕	

LEGEND

→ = Release / Migration Routes

⊕ = Potentially Complete Exposure Pathway

MALCOLM PIRNIE

CONCEPTUAL SITE MODEL

Brownfield Cleanup Progam Site - 1132 and 1146 Seneca Street

Buffalo, New York

FIGURE 8-1

TABLE 8-8
Chemical Release Mechanisms in the Absense of Remedial Action
Human Health Evaluation
1132 and 1146 Seneca Street, Buffalo, New York

Source Media	Release Mechanism	Exposure Medium	Site Conditions	Viable Current Release Scenario?	Viable Future Release Scenario?
On-Site Soil/Fill	--	Site-wide Surface Soil/Fill (< 2.0')	The BCP site contains a former manufacturing building and an immediately adjacent vacant parcel. The site is located in a mixed commercial/industrial and residential area. It is surrounded by chain-link fencing on the south, east, and west sides; locked gates limit access along the southern boundary with Seneca Street. The northern side is not fenced but access is impeded by overgrown vegetation.	Yes - surface soil/fill samples were collected for laboratory analysis, and data are considered representative of conditions across the site. COPCs were identified in the site-wide surface soil/fill data set. As such, treaspassers accessing the site may be exposed to COPCs in surface soil/fill.	Yes - the anticipated future use of the site is as a commercial or light industrial facility. In the absence of site remediation, construction workers and construction/utility workers may contact COPCs in surface soil/fill during future building renovation or construction, utilites installation, repair, and/or maintenance, and other future site activities.
	--	Site-wide Subsurface Soil/Fill (>2.0')	Subsurface materials consist of black-gray, fine to coarse grain sand with silt and trace clay admixed with construction and demolition debris composed of wood, concrete, brick, and gravel. Fill materials range in thickness from 0.5 to 3.7 feet below grade. Native silt/sand and clay are present beneath the fill layer. Depth to bedrock is approximately 10 feet below grade.	No - subsurface soil/fill samples were collected for laboratory analysis, and data are considered representative of conditions across the site. COPCs were identified in the site-wide surface soil/fill data set. However, under the current scenario, it is not expected that trespassers accessing the site would contact COPCs in subsurface soil/fill.	Yes - the anticipated future use of the site is as a light industrial facility. Future building renovation and new building construction will necessitate intrusion to the subsurface. In addition, future construction/utility work may disturb subsurface soil/fill. In the absence of site remediation, construction workers and construction/utility workers may contact COPCs in subsurface soil/fill.
	--	Loading Dock IRM Area (IRM1) Soil/Fill	Soil/fill materials beneath the former loading dock at the back of the former manufacturing building at 1132 Seneca Street were excavated and removed for off-site disposal. The excavation area measures approximately 700 square feet and has not been backfilled.	No - The Site building is locked and no evidence of treaspasser entry has been observed.	Yes - the assumed future use of the site is as a light industrial facility. Future building renovation and potential new building construction may disturb soil/fill near the Loading Dock IRM Area. In the absence of site remediation, construction workers, construction/utility workers, and interior workers/visitors may contact PCBs in subsurface soil/fill.
	--	Pre-Characterization Soil/Fill	Soil/fill materials in the back and side yards of the 1132 Seneca Street property were sampled for PCB analyses. Soil borings were installed according to a grid that measures approximately 33,000 square feet.	Yes - pre-characterization samples were collected for laboratory analysis, and total PCBs was identified as a COPC. Given this area of the site is outside the former manufacturing building and in a relatively cleared area, trespassers accessing the site may be exposed to PCBs in pre-characterization soil/fill.	Yes - the assumed future use of the site is as a light industrial facility. Future building renovation and potential new building construction may disturb pre-characterization soil/fill. In the absence of site remediation, construction workers and construction/utility workers may contact PCBs in subsurface soil/fill.
	Leaching	Groundwater	Results of the hydrogeologic investigation indicate the shallow groundwater table is present approximately 0.1-4.1 feet below grade. Shallow groundwater beneath the site is perched and discontinuous. Based on elevation measurement and mapping of the shallow overburden groundwater, groundwater flows from east to west across the Site. The site has access to a public potable water supply.	No - shallow groundwater samples were collected for laboratory analysis, and data are considered representative of conditions across the site. COPCs were identified in groundwater. However, it is not expected that human receptors would contact COPCs in shallow groundwater under the current scenario.	Yes - the anticipated future use of the site is as a light industrial facility. Future construction/utility work to install and/or maintain buried utilities may necessitate intrusion to the subsurface such that the shallow groundwater table is intercepted. Therefore, construction/utility workers may contact COPCs in shallow groundwater. Construction workers are not expected to contact COPCs in shallow groundwater. However, this scenario may need to be reevaluated depending on the nature of the construction work (e.g., basement construction for a new building).
	Vapor Intrusion	Indoor Air	The building at 1132 Seneca Street, which is currently vacant has a concrete floor slab foundation.	No - Sub-slab soil vapors under the concrete floor slab foundation contain low concentrations of a variety of VOCs, all of which were retained as COPCs. However, since the building is vacant, human receptors are not exposed to indoor air.	No - while the anticipated future use of the site is as a light industrial facility, using the exisitng building and COPCs were retained in soil vapor due to the lack of NYSDOH screening criteria, the detected COPC concentrations are low. The exisitng concrete floor slab in the existing building and the foundation should adequately mitigate the potential for vapor intrusion.

Notes
COPC - Chemical of Potential Concern

potentially complete exposure pathways. The exposure pathways identified as potentially complete are illustrated in the CSM (Figure 8-1) and are discussed with regard to their likelihood, below.

8.4.2.1. Current/Future Land Use Scenario

The following exposure scenarios were based on current Site conditions and are expected to exist in the future, in the absence of further Site remediation.

Trespasser: Based on the current use of the Site, the following exposure pathways are identified as potentially complete:

- Dermal contact with and incidental ingestion and inhalation of COPCs in surface soil/fill. COPCs in surface soil/fill could be released to the ambient air by wind or mechanical erosion. These exposure pathways are limited to those areas of the Site not covered by the former manufacturing building footprint (1132 Seneca Street) or other impervious surfaces and are mitigated by the fact that the vacant property (1146 Seneca Street) is covered with vegetation, which limits soil disturbance. In addition, under the future land use scenario, it is anticipated the majority of the Site will be covered with impervious surfaces (e.g., buildings or asphalt-paved parking lots).

8.4.2.2. Future Land Use Scenario

The following additional exposure scenarios, which may occur in the future, were evaluated based on the potential redevelopment of the Site as a light industrial facility, with associated asphalt-paved driveways and parking areas, and in the absence of further Site remediation.

Construction Worker: Based on the anticipated future use of the Site as a light industrial facility, the following exposure pathways are identified as potentially complete:

- Dermal contact with and incidental ingestion and inhalation of COPCs in surface soil/fill. COPCs in surface soil/fill could be released to the ambient air by wind or mechanical erosion (e.g., during future Site redevelopment).
- Dermal contact with and incidental ingestion and inhalation of COPCs in subsurface soil/fill. COPCs in subsurface soil/fill could be released by mechanical erosion in the event Site redevelopment necessitates subsurface soil/fill disturbance.

It is assumed the extent of future construction work will be limited to renovation of the existing building and facilities and that intrusive work that intercepts the shallow groundwater table will not be carried out. Therefore, exposure of construction workers to COPCs in shallow groundwater is not expected to occur. Should the nature of future construction work differ (e.g., basement construction for a new building occurs), the assumptions regarding the potential for exposure of future construction workers to COPCs in shallow groundwater should be re-evaluated.

Construction/Utility Worker: Based on the anticipated future use of the Site as a light industrial facility, the following exposure pathways are identified as potentially complete:

- Dermal contact with and incidental ingestion and inhalation of COPCs in surface soil/fill. COPCs in surface soil/fill could be released to the ambient air by wind or mechanical erosion.
- Dermal contact with and incidental ingestion and inhalation of COPCs in subsurface soil/fill. COPCs in subsurface soil/fill could be released by mechanical erosion in the event future construction/utility work necessitates intrusion to the subsurface (e.g., digging of a trench to access utilities).
- Dermal contact with and inhalation of COPCs in shallow groundwater. Depth to groundwater on the Site has been measured as 0.1 to 4.1 feet bgs. It is possible that construction/utility workers may encounter shallow groundwater while performing intrusive work (e.g., in a trench) to install or maintain utilities at the Site.

Indoor Site Worker/Visitor: Based on the anticipated future use of the Site as a light industrial facility, the following exposure pathways are identified as potentially complete:

- Dermal contact with and incidental ingestion and inhalation of PCBs in soil/fill in the sidewalls of the exposed excavation at the loading dock IRM area (IRM1). PCBs in surface soil/fill could be released to the ambient air by mechanical erosion during work in the area.
- Inhalation of VOCs that migrate from sub-slab soil vapor to indoor air of the existing building to be renovated or future buildings that may be constructed on the Site.

Indoor Site workers and visitors are expected to have little, if any, direct contact exposure to COPCs in outdoor soil/fill (including Site-wide and pre-characterization soil/fill), because they would spend the majority of time indoors. Further, under a future exposure scenario, the Site will be completely covered with building footprint, asphalt pavement, or clean soil, thereby eliminating the potential exposure pathway to COPCs in surface soil/fill. In addition, there is no potential for indoor Site workers or visitors to contact COPCs in shallow groundwater through drinking water wells, as the Site has access to a public potable water supply.

8.5. Toxicity Assessment

For each COPC, critical non-carcinogenic and carcinogenic health effects, for oral and inhalation exposures, are presented in Tables 8-9 and 8-10, respectively. The critical health effects presented are those used by the USEPA to derive verified or provisional reference doses and reference concentrations (to assess the potential for chronic non-carcinogenic health effects) and slope factors and unit risk factors (to assess carcinogenic risk) typically used in the quantification of human health risks.

TABLE 8-9
Non-Carcinogenic Health Effects of Chemicals of Potential Concern
Human Health Evaluation
1132 and 1146 Seneca Street, Buffalo, New York

Chemical of Potential Concern	CAS #	Non-Carcinogenic Oral Critical Effect	Non-Carcinogenic Inhalation Critical Effect
Volatile Organic Compounds			
Acetone	67-64-1	Nephropathy	--
Benzene	71-43-2	Decreased lymphocyte count	Decreased lymphocyte count
1,3-Butadiene	106-99-0	--	Ovarian atrophy
Carbon disulfide	75-15-0	Fetal toxicity/malformations	Peripheral nervous system dysfunction
Chloromethane (methyl chloride)	74-87-3	--	Cerebellar lesions
Cyclohexane	110-82-7	--	Reduced pup weights in the F1 and F2 generations
Dichlorodifluoromethane	75-71-8	Reduced body weight	--
Ethylbenzene	100-41-4	Liver and kidney toxicity	Developmental toxicity
n-Heptane	142-82-5	--	--
n-Hexane	110-54-3	--	Peripheral neuropathy (decreased motor nerve conduction velocity at 12 weeks)
Isopropylbenzene (cumene)	98-82-8	Increased average kidney weight in female rats	Increased kidney weights in female rats and adrenal weights in male and female rats
Methylcyclohexane	108-87-2	--	--
Methylene chloride	75-09-2	**Liver toxicity**	--
Methyl ethyl ketone (2-butanone)	78-93-3	Decreased pup body weight	Developmental toxicity (skeletal variations)
Styrene	100-42-5	Red blood cell and liver effects	CNS effects
Toluene	108-88-3	Increased kidney weight	Neurological effects in occupationally-exposed workers
1,2,4-Trichlorobenzene	120-82-1	Increased adrenal weights; vacuolization of zona fasciculata in the cortex	--
1,1,1-Trichloroethane	71-55-6	Reduced body weight	Liver histopathologic changes
Trichlorofluoromethane	75-69-4	Survival and histopathology	--
1,2,4-Trimethylbenzene	95-63-6	--	--
1,3,5-Trimethylbenzene	108-67-8	--	--
Xylenes, total	1330-20-7	Decreased body weight, increased mortality	Impaired motor coordination (decreased rotarod performance)
Semi-Volatile Organic Compounds			
Acetophenone	98-86-2	General toxicity	--
Benzaldehyde	100-52-7	Forestomach lesions, kidney toxicity	--
Benzo(a)anthracene	56-55-3	--	--
Benzo(a)pyrene	50-32-8	--	--
Benzo(b)fluoranthene	205-99-2	--	--
Benzo(g,h,i)perylene	191-24-2	--	--
Benzo(k)fluoranthene	208-08-9	--	--
1,1-Biphenyl	92-52-4	Kidney damage	--
Carbazole	86-74-8	--	--
Chrysene	218-01-9	--	--
bis(2-Ethylhexyl)phthalate	117-81-7	Increased relative liver weight	--
Indeno(1,2,3-cd)pyrene	193-39-5	--	--
2-Methylnaphthalene	91-57-6	Pulmonary alveolar proteinosis	--
Phenol	108-95-2	Decreased maternal weight gain	--
Polychlorinated biphenyls			
PCBs, total	1336-36-3	--	--
Metals			
Aluminum	121-82-4	Body weight and clinical parameters	--
Cobalt	7440-48-4	--	--
Manganese	7439-96-5	Central nervous system effects (other effect: Impairment of neurobehavioral function)	Impairment of neurobehavioral function
Thallium	7446-18-6	--	--
Vanadium	7440-62-2	--	--

Notes
Source: United States Environmental Protection Agency, Integrated Risk Information System (Accessed at: www.epa.gov/iris)

TABLE 8-10
Carcinogenic Health Effects of Chemicals of Potential Concern
Human Health Evaluation
1132 and 1146 Seneca Street, Buffalo, New York

Chemical of Potential Concern	CAS #	Oral Carcinogenic Effect	Inhalation Carcinogenic Effect	USEPA Weight of Evidence Classification [1]
Volatile Organic Compounds				
Acetone	67-64-1	--	--	Data are inadequate
Benzene	71-43-2	Tumor type: leukemia	Tumor type: leukemia	A; Known/likely human carcinogen
1,3-Butadiene	106-99-0	--	Tumor type: leukemia	Carcinogenic to humans
Carbon disulfide	75-15-0	--	--	--
Chloromethane (methyl chloride)	74-87-3	--	--	D; Carcinogenic potential cannot be determined
Cyclohexane	110-82-7	--	--	Data are inadequate
Dichlorodifluoromethane	75-71-8	--	--	--
Ethylbenzene	100-41-4	--	--	D
n-Heptane	142-82-5	--	--	D
n-Hexane	110-54-3	--	--	--
Isopropylbenzene (cumene)	98-82-8	--	--	D; Carcinogenic potential cannot be determined
Methylcyclohexane	108-87-2	--	--	--
Methylene chloride	75-09-2	Tumor type: hepatocellular adenomas or carcinomas and hepatocellular cancer and neoplastic nodules	Tumpr type: combined adenomas and carcinomas	B2
Methyl ethyl ketone (2-butanone)	78-93-3	--	--	Data are inadequate
Styrene	100-42-5	--	--	--
Toluene	108-88-3	--	--	--
1,2,4-Trichlorobenzene	120-82-1	--	--	D
1,1,1-Trichloroethane	71-55-6	--	--	--
Trichlorofluoromethane	75-69-4	--	--	--
1,2,4-Trimethylbenzene	95-63-6	--	--	--
1,3,5-Trimethylbenzene	108-67-8	--	--	--
Xylenes, total	1330-20-7	--	--	Data are inadequate
Semi-Volatile Organic Compounds				
Acetophenone	98-86-2	--	--	D
Benzaldehyde	100-52-7	--	--	--
Benzo(a)anthracene	56-55-3	--	--	B2
Benzo(a)pyrene	50-32-8	Tumor type: forestomach, squamous cell papillomas and carcinomas; forestomach, larynx and esophagus, papillomas and carcinomas (combined)	--	B2
Benzo(b)fluoranthene	205-99-2	--	--	B2
Benzo(g,h,i)perylene	191-24-2	--	--	D
Benzo(k)fluoranthene	208-08-9	--	--	B2
1,1-Biphenyl	92-52-4	--	--	--
Carbazole	86-74-8	--	--	--
Chrysene	218-01-9	--	--	B2
bis(2-Ethylhexyl)phthalate	117-81-7	Tumor type: hepatocellular carcinoma and adenoma	--	B2
Indeno(1,2,3-cd)pyrene	193-39-5	--	--	B2
2-Methylnaphthalene	91-57-6	--	--	Data are inadequate
Phenol	108-95-2	--	--	D
Polychlorinated biphenyls				
PCBs, total	1336-36-3	Tumor type: liver hepatocellular adenomas, carcinomas, cholangiomas, or cholangiocarcinomas	Tumor type: liver hepatocellular adenomas, carcinomas, cholangiomas, or cholangiocarcinomas	B2
Metals				
Aluminum	121-82-4	--	--	--
Cobalt	7440-48-4	--	--	--
Manganese	7439-96-5	--	--	D
Thallium	7446-18-6	--	--	--
Vanadium	7440-62-2	--	--	--

Notes
Source: United States Environmental Protection Agency, Integrated Risk Information System (Accessed at: www.epa.gov/iris)
(1) USEPA Weight-of-Evidence Classifications:
A - Human carcinogen
B1 - Probable human carcinogen; limited human data are available
B2 - Probable human carcinogen; sufficient evidence in animals and inadequate or no evidence in humans
C - Possible human carcinogen
D - Not classifiable as to human carcinogenicity
-- Not Evaluated

8.6. Risk Characterization

Based on current Site conditions, observations, and the anticipated future use of the Site, the potential for human exposure to COPCs and resultant adverse health effects are discussed for each receptor population below. Table 8-11 provides a summary of the human health risk characterization.

8.6.1. Current/Future Land Use Scenario

The potential for exposure to COPCs via the pathways described in the Exposure Assessment is discussed for trespassers in the current/future land use scenario, under the assumption there will be no further remediation at the Site. In this section, the potential for exposure is classified as “Not Expected”, “Possible”, or “Likely” based on current/future Site conditions and surrounding land use.

Trespassers

Dermal contact with and incidental ingestion and inhalation of COPCs in surface soil/fill:

The Site is composed of a currently vacant former industrial building, paved driveways, and vacant land on the 1132 property and vacant land on the adjacent 1146 property located in a mixed commercial/light industrial and residential area in Buffalo. There are access restrictions that would deter potential trespassers, such as the chain-link fence along the southern, eastern, and western sides of the Site and along the northern side of the 1132 property. In addition, overgrown vegetation impedes access from the northern side of the 1146 property. It is not expected that trespassers would obtain access to the inside of the former industrial building.

Exposure of trespassers to COPCs in surface soil/fill via incidental ingestion of and dermal contact with the soil/fill and/or inhalation of volatiles and/or particulates released from the soil/fill, is possible. This includes COPCs in surface soil/fill across the Site and PCBs in soil/fill to the north, west, and east of the former industrial building.

However, these exposure pathways are limited to those areas of the Site not covered by the former manufacturing building footprint (1132 Seneca Street) or other impervious surfaces and are mitigated by the fact that the vacant property (1146 Seneca Street) is covered with vegetation, which limits soil disturbance. In addition, under the future land use scenario, it is anticipated the majority of the Site will be covered with impervious surfaces (e.g., buildings or asphalt-paved parking lots).

PCBs is the predominant COPC in shallow soil/fill based on comparison of the soil/fill data to the NYSDEC BCP’s SCO for restricted-industrial use. The other chemical selected as a COPC based on comparison to an SCO is benzo(a)pyrene, a polycyclic

TABLE 8-11
Summary of Human Health Risk Characterization
Human Health Evaluation
1132 and 1146 Seneca Street, Buffalo, New York

Scenario Timeframe	Receptor Population	Exposure Medium	Exposure Routes Evaluated			Likelihood of Exposure [1]		
						Not Expected	Possible	Likely
Current/Future	Trespasser	Site-wide Surface Soil/Fill	Ingestion	Dermal Contact	Inhalation		X	
		Loading Dock IRM Area Soil/Fill	Ingestion	Dermal Contact	Inhalation	X		
		Pre-Characterization Soil/Fill	Ingestion	Dermal Contact	Inhalation		X	
Future	Construction Worker	Site-wide Surface Soil/Fill	Ingestion	Dermal Contact	Inhalation			X
		Site-wide Subsurface Soil/Fill	Ingestion	Dermal Contact	Inhalation		X	
		Loading Dock IRM Area Soil/Fill	Ingestion	Dermal Contact	Inhalation			X
		Pre-Characterization Soil/Fill	Ingestion	Dermal Contact	Inhalation			X
		Groundwater	N/A	Dermal Contact	Inhalation	X		
	Construction/Utility Worker	Site-wide Surface Soil/Fill	Ingestion	Dermal Contact	Inhalation			X
		Site-wide Subsurface Soil/Fill	Ingestion	Dermal Contact	Inhalation			X
		Loading Dock IRM Area Soil/Fill	Ingestion	Dermal Contact	Inhalation			X
		Pre-Characterization Soil/Fill	Ingestion	Dermal Contact	Inhalation			X
		Groundwater	N/A	Dermal Contact	Inhalation		X	
	Indoor Site Worker / Visitor	Site-wide Surface Soil/Fill	Ingestion	Dermal Contact	Inhalation	X		
		Loading Dock IRM Area Soil/Fill	Ingestion	Dermal Contact	Inhalation		X	
		Indoor Air	N/A	N/A	Inhalation		X	

Notes
N/A = Not Applicable
(1) The likelihood of exposure does not equate to the potential for adverse human health effects from such exposure. See the Risk Characterization section of text for additional discussion specific to each human receptor population.

aromatic hydrocarbon (PAH) that is ubiquitous in the environment. Seven of the nine organic COPCs and all three of the inorganic COPCs were selected based on the lack of chemical-specific SCOs. USEPA RSLs were available for seven of these ten chemicals, however, and their maximum detected concentrations were orders of magnitude less than the corresponding USEPA RSLs. The exposure duration would be limited to the trespassing period.

8.6.2. Future Land Use Scenario

The potential for exposure to COPCs via the pathways described in the Exposure Assessment is discussed for human receptors in the future scenario, under the assumption of Site redevelopment but no further Site remediation. In this section, the potential for exposure is classified as "Not Expected", "Possible", or "Likely" based on anticipated future conditions and surrounding land use.

Construction Workers

Dermal contact with and incidental ingestion and inhalation of COPCs in surface soil/fill:

It is assumed that the volunteer will redevelop the Site as an expansion to their current business. Therefore, exposure of construction workers to COPCs in surface soil/fill, via incidental ingestion of and dermal contact with the soil/fill and/or inhalation of volatiles and/or particulates released from the soil/fill, during future construction work is likely. This includes COPCs in surface soil/fill across the Site, PCBs in soil/fill to the north, west, and east of the former industrial building, and PCBs in the exposed excavation at the loading dock IRM Area.

PCBs is the predominant COPC in shallow soil/fill based on comparison of the soil/fill data to the NYSDEC BCP's SCO for restricted-industrial use. The other chemical selected as a COPC based on comparison to an SCO is benzo(a)pyrene, a polycyclic aromatic hydrocarbon (PAH) that is ubiquitous in the environment. Seven of the nine organic COPCs and all three of the inorganic COPCs were selected based on the lack of chemical-specific SCOs. USEPA RSLs were available for seven of these ten chemicals and their maximum detected concentrations were orders of magnitude less than the corresponding RSLs. The exposure duration would be limited to the period of Site redevelopment.

Dermal contact with and incidental ingestion and inhalation of COPCs in subsurface soil/fill:

Although new construction (e.g., involving subsurface intrusion for footings) is not anticipated at this time, some disturbance to subsurface soil/fill during future redevelopment activities at the Site may occur. Exposure of construction workers to

COPCs in subsurface soil/fill, via incidental ingestion of and dermal contact with soil and/or inhalation of volatiles and/or particulates released from the soil, during future construction work is therefore possible.

However, there is little potential for adverse human health effects from such exposure. The exposure duration would be limited to the period of Site redevelopment. The only COPCs in subsurface soil/fill were one VOC and three metals that were selected based on the lack of chemical-specific SCOs. USEPA RSLs were available for the three metals, and their maximum detected concentrations were orders of magnitude less than the corresponding RSLs.

Construction/Utility Workers

Dermal contact with and incidental ingestion and inhalation of COPCs in surface soil/fill:

The Site has access to a public potable water supply and underground utilities are likely present on the Site. It is assumed that the volunteer will redevelop the Site as an expansion to their current business. Therefore, exposure of construction/utility workers to COPCs in surface soil/fill, via incidental ingestion of and dermal contact with soil and/or inhalation of volatile and/or particulates released from surface soil/fill, during future construction/utility work is likely. This includes COPCs in surface soil/fill across the Site, PCBs in soil/fill to the north, west, and east of the former industrial building, and PCBs in the exposed excavation at the loading dock IRM Area.

PCBs is the predominant COPC in shallow soil/fill based on comparison of the soil/fill data to the NYSDEC BCP's SCO for restricted-industrial use. The other chemical selected as a COPC based on comparison to an SCO is benzo(a)pyrene, a polycyclic aromatic hydrocarbon (PAH) that is ubiquitous in the environment. Seven of the nine organic COPCs and all three of the inorganic COPCs were selected based on the lack of chemical-specific SCOs. USEPA RSLs are available for seven of these ten chemicals and their maximum detected concentrations are orders of magnitude less than the corresponding RSLs. The exposure duration would be limited to the period of Site redevelopment.

Dermal contact with and incidental ingestion and inhalation of COPCs in subsurface soil/fill:

Future construction/utility work would most likely necessitate intrusion to the subsurface soil/fill. Therefore, exposure of construction/utility workers to COPCs in subsurface soil/fill, via incidental ingestion of and dermal contact with the soil/fill and/or inhalation of volatiles and/or particulates released from the soil/fill, is likely.

However, there is little potential for adverse human health effects from such exposure. The only COPCs in subsurface soil/fill were one VOC and three metals that were selected based on the lack of chemical-specific SCOs. USEPA RSLs were available for the three metals, and their maximum detected concentrations were orders of magnitude less than the corresponding RSLs. The exposure duration would be limited to the period of Site redevelopment.

Dermal contact with and inhalation of COPCs in shallow groundwater:

Depth to groundwater on the Site has been measured as 0.1 to 4.1 feet bgs. In the event future construction/utility work necessitates intrusion to the subsurface soil/fill, shallow groundwater may pool in the bottom of an excavation (e.g., a trench). Exposure of construction/utility workers to COPCs in shallow groundwater, via dermal contact and/or inhalation of volatiles, is possible.

However, there is little potential for adverse human health effects from such exposure. The COPCs in shallow groundwater were selected by comparison to the NYSDEC Class GA standards and guidance values, which are protective of drinking water. While the maximum detected concentrations of a few chemicals (i.e., six PAHs, phenol, and manganese) are greater than these screening criteria, the comparison presented herein overstates the potential for adverse human health effects following direct contact exposure to COPCs in shallow groundwater, as is assumed in this exposure scenario. Six of the thirteen organic chemicals and three of the four metals were identified as COPCs based on the lack of chemical-specific Class GA standards and guidance values. USEPA RSLs for tapwater are available for seven of these nine chemicals and their maximum detected concentrations are less than the corresponding RSLs. The exposure duration would be limited to the period of work.

Indoor Site Workers/Visitors

Dermal contact with and incidental ingestion and inhalation of PCBs in soil/fill in the exposed excavation at the Loading Dock IRM area (IRM1)

In the absence of further remediation, exposure of indoor Site workers to PCBs in soil/fill in the exposed excavation during work activities in the area, via incidental ingestion of and dermal contact with the soil/fill and/or inhalation of particulates released from the soil/fill, is possible.

Inhalation of VOCs that migrate from sub-slab soil vapor to indoor air of the existing former industrial building and/or future buildings that may be constructed on the Site:

Since COPCs were selected in sub-slab soil vapor from under the concrete floor slab foundation in the former industrial building, albeit due to the lack of NYSDOH screening criteria, inhalation exposure of indoor Site workers/visitors to the COPCs in indoor air from sub-slab vapor intrusion is possible.

However, based on the conservative comparison of the sub-slab soil vapor data to the available NYSDOH criteria for indoor air and the USEPA RSLs for industrial air, the COPCs in sub-slab soil vapor are unlikely to pose exposure or health hazards to indoor Site workers/visitors. With three exceptions, all of the detected chemical concentrations in sub-slab soil vapor are less than the corresponding screening levels for ambient air. The maximum detected concentrations of the other three chemicals are less than an order of magnitude greater than the corresponding screening levels for indoor air such that the concrete floor slab foundation in the existing building and the foundation in future buildings should mitigate the potential for vapor intrusion.

8.7. Uncertainty Analysis

Uncertainty is inherent in the process of conducting human health evaluations. In qualitative evaluations, sampling and analysis data, information and assumptions regarding the likelihood, frequency, and magnitude of exposure, and information on the toxicity of the detected chemicals are used to infer the potential for exposure and health risk. By design, the evaluations rely on simple and conservative assumptions with the sole intent of identifying and eliminating from concern those scenarios that are unlikely to result in exposure and health risk and highlighting those scenarios that, depending on actual circumstances, may result in exposure and risk. Uncertainty is associated with each component of this process, the sum of which could alter the conclusions regarding the likelihood of exposure and health risk for any given receptor population.

8.7.1. Sampling and Analysis

Uncertainty associated with environmental sampling is generally related to the limitations of the sampling in terms of the number and distribution of samples, while uncertainty associated with the sample analysis is generally associated with systematic or random errors (e.g., false positive or false negative results). Thus, the potential for exposure may be overstated or understated depending on how well each environmental medium was characterized.

8.7.2. Exposure Assessment

Aspects of the human exposure assessment generally result in overstatement of the potential for long-term exposure. In addition, the release mechanisms for COPCs may have been overstated.

8.7.3. Toxicological/Screening Criteria

Screening criteria were not available for all chemicals that were detected in samples collected at the Site. As such, the potential for adverse health effects as a result of potential exposure to those chemicals is uncertain. In addition, in most cases, the critical effects listed for the COPC are for laboratory animals. Differences in toxicity may exist between laboratory animals and humans.

8.8. Summary

The current/future scenario evaluated the potential for human exposure to COPCs at the Site, given the current vacancy of the Site and the anticipated future use of the Site for light industrial use, assuming no further Site remediation. The future scenario evaluated the potential for exposure of additional future human receptor populations to COPCs at the Site, given the anticipated future use of the Site and assuming no further Site remediation. The following presents a summary of the results of the HHE.

8.8.1. Current/Future Scenario

Based on the current and assumed future use of the Site, the potential for trespasser exposure to COPCs in surface soil/fill, via incidental ingestion, dermal contact, and/or inhalation of particulates, is possible. This includes COPCs in surface soil/fill across the Site and PCBs in soil/fill to the north, west, and east of the former industrial building.

However, these exposure pathways are limited to those areas of the Site not covered by the former manufacturing building footprint or other impervious surfaces (1132 Seneca Street) and are mitigated by the fact that the vacant property (1146 Seneca Street) is covered with vegetation, which limits soil disturbance. In addition, under the future land use scenario, it is anticipated the majority of the Site will be covered with impervious surfaces (e.g., buildings or asphalt-paved parking lots). PCBs is the predominant COPC in shallow soil/fill based on comparison of the soil/fill data to the NYSDEC BCP's SCO for restricted-industrial use

8.8.2. Future Scenario

For the purposes of this HHE, it is assumed that the volunteer will redevelop the Site as an expansion to their current business. Potential additional human receptors under the future exposure scenario include construction workers, construction/utility workers, and indoor Site workers/visitors.

Exposure of construction workers and construction/utility workers to COPCs in surface soil/fill at the Site is likely. This includes COPCs in surface soil/fill across the Site, PCBs in soil/fill to the north, west, and east of the former industrial building, and PCBs in the exposed excavation at the loading dock IRM Area. PCBs is the predominant COPC in shallow soil/fill based on comparison of the soil/fill data to the NYSDEC BCP's SCO for restricted-industrial use. The exposure duration would be limited to the period of Site redevelopment.

Exposure of construction workers and construction/utility workers to COPCs in subsurface soil/fill at the Site is possible and likely, respectively. However, there is little potential for adverse human health effects from such exposure. The only COPCs in subsurface soil/fill were one VOC and three metals that were selected based on the lack of chemical-specific SCOs. USEPA RSLs were available for the three metals, and their maximum detected concentrations were orders of magnitude less than the corresponding RSLs. The exposure duration would be limited to the period of Site redevelopment.

Exposure of construction/utility workers to COPCs in shallow groundwater at the Site is possible. In the event that future construction/utility work necessitates intrusion into the subsurface soil, shallow groundwater may infiltrate the bottom of an excavation. However, there is little potential for adverse human health effects from such exposure. The COPCs were selected by comparison to NYSDEC Class GA standards and guidance values protective of drinking water which overstates the potential for adverse human health effects following direct contact exposure to COPCs in shallow groundwater, as is assumed in this exposure scenario. The exposure duration would be limited to the period of work.

Exposure of indoor Site workers to PCBs in soil/fill in the exposed excavation at the loading dock IRM area (IRM1) during work in the area is possible.

Since COPCs were selected in sub-slab soil vapor from under the concrete floor slab foundation in the former industrial building, albeit due to the lack of NYSDOH screening criteria, inhalation exposure of indoor Site workers/visitors to the COPCs in indoor air from sub-slab vapor intrusion is possible.

However, based on the conservative comparison of the sub-slab soil vapor data to the available NYSDOH criteria for indoor air and the USEPA RSLs for industrial air, the COPCs in sub-slab soil vapor are unlikely to pose exposure or health hazards to indoor Site workers/visitors. The concrete floor slab foundation in the existing building and the foundation in future buildings should mitigate the potential for vapor intrusion.

9. Conclusions and Recommendations

9.1. Conclusions

The Remedial Investigation of the 1132-1146 Seneca Street Site provided an environmental characterization of on-Site surface and subsurface soil/fill, groundwater, and sub-slab soil vapor sufficient to evaluate potential impacts to human health and the environment. A summary of the conclusions drawn for the data presented in this report is provided below by medium evaluated:

9.1.1. Soil/Fill Material

Evaluation of analytical results for surface and subsurface soil/fill samples identified elevated concentrations of PCBs on the 1122 and 1132 Seneca street properties and benzo(a)pyrene on the 1146 Seneca Street property in surface soil. Based on samples collected from the native silty clay as part of the two IRMs completed, these elevated concentrations may be limited to the soil/fill material above the underlying, relatively less permeable, native silty clay. Also, sediment samples collected from an interior floor drain/pipe chase in the former manufacturing building also contained elevated PCBs. As shown on Table 7-4 and Figure 7-3, highest concentrations of PCBs are present in the upper six inches of the soil/fill and in the floor drain sediment

One carcinogenic PAH compound (benzo(a) pyrene) was detected in surface soil (0 to 2" depth) on the 1146 Seneca property at concentrations that exceed the NYS Restricted Industrial SCO. Based on the analytical results , surface soils containing BAP at concentrations above the industrial SCO of 1.1 mg/kg will be removed and disposed off-site at a DEC-permitted waste disposal facility. VOCs were not detected in the soil/fill samples at concentrations above NYS SCOs for restricted commercial or industrial use.

The deepest samples in which constituent concentrations were greater than the Restricted Industrial SCOs were collected at the 0.5 to 2.0 feet depth. These samples represent the deepest depth at which contamination of concern was found and are within the soil/fill material, above the native silty clay.

9.1.2. Groundwater

Slightly elevated concentrations of two SVOCs and three common metals were identified in the groundwater samples collected during the RI. VOCs and PCBs were not present in groundwater samples at concentrations above GW standards.

The groundwater in the on-Site overburden is perched on the native silty clay, discontinuous across the Site, and ephemeral based on seasonal and periodic precipitation and snow melt events.

Although the on-Site overburden groundwater is not used for human consumption or for any other purpose, the shallow depth of the overburden groundwater, when present, could allow for direct contact with the groundwater during planned redevelopment activities. Such contact would be limited to the times during which excavations are performed.

9.1.3. Soil Vapor

VOC concentrations detected in sub-slab soil vapor samples collected at the Site are all very low and for the few compounds that were detected that have NYSDOH guidance criteria, those concentrations were below the criteria at which further action would be recommended.

9.2. Recommendations

The recommendations described below are based on the inherent directive of the NYS Brownfield Cleanup Program that mandates the implementation of remedial actions designed to return properties within the BCP to a status that is protective of Human Health and the Environment. Results of this and previous environmental studies at the Site confirm that the 1132-1146 Seneca Street Site is suitable for re-development for new industrial use provided that certain remedial actions and precautions are taken to limit exposure to PCBs and other contaminants in the soil/fill material and groundwater. Recommendations include:

- **Removal of the UST** – Remove the UST that was encountered outside and near the entrance to the former rail loading dock on the 1132 Seneca Street property.
- **Removal of PCB-Impacted Soil Fill -** Removal and off-Site disposal of PCB-impacted soil/fill is recommended for the soil/fill that is identified as containing PCBs at concentrations above the SCO for restricted industrial use (25 PPM). These were delineated and found to be limited to the 1122 and 1132 Seneca Street properties.
- **Removal of benzo(a)pyrene-**impacted Surface Soils- Removal and off-Site disposal of BAP-impacted surface soil(upper 2”) is recommended for the soil/fill that is identified as containing BAP at concentrations above the SCO for restricted industrial use (1.1 mg/kg). These were determined to be limited to surface soils of the 1146 Seneca Street property.
- **Confirmatory Sampling** – Subsequent to UST removal and excavation and disposal of the PCB -impacted soil/fill materials, post-excavation confirmatory soil will be collected for PCB (and organics in the case of the UST) analysis prior to backfilling with documented clean soil.

- **Removal of PCB-Containing Floor Drain Sediment -** Sediments found to contain elevated PCBs located in a floor drain (pipe chase) in the floor of the 1132 Building should be properly removed and disposed off-Site at a permitted waste disposal facility.

Depending on the results of post excavation sampling, the following potential precautions may be warranted during and subsequent to Site redevelopment:

- Establishment of health and safety protocols for specific tank removal, excavation and re-development activities to minimize exposure to potential contaminants.
- Development of a Site Management Plan (SMP) of which will contain three main parts as follows:
  - Environmental Easement – which details site-specific restrictions and requirements.
  - ExcavationWork Plan for dealing with excavated fill material as well as for the likely event that groundwater is encountered during development activities and when digging as required for maintenance of buried utilities following completion of Site redevelopment. The Excavation Work Plan should include health and safety requirements and excavated soil and/or groundwater handling/disposal requirements.
  - Periodic Review Report – which details requirements for regular site inspection/reviews and certification of institutional controls.
- Placement of Site and groundwater use restrictions to prevent higher Site uses and human consumption of the on-Site groundwater.

As discussed in the qualitative human health evaluation in Section 8.0, implementation of these actions will be sufficient to protect human health and the environment.

10. Remedial Work Plan

10.1. Remedial Goals and Objectives

Phase II and Remedial investigations completed at the Site have sufficiently characterized the nature and extent of contamination present in on-Site environmental media for use in determining potential risks and remedial needs at the Site. Risk assessment conclusions derived from extensive analytical data from soil, air, and groundwater samples indicate that elevated levels of PCBs present in surface (upper 2-inches) and near-surface ($\leq$2.0 feet) soil/fill are the primary potential health risk posed by environmental media at the Site and that these soil/fill warrant remedial action. Also, benzo(a)pyrene is present in surface soil at concentrations above the industrial soil cleanup objective at some locations on the 1146 Seneca Street property and will also be remediated. The discovery of a (water-filled) underground storage tank may pose potential environmental risk and therefore should be removed along with any associated impacted soil/fill, if present. Soil vapor and groundwater were determined not to be media of significant concern based on the lack of constituents and/or concentrations of concern and unlikely/limited exposure routes and duration.

10.1.1. Remedial Goals

The remedial goals for the Site are:

1. Elimination of potential threats to public health posed by on-Site PCB-impacted soil/fill located on the 1122 and 1132 properties.
2. Elimination of potential threats to public health posed by on-Site benzo(a)pyrene-impacted surface soil located on the 1146 Seneca Street property.
3. Elimination of potential threats to public health potentially posed by the underground storage tank (UST), located on the 1132 property, and related impacted soil/fill, if present.

10.1.2. Remedial Action Objectives

Based on the results of the Site characterizations and Qualitative Human Health Risk Assessment, PCB-impacted and benzo(a)pyrene-impacted soil/fill are the media of primary concern at the Site. The PCB-impacted soil/fill of concern is that which is located on the 1122 and 1132 properties at concentrations above 25 PPM (the restricted industrial SCO). No such PCB-impacted soil/fill was found on the 1146 property. The BAP-impacted soil are surface soils of 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, potential petroleum-impacted soil/fill and/or impacted groundwater may be present in the immediate vicinity of the UST discovered on the 1132 property, near the rail loading dock.

The Remedial Action Objectives for the Site are:

1. To remove 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 PPM and 1.1 mg/kg respectively).
2. To remove risks potentially associated with the contents of the UST and surrounding soil/fill that may have been impacted by the UST.

In order to achieve the RAOs, the PCB-impacted soil/fill material and BAP-impacted surface soil will be removed and properly disposed off-Site prior to Site re-development. The PCB excavations will be backfilled with documented clean soil. The UST and associated impacted soil/fill, if present, will be removed and backfilled with documented clean soil prior to Site redevelopment. Surface soil with elevated concentrations of BAP will be removed to a depth of a minimum of 3-inches and disposed off-Site at a DEC-permitted disposal facility.

10.1.3. Cleanup Tracks and SCGs

Since both remedial action objectives require the same basic remedy of removal and off-Site disposal, this remedy was evaluated under different cleanup track scenarios. Site cleanup Tracks 1, 2, and 4 were considered and evaluated for the remediation of the 1132-1146 Seneca Street BCP Site. The appropriate SCGs pertain only to soil/fill and are the New York State Soil Cleanup Objectives as provided in 6NYCRR Subpart 375-6.8(a) and (b).

10.2. Remedial Alternatives

Removal and off-Site Disposal of the PCB-impacted soil/fill, BAP-impacted surface soil and the UST is the focus of the remedial alternatives considered 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 was evaluated under several different Cleanup Track scenarios which vary by cleanup levels and/or engineering controls. The following is a list of the five remedial alternatives evaluated for this Site:

1. **No Action** – The No Action alternative assumes that no remedial action is taken and the Site is developed as planned but without removal of any of the PCB-impacted or BAP-impacted soil/fill or the UST and associated soil/fill.
2. **Track 1 Cleanup** – Under a Track 1 cleanup, all on-Site soil/fill with constituents above unrestricted SCOs, including that which is beneath the large existing building, would be removed and replaced with documented clean soil.
3. **Track 2 Cleanup –Commercial SCOs** – Under a Track 2 Commercial cleanup, PCBs and other constituents present in soil/fill above restricted commercial SCOs would be removed and replaced with documented clean soil.
4. **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 would be removed and where necessary for redevelopment, replaced with documented clean soil.
5. **Track 4 Cleanup – Industrial SCOs** - Under a Track 4 Industrial cleanup, PCBs at hazardous levels (> 50 PPM) would be removed and replaced with documented clean soil and the entire Site covered with a protective cover system consisting of buildings, pavement, and/or one foot of vegetated clean soil. Figure 7-3 illustrates, in red, those areas that would be excavated and removed under this remedial alternative.

Each of these five remedial alternatives is described in more detail below.

10.2.1. Description of Remedial Alternatives

10.2.1.1. Alternative # 1- No Action

This alternative assumes that no remedial action is taken and the Site is developed as planned but without removal of any of impacted soil/fill or the UST and associated soil/fill. Since hazardous levels of PCBs are present in surface and near-surface soils, and BAP is present in surface soils at some locations on the 1146 Seneca Street property at concentrations above the industrial SCO, this alternative would not be protective of human health and would not be compliant with 6NYCRR Subpart 375-6. For this reason, this alternative was not considered further.

10.2.1.2. Alternative #2 - Track 1 Cleanup

Under a Track 1 cleanup, all on-Site soil/fill, including that which is beneath the existing warehouse building, would be removed and replaced with documented clean soil. Cleanup under Track 1 requires achieving unrestricted use soil cleanup objectives as specified in 6NYCRR Subpart 375-6.8(a), resulting in unrestricted Site use. Implementing the Track 1 alternative at this Site would involve removal of all on-Site soil/fill material from 1122, 1132, and 1146 Seneca Street properties to a minimum depth equivalent to the top of the native silty clay material. The remaining native silty clay soil would have to be verified through additional characterization and meet unrestricted

SCOs. Where necessary, backfill material would have to be documented clean soil per Appendix 5 of DER-10 (Nov 2009) Allowable Constituent Levels for Imported Fill or Soil.

A large volume of impacted soil/fill that would need to be removed and replaced by clean soil. The removal of the Soil/fill would be significantly complicated by the presence of the large former manufacturing building which covers much of the Site including some of the soil/fill that would need to be removed. This building is the main reason the applicant purchased the property and is undertaking the expense of Site remediation and redevelopment. If this building were required to be removed or significantly modified in order to remove the underlying soil/fill material the applicant would not be able to fund the remediation or Site redevelopment. The planned continued industrial use and industrial zoning of the Site makes cleanup of the Site under Track 1 overly conservative and unnecessary, impractical, and cost prohibitive. For these reasons, this alternative was not considered further.

10.2.1.3. Alternative #3 - Track 2 Cleanup –Commercial SCOs

Cleanup under Track 2 requires achieving the lowest of three applicable restricted use contaminant-specific soil cleanup objectives for all soils above bedrock as set forth in Section 375-6.4, (protection of public health), Section 375-6.5 (protection of groundwater), and Section 375-6.6 (protection of ecological resources). PCBs and other constituents coincident with those PCBs present in soil/fill of the 1122 and 1132 property above restricted commercial SCOs would be removed and replaced with documented clean soil. Also, surface soils containing BAP at concentrations above the industrial SCO would be removed from the 1146 Seneca Street property. This remedial option would include the removal of approximately 11,000 tons of PCB-impacted soil/fill from the 1122 and 1132 properties, including the UST and related soil/fill at an estimated cost of approximately $1.2 million, as well as an estimated 1430 tons of PAH- impacted surface soil at a cost of $70,000 Table 10-1. The removal of the PCB-impacted surface and subsurface soil/fill would include excavation, confirmation sampling, and backfilling with clean soil in accordance with DER-10 (DEC November 2009). This option would meet and exceed the remedial action objective and would include institutional controls of future Site use (industrial) and groundwater use. This alternative is analyzed further in Section 10.3.

10.2.1.4. Alternative # 4 - Track 2 Cleanup – Industrial SCOs

Under a Track 2 Industrial cleanup, PCBs and other constituents present in soil/fill above the restricted industrial SCOs would be removed and replaced with documented clean soil. Based on the known environmental conditions at the Site and the planned Site industrial use, Site cleanup under Track 2 can be achieved by the removal and off-Site disposal of PCB-impacted soil/fill to meet the restricted industrial SCO of 25 mg/kg and replacement with documented clean soil. The PCB-impacted soil/fill of concern is

Table 10-1

REMEDIAL COST ESTIMATE
ALTERNATIVE 3

1132-1146 SENECA STREET SITE
Buffalo, New York

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE MAT. & LABOR	EST. TOTAL
1	Remedial Contractor Mobilization and demobilization	1	sum	$2,900	$2,900
2	Excavation water management/disposal and removal of Pipe Chase PCB sediments	1	sum	$2,600	$2,600
3	Removal and disposal of hazardous PCB soil/concrete	700	tons	$144	$100,800
4	Removal and disposal of non-haz PCB soil/concrete (>1 < 50 PPM) [1]	10100	tons	$51	$515,100
	Removal and disposal of non-haz PAH surface soil (upper 4") from 75% of 1146 Seneca St.	1430	tons	$46	$65,780
5	Removal and disposal of UST and related product/soils	1	sum	$12,500	$12,500
6	Backfill all PCB excavations with clean soil	4100	tons	$21	$86,100
	Total Remedial Contractor Costs before tax and contingency				**$785,780**
7	Sales tax on Remedial Contractor Costs	0.0875		$785,780.00	$68,756
8	Side-wall/bottom confirmation samples (Pirnie's sub lab) 24 hr TAT	110	Samples	$110.00	$12,100
9	Engineering [2]	1	sum	$30,000	$30,000
	Sub-Total				$896,636
10	Health & Safety (10%)	10% of Subtotal	sum		$89,664
11	Contingency	30 % of subtotal	sum		$268,991
Total					**$1,255,290**

[1] Assumes minor non-PCB exceedances of commercial SCO in areas without PCB > 1PPM will be left in place.

[2] Includes time and expenses for oversight of remedial contractor (4 hrs/day x 40 days), collection/coordination of confirmation samples and 10 hrs/week for 8 weeks for oversight of construction ops.

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located on the 1122 and 1132 Seneca properties. In addition, BAP-impacted surface soils would be removed from the upper 3-inches minimum and disposed off-Site at a DEC-permitted waste disposal facility. Figure 7-3 of the RI illustrates the areas planned for PCB-impacted soil/fill removal operations. Also, based on post-RI pre-characterization sampling, BAP-impacted surface soil will be removed from approximately 50% of the 1146 Seneca Street property. Figure 10-1A illustrates the areas that will require BAP removal. 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 institutional controls would be implemented. These controls would include limiting future Site use to industrial and restricting the use of groundwater from beneath the Site without prior treatment and written permission of the Department.

To verify protection, any soil/fill materials encountered during redevelopment and determined to be significantly more contaminated than what has been previously characterized would be properly disposed off-Site. The SCOs will be used to assess soil/fill excavations or disturbances, define levels for the Site contaminants of concern, above which off-Site disposal will be required.

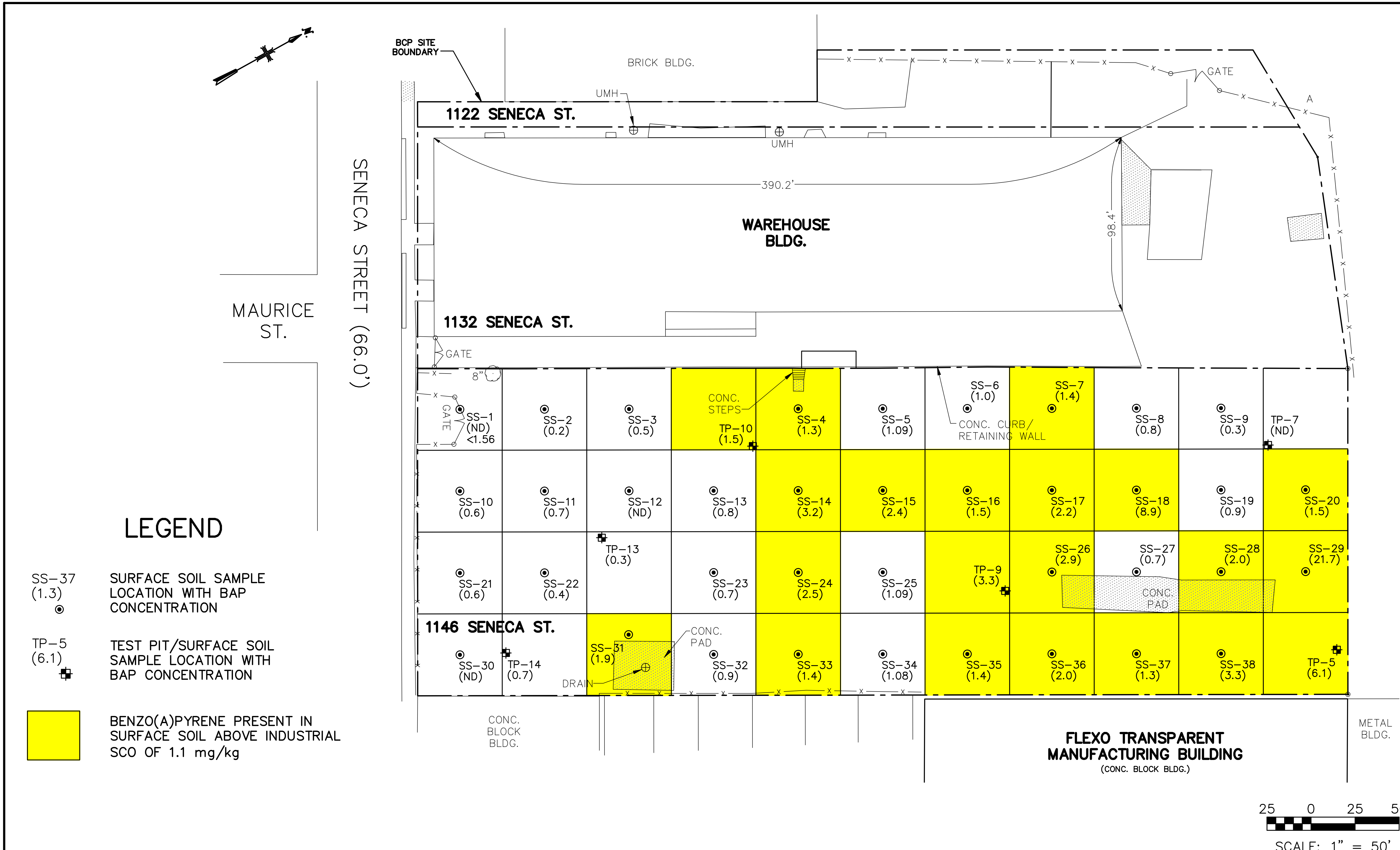
During clearing, grading, excavating, and stockpiling of excavated soil, dust suppression and air monitoring will be conducted in accordance with NYSDEC TAGM HWR-89-4031, Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Waste Sites.

Soil/fill material containing analytes above the SCOs will be 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 will be 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.

This remedial option would include the removal of approximately 1500 tons of PCB-impacted soil/fill and an estimated 1000 tons of BAP-impacted surface soil at an estimated cost of approximately $425,000, including the UST and related soil/fill, see Table 10-2. As part of the PCB-impacted soil/fill removal, excavation, confirmation sampling, and backfilling with clean soil would be performed in accordance with DER-10 (DEC November 2009). This option would meet the remedial action objective. This alternative is analyzed further in Section 10.3.

10.2.1.5. Alternative # 5 - Track 4 Cleanup – Industrial SCOs

Under a Track 4 Industrial cleanup, PCBs present in soil/fill above hazardous waste concentration (50 ppm) along with other constituents located coincidental with those



MALCOLM PIRNIE

FLEXO TRANSPARENT, INC.
BUFFALO, NEW YORK

REMEDIAL INVESTIGATION REPORT/REMEDIAL WORK PLAN
1132–1146 SENECA STREET BCP REDEVELOPMENT

BENZO(A)PYRENE IN SURFACE SOILS

MALCOLM PIRNIE, INC.
JULY 2010
FIGURE 10–1A

Table 10-2

REMEDIAL COST ESTIMATE
ALTERNATIVE 4

1132-1146 SENECA STREET SITE
Buffalo, New York

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE MAT. & LABOR	EST. TOTAL
1	Remedial Contractor Mobilization and demobilization	1	sum	$2,900	$2,900
2	Excavation water management/disposal and removal of Pipe Chase PCB sediments	1	sum	$2,600	$2,600
3	Removal and disposal of hazardous PCB soil/concrete	700	tons	$144	$100,800
4	Removal and disposal of non-haz PCB soil/concrete (>25 < 50 PPM)	800	tons	$51	$40,800
5	Removal and disposal of UST and related product/soils	1	sum	$12,500	$12,500
6	Backfill all excavations with clean soil	1980	tons	$21	$41,580
7	Removal and disposal of BAP-impacted surface (0-4") soil from 50% of the 1146 Seneca Propert	1000	tons	$46	$46,000
	Total Remedial Contractor Costs before tax and contingency				**$247,180**
8	Sales tax on Remedial Contractor Costs	0.0875		$247,180.00	$21,628
9	Side-wall/bottom confirmation samples (Pirnie's sub lab) 24 hr TAT	70	Samples	$110.00	$7,700
10	Engineering [(1)]	1	sum	$25,000	$25,000
	Sub-Total				$301,508
11	Health & Safety (10%)	10% of Subtotal	sum		$30,151
12	Contingency	30 % of subtotal	sum		$90,452
	Total				**$422,112**

[(1)] Includes time and expenses for oversight of remedial contractor (4 hrs/day x 25 days), collection/coordination of confirmations samples and 10 hrs/week for 8 weeks for oversight of construction ops.

Prepared 070610 jjr

elevated PCBs, would be removed and replaced with documented clean soil and the entire Site covered with a protective cover system consisting of buildings, pavement, and/or one foot of vegetated documented clean soil. Figure 7-3 illustrates, in red, those areas that would be excavated and removed under Alternative 5. Associated with a Site cover system would be required long-term Operations, Monitoring, and Maintenance (OM&M) and regular inspections and reporting on the condition of the cover system.

Details of the Site cover system would include:

- preparation of the Site surface/grading,
- specifications of thickness and type of pavement sub-base,
- thickness requirements of concrete and asphalt pavement,
- specifications of a demarcation mesh layer to be placed prior to placement of soil cover,
- specifications of thickness (1-foot) and type of acceptable clean soil cover,
- requirements for vegetative cover where clean soil is placed, including seed mixture specifications.

Also, included in this remedial alternative would be required excavation management practices per the Excavation Management Plan and the implementation of institutional controls of future industrial Site use and restriction on groundwater use.

The estimated cost of this alternative is approximately $390,000 as detailed in Table 10-3. This alternative is analyzed with others in Section 10.3.

10.3. Alternative Analysis

10.3.1. Introduction

The following Sections present a detailed analysis of the three potentially viable remedial alternatives (Alternatives 3, 4, and 5) with respect to the evaluation criteria outlined in 6 NYCRR Part 375-1.10 and the RAOs for the Site.

10.3.2. Overall Protection of Public Health and the Environment

This threshold assessment addresses whether a remedy provides adequate protection and describes how risks posed through each pathway are eliminated, reduced, or controlled. This evaluation allows for consideration of whether the alternative poses any unacceptable short-term or cross-media impacts.

As determined by the Site-specific Qualitative Risk Assessment, Alternatives #3, 4, and 5 all provide adequate protection of public health and the environment and, therefore, achieve the RAOs for the Site. Alternatives #3 and #5 would be more protective than necessary relative to the future industrial use of the Site.

Table 10-3

REMEDIAL COST ESTIMATE
ALTERNATIVE 5

1132-1146 SENECA STREET SITE
Buffalo, New York

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE MAT. & LABOR	EST. TOTAL
1	Remedial Contractor Mobilization and demobilization	1	sum	$2,900	$2,900
2	Excavation water management/disposal and removal of Pipe Chase PCB sediments	1	sum	$2,600	$2,600
3	Removal and disposal of hazardous PCB soil/concrete	700	tons	$144	$100,800
5	Removal and disposal of UST and related product/soils	1	sum	$12,500	$12,500
6	Backfill all PCB excavations with clean soil	850	tons	$21	$17,850
7	Soil cover System (one foot clean soil over north end of 1146 Seneca)	38000	SF	$1	$38,000
8	Annual Inspection and Certification of Site Cover System (per year)	10	year	$4,500	$45,000
	Total Remedial Contractor Costs before tax and contingency				**$219,650**
9	Sales tax on Remedial Contractor Costs	0.0875		$219,650.00	$19,219
10	Side-wall/bottom confirmation samples (Pirnie's sub lab) 24 hr TAT	70	Samples	$110.00	$7,700
11	Engineering [1]	1	sum	$30,000	$30,000
	Sub-Total				$276,569
12	Health & Safety (10%)	10% of Subtotal	sum		$27,657
13	Contingency	30 % of subtotal	sum		$82,971
Total					**$387,197**

[1] Includes time and expenses for oversight of remedial contractor (4 hrs/day x 25 days), collection/coordination of confirmations samples and 10 hrs/week for 12 weeks for oversight of construction ops.

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Additionally, the Excavation Work Plan of the Site Management Plan will protect on-Site workers, the public, and the environment during Site redevelopment and future maintenance actions that would disturb the soil/fill material. The Excavation Work Plan also requires the off-Site disposal of soil/fill material determined to contain contaminant concentrations above restricted industrial SCOs if encountered.

10.3.3. Compliance with Standards, Criteria, and Guidance (SCGs)

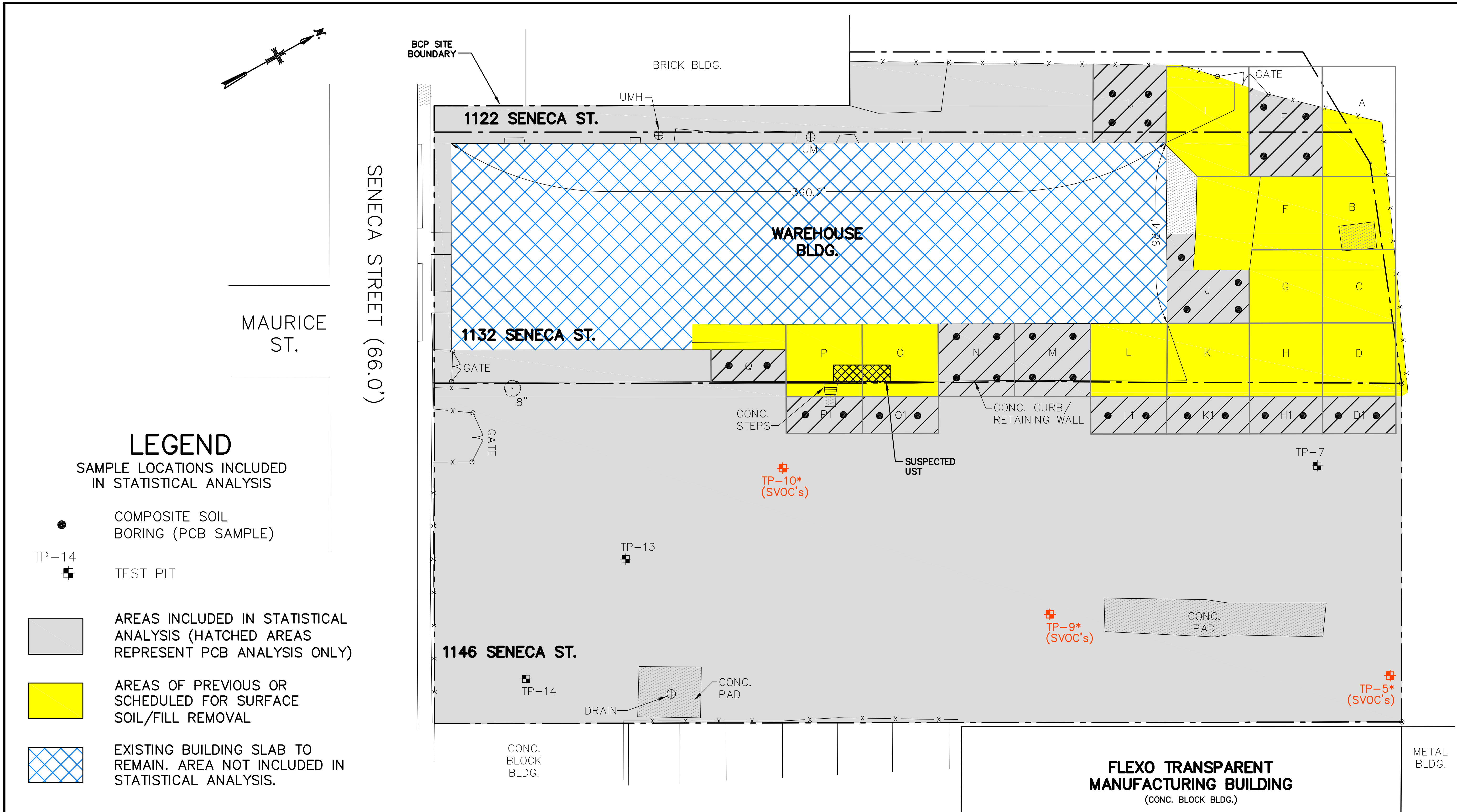
A Site's remedial program must be designed so as to conform to standards and criteria that are generally applicable, consistently applied, and officially promulgated, that are either directly applicable, or that are not directly applicable but are relevant and appropriate, unless good cause exists why conformity should be dispensed with [6 NYCRR 375-1.0(c)(1)(i)].

Remedial Alternative #5 would fully comply with SCGs for the Site by removal of the most acutely contaminated soil/fill and placing a cover system over the entire Site to prevent contact with contaminants remaining on Site at concentrations below the industrial SCO.

Alternatives #3 would not completely comply with the SCGs because of exceedances to SCGs on the 1146 property. These analytes include two PAHs, PCBs, and arsenic. However, these exceedances are very few of the 140 analytes tested, are present in the subsurface not at the surface and, were present, are below or only slightly above SCO levels. Tables 10-4 and 10-5 provide a summary of SCO exeedances in surface (0-2”) and subsurface (>2” and <2’) soil/fill samples and corresponding Figures 10-1, 10-1A and 10-2 illustrate the locations and concentrations of the samples which contained constituents above commercial and or industrial SCOs. Comparison of these two maps with Figure 8-2 which shows the planned Site development reveals that all but one of the SCO exceedances will be covered by some planned Site structure or paved surface. The single exception is this is the subsurface sample collected at Phase II boring B-3 which contained arsenic at 24 mg/kg, slightly above the commercial and industrial SCO of 16 mg/kg. Most other SCO exceedances were within the same order of magnitude of the SCOs and were located in areas that will be covered by planned Site structures or paved surfaces. See Figures 8-2, 10-1, 10-1Aand 10-2.

10.3.4. Long-Term Effectiveness and Permanence

This criterion evaluates the long-term protection of human health and the environment at the completion of the remedial action. Effectiveness is assessed with respect to the magnitude of residual risks; adequacy of controls, if any, in managing treatment residuals or untreated wastes that remain at the Site; reliability of controls against possible failure; and potential to provide continued protection.



NOTE:

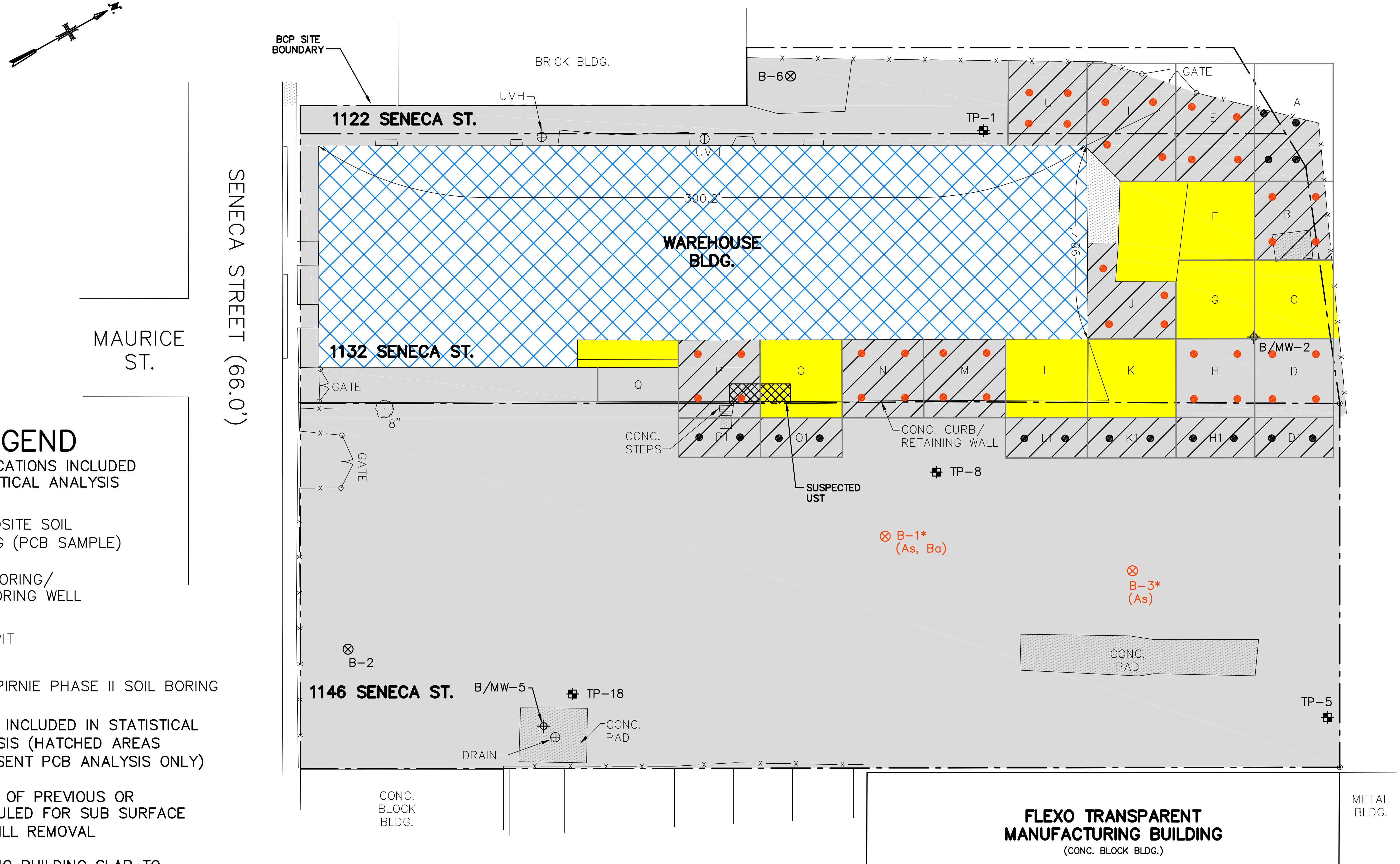
SAMPLE LOCATIONS IN RED REPRESENT SOIL CLEANUP OBJECTIVE (SCO) RESTRICTED COMMERCIAL OR RESTRICTED INDUSTRIAL EXCEEDANCE. INDUSTRIAL EXCEEDANCES SHOWN WITH *. ANALYTE(S) CLASS SHOWN IN ( ).

MALCOLM PIRNIE

FLEXO TRANSPARENT, INC.
BUFFALO, NEW YORK
REMEDIAL INVESTIGATION REPORT/REMEDIAL WORK PLAN
1132-1146 SENECA STREET BCP REDEVELOPMENT

SURFACE SOIL CONTAMINATION SUMMARY

MALCOLM PIRNIE, INC.
MAY 2010
FIGURE 10-1



LEGEND

SAMPLE LOCATIONS INCLUDED IN STATISTICAL ANALYSIS

COMPOSITE SOIL BORING (PCB SAMPLE)

B/MW-5 — SOIL BORING/ MONITORING WELL

TP-17 — TEST PIT

B-1 — 2008 PIRNIE PHASE II SOIL BORING

AREAS INCLUDED IN STATISTICAL ANALYSIS (HATCHED AREAS REPRESENT PCB ANALYSIS ONLY)

AREAS OF PREVIOUS OR SCHEDULED FOR SUB SURFACE SOIL/FILL REMOVAL

EXISTING BUILDING SLAB TO REMAIN. AREA NOT INCLUDED IN STATISTICAL ANALYSIS.

NOTE:

1. SAMPLE LOCATIONS IN RED REPRESENT SOIL CLEANUP OBJECTIVE (SCO) RESTRICTED COMMERCIAL OR RESTRICTED INDUSTRIAL EXCEEDANCE. INDUSTRIAL EXCEEDANCES SHOWN WITH *. ANALYTE(S) CLASS SHOWN IN ( ).

MALCOLM PIRNIE

FLEXO TRANSPARENT, INC.
BUFFALO, NEW YORK
REMEDIAL INVESTIGATION REPORT/REMEDIAL WORK PLAN
1132–1146 SENECA STREET BCP REDEVELOPMENT

SUBSURFACE SOIL CONTAMINATION SUMMARY

MALCOLM PIRNIE, INC.
MAY 2010
FIGURE 10-2

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TABLE 10-4
Summary of Contamination
Site-Wide Surface Soil[1]
1132-1146 Seneca Street Site
Buffalo, NY

Analyte[2]	Number of Samples Analyzed[3,4]	Frequency of Detection	Range of Detection (µg/kg)	Maximum Concentration (µg/kg)	Average Concentration (µg/kg)	Restricted Use Soil Cleanup Objectives - Commercial	Restricted Use Soil Cleanup Objectives - Industrial	Frequency of Detections > SCO- Restricted Commercial	Frequency of Detections > SCO- Restricted Industrial
Semi-Volatiles Organic Compounds (µg/kg)									
Benzo(a)anthracene	6	6 / 6	240 - 7,900	7,900	1,963	5,600	11,000	1 of 6	0 of 6
Benzo(a)pyrene	44	41/44	230 - 21,700	21,700	2,030	1,000	1,100	24/44	21/44
Benzo(b)fluoranthene	6	6 / 6	370 - 9,900	9,900	2,688	5,600	11,000	1 of 6	0 of 6
PCB (µg/kg)									
Total PCBs	19	19 / 19	46 - 18,500	18,500	4,497	1,000	25,000	8 of 19	0 of 19
Volatiles Organic Compounds (µg/kg)									
VOCs were not detected in surface soil samples at concentrations greater than Soil Cleanup Objectives									
Inorganics (Metals) (mg/kg)									
Inorganics (Metals) were not detected in surface soil samples at concentrations greater than Soil Cleanup Objectives									

Notes:
1. Surface Soils represent samples collected from the 0 - 2-inch interval only.
2. Only those analytes present at concentrations above the Restricted Commercial Soil Cleanup Objective are shown.
3. Includes surface soil samples analyzed for PCBs or BAP only as part of the soil pre-characterization work.
4. Samples collected from locations in areas beneath the existing building floor slab are not included.

TABLE 10-5
Summary of Contamination
Site-Wide Subsurface Soil
1132-1146 Seneca Street Site
Buffalo, NY

Analyte[1]	Number of Samples Analyzed[2,3]	Frequency of Detection	Range of Detection (µg/kg)	Maximum Concentration (µg/kg)	Average Concentration (µg/kg)	Restricted Use Soil Cleanup Objectives - Commercial	Restricted Use Soil Cleanup Objectives - Industrial	Frequency of Detections > SCO-Restricted Commercial	Frequency of Detections > SCO-Restricted Industrial
Semi-Volatiles Organic Compounds (µg/kg)									
SVOCs were not detected in the 12 subsurface soil samples at concentrations greater than Soil Cleanup Objectives									
PCB (µg/kg)									
Total PCBs	28	19 / 28	28 - 15,400	15,400	4,559	1,000	25,000	10 of 28	0 of 28
Volatiles Organic Compounds (µg/kg)									
VOCs were not detected in the 12 subsurface soil samples at concentrations greater than Soil Cleanup Objectives									
Inorganics (Metals) (mg/kg)									
Arsenic	12	12 / 12	3.8 - 24	24.0	11.7	16	16	2 of 12	2 of 12
Barium	12	12 / 12	59.6 - 704	704	176.5	400	10,000	1 of 12	0 of 12

Notes:
1. Only those analytes present at concentrations above the Restricted Commercial Soil Cleanup Objective are shown.
2. Includes subsurface soil samples analyzed for PCBs only as part of the soil pre-characterization work.
3. Samples collected from locations in areas planned for surface/subsurface soil removal or beneath the existing building floor slab are not included.

Remedial Alternatives #3, #4, and #5 would all effectively reduce the long-term risk to public health and the environment by removing the most acutely impacted material that poses the potential risk. The contaminants that will remain in the soils at the Site following redevelopment will be of relatively low concentration and mostly or completely covered with Site development features including buildings, paved parking lots, driveways, walkways and vegetation. In addition, the contaminants of concern are generally considered immobile and, therefore, do not pose a threat via migration to adjacent properties via groundwater flow or vapor migration.

In addition, the industrial use of the Site will be controlled through City zoning, land use and design guidelines, and deed restrictions. Therefore, with the impacted soil/fill of concern removed from the Site, the remaining soil/fill mostly or completely covered, the future use of the Site limited to industrial use, and future handling of the remaining soil/fill managed through the use of a Excavation Work Plan, any of the three alternatives considered will provide long-term effectiveness and permanence in achieving the RAOs for the Site.

10.3.5. Reduction of Toxicity, Mobility, or Volume

This evaluation criterion addresses the preference for selecting a remedial action alternative that permanently and significantly reduces the volume, toxicity, and/or mobility of the hazardous wastes and/or constituents. This preference is satisfied when the remedial action is used to reduce the principal threats at a Site through destruction of toxic contaminants, irreversible reduction in contaminant mobility, or reduction of total volume of contaminated media. The following is the hierarchy of remedial technologies ranked from most preferable to least preferable:

1. Removal/Destruction
2. Separation/Treatment
3. Solidification/Chemical Fixation
4. Control and Isolation

As supported by the Qualitative Risk Assessment, remedial Alternatives #3, #4, and #5 are all protective of public health and the environment. Additional treatment-focused remedial alternatives (e.g., destruction, separation/treatment, and solidification/ chemical fixation) therefore are considered unnecessary.

Remedial Options #3, #4, would remove the contaminants of primary concern (i.e. elevated PCBs, BAP, and any impacts of the UST) thus reducing the volume of hazardous constituents at the Site. Both of these alternatives would also control remaining residual concentrations of contaminants of concern by complete to nearly complete coverage of the soil/fill by buildings, roadways, parking lots, and vegetation as well as limiting use of the Site to industrial and implementation of an Excavation Work Plan.

If concentrations of contaminants of concern detected in soils during future Site maintenance or construction are above industrial SCOs, the impacted soil/fill material will be removed from the Site and properly disposed, thereby further decreasing the volume of contamination at the Site.

10.3.6. Short-Term Effectiveness

The effectiveness of alternatives in protecting human health and the environment during construction and implementation of the remedial action is evaluated under this criterion. Short-term effectiveness is assessed by protection of the community, protection of workers, environmental impacts, and time until protection is achieved.

Initially, the restriction of access to the Site in its present condition has reduced the risks posed by the Site to the general public prior to Site remediation and redevelopment. Under Alternatives #3, #4, and #5, the removal of impacted soil/fill and the UST and related soil/fill all equally reduce the risk to public health and the environment in the short-term and long-term by removing the materials that pose the greatest potential risk.

An Excavation Work Plan will further help to protect on-Site workers, the public, and the environment during Site redevelopment activities. During redevelopment activities, workers engaged in subsurface construction or maintenance activities will be required to implement a Site-specific, activity-specific Health and Safety Plan. In the short-term, the impact to human health and the environment during implementation of any one of the three alternatives considered will be negligible, will achieve the Remedial Action Objectives and are anticipated to be completed in approximately two months.

10.3.7. Implementability

A feasible remedy is one that is suitable to Site conditions, is capable of being successfully carried out with available technology, and considers, at a minimum, implementability. Remedial Alternatives #3, #4, and #5 are all suitable to current and future Site conditions and Site uses. Materials and equipment for removal of the PCB-, and BAP-impacted soil/fill and the UST are readily available. The removal actions are relatively easy to implement since all areas of planned removal action are accessible and shallow. The PCB-excavated areas will be backfilled with documented clean soil per DER-10 Appendix 5 and the Site covered nearly completely or completely with buildings, pavement and managed vegetation.

10.3.8. Community Acceptance

Redevelopment of formerly vacant industrial properties at 1122, 1132, and 1146 Seneca Street is an important step for the surrounding neighborhood and the City of Buffalo as a whole. These redevelopment efforts will create positive economic benefits for the City of Buffalo and have been met with the support of the local community. Any one of the three considered remedial alternatives will remove the primary environmental contamination and therefore risks from the Site. An alternative which sufficiently removes the contamination of concern from the property and returns the Site to productive and neighborhood friendly use meets community acceptance.

10.3.9. Cost

Remedial Alternative #3 is estimated to cost approximately $1.255 million, see Table 10-1. Remedial Alternative #4 is estimated to cost approximately $420,000, see Table 10-2. Remedial Alternative #5 is estimated to cost approximately $390,000, see Table 10-3.

The applicant has made arrangements to pay for this remedial alternative and the Site redevelopment with the help of bank loans and a local grant. Significant increases in cost cannot be sustained by this small business and could jeopardize the project as a whole.

10.4. Recommended Remedial Alternative

The remedial alternatives analysis was completed giving consideration to the Part 375-6.8 (a) SCOs for unrestricted use, and Part 375-6.8 (b) SCOs for restricted commercial and restricted industrial use.

Remedial alternative #3 (Track 2 cleanup to commercial standards) is not recommended because cleanup to the commercial standards is not warranted for this industrial Site and the cost to remove the additional volume of soil/fill ($1.255 million) would put the project in jeopardy due to lack of funding.

Remedial alternative #5 is not recommended for the following reasons:

- The scarce presence, low number, and low concentrations of contaminants present in the on-Site soil/fill (after removal of hazardous levels of PCB-impacted soil/fill) makes placement of a Site-wide cover system impractical and unnecessary.
- The planned industrial warehouse use of the Site precludes contact with the soil/fill during on-Site activities which will take place primarily inside the warehouse building.
- The area of the Site that is not to be covered by buildings, roads, parking lots, and walkways is relatively small, 20 percent of the Site. That which is currently not planned for one of these paved surfaces will be covered with vegetation and possibly a new building from a subsequent phase of development. The imposing requirement of a Site-wide cover system along with the long-term requirements associated with it because of one relatively small uncovered area of the Site is disproportionately conservative and relatively expensive for the arguably small added protective benefit it may provide.

Based on the known levels of contamination at the Site, as determined from data collected from multiple Site investigations and a qualitative assessment of potential risks to the public health posed by Site contamination, it was determined that the primary concern at this Site is direct contact, inhalation, and ingestion of PCBs in surface and near surface ($\leq$ 2.0 feet) soils on the 1122 and 1132 properties and direct contact with surface soils containing elevated levels of BAP in surface soils on the 1146 Seneca Street property. It was further determined that the removal of soil/fill that contains greater than 25 mg/kg of total PCBs (the industrial use SCO) and surface soils containing greater than 1.1 mg/Kg of BAP would sufficiently mitigate this potential risk to current trespassers and current/future Site workers at this industrial Site. Therefore **Remedial Alternative #4 (Track 2 cleanup to restricted industrial SCOs) is recommended for the Site.** This remedial option is recommended for the Site because it would meet the remedial action objective, is protective of public health, is achievable, affordable, and would meet the Site redevelopment plans and schedule.

Figures 10-1,10-1A, 10-2 along with accompanying Tables 10-4 and 10-5 provide a summary of analytical results of soil/fill that would remain in place under this remedial option. The constituents, frequency, range, average, and maximum concentrations of each analyte detected in the soil fill at concentrations above the industrial and/or commercial SCOs are included in these tables and figures. As seen on these tables and figures, at most just five of the 140 parameters tested are present above commercial SCOs and none above industrial SCOs. Further, all three of these locations are located in areas that are planned to be covered by either a paved parking or a future Site building.

Once the Site is re-developed, consequential contact with the minimally-impacted soil/fill will be highly unlikely as most daily activity will take place inside of the on-Site warehouse building. As illustrated on Figure 8-2, the planned Site redevelopment will cover approximately 80 percent of the Site with buildings, paved parking, roads, and walkways. The area of the Site not currently planned for such cover will be fully vegetated (lawn) and is located in the rear of the Site where no day-to-day use will take place. Furthermore, there are plans to build a new building on this currently un-paved rear area of the Site as part of a subsequent Phase of Site development, thus providing further protection.

The Site will be used for industrial use and will remain industrial as dictated by City zoning and an institutional control requiring no Site use higher than industrial. The site will be fenced in the rear to restrict access by trespassers. Potential future excavation of soil/fill will be managed with an Excavation Work Plan, which will be included as part of the Site Management Plan.

10.5. Health and Safety

Health and Safety considerations and procedures are the same for all three remedial alternatives considered.

Invasive work performed at the Site will be performed in accordance with applicable local, state, and federal regulations to protect worker and public health and safety. Contractors performing redevelopment or maintenance activities involving intrusive work at the Site are required to prepare a Site-specific, activity-specific Health and Safety Plan that will include a Community Air Monitoring Plan (CAMP). Data summary tables provided in Section 7 of this report should be used by the contractor to facilitate the creation of an appropriate Health and Safety Plan.

When on Site for investigation, remediation, and construction oversight purposes, Malcolm Pirnie personnel will follow the provisions of their own Site-Specific Health and Safety Plan.

10.6. Citizen Participation

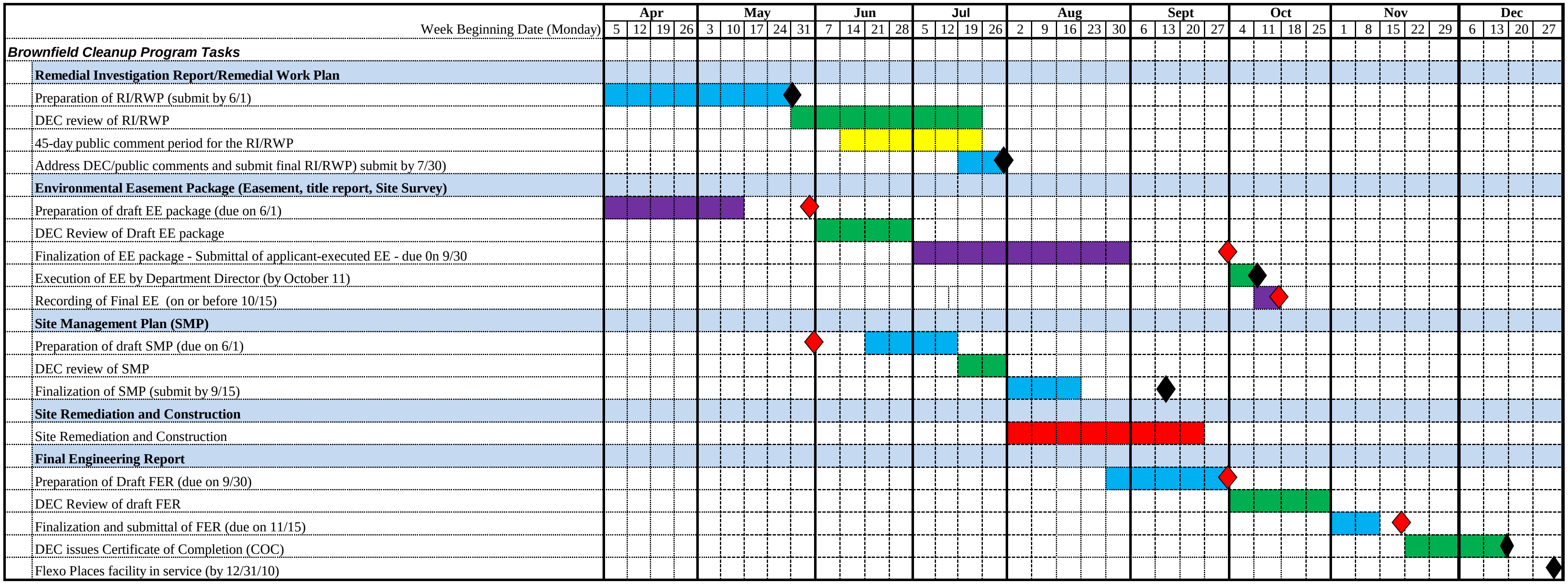
As required in the Brownfield Cleanup Agreement, a Citizen Participation Plan has been prepared by Malcolm Pirnie and was approved by the NYSDEC. The CPP has been sent to the public document repository for public availability.

10.7. Schedule

A primary goal of the BCP applicant is to receive a Certificate of Completion (COC) from the NYSDEC and place the new facility into service during the 2010 calendar year. The schedule for remediation and redevelopment of the 1132-1146 Seneca Site is provided in Figure 10-3.

MALCOLM PIRNIE

Figure 10-3
BROWNFIELD CLEANUP PROGRAM SCHEDULE
1132 and 1146 SENECA STREET SITE
BUFFALO, NEW YORK



- NYSDEC review
- Public comment period
- Malcolm Pirnie
- Flexo Field work (OpTech and/or construction contractors)
- Harris Beach
- Flexo site remediation and redevelopment
- Deliverable submittal date
- DEC- Required deliverable date.

Revised 052810 jjr

11. Site Management Plan and Final Engineering Report

11.1. Site Management Plan

A Site Management Plan (SMP) will be prepared as a requirement of the Environmental Easement and will include an Excavation Work Plan. The purpose of the Site Management Plan is to document long-term environmental obligations associated with the Site and provide specific instructions on how those obligations are to be met. Obligations include but are not necessarily limited to soil/fill handing procedures, Site inspections and reporting. The NYSDEC-prepared SMP checklist will be used when preparing the SMP to assist with completeness and will be provided along with the SMP submittal.

Also, a NYSDEC-prepared SMP Template will be used to prepare the SMP to achieve consistency with NYSDEC expectations and to expedite NYSDEC review and approval of the SMP.

11.2. Final Engineering Report

Once the Site remediation has been completed a Final Engineering Report (FER) will be prepared and submitted to the NYSDEC. The purpose of the FER is to fully document the implementation of the Site remedy and to certify, by a registered professional engineer, that the remedial program activities were implemented in conformance with the Department-approved Remedial Work Plan.

The FER will include a description of the selected remedy, details and supporting documentation of remedial actions performed, and required certifications.

A Checklist for FER approval, as provided by the NYSDEC will be used during FER preparation to assist with completeness and will be provided along with the FER submittal.

Also, a NYSDEC-prepared FER Template will be used to prepare the FER to achieve consistency with NYSDEC expectations and to expedite NYSDEC review and approval of the FER.

12. References

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Flexo Transparent, Inc.
REMEDIAL INVESTIGATION REPORT

Appendix A

Documentation of Previous Remedial Measures

6105002 / BUF

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9/95
2/96.
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DIV. ENVIRONMENTAL ENFORCEMENT
BUFFALO FIELD UNIT

October 16, 1991

REPORT

REMOVAL OF CONTAMINATED SOIL
EASTERN ELECTRIC FACILITY
BUFFALO, NEW YORK

FOR

WESTINGHOUSE ELECTRIC CORPORATION

DAMES & MOORE

3065 Southwestern Blvd., Suite 202
Orchard Park, New York

REPORT
REMOVAL OF CONTAMINATED SOIL
WESTINGHOUSE ELECTRIC CORPORATION
EASTERN ELECTRIC APPARATUS FACILITY
BUFFALO, NEW YORK

1.0 INTRODUCTION

This report summarizes contaminated soil removal operations at the Eastern Electric Apparatus Facility, 1132 Seneca Street, Buffalo, New York. The report and the work upon which it is based were performed under the responsible charge of Mr. Robert R. Blickwedehl, P.E. (State of New York), in accordance with Section 9.0 of the Work Plan "Certification of New York P.E. Engineer." The report is prepared pursuant to Amendment 1 to the Remediation Work Plan for the above referenced site, dated January 15, 1990. The report includes a certification that this portion of the work was done in accordance with Westinghouse Electric Corporation's prescribed Work Plan dated August 30, 1989.

Soil removal was one of two components of the limited remediation effort at the Eastern Electric Site. The other component involved decontamination of a spray pit. This activity is documented in Dames & Moore's report dated October 16, 1991, and entitled Spray Booth Area Decontamination and Sewer Evaluation.

Dames & Moore provided overall project management support for the soil removal project. The onsite observation was performed by Mr. J. Britt Quinby, Project Civil Engineer, under the responsible charge of Mr. Blickwedehl. Mr. Quinby and Mr. Blickwedehl also provided technical consultation during discussions and meetings with Mr. Thomas D. Johnson and Mr. E. Joseph Sciasca, P.E., of the NYSDEC. Copies of the curriculum Vitae for Messr's Quinby and Blickwedehl are included in Appendix D of this report.

Contaminated soil removal was performed in three phases. The first phase was performed in November of 1989, the second phase was in June, 1990, and the third in October 1990. Westinghouse Environmental & Geotechnical Services, Inc. (WEGS) of Toledo, Ohio performed the excavation and remedial work for the first phase, Buffalo Drilling, Inc. of Buffalo, New York performed drilling and sampling during Phase II, and Environmental Products and Services, Inc. of Buffalo, New York performed the soil removal of Phase III. Buffalo Drilling and Environmental Products and Services were subcontractors to Dames & Moore.

The technical content of the report is divided into six sections as follows:

1. A description of soil removal activities;

2. A summary of the quantities of soil removed and disposed of;

3. Photocopies of manifest and disposal documents;

4. A sketch showing soil sample locations;

5. Laboratory analysis of soil samples along with SW 846 Section 1.5 QA/QC reportables and deliverables package; and

6. Certification that the work was done in accordance with the approved work plan.

2.0 DESCRIPTION OF SOIL REMOVAL ACTIVITIES

The soil removal activities consisted of the removal of two piles of contaminated sludge, (referred to as pile #1 and pile #2), and the effected soil below and around them. The piles were located on the North East corner of the facility property and encompassed an area approximately 40 feet square, (reference Figure 1 and 2 in Appendix B).

2.1 PHASE I

On Friday, November 17, 1989, the area surrounding Pile #1 and #2 was separated into a Hot Zone, Support Zone and decontamination area for exit/entry. The Hot Zone encompassed Pile #1, Pile #2 and an area sufficiently large enough to contain the trackhoe and two 25-cubic yard roll-off boxes. A decontamination area and Support Zone was established just to the south of the site prior to the edge of the gravel parking lot.

Two sides of the newer chain link fence (the Southern and Western sides) and approximately 50 feet of the old chain link fence were temporarily removed. The trackhoe was then placed in the north-west corner of the area with the roll-off boxes to the south and to the west of Pile #1. This enabled the trackhoe to excavate contaminated soil and transfer it to roll-off boxes while being positioned in a "clean" area.

Prior to excavation the NYSDEC was notified. Mr. Johnson of the NYSDEC was on site during the excavation activities.

The trackhoe excavated Pile #2 first, then Pile #1. The contents of piles plus 6 to 8 inches of subsoil were removed. The horizontal excavation limits extended 4 to 8 feet out from each pile. One 25 c.y. rolloff box, lined with visqueen, was filled.

During excavation, water or saturated soil was encountered approximately 12 to 18 inches below the ground surface. This limited the depth of the excavation in accordance with the terms of the work plan which did not contain provisions to handle a wet excavation and the risk of potential spread of contamination. Therefore, nine (9) post excavation soil samples were taken above these saturated conditions at several locations as shown on Figure 1.0 in Appendix B of this report.

The samples were collected in accordance with the procedures outlined in Appendix B of the Work Plan. It was the intent of the field crew to do a headspace screening of each sample for volatile organics five minutes after the samples were collected, but due to a malfunctioning OVA, this was not possible. A field judgement was made by Mr. Quinby, and Messrs. Bowman and Alliman of WEGS, to forward the samples to NUS without doing the headspace screening. This was based on the premise that even if the OVA readings were above the 10 ppm limit, further excavation would not be possible during this project phase due to the presence of water.

The samples were packaged and delivered by Mr. Alliman to NUS in Pittsburgh, Pennsylvania the next morning.

When excavation and sampling activities were completed for the day, both Pile #1 and Pile #2 excavated areas were covered with visqueen and the rolloff boxes covered and secured.

On Sunday the 19th, contaminated soil was transferred from the full rolloff box to a second empty rolloff. Bulk waste (visqueen and disposable personnel protective equipment) generated from the spray booth pit cleaning was also placed in the second rolloff. Both rolloff's were then covered and secured.

On Monday, November 20th the Westinghouse crew constructed a decontamination pad out of Hypalon which was elevated at the edges by an earthen berm. A high pressure water rinse was used to clean the entire trackhoe, including the under carriage, of all soil, sludge, and dust. The bucket of the trackhoe was the only part of the equipment that came into contact with PCB contaminated material. It was wiped clean with penetone prior to water rinsing. Rinse and wash water were collected on the decon pad and placed into 55 gallon drums.

That afternoon NUS called with the PCB and total volatile organic sample results from the first round of samples collected the previous Friday (see Table 1.0 for a summary of the results and Appendix C for a copy of the Lab Report and QA/QC package). Two sample locations showed results of PCB concentrations lower than 1 ppm - #5 and #9. Also, except for 1,1-dichloroethane found in samples #2 and #7, the sample results for the volatile organics were under the 1 ppm target level.

Since the concentrations of PCB's in soil samples #2, #3, #4, #6, #7, #8 and #10 were all above 1 ppm, further excavation in these areas was needed. Mr. Joseph Sciasca of the NYSDEC was on site shortly after the sample results were available. A site meeting was held between Mr. Sciasca, Mr. Bowman of WEGS, and Mssr's Quinby and Blickwedehl of Dames & Moore to determine how to proceed with the work under conditions involving saturated soil.

Mr. Sciasca suggested that the excavations continue under these "wet" conditions. He proposed that the confirmation samples of the soil under the piles be obtained using a core sampler. However, because this is below the water table, and would constitute a significant change from the original work plan, and since there was a possibility of contaminating clean underlying soil with water in the excavation and/or sampling holes, the determination was made to remove soil to only the depth that was at or close to saturated conditions. Therefore, WEGS used shovels to remove an additional 2 to 3 inches of soil within the excavated areas.

That afternoon, November 21, 1989, a second round of soil sampling was performed (see Figure 1.0). The samples were again collected in accordance with Appendix B of the Work Plan. These samples were screened via a headspace measurement with an OVA. The results of this screening can be found in Table 2.0 provided at the end of this report. The samples were then packaged and shipped to NUS for analysis.

The contaminated soil area was then covered with visqueen, hazard tape was placed around the area, and a snow fence was erected to serve as a temporary barrier until the project could be completed. The same day WEGS completed their demobilization activities and left the site. No further work could be done until the receipt of the second round of soil sample results.

The second round of sample results were available the week of December 16, 1989. Original sample point locations #2, #3, #4, #6, #7, #8, and #10 had been resampled and were relabeled #2P, #3P, #4P, #6P, #7P, #8P, and #10P respectively. The results are summarized in Table 1.0 and a copy of the Lab Report and QA/QC package can be found in Appendix C.

The concentrations of PCB's and the volatile organics in the second round of sampling did not meet the target clean up levels as outlined in the Work Plan. The concentrations of PCB's ranged from less than 2 ppm to 64 ppm, and the concentrations for some of the volatile organics were above the 1 ppm target level.

2.2 PHASE II

Since the confirmation soil sample results from the second round of sampling did not meet the target clean up levels as outlined in the Work Plan, and groundwater was encountered near the resultant surface of the excavated area, Amendment 1 to the Remediation Work Plan dated January 15, 1990 was developed by Dames & Moore. This amendment addressed procedures to be used in characterizing the depth to which contamination had penetrated the soil, (Phase II), and excavation of soil under saturated conditions, (Phase III). The plan was submitted to the NYSDEC on January 17, 1990 and subsequently approved on January 30, 1990.

On Monday, June 11, 1990, Buffalo Drilling Company, Inc., of Buffalo, New York, working under the direction of Dames & Moore, mobilized a track mounted drill rig to the site to sample the soil in the affected area. The samples were needed to characterize the extent of the contamination as outlined by Amendment 1. Continuous split spoon samples were taken at the six locations shown on Figure 2.0 in Appendix B. The samples extended from the bottom of the excavation surface (approximately 18" below original grade) to a depth of 6 feet. Sampling locations #22, #32, #42, #62, #72, and #102 taken from Pile 1 area and #82 taken from Pile 2 area correspond to sampling locations #2P, #3P, #4P, #6P, #7P, and #10P from Pile 1 area and sample #8P from Pile 2 area collected during sampling activities of November 1989. All soil sampling and handling procedures were in accordance with Amendment 1 to the Remediation Work Plan, dated January 15, 1990.

The soil samples were inspected in the field by Mr. Quinby and descriptions were logged. Field screening was performed on the upper two split spoon samples (0-2′ and 2-4′ samples) using an organic vapor analyzer (OVA) in accordance with Section 5.2.3, of the Work Plan. The concentrations of VOC's detected by the OVA ranged from 0 to 5 ppm for the series of samples collected from the upper 0 to 2 foot depths, (see Table 2.0 located at the end of this report). The split spoon samples collected from the 4 to 6′ depth interval were used to visually classify the soils and make observations as to the soils general condition and make-up.

At the completion of the sampling effort, the borings were grouted and the drill rig and all associated equipment were decontaminated in accordance with Section 5.2 of the Work Plan.

Subsurface soils encountered during the sampling activities consisted of 12 to 24 inches of loose gravel, sandy gravel and cinders to sandy clay overlying stiff brown silty clay to clay. This dry stiff silty-clay to clay layer was identified down to a depth of six feet and the borings did not penetrate beneath it. The upper gravel and sandy zones were moist, with decreasing moisture content with depth. The lower most split spoon samples collected at each location (4-6' in depth) appeared dry.

Field screening of these samples with an OVA revealed readings of less than 0.10 to 5 ppm, (see Table 2.0), analytical test results showed concentrations of the VOC's were below 55 parts per billion (ppb) (see Table 1.0). All PCB concentrations were below detection limits.

Analytical and field screening results were combined with boring logs to estimate the extent to which contaminated soil should be excavated and to identify potential problems in the underlying geological conditions which could impact Phase III remedial activities. Based on the available data, a minimum target excavation depth of 24 to 26 inches was established. Excavating to this depth would remove the upper granular soils and a few inches of the underlying silty-clay layer.

Mr. Tom Johnson of the NYSDEC was on site during the boring and sampling activities. He was also present during the head space analyses of the collected samples.

2.3 PHASE III

The information obtained during the Phase II characterization activities was used to establish the excavation depth and prepare contract documents for completion of the soil remediation effort. Environmental Products and Services (EPS) was subcontracted by Dames & Moore to complete the soil removal work at the site. NUS Laboratories was again used to perform the confirmation soil sample analyses.

On October 1, 1990, Mr. Jim Vreeland, Mr. Jim Barry, and Mr. John Scott of EPS were met on site by Mr. Quinby. They proceeded to establish the Hot Zone, Support Zone and decontamination area for exit/entry. These areas were the same as used during the excavation activities in November, 1989. Four 20 cubic yard rolloff boxes were delivered onsite the previous Friday and were positioned to the south of Pile #1 and to the east and south of Pile #2.

Prior to excavation Mr. Johnson of the NYSDEC was notified. He was onsite during excavation activities.

A backhoe was used to excavate Pile #1 and then Pile #2. The backhoe was maneuvered outside of the contaminated area with only the bucket contacting the contaminated soil being excavated. Little to no water was encountered during the excavation and approximately 90 cubic yards of soil was removed from the Pile #1 and Pile #2 areas and placed in rolloff containers.

When the desired depth of 24 to 26 inches below the excavated grade (42 to 44 inches below the original grade) was reached, seven confirmation soil samples were taken. The locations of these sample points corresponded to the previous locations of the characterization activities and of November 1989. They were labeled #23, #33, #43, #63, #73, #83, and #103 (see Figure 3.0 in Appendix B). Each sample was collected in accordance with the procedures outlined in Appendix B of the Work Plan. Again, headspace readings using an OVA were performed on each sample in the field. The headspace results were all below 10 ppm and are reported in Table 2.0 attached to this report.

At the request of Mr. Johnson, Mr. Quinby obtained four more soil samples from the perimeter of the excavated area of Pile #1. These samples were labeled North, South, East, and West. Headspace measurements were again performed in accordance with procedures outlined in the Work Plan. The results of these readings indicated nondetectable for all four samples, these results are also listed in Table 2.0.

Since all headspace readings from the confirmation samples were nondetectable or below 10 ppm, the samples were packaged for shipment to NUS. Included with the sample shipment were two additional samples one was of the backfill material and the other was of the topsoil. Both materials were to be used in restoration of the site.

When excavation and sampling activities were completed, both Pile #1 and Pile #2 excavated areas were covered with visqueen, rolloff boxes covered and secured, the equipment decontaminated as outlined by the Work Plan, and a snow fence erected around the excavated area.

Laboratory results of the confirmation samples were received by Dames & Moore on October 11, 1990. A copy of these results and the respective QA/QC package can be found in Appendix C. The concentration levels of PCB's and total volatile organics in the samples were all within the target cleanup levels outlined in the Work Plan.

Analysis of the backfill sample showed a 9 ppb concentration of benzene. Even though the work plan did not call for confirmation that the material be free of volatile organics, EPS was asked to obtain another sample from a different source and analyze the source for PCBs as reviewed by the Work Plan. A sample was obtained directly from a truck that delivered backfill to the site. It was tested for PCB's and the results were nondectable. The results of the analysis of the topsoil sample initially provided by EPS were nondetectable for both volatile organics and PCB's. These analyses can be found in Appendix C, and are also tabulated in Table 1.0.

These analytical data were transmitted to Mr. Johnson on October 19, 1990 during a meeting held at the Dames & Moore office in Orchard Park, New York. Ms. Maryann Grotefend of Westinghouse Electric Corporation, and Mr. Quinby were also in attendance at the meeting, the purpose of which was to discuss the status of the project and relay the results of the confirmation sample analysis to Mr. Johnson.

2.4 SITE RESTORATION

With the required analytical data showing that the target cleanup levels for PCB's and volatile organics as outlined in the Work Plan have been met, a decision was made by Westinghouse and agreed to by NYSDEC to backfill the excavation and commence with site restoration.

On October 25, 1990 EPS backfilled the excavations and restored the area back to its original grade.

The Contract Laboratory Protocol (CLP) backup package for the lab results were not received until after the backfill had been placed. While reviewing the CLP package, Mr. Quinby discovered (as a result of a misunderstanding by the laboratory) the analyses performed on the confirmation soil sample for volatile organics had been performed using the TCLP extraction protocol, and not on an as received basis as was done on all previous samples. Even though the results from the TCLP extraction indicated extremely low to nondetectable concentrations of volatile organics, the decision was made to obtain another set of confirmation samples and redo the VOC analysis on an as received basis. This was needed to provide a consistent comparison to the November 1989 results using the same analytical procedures for the confirmation sample analyses both times.

On November 2, 1990 Mr. Quinby accompanied by Ms. Jane Staten of Dames & Moore obtained seven more soil samples. The samples were labeled #24, #34, #44,#64, #74, #84, and #104, and correspond to the previous soil sample points (see Figure 3.0 in Appendix D). Samples of the underlying native material were obtained by hand boring through the newly placed backfill material to the resultant level of the excavation. This interface was easily identified. The backfill is a well graded sandy loam material which is dark in color. The native material consisted of silty, sandy, clay, fairly consolidated and light in color. The samples were collected and headspace readings taken with an OVA in accordance with the Work Plan. The results of the headspace readings are listed in Table 2.0 attached to this report.

Headspace readings were nondetectable for all samples but one which was approximately 1 to 5 ppm. The samples were packaged and shipped to NUS for analysis. The volatiles were analyzed on an as received basis, consistent with the analysis performed on the samples from November, 1989.

Mr. Johnson, of the NYSDEC, was onsite during the resampling activities and collected two duplicate soil samples. Mr. Johnson packaged the samples and forwarded them to an independent lab as chosen by the NYSDEC.

Analytical results for the samples analyzed for Dames & Moore were available on November 13, 1990. All results were within the target cleanup levels and are listed in Table 1.0 located at the end of this report. The data and respective QA/QC package can be found in Appendix C.

Mr. Johnson informed Mr. Quinby on December 19, 1990 of the results from the analyses performed on the duplicate samples he had taken. They were consistent with the results obtained from NUS. A copy of these results can be found in Appendix C, and are summarized in Table 2.0.

On May 8, 1990, Environmental Products and Services completed the site restoration work by installing a chain link fence in the location were the original one had been previously removed in order to perform the soil excavation activities. They also placed seed and mulch over the affected area as required by Section 5.2.5 of the Work Plan.

3.0 CHARACTERISTICS AND DISPOSITION OF REMOVED SOIL

3.1 SOIL REMOVAL DURING THE NOVEMBER 1989 ACTIVITIES (PHASE I)

During the remedial activities of November, 1989 approximately 30 cubic yards of soil and debris were removed from the area in and around piles #1 and #2. The material was placed into two 30 cubic yard rolloff containers. A sample of the soil was obtained and forwarded to RECRA Environmental, Inc., (a New York State Certified laboratory), for TCLP extraction and a subsequent analysis for F-listed spent solvents (VOA's) to determine the soil's disposal status under 40 CFR Part 268, "Land Disposal Restrictions". The results of this analysis are provided in Appendix C and show a concentration of xylene which is above the limits imposed by the regulations for material that can be disposed in a permitted land disposal facility. Because of the elevated concentrations of xylene, the soil was considered an F listed waste, for which the Best Demonstrated Available Technology (BDAT) for disposal is incineration.

Since the material contained in the rolloff's needed to be incinerated, the sample analytical results and another sample of soil was forwarded to Aptus Inc., in Coffeyville, Kansas. Based on this information and their evaluation of the sample, approval was granted for incineration of the soil by Aptus. The two rolloff containers were then transported off site in route to Coffeyville on May 30, 1990.

The permitted hazardous waste carrier contracted by Westinghouse Electric Corp. to transport the material to Aptus was Buffalo Fuel Corp., of Niagara Falls, New York. The material arrived in Coffeyville on June 1, 1990, and copies of the hazardous waste manifests are provided in Appendix A. The material in one rolloff container was destroyed by Aptus on August 1, 1990, and a copy of the Certificate of Destruction has been provided in Appendix A. Due to time constraints during the trial burn, at Aptus, the remaining material could not be incinerated there and was transported to a Chemical Waste Management permitted facility in Chicago for incineration. However, prior to it's destruction the incinerator was shut down due to operational problems. Therefore, the rolloff was transported back to Aptus, and was destroyed the week of October 7, 1991. A copy of the manifests and Certificate of Destruction are included in Appendix A.

3.2 SOIL REMOVED DURING THE OCTOBER 1990 ACTIVITIES (PHASE III)

The material excavated during October, 1990 totaled approximately 90 cubic yards and was placed in four 25 cubic yard rolloffs. A composite sample was obtained from the rolloffs and forwarded to RECRA Environmental Laboratory for TCLP extraction and a subsequent analysis to determine it's disposal status in accordance with 40 CFR Part 268, (as was done for the for the material removed in November, 1989). The results of this analysis are presented in Appendix C and show very low to nondetectable concentrations of the F-listed solvent wastes (VOA's). Based on these results, and PCB concentrations of 64 ppm, the soil could be disposed in a permitted land disposal facility. This information along with a soil sample was forwarded to Chemical Waste Management, Inc.'s permitted landfill located in Model City New York, and was subsequently approved for disposal at this facility.

The rolloff containers remained on site during the time required to characterize the waste and obtain approval for disposal from Chemical Waste Management. During this time, the covers on the containers were damaged by vandalism and adverse weather. As a result of the damage some rain water collected in the rolloffs. Thus, removal and proper disposal of the water was required prior to the transport of the material to Model City. To determine if the water could be disposed of by discharging it into the Buffalo Sanitary Sewer system, a composite sample of the water was collected and forwarded to RECRA Environmental, Inc. for analysis. Due to the presence of organics that were found in the TCLP extract and PCB concentration in the soil, the Buffalo Sewer Authority requested that the sample be analyzed for PCB's per 40 CFR Part 136, method 608. The results of this analysis showed a PCB concentration of 13 ppb. This was communicated to Mr. James Overholt of the Buffalo Sewer Authority. Based on the information furnished, approval was granted by the Sewer Authority to discharge the water in the rolloffs into the sewer system. Copies of the water sample analytical results are provided in Appendix C; the letter from Mr. Overholt approving the discharge of the water into the sewer system is provided in Appendix A.

On Thursday March 28, 1991 Mr. Quinby meet a laborer from Environmental Products and Services at the Eastern Electric site to transfer soil contained in the two overfilled rolloffs into a fifth one that had been delivered the preceding day, and to remove the water in the containers and discharge it into the sewer. Mr. Overholt met us on site and located the sewer inlet where the water was to be discharged. The soil and water transfer operations were completed that day and the pickup and transport of the containers to Model City was scheduled for the following day.

On Friday March 29, 1991 the permitted hazardous waste hauler contracted by Westinghouse Electric Corp., Tonawanda Tank Transport Service, Inc. picked up the five rolloffs of material for transport to CWM in Model City, NY. However, due to scheduling problems, the containers were transported to, and staged at Tonawanda Tank's facility until the following Monday, (April 1, 1991) at which time Chemical Waste Management could accept the shipment at their Model City facility. Four of the rolloffs were transported to Model City that Monday with the remaining one transported Tuesday April 2, 1991. Copies of the hazardous waste manifests used are provided in Appendix A.

Table 3.0 attached to this report provides a listing of the quantity of material removed and disposed. It also provides the location, date, and method of disposal.

4.0 SUMMARY AND CONCLUSIONS

As described in the previous sections of this report, all exterior cleanup activities required by the Work Plan were completed in accordance with the methods specified in the Work Plan as amended. A certification document to this effect is attached to this report.

The activities documented in this report and those documented in Dames & Moore's report entitled Spray Booth Area Decontamination and Sewer Evaluation, dated December 13, 1990, fulfilled all remediation requirements cleanup objectives for the site.

Respectfully submitted,
DAMES & MOORE
A Professional Limited Partnership

Robert R. Blickwedehl, P.E.
New York Registration No. 54177
Partner, (Ltd.)

J. Britt Quinby
Project Manager

RRB/JBQ:ph

CERTIFICATION OF COMPLETION

CONTAMINATED SOIL REMOVAL

Eastern Electric Apparatus Facility
1132 Seneca Street
Buffalo, New York

I hereby certify based on personal knowledge and belief that the soil removal work performed at the subject facility during the period of November 17, 1989, May 30, 1990, and March 28 and 29, 1991 was performed in accordance with the Approved Work Plan dated August 31, 1989, and addendum to the work plan dated January 15, 1990.

Robert R. Blickwedehl
New York Professional Engineer
Registration No. 54177

TABLE 1.0
SUMMARY OF CONFIRMATION SOIL SAMPLE
RESULTS FOR THE EASTERN ELECTRIC APPARATUS FACILITY
SOIL REMEDIATION EFFORT

#	Date Sampled	PCB (ppm)	Total Volatile Organics (ppm)	Comments
2	11/17/89	19.3	3.265	PCB's - AR, PH's - AR
2p	11/21/89	64.0	13.330	PCB's - AR, PH's - AR
23	10/01/90	<0.2	0.015	PCB's - AR, PV's - TCLP
24	11/02/90		0.014	PH's - AR
3	11/17/89	5.7	1.204	PCB's - AR , PH's - AR
3p	11/21/89	6.3	0.033	PCB's - AR, PH's - AR
33	10/01/90	<0.2	0.020	PCB's - AR, PV's - TCLP
34	11/02/90		0.009	PH's - AR
4	11/17/89	4.4	0.744	PCB's - AR, PH's - AR
4p	11/21/89	1.4	0.003	PCB's - AR, PH's - AR
43	10/01/90	<0.2	<D.L.	PCB's - AR, PV'S - TCLP
44	11/02/90		<D.L.	PH's - AR
5	11/17/89	<0.2	0.013	PCB's - AR, PH's - AR
6	11/17/89	4.5	1.237	PCB's - AR, PH's - AR
6p	11/21/89	<2.0	0.144	PCB's - AR, PH's - AR
63	10/01/90	<0.2	0.018	PCB's - AR, PV's - TCLP
64	11/02/90		<D.L.	PH's - AR

TABLE 1.0 (Continued)
SUMMARY OF CONFIRMATION SOIL SAMPLE
RESULTS FOR THE EASTERN ELECTRIC APPARATUS FACILITY
SOIL REMEDIATION EFFORT

#	Date Sampled	PCB (ppm)	Total Volatile Organics (ppm)	Comments
7	11/17/89	17.0	3.402	PCB's - AR, PH's - AR
7p	11/21/89	21.0	0.300	PCB's - AR, PH's - AR
73	10/01/90	<2.0	0.011	PCB's - PV's - TCLP
74	11/02/90		0.003	PH's - AR
8	11/18/89	35.0	0.163	PCB's - AR, PH's - AR
8p	11/21/89	<2.0	0.002	PCB's - AR, PH's - AR
83	10/01/90	0.2	0.017	PCB's - AR, PV's - TCLP
84	11/02/90		0.002	PH's - AR
9	11/17/89	0.38	0.010	PCB's - AR, PH's - AR
10	11/17/89	8.8	1.406	PCB's - AR, PH's - AR
10p	11/21/89	19.3	0.981	PCB's - AR, PH's - AR
103	10/01/90	<0.2	<D.L.	PCB's - AR, PV's - AR
104	11/02/90		0.002	PH's - AR

<D.L. = Less than detection limits.
PCB's = Polychlorinated Biphenals
PH's = Purgable Halocarbons
PV's = Priority Pollutant
AR = As Received
TCLP = Toxicity Characteristic Leachate Procedure

TABLE 2.0
SUMMARY OF SOIL SAMPLE FIELD
HEAD SPACE READINGS FOR THE
EASTERN ELECTRIC APPARATUS FACILITY
SOIL REMEDIATION EFFORT

Sample #	Date of Reading/Sampling	Results (ppm)
2	11/18/89	N.R.
2P	11/21/89	750.00
22A	6/11/90	2.00 to 3.00
23	10/01/90	N.D.
24	11/02/90	1.00 to 5.00
3	11/18/89	N.R.
3P	11/21/89	4.50
32A	6/11/90	1.00
33	10/01/90	N.D.
34	11/02/90	N.D.
4	11/18/89	N.R.
4p	11/21/89	2.80
42A	6/11/90	N.D.
43	10/01/90	N.D.
44	11/02/90	N.D.
5	11/18/89	N.R.
6	11/18/89	N.R.
6P	11/21/89	N.D.
62A	6/11/90	N.D.
63	10/01/90	N.D.
64	11/02/90	N.D.
7	11/18/89	N.R.
7P	11/21/89	12.00
72A	6/11/90	2.00
73	10/01/90	0.10
74	11/02/90	N.D.
8	11/18/89	N.R.
8P	11/21/89	N.D.
82A	6/11/90	N.D.
83	10/01/90	N.D.
84	11/02/90	N.R.

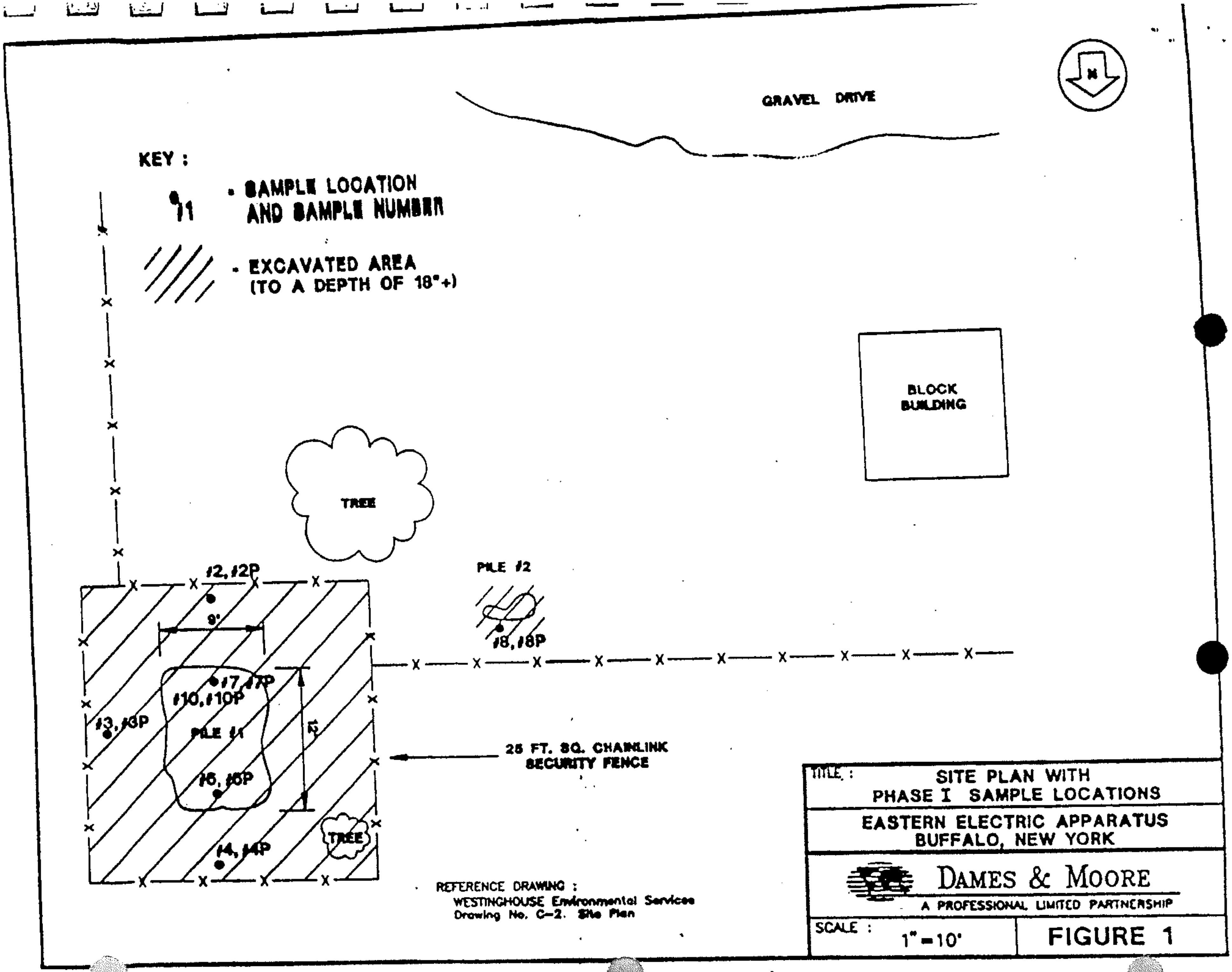
TABLE 2.0 (CONTINUED)

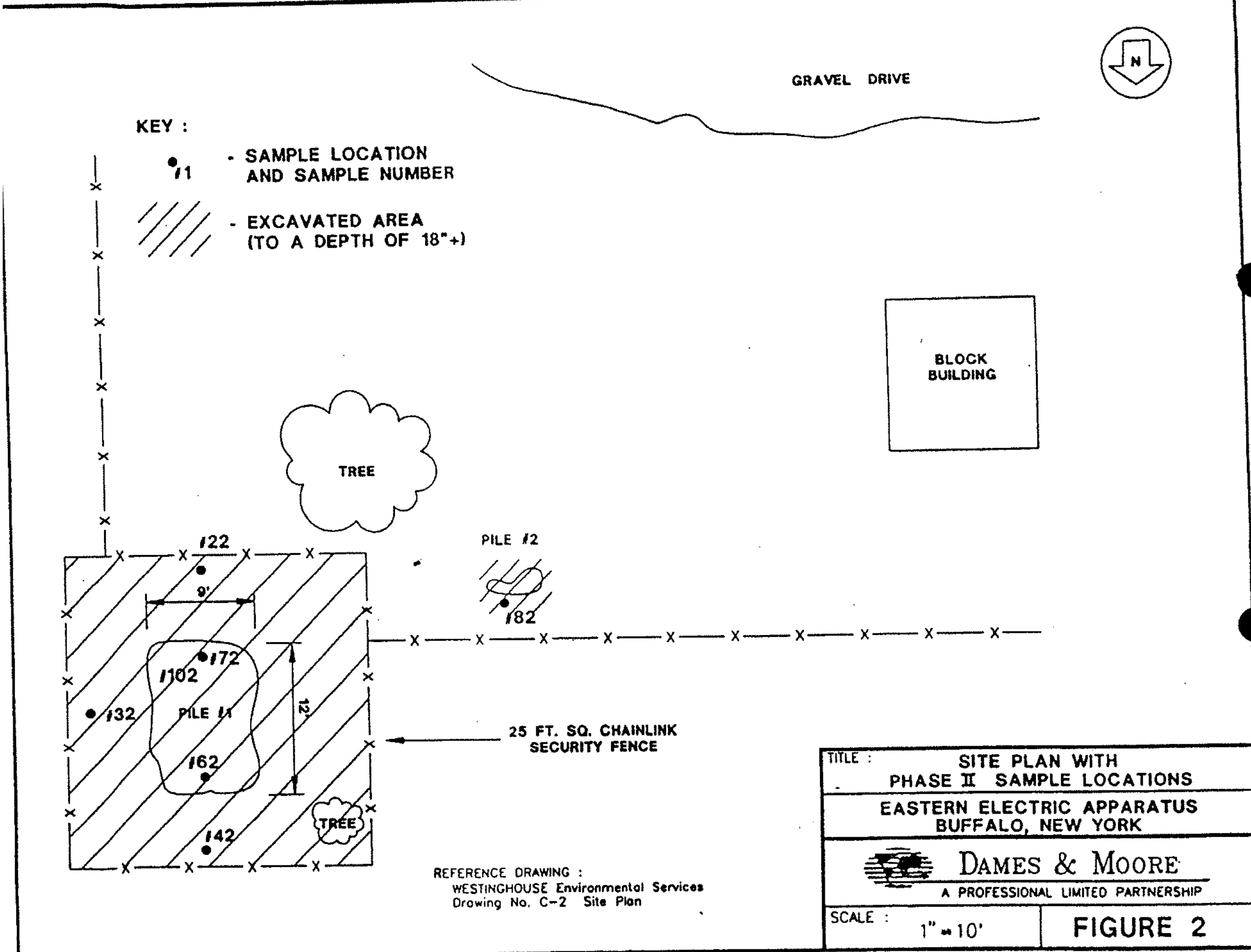
Sample #	Date of Reading/Sampling	Results (ppm)
9	11/18/89	N.R.
10	11/18/89	N.R.
10P	11/21/89	4.50
102A	6/11/90	2.00
103	10/01/90	0.10
104	11/02/90	N.D.
South		
North	10/01/90	N.D.
East	10/01/90	N.D.
West	10/01/90	N.D.
	10/01/90	N.D.

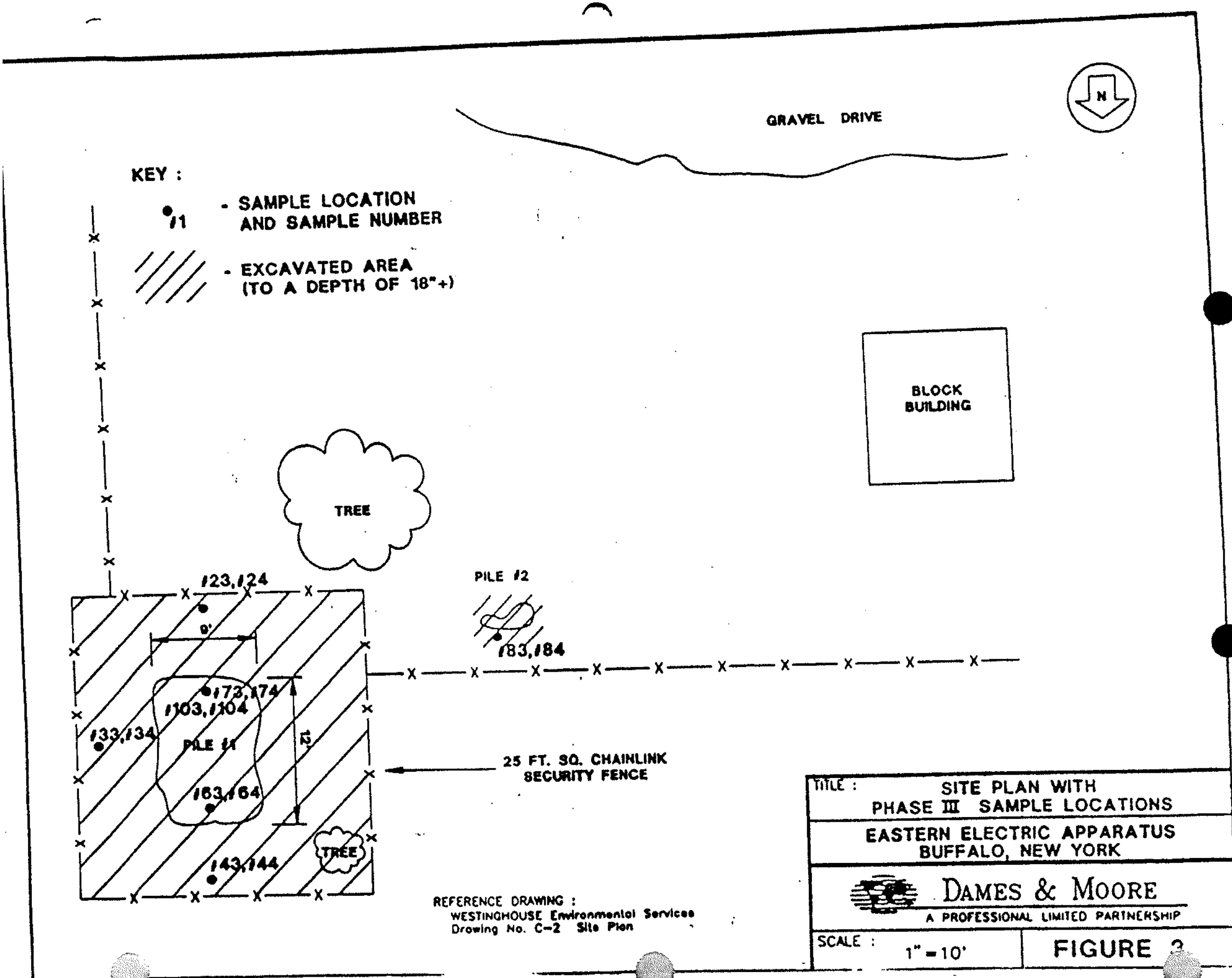
N.D. = Non detectable; less than detection limits = <0.10 ppm.
N.R. = No results (head space reading not taken).

TABLE 3.0
SUMMARY OF SOIL DISPOSAL

Dates Material Removed	Quantity Removed	Disposal Facility	Date of Disposal	Method of Disposal
November 17, to November 21, 1989	15 c.y.s.	Aptus Inc. Coffeyville, KS	August 1, 1990	Incineration
November 17, to November 21, 1989	15 c.y.s.	Aptus Inc. Coffeyville, KS	Week of October 7, 1991	Incineration
October 1, 1990	90 c.y.s.	Chemical Waste Management, Inc. Model City, NY	April 1, and April 2, 1991	Land Disposal


GRAVEL DRIVE
N
KEY :
• SAMPLE LOCATION AND SAMPLE NUMBER
- EXCAVATED AREA (TO A DEPTH OF 18"+)
BLOCK BUILDING
TREE
PILE #2
#2, #2P
9'
#8, #8P
#7, #7P
#10, #10P
#3, #3P
PILE #1
#6, #6P
25 FT. SQ. CHAINLINK SECURITY FENCE
TREE
#4, #4P
REFERENCE DRAWING :
WESTINGHOUSE Environmental Services
Drawing No. C-2. Site Plan
TITLE :
SITE PLAN WITH
PHASE I SAMPLE LOCATIONS
EASTERN ELECTRIC APPARATUS
BUFFALO, NEW YORK
DAMES & MOORE
A PROFESSIONAL LIMITED PARTNERSHIP
SCALE :
1" = 10'
FIGURE 1


GRAVEL DRIVE
N
KEY :
#1 - SAMPLE LOCATION AND SAMPLE NUMBER
- EXCAVATED AREA (TO A DEPTH OF 18"+)
BLOCK BUILDING
TREE
PILE #2
#82
#22
9'
#72
#102
#32
PILE #1
12'
#62
TREE
#42
25 FT. SQ. CHAINLINK SECURITY FENCE
REFERENCE DRAWING :
WESTINGHOUSE Environmental Services
Drawing No. C-2 Site Plan
TITLE : SITE PLAN WITH PHASE II SAMPLE LOCATIONS
EASTERN ELECTRIC APPARATUS
BUFFALO, NEW YORK
DAMES & MOORE
A PROFESSIONAL LIMITED PARTNERSHIP
SCALE : 1" = 10'
FIGURE 2


GRAVEL DRIVE
N
KEY :
#1 - SAMPLE LOCATION AND SAMPLE NUMBER
- EXCAVATED AREA (TO A DEPTH OF 18"+)
BLOCK BUILDING
TREE
PILE #2
#83,#84
#23,#24
9'
#73,#74
#103,#104
#33,#34
PILE #1
13'
#63,#64
#43,#44
TREE
25 FT. SQ. CHAINLINK SECURITY FENCE
REFERENCE DRAWING :
WESTINGHOUSE Environmental Services
Drawing No. C-2 Site Plan
TITLE : SITE PLAN WITH PHASE III SAMPLE LOCATIONS
EASTERN ELECTRIC APPARATUS
BUFFALO, NEW YORK
DAMES & MOORE
A PROFESSIONAL LIMITED PARTNERSHIP
SCALE : 1" = 10'
FIGURE 3

New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 9
270 Michigan Avenue, Buffalo, New York, 14203-2999
Phone: (716) 851-7220 • **FAX:** (716) 851-7226
Website: www.dec.state.ny.us

Denise M. Sheehan
Commissioner

August 28, 2006

Mr. Ronald Maybry
President
Flexo Transparent
28 Wasson Street
Buffalo, New York 14210

Dear Mr. Maybry:

Flexo Transparent
28 Wasson Street, Buffalo
NYSDEC Spill No. 0650733

The Department has reviewed the 'Focused Phase II Environmental Assessment Report' prepared by Hazard Evaluations, Inc. dated July 13, 2006. This report provided preliminary data documenting a historical spill at the above-referenced site. The data was submitted to the Department and was assigned NYSDEC Spill No. 0650733.

This office has reviewed the groundwater and test pit soil/fill sample(s) laboratory results. The results exceed our soil guidance values (TAGM #4046) and New York State Groundwater Standards (Division of Water TOGS 1.1.1). The report states that strong odors were present and visual contamination was present on the site. However, based upon sampling results presented in the report, the soils/fill at the site are not considered hazardous waste. Subsequently, the site will have a status of 'inactive' in our Spill Report database.

Please note, any soils generated during future site excavations from the contaminated area must be tested and analyzed by an approved laboratory from New York State's Environmental Laboratory Program (ELAP). If sample results exceed guidance values listed in the Department's TAGM #4046, the excavated material may require remediation and will require proper disposal.

Currently, New York State offers the Brownfield Cleanup Program to encourage the remediation and redevelopment of contaminated sites. The program offers remedial and redevelopment tax credits for eligible contaminated sites. The Flexo Transparent site may be eligible. For further information on the Brownfield Cleanup Program please visit our website at **http://www.dec.state.ny.us/website/der/bcp.**

If you have any questions, please contact myself at (716) 851-7220

Sincerely,

Martin L. Doster for

Chad Staniszewski, P.E.
Project Manager

cc: Mr. Daniel King, Regional Spill Engineer
Mr. Mark Hanna, Hazard Evaluations Inc.

AREA OF SOIL REMEDIATION

HAZARD EVALUATIONS HAZARD EVALUATIONS, INC. • 3836 N. BUFFALO ROAD • ORCHARD PARK, NEW YORK 14127
716-667-3130 • FAX 716-667-3156

July 13, 2006

David S. DePasquale, Vice President
First Niagara Bank
PO Box 514
6950 South Transit Road
Lockport, New York 14095-0514

Re: **Focused Phase II Environmental Assessment Report;**
Industrial Property, 28-35 Wasson Street, Buffalo, New York

Dear Mr. DePasquale:

In accordance with our agreement, dated June 22, 2006, Hazard Evaluations, Inc. (HEI) completed a Focused Phase II Environmental Site Assessment (ESA) at the above-referenced (subject) site. Both the ESA and this related letter report were completed on behalf of, and for the use of, First Niagara Bank (hereinafter the "Client") for its reliance in the environmental assessment of the subject site. Use of this ESA report by any other party is strictly prohibited, except by authorization in writing from the Client.

This Focused Phase II ESA was completed to address a single condition of environmental concern selected by the Client, as previously identified in the LCS Phase I ESA, dated April 6, 2006, and LCS's follow-up letters of explanation, dated April 6 and April 14, 2006. This condition of concern is limited to an area of the subject site at the rear of the building along the western property boundary within which the reported historic dumping or discharge of waste ink/solvent mixtures occurred. It must also be noted that this specific area of the subject site historically contained, and was bordered by, railroad sidings/tracks. HEI's investigative activities and the associated results of this investigation are described in the following paragraphs, and only reflect the conditions of the subject site within the specific area of concern investigated.

<u>Test Trench Excavation</u>

Prior to performing any on-site subsurface activities, underground utilities were marked by the Underground Facilities Protection Organization (UFPO). On June 26, 2006, a mini-excavator was mobilized to the subject site in an effort to expose the soil profile within the area of concern and collect soil and/or groundwater samples. HEI excavated a total of five (5) test trenches along the western border of the subject site (Field Notes Sketch, Attachment 1 depicts the approximate test trench locations). The soil/fill encountered within each test trench was examined for the presence of staining, odors or other characteristics that would indicate the potential presence of regulated substances. Numerous samples were manually collected, placed in acetate sampling bags, and screened for the presence of volatile organic compounds (VOCs) using a Thermo Model 580B organic vapor monitor (OVM).

Obvious apparent solvent-type odors were noted emanating from the soil excavated from Test Trenches A and C; however, no positive VOCs readings were measured. Additionally, stained soil/fill material exhibiting one or more colors, including black, orange, red and yellow (suspected to be waste inks), was observed in Test Trenches A and C. The impacted soil/fill material generally appeared to exist within the top four to five feet below grade (bg) within these two test trenches. Also, a variety of old construction-type materials was encountered in the test trenches, including limited brick and substantial structural wood. A native sandy clay material was found below this depth. Test Trench A was installed to approximately 9' - 10' bg, while Test Trench C was installed to approximately 6' - 7' bg. Apparent perched water (based on the soil conditions and the manner in which the water flowed into the trench) was observed entering Test Trench A in the vicinity of the soil/fill and native clay interface (approximately 9' bg). Bedrock was not encountered in either excavation.

Test Trench B was installed approximately 13' north of Test Trench A, but exhibited no obvious staining or odors. Test Trench D was installed approximately 23' south of Test Trench C, and only a slight odor was detected at the top of the clayey material (approximately 5' bg). Test Trench E was installed approximately 25' south of Test Trench D, and exhibited only a very slight unrecognizable odor that could not be characterized as being similar to the odor from Test Trench A.

A total of four soil/fill material samples were submitted for laboratory analysis, including: 1) Test Trench A Sand/Clay Composite; 2) Test Trench A (0'-4') Composite; 3) Test Trench B Excavated Material Composite; and 4) Test Trench E (3'-5') Clay Material. Each of these samples was analyzed for USEPA Method 8260 TCL (VOCs), 8270 TCL (SVOCs), RCRA Metals (Total & TCLP) and PCBs. Additionally, a water sample was collected from Test Trench A and submitted for the same parameters listed above, with the exception of TCLP RCRA Metals.

Subsequent to sample collection, all test trenches were backfilled and rough graded using the excavator blade. Attachment 1 presents the field notes that were prepared for this project.

Discussion of Results

The laboratory analytical results for the soil samples identified low levels of two target VOCs parameters in both the Test Trench A Sand/Clay Composite and Test Trench A (0'-4') Composite samples, including Xylenes and Acetone. Neither of these compounds exceeded applicable NYSDEC Recommended Soil Cleanup

Objectives (RSCOs), as presented in Appendix A, Table 1 of TAGM HWR-94-4046, dated January 24, 1994 (TAGM 4046). Table 1 (Attachment 2) presents a summary of the VOCs data. The Laboratory Analytical Report is presented in Attachment 3.

The SVOCs analysis revealed the presence of numerous target compounds in both the Test Trench A (0'-4') Composite and Test Trench B Excavated Material Composite samples. Benzo(a)anthracene, Benzo(a)pyrene and Chrysene were detected in both of these samples at concentrations exceeding the applicable NYSDEC RSCOs. It should be noted that 2-Methylphenol and 2,4-Dimethylphenol, which are compounds contained in Creosote (historically used for preserving railroad ties), were detected in the Test Trench A (0'-4') Composite sample. The level of 2-Methyl phenol (628 µg/kg) also exceeded the 100 µg/kg RSCO (Table 2).

The Metals analyses for the soil/fill samples identified several metals slightly above the Eastern USA Background Levels, as presented in TAGM 4046; however, the concentrations were close to, or within the same order of magnitude as the published background levels (Table 3). In this regard, HEI suggests that the levels detected represent site background conditions and do not present a condition of environmental concern. The RCRA Metals TCLP analyses did not identify any metals exceeding the applicable toxicity characteristic limits.

There were no PCBs detected in any of the soil samples submitted (Table 4).

The laboratory analytical results for the Test Trench A water sample revealed the presence of four target VOCs parameters above the applicable NYSDEC Ambient Water Quality Standards and Guidance Values (WQSs), as presented in TOGS 1.1.1, dated June 1998. These parameters included Xylenes, Acetone, 2-Butanone (MEK) and 2-Hexanone (MIBK), which are all solvents currently or historically used in the printing industry (Table 5). It should be noted that the Xylenes and MIBK concentrations were only slightly above the WQSs, but that Acetone and MEK were at slightly higher levels, but may not present a condition of environmental concern within this heavily industrialized area of the City of Buffalo.

The laboratory analytical results for the Test Trench A water sample revealed the presence of two target SVOCs parameters above the applicable WQSs, including 2-Methylphenol and 2,4-Dimethylphenol (suspect Creosote constituents; Table 6). It should be also noted that these two SVOCs were at somewhat higher levels, but may not present a condition of environmental concern due to the significant historic railroad development within this area of the City of Buffalo.

The results for RCRA metals in the Test Trench A water sample only Lead at a concentration exceeding WQS (Table 7). However, given both the low levels of Total Lead detected in the soil/fill samples from the test trenches, and the apparent low leachability of that Lead in the soil/fill matrix, as well as no reported historic use of Lead-containing printing products on-site and the history of this general area of the City of Buffalo which has a known, widespread Lead contamination condition, HEI suggests that this may not present a condition of environmental concern.

No PCBs were detected in the Test Trench A water sample (Table 8).

Conclusions

Based on the results of this limited investigation, HEI suggests that printing waste-impacted soil/fill and subsurface water exist in a restricted area along the western boundary of the subject site. This restricted area appears to be limited to the vicinity of Test Trenches A and C, although the specific lateral and vertical extent of this contamination is not clearly defined, especially with respect to whether it has remained on the subject site and not migrated off-site. It should be noted that if the solvent VOCs detected in the soil/fill samples are the result of historic dumping of printing wastes, the potential exists that they may represent listed hazardous wastes in accordance with 6 NYCRR Part 371.4(b)(1) under the F003 or F005 hazardous waste codes. However, the definitions for these two codes mandate that the concentrations of the regulated solvents before use had to be at least 10% of the mixture. In that regard, as the release of these substances predated the current owner/operator of the subject site, and as a result, it is highly unlikely that the formulations for any solvent/ink mixtures can be determined, HEI suggests that these released waste solvent/ink mixtures cannot be determined to have been listed hazardous wastes and only need to be addressed in accordance with the NYSDEC TAGM cleanup guidance procedures.

With respect to the apparent Creosote soil/fill contamination encountered, this type of subsurface contaminant is widespread throughout the area of Buffalo surrounding the subject site which was once the largest rail yard in the United States east of Chicago. Such contamination, when encountered and/or disturbed, must be addressed appropriately by excavation and off-site disposal. However, the contaminant levels encountered in this investigation may not warrant such a remedial response. Such a determination would need to be made by the NYSDEC.

Summary

HEI suggests that the site conditions encountered within the area of concern at the subject site represent a historic release that appears to be (but may not be) reportable to the NYSDEC Region 9 office by the current site owner. However, even if the reporting requirement is not triggered, the conditions encountered (VOCs exceeding TAGM RSCOs) appear to warrant at least limited excavation and removal remedial procedures to be completed by the owner/operator of the subject site. Some concern still exists with respect to whether these contaminants have migrated off-site to the west, and if so, to what extent. One additional concern related to this site contamination that may need to be addressed is the potential applicability of the Financial Accounting Standards Board (FASB) Interpretation No. 47 (March 2005) of Financial Accounting Standard 143 that addresses the potential liability of potential and existing environmental management costs.

The information presented above should adequately summarize HEI's investigative efforts and results regarding the specific environmental concern at the subject site, as identified above. If you have any questions regarding the contents of this letter report, please contact me directly.

Very truly yours,
HAZARD EVALUATIONS, INC.

C. Mark Hanna, CHMM
President

Attachments
FNB FlexoWasson P2

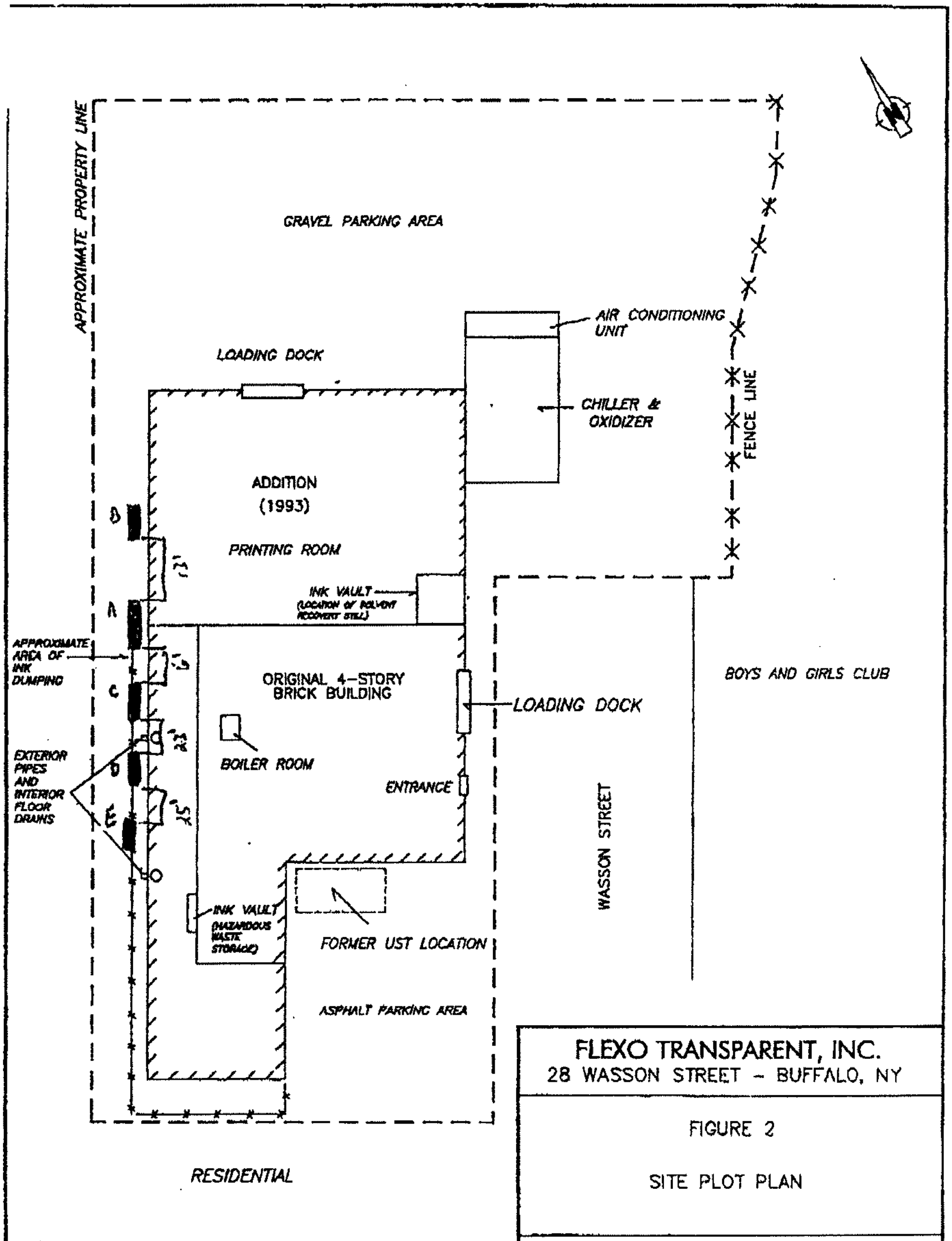

APPROXIMATE PROPERTY LINE
GRAVEL PARKING AREA
AIR CONDITIONING UNIT
LOADING DOCK
CHILLER & OXIDIZER
FENCE LINE
ADDITION (1993)
PRINTING ROOM
INK VAULT
(LOCATION OF SOLVENT RECOVERY STILL)
APPROXIMATE AREA OF INK DUMPING
ORIGINAL 4-STORY BRICK BUILDING
LOADING DOCK
BOYS AND GIRLS CLUB
EXTERIOR PIPES AND INTERIOR FLOOR DRAINS
BOILER ROOM
ENTRANCE
WASSON STREET
INK VAULT
(HAZARDOUS WASTE STORAGE)
FORMER UST LOCATION
ASPHALT PARKING AREA
FLEXO TRANSPARENT, INC.
28 WASSON STREET - BUFFALO, NY
FIGURE 2
SITE PLOT PLAN
RESIDENTIAL

Table 1
Selected Soil Sample Analytical Results; Volatile Organics
28 Wasson Street, Buffalo, NY
June 26, 2006 Sampling Date

	Analytical Parameter	(A) Sand/Clay Composite	(A) (0'-4') Composite	(B) Material Composite	(E) (3'-5') Clay Material	Recommended Soil Cleanup Objective (TAGM 4046)
	Bromodichloromethane	*	*	*	*	NA
	Bromomethane	*	*	*	*	NA
	Bromoform	*	*	*	*	NA
	Carbon Tetrachloride	*	*	*	*	600
	Chloroethane	*	*	*	*	1,900
	Chloromethane	*	*	*	*	NA
	2-Chloroethyl vinyl ether	*	*	*	*	NA
	Chloroform	*	*	*	*	300
	1,1-Dichloroethane	*	*	*	*	200
	1,2-Dichloroethane	*	*	*	*	100
	1,1-Dichloroethene	*	*	*	*	400
	Cis-1,2-Dichloroethene	*	*	*	*	NA
	Trans-1,2-Dichloroethene	*	*	*	*	300
	1,2-Dichloropropane	*	*	*	*	NA
	Cis-1,3-Dichloropropene	*	*	*	*	300
	Trans-1,3-Dichloropropene	*	*	*	*	300
	Methylene Chloride	*	*	*	*	100
	1,1,2,2-Tetrachloroethane	*	*	*	*	600
	Tetrachloroethene	*	*	*	*	1,400
	1,1,1-Trichloroethane	*	*	*	*	800
	1,1,2-Trichloroethane	*	*	*	*	NA
	Trichloroethene	*	*	*	*	700
	Trichlorofluoromethane	*	*	*	*	NA
	Vinyl Chloride	*	*	*	*	200
	Benzene	*	*	*	*	60
	Chlorobenzene	*	*	*	*	1,700
	Ethylbenzene	*	*	*	*	5,500
	Toluene	*	*	*	*	1,500
500,000	Xylenes	31.1	21.2	*	*	1,200
	Styrene	*	*	*	*	NA
	1,2-Dichlorobenzene	*	*	*	*	7,900
	1,3-Dichlorobenzene	*	*	*	*	1,600
	1,4-Dichlorobenzene	*	*	*	*	8,500
500,000	Acetone	89.5	*	*	*	200
	2-Butanone	*	*	*	*	300
	2-Hexanone	*	*	*	*	NA
	4-Methyl-2-pentanone	*	*	*	*	1,000
	Carbon Disulfide	*	*	*	*	2,700
	Vinyl acetate	*	*	*	*	NA

Notes: 1) Results from USEPA Method 8260 for Volatiles; All results in ppb (ug/kg).
2) NA = Not Applicable
3) * means compound not detected above Method Detection Limit (MDL).
4) Shaded results indicates concentration exceed the TAGM 4046 Standard.

commercial

SCO

Table 2
Selected Soil Sample Analytical Results; Semi-volatile Organics
28 Wasson Street, Buffalo, NY
June 26, 2006 Sampling Date

	Analytical Parameter	(A) Sand/Clay Composite	(A) (0'-4') Composite	(B) Material Composite	(E) (3'-5') Clay Material	Recommended Soil Cleanup Objective (TAGM 4046)
	Acenaphthene	*	*	*	*	50,000
500,000	Anthracene	*	490	818	*	50,000
5600	Benzo(a)anthracene	*	1,010	1,250	*	224 or MDL
1000	Benzo(a)pyrene	*	737	1,430	*	61 or MDL
5600	Benzo(b)fluoranthene	*	494	1,030	*	1,100
500,000	Benzo(g,h,i)perylene	*	508	870	*	50,000
56,000	Benzo(k)fluoranthene	*	785	1,080	*	1,100
56,000	Chrysene	*	1,990	1,350	*	400
	Diethylphthalate	*	*	*	*	NA
	Dimethylphthalate	*	*	*	*	2,000
	Butylbenzylphthalate	*	*	*	*	50,000
	Di-n-butylphthalate	*	*	*	*	8,100
	Di-n-octylphthalate	*	*	*	*	50,000
	bis(2-Ethylhexyl)phthalate	*	*	*	*	50,000
	2-Chloronaphthalene	*	*	*	*	NA
	Hexachlorbenzene	*	*	*	*	410
	Hexachloroethane	*	*	*	*	NA
	Hexachlorocyclopentadiene	*	*	*	*	NA
	Hexachlorobutadiene	*	*	*	*	NA
	n-Nitrosodinpropylamine	*	*	*	*	NA
	n-Nitrosodiphenylamine	*	*	*	*	NA
	n-Nitrosodimethylamine	*	*	*	*	NA
	Isophorone	*	*	*	*	4,400
	Benzyl alcohol	*	*	*	*	NA
	Dibenzofuran	*	*	*	*	6,200
	2-Methylnaphthalene	*	*	*	*	36,400
	Dibenzo(a,h)anthracene	*	*	*	*	14 or MDL
500,000	Fluoranthene	*	2,340	3,100	*	50,000
500,000	Fluorene	*	*	*	*	50,000
5600	Indeno(1,2,3-cd)pyrene	*	438	*	*	NA
5	Naphthalene	*	*	*	*	13,000
500,000	Phenanthrene	*	1,990	2,470	*	50,000
500,000	Pyrene	*	1,800	2,430	*	50,000

Notes: 1) Results from USEPA Method 8270 for Semi-volatiles; All results in ppb (ug/kg).
2) Shaded results indicates concentration exceeds RSCO.
3) NA means Not Applicable.
4) MDL means Method Detection Limit.
5) * means compound not detected above MDL.

Table 2 (continued)
Selected Soil Sample Analytical Results; Semi-volatile Organics
28 Wasson Street, Buffalo, NY
June 26, 2006 Sampling Date

Analytical Parameter	(A) Sand/Clay Composite	(A) (0'-4') Composite	(B) Material Composite	(E) (3'-5') Clay Material	Recommended Soil Cleanup Objective (TAGM 4046)
Acenaphthylene	*	*	*	*	41,000
1,2-Dichlorobenzene	*	*	*	*	7,900
1,3-Dichlorobenzene	*	*	*	*	1,600
1,4-Dichlorobenzene	*	*	*	*	8,500
1,2,4-Trichlorobenzene	*	*	*	*	3,400
Nitrobenzene	*	*	*	*	200 or MDL
2,4-Dinitrotoluene	*	*	*	*	NA
2,6-Dinitrotoluene	*	*	*	*	1,000
bis(2-Chloroethyl)ether	*	*	*	*	NA
bis(2-Chloroisopropyl)ether	*	*	*	*	NA
bis(2-chloroethoxy)methane	*	*	*	*	NA
4-Bromophenylphenylether	*	*	*	*	NA
4-Chlorophenylphenylether	*	*	*	*	NA
Benzidine	*	*	*	*	NA
3,3-Dichlorobenzidine	*	*	*	*	NA
4-Chloroaniline	*	*	*	*	220 or MDL
2-Nitroanaline	*	*	*	*	430 or MDL
3-Nitroaniline	*	*	*	*	500 or MDL
4-Nitroanaline	*	*	*	*	NA
Phenol	*	*	*	*	30 or MDL
2-Chlorophenol	*	*	*	*	800
2,4-Dichlorophenol	*	*	*	*	400
2,6-Dichlorophenol	*	*	*	*	NA
2,4,5-Trichlorophenol	*	*	*	*	100
2,4,6-Trichlorophenol	*	*	*	*	NA
Pentachlorophenol	*	*	*	*	1,000 or MDL
4-Chloro-3-methylphenol	*	*	*	*	240 or MDL
2-Methylphenol	*	628	*	*	100 or MDL
4-Methylphenol	*	*	*	*	900
2,4-Dimethylphenol	*	880	*	*	NA
2-Nitrophenol	*	*	*	*	330 or MDL
4-Nitrophenol	*	*	*	*	100 or MDL
2,4-Dinitrophenol	*	*	*	*	200 or MDL
4,6-Dinitro-2-methylphenol	*	*	*	*	NA
Benzoic acid	*	*	*	*	NA

Notes: 1) Results from USEPA Method 8270 for Semi-volatiles; All results in ppb (ug/kg).
2) Shaded results indicates concentration exceeds RSCO.
3) NA means Not Applicable.
4) MDL means Method Detection Limit.
5) * means compound not detected above MDL.

Table 3
28 Wasson Street, Buffalo, NY
June 26, 2006 Sampling Date

Soil Sample Analytical Results; RCRA Metals (Total)

	Analytical Parameter	(A) Sand/Clay Composite	(A) (0'-4') Composite	(B) Material Composite	(E) (3'-5') Clay Material	Eastern USA Background Levels (TAGM 4046)
16	Arsenic	5.82	[illegible]	18.0	9.01	3-12*
400	Barium	64.6	150	156	97.9	15-600
9.3	Cadmium	0.599	4.61	4.04	0.559	0.1-1.0
400	Chromium	15.3	80.7	23.8	22.2	1.5-40
1000	Lead	18.4	467	112	12.3	200-500
2.8	Mercury	0.0439	0.0981	[illegible]	0.0246	0.001-0.2
1500	Selenium	*	*	*	*	0.1-3.9
1500	Silver	*	*	*	*	NA

Notes: 1) All results and Standards expressed in mg/kg.
2) * means compound not detected above MDL
3) Shaded results indicates concentration exceeds the TAGM 4046 Standard.

Soil Sample Analytical Results; RCRA Metals (TCLP)

Analytical Parameter	(A) Sand/Clay Composite	(A) (0'-4') Composite	(B) Material Composite	(E) (3'-5') Clay Material	Hazardous Toxicity Level 6 NYCRR 371
Arsenic	*	*	*	*	5.0
Barium	2.85	3.11	2.35	2.63	100.0
Cadmium	*	*	*	*	1.0
Chromium	*	*	*	*	5.0
Lead	*	*	0.132	*	5.0
Mercury	*	*	*	*	0.2
Selenium	*	*	*	*	1.0
Silver	*	*	*	*	5.0

Notes: 1) All results and Standards expressed in mg/l.
2) * means compound not detected above MDL

Table 4
Soil Sample Analytical Results; PCBs
28 Wasson Street, Buffalo, NY
June 26, 2006 Sampling Date

Analytical Parameter	(A) Sand/Clay Composite	(A) (0'-4') Composite	(B) Material Composite	Recommended Soil Cleanup Objective (TAGM 4046)
Aroclor 1016	*	*	*	1.0
Aroclor 1221	*	*	*	1.0
Aroclor 1232	*	*	*	1.0
Aroclor 1242	*	*	*	1.0
Aroclor 1248	*	*	*	1.0
Aroclor 1254	*	*	*	1.0
Aroclor 1260	*	*	*	1.0
Total PCB's	*	*	*	1.0

Notes: 1) All results and Standards expressed in mg/kg.
2) * means compound not detected above MDL
3) Shaded results indicates concentration exceeds the TAGM 4046 Standard.

Table 5
Water Sample Analytical Results; Volatile Organics
28 Wasson Street, Buffalo, NY
June 26, 2006 Sampling Date

Analytical Parameter	(A) Excavation Water	Water Quality Standards (see notes)
Bromodichloromethane	*	5*
Bromomethane	*	5*
Bromoform	*	5*
Carbon Tetrachloride	*	5
Chloroethane	*	50
Chloromethane	*	5*
2-Chloroethyl vinyl Ether	*	5*
Chloroform	*	7
1,1-Dichloroethane	*	5
1,2-Dichloroethane	*	5
1,1-Dichloroethene	*	5
Cis-1,2-Dichloroethene	*	5
Trans-1,2-Dichloroethene	*	5
1,2-Dichloropropane	*	1
Cis-1,3-Dichloropropene	*	5
Trans-1,3-Dichloropropene	*	5
Methylene Chloride	*	5
1,1,2,2-Tetrachloroethane	*	5
Tetrachloroethene	*	5
1,1,1-Trichloroethane	*	5
1,1,2-Trichloroethane	*	1
Trichloroethene	*	5
Trichlorofluoromethane	*	5*
Vinyl Chloride	*	2
Benzene	*	1.0
Chlorobenzene	*	5
Ethylbenzene	*	5
Toluene	3.22	5
Xylenes	5.01	5
Styrene	*	5*
1,2-Dichlorobenzene	*	3
1,3-Dichlorobenzene	*	3
1,4-Dichlorobenzene	*	3
Acetone	103	50
2-Butanone	90.9	50
2-Hexanone	9.04	5*
4-Methyl-2-pentanone	*	50
Carbon Disulfide	*	50
Vinyl Acetate	*	5*

Notes:
1) Results from USEPA Method 8260 for Volatiles; All results in ppb (ug/l).
2) Shaded results exceed the applicable Water Quality Standard.
3) NA means Not Applicable.
4) * means compound not detected above MDL.
5) Water Quality Standards from either TOGS 1.1.1 or TAGM 4046.
6) * = Assumed NYSDEC POC which, if verified, would have a standard of 5 µg/l.

Table 6
Water Sample Analytical Results; Semi-Volatile Organics
28 Wasson Street, Buffalo, NY
June 26, 2006 Sampling Date

Analytical Parameter	(A) Excavation Water	Water Quality Standards (see notes)
Acenaphthene	"	20
Anthracene	"	50
Benzo(a)anthracene	"	0.002
Benzo(a)pyrene	"	0.002
Benzo(b)fluoranthene	"	0.002
Benzo(g,h,l)perylene	"	5
Benzo(k)fluoranthene	"	0.002
Chrysene	"	0.002
Diethylphthalate	"	50
Dimethylphthalate	"	50
Butylbenzylphthalate	"	50
Di-n-butylphthalate	"	50
Di-n-octylphthalate	"	50
bis(2-Ethylhexyl)phthalate	"	5
2-Chloronaphthalene	"	10
Hexachlorbenzene	"	0.04
Hexachloroethane	"	5
Hexachlorocyclopentadiene	"	5
Hexachlorobutadiene	"	0.5
n-Nitrosodinpropylamine	"	NA
n-Nitrosodiphenylamine	"	1
n-Nitrosodimethylamine	"	1
Isophorone	"	50
Benzyl alcohol	"	NA
Dibenzofuran	"	5
2-Methylnaphthalene	"	5*
Dibenzo(a,h)anthracene	"	50
Fluoranthene	"	50
Fluorene	"	50
Indeno(1,2,3-cd)pyrene	"	0.002
Naphthalene	"	10
Phenanthrene	"	50
Pyrene	"	50

Notes: 1) Results from USEPA Method 8270 for SVOCs; All results in ppb (ug/l).
2) Shaded results exceed the applicable Water Quality Standard.
3) NA means Not Applicable.
4) " means compound not detected above MDL.
5) Water Quality Standards from either TOGS 1.1.1 or TAGM 4046.
6) * = Assumed NYSDEC POC which, if verified, would have a standard of 5 µg/l.

Table 6 (continued)
Water Sample Analytical Results; Semi-Volatile Organics
28 Wasson Street, Buffalo, NY
June 26, 2006 Sampling Date

Analytical Parameter	(A) Excavation Water	Water Quality Standards (see notes)
Acenaphthylene	*	20
1,2-Dichlorobenzene	*	3
1,3-Dichlorobenzene	*	3
1,4-Dichlorobenzene	*	3
1,2,4-Trichlorobenzene	*	5
Nitrobenzene	*	0.4
2,4-Dinitrotoluene	*	5
2,6-Dinitrotoluene	*	5
bis(2-Chloroethyl)ether	*	1
bis(2-Chloroisopropyl)ether	*	NA
bis(2-chloroethoxy)methane	*	5
4-Bromophenylphenylether	*	NA
4-Chlorophenylphenylether	*	NA
Benzidine	*	NA
3,3-Dichlorobenzidine	*	5
4-Chloroaniline	*	5
2-Nitroanaline	*	5
3-Nitroaniline	*	5
4-Nitroanaline	*	5
Phenol	*	1
2-Chlorophenol	*	1
2,4-Dichlorophenol	*	1
2,6-Dichlorophenol	*	1
2,4,5-Trichlorophenol	*	1
2,4,6-Trichlorophenol	*	1
Pentachlorophenol	*	1
4-Chloro-3-methylphenol	*	50
2-Methylphenol	198	5
4-Methylphenol	49.5	50
2,4-Dimethylphenol	112	1
2-Nitrophenol	*	5
4-Nitrophenol	*	5
2,4-Dinitrophenol	*	1
4,6-Dinitro-2-methylphenol	*	NA
Benzoic acid	*	NA

Notes:
1) Results from USEPA Method 8270 for SVOCs; All results in ppb (ug/l).
2) Shaded results exceed the applicable Water Quality Standard.
3) NA means Not Applicable.
4) * means compound not detected above MDL.
5) Water Quality Standards from either TOGS 1.1.1 or TAGM 4046.
6) * = Assumed NYSDEC POC which, if verified, would have a standard of 5 μg/l.

Table 7
Water Sample Analytical Results; RCRA Metals - Filtered
28 Wasson Street, Buffalo, NY
June 26, 2006 Sampling Date

Analytical Parameter	(A) Excavation Water	6NYCCR 703.6 Groundwater Standards
Arsenic	22	25
Barium	284	1,000
Cadmium	*	5
Chromium	*	50
Lead	136	25
Mercury	*	0.7
Selenium	*	10
Silver	*	50

Notes: 1) All results and Standards expressed in µg/l.
2) * means compound not detected above MDL
3) Shaded results indicate concentration exceeds the NYCCR Title 6, Part 703.6 Groundwater Standards.

Table 8
Groundwater Sample Analytical Results; PCBs
3484 S. Union Street, North Chili, NY
May 26, 2006 Sampling Date

Analytical Parameter	(A) Excavation Water	6NYCCR 703.6 Groundwater Standards
Aroclor 1016	*	0.09
Aroclor 1221	*	0.09
Aroclor 1232	*	0.09
Aroclor 1242	*	0.09
Aroclor 1248	*	0.09
Aroclor 1254	*	0.09
Aroclor 1260	*	0.09
Total PCB's	*	0.09

Notes: 1) Results from USEPA Method 8082 PCBs; All results in ppb (ug/l).
2) * means compound not detected above MDL.
3) Shaded results indicate concentration exceeds the NYCCR Title 6, Part 703.6 Groundwater Standards.

HAZARD EVALUATIONS HAZARD EVALUATIONS, INC. • 3836 N. BUFFALO ROAD • ORCHARD PARK, NEW YORK 14127
716-667-3130 • FAX 716-667-3156

December 8, 2006

Ronald Mabry, President
Flexo Transparent, Inc.
28 Wasson Street
Buffalo, New York 14240-0128

Re: **Site Remediation; Summary Report**

Dear Mr. Mabry:

In accordance with our agreement, dated October 3, 2006, Hazard Evaluations, Inc. (HEI) completed limited remedial activities along the western property boundary of Flexo Transparent, Inc.'s (Flexo) Wasson Street, Buffalo, New York (subject) site. These remedial activities focused on a reported historic release of printing related wastes by a previous operator of the facility, as identified in HEI's Phase II ESA report, dated July 13, 2006. It should be noted that this was a voluntary remedial program performed on behalf of Flexo, and was not mandated by the NYSDEC. A summary of the remedial activities completed at the subject site is provided below.

Prior to any on-site remedial activities, written authorization was obtained from the adjoining property owner to allow HEI to operate on that property and remove any soil impacted with printing related wastes that were encountered. In addition, underground utilities in the area of the remedial activities were located prior to any intrusive activities.

On November 28, 2006 HEI mobilized a tracked excavator to the facility and proceeded to remove soil impacted with paint related material from the ground and load it directly into dump trucks. This waste contaminated soil was transported to the Town of Tonawanda Landfill (NYSDEC Facility #15S29) for disposal (390.64 tons total). The extent of the excavation was determined solely by visual observation of colored soil or ink, given that this waste material did not exhibit discernable volatile organic compounds (VOCs) readings. The depth of the excavation ranged from approximately five feet below grade (bg) adjacent to the building to three feet bg toward the western portion of the excavation. Due to the close proximity of the building wall, excavation was only performed to within a distance of approximately two feet from the building to ensure the structural stability of the wall. As a result, any residual ink encountered was left in-place along the eastern wall of the excavation. HEI's Field Notes are presented in Attachment 1, and present a sketch of the excavation. Backfilling of the excavation was performed using fill generated by on-site construction activities. The waste disposal receipts are presented in Attachment 2.

Five verification samples were collected from within the excavation (three wall samples and two floor samples), and were submitted for laboratory analysis using USEPA Methods 8260 (VOCs) and 8270 (SVOCs), both TCL list and direct analysis, as well as RCRA metals (direct analysis). All samples were placed in appropriate containers which were labeled, preserved by cooling in the field and handled under chain-of-custody procedures until receipt by a NYSDEC-approved analytical laboratory. It should be noted that only the E. Wall Composite sample was collected on the subject site, as all others were obtained from the adjacent property.

The verification sample laboratory analytical results for VOCs (Table 1, Attachment 3) indicated the presence of one target parameter (Acetone) in three of the five verification samples. Only the E. Wall Composite sample exceeded the applicable NYSDEC Recommended Soil Cleanup Objectives (RSCOs) of 200 µg/kg, as presented in Appendix A, Table 1 of TAGM HWR-94-4046, dated January 24, 1994 (TAGM 4046). It should be noted that the E. Wall results are substantially below the proposed Soil Cleanup Objective (SCO) of 500,000 µg/kg for commercial properties, as presented in Table 375-6.8(b) of 6 NYCRR 375-6, due to become effective in January 2007. The Laboratory Analytical Report is presented in Attachment 4.

The verification sample laboratory analytical results for SVOCs (Table 2, Attachment 3) indicated the presence of several target parameters in two of the five verification samples, three of which exceeded their respective RSCOs in the N. Wall sample and two of which exceeded their respective RSCOs in the E. Wall sample. The N. Wall results are also substantially below the proposed Soil Cleanup Objectives (SCOs) of 5,600 µg/kg, 1,000 µg/kg and 56,000 µg/kg for commercial properties [respectively for Benzo(a)anthracene, Benzo(a)pyrene and Chrysene], as presented in Table 375-6.8(b) of 6 NYCRR 375-6. No SCOs were even developed for the Methylphenol parameters detected in the E. Wall sample.

The verification sample laboratory analytical results for the RCRA metals (Table 3, Attachment 3) indicated the presence of several target parameters in two of the five verification samples which exceeded the Eastern USA Background Levels as presented in TAGM 4046. Of significance for metals contaminants, the TAGM 4046 levels are not clean-up objectives, but rather represent common levels encountered in uncontaminated soils located across the eastern United States. It should be noted that the S. Wall results are all below the proposed Soil Cleanup Objectives (SCO) of 16 mg/kg, 8 mg/kg and 1,500 mg/kg for commercial properties (respectively for Arsenic, Mercury and Selenium), as presented in Table 375-6.8(b) of 6 NYCRR 375-6. Similarly, the N. Wall results for Chromium (SCO = 1,500 mg/kg), Mercury and Selenium are all below the applicable SCOs.

Based on the remedial activities performed and the verification sampling results obtained, HEI suggests that the remediation of the printing related wastes along the western boundary of the subject site have been adequately completed. It is likely that the residual Acetone detected in the eastern excavation wall may be related to the historic release of printing related wastes; however, the level detected is significantly below the proposed commercial property soil clean-up objective that becomes effective early in 2007. The SVOCs detected in the E. Wall sample that exceeded the RSCOs are unlikely to be related to the historic release of printing related wastes, but are more likely to reflect the historic presence of a railroad line that once ran along the western property boundary. As indicated above, no SCOs have even been proposed for these two compounds in the new regulations for commercial property clean-ups. No metals were detected in the E. Wall sample that exceeded background levels. As a result of this limited remedial program, HEI suggests that no further investigative or remedial activities are warranted.

The information presented above should adequately summarize HEI's remedial efforts at the subject site. If you have any questions regarding the content of this letter report or its attachments, please contact me directly.

Very truly yours,
HAZARD EVALUATIONS, INC.

C. Mark Hanna, CHMM
President

Attachments
23403\Flexo#1\Remediation\RemedSummRpt 121206

Attachment 1

Field Notes

Date 11/28/06 No. 23403
Client Flexo Transparent, Inc.
Subject Remediation
Weather Warm Temp. 50-60°

Hazard Evaluations, Inc.
3836 N. Buffalo Rd.
Orchard Park, NY 14127
(716) 667-3130

FIELD INVESTIGATION REPORT

Travelled to subject site and met K+R Day. Used excavator to move Baker tank to location near the excavation. Then used excavator to move some of the fill piles which would hinder access to the excavation area.

Trucks began arriving at about 8:00 am. Began loading material from adjacent to the building where block structure meets the newer metal building. The extent of excavation was based on visual observation of the gold-colored ink material, as VOC readings were negligible.

Excavated to an approximate distance of 2-2.5 feet from the wall of building. Gold ink still present along this wall, but due to structural issues, was left in-place. The depth of excavation ranged from about 3'-5' depending on observed ink material. Excavated until limits of excavation were reached to the South, West and North. No appreciable water was observed entering excavation that necessitated dewatering. A clay pipe was broken (about 4-6" diameter) along the eastern wall of excavation (Northern side of excavation) and some water exited this pipe. The purpose of this pipe is not known, but it appeared to be abandoned.

There was much fill within top 3' feet of material. Some locations had much wood with some rail road ties. Strange odor present, presumably related to the rail road ties or fill but no VOC readings detected.

During the load out, there were two locations where

Signature [signature] Title PM

Date 11/28/06 No. 22403
Client Flexo Transparent, Inc.
Subject Remediation
Weather Warm Temp. 50°-60°

Hazard Evaluations, Inc.
3836 N. Buffalo Rd.
Orchard Park, NY 14127
(716) 667-3130

FIELD INVESTIGATION REPORT

the dump trucks were driving that became very soft, therefore we had one of the trucks bring a load of oversized crushed concrete to fill these areas in. Also during load-out, one of the trucks hit a parked car at end of Oxson street. Trucker and Flexo managed the situation. No injuries occurred, with only some driver side back bumper damage to parked car.

Load out complete at about 1:30 pm. HEI collected verification samples from excavation as indicated on attached sketch. Screened samples and submitted for analysis for 8260 TCL, 8270 TCL, and RCRA Metals. Screening results shown below.

South Wall Composite = 0ppm
North Wall Composite = 0ppm
East Wall Composite (Residual Tank) = 8.8ppm
South Floor = 0ppm
North Floor = 0ppm

Moved Baker Tank back to end of street for pick-up. HEI left site. K+R Day mobilized dump truck to site and used fill staged on site from addition site work to fill excavation. Finished filling on 11/29/06

Signature [signature] Title PM

Attachment 2

Waste Disposal Receipts

TUESDAY 11-28-06 5 TRUCKS 8:00 AM; 20 MIN SPREAD
CONTACT: SCOTT: 998-3130

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: N/A
2. Page 1 of
3. Emergency Response Phone: [illegible]
4. Waste Tracking Number: [illegible]

5. Generator's Name and Mailing Address
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry

Generator's Site Address (if different than mailing address)
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry

Generator's Phone: 716-835-7710

6. Transporter 1 Company Name
Fariso Trucking
716-875-4163

U.S. EPA ID Number: 9A 035

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Town of Tonawanda Landfill Closure
East Park Road
Tonawanda NY
Facility's Phone: 716-285-3920

U.S. EPA ID Number: N/A

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
	1. Non RCRA, Non D.O.T. Regulated Material, AGM Soil (PCS), , ,	001	T		T
	2. , , ,				
	3. , , ,				
	4. , , ,				

13. Special Handling Instructions and Additional Information
Emergency Contact: Ensol, Inc. Nick Morreale
EnSol, Inc. Project ID Number: 06-3259-12T
Truck ID: 163
Truck Lic.: 378982A NJ
Handling Codes: L , , ,

Weight Ticket No.: 75105
Gross Weight: 60780
Tare Weight: 27280
, , ,

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Scott Overhoff on behalf of Flexo Transport
Signature: [signature]
Month 11 Day 28 Year 06

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Salvatore Catanese
Signature: [signature]
Month 11 Day 28 Year 06

Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Item #13 Estimated Actual Weight = 20.76

Manifest Reference Number: 374678

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Brent Reed
Signature: Brent W. Reed
Month 11 Day 28 Year 06

169-BLC-O 5 11977

DESIGNATED FACILITY TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number N/A	2. Page 1 of	3. Emergency Response Phone 716-285-3920	4. Waste Tracking Number ES-374679

5. Generator's Name and Mailing Address
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry

Generator's Site Address (if different than mailing address)
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry

Generator's Phone: 716-825-7710

6. Transporter 1 Company Name
Pariso Trucking
716-875-4152
U.S. EPA ID Number 9A 035

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Town of Tonawanda Landfill Closure
East Park Road
Tonawanda NY
Facility's Phone: 716-285-3920
U.S. EPA ID Number N/A

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
	1. Non RCRA, Non D.O.T. Regulated Material, AGM Soil (PCS), , ,	001	T		T
	2. , , ,				
	3. , , ,				
	4. , , ,				

13. Special Handling Instructions and Additional Information
Emergency Contact: Ensol, Inc. Nick Morreale
EnSol, Inc. Project ID Number: 06-3259-12T
Truck ID: AF3A #23
Truck Lic.: 22288SJ
Handling Codes: L , , ,

Weight Ticket No.: 75107
Gross Weight: 62940
Tare Weight: 25000
, , ,

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Scott Overhoff on behalf of Flexo Transparent | Signature | Month 11 Day 28 Year 06

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: John Cole | Signature | Month 11 Day 28 Year 06
Transporter 2 Printed/Typed Name | Signature | Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Item #13 Estimated. Actual Weight = 18.36
Manifest Reference Number: 374679

17b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator) Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Brent Reed | Signature | Month 11 Day 28 Year 06

169-BLC-O 5 11977 DESIGNATED FACILITY TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number N/A	2. Page 1 of	3. Emergency Response Phone 716-285-3920	4. Waste Tracking Number ES-374680

5. Generator's Name and Mailing Address
Flexo Transparent, , 28 Wasson Street, , Buffalo NY 14240, Ronald Mabry
Generator's Phone: 716-825-7710

Generator's Site Address (if different than mailing address)
Flexo Transparent, , 28 Wasson Street, , Buffalo NY 14240, Ronald Mabry

6. Transporter 1 Company Name
Patrzo Trucking
716-878-6168
U.S. EPA ID Number 9A 035

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Town of Tonawanda Landfill Closure
East Park Road
Tonawanda NY
Facility's Phone: 716-285-3920
U.S. EPA ID Number N/A

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
	1. Non RCRA, Non D.O.T. Regulated Material, AGH Soil (PCS), , ,	001	T		T
	2. , , ,				
	3. , , ,				
	4. , , ,				

13. Special Handling Instructions and Additional Information
Emergency Contact: Ensol, Inc. Nick Morreale
Ensol, Inc. Project ID Number: 06-3259-12T
Truck ID: 22
Truck Lic.: 52319 JD
Handling Codes: L , , ,
Weight Ticket No.: 75108
Gross Weight: 59540
Tare Weight: 27,000
, , , 16.26 tons

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: Scott Overhoff on behalf of Flexo Transparent
Signature
Month 11 Day 28 Year 06

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Chris Purucker
Signature
Month 11 Day 28 Year 06
Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Item #13 Estimated. Actual Weight = 16.36
Manifest Reference Number: 374680
17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Brent Reed
Signature: Bret W. Reed
Month 11 Day 28 Year 06

169-BLC-O 5 11977
DESIGNATED FACILITY TO GENERATOR

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number: N/A	2. Page 1 of	3. Emergency Response Phone: 716-285-3920	4. Waste Tracking Number: ES-374691

5. Generator's Name and Mailing Address
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry
Generator's Phone: 716-825-7710

Generator's Site Address (if different than mailing address)
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry

6. Transporter 1 Company Name
Pariso Trucking
716-575-6168
U.S. EPA ID Number: 9A 035

7. Transporter 2 Company Name
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Town of Tonawanda Landfill Closure
East Park Road
Tonawanda NY
Facility's Phone: 716-285-3920
U.S. EPA ID Number: N/A

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
	1. Non RCRA, Non U.D.T. Regulated Material, AGM Soil (PCS), , ,	001	T		T
	2. , , ,				
	3. , , ,				
	4. , , ,				

13. Special Handling Instructions and Additional Information
Emergency Contact: Ensol, Inc. Nick Morreale
EnSol, Inc. Project ID Number: 06-3250-12T
Truck ID: 101
Truck Lic.: 88220 JB NY
Handling Codes: L , , ,

Weight Ticket No.: 75110
Gross Weight: 63240
Tare Weight: 25640
, , ,

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Scott Overhoff on behalf of Flexo Transparent | Signature | Month 11 Day 28 Year 06

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: DAVID P MURPHY | Signature | Month 11 Day 28 Year 06
Transporter 2 Printed/Typed Name | Signature | Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Item #13 Estimated. Actual Weight = 18.82
Manifest Reference Number: 374691

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator) Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Brent Reed | Signature | Month 11 Day 28 Year 06

169-BLC-O 5 11977

DESIGNATED FACILITY TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number N/A	2. Page 1 of	3. Emergency Response Phone 716-265-3920	4. Waste Tracking Number ES-374582

5. Generator's Name and Mailing Address
Flexo Transparent, , 28 Wasson Street, , Buffalo NY 14240, Ronald Mabry

Generator's Site Address (if different than mailing address)
Flexo Transparent, , 28 Wasson Street, , Buffalo NY 14240, Ronald Mabry

Generator's Phone: 716-825-7710

6. Transporter 1 Company Name: [illegible]ing 716-375-6168 — U.S. EPA ID Number: 9A 035

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address: Town of Tonawanda Landfill Closure, East Park Road, Tonawanda NY — U.S. EPA ID Number: N/A

Facility's Phone: 716-265-3920

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
	1. Non RCRA, Non D.O.T. Regulated Material, AGM Soil (PCS), , ,	001	T		T
	2. , , ,				
	3. , , ,				
	4. , , ,				

13. Special Handling Instructions and Additional Information
Emergency Contact: Ensol, Inc. Nick Morreale
EnSol, Inc. Project ID Number: 06-3259-12T
Truck ID: #102
Truck Lic.:
Handling Codes: L , , ,

Weight Ticket No.: 170799
Gross Weight: 62420
Tare Weight: 25800
, , , 18.32

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Scott Overhoft on behalf of Flexo Transparent — Signature: [signature] — Month 11 Day 28 Year 06

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Bob Stafet — Signature: [signature] — Month 11 Day 28 Year 06
Transporter 2 Printed/Typed Name — Signature — Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Item #13 Estimated. Actual Weight = 18.32
Manifest Reference Number: 374582

17b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Brent Reed — Signature: Brent W. Reed — Month 11 Day 28 Year 06

GENERATOR · INT'L · TRANSPORTER · DESIGNATED FACILITY

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	N/A		716-285-3920	ES-374584

5. Generator's Name and Mailing Address
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry

Generator's Site Address (if different than mailing address)
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry

Generator's Phone: 716-825-7710

6. Transporter 1 Company Name
Fallis Trucking
716-875-6168

U.S. EPA ID Number: 9A 035

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Town of Tonawanda Landfill Closure
East Park Road
Tonawanda NY

U.S. EPA ID Number: N/A

Facility's Phone: 716-285-3920

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
	1. Non RCRA, Non D.O.T. Regulated Material, AEM Soil (PCS), , ,	001	T		T
	2. , , ,				
	3. , , ,				
	4. , , ,				

13. Special Handling Instructions and Additional Information
Emergency Contact: Ensol, Inc. Nick Morreale
Ensol, Inc. Project ID Number: 06-3259-12T
Truck ID: 22
Truck Lic.: 53319 JD
Handling Codes: L , , ,

Weight Ticket No.: 75121
Gross Weight: 62,140
Tare Weight: 27,000
, , ,
17.58 TNS

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Scott Aerhoff on behalf of Flexo Transparent
Signature: [signature]
Month 11 Day 28 Year 06

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Chris Poruckes
Signature: [signature]
Month 11 Day 28 Year 06

Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Item #13 Estimated. Actual Weight = 17.58

Manifest Reference Number: 374584

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Brent Reed
Signature: Brent W. Reed
Month 11 Day 28 Year 06

169-BLC-O 5 11977

DESIGNATED FACILITY TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number N/A	2. Page 1 of	3. Emergency Response Phone 716-285-3920	4. Waste Tracking Number ES-374533

5. Generator's Name and Mailing Address
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry

Generator's Site Address (if different than mailing address)
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry

Generator's Phone: 716-825-7710

6. Transporter 1 Company Name
Pariso Trucking
716-875-5152
U.S. EPA ID Number
PA 035

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Town of Tonawanda Landfill Closure
East Park Road
Tonawanda NY
Facility's Phone: 716-285-3920
U.S. EPA ID Number
N/A

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
	1. Non RCRA, Non D.O.T. Regulated Material, AGM Soil (PCS), , ,	001	T		T
	2. , , ,				
	3. , , ,				
	4. , , ,				

13. Special Handling Instructions and Additional Information
Emergency Contact: Ensol, Inc. Nick Morreale
EnSol, Inc. Project ID Number: 06-3259-12T
Truck ID: AF3A #23
Truck Lic.: 222 8K55
Handling Codes: L , , ,
Weight Ticket No.: 75120
Gross Weight: 72350
Tare Weight: 25000
, , , ton's 23.68

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Scott Overhoff on behalf of Flexo Transparent
Signature
Month 11 Day 28 Year 06

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: John Cole
Signature
Month 11 Day 28 Year 06
Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Item #13 Estimated. Actual Weight = 23.68
Manifest Reference Number: 374533

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Brent Reed
Signature
Month 11 Day 28 Year 06

169-BLC-O 5 11977
DESIGNATED FACILITY TO GENERATOR

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	N/A		715-285-3920	ES-374685

5. Generator's Name and Mailing Address
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry

Generator's Site Address (if different than mailing address)
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry

Generator's Phone: 716-825-9710

6. Transporter 1 Company Name
Pariso Trucking
716-875-6138
U.S. EPA ID Number: 9A 035

7. Transporter 2 Company Name
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Town of Tonawanda Landfill Closure
East Park Road
Tonawanda NY
U.S. EPA ID Number: N/A
Facility's Phone: 716-285-3920

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
	1. Non RCRA, Non D.O.T. Regulated Material, AGM Soil (PCS), , ,	001	T		T
	2. , , ,				
	3. , , ,				
	4. , , ,				

13. Special Handling Instructions and Additional Information
Emergency Contact: Ensol, Inc. Nick Morreale
Ensol, Inc. Project ID Number: 06-3259-12T
Truck ID: 101
Truck Lic.: 88220 JB NY
Handling Codes: L, , , ,
Weight Ticket No.: 75123
Gross Weight: 64800
Tare Weight: 25640
, , ,

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Scott Overhoff Agent on behalf of Flexo Transparent
Signature:
Month 11 Day 28 Year 06

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: DAVID P MURPHY
Signature:
Month 11 Day 28 Year 06

Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Item #13 Estimated. Actual Weight = 19.58

Manifest Reference Number: 374685

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Brent Reed
Signature: Brent W. Reed
Month 11 Day 28 Year 06

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DESIGNATED FACILITY TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number N/A	2. Page 1 of	3. Emergency Response Phone 716-285-3920	4. Waste Tracking Number ES-374686

5. Generator's Name and Mailing Address
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry

Generator's Site Address (if different than mailing address)
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry

Generator's Phone: 716-825-7710

6. Transporter 1 Company Name
Pariso Trucking
716-675-6168

U.S. EPA ID Number
9A 035

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Town of Tonawanda Landfill Closure
East Park Road
Tonawanda NY

U.S. EPA ID Number
N/A

Facility's Phone: 716-285-3920

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
	1. Non RCRA, Non D.O.T. Regulated Material, AGM Soil (PCS), , ,	001	T		T
	2. , , ,				
	3. , , ,				
	4. , , ,				

13. Special Handling Instructions and Additional Information
Emergency Contact: Ensol, Inc. Nick Morreale
Ensol, Inc. Project ID Number: 06-3259-12T
Truck ID: 163
Truck Lic.: 37898 PA
Handling Codes: L , , ,

Weight Ticket No.: 75125 ~~[illegible]~~
Gross Weight: 72340 ~~[illegible]~~
Tare Weight: 27280 ~~[illegible]~~
, , ,

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Scott Ovelhoff on behalf of Flexo Transpar
Signature: [signature]
Month 11 Day 28 Year 06

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Salvatore Catanese
Signature: [signature]
Month 11 Day 28 Year 06

Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Item #13 Estimated. Actual Weight = 22.52 ~~[illegible]~~

Manifest Reference Number: 374686

17b. Alternate Facility (or Generator)
U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Brent Reed
Signature: Brent W. Reed
Month 11 Day 28 Year 06

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

169-BLC-O 5 11977

DESIGNATED FACILITY TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: N/A
2. Page 1 of
3. Emergency Response Phone: 716-285-3920
4. Waste Tracking Number: ES-374587

5. Generator's Name and Mailing Address:
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry

Generator's Site Address (if different than mailing address):
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry

Generator's Phone: 716-825-7710

6. Transporter 1 Company Name: Pariso Trucking ~~716-275-6153~~
U.S. EPA ID Number: 9A 035

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address:
Town of Tonawanda Landfill Closure
East Park Road
Tonawanda NY
Facility's Phone: 716-285-3920
U.S. EPA ID Number: N/A

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
	1. Non RCRA, Non D.O.T. Regulated Material, NGM Soil (PCS), , ,	001	T		T
	2. , , ,				
	3. , , ,				
	4. , , ,				

13. Special Handling Instructions and Additional Information
Emergency Contact: Ensol, Inc. Nick Morreale
EnSol, Inc. Project ID Number: 06-3259-12T
Truck ID: #102
Truck Lic.:
Handling Codes: I, , , ,

Weight Ticket No.: 75126 ~~69080~~
Gross Weight: 25800
Tare Weight: 43280
, , , 21.64

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: Scott Overhoff on behalf of Flexo Transparent
Signature: [signature]
Month: 11 Day: 28 Year: 06

15. International Shipments ☐ Import to U.S. ☐ Export from U.S.
Port of entry/exit:
Transporter Signature (for exports only):
Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Bob Shevlet
Signature: [signature]
Month: 11 Day: 28 Year: 06
Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Item #13 Estimated. Actual Weight =
Manifest Reference Number: 374587

17b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Brent Reed
Signature: Brent W. Reed
Month: 11 Day: 28 Year: 06

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DESIGNATED FACILITY TO GENERATOR

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
N/A		716-285-3920	ES-374688

5. Generator's Name and Mailing Address
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry
Generator's Phone: 716-825-7710

Generator's Site Address (if different than mailing address)
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry

6. Transporter 1 Company Name
Pariso Trucking
716-875-6166
U.S. EPA ID Number: 9A 035

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Town of Tonawanda Landfill Closure
East Park Road
Tonawanda NY
Facility's Phone: 716-285-3920
U.S. EPA ID Number: N/A

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
	1. Non RCRA, Non D.O.T. Regulated Material, AGM Soil (PCS), , ,	001	T		T
	2. , , ,				
	3. , , ,				
	4. , , ,				

13. Special Handling Instructions and Additional Information
Emergency Contact: Ensol, Inc. Nick Morreale
EnSol, Inc. Project ID Number: 06-3259-12T
Truck ID: AT3A #23
Truck Lic.: 22288 JJ
Handling Codes: L , , ,

Weight Ticket No.: 75132
Gross Weight: 78460
Tare Weight: 25000
, , , tons 26.72

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Scott Overhoff on behalf of Flexo Transparent
Signature: [signature]
Month 11 Day 28 Year 06

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: John Cole
Signature: John Cole
Month 11 Day 28 Year 06

Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Item #13 Estimated. Actual Weight = 26.72
Manifest Reference Number: 374688

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Brent Reed
Signature: Brent W. Reed
Month 11 Day 28 Year 06

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DESIGNATED FACILITY TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number N/A	2. Page 1 of	3. Emergency Response Phone 716-285-3920	4. Waste Tracking Number ES-374689

5. Generator's Name and Mailing Address
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry

Generator's Site Address (if different than mailing address)
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry

Generator's Phone: 716-825-7710

6. Transporter 1 Company Name
Parise Trucking
716-875-5159
U.S. EPA ID Number: 9A 035

7. Transporter 2 Company Name
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Town of Tonawanda Landfill Closure
East Park Road
Tonawanda NY
Facility's Phone: 716-285-3920
U.S. EPA ID Number: N/A

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
	1. Non RCRA, Non D.O.T. Regulated Material, AGM Soil (2C8), , ,	001	T		T
	2. , , ,				
	3. , , ,				
	4. , , ,				

13. Special Handling Instructions and Additional Information
Emergency Contact: Ensol, Inc. Nick Morreale
EnSol, Inc. Project ID Number: 06-3259-12T
Truck ID: 22
Truck Lic.: 52319 JD
Handling Codes: T, , , ,

Weight Ticket No.: 75133
Gross Weight: 67060
Tare Weight: 27000
, , , 20.04 tons

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Scott Ahlhuff on behalf of Flexo Transparent
Signature: [signature]
Month 11 Day 28 Year 06

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Chris Purucker
Signature: [signature]
Month 11 Day 28 Year 06

Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Item #13 Estimated. Actual Weight = 20.04
Manifest Reference Number: 374689

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Brent Reed
Signature: Brent W. Reed
Month 11 Day 28 Year 06

169-BLC-O 5 11977 DESIGNATED FACILITY TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number N/A	2. Page 1 of	3. Emergency Response Phone 716-285-3920	4. Waste Tracking Number ES-374690

5. Generator's Name and Mailing Address
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14210, Ronald Mabry

Generator's Phone: 716-825-7710

Generator's Site Address (if different than mailing address)
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14210, Ronald Mabry

6. Transporter 1 Company Name
Pariso Trucking
716-875-6168
U.S. EPA ID Number 9A 035

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Town of Tonawanda Landfill Closure
East Park Road
Tonawanda NY
Facility's Phone: 716-285-3920
U.S. EPA ID Number N/A

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
	1. Non RCRA, Non D.O.T. Regulated Material, AGM Soil (PCS), , ,	001	T		T
	2. , , ,				
	3. , , ,				
	4. , , ,				

13. Special Handling Instructions and Additional Information
Emergency Contact: Ensol, Inc. Nick Morreale
EnSol, Inc. Project ID Number: 06-3259-12T
Truck ID: 101
Truck Lic.: 88220 JB NY
Handling Codes: T, , , ,
Weight Ticket No.: 75136
Gross Weight: 63020
Tare Weight: 25640
, , , ,

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Scott Crowley on behalf of Flexo Transparent
Signature:
Month 11 Day 28 Year 06

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: DAVID P MURPHY
Signature:
Month 11 Day 28 Year 06

Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Item #13 Estimated. Actual Weight = 18.70
Manifest Reference Number: 374690

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Brent Reed
Signature:
Month 11 Day 28 Year 06

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: N/A

2. Page 1 of

3. Emergency Response Phone: 716-285-3920

4. Waste Tracking Number: ES-374691

5. Generator's Name and Mailing Address
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry

Generator's Site Address (If different than mailing address)
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry

Generator's Phone: 716-875-7710

6. Transporter 1 Company Name
Pariso Trucking
716 875 3156
U.S. EPA ID Number: 9A 035

7. Transporter 2 Company Name
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Town of Tonawanda Landfill Closure
East Park Road
Tonawanda NY
Facility's Phone: 716-285-3920
U.S. EPA ID Number: N/A

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
	1. Non RCRA, Non D.O.T. Regulated Material, AGM Soil (PCS), , ,	001	T		T
	2. , , ,				
	3. , , ,				
	4. , , ,				

13. Special Handling Instructions and Additional Information
Emergency Contact: Ensol, Inc. Nick Morreale
Ensol, Inc. Project ID Number: 06-3259-17T
Truck ID: 163
Truck Lic.: 37858PA NY
Handling Codes: L , , , ,
Weight Ticket No.: 7508
Gross Weight: 68540
Tare Weight: 27290
, , ,

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: Scott Ochhoff on behalf of Flexo Transparent
Signature: [signature]
Month 11 Day 28 Year 06

15. International Shipments ☐ Import to U.S. ☐ Export from U.S.
Port of entry/exit:
Transporter Signature (for exports only):
Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Salvatore Cataracc
Signature: [signature]
Month 11 Day 28 Year 06
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Item #13 Estimated. Actual Weight = 20.64
Manifest Reference Number: 374691

17b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Brent Reed
Signature: Brent W. Reed
Month 11 Day 28 Year 06

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DESIGNATED FACILITY TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	N/A		716-285-3920	ES-374692

5. Generator's Name and Mailing Address
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry
Generator's Phone: 716-825-7710

Generator's Site Address (if different than mailing address)
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry

6. Transporter 1 Company Name: Fariso Trucking 716-875-6168 — U.S. EPA ID Number: 9A 035

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number: N/A
Town of Tonawanda Landfill Closure
East Park Road
Tonawanda NY
Facility's Phone: 716-285-3920

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.
	1. Non RCRA, Non D.O.T. Regulated Material, NGM Soil (PCS) , , ,	001	T		T
	2. , , ,				
	3. , , ,				
	4. , , ,				

13. Special Handling Instructions and Additional Information
Emergency Contact: Ensol, Inc. Nick Morreale
EnSol, Inc. Project ID Number: 06-3259-12T
Truck ID: #102
Truck Lic.:
Handling Codes: L , , ,

Weight Ticket No.: 75139
Gross Weight: 69280
Tare Weight: 25800
, , ,
21,74.T

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: Scott Duhuff on behalf of Flexo Transparent — Signature: [signature] — Month 11 Day 28 Year 06

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Bob Shallet — Signature: [signature] — Month 11 Day 28 Year 06
Transporter 2 Printed/Typed Name — Signature — Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Item #13 Estimated. Actual Weight = 21.74
Manifest Reference Number: 374692

17b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Brent Reed — Signature: Brent R. Reed — Month 11 Day 28 Year 06

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	N/A		716-285-3920	ES-374693

5. Generator's Name and Mailing Address
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry

Generator's Site Address (if different than mailing address)
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry

Generator's Phone: 716-825-7710

6. Transporter 1 Company Name: Parise Trucking 716-875-3369 — U.S. EPA ID Number: 9A 035

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number: N/A
Town of Tonawanda Landfill Closure
East Park Road
Tonawanda NY
Facility's Phone: 716-285-3920

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
	1. Non RCRA, Non D.O.T. Regulated Material, AEM Soil (PCS), , ,	001	T		T
	2. , , ,				
	3. , , ,				
	4. , , ,				

13. Special Handling Instructions and Additional Information
Emergency Contact: Ensol, Inc. Nick Morreale
EnSol, Inc. Project ID Number: 06-3259-12T
Truck ID: A134 #23
Truck Lic.: 22288JJ
Handling Codes: L , , ,
Weight Ticket No.: 75144
Gross Weight: 65800
Tare Weight: 25000
, , , TONS 20.40

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: Scott Ochs on behalf of Flexo Transparent — Signature: [signature] — Month 11 Day 28 Year 06

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: John Cole — Signature: [signature] — Month Day Year
Transporter 2 Printed/Typed Name — Signature — Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Item #13 Estimated. Actual Weight =
Manifest Reference Number: 374693

17b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Brent Reed — Signature: Brent W. Reed — Month 11 Day 28 Year 06

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NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
N/A		716-285-3920	ES-374694

5. Generator's Name and Mailing Address
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry

Generator's Site Address (if different than mailing address)
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry

Generator's Phone: 716-825-7710

6. Transporter 1 Company Name
Fazio Trucking
716-875-6150
U.S. EPA ID Number: 9A 035

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Town of Tonawanda Landfill Closure
East Park Road
Tonawanda NY
Facility's Phone: 716-285-3920
U.S. EPA ID Number: N/A

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.
	1. Non RCRA, Non D.O.T. Regulated Material, AGM Soil (PCS), , ,	001	T		T
	2. , , ,				
	3. , , ,				
	4. , , ,				

13. Special Handling Instructions and Additional Information
Emergency Contact: Ensol, Inc. Nick Morreale
Ensol, Inc. Project ID Number: 06-3258-12T
Truck ID: 22 ATTA
Truck Lic.: 52319 JD
Handling Codes: L , , ,
Weight Ticket No.: 7546
Gross Weight: 71380
Tare Weight: 27,000
, , , 22.14

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: Scott Wehrloff on behalf of Flexo Transparent
Signature: [signature]
Month 11 Day 28 Year 06

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Chris Purvaker
Signature: [signature]
Month 11 Day 28 Year 06
Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Item #13 Estimated. Actual Weight = 22.18
Manifest Reference Number: 374694

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Brent Reed
Signature: Brent W. Reed
Month 11 Day 28 Year 06

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DESIGNATED FACILITY TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	N/A
2. Page 1 of	
3. Emergency Response Phone	716-285-3920
4. Waste Tracking Number	FS-374595

5. Generator's Name and Mailing Address
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry

Generator's Site Address (if different than mailing address)
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry

Generator's Phone: 716-825-7710

6. Transporter 1 Company Name
Farisc Trucking
716-[illegible]

U.S. EPA ID Number: 9A 035

7. Transporter 2 Company Name

U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Town of Tonawanda Landfill Closure
East Park Road
Tonawanda NY

Facility's Phone: 716-285-3920

U.S. EPA ID Number: N/A

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
	1. Non RCRA, Non D.O.T. Regulated Material, AGN Soil (PCS), , ,	001	T		T
	2. , , ,				
	3. , , ,				
	4. , , ,				

13. Special Handling Instructions and Additional Information

Emergency Contact: Ensol, Inc, Nick Morreale
EnSol. Inc. Project ID Number: 06-3259-12T
Truck ID: 101
Truck Lic.: 88220 JB NY
Handling Codes: T, , , ,

Weight Ticket No.: 75150
Gross Weight: 66460
Tare Weight: 25640
, , ,

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Scott Caruluff on behalf of Flexo Transparent
Signature: [signature]
Month 11 Day 28 Year 06

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: DAVID P MURPHY
Signature: [signature]
Month 11 Day 28 Year 06

Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Item #13 Estimated. Actual Weight = 20.42

Manifest Reference Number: 374595

17b. Alternate Facility (or Generator)

U.S. EPA ID Number:

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Brent Reed
Signature: Brent D. Reed
Month 11 Day 28 Year 06

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DESIGNATED FACILITY TO GENERATOR

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number N/A	2. Page 1 of	3. Emergency Response Phone 716-285-3920	4. Waste Tracking Number ES-374696

5. Generator's Name and Mailing Address
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry

Generator's Site Address (if different than mailing address)
Flexo Transparent, , 28 Wasson Street, ,
Buffalo NY 14240, Ronald Mabry

Generator's Phone: 716-825-7710

6. Transporter 1 Company Name
[illegible] Trucking
716-875-6168
U.S. EPA ID Number: 9A 035

7. Transporter 2 Company Name
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Town of Tonawanda Landfill Closure
East Park Road
Tonawanda NY
Facility's Phone: 716-285-3920
U.S. EPA ID Number: N/A

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
	1. Non RCRA, Non D.O.T. Regulated Material, AGM Soil (PCB), , ,	001	T		T
	2. , , ,				
	3. , , ,				
	4. , , ,				

13. Special Handling Instructions and Additional Information
Emergency Contact: Ensol, Inc. Nick Morreale
Ensol, Inc. Project ID Number: 06-3259-12T
Truck ID: 163
Truck Lic.: 37848PA NY
Handling Codes: L , , ,

Weight Ticket No.: 75151
Gross Weight: 71880
Tare Weight: 27280
, , ,

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Scott [illegible] on behalf of Flexo Transparent
Signature: [signature]
Month 11 Day 28 Year 06

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Salvatore Catanese
Signature: [signature]
Month 11 Day 29 Year 06

Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Item #13 Estimated. Actual Weight = 22.32
Manifest Reference Number: 374696

17b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Brent Reed
Signature: Brent W. Reed
Month 11 Day 28 Year 06

169-BLC-O 5 11977

DESIGNATED FACILITY TO GENERATOR

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

Attachment 3

Laboratory Analytical Summary Tables

Table 1
Selected Soil Sample Analytical Results; TCL Volatile Organics
November 28, 2006 Sampling Date

Analytical Parameter	S. Wall Composite	N. Wall Composite	E. Wall Composite	Floor A (South)	Floor B (North)	Recommended Soil Cleanup Objective (TAGM 4046)
Bromodichloromethane	"	"	"	"	"	NA
Bromomethane	"	"	"	"	"	NA
Bromoform	"	"	"	"	"	NA
Carbon Tetrachloride	"	"	"	"	"	600
Chloroethane	"	"	"	"	"	1,900
Chloromethane	"	"	"	"	"	NA
2-Chloroethyl vinyl ether	"	"	"	"	"	NA
Chloroform	"	"	"	"	"	300
1,1-Dichloroethane	"	"	"	"	"	200
1,2-Dichloroethane	"	"	"	"	"	100
1,1-Dichloroethene	"	"	"	"	"	400
Cis-1,2-Dichloroethene	"	"	"	"	"	NA
Trans-1,2-Dichloroethene	"	"	"	"	"	300
1,2-Dichloropropane	"	"	"	"	"	NA
Cis-1,3-Dichloropropene	"	"	"	"	"	300
Trans-1,3-Dichloropropene	"	"	"	"	"	300
Methylene Chloride	"	"	"	"	"	100
1,1,2,2-Tetrachloroethane	"	"	"	"	"	600
Tetrachloroethene	"	"	"	"	"	1,400
1,1,1-Trichloroethane	"	"	"	"	"	800
1,1,2-Trichloroethane	"	"	"	"	"	NA
Trichloroethene	"	"	"	"	"	700
Trichlorofluoromethane	"	"	"	"	"	NA
Vinyl Chloride	"	"	"	"	"	200
Benzene	"	"	"	"	"	60
Chlorobenzene	"	"	"	"	"	1,700
Ethylbenzene	"	"	"	"	"	5,500
Toluene	"	"	"	"	"	1,500
Xylenes	"	"	"	"	"	1,200
Styrene	"	"	"	"	"	NA
1,2-Dichlorobenzene	"	"	"	"	"	7,900
1,3-Dichlorobenzene	"	"	"	"	"	1,600
1,4-Dichlorobenzene	"	"	"	"	"	8,500
Acetone	"	"	1,970	171	169	200
2-Butanone	"	"	"	"	"	300
2-Hexanone	"	"	"	"	"	NA
4-Methyl-2-pentanone	"	"	"	"	"	1,000
Carbon Disulfide	"	"	"	"	"	2,700
Vinyl acetate	"	"	"	"	"	NA

Notes: 1) Results from USEPA Method 8260 for Volatiles; All results in ppb (ug/kg).
2) NA = Not Applicable
3) " means compound not detected above Method Detection Limit (MDL).

Table 2
Selected Soil Sample Analytical Results; Semi-volatile Organics
November 28, 2006 Sampling Date

Analytical Parameter	S. Wall Composite	N. Wall Composite	E. Wall Composite	Floor A (South)	Floor B (North)	Recommended Soil Cleanup Objective (TAGM 4046)
Acenaphthene	"	"	"	"	"	50,000
Anthracene	"	"	"	"	"	50,000
Benzo(a)anthracene	"	705	"	"	"	224 or MDL
Benzo(a)pyrene	"	602	"	"	"	61 or MDL
Benzo(b)fluoranthene	"	538	"	"	"	1,100
Benzo(g,h,I)perylene	"	"	"	"	"	50,000
Benzo(k)fluoranthene	"	653	"	"	"	1,100
Chrysene	"	727	"	"	"	400
Diethylphthalate	"	"	"	"	"	NA
Dimethylphthalate	"	"	"	"	"	2,000
Butylbenzylphthalate	"	"	"	"	"	50,000
Di-n-butylphthalate	"	"	"	"	"	8,100
Di-n-octylphthalate	"	"	"	"	"	50,000
bis(2-Ethylhexyl)phthalate	"	"	"	"	"	50,000
2-Chloronaphthalene	"	"	"	"	"	NA
Hexachlorbenzene	"	"	"	"	"	410
Hexachloroethane	"	"	"	"	"	NA
Hexachlorocyclopentadiene	"	"	"	"	"	NA
Hexachlorobutadiene	"	"	"	"	"	NA
n-Nitrosodinpropylamine	"	"	"	"	"	NA
n-Nitrosodiphenylamine	"	"	"	"	"	NA
n-Nitrosodimethylamine	"	"	"	"	"	NA
Isophorone	"	"	"	"	"	4,400
Benzyl alcohol	"	"	"	"	"	NA
Dibenzofuran	"	"	"	"	"	6,200
2-Methylnaphthalene	"	"	582	"	"	36,400
Dibenzo(a,h)anthracene	"	"	"	"	"	14 or MDL
Fluoranthene	"	1,560	"	"	"	50,000
Fluorene	"	"	"	"	"	50,000
Indeno(1,2,3-cd)pyrene	"	"	"	"	"	NA
Naphthalene	"	"	655	"	"	13,000
Phenanthrene	"	1,320	"	"	"	50,000
Pyrene	"	1,370	"	"	"	50,000

Notes: 1) Results from USEPA Method 8270 for Semi-volatiles; All results in ppb (ug/kg).
2) Shaded results indicates concentration exceeds RSCO.
3) NA means Not Applicable.
4) MDL means Method Detection Limit.
5) " means compound not detected above MDL.

Table 2 (continued)
Soil Sample Analytical Results; Semi-volatile Organics
November 28, 2006 Sampling Date

Analytical Parameter	S. Wall Composite	N. Wall Composite	E. Wall Composite	Floor A (South)	Floor B (North)	Recommended Soil Cleanup Objective (TAGM 4046)
Acenaphthylene	"	"	"	"	"	41,000
1,2-Dichlorobenzene	"	"	"	"	"	7,900
1,3-Dichlorobenzene	"	"	"	"	"	1,600
1,4-Dichlorobenzene	"	"	"	"	"	8,500
1,2,4-Trichlorobenzene	"	"	"	"	"	3,400
Nitrobenzene	"	"	"	"	"	200 or MDL
2,4-Dinitrotoluene	"	"	"	"	"	NA
2,6-Dinitrotoluene	"	"	"	"	"	1,000
bis(2-Chloroethyl)ether	"	"	"	"	"	NA
bis(2-Chloroisopropyl)ether	"	"	"	"	"	NA
bis(2-chloroethoxy)methane	"	"	"	"	"	NA
4-Bromophenylphenylether	"	"	"	"	"	NA
4-Chlorophenylphenylether	"	"	"	"	"	NA
Benzidine	"	"	"	"	"	NA
3,3-Dichlorobenzidine	"	"	"	"	"	NA
4-Chloroaniline	"	"	"	"	"	220 or MDL
2-Nitroanaline	"	"	"	"	"	430 or MDL
3-Nitroaniline	"	"	"	"	"	500 or MDL
4-Nitroanaline	"	"	"	"	"	NA
Phenol	"	"	"	"	"	30 or MDL
2-Chlorophenol	"	"	"	"	"	800
2,4-Dichlorophenol	"	"	"	"	"	400
2,6-Dichlorophenol	"	"	"	"	"	NA
2,4,5-Trichlorophenol	"	"	"	"	"	100
2,4,6-Trichlorophenol	"	"	"	"	"	NA
Pentachlorophenol	"	"	"	"	"	1,000 or MDL
4-Chloro-3-methylphenol	"	"	"	"	"	240 or MDL
2-Methylphenol	"	"	3,750	"	"	100 or MDL
4-Methylphenol	"	"	2,670	"	"	900
2,4-Dimethylphenol	"	"	6,650	"	"	NA
2-Nitrophenol	"	"	"	"	"	330 or MDL
4-Nitrophenol	"	"	"	"	"	100 or MDL
2,4-Dinitrophenol	"	"	"	"	"	200 or MDL
2-Methyl-4,6-dinitrophenol	"	"	"	"	"	NA
Benzoic Acid	"	"	"	"	"	NA

Notes: 1) Results from USEPA Method 8270 for Semi-volatiles; All results in ppb (ug/kg).
2) Shaded results indicates concentration exceeds RSCO.
3) NA means Not Applicable.
4) MDL means Method Detection Limit.
5) " means compound not detected above MDL.

Table 3
November 28, 2006 Sampling Date
Soil Sample Analytical Results; RCRA Metals (Total)

Analytical Parameter	S. Wall Composite	N. Wall Composite	E. Wall Composite	Floor A (South)	Floor B (North)	Eastern USA Background Levels (TAGM 4046)
Arsenic	16.0	30.5	10.5	3.54	2.67	3-12*
Barium	125	732	88.6	37.8	23.8	15-600
Cadmium	0.943	20.2	0.526	"	"	0.1-1.0
Chromium	13.8	66.7	12.3	9.63	5.74	1.5-40
Lead	311	1,110	71.0	5.50	5.26	200-500
Mercury	0.6093	0.3051	0.0547	0.0390	0.0224	0.001-0.2
Selenium	4.33	8.26	0.739	"	"	0.1-3.9
Silver	"	8.32	"	"	"	NA

Notes: 1) All results and Standards expressed in mg/kg.
2) " means compound not detected above MDL
3) NS means not sampled for designated parameter.

Attachment 4

Laboratory Analytical Results

PARADIGM
ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue
Rochester, NY 14608
(585) 647-2530 • (800) 724-1997
FAX: (585) 647-3311

CHAIN OF CUSTODY

REPORT TO:	INVOICE TO:
COMPANY: Hazard Evaluations, Inc.	COMPANY:
ADDRESS: 3836 N. Buffalo Rd.	ADDRESS:
CITY: Orchard Park STATE: NY ZIP: 14127	CITY: STATE: ZIP:
PHONE: (716) 667-3130 FAX: (716) 667-3156	PHONE: FAX:
ATTN:	ATTN:
COMMENTS:	

LAB PROJECT #: 06-3634

CLIENT PROJECT #: 23403

TURNAROUND TIME: (WORKING DAYS)

☐ 1 ☐ 2 ☐ 3 ☒ 5 (STD) OTHER ☐

QUOTE #:

PROJECT NAME/SITE NAME: Flexo Transparent, Inc.

REQUESTED ANALYSIS

	DATE	TIME	COMPOSITE	GRAB	SAMPLE LOCATION/FIELD ID	MATRIX	NUMBER CONTAINERS	8260 TCL	8270 TCL	RCRA Metals	REMARKS	PARADIGM LAB SAMPLE NUMBER
1	11/28/06		X		S. Wall Composite	~~Fill~~ Soil EAH 11/30	1	X	X	X		12250
2	11/28/06		X		N. Wall Composite	~~Fill~~ Soil	1	X	X	X		12251
3	11/28/06		X		E. Wall Composite	~~Fill~~ Soil	1	X	X	X		12252
4	11/28/06			X	Floor A (South)	Soil	1	X	X	X		12253
5	11/28/06			X	Floor B (North)	Soil	1	X	X	X		12254
6												
7												
8												
9												
10												

****LAB USE ONLY BELOW THIS LINE****

Sample Condition: Per NELAC/ELAP 210/241/242/243/244

Receipt Parameter	NELAC Compliance	
Container Type: Comments:	Y ☒	N ☐
Preservation: Comments:	Y ☒	N ☐
Holding Time: Comments:	Y ☒	N ☐
Temperature: Comments: 13°C iced	Y ☐	N ☒

		Date/Time
Sampled By	[signature]	11/28/06
Relinquished By	[signature]	11/30/06
Received By	[signature]	11/30/06
Received @ Lab By	Elizabeth A. Honch	11/30/06 1510

Total Cost:

P.I.F.

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Volatile Analysis Report for Soils/Solids/Sludges

Client: Hazard Evaluations, Inc

Client Job Site:	Flexo Transparent, Inc	**Lab Project Number:**	06-3634
		Lab Sample Number:	12254
Client Job Number:	23403		
Field Location:	Floor B (North)	**Date Sampled:**	11/28/2006
Field ID Number:	N/A	**Date Received:**	11/30/2006
Sample Type:	Soil	**Date Analyzed:**	12/06/2006

Halocarbons	Results in ug / Kg
Bromodichloromethane	ND< 10.7
Bromomethane	ND< 10.7
Bromoform	ND< 10.7
Carbon Tetrachloride	ND< 10.7
Chloroethane	ND< 10.7
Chloromethane	ND< 10.7
2-Chloroethyl vinyl Ether	ND< 10.7
Chloroform	ND< 10.7
Dibromochloromethane	ND< 10.7
1,1-Dichloroethane	ND< 10.7
1,2-Dichloroethane	ND< 10.7
1,1-Dichloroethene	ND< 10.7
cis-1,2-Dichloroethene	ND< 10.7
trans-1,2-Dichloroethene	ND< 10.7
1,2-Dichloropropane	ND< 10.7
cis-1,3-Dichloropropene	ND< 10.7
trans-1,3-Dichloropropene	ND< 10.7
Methylene chloride	ND< 26.6
1,1,2,2-Tetrachloroethane	ND< 10.7
Tetrachloroethene	ND< 10.7
1,1,1-Trichloroethane	ND< 10.7
1,1,2-Trichloroethane	ND< 10.7
Trichloroethene	ND< 10.7
Trichlorofluoromethane	ND< 10.7
Vinyl chloride	ND< 10.7

Aromatics	Results in ug / Kg
Benzene	ND< 10.7
Chlorobenzene	ND< 10.7
Ethylbenzene	ND< 10.7
Toluene	ND< 10.7
m,p-Xylene	ND< 10.7
o-Xylene	ND< 10.7
Styrene	ND< 26.6
1,2-Dichlorobenzene	ND< 10.7
1,3-Dichlorobenzene	ND< 10.7
1,4-Dichlorobenzene	ND< 10.7

Ketones	Results in ug / Kg
Acetone	169
2-Butanone	ND< 53.3
2-Hexanone	ND< 26.6
4-Methyl-2-pentanone	ND< 26.6

Miscellaneous	Results in ug / Kg
Carbon disulfide	ND< 26.6
Vinyl acetate	ND< 26.6

ELAP Number 10958 Method: EPA 8260B Data File: V41259.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram
Surrogate outliers indicate probable matrix interference

Signature:
Bruce Hoogesteger: Technical Director

This report is part of a multipage document and should only be evaluated in its entirety. Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt.

063634V5.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Volatile Analysis Report for Soils/Solids/Sludges

Client: Hazard Evaluations, Inc

Client Job Site:	Flexo Transparent, Inc	Lab Project Number:	06-3634
		Lab Sample Number:	12253
Client Job Number:	23403		
Field Location:	Floor A (South)	Date Sampled:	11/28/2006
Field ID Number:	N/A	Date Received:	11/30/2006
Sample Type:	Soil	Date Analyzed:	12/06/2006

Halocarbons	Results in ug / Kg
Bromodichloromethane	ND< 9.55
Bromomethane	ND< 9.55
Bromoform	ND< 9.55
Carbon Tetrachloride	ND< 9.55
Chloroethane	ND< 9.55
Chloromethane	ND< 9.55
2-Chloroethyl vinyl Ether	ND< 9.55
Chloroform	ND< 9.55
Dibromochloromethane	ND< 9.55
1,1-Dichloroethane	ND< 9.55
1,2-Dichloroethane	ND< 9.55
1,1-Dichloroethene	ND< 9.55
cis-1,2-Dichloroethene	ND< 9.55
trans-1,2-Dichloroethene	ND< 9.55
1,2-Dichloropropane	ND< 9.55
cis-1,3-Dichloropropene	ND< 9.55
trans-1,3-Dichloropropene	ND< 9.55
Methylene chloride	ND< 23.9
1,1,2,2-Tetrachloroethane	ND< 9.55
Tetrachloroethene	ND< 9.55
1,1,1-Trichloroethane	ND< 9.55
1,1,2-Trichloroethane	ND< 9.55
Trichloroethene	ND< 9.55
Trichlorofluoromethane	ND< 9.55
Vinyl chloride	ND< 9.55

Aromatics	Results in ug / Kg
Benzene	ND< 9.55
Chlorobenzene	ND< 9.55
Ethylbenzene	ND< 9.55
Toluene	ND< 9.55
m,p-Xylene	ND< 9.55
o-Xylene	ND< 9.55
Styrene	ND< 23.9
1,2-Dichlorobenzene	ND< 9.55
1,3-Dichlorobenzene	ND< 9.55
1,4-Dichlorobenzene	ND< 9.55

Ketones	Results in ug / Kg
Acetone	171
2-Butanone	ND< 47.8
2-Hexanone	ND< 23.9
4-Methyl-2-pentanone	ND< 23.9

Miscellaneous	Results in ug / Kg
Carbon disulfide	ND< 23.9
Vinyl acetate	ND< 23.9

ELAP Number 10958 Method: EPA 8260B Data File: V41312.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram
Surrrogate outliers indicate probable matrix interference

Signature:

Bruce Hoogesteger: Technical Director

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Volatile Analysis Report for Soils/Solids/Sludges

Client: Hazard Evaluations, Inc

Client Job Site:	Flexo Transparent, Inc	Lab Project Number:	06-3634
		Lab Sample Number:	12251
Client Job Number:	23403		
Field Location:	N Wall Composite	Date Sampled:	11/28/2006
Field ID Number:	N/A	Date Received:	11/30/2006
Sample Type:	Soil	Date Analyzed:	12/04/2006

Halocarbons	Results in ug / Kg
Bromodichloromethane	ND< 13.8
Bromomethane	ND< 13.8
Bromoform	ND< 13.8
Carbon Tetrachloride	ND< 13.8
Chloroethane	ND< 13.8
Chloromethane	ND< 13.8
2-Chloroethyl vinyl Ether	ND< 13.8
Chloroform	ND< 13.8
Dibromochloromethane	ND< 13.8
1,1-Dichloroethane	ND< 13.8
1,2-Dichloroethane	ND< 13.8
1,1-Dichloroethene	ND< 13.8
cis-1,2-Dichloroethene	ND< 13.8
trans-1,2-Dichloroethene	ND< 13.8
1,2-Dichloropropane	ND< 13.8
cis-1,3-Dichloropropene	ND< 13.8
trans-1,3-Dichloropropene	ND< 13.8
Methylene chloride	ND< 34.4
1,1,2,2-Tetrachloroethane	ND< 13.8
Tetrachloroethene	ND< 13.8
1,1,1-Trichloroethane	ND< 13.8
1,1,2-Trichloroethane	ND< 13.8
Trichloroethene	ND< 13.8
Trichlorofluoromethane	ND< 13.8
Vinyl chloride	ND< 13.8

Aromatics	Results in ug / Kg
Benzene	ND< 13.8
Chlorobenzene	ND< 13.8
Ethylbenzene	ND< 13.8
Toluene	ND< 13.8
m,p-Xylene	ND< 13.8
o-Xylene	ND< 13.8
Styrene	ND< 34.4
1,2-Dichlorobenzene	ND< 13.8
1,3-Dichlorobenzene	ND< 13.8
1,4-Dichlorobenzene	ND< 13.8

Ketones	Results in ug / Kg
Acetone	ND< 68.9
2-Butanone	ND< 68.9
2-Hexanone	ND< 34.4
4-Methyl-2-pentanone	ND< 34.4

Miscellaneous	Results in ug / Kg
Carbon disulfide	ND< 34.4
Vinyl acetate	ND< 34.4

ELAP Number 10958 Method: EPA 8260B Data File: V41256.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:
Bruce Hoogesteger: Technical Director

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Volatile Analysis Report for Soils/Solids/Sludges

Client: Hazard Evaluations, Inc

Client Job Site:	Flexo Transparent, Inc	Lab Project Number:	06-3634
		Lab Sample Number:	12252
Client Job Number:	23403		
Field Location:	E Wall Composite	Date Sampled:	11/28/2006
Field ID Number:	N/A	Date Received:	11/30/2006
Sample Type:	Soil	Date Analyzed:	12/05/2006

Halocarbons	Results in ug / Kg
Bromodichloromethane	ND< 77.9
Bromomethane	ND< 77.9
Bromoform	ND< 77.9
Carbon Tetrachloride	ND< 77.9
Chloroethane	ND< 77.9
Chloromethane	ND< 77.9
2-Chloroethyl vinyl Ether	ND< 77.9
Chloroform	ND< 77.9
Dibromochloromethane	ND< 77.9
1,1-Dichloroethane	ND< 77.9
1,2-Dichloroethane	ND< 77.9
1,1-Dichloroethene	ND< 77.9
cis-1,2-Dichloroethene	ND< 77.9
trans-1,2-Dichloroethene	ND< 77.9
1,2-Dichloropropane	ND< 77.9
cis-1,3-Dichloropropene	ND< 77.9
trans-1,3-Dichloropropene	ND< 77.9
Methylene chloride	ND< 195
1,1,2,2-Tetrachloroethane	ND< 77.9
Tetrachloroethene	ND< 77.9
1,1,1-Trichloroethane	ND< 77.9
1,1,2-Trichloroethane	ND< 77.9
Trichloroethene	ND< 77.9
Trichlorofluoromethane	ND< 77.9
Vinyl chloride	ND< 77.9

Aromatics	Results in ug / Kg
Benzene	ND< 77.9
Chlorobenzene	ND< 77.9
Ethylbenzene	ND< 77.9
Toluene	ND< 77.9
m,p-Xylene	ND< 77.9
o-Xylene	ND< 77.9
Styrene	ND< 195
1,2-Dichlorobenzene	ND< 77.9
1,3-Dichlorobenzene	ND< 77.9
1,4-Dichlorobenzene	ND< 77.9

Ketones	Results in ug / Kg
Acetone	1,970
2-Butanone	ND< 390
2-Hexanone	ND< 195
4-Methyl-2-pentanone	ND< 195

Miscellaneous	Results in ug / Kg
Carbon disulfide	ND< 195
Vinyl acetate	ND< 195

ELAP Number 10958 Method: EPA 8260B Data File: V41257.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram
Surrogate outliers indicate probable matrix interference

Signature:
Bruce Hoogesteger: Technical Director

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063634V3.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Volatile Analysis Report for Soils/Solids/Sludges

Client: Hazard Evaluations, Inc

Client Job Site:	Flexo Transparent, Inc	Lab Project Number:	06-3634
		Lab Sample Number:	12250
Client Job Number:	23403		
Field Location:	S Wall Composite	Date Sampled:	11/28/2006
Field ID Number:	N/A	Date Received:	11/30/2006
Sample Type:	Soil	Date Analyzed:	12/04/2006

Halocarbons	Results in ug / Kg
Bromodichloromethane	ND< 12.8
Bromomethane	ND< 12.8
Bromoform	ND< 12.8
Carbon Tetrachloride	ND< 12.8
Chloroethane	ND< 12.8
Chloromethane	ND< 12.8
2-Chloroethyl vinyl Ether	ND< 12.8
Chloroform	ND< 12.8
Dibromochloromethane	ND< 12.8
1,1-Dichloroethane	ND< 12.8
1,2-Dichloroethane	ND< 12.8
1,1-Dichloroethene	ND< 12.8
cis-1,2-Dichloroethene	ND< 12.8
trans-1,2-Dichloroethene	ND< 12.8
1,2-Dichloropropane	ND< 12.8
cis-1,3-Dichloropropene	ND< 12.8
trans-1,3-Dichloropropene	ND< 12.8
Methylene chloride	ND< 32.0
1,1,2,2-Tetrachloroethane	ND< 12.8
Tetrachloroethene	ND< 12.8
1,1,1-Trichloroethane	ND< 12.8
1,1,2-Trichloroethane	ND< 12.8
Trichloroethene	ND< 12.8
Trichlorofluoromethane	ND< 12.8
Vinyl chloride	ND< 12.8

Aromatics	Results in ug / Kg
Benzene	ND< 12.8
Chlorobenzene	ND< 12.8
Ethylbenzene	ND< 12.8
Toluene	ND< 12.8
m,p-Xylene	ND< 12.8
o-Xylene	ND< 12.8
Styrene	ND< 32.0
1,2-Dichlorobenzene	ND< 12.8
1,3-Dichlorobenzene	ND< 12.8
1,4-Dichlorobenzene	ND< 12.8

Ketones	Results in ug / Kg
Acetone	ND< 64.0
2-Butanone	ND< 64.0
2-Hexanone	ND< 32.0
4-Methyl-2-pentanone	ND< 32.0

Miscellaneous	Results in ug / Kg
Carbon disulfide	ND< 32.0
Vinyl acetate	ND< 32.0

ELAP Number 10958 Method: EPA 8260B Data File: V41255.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

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063634V1.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi-Volatile Analysis Report for Soils/Solids/Sludges

Client: Hazard Evaluations, Inc

Client Job Site:	Flexo Transparent, Inc	**Lab Project Number:**	06-3634
		Lab Sample Number:	12251
Client Job Number:	23403		
Field Location:	N Wall Composite	**Date Sampled:**	11/28/2006
Field ID Number:	N/A	**Date Received:**	11/30/2006
Sample Type:	Soil	**Date Analyzed:**	12/06/2006

Base / Neutrals	Results in ug / Kg	Base / Neutrals	Results in ug / Kg
Acenaphthene	ND< 423	Dibenz (a,h) anthracene	ND< 423
Anthracene	ND< 423	Fluoranthene	1,560
Benzo (a) anthracene	705	Fluorene	ND< 423
Benzo (a) pyrene	602	Indeno (1,2,3-cd) pyrene	ND< 423
Benzo (b) fluoranthene	538	Naphthalene	ND< 423
Benzo (g,h,i) perylene	ND< 423	Phenanthrene	1,320
Benzo (k) fluoranthene	653	Pyrene	1,370
Chrysene	727	Acenaphthylene	ND< 423
Diethyl phthalate	ND< 423	1,2-Dichlorobenzene	ND< 423
Dimethyl phthalate	ND< 1,060	1,3-Dichlorobenzene	ND< 423
Butylbenzylphthalate	ND< 423	1,4-Dichlorobenzene	ND< 423
Di-n-butyl phthalate	ND< 423	1,2,4-Trichlorobenzene	ND< 423
Di-n-octylphthalate	ND< 423	Nitrobenzene	ND< 423
Bis (2-ethylhexyl) phthalate	ND< 423	2,4-Dinitrotoluene	ND< 423
2-Chloronaphthalene	ND< 423	2,6-Dinitrotoluene	ND< 423
Hexachlorobenzene	ND< 423	Bis (2-chloroethyl) ether	ND< 423
Hexachloroethane	ND< 423	Bis (2-chloroisopropyl) ether	ND< 423
Hexachlorocyclopentadiene	ND< 423	Bis (2-chloroethoxy) methan	ND< 423
Hexachlorobutadiene	ND< 423	4-Bromophenyl phenyl ether	ND< 423
N-Nitroso-di-n-propylamine	ND< 423	4-Chlorophenyl phenyl ether	ND< 423
N-Nitrosodiphenylamine	ND< 423	Benzidine	ND< 1,060
N-Nitrosodimethylamine	ND< 423	3,3'-Dichlorobenzidine	ND< 423
Isophorone	ND< 423	4-Chloroaniline	ND< 423
Benzyl alcohol	ND< 1,060	2-Nitroaniline	ND< 1,060
Dibenzofuran	ND< 423	3-Nitroaniline	ND< 1,060
2-Methylnapthalene	ND< 423	4-Nitroaniline	ND< 1,060

Acids	Results in ug / Kg	Acids	Results in ug / Kg
Phenol	ND< 423	2-Methylphenol	ND< 423
2-Chlorophenol	ND< 423	4-Methylphenol	ND< 423
2,4-Dichlorophenol	ND< 423	2,4-Dimethylphenol	ND< 423
2,6-Dichlorophenol	ND< 423	2-Nitrophenol	ND< 423
2,4,5-Trichlorophenol	ND< 1,060	4-Nitrophenol	ND< 1,060
2,4,6-Trichlorophenol	ND< 423	2,4-Dinitrophenol	ND< 423
Pentachlorophenol	ND< 1,060	4,6-Dinitro-2-methylphenol	ND< 1,060
4-Chloro-3-methylphenol	ND< 423	Benzoic acid	ND< 1,060

ELAP Number 10958 Method: EPA 8270C Data File: S32551.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram
Surrogate outliers indicate probable matrix interference

Signature:

Bruce Hoogesteger: Technical Director

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063634S2.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi-Volatile Analysis Report for Soils/Solids/Sludges

Client: Hazard Evaluations, Inc

Client Job Site:	Flexo Transparent, Inc	Lab Project Number:	06-3634
		Lab Sample Number:	12252
Client Job Number:	23403		
Field Location:	E Wall Composite	Date Sampled:	11/28/2006
Field ID Number:	N/A	Date Received:	11/30/2006
Sample Type:	Soil	Date Analyzed:	12/06/2006

Base / Neutrals	Results in ug / Kg	Base / Neutrals	Results in ug / Kg
Acenaphthene	ND< 401	Dibenz (a,h) anthracene	ND< 401
Anthracene	ND< 401	Fluoranthene	ND< 401
Benzo (a) anthracene	ND< 401	Fluorene	ND< 401
Benzo (a) pyrene	ND< 401	Indeno (1,2,3-cd) pyrene	ND< 401
Benzo (b) fluoranthene	ND< 401	Naphthalene	655
Benzo (g,h,i) perylene	ND< 401	Phenanthrene	ND< 401
Benzo (k) fluoranthene	ND< 401	Pyrene	ND< 401
Chrysene	ND< 401	Acenaphthylene	ND< 401
Diethyl phthalate	ND< 401	1,2-Dichlorobenzene	ND< 401
Dimethyl phthalate	ND< 1,000	1,3-Dichlorobenzene	ND< 401
Butylbenzylphthalate	ND< 401	1,4-Dichlorobenzene	ND< 401
Di-n-butyl phthalate	ND< 401	1,2,4-Trichlorobenzene	ND< 401
Di-n-octylphthalate	ND< 401	Nitrobenzene	ND< 401
Bis (2-ethylhexyl) phthalate	ND< 401	2,4-Dinitrotoluene	ND< 401
2-Chloronaphthalene	ND< 401	2,6-Dinitrotoluene	ND< 401
Hexachlorobenzene	ND< 401	Bis (2-chloroethyl) ether	ND< 401
Hexachloroethane	ND< 401	Bis (2-chloroisopropyl) ether	ND< 401
Hexachlorocyclopentadiene	ND< 401	Bis (2-chloroethoxy) methan	ND< 401
Hexachlorobutadiene	ND< 401	4-Bromophenyl phenyl ether	ND< 401
N-Nitroso-di-n-propylamine	ND< 401	4-Chlorophenyl phenyl ether	ND< 401
N-Nitrosodiphenylamine	ND< 401	Benzidine	ND< 1,000
N-Nitrosodimethylamine	ND< 401	3,3'-Dichlorobenzidine	ND< 401
Isophorone	ND< 401	4-Chloroaniline	ND< 401
Benzyl alcohol	ND< 1,000	2-Nitroaniline	ND< 1,000
Dibenzofuran	ND< 401	3-Nitroaniline	ND< 1,000
2-Methylnapthalene	582	4-Nitroaniline	ND< 1,000

Acids	Results in ug / Kg	Acids	Results in ug / Kg
Phenol	ND< 401	2-Methylphenol	3,750
2-Chlorophenol	ND< 401	4-Methylphenol	2,670
2,4-Dichlorophenol	ND< 401	2,4-Dimethylphenol	6,650
2,6-Dichlorophenol	ND< 401	2-Nitrophenol	ND< 401
2,4,5-Trichlorophenol	ND< 1,000	4-Nitrophenol	ND< 1,000
2,4,6-Trichlorophenol	ND< 401	2,4-Dinitrophenol	ND< 401
Pentachlorophenol	ND< 1,000	4,6-Dinitro-2-methylphenol	ND< 1,000
4-Chloro-3-methylphenol	ND< 401	Benzoic acid	ND< 1,000

ELAP Number 10958 Method: EPA 8270C Data File: S32552.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram
Surrrogate outliers indicate probable matrix interference

Signature:

Bruce Hoogesteger: Technical Director

This report is part of a multipage document and should only be evaluated in its entirety. Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt.

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi-Volatile Analysis Report for Soils/Solids/Sludges

Client: Hazard Evaluations, Inc

Client Job Site:	Flexo Transparent, Inc	**Lab Project Number:**	06-3634
		Lab Sample Number:	12250
Client Job Number:	23403		
Field Location:	S Wall Composite	**Date Sampled:**	11/28/2006
Field ID Number:	N/A	**Date Received:**	11/30/2006
Sample Type:	Soil	**Date Analyzed:**	12/06/2006

Base / Neutrals	Results in ug / Kg	Base / Neutrals	Results in ug / Kg
Acenaphthene	ND< 394	Dibenz (a,h) anthracene	ND< 394
Anthracene	ND< 394	Fluoranthene	ND< 394
Benzo (a) anthracene	ND< 394	Fluorene	ND< 394
Benzo (a) pyrene	ND< 394	Indeno (1,2,3-cd) pyrene	ND< 394
Benzo (b) fluoranthene	ND< 394	Naphthalene	ND< 394
Benzo (g,h,i) perylene	ND< 394	Phenanthrene	ND< 394
Benzo (k) fluoranthene	ND< 394	Pyrene	ND< 394
Chrysene	ND< 394	Acenaphthylene	ND< 394
Diethyl phthalate	ND< 394	1,2-Dichlorobenzene	ND< 394
Dimethyl phthalate	ND< 985	1,3-Dichlorobenzene	ND< 394
Butylbenzylphthalate	ND< 394	1,4-Dichlorobenzene	ND< 394
Di-n-butyl phthalate	ND< 394	1,2,4-Trichlorobenzene	ND< 394
Di-n-octylphthalate	ND< 394	Nitrobenzene	ND< 394
Bis (2-ethylhexyl) phthalate	ND< 394	2,4-Dinitrotoluene	ND< 394
2-Chloronaphthalene	ND< 394	2,6-Dinitrotoluene	ND< 394
Hexachlorobenzene	ND< 394	Bis (2-chloroethyl) ether	ND< 394
Hexachloroethane	ND< 394	Bis (2-chloroisopropyl) ether	ND< 394
Hexachlorocyclopentadiene	ND< 394	Bis (2-chloroethoxy) methan	ND< 394
Hexachlorobutadiene	ND< 394	4-Bromophenyl phenyl ether	ND< 394
N-Nitroso-di-n-propylamine	ND< 394	4-Chlorophenyl phenyl ether	ND< 394
N-Nitrosodiphenylamine	ND< 394	Benzidine	ND< 985
N-Nitrosodimethylamine	ND< 394	3,3'-Dichlorobenzidine	ND< 394
Isophorone	ND< 394	4-Chloroaniline	ND< 394
Benzyl alcohol	ND< 985	2-Nitroaniline	ND< 985
Dibenzofuran	ND< 394	3-Nitroaniline	ND< 985
2-Methylnapthalene	ND< 394	4-Nitroaniline	ND< 985

Acids	Results in ug / Kg	Acids	Results in ug / Kg
Phenol	ND< 394	2-Methylphenol	ND< 394
2-Chlorophenol	ND< 394	4-Methylphenol	ND< 394
2,4-Dichlorophenol	ND< 394	2,4-Dimethylphenol	ND< 394
2,6-Dichlorophenol	ND< 394	2-Nitrophenol	ND< 394
2,4,5-Trichlorophenol	ND< 985	4-Nitrophenol	ND< 985
2,4,6-Trichlorophenol	ND< 394	2,4-Dinitrophenol	ND< 394
Pentachlorophenol	ND< 985	4,6-Dinitro-2-methylphenol	ND< 985
4-Chloro-3-methylphenol	ND< 394	Benzoic acid	ND< 985

ELAP Number 10958 Method: EPA 8270C Data File: S32550.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram
Surrogate outliers indicate probable matrix interference

Signature: ____________________
Bruce Hoogesteger: Technical Director

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi-Volatile Analysis Report for Soils/Solids/Sludges

Client: Hazard Evaluations, Inc

Client Job Site:	Flexo Transparent, Inc	**Lab Project Number:**	06-3634
		Lab Sample Number:	12254
Client Job Number:	23403		
Field Location:	Floor B (North)	**Date Sampled:**	11/28/2006
Field ID Number:	N/A	**Date Received:**	11/30/2006
Sample Type:	Soil	**Date Analyzed:**	12/06/2006

Base / Neutrals	Results in ug / Kg	Base / Neutrals	Results in ug / Kg
Acenaphthene	ND< 347	Dibenz (a,h) anthracene	ND< 347
Anthracene	ND< 347	Fluoranthene	ND< 347
Benzo (a) anthracene	ND< 347	Fluorene	ND< 347
Benzo (a) pyrene	ND< 347	Indeno (1,2,3-cd) pyrene	ND< 347
Benzo (b) fluoranthene	ND< 347	Naphthalene	ND< 347
Benzo (g,h,i) perylene	ND< 347	Phenanthrene	ND< 347
Benzo (k) fluoranthene	ND< 347	Pyrene	ND< 347
Chrysene	ND< 347	Acenaphthylene	ND< 347
Diethyl phthalate	ND< 347	1,2-Dichlorobenzene	ND< 347
Dimethyl phthalate	ND< 868	1,3-Dichlorobenzene	ND< 347
Butylbenzylphthalate	ND< 347	1,4-Dichlorobenzene	ND< 347
Di-n-butyl phthalate	ND< 347	1,2,4-Trichlorobenzene	ND< 347
Di-n-octylphthalate	ND< 347	Nitrobenzene	ND< 347
Bis (2-ethylhexyl) phthalate	ND< 347	2,4-Dinitrotoluene	ND< 347
2-Chloronaphthalene	ND< 347	2,6-Dinitrotoluene	ND< 347
Hexachlorobenzene	ND< 347	Bis (2-chloroethyl) ether	ND< 347
Hexachloroethane	ND< 347	Bis (2-chloroisopropyl) ether	ND< 347
Hexachlorocyclopentadiene	ND< 347	Bis (2-chloroethoxy) methan	ND< 347
Hexachlorobutadiene	ND< 347	4-Bromophenyl phenyl ether	ND< 347
N-Nitroso-di-n-propylamine	ND< 347	4-Chlorophenyl phenyl ether	ND< 347
N-Nitrosodiphenylamine	ND< 347	Benzidine	ND< 868
N-Nitrosodimethylamine	ND< 347	3,3'-Dichlorobenzidine	ND< 347
Isophorone	ND< 347	4-Chloroaniline	ND< 347
Benzyl alcohol	ND< 868	2-Nitroaniline	ND< 868
Dibenzofuran	ND< 347	3-Nitroaniline	ND< 868
2-Methylnapthalene	ND< 347	4-Nitroaniline	ND< 868

Acids	Results in ug / Kg	Acids	Results in ug / Kg
Phenol	ND< 347	2-Methylphenol	ND< 347
2-Chlorophenol	ND< 347	4-Methylphenol	ND< 347
2,4-Dichlorophenol	ND< 347	2,4-Dimethylphenol	ND< 347
2,6-Dichlorophenol	ND< 347	2-Nitrophenol	ND< 347
2,4,5-Trichlorophenol	ND< 868	4-Nitrophenol	ND< 868
2,4,6-Trichlorophenol	ND< 347	2,4-Dinitrophenol	ND< 347
Pentachlorophenol	ND< 868	4,6-Dinitro-2-methylphenol	ND< 868
4-Chloro-3-methylphenol	ND< 347	Benzoic acid	ND< 868

ELAP Number 10958 Method: EPA 8270C Data File: S32554.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

This report is part of a multipage document and should only be evaluated in its entirety. Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt.

063634S5.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi-Volatile Analysis Report for Soils/Solids/Sludges

Client: Hazard Evaluations, Inc

Client Job Site:	Flexo Transparent, Inc	Lab Project Number:	06-3634
		Lab Sample Number:	12253
Client Job Number:	23403		
Field Location:	Floor A (South)	Date Sampled:	11/28/2006
Field ID Number:	N/A	Date Received:	11/30/2006
Sample Type:	Soil	Date Analyzed:	12/06/2006

Base / Neutrals	Results in ug / Kg	Base / Neutrals	Results in ug / Kg
Acenaphthene	ND< 342	Dibenz (a,h) anthracene	ND< 342
Anthracene	ND< 342	Fluoranthene	ND< 342
Benzo (a) anthracene	ND< 342	Fluorene	ND< 342
Benzo (a) pyrene	ND< 342	Indeno (1,2,3-cd) pyrene	ND< 342
Benzo (b) fluoranthene	ND< 342	Naphthalene	ND< 342
Benzo (g,h,i) perylene	ND< 342	Phenanthrene	ND< 342
Benzo (k) fluoranthene	ND< 342	Pyrene	ND< 342
Chrysene	ND< 342	Acenaphthylene	ND< 342
Diethyl phthalate	ND< 342	1,2-Dichlorobenzene	ND< 342
Dimethyl phthalate	ND< 855	1,3-Dichlorobenzene	ND< 342
Butylbenzylphthalate	ND< 342	1,4-Dichlorobenzene	ND< 342
Di-n-butyl phthalate	ND< 342	1,2,4-Trichlorobenzene	ND< 342
Di-n-octylphthalate	ND< 342	Nitrobenzene	ND< 342
Bis (2-ethylhexyl) phthalate	ND< 342	2,4-Dinitrotoluene	ND< 342
2-Chloronaphthalene	ND< 342	2,6-Dinitrotoluene	ND< 342
Hexachlorobenzene	ND< 342	Bis (2-chloroethyl) ether	ND< 342
Hexachloroethane	ND< 342	Bis (2-chloroisopropyl) ether	ND< 342
Hexachlorocyclopentadiene	ND< 342	Bis (2-chloroethoxy) methan	ND< 342
Hexachlorobutadiene	ND< 342	4-Bromophenyl phenyl ether	ND< 342
N-Nitroso-di-n-propylamine	ND< 342	4-Chlorophenyl phenyl ether	ND< 342
N-Nitrosodiphenylamine	ND< 342	Benzidine	ND< 855
N-Nitrosodimethylamine	ND< 342	3,3'-Dichlorobenzidine	ND< 342
Isophorone	ND< 342	4-Chloroaniline	ND< 342
Benzyl alcohol	ND< 855	2-Nitroaniline	ND< 855
Dibenzofuran	ND< 342	3-Nitroaniline	ND< 855
2-Methylnapthalene	ND< 342	4-Nitroaniline	ND< 855

Acids	Results in ug / Kg	Acids	Results in ug / Kg
Phenol	ND< 342	2-Methylphenol	ND< 342
2-Chlorophenol	ND< 342	4-Methylphenol	ND< 342
2,4-Dichlorophenol	ND< 342	2,4-Dimethylphenol	ND< 342
2,6-Dichlorophenol	ND< 342	2-Nitrophenol	ND< 342
2,4,5-Trichlorophenol	ND< 855	4-Nitrophenol	ND< 855
2,4,6-Trichlorophenol	ND< 342	2,4-Dinitrophenol	ND< 342
Pentachlorophenol	ND< 855	4,6-Dinitro-2-methylphenol	ND< 855
4-Chloro-3-methylphenol	ND< 342	Benzoic acid	ND< 855

ELAP Number 10958 Method: EPA 8270C Data File: S32553.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

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063634S4.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue, Rochester, NY 14608 (585) 647-2530 FAX (585) 647-3311

Client:	Hazard Evaluations, Inc.	Lab Project No.:	06-3634
		Lab Sample No.:	12251
Client Job Site:	Flexo Transparent, Inc.		
		Sample Type:	Soil
Client Job No.:	23403		
Field Location:	N. Wall Composite	Date Sampled:	11/28/2006
Field ID No.:	N/A	Date Received:	11/30/2006

Laboratory Report for Solid Waste Analysis

Parameter	Date Analyzed	Analytical Method	Result (mg/kg)
Arsenic	12/06/2006	EPA 6010	30.5
Barium	12/06/2006	EPA 6010	732
Cadmium	12/06/2006	EPA 6010	20.2
Chromium	12/06/2006	EPA 6010	66.7
Lead	12/06/2006	EPA 6010	1110
Mercury	12/05/2006	EPA 7471	0.3051
Selenium	12/06/2006	EPA 6010	8.26
Silver	12/06/2006	EPA 6010	8.32

ELAP ID No.:10958

Comments:

Approved By: ______________________

Bruce Hoogesteger, Technical Director

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File ID:063634.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue, Rochester, NY 14608 (585) 647-2530 FAX (585) 647-3311

Client:	Hazard Evaluations, Inc.	Lab Project No.:	06-3634
		Lab Sample No.:	12252
Client Job Site:	Flexo Transparent, Inc.	Sample Type:	Soil
Client Job No.:	23403		
Field Location:	E. Wall Composite	Date Sampled:	11/28/2006
Field ID No.:	N/A	Date Received:	11/30/2006

Laboratory Report for Solid Waste Analysis

Parameter	Date Analyzed	Analytical Method	Result (mg/kg)
Arsenic	12/06/2006	EPA 6010	10.5
Barium	12/06/2006	EPA 6010	88.6
Cadmium	12/06/2006	EPA 6010	0.526
Chromium	12/06/2006	EPA 6010	12.3
Lead	12/06/2006	EPA 6010	71.0
Mercury	12/05/2006	EPA 7471	0.0547
Selenium	12/06/2006	EPA 6010	0.739
Silver	12/06/2006	EPA 6010	<1.05

ELAP ID No.:10958

Comments:

Approved By: ______________________
Bruce Hoogesteger, Technical Director

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File ID:063634.XLS

Client:	Hazard Evaluations, Inc.	Lab Project No.:	06-3634
		Lab Sample No.:	12250
Client Job Site:	Flexo Transparent, Inc.	Sample Type:	Soil
Client Job No.:	23403		
Field Location:	S. Wall Composite	Date Sampled:	11/28/2006
Field ID No.:	N/A	Date Received:	11/30/2006

Laboratory Report for Solid Waste Analysis

Parameter	Date Analyzed	Analytical Method	Result (mg/kg)
Arsenic	12/06/2006	EPA 6010	16.0
Barium	12/06/2006	EPA 6010	125
Cadmium	12/06/2006	EPA 6010	0.943
Chromium	12/06/2006	EPA 6010	13.8
Lead	12/06/2006	EPA 6010	311
Mercury *	12/05/2006	EPA 7471	0.6093
Selenium	12/06/2006	EPA 6010	4.33
Silver	12/06/2006	EPA 6010	<1.24

ELAP ID No.:10958

Comments: * -Triplicate values differ by greater than 100 % difference between highest and lowest result. This indicates a non-homogenous sample.

Approved By: ______________________
Bruce Hoogesteger, Technical Director

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue, Rochester, NY 14608 (585) 647-2530 FAX (585) 647-3311

Client:	Hazard Evaluations, Inc.	Lab Project No.:	06-3634
		Lab Sample No.:	12254
Client Job Site:	Flexo Transparent, Inc.	Sample Type:	Soil
Client Job No.:	23403		
Field Location:	Floor B (North)	Date Sampled:	11/28/2006
Field ID No.:	N/A	Date Received:	11/30/2006

Laboratory Report for Solid Waste Analysis

Parameter	Date Analyzed	Analytical Method	Result (mg/kg)
Arsenic	12/06/2006	EPA 6010	2.67
Barium	12/06/2006	EPA 6010	23.8 D
Cadmium	12/06/2006	EPA 6010	<0.554 M
Chromium	12/06/2006	EPA 6010	5.74 D
Lead	12/06/2006	EPA 6010	5.26 D
Mercury	12/05/2006	EPA 7471	0.0224
Selenium	12/06/2006	EPA 6010	<0.554
Silver	12/06/2006	EPA 6010	<1.11

ELAP ID No.:10958

Comments:

Approved By: ______________________
Bruce Hoogesteger, Technical Director

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File ID:063634.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue, Rochester, NY 14608 (585) 647-2530 FAX (585) 647-3311

Client:	Hazard Evaluations, Inc.	Lab Project No.:	06-3634
		Lab Sample No.:	12253
Client Job Site:	Flexo Transparent, Inc.		
		Sample Type:	Soil
Client Job No.:	23403		
Field Location:	Floor A (South)	Date Sampled:	11/28/2006
Field ID No.:	N/A	Date Received:	11/30/2006

Laboratory Report for Solid Waste Analysis

Parameter	Date Analyzed	Analytical Method	Result (mg/kg)
Arsenic	12/06/2006	EPA 6010	3.54
Barium	12/06/2006	EPA 6010	37.8
Cadmium	12/06/2006	EPA 6010	<0.548
Chromium	12/06/2006	EPA 6010	9.63
Lead	12/06/2006	EPA 6010	5.50
Mercury	12/05/2006	EPA 7471	0.0390
Selenium	12/06/2006	EPA 6010	<0.548
Silver	12/06/2006	EPA 6010	<1.09

ELAP ID No.:10958

Comments:

Approved By:
Bruce Hoogesteger, Technical Director

This report is part of a multipage document and should only be evaluated in its entirety. Chain of Custody provides additional sample information, including compliance with sample condition requirements upon receipt.

Flexo Transparent, Inc.
REMEDIAL INVESTIGATION REPORT

Appendix B

Photo Log

6105002 / BUF

MALCOLM PIRNIE

PHOTOGRAPHIC LOG

Project:	Location:	Project No.
1132-1146 Seneca Street BCP Site	Buffalo, NY	6105-002

Photo No.	Date:
1	8/4/09

Direction Photo Taken:

North

Description:

BCP Sign on south fence of 1146 Seneca Street Property

MALCOLM PIRNIE

PHOTOGRAPHIC LOG

Project:	Location:	Project No.
1132-1146 Seneca Street BCP Site	Buffalo, NY	6105-002

Photo No.	Date:
2	10/19/09

Direction Photo Taken:

West

Description:

North yard of 1132 Seneca St. property

PHOTOGRAPHIC LOG

Project: 1132-1146 Seneca Street BCP Site	**Location:** Buffalo, NY	**Project No.** 6105-002

Photo No. 3	**Date:** 10/19/09
Direction Photo Taken: North	
Description: Grubbing operations on 1132 Seneca St. property	

PHOTOGRAPHIC LOG

Project: 1132-1146 Seneca Street BCP Site	**Location:** Buffalo, NY	**Project No.** 6105-002

Photo No. 4	**Date:** 10/19/09
Direction Photo Taken: South	
Description: RI Drilling operations at B/MW-5	

MALCOLM PIRNIE

PHOTOGRAPHIC LOG

Project: 1132-1146 Seneca Street BCP Site	**Location:** Buffalo, NY	**Project No.** 6105-002

Photo No. 5

Date: 10/22/09

Direction Photo Taken:

NW

Description:

RI well development operations at B/MW-2

MALCOLM PIRNIE

PHOTOGRAPHIC LOG

Project: 1132-1146 Seneca Street BCP Site	**Location:** Buffalo, NY	**Project No.** 6105-002

Photo No. 6

Date: 3/18/10

Direction Photo Taken:

North

Description:

Phase 2 of pre-characterization drilling and sampling (on 1146 Seneca St. property)

PHOTOGRAPHIC LOG

Project:	Location:	Project No.
1132-1146 Seneca Street BCP Site	Buffalo, NY	6105-002

Photo No. 7 **Date:** 12/14/09

Direction Photo Taken:

west

Description:

Phase 1 of pre-characterization drilling/sampling. Note traffic cone covering boring at suspected UST.

PHOTOGRAPHIC LOG

Project:	Location:	Project No.
1132-1146 Seneca Street BCP Site	Buffalo, NY	6105-002

Photo No. 8 **Date:** 3/18/10

Direction Photo Taken:

NA

Description:

Split spoon sample. Typical black colored soil/fill over native clay.

PHOTOGRAPHIC LOG

Project: 1132-1146 Seneca Street BCP Site	Location: Buffalo, NY	Project No. 6105-002

Photo No.	Date:
9	3/18/10

Direction Photo Taken:

NA

Description:

Native clay

PHOTOGRAPHIC LOG

Project: 1132-1146 Seneca Street BCP Site	Location: Buffalo, NY	Project No. 6105-002

Photo No.	Date:
10	3/18/10

Direction Photo Taken:

North

Description:

Phase 2 of pre-characterization sampling, at boring Q2.

MALCOLM PIRNIE	PHOTOGRAPHIC LOG	
Project: 1132-1146 Seneca Street BCP Site	**Location:** Buffalo, NY	**Project No.** 6105-002

Photo No. 11

Date: 3/18/10

Direction Photo Taken:

NNE

Description:

View of elevation difference between 1132 and 1146 Seneca Street lots in the vicinity of the 1132 loading dock.

MALCOLM PIRNIE	PHOTOGRAPHIC LOG	
Project: 1132-1146 Seneca Street BCP Site	**Location:** Buffalo, NY	**Project No.** 6105-002

Photo No. 12

Date: 10/21/09

Direction Photo Taken:

NA

Description:

Typical sub-slab soil vapor sampling- tracer test equipment and configuration.

PHOTOGRAPHIC LOG

Project:	Location:	Project No.
1132-1146 Seneca Street BCP Site	Buffalo, NY	6105-002

Photo No. 13

Date: 10/21/09

Direction Photo Taken:

NA

Description:

Typical sub-slab soil vapor sampling setup.

PHOTOGRAPHIC LOG

Project:	Location:	Project No.
1132-1146 Seneca Street BCP Site	Buffalo, NY	6105-002

Photo No. 14

Date: 10/21/09

Direction Photo Taken:

South

Description:

View into loading dock from outside before IRM excavation activities.

PHOTOGRAPHIC LOG

Project:	Location:	Project No.
1132-1146 Seneca Street BCP Site	Buffalo, NY	6105-002

Photo No. 15 **Date:** 10/28/09

Direction Photo Taken:

Northeast

Description:

IRM excavation activities at 1132 loading dock. Note native clay at bottom of excavation.

PHOTOGRAPHIC LOG

Project:	Location:	Project No.
1132-1146 Seneca Street BCP Site	Buffalo, NY	6105-002

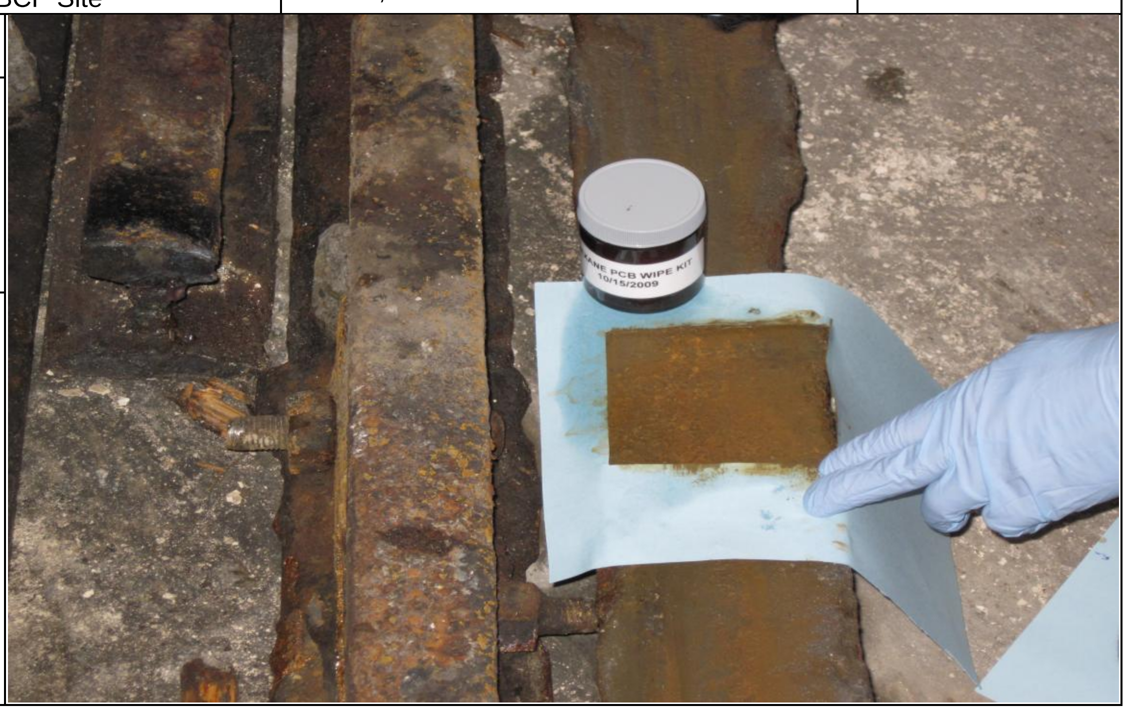
Photo No. 16 **Date:** 10/28/09

Direction Photo Taken:

NA

Description:

Template used for collection of PCB wipe sample of removed RR ties.



PHOTOGRAPHIC LOG

Project: 1132-1146 Seneca Street BCP Site	Location: Buffalo, NY	Project No. 6105-002

Photo No. 17 | **Date:** 10/28/09

Direction Photo Taken:

North

Description:

View of completed excavation at the 1132 loading dock IRM.

PHOTOGRAPHIC LOG

Project: 1132-1146 Seneca Street BCP Site	Location: Buffalo, NY	Project No. 6105-002

Photo No. 18 | **Date:** 10/28/09

Direction Photo Taken:

East/Southeast

Description:

Collection of sample (East wall North) from east wall of excavation at 1132 loading dock IRM site.

MALCOLM PIRNIE	PHOTOGRAPHIC LOG	
Project: 1132-1146 Seneca Street BCP Site	**Location:** Buffalo, NY	**Project No.** 6105-002

Photo No. 19 | **Date:** 10/28/09

Direction Photo Taken:

Northeast

Description:

Collection of sample from north wall of completed excavation at 1132 loading dock IRM.

MALCOLM PIRNIE	PHOTOGRAPHIC LOG	
Project: 1132-1146 Seneca Street BCP Site	**Location:** Buffalo, NY	**Project No.** 6105-002

Photo No. 20 | **Date:** 10/28/09

Direction Photo Taken:

West

Description:

South end of loading dock.

MALCOLM PIRNIE	**PHOTOGRAPHIC LOG**

Project: 1132-1146 Seneca Street BCP Site	**Location:** Buffalo, NY	**Project No.** 6105-002

Photo No. 21

Date: 10/29/09

Direction Photo Taken:

Southwest

Description:

Completed excavation of 1132 North area IRM.

MALCOLM PIRNIE	**PHOTOGRAPHIC LOG**

Project: 1132-1146 Seneca Street BCP Site	**Location:** Buffalo, NY	**Project No.** 6105-002

Photo No. 22

Date: 10/29/09

Direction Photo Taken:

Southwest

Description:

Excavation and stockpiling operations at the 1132 North area IRM.

PHOTOGRAPHIC LOG

Project: 1132-1146 Seneca Street BCP Site	**Location:** Buffalo, NY	**Project No.** 6105-002

Photo No. 23 | **Date:** 10/29/09

Direction Photo Taken:

West

Description:

Preparing to collect composite sample from south wall of completed excavation at 1132 north area IRM.

PHOTOGRAPHIC LOG

Project: 1132-1146 Seneca Street BCP Site	**Location:** Buffalo, NY	**Project No.** 6105-002

Photo No. 24 | **Date:** 10/29/09

Direction Photo Taken:

West/Northwest

Description:

Flags marking locations of composite sample points sampled from north wall of the 1132 North area IRM.

MALCOLM PIRNIE	PHOTOGRAPHIC LOG	
Project: 1132-1146 Seneca Street BCP Site	**Location:** Buffalo, NY	**Project No.** 6105-002

Photo No. 25 | **Date:** 3/18/10

Direction Photo Taken:

Southwest

Description:

Location of floor drain/pipe chase sediment sample FD-1

MALCOLM PIRNIE	PHOTOGRAPHIC LOG	
Project: 1132-1146 Seneca Street BCP Site	**Location:** Buffalo, NY	**Project No.** 6105-002

Photo No. 26 | **Date:** 3/18/10

Direction Photo Taken:

Southeast

Description:

Location of floor drain/pipe chase sediment sample FD-2

MALCOLM PIRNIE

PHOTOGRAPHIC LOG

Project: 1132-1146 Seneca Street BCP Site	**Location:** Buffalo, NY	**Project No.** 6105-002

Photo No. 27

Date: 3/18/10

Direction Photo Taken:

East and down

Description:

FD-2 sample collected of dirt/sediment beneath pipes

MALCOLM PIRNIE

PHOTOGRAPHIC LOG

Project: 1132-1146 Seneca Street BCP Site	**Location:** Buffalo, NY	**Project No.** 6105-002

Photo No. 28

Date: 3/18/10

Direction Photo Taken:

South and down

Description:

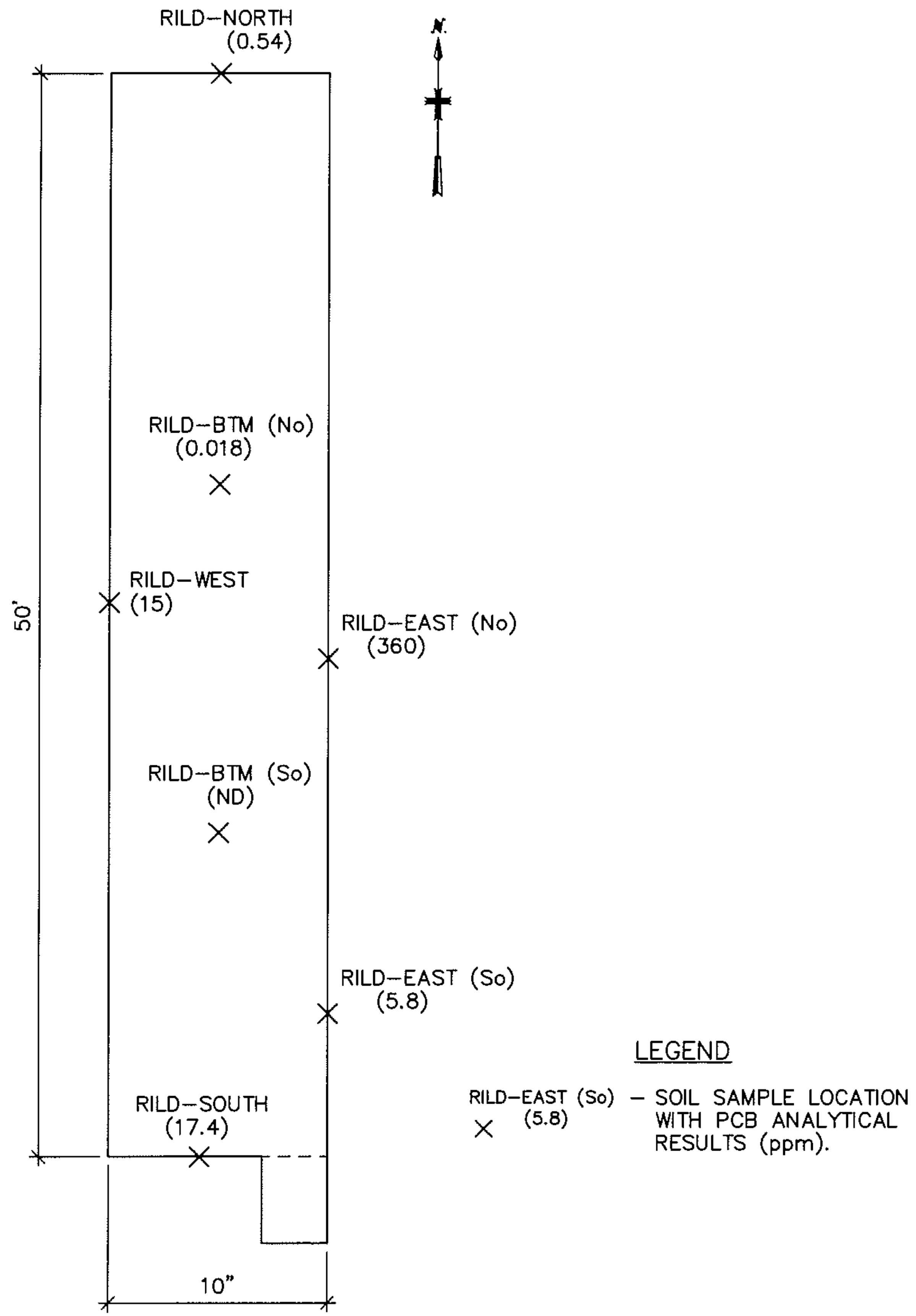
Location of FD-1, collected from beneath and west of all pipes.

Flexo Transparent, Inc.
REMEDIAL INVESTIGATION REPORT

Appendix C

Documentation of IRM's

6105002 / BUF



MALCOLM PIRNIE

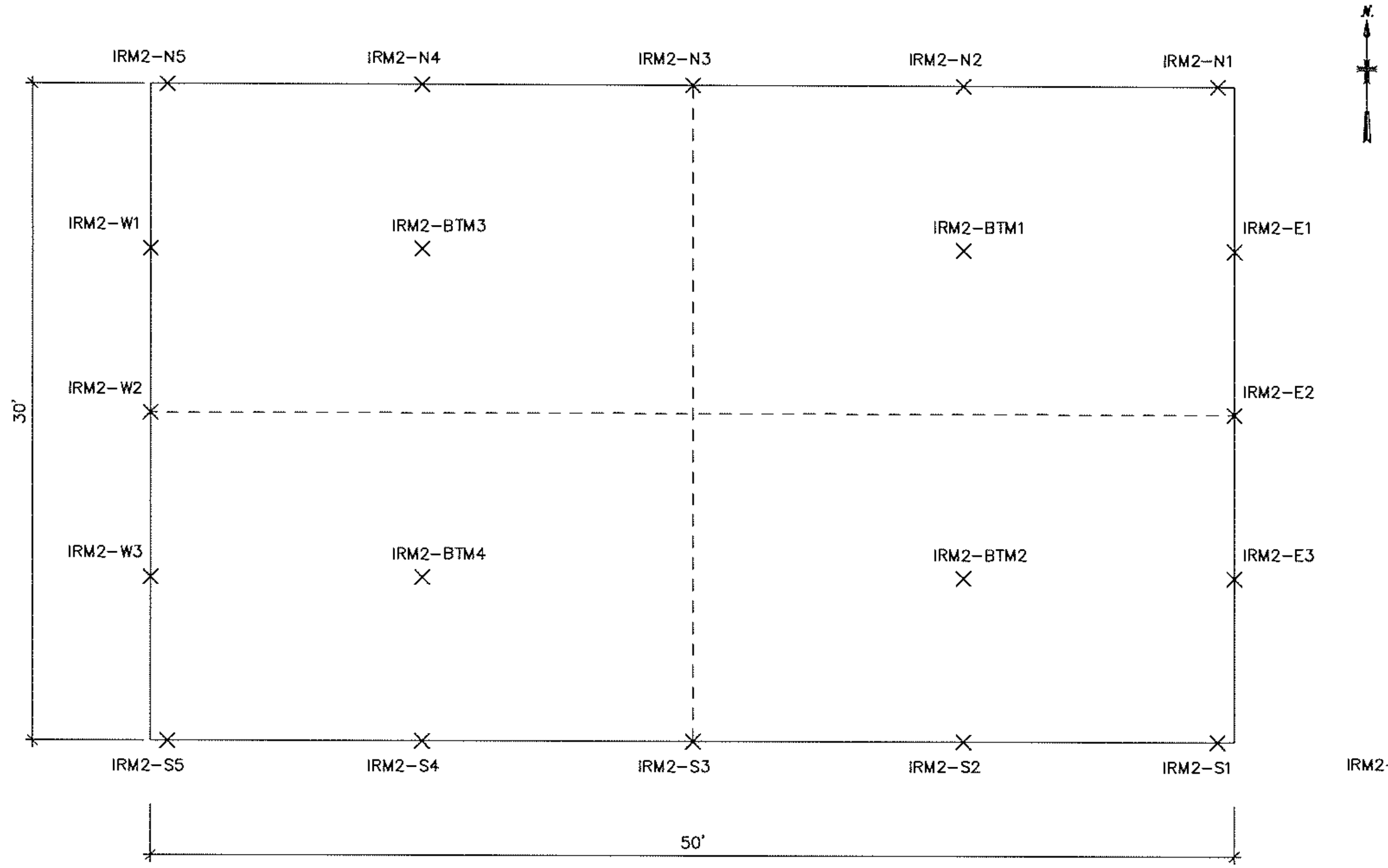
FLEXO - TRANSPARENT
REMEDIAL INVESTIGATION
IRM #1
RAILROAD LOADING DOCK

SAMPLE LOCATION MAP

NOT TO SCALE

MALCOLM PIRNIE, INC.

APRIL 2010



LEGEND

IRM2-BTM1 – SOIL SAMPLE LOCATION

COMPOSITE PCB SOIL RESULTS

IRM2 – NORTH = 1.8 ppm
IRM2 – SOUTH = <1 ppm
IRM2 – EAST = <1 ppm
IRM2 – WEST = <1 ppm
IRM2 – BTM = <1 ppm

MALCOLM PIRNIE	FLEXO – TRANSPARENT REMEDIAL INVESTIGATION IRM #2 PCB AREA NORTH	SAMPLE LOCATION MAP NOT TO SCALE	MALCOLM PIRNIE, INC. APRIL 2010

J. Rickert

New York State Department of Environmental Conservation
Division of Solid and Hazardous Materials, Region 9
270 Michigan Avenue, Buffalo, New York, 14203-2999
Phone: (716) 851-7220 • **Fax:** (716) 851-7226
Website: www.dec.ny.gov

Alexander B. Grannis
Commissioner

December 3, 2009

Mr. Nicholas Morreale
EnSol, Inc.
661 Main Street
Niagara Falls, New York 14301

Dear Mr. Morreale:

Town of Tonawanda Landfill, #15S29
Alternate Grading Material (AGM) Request
Flexo Transparent, Inc.

This is in response to your letter dated November 23, 2009 requesting approval to accept non-hazardous contaminated soil generated during the remedial activities at the Flexo Transparent, Inc. site, located at 1132 Seneca Street, Buffalo, NY. The material is proposed for use as AGM at the Town of Tonawanda landfill and you have estimated that about 1000 tons will be delivered to the landfill.

In follow-up to your submission, I was contacted by both the engineer and contractor for the remedial project in order to provide additional clarification on the specific wastes generated at the Flexo Transparent facility. On December 2, 2009 I received an email from Mr. James Richert, of Malcom Pirnie, Inc. which provided a site drawing of the two Interim Remedial Measure (IRM) areas and details on the PCB analytical results for the various stockpiles of excavated soils.

Based on this additional information, the Department hereby approves for acceptance at the Town of Tonawanda landfill for use as alternate grading material, **only** the contaminated soils excavated from the outdoor North IRM Area #2, which are contained in the two piles labeled as "North" and "East" on Malcolm Pirnie's Sample Location Map, Figure 1. The quantity of this material is estimated to be 283 tons.

Specifically **excluded** from this approval are any PCB contaminated materials from the clean up at the loading dock area, IRM Area #1.

Placement and handling of the material must be in accordance with the Operations and Maintenance Manual, revised May 2001, prepared by EnSol, Inc.

Additionally, the Department's approval for the use of the above referenced material as AGM at the Town of Tonawanda landfill does not relieve the Town from having to comply with any other applicable local, state and/or federal requirements.

If you have any questions regarding this matter, please call me at 851-7220.

Sincerely,

Dennis Weiss

Dennis R. Weiss, P.E.
Environmental Engineer II

DRW:dcg
weiss\morreale-dec1.ltr

cc: Mr. Mark Hans, P.E., Regional Solid Materials Engineer
Mr. Robert Morris, Town of Tonawanda
Mr. Bill Murray, NYSDEC Buffalo office
Mr. James Richert, Malcolm Pirnie, Inc.

1132-1146 SENECA STREET SITE
IRM CONFIRMATORY SAMPLE RESULTS (PCBs)

Sample #	PCB Result (PPM)	Restricted Industrial SCO = 1 PPM)	PCB Hazardous Waste Level = > 50 PPM
North IRM Area			
North	1.81/Dup = 1.99	25 PPM	NA
East	0.83	25 PPM	NA
South	0.53	25 PPM	NA
West	0.27	25 PPM	NA
Bottom	0.014	25 PPM	NA
Loading Dock IRM Area			
North	0.54	25 PPM	NA
South[1]	17.4	25 PPM	NA
West [2]	15	25 PPM	NA
East (N)	360	25 PPM	NA
East (S)	5.8	25 PPM	NA
Bottom (N)	0.018	25 PPM	NA
Bottom (S)	ND	25 PPM	NA
Material Samples			
Concrete A1	320	NA	50 PPM
Concrete B1	79	NA	50 PPM
Concrete C1	450	NA	50 PPM
Rail Wipe	0.89	NA	50 PPM
Prepared 4/14/10 jjr			

[1] South excavation wall made of wood

[2] West excavation wall made of concrete

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Analytical Report Cover Page

Op Tech Environmental

For Lab Project # 09-4687
Issued December 28, 2009
This report contains a total of 10 pages

The reported results relate only to the samples as they have been received by the laboratory.

Any noncompliant QC parameters having impact on the data are flagged or documented on the final report.

All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

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The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of frequently used data flags and their meaning:

"ND" = analyzed for but not detected.
"E" = Result has been estimated, calibration limit exceeded.
"D" = Duplicate results outside QC limits. May indicate a non-homogenous matrix.
"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.
"B" = Method blank contained trace levels of analyte. Refer to included method blank report.

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

pH Analysis Report

Client: OP-Tech

Client Job Site:	FLEXO	**Lab Project Number:**	09-4687
Client Job Number:	N/A	**Date Sampled:**	12/16/2009
		Time Sampled:	11:55 AM
		Date Received:	12/17/2009
Sample Type:	Water	**Time Received:**	1:50 PM
Location:	Laboratory	**Date Analyzed:**	12/16/2009 *
		Time Analyzed:	4:40 PM

Lab Sample Number	Field Number	Field Location	Result (pH)
14182	N/A	Excavation-Water	7.46

ELAP Number 10958

Method: EPA 150.2

Comments Sample was analyzed for pH prior to log-in.

Signature:

Bruce Hoogesteger: Technical Director

PARADIGM
ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue Rochester New York 14608 (585) 647-2530 FAX (585) 647-3311

Client: OP-Tech

Client Job Site: FLEXO

Client Job No.: N/A

Field Location: Excavation - Water

Lab Project No.: 09-4687
Lab Sample No.: 14182

Sample Type: Water

Date Sampled: 12/16/2009
Date Received: 12/17/2009

Laboratory Report of Analysis

Parameter	Date Analyzed	Analytical Method	Result (mg/L)
Total Cyanide	12/22/2009	EPA 335.4	ND<0.01
Oil and Grease	12/28/2009	EPA 1664	ND<1.0
Total Phenolics	12/23/2009	EPA 420.1	0.003
Total Suspended Solids	12/21/2009	SM 2540 D	12.0

ELAP ID.No.: 10709

Comments: ND denotes Non Detect.

Approved By Technical Director: ______________________
Bruce Hoogesteger

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PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue, Rochester, NY 14608 (585) 647-2530 FAX (585) 647-3311

Client: OP-Tech

Client Job Site: FLEXO

Client Job No.: N/A

Field Location: Excavation - Water
Field ID No.: N/A

Lab Project No.: 09-4687
Lab Sample No.: 14182

Sample Type: Water

Date Sampled: 12/16/2009
Date Received: 12/17/2009

Laboratory Report for TAL Metals Analysis in Waters

Parameter	Date Analyzed	Analytical Method	Result (mg/L)
Aluminum	12/22/2009	EPA 200.7	0.387
Antimony	12/28/2009	EPA 200.7	<0.060
Arsenic	12/22/2009	EPA 200.7	<0.005
Barium	12/22/2009	EPA 200.7	0.062
Beryllium	12/22/2009	EPA 200.7	<0.005
Cadmium	12/22/2009	EPA 200.7	<0.005
Calcium	12/22/2009	EPA 200.7	184
Chromium	12/22/2009	EPA 200.7	<0.010
Cobalt	12/22/2009	EPA 200.7	<0.010
Copper	12/22/2009	EPA 200.7	<0.010
Iron	12/22/2009	EPA 200.7	0.483
Lead	12/22/2009	EPA 200.7	<0.005
Magnesium	12/22/2009	EPA 200.7	32.8
Manganese	12/22/2009	EPA 200.7	0.518
Mercury	12/22/2009	EPA 245.1	<0.0002
Nickel	12/22/2009	EPA 200.7	<0.040
Potassium	12/22/2009	EPA 200.7	6.99
Selenium	12/23/2009	EPA 200.7	<0.005
Silver	12/22/2009	EPA 200.7	<0.010
Sodium	12/22/2009	EPA 200.7	36.2
Thallium	12/22/2009	EPA 200.7	<0.006
Vanadium	12/22/2009	EPA 200.7	<0.010
Zinc	12/22/2009	EPA 200.7	0.039

ELAP ID No.:10958

Comments:

Approved By: ______________________
Bruce Hoogesteger, Technical Director

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Non-potable Water

Client: **OP-Tech**

Client Job Site:	FLEXO	**Lab Project Number:**	09-4687
		Lab Sample Number:	14182
Client Job Number:	FFLE-0002		
Field Location:	Excavation-Water	**Date Sampled:**	12/16/2009
Field ID Number:	N/A	**Date Received:**	12/17/2009
Sample Type:	Water	**Date Analyzed:**	12/22/2009

PCB Identification	Results in ug / L
Aroclor 1016	ND< 1.00
Aroclor 1221	ND< 1.00
Aroclor 1232	ND< 1.00
Aroclor 1242	ND< 1.00
Aroclor 1248	ND< 1.00
Aroclor 1254	ND< 1.00
Aroclor 1260	1.93

ELAP Number 10958 Method: EPA 608

Comments: ND denotes Non Detect
ug / L = microgram per Liter

Signature:
Bruce Hoogesteger: Technical Director

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PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Pesticide Analysis Report for Non-potable Water

Client: **OP-Tech**

Client Job Site:	FLEXO	**Lab Project Number:**	09-4687
		Lab Sample Number:	14182
Client Job Number:	N/A		
Field Location:	Excavation - Water	**Date Sampled:**	12/16/2009
Field ID Number:	N/A	**Date Received:**	12/17/2009
Sample Type:	Water	**Date Analyzed:**	12/21/2009

Pesticide Identification	Results in ug / L
Aldrin	ND< 0.10
alpha-BHC	ND< 0.10
beta-BHC	ND< 0.10
delta-BHC	ND< 0.10
gamma-BHC	ND< 0.10
alpha-Chlordane	ND< 0.10
gamma-Chlordane	ND< 0.10
4,4'-DDD	ND< 0.10
4,4'-DDE	ND< 0.10
4,4'-DDT	ND< 0.10
Dieldrin	ND< 0.10
Endosulfan I	ND< 0.10
Endosulfan II	ND< 0.10
Endosulfan Sulfate	ND< 0.10
Endrin	ND< 0.10
Endrin Aldehyde	ND< 0.10
Heptachlor	ND< 0.10
Heptachlor Epoxide	ND< 0.10
Methoxychlor	ND< 0.50
Toxaphene	ND< 5.00

ELAP Number 10709 Method: EPA 608

Comments: ND denotes Non Detect
ug / L = microgram per Liter

Signature:

Bruce Hoogesteger: Technical Director

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PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi -Volatile Analysis Report for Non-potable Water

Client: **OP-Tech**

Client Job Site:	FLEXO	**Lab Project Number:**	09-4687
		Lab Sample Number:	14182
Client Job Number:	FFLE-0002		
Field Location:	Excavation-Water	**Date Sampled:**	12/16/2009
Field ID Number:	N/A	**Date Received:**	12/17/2009
Sample Type:	Water	**Date Analyzed:**	12/22/2009

Base / Neutrals	Results in ug / L	**Base / Neutrals**	Results in ug / L
Acenaphthene	ND< 12.5	Dibenz (a,h) anthracene	ND< 12.5
Anthracene	ND< 12.5	Fluoranthene	ND< 12.5
Benzo (a) anthracene	ND< 12.5	Fluorene	ND< 12.5
Benzo (a) pyrene	ND< 12.5	Indeno (1,2,3-cd) pyrene	ND< 12.5
Benzo (b) fluoranthene	ND< 12.5	Naphthalene	ND< 12.5
Benzo (g,h,i) perylene	ND< 12.5	Phenanthrene	ND< 12.5
Benzo (k) fluoranthene	ND< 12.5	Pyrene	ND< 12.5
Chrysene	ND< 12.5	Acenaphthylene	ND< 12.5
Diethyl phthalate	ND< 12.5	1,2-Dichlorobenzene	ND< 12.5
Dimethyl phthalate	ND< 31.3	1,3-Dichlorobenzene	ND< 12.5
Butylbenzylphthalate	ND< 12.5	1,4-Dichlorobenzene	ND< 12.5
Di-n-butyl phthalate	ND< 12.5	1,2,4-Trichlorobenzene	ND< 12.5
Di-n-octylphthalate	ND< 12.5	Nitrobenzene	ND< 12.5
Bis (2-ethylhexyl) phthalate	ND< 12.5	2,4-Dinitrotoluene	ND< 12.5
2-Chloronaphthalene	ND< 12.5	2,6-Dinitrotoluene	ND< 12.5
Hexachlorobenzene	ND< 12.5	Bis (2-chloroethyl) ether	ND< 12.5
Hexachloroethane	ND< 12.5	Bis (2-chloroisopropyl) ether	ND< 12.5
Hexachlorocyclopentadiene	ND< 12.5	Bis (2-chloroethoxy) methan	ND< 12.5
Hexachlorobutadiene	ND< 12.5	4-Bromophenyl phenyl ether	ND< 12.5
N-Nitroso-di-n-propylamine	ND< 12.5	4-Chlorophenyl phenyl ether	ND< 12.5
N-Nitrosodiphenylamine	ND< 12.5	Benzidine	ND< 31.3
N-Nitrosodimethylamine	ND< 12.5	3,3'-Dichlorobenzidine	ND< 12.5
Isophorone	ND< 12.5		

ELAP Number 10958 Method: EPA 625 Data File: S48232.D

Comments: ND denotes Non Detect
ug / L = microgram per Liter

Signature:

Bruce Hoogesteger: Technical Director

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094687S2.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi -Volatile Analysis Report for Non-potable Water (Acid Fraction)

Client: OP-Tech

Client Job Site:	FLEXO	**Lab Project Number:**	09-4687
		Lab Sample Number:	14182
Client Job Number:	FFLE-0002		
Field Location:	Excavation-Water	**Date Sampled:**	12/16/2009
Field ID Number:	N/A	**Date Received:**	12/17/2009
Sample Type:	Water	**Date Analyzed:**	12/22/2009

Acids	Results in ug / L	Acids	Results in ug / L
Phenol	ND< 12.5	2,4-Dimethylphenol	ND< 12.5
2-Chlorophenol	ND< 12.5	2-Nitrophenol	ND< 12.5
2,4-Dichlorophenol	ND< 12.5	4-Nitrophenol	ND< 31.3
2,4,6-Trichlorophenol	ND< 12.5	2,4-Dinitrophenol	ND< 31.3
Pentachlorophenol	ND< 31.3	4,6-Dinitro-2-methylphenol	ND< 31.3
4-Chloro-3-methylphenol	ND< 12.5		

ELAP Number 10958 Method: EPA 625 Data File: S48231.D

Comments: ND denotes Non Detect
ug / L = microgram per Liter

Signature: ____________________
Bruce Hoogesteger: Technical Director

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Volatile Analysis Report for Non-potable Water

Client: OP-Tech

Client Job Site:	FLEXO	**Lab Project Number:**	09-4687
		Lab Sample Number:	14182
Client Job Number:	FFLE-0002		
Field Location:	Excavation-Water	**Date Sampled:**	12/16/2009
Field ID Number:	N/A	**Date Received:**	12/17/2009
Sample Type:	Water	**Date Analyzed:**	12/21/2009

Halocarbons	Results in ug / L	Halocarbons	Results in ug / L
Bromodichloromethane	ND< 2.00	trans-1,2-Dichloroethene	ND< 2.00
Bromomethane	ND< 2.00	1,2-Dichloropropane	ND< 2.00
Bromoform	ND< 5.00	cis-1,3-Dichloropropene	ND< 2.00
Carbon Tetrachloride	ND< 2.00	trans-1,3-Dichloropropene	ND< 2.00
Chloroethane	ND< 2.00	Methylene chloride	ND< 5.00
Chloromethane	ND< 2.00	1,1,2,2-Tetrachloroethane	ND< 2.00
2-Chloroethyl vinyl Ether	ND< 10.0	Tetrachloroethene	ND< 2.00
Chloroform	ND< 2.00	1,1,1-Trichloroethane	ND< 2.00
Dibromochloromethane	ND< 2.00	1,1,2-Trichloroethane	ND< 2.00
1,1-Dichloroethane	ND< 2.00	Trichloroethene	ND< 2.00
1,2-Dichloroethane	ND< 2.00	Trichlorofluoromethane	ND< 2.00
1,1-Dichloroethene	ND< 2.00	Vinyl chloride	ND< 2.00

Aromatics	Results in ug / L	Aromatics	Results in ug / L
Benzene	ND< 0.700	1,2-Dichlorobenzene	ND< 2.00
Chlorobenzene	ND< 2.00	1,3-Dichlorobenzene	ND< 2.00
Ethylbenzene	ND< 2.00	1,4-Dichlorobenzene	ND< 2.00
Toluene	ND< 2.00		

ELAP Number 10958 Method: EPA 624 Data File: V71279.D

Comments: ND denotes Non Detect
ug / L = microgram per Liter

Signature:

Bruce Hoogesteger: Technical Director

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179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

PARADIGM ENVIRONMENTAL SERVICES, INC.

CHAIN OF CUSTODY

REPORT TO:		INVOICE TO:		LAB PROJECT #:	CLIENT PROJECT #:
COMPANY: OP-TECH		COMPANY: Same		09-4687	
ADDRESS:		ADDRESS:		TURNAROUND TIME: (WORKING DAYS)	
CITY: TONAWANDA	STATE: NY ZIP:	CITY:	STATE: ZIP:	1 [ ] 2 [ ] 3 [ ] STD [X] 5	OTHER [ ]
PHONE:	FAX:	PHONE:	FAX:		
ATTN: GARY BRITT		ATTN:			
COMMENTS: FFLE-0002				Quotation # per GB 12/17 as per JD 12/17 EAH	

PROJECT NAME/SITE NAME: FLEXO

REQUESTED ANALYSIS

	DATE	TIME	COMPOSITE	GRAB	SAMPLE LOCATION/FIELD ID	MATRIX	NUMBER OF CONTAINERS	VOC's 624	VOC's 625	Total Phenols	Oil/Grease	PCB's	TSS	TAL Metals	608 Pest	pH	TCN	REMARKS sample per bottle label. cdf 12/17 EAH 12/17	PARADIGM LAB SAMPLE NUMBER
1	12/16/09	11:55		X	EXCAVATION - WATER	W	11	X	X	X	X	X	X	X	X	X	X	CPC G.B. 12/17 as	1 4 1 8 2
2																		per JD, Add 608	
3																		Pest. EAH 12/17	
4																		CPC GB 12/18/09	
5																		OK per Client	
6																		pH, CN [illegible]	
7																			
8																			
9																			
10																			

LAB USE ONLY BELOW THIS LINE

Sample Condition: Per NELAC/ELAP 210/241/242/243/244

Receipt Parameter	NELAC Compliance	
Container Type: Comments:	Y [X]	N [ ]
Preservation: Comments: 625, PCB neg. for Cl⁻. 624 Res. Cl⁻, pH<2, Cl⁻ neg	Y [X]	N [ ]
Holding Time: Comments: pH rec'd past HT	Y [X]	N [X]
Temperature: 8°C iced Comments:	Y [X]	N [ ]

	Date/Time
[signature] Sampled By	12/16/09 11:55
[signature] Relinquished By	12/16/09 13:45
[signature] Received By	12/16/ 14:25
Elizabeth A. Honck Received @ Lab By	12/17/09 1350

Total Cost:

P.I.F.

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Analytical Report Cover Page

Op Tech Environmental

For Lab Project # 09-4688
Issued December 28, 2009
This report contains a total of 10 pages

The reported results relate only to the samples as they have been received by the laboratory.

Any noncompliant QC parameters having impact on the data are flagged or documented on the final report.

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NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified.

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"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.
"B" = Method blank contained trace levels of analyte. Refer to included method blank report.

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

pH Analysis Report

Client: **OP-TECH**

Client Job Site:	FLEXO	**Lab Project Number:**	09-4688
Client Job Number:	FFLE-0002	**Date Sampled:**	12/16/2009
		Time Sampled:	10:45 AM
		Date Received:	12/17/2009
Sample Type:	Water	**Time Received:**	1:52 PM
Location:	Laboratory	**Date Analyzed:**	12/16/2009 *
		Time Analyzed:	4:40 PM

Lab Sample Number	Field Number	Field Location	Result (pH)
14183	N/A	Tank #1	7.79

ELAP Number 10958

Method: EPA 9045C

Comments Sample was analyzed for pH prior to log-in.

Signature:

Bruce Hoogesteger: Technical Director

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Flashpoint by Pensky-Martin Analysis Report

Client: **OP-TECH**

Client Job Site: FLEXO

Client Job Number: N/A

Sample Type: Water

Lab Project Number: 09-4688

Date Sampled: 12/16/2009
Date Received: 12/17/2009
Date Analyzed: 12/22/2009

Lab Sample Number	Field Number	Field Location	Result (°C)
14183	N/A	TANK #1	>70

ELAP Number 10958

Method: SW846 1010

Comments: °C = degrees Centigrade

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 094688F1.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647-2530 FAX (585) 647-3311

Client: OP-TECH
Client Job Site: FLEXO
Client Job No.: N/A
Analytical Method: EPA 335.4

Lab Project No.: 09-4688
Sample Type: Water
Date Sampled: 12/16/2009
Date Received: 12/17/2009
Date Analyzed: 12/22/2009

Laboratory Report for Total Cyanide

Lab Sample ID	Sample Location/Field ID	TCN (mg/L)
14183	Tank #1	ND<0.01

ELAP ID.No.: 10709

Comments: ND denotes Non Detect.

Approved By Technical Director: ______________________
Bruce Hoogesteger

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PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647-2530 FAX (585) 647-3311

Client: OP-TECH

Client Job Site: FLEXO

Client Job No.: N/A

Field Location: Tank #1

Lab Project No.: 09-4688
Lab Sample No.: 14183

Sample Type: Water

Date Sampled: 12/16/2009
Date Received: 12/17/2009

Laboratory Report for Reactivity

Parameter	Date Analyzed	Analytical Method	Results (mg/L)
Cyanide Reactivity	12/24/2009	SW846, 7.3.3.2	ND<1.0
Sulfide Reactivity	12/23/2009	SW846, 7.3.4.2	ND<10

ELAP ID. No.: 10709

Comments: ND denotes Non Detect.
Hazardous Waste Regulatory Levels for Reactivity are as follows:
Sulfide - 500 mg/kg, Cyanide - 250 mg/kg.

Approved By Technical Director: ______________________
Bruce Hoogesteger

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with sample condition requirements upon receipt.

PARADIGM
ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue, Rochester, NY 14608 (585) 647-2530 FAX (585) 647-3311

Client: OP-Tech

Client Job Site: FLEXO
Client Job No.: N/A

Field Location: Tank #1
Field ID No.: N/A

Lab Project No.: 09-4688
Lab Sample No.: 14183

Sample Type: TCLP Extract

Date Sampled: 12/16/2009
Date Received: 12/17/2009

Laboratory Report for TCLP Metals Analysis

Parameter	Date Analyzed	Analytical Method	Result (mg/L)	Regulatory Limit (mg/L)
TCLP Metal Series				
Arsenic	12/22/2009	EPA 6010	<0.100	5.0
Barium	12/22/2009	EPA 6010	<0.100	100.0
Cadmium	12/22/2009	EPA 6010	<0.025	1.0
Chromium	12/22/2009	EPA 6010	<0.050	5.0
Lead	12/22/2009	EPA 6010	<0.100	5.0
Mercury	12/22/2009	EPA 7470	<0.0020	0.2
Selenium	12/23/2009	EPA 6010	<0.100	1.0
Silver	12/22/2009	EPA 6010	<0.050	5.0

ELAP ID No.: 10958

Comments:

Approved By: ______________________
Bruce Hoogesteger, Technical Director

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Non-potable Water

Client: **OP-TECH**

Client Job Site: FLEXO

Client Job Number: N/A
Field Location: TANK #1
Field ID Number: N/A
Sample Type: Water

Lab Project Number: 09-4688
Lab Sample Number: 14183

Date Sampled: 12/16/2009
Date Received: 12/17/2009
Date Analyzed: 12/22/2009

PCB Identification	Results in ug / L
Aroclor 1016	ND< 1.00
Aroclor 1221	ND< 1.00
Aroclor 1232	ND< 1.00
Aroclor 1242	ND< 1.00
Aroclor 1248	ND< 1.00
Aroclor 1254	ND< 1.00
Aroclor 1260	1.25

ELAP Number 10958

Method: EPA 8082

Comments: ND denotes Non Detect
ug / L = microgram per Liter

Signature:

Bruce Hoogesteger: Technical Director

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi-Volatile Analysis Report for TCLP Extract

Client: **OP-TECH**

Client Job Site:	FLEXO	**Lab Project Number:**	09-4688
		Lab Sample Number:	14183
Client Job Number:	N/A		
Field Location:	TANK #1	**Date Sampled:**	12/16/2009
Field ID Number:	N/A	**Date Received:**	12/17/2009
Sample Type:	TCLP Extract	**Date Analyzed:**	12/21/2009

Base / Neutrals	Results in ug / L	Regulatory Limits in ug / L
1,4-Dichlorobenzene	ND< 40.0	7,500
2,4-Dinitrotoluene	ND< 40.0	130
Hexachlorobenzene	ND< 40.0	130
Hexachlorobutadiene	ND< 40.0	500
Hexachloroethane	ND< 40.0	3000
Nitrobenzene	ND< 40.0	2000
Pyridine	ND< 80.0	5000

Acids	Results in ug / L	Regulatory Limits in ug / L
Cresols (as m,p,o-Cresol)	ND< 80.0	200,000
Pentachlorophenol	ND< 100	100,000
2,4,5-Trichlorophenol	ND< 100	400,000
2,4,6-Trichlorophenol	ND< 40.0	2000

ELAP Number 10958 Method: EPA 8270C Data File: S48211.D

Comments: ND denotes Non Detect
ug / L = microgram per Liter

Signature:

Bruce Hoogesteger: Technical Director

This report is part of a multipage document and should only be evaluated in its entirety. Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt.

094688S1.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Volatile Analysis Report for TCLP Extract

Client: **OP-TECH**

Client Job Site:	FLEXO	**Lab Project Number:**	09-4688
		Lab Sample Number:	14183
Client Job Number:	N/A		
Field Location:	TANK #1	**Date Sampled:**	12/16/2009
Field ID Number:	N/A	**Date Received:**	12/17/2009
Sample Type:	TCLP Extract	**Date Analyzed:**	12/21/2009

Compounds	Results in ug / L	Regulatory Limits in ug / L
Benzene	ND< 20.0	500
2-Butanone	ND< 100	200,000
Carbon Tetrachloride	ND< 20.0	500
Chlorobenzene	ND< 20.0	100,000
Chloroform	ND< 20.0	6,000
1,2-Dichloroethane	ND< 20.0	500
1,1-Dichloroethene	ND< 20.0	700
Tetrachloroethene	ND< 20.0	700
Trichloroethene	ND< 20.0	500
Vinyl chloride	ND< 20.0	200

ELAP Number 10958 Method: EPA 8260B Data File: V71280.D

Comments: ND denotes Non Detect
ug / L = microgram per Liter

Signature:

Bruce Hoogesteger: Technical Director

This report is part of a multipage document and should only be evaluated in its entirety. Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt.

094688V1.XLS

PARADIGM ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

CHAIN OF CUSTODY

REPORT TO:		INVOICE TO:			
COMPANY: OP-TECH		COMPANY: Same		LAB PROJECT #: 09-4688	CLIENT PROJECT #:
ADDRESS:		ADDRESS:			
CITY: TONAWANDA STATE: NY ZIP:		CITY: STATE: ZIP:		TURNAROUND TIME: (WORKING DAYS)	
PHONE: FAX:		PHONE: FAX:		1 ☐ 2 ☐ 3 ☐ STD 5 ☒ OTHER ☐	
ATTN: GARY BRITT		ATTN:			
COMMENTS: FFLE-0002				Quotation # per GB 12/17 as per JD EAH 12/17	

PROJECT NAME/SITE NAME: FLEXO

REQUESTED ANALYSIS

	DATE	TIME	COMPOSITE	GRAB	SAMPLE LOCATION/FIELD ID	MATRIX	NUMBER OF CONTAINERS	TCLP METALS	TCLP VOC	TCLP SVOC	PCB'S	CYANIDE	RCRA CHARACTERISTS					REMARKS	PARADIGM LAB SAMPLE NUMBER
1	12/16/09	10:45		X	TANK #1	W	8	X	X	X	X	X	X					Full TCLP (MINUS PEST/HERB)	1 4 1 8 3
2																		RCRA Char = pH, flash, reactivity, per G.B. 12/17 as per JD. EAH 12/17	
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

LAB USE ONLY BELOW THIS LINE

Sample Condition: Per NELAC/ELAP 210/241/242/243/244

Receipt Parameter	NELAC Compliance	
Container Type: Comments:	Y ☒	N ☐
Preservation: Comments:	Y ☒	N ☐
Holding Time: Comments:	Y ☐	N ☐
Temperature: 8°C iced Comments:	Y ☐	N ☒

[signature]	12/16/09 10:45	
Sampled By	Date/Time	Total Cost:
[signature]	12/16/09 13:40	
Relinquished By	Date/Time	
[signature]	12/16 14:25 PM	
Received By	Date/Time	P.I.F.
Elizabeth A. Honck	12/17/09 1352	
Received @ Lab By	Date/Time	

WASTE MANAGEMENT

CWM CHEMICAL SERVICES, LLC
1550 Balmer Road
Model City, NY 14107
(716) 286-1550
(716) 286-0211 Fax

FLEXO TRANSPARENT INC
ATTN: ENVIRONMENTAL COMPLIANCE DEPT.
NYD002100566
1132 SENECA ST
BUFFALO NY 14210-1533

CERTIFICATE OF DISPOSAL

CWM CHEMICAL SERVICES, L.L.C., EPA ID: NYD049836679, has received waste material from FLEXO TRANSPARENT INC on 12/07/09 as described on Shipping Document number 001055511JJK Sequence number 01. CWM CHEMICAL SERVICES, L.L.C. hereby certifies that the above described material was landfilled in accordance with the 40 CFR part 761 as it pertains to the land disposal of polychlorinated biphenyl contaminated materials.

Profile Number: NY300269
CWM Tracking ID: 8163843101
CWM Unit #: 1*0
Disposal Date: 12/07/09

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C 1001 and 15 U.S.C. 2615) I certify that the information contained in or accompanying this document is true accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true accurate and complete.

Michael D. Mahar

MICHAEL D MAHAR
DISTRICT MANAGER
Certificate # 336019
12/08/09

For questions please call our Customer Service Dept. at (800) 843-3604

From everyday collection to environmental protection, Think Green® Think Waste Management.

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

GENERATOR

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: NYD002100566

2. Page 1 of 1

3. Emergency Response Phone: 800-225-6750

4. Manifest Tracking Number: 001055511 JJK

5. Generator's Name and Mailing Address
Flexo Transparent Inc.
28 Wasson Street Buffalo, NY 14210
Generator's Phone: 716-825-7710

Generator's Site Address (if different than mailing address)
1132 Seneca Street
Buffalo, NY

6. Transporter 1 Company Name: Price Trucking Corp.
U.S. EPA ID Number: 4 6 7 6 5 5 7 4

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
CWM Chemical Services, LLC
1550 Balmar Road
Model City, NY 14107
Facility's Phone: 716-754-8231

U.S. EPA ID Number: NYD049836679

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, Polychlorinated Biphenyl Solid,9,UN3432, PG II ERG # 171	1	DT CM	20,000 est.	K	B007
	2.					
	3.					
	4. Service Request # 9202107-2					

14. Special Handling Instructions and Additional Information
NY300269 Out of Service Date 12-7-09 Job # FFLE0002 PO # FFLE0002-08
81638431 rec'd 34010K

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: David Gray as Agent
Signature: [signature]
Month 12 Day 7 Year 09

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: JOHNNY NEWTON
Signature: Johnny Newton
Month 12 Day 7 Year 09

Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☑ Quantity ☑ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Qty est; actual rec'd 34010K

Liner failed, container should be decontaminated in accordance with 40 CFR 761.79.

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H132			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Roberta Kloda
Signature: [signature]
Month 12 Day 07 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

WASTE MANAGEMENT

CWM CHEMICAL SERVICES, LLC
1550 Balmer Road
Model City, NY 14107
(716) 286-1550
(716) 286-0211 Fax

FLEXO TRANSPARENT INC
ATTN: ENVIRONMENTAL COMPLIANCE DEPT.
NYD002100566
1132 SENECA ST
BUFFALO NY 14210-1533

CERTIFICATE OF DISPOSAL

CWM CHEMICAL SERVICES, L.L.C., EPA ID: NYD049836679, has received waste material from FLEXO TRANSPARENT INC on 12/07/09 as described on Shipping Document number 001055510JJK Sequence number 01. CWM CHEMICAL SERVICES, L.L.C. hereby certifies that the above described material was landfilled in accordance with the 40 CFR part 761 as it pertains to the land disposal of polychlorinated biphenyl contaminated materials.

Profile Number: NY300269
CWM Tracking ID: 8163841301
CWM Unit #: 1*0
Disposal Date: 12/07/09

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C 1001 and 15 U.S.C. 2615) I certify that the information contained in or accompanying this document is true accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true accurate and complete.

Michael D. Mahar

MICHAEL D MAHAR
DISTRICT MANAGER
Certificate # 336004
12/08/09

For questions please call our Customer Service Dept. at (800) 843-3604

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: N Y D 0 0 2 1 0 0 5 6 6
2. Page 1 of 1
3. Emergency Response Phone: 800-223-0750
4. Manifest Tracking Number: 001055510 JJK

5. Generator's Name and Mailing Address: Flexo Transparent Inc. 28 Wasson Street Buffalo, NY 14210
Generator's Phone: 716-825-7710
Generator's Site Address (if different than mailing address): 1132 Seneca Street Buffalo, NY

6. Transporter 1 Company Name: Pines Trucking Corp.
U.S. EPA ID Number: [illegible] 0 7 6 5 5 7 4

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: CWM Chemical Services, LLC 1550 Balmer Road Model City, NY 14107
Facility's Phone: 716-754-8231
U.S. EPA ID Number: N Y D 0 4 9 8 3 6 6 7 9

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, Polychlorinated Biphenyl Solid,9,UN3432, PG II ERG # 171	1	CM	30,000 est.	K	B007
	2.					
	3.					
	4. Service Request # 920407-1					

14. Special Handling Instructions and Additional Information

NY300269 Out of Service Date 12-7-09 Job # FFLE0002 PO # FFLE0002-08

81638413. rec'd 32123K

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: David Gray as Agent | Signature: [signature] | Month 12 Day 7 Year 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: James McGee | Signature: [signature] | Month 12 Day 7 Year 09
Transporter 2 Printed/Typed Name: | Signature: | Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H132 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Roberta Kloda | Signature: Roberta Kloda | Month 12 Day 07 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number NYD002100566	2. Page 1 of 1	3. Emergency Response Phone 800-225-6750	4. Manifest Tracking Number 001055510 JJK

5. Generator's Name and Mailing Address
Flexo Transparent Inc.
28 Wasson Street Buffalo, NY 14210
716-825-7710
Generator's Phone:

Generator's Site Address (if different than mailing address)
1132 Seneca Street
Buffalo, NY

6. Transporter 1 Company Name
Price Trucking Corp.
U.S. EPA ID Number
NYD4 676574

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
CWM Chemical Services, LLC
1550 Balmer Road
Model City, NY 14107
Facility's Phone: 716-754-8231
U.S. EPA ID Number
NYD049836679

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, Polychlorinated Biphenyl Solid,9,UN3432, PG II ERG # 171	1	CM	30,000 est.	K	B007
	2.					
	3.					
	4. Service Request # 920407-1					

14. Special Handling Instructions and Additional Information
NY300269 Out of Service Date 12-7-09 Job # FFLE0002 PO # FFLE0002-08
81638413 rec'd 32123K

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: David Gray as Agent
Signature:
Month 12 Day 7 Year 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: James McGee
Signature:
Month 12 Day 7 Year 09
Transporter 2 Printed/Typed Name
Signature
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H132			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Roberta Kloda
Signature:
Month 12 Day 07 Year 09

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: N Y D 0 0 2 1 0 0 5 6 6
2. Page 1 of 1
3. Emergency Response Phone: 800-225-6750
4. Manifest Tracking Number: 001055511 JJK

5. Generator's Name and Mailing Address
Flexo Transparent Inc.
28 Wasson Street Buffalo, NY 14210
Generator's Phone: 716-825-7710

Generator's Site Address (if different than mailing address)
1132 Seneca Street
Buffalo, NY

6. Transporter 1 Company Name: Price Trucking Corp.
U.S. EPA ID Number: N Y D 0 4 6 7 6 5 5 7 4

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
CWM Chemical Services, LLC
1550 Balmer Road
Model City, NY 14107
Facility's Phone: 716-754-8231
U.S. EPA ID Number: N Y D 0 4 9 8 3 6 6 7 9

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, Polychlorinated Biphenyl Solid,9,UN3432, PG II ERG # 171	1	DT ~~CM~~ Electrical	30 00 est.	K	B007
	2.					
	3.					
	4. Service Request # 920407-2					

14. Special Handling Instructions and Additional Information
NY300269 Out of Service Date 12-7-09 Job # FFLE0002 PO # FFLE0002-08
81638431 rec'd 34010K

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: David Gray as Agent
Signature: [signature]
Month 12 Day 7 Year 09

16. International Shipments ☐ Import to U.S. ☐ Export from U.S.
Port of entry/exit:
Transporter signature (for exports only):
Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: JOHNNY NEWTON
Signature: Johnny Newton
Month 12 Day 7 Year 09

Transporter 2 Printed/Typed Name
Signature
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☑ Quantity ☑ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Liner failed, container should be decontaminated in accordance with 40 CFR 761.79.

Was est.; actual rec'd 34010K

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H132
2.
3.
4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Roberta Kloda
Signature: Roberta K
Month 12 Day 07 Year 09

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

FRIDAY 12-4-09 3 TRUCKS 7:45 AM 15 MIN SPREAD
GARY 548-2084

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: [illegible]
2. Page 1 of
3. Emergency Response Phone: [illegible]
4. Waste Tracking Number: [illegible]

5. Generator's Name and Mailing Address
Flexo Transparent Inc., , 28 Wasson Street, , Buffalo NY 14210, Dan Steger
Generator's Phone: [illegible]

Generator's Site Address (if different than mailing address)
Flexo Transparent Inc., , 1132 Seneca Street, , Buffalo NY 14210, Dan Steger

6. Transporter 1 Company Name
Parise Trucking
[illegible]
U.S. EPA ID Number: [illegible]

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Town of Tonawanda Landfill Closure
East Park Road
Tonawanda NY
Facility's Phone: [illegible]
U.S. EPA ID Number: N/A

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	Non RCRA, Non D.O.T. Regulated Material, ASH Soil (PCB), , ,	001	T		T
2.	MATERIAL FROM OUTDOOR NORTH [illegible], , ,				
3.	, , ,				
4.	, , ,				

13. Special Handling Instructions and Additional Information
Emergency Contact: [illegible], Inc. [illegible] , [illegible], Inc. Business ID Number: [illegible]
Truck ID: 208
Truck Lic.: 40211JZ
Handling Codes: [illegible]
Weight Ticket No.: 91659
Gross Weight: 73360
Tare Weight: 47600

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: Todd Harris as agent
Signature: Todd Harris
Month 12 Day 4 Year 09

15. International Shipments ☐ Import to U.S. ☐ Export from U.S.
Port of entry/exit:
Transporter Signature (for exports only):
Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: M C Brodfuehrer
Signature: M Brodfuehrer
Month 12 Day 4 Year 09
Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Item [illegible] Estimated. Actual Weight = 23.80
Manifest Reference Number: [illegible]
17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: [illegible]
Signature
Month 12 Day 4 Year 09

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DESIGNATED FACILITY TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
N/A		[illegible]	[illegible]

5. Generator's Name and Mailing Address
Flexo Transparent Inc., , 28 Wasson Street, , Buffalo NY 14210, Don Steger

Generator's Site Address (if different than mailing address)
Flexo Transparent Inc., , 1132 Seneca Street, , Buffalo NY 14210, Dan Steger

Generator's Phone: 716-825-7710

6. Transporter 1 Company Name
Perison Trucking
[illegible]
209
U.S. EPA ID Number: 9A 035

7. Transporter 2 Company Name
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Town of Tonawanda Landfill Closure
East Park Road
Tonawanda NY
U.S. EPA ID Number: N/A
Facility's Phone: 716-285-3990

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	Non RCRA, Non D.O.T. Regulated Material, AGM Soil (PCS), , ,	001	T		T
2.	MATERIAL FROM OUTDOOR NORTH AREA 82, , ,				
3.	, , ,				
4.	, , ,				

13. Special Handling Instructions and Additional Information
Emergency Contact: Ensol, Inc. Nick Moneeale , Ensol, Inc. Program ID Number: 09-2224-11T
Truck ID: 209
Truck Lic.: 72610-JF
Handling Codes: T, , , ,
Weight Ticket No.: 91658
Gross Weight: 61960
Tare Weight: 23540
, , ,

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: Todd Harris as agent
Signature: Todd Harris
Month 12 Day 4 Year 09

INT'L
15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER
16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Robert Ward
Signature: [signature]
Month 12 Day 4 Year 09
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

DESIGNATED FACILITY
17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Item 11B Estimated. Actual Weight = 19.20
Manifest Reference Number: [illegible]
17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Michael [illegible]
Signature: [signature]
Month 12 Day 4 Year 09

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DESIGNATED FACILITY TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	N/A		716-285-3920	ES-394533

5. Generator's Name and Mailing Address
Flexo Transparent Inc., , 28 Wasson Street, Buffalo NY 14210, Dan Steger

Generator's Phone: 716-825-7710

Generator's Site Address (if different than mailing address)
Flexo Transparent Inc., , 1132 Seneca Street, , Buffalo NY 14210, Dan Steger

6. Transporter 1 Company Name
[illegible] Trucking
716-875-5152

U.S. EPA ID Number: PA 035·

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Town of Tonawanda Landfill Closure
East Park Road
Tonawanda NY

Facility's Phone: 716-285-3920

U.S. EPA ID Number: N/A

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	Non RCRA, Non D.O.T. Regulated Material, ASH Soil (PCB)	001	T		T
2.	MATERIAL FROM OUTDOOR NORTH EMI #2, , ,				
3.	, , ,				
4.	, , ,				

13. Special Handling Instructions and Additional Information
Emergency Contact: Ensol, Inc. Nick Morreale, Ensol, Inc. Project ID Number: 09-3236-11T
Truck ID: 210
Truck Lic.: 40212 JZ
Handling Codes: T
Weight Ticket No.: 91660
Gross Weight: 74000
Tare Weight: 25860

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Todd Harris as agent
Signature: Todd Harris
Month 12 Day 4 Year 09

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Bill Grosskopf
Signature: Bill Grosskopf
Month 12 Day 4 Year 09

Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Item #1 Estimated. Actual Weight = 24.06
Manifest Reference Number: 394533

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Michael Cyganovich
Signature
Month 12 Day 4 Year 09

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DESIGNATED FACILITY TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	N/A		[illegible]	[illegible]

5. Generator's Name and Mailing Address
Flexo Transparent Inc., , 28 Wasson Street, , Buffalo NY 14210, Dan Steger

Generator's Site Address (if different than mailing address)
Flexo Transparent Inc., , 1132 Seneca Street, , Buffalo NY 14210, Dan Steger

Generator's Phone: [illegible]

6. Transporter 1 Company Name
Fazio Trucking
[illegible]

U.S. EPA ID Number
[illegible]

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
Town of Tonawanda Landfill Closure
East Park Road
Tonawanda NY

U.S. EPA ID Number
N/A

Facility's Phone: [illegible]

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	Non RCRA, Non D.O.T. Regulated Material, AEM Soil (PCB), , ,	001	T		T
2.	MATERIAL FROM OUTDOOR NORTH AEM #2, , ,				
3.	, , ,				
4.	, , ,				

13. Special Handling Instructions and Additional Information
Emergency Contact: Ensol, Inc. Nick Morreale ,
Ensol, Inc. Project ID Number: 09-3238-11T
Truck ID: 309
Truck Lic.: 7710-JF
Handling Codes: Y, , , ,

Weight Ticket No.: 9661
Gross Weight: 68760
Tare Weight: 22540
, , , ,

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Todd Harris as agent
Signature: Todd H[illegible]
Month 12 Day 4 Year 09

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Robert [illegible]
Signature: [illegible]
Month 12 Day 4 Year 09

Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Item #13 Estimated. Actual Weight = 23160

Manifest Reference Number: [illegible]

17b. Alternate Facility (or Generator)
U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Michael [illegible]
Signature: [illegible]
Month 12 Day 4 Year 09

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DESIGNATED FACILITY TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: N/A
2. Page 1 of
3. Emergency Response Phone: 716-285-3920
4. Waste Tracking Number: ES-334635

5. Generator's Name and Mailing Address
Flexo Transparent Inc., , 28 Wasson Street, , Buffalo NY 14210, Dan Steger
Generator's Phone: 716-825-7710

Generator's Site Address (if different than mailing address)
Flexo Transparent Inc., , 1132 Seneca Street, , Buffalo NY 14210, Dan Steger

6. Transporter 1 Company Name
Fariss Trucking
716-875-5186
U.S. EPA ID Number: 9A 035

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Town of Tonawanda Landfill Closure
East Park Road
Tonawanda NY
Facility's Phone: 716-285-3920
U.S. EPA ID Number: N/A

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	Non RCRA, Non D.O.T. Regulated Material, NEM Soil (PCB), , ,	001	T		T
2.	MATERIAL FROM OUTDOOR NORTH ITEM #2,				
3.					
4.					

13. Special Handling Instructions and Additional Information
Emergency Contact: Ensol, Inc. Nick Morreale
Ensol, Inc. Project ID Number: 48-3256-11T
Truck ID: 708
Truck Lic.: 40211JZ
Handling Codes:

Weight Ticket No.: 91663
Gross Weight: 69920
Tare Weight: 25760

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: Todd Harris as agent
Signature: Todd Harris
Month Day Year: 12 4 09

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: M C Brodfuehrer
Signature: M Brodfuehrer
Month Day Year: 12 4 09
Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Item #13 Estimated. Actual Weight = 2210
Manifest Reference Number:
17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Michael Ryan
Signature
Month Day Year: 12 4 09

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DESIGNATED FACILITY TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
N/A		716-285-3920	ES-324636

5. Generator's Name and Mailing Address: Flexo Transparent Inc., , 30 Hassan Street, , Buffalo NY 14210, Dan Steger

Generator's Site Address (if different than mailing address): Flexo Transparent Inc., , 3132 Seneca Street, , Buffalo NY 14210, Dan Steger

Generator's Phone: 716-855-7716

6. Transporter 1 Company Name: Seniso Trucking 716-875-2162 — U.S. EPA ID Number: 24 222

7. Transporter 2 Company Name: — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Town of Tonawanda Landfill Closure, East Park Road, Tonawanda NY — U.S. EPA ID Number: N/A

Facility's Phone: 716-285-3920

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	Non RCRA, Non D.O.T. Regulated Material, AGM Soil (PCS)	001	T		T
2.	MATERIAL FROM OUTDOOR NORTH EXK #2, , ,				
3.	, , ,				
4.	, , ,				

13. Special Handling Instructions and Additional Information

Emergency Contact: Ensol, Inc. Nick Morreale, EnSol, Inc. Project ID Number: 09-3236-11T

Truck ID: 210

Truck Lic.: 40212JZ

Handling Codes: T, , , ,

Weight Ticket No.: 91664

Gross Weight: 73020

Tare Weight: 25860

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Todd Harris as agent — Signature: Todd Harris — Month 12 Day 4 Year 09

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Bill Grosskopf — Signature: Bill Grosskopf — Month 12 Day 4 Year 09

Transporter 2 Printed/Typed Name: — Signature: — Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Item #13 Estimated. Actual Weight = 23.58

Manifest Reference Number: 324636

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Michael [illegible] — Signature: [signature] — Month 12 Day 4 Year 09

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DESIGNATED FACILITY TO GENERATOR

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: N/A
2. Page 1 of
3. Emergency Response Phone: 716-285-3533
4. Waste Tracking Number: ES-394037

5. Generator's Name and Mailing Address:
Flexo Transparent Inc., , 28 Wasson Street, , Buffalo NY 14210, Don Steger

Generator's Site Address (if different than mailing address):
Flexo Transparent Inc., , 1132 Seneca Street, , Buffalo NY 14210, Don Steger

Generator's Phone: 716-825-7710

6. Transporter 1 Company Name: [illegible] Trucking
716-875-6166
U.S. EPA ID Number: 9A 058

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address:
Town of Tonawanda Landfill Closure
East Park Road
Tonawanda NY
Facility's Phone: 716-285-3533
U.S. EPA ID Number: N/A

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	Non RCRA, Non D.O.T. Regulated Material, NON Soil (PCB), , ,	001	T		T
2.	MATERIAL FROM OUTDOOR NORTH [illegible] #2, , ,				
3.	, , ,				
4.	, , ,				

13. Special Handling Instructions and Additional Information
Emergency Contact: EnSol, Inc. Nick Morreale
EnSol, Inc. Project ID Number: 09-3235-11T
Truck ID: 209
Truck Lic.: 77610-JP
Handling Codes: X, , , ,

Weight Ticket No.: 91665
Gross Weight: 71480
Tare Weight: 23540
, , ,

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Todd Harris as agent
Signature: Todd Harris
Month 12 Day 4 Year 09

15. International Shipments ☐ Import to U.S. ☐ Export from U.S.
Port of entry/exit:
Transporter Signature (for exports only):
Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Robert [illegible]
Signature: [illegible]
Month 12 Day 4 Year 09

Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Item #11 Estimated. Actual Weight = 23.96

Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: [illegible]
Signature: [illegible]
Month 12 Day 4 Year 09

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DESIGNATED FACILITY TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number N/A	2. Page 1 of	3. Emergency Response Phone 716-288-3570	4. Waste Tracking Number [illegible]

5. Generator's Name and Mailing Address
Flexo Transparent Inc., , 28 Wasson Street, , Buffalo NY 14210, Dan Steger

Generator's Site Address (if different than mailing address)
Flexo Transparent Inc., , 1132 Seneca Street, , Buffalo NY 14210, Dan Steger

Generator's Phone: 716-855-7710

6. Transporter 1 Company Name
Parisc Trucking
716-873-7133

U.S. EPA ID Number: NA NNN

7. Transporter 2 Company Name

U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Town of Tonawanda Landfill Closure
East Park Road
Tonawanda NY

U.S. EPA ID Number: N/A

Facility's Phone: 716-288-3570

9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1. Non RCRA, Non D.O.T. Regulated Material, AGM Soil (PCS), , ,	001	T		T
2. MATERIAL FROM OUTDOOR NORTH ZON #2, , ,				
3. , , ,				
4. , , ,				

13. Special Handling Instructions and Additional Information

Emergency Contact: Encel, Inc. Nick Morreale ,
Encel, Inc. Project ID Number: 09-3336-A17
Truck ID: 708
Truck Lic.: 40211JZ
Handling Code: T, , , ,

Weight Ticket No.: 91666
Gross Weight: 71500
Tare Weight: 25760

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Todd Harris as agent
Signature: Todd Harris
Month 12 Day 4 Year 09

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: M C Brodfuehrer
Signature: M Brodfuehrer
Month 12 Day 4 Year 09

Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Item #12 Estimated. Actual Weight = 22.86 tons

Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator) Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Michael Cappamal
Signature
Month 12 Day 4 Year 09

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DESIGNATED FACILITY TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: N/A
2. Page 1 of
3. Emergency Response Phone: 716-285-3923
4. Waste Tracking Number: ES-394639

5. Generator's Name and Mailing Address: Flexo Transparent Inc., , 28 Wasson Street, , Buffalo NY 14210, Don Steger

Generator's Site Address (if different than mailing address): Flexo Transparent Inc., , 1132 Seneca Street, , Buffalo NY 14210, Dan Steger

Generator's Phone: 716-825-7710

6. Transporter 1 Company Name: Parise Trucking 716-876-6188
U.S. EPA ID Number: 9A 035

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Town of Tonawanda Landfill Closure, East Park Road, Tonawanda NY
Facility's Phone: 716-[illegible]
U.S. EPA ID Number: N/A

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	Non RCRA, Non D.O.T. Regulated Material, AGM Soil (PCS), , ,	001	T		T
2.	MATERIAL FROM OUTDOOR NORTH BRM 82, , ,				
3.	, , ,				
4.	, , ,				

13. Special Handling Instructions and Additional Information
Emergency Contact: Ensol, Inc. Nick Morreale, Ensol, Inc. Project ID Number: ES-3336-11T
Truck ID: 210
Truck Lic.: 40212 JZ
Handling Codes: T, , , ,
Weight Ticket No.: 91667
Gross Weight: 73540
Tare Weight: 25860

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: Todd Harris as agent
Signature: Todd Harris
Month 12 Day 4 Year 09

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Bill Grosskopf
Signature: Bill Grosskopf
Month 12 Day 4 Year 09
Transporter 2 Printed/Typed Name: Signature: Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Item #11 Estimated. Actual Weight = 23.82
Manifest Reference Number:
17b. Alternate Facility (or Generator) U.S. EPA ID Number:
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Michael [illegible]
Signature:
Month 12 Day 4 Year 09

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DESIGNATED FACILITY TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
N/A		716-[illegible]	[illegible]

5. Generator's Name and Mailing Address
Flexo Transparent Inc., , 28 Wasson Street, , Buffalo NY 14210, Dan Steger

Generator's Site Address (if different than mailing address)
Flexo Transparent Inc., , 1132 Seneca Street, , Buffalo NY 14210, Dan Steger

Generator's Phone: 716-[illegible]

6. Transporter 1 Company Name
Parise Trucking
[illegible]

U.S. EPA ID Number: NA NNA

7. Transporter 2 Company Name

U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Town of Tonawanda Landfill Closure
East Park Road
Tonawanda NY

U.S. EPA ID Number: N/A

Facility's Phone: 716-[illegible]

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	Non RCRA, Non D.O.T. Regulated Material, ACM Soil (PCS), , ,	001	T		T
2.	MATERIAL FROM OUTFALL NORTH [illegible] #2, , ,				
3.	, , ,				
4.	, , ,				

13. Special Handling Instructions and Additional Information

Emergency Contact: Ensol, Inc. Nick Morreale
EnSol, Inc. Project ID Number: [illegible]
Truck ID: 209
Truck Lic.: 77610-JF
Handling Codes: , , , ,

Weight Ticket No.: 91668
Gross Weight: 67120
Tare Weight: 23540
, , ,

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name	Signature	Month	Day	Year
Todd Harris as agent	Todd H[illegible]	12	4	09

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name	Signature	Month	Day	Year
Robert W[illegible]	[illegible]	12	4	09

Transporter 2 Printed/Typed Name	Signature	Month	Day	Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Item #11 Estimated. Actual Weight = 21.80

Manifest Reference Number: [illegible]

17b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name	Signature	Month	Day	Year
[illegible]	[illegible]	12	4	09

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

169-BLC-O 5 11977 (Rev. 8/06)

DESIGNATED FACILITY TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: N/A

2. Page 1 of

3. Emergency Response Phone: 716-285-3920

4. Waste Tracking Number: ES-394841

5. Generator's Name and Mailing Address: Flexo Transparent Inc., , 28 Wasson Street, , Buffalo NY 14210, Dan Steger

Generator's Site Address (if different than mailing address): Flexo Transparent Inc., , 1132 Seneca Street, , Buffalo NY 14210, Dan Steger

Generator's Phone: 716-825-7710

6. Transporter 1 Company Name: Pariso Trucking 716-875-6152 — U.S. EPA ID Number: 9A 035

7. Transporter 2 Company Name: — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Town of Tonawanda Landfill Closure, East Park Road, Tonawanda NY — U.S. EPA ID Number: N/A

Facility's Phone: [illegible]

9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1. Non RCRA, Non D.O.T. Regulated Material, AEM Soil (PCB), , ,	001	T		T
2. MATERIAL FROM OUTDOOR NORTH TRN #2, , ,				
3. , , ,				
4. , , ,				

13. Special Handling Instructions and Additional Information

Emergency Contact: Ensol, Inc. Nick Moscale

Ensol, Inc. Project ID Number: ES-[illegible]

Truck ID: 208

Truck Lic.: 4021JZ

Handling Codes: L , , ,

Weight Ticket No.: 91669

Gross Weight: 72700

Tare Weight: 25760

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Todd Harris as agent — Signature: [signature] — Month 12 Day 4 Year 09

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: M Brodfuehrer — Signature: [signature] — Month 12 Day 4 Year 09

Transporter 2 Printed/Typed Name: — Signature: — Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Item #11 Estimated. Actual Weight = 23.48

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number:

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: [signature] — Signature: [signature] — Month 12 Day 4 Year 09

169-BLC-O 5 11977 (Rev. 8/06)

DESIGNATED FACILITY TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
N/A		[illegible]	[illegible]

5. Generator's Name and Mailing Address
Flexo Transparent Inc., , 28 Wasson Street, , Buffalo NY 14210, Dan Steger
Generator's Phone: [illegible]

Generator's Site Address (if different than mailing address)
Flexo Transparent Inc., , 1132 Seneca Street, , Buffalo NY 14210, Dan Steger

6. Transporter 1 Company Name
[illegible] Trucking
[illegible]
U.S. EPA ID Number: [illegible]

7. Transporter 2 Company Name
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Town of Tonawanda Landfill Closure
East Park Road
Tonawanda NY
Facility's Phone: 716-[illegible]
U.S. EPA ID Number: N/A

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	Non RCRA, Non D.O.T. Regulated Material, ACM Soil (PCS) , , ,	001	T		T
2.	MATERIAL FROM OUTDOOR NORTH AREA #2, , ,				
3.	, , ,				
4.	, , ,				

13. Special Handling Instructions and Additional Information
Emergency Contact: Ensol, Inc. Nick Morreale
Ensol, Inc. Project ID Number: 09-[illegible]-11T
Truck ID: 210
Truck Lic.: 40212 JZ
Handling Codes: [illegible] , , ,
Weight Ticket No.: 91670
Gross Weight: 71540
Tare Weight: 25860

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: Todd Harris as agent
Signature: Todd Ha[illegible]
Month 12 Day 4 Year 09

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Bill Grosskopf
Signature: Bill Grosskopf
Month 12 Day 4 Year 09
Transporter 2 Printed/Typed Name:
Signature: Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Item #11 Estimated. Actual Weight = 22.84
Manifest Reference Number: [illegible]

17b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

17c. Signature of Alternate Facility (or Generator) Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 17a
Printed/Typed Name: Steve Hess
Signature: [illegible]
Month 12 Day 4 Year 09

169-BLC-O 5 11977 (Rev. 8/06)

DESIGNATED FACILITY TO GENERATOR

Flexo Transparent, Inc.
REMEDIAL INVESTIGATION REPORT

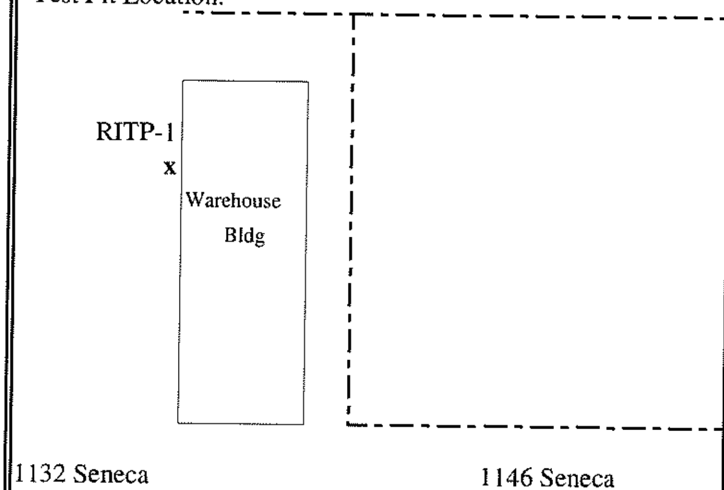
Appendix D

Test Pit Logs, Soil Boring Logs, and Monitoring Well Construction Logs

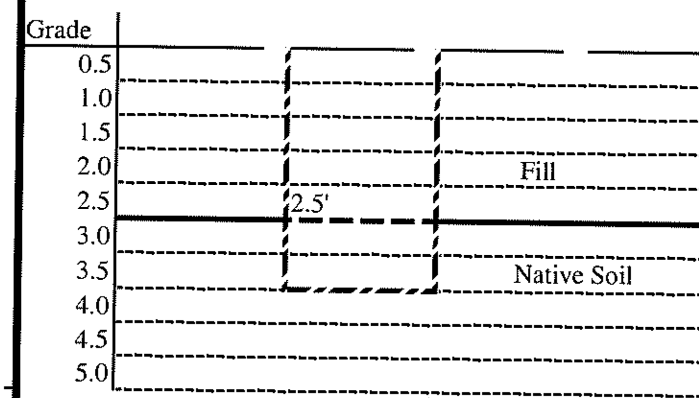
MALCOLM PIRNIE

Project:	Flexo-Transparent RI	Excavation Dates:	10/14/2009
Project No.:	6105-002	Excavation Method:	10/14/2009
Client:	Flexo-Transparent RI	Logged / Checked By:	JPH
Location:	Buffalo	Test Pit Location #:	RI TP - 1

Test Pit Location:



Test Pit Cross Section:



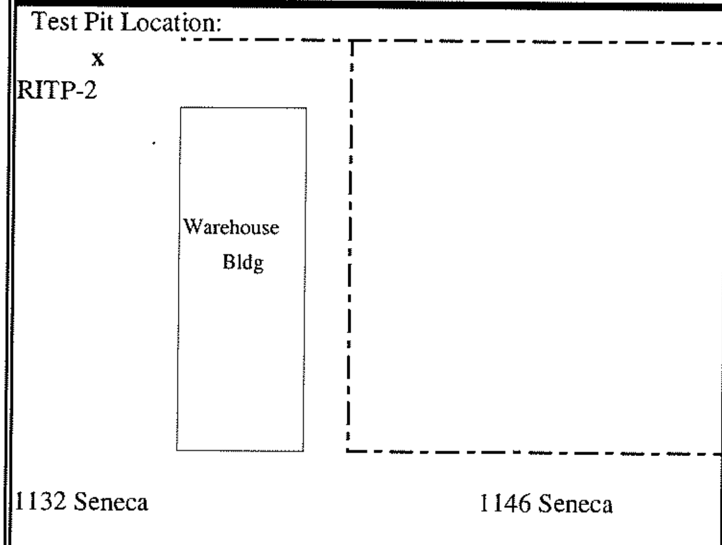
Depth bgs	Soil Description	Graphic Log	Photos Y / N	Samples Y / N	Comments (Include seepage horizons)
0.0 - 2"	Asphalt				
2" - 1.4'	**Fill** as Gravel and crushed stone				Wet
1.4' - 2.5	**Fill** as Silt and Sand, black, fine grain			Y	Saturated
2.5' - 3.3'	Native soil, Sand and Silt, gray-black, fine grain				PID = 0.0 ppm
					RITP-1 (1.4 - 2.0')
					Soil sample collected for:
					TCL VOCs
					SVOCs/PCBs
					TAL Metals
					Cyanide

Sheet ____ of ____

MALCOLM PIRNIE

Project:	Flexo-Transparent RI	Excavation Dates:	10/14/2009
Project No.:	6105-002	Excavation Method:	10/14/2009
Client:	Flexo-Transparent RI	Logged / Checked By:	JPH
Location:	Buffalo	Test Pit Location #:	RI TP - 2

Test Pit Location:



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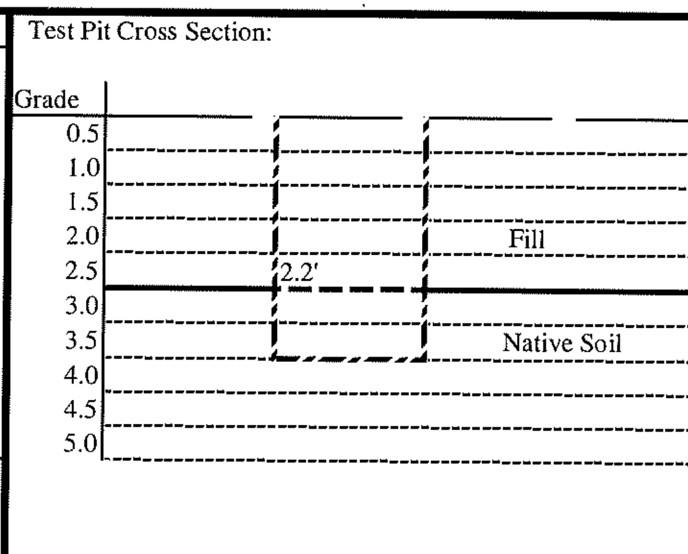
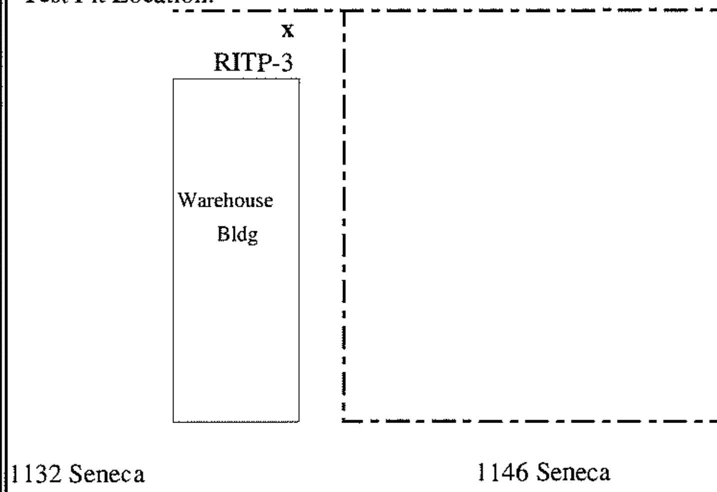


Depth bgs	Soil Description	Graphic Log	Photos Y / N	Samples Y / N	Comments (Include seepage horizons)
0.0 - 2.2'	Fill as Sand and Gravel, black-brown, fine grain w/ f - crs. angular gravel & crushed stone, some Fe staining, w/ brick, ash, rubber			Y	
					Wet
				Y	PID = 0.0 ppm
2.2' - 3.2'	Native soil, Silt dark gray, w/ little fine Sand, trace				Saturated
					Perched water at native soil contact
					Collected soil sample(s)
					RITP-2 (0.0 - 2")
					RITP-2 (1.5 - 2.0')
					Soil samples collected for:
					TCL VOCs
					SVOCs/PCBs
					TAL Metals
					Cyanide

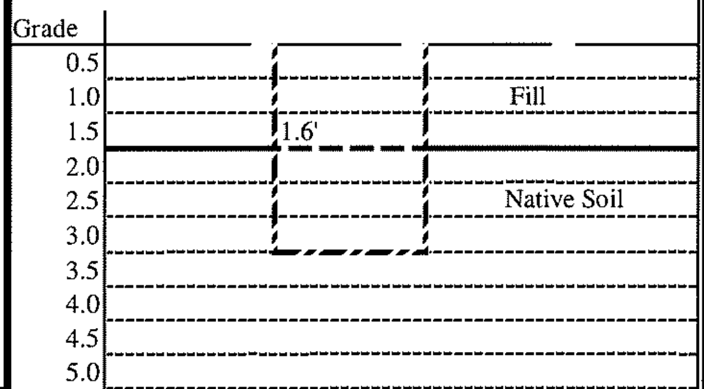
MALCOLM PIRNIE

Project:	Flexo-Transparent RI	Excavation Dates:	10/14/2009
Project No.:	6105-002	Excavation Method:	10/14/2009
Client:	Flexo-Transparent RI	Logged / Checked By:	JPH
Location:	Buffalo	Test Pit Location #:	RI TP - 3

Test Pit Location:



Test Pit Cross Section:



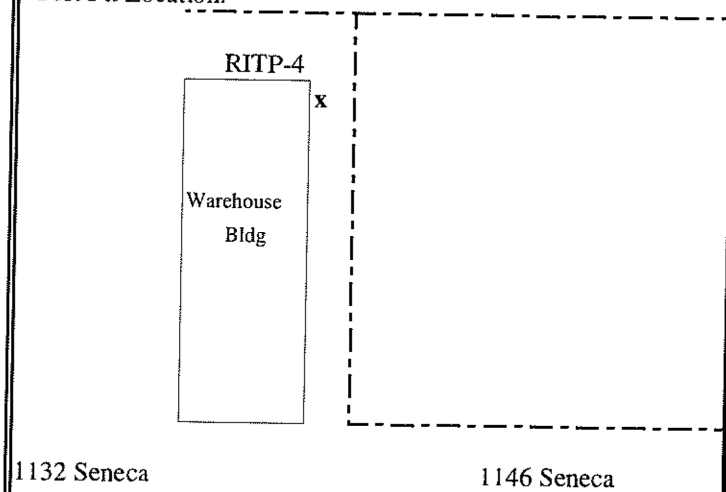
Depth bgs	Soil Description	Graphic Log	Photos Y / N	Samples Y / N	Comments (Include seepage horizons)
0.0 - 1.6'				Y	Moist - wet
	Fill as Silt and Sand, black-gray, fine grain w/ C&D debris as red brick, f angular gravel, sharp contact w/			Y	PID = 0.0 ppm
1.6' - 3.1'	Native soil, Silt and Sand, yellow-brown, fine grain				Saturated
					Perched water at native soil contact
					Collected soil sample(s)
					RITP-3 (0.0 - 2")
					RITP-3 (1.0 - 1.5')
					Soil samples collected for:
					TCL VOCs
					SVOCs/PCBs
					TAL Metals
					Cyanide

Sheet ____ of ____

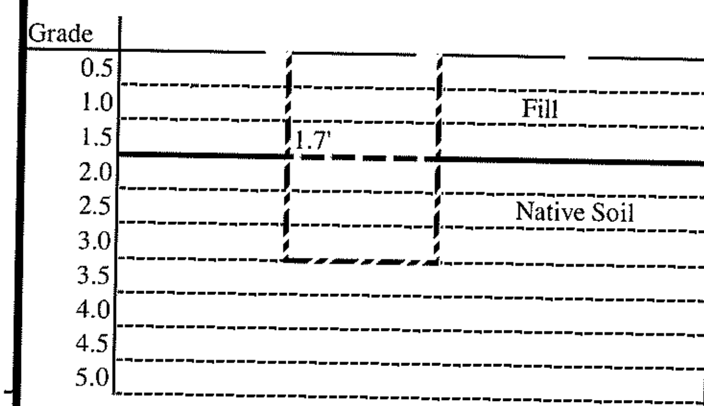
MALCOLM PIRNIE

Project:	Flexo-Transparent RI	Excavation Dates:	10/14/2009
Project No.:	6105-002	Excavation Method:	10/14/2009
Client:	Flexo-Transparent RI	Logged / Checked By:	JPH
Location:	Buffalo	Test Pit Location #:	RI TP - 4

Test Pit Location:



Test Pit Cross Section:



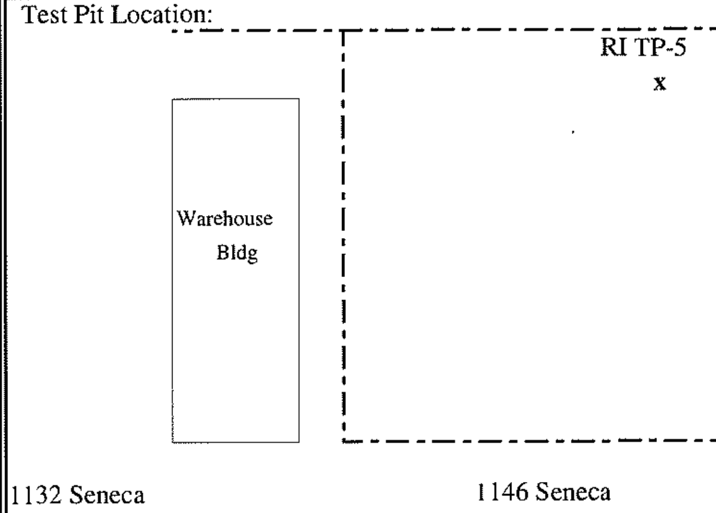
Depth bgs	Soil Description	Graphic Log	Photos Y / N	Samples Y / N	Comments (Include seepage horizons)
0.0 - 1.7'	Fill as Gravel railroad ballast consisting of fine, angular crushed stone, w/ trace-little Silt, black-brown, sharp contact w/			Y	
1.7' - 2.4'	Native soil, Silt, lt. gray-yellow, trace fine grain Sand, mottled				Saturated
					Perched water at native soil contact
					PID = 0.0 ppm
					Collected soil sample RITP-4 (1.0 - 1.5')
					Soil samples collected for:
					TCL VOCs
					SVOCs/PCBs
					TAL Metals
					Cyanide

Sheet ____ of ____

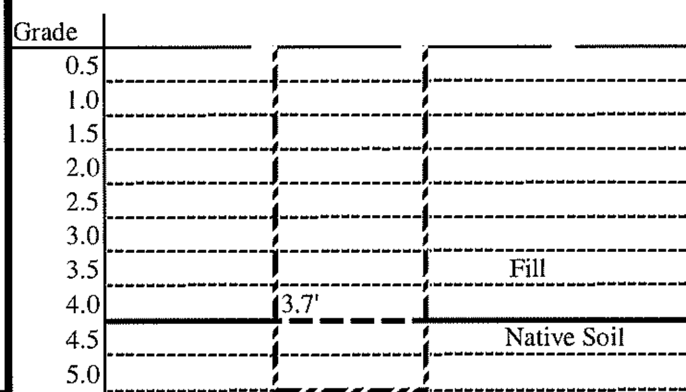
MALCOLM PIRNIE

Project:	Flexo-Transparent RI	Excavation Dates:	10/14/2009
Project No.:	6105-002	Excavation Method:	10/14/2009
Client:	Flexo-Transparent RI	Logged / Checked By:	JPH
Location:	Buffalo	Test Pit Location #:	RI TP - 5

Test Pit Location:



Test Pit Cross Section:



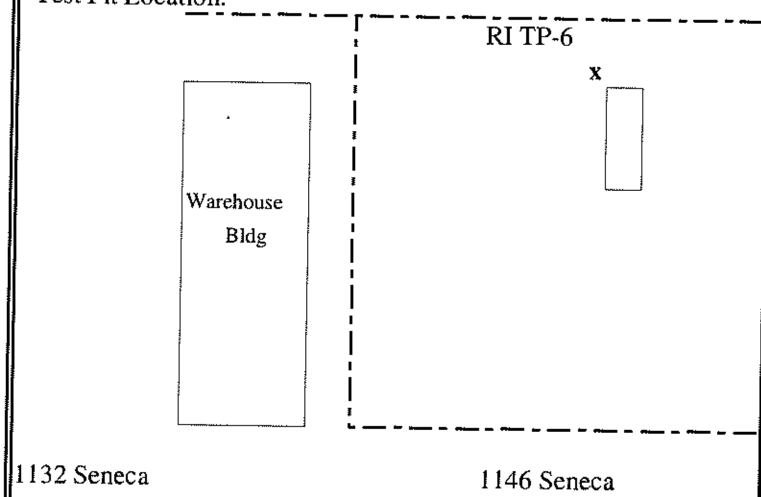
Depth bgs	Soil Description	Graphic Log	Photos Y / N	Samples Y / N	Comments (Include seepage horizons)
0.0 -3.7'	**Fill** as Silt and Sand, dark gray-black, fine grain w/ admixed C&D debris consisting of brick, concrete, plastic and wood, sharp contact w/			Y	Strong solvent odor No PID measurment recorded in fill unit
3.7' - 5.1'	Native soil, Silt and Sand, olive gray-brown, mottled, fine grain w/ carbonized plant fragments.			Y	Moist-wet Perched water at native soil contact
					Max. PID 2.1 ppm measured in native soil.
					Collected soil sample(s) RITP-5 (0.0 - 2") RITP-5 (3.5 - 4.5')
					Collected soil duplicate RI TP-Dupl #1 at 3.5 - 4.5' depth
					Soil samples collected for: TCL VOCs SVOCs/PCBs TAL Metals Cyanide

Sheet ___ of ___

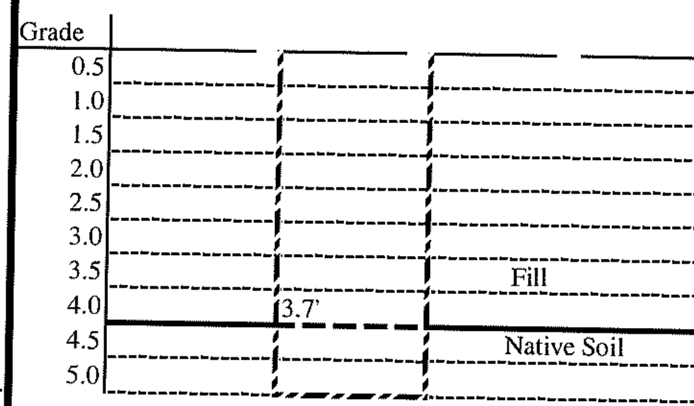
MALCOLM PIRNIE

Project:	Flexo-Transparent RI	Excavation Dates:	10/14/2009
Project No.:	6105-002	Excavation Method:	10/14/2009
Client:	Flexo-Transparent RI	Logged / Checked By:	JPH
Location:	Buffalo	Test Pit Location #:	RI TP - 6

Test Pit Location:



Test Pit Cross Section:



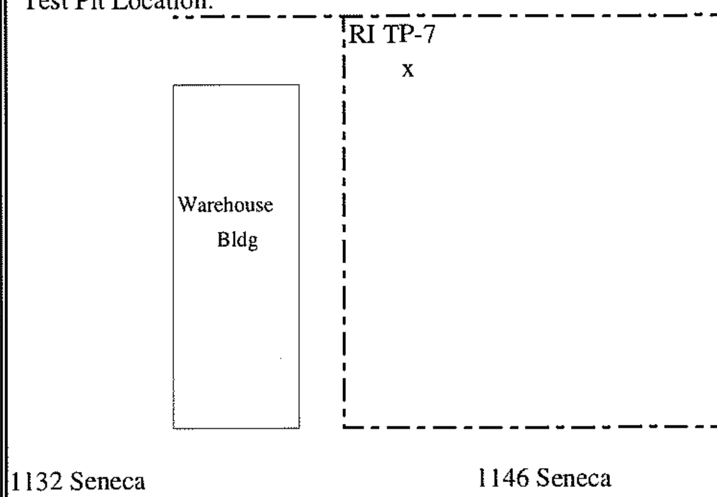
Depth bgs	Soil Description	Graphic Log	Photos Y / N	Samples Y / N	Comments (Include seepage horizons)
0.0 -3.7'	**Fill** as Sand and Gravel, black, fine grain w/ med- crs. Gravel to 1" dia. significant Fe staining, admixed debris as wood, brick and clay tile pipe			N	Wet PID = 0.0 ppm
3.7' - 4.8'	Native soil, Silt dark gray w/ carbonized plant mat'l, grading to dark gray Silt and fine grain Sand			N	Moist-wet Perched water at native soil contact Exposed 6" clay pipe w/ N-S orientation at approx. 3.5' bgs in original test pit excavation.

Sheet ____ of ____

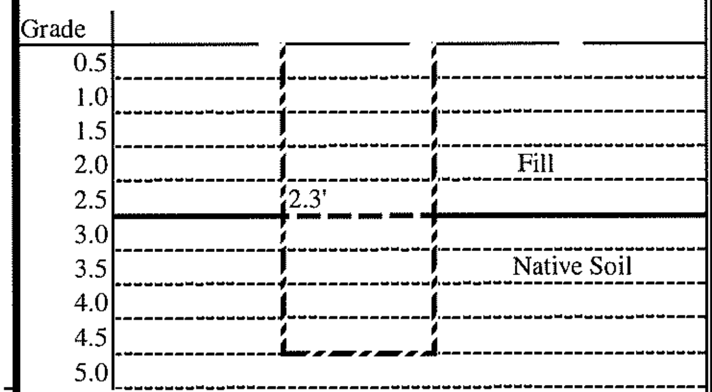
MALCOLM PIRNIE

Project:	Flexo-Transparent RI	Excavation Dates:	10/15/2009
Project No.:	6105-002	Excavation Method:	10/15/2009
Client:	Flexo-Transparent RI	Logged / Checked By:	JPH
Location:	Buffalo	Test Pit Location #:	RI TP - 7

Test Pit Location:



Test Pit Cross Section:



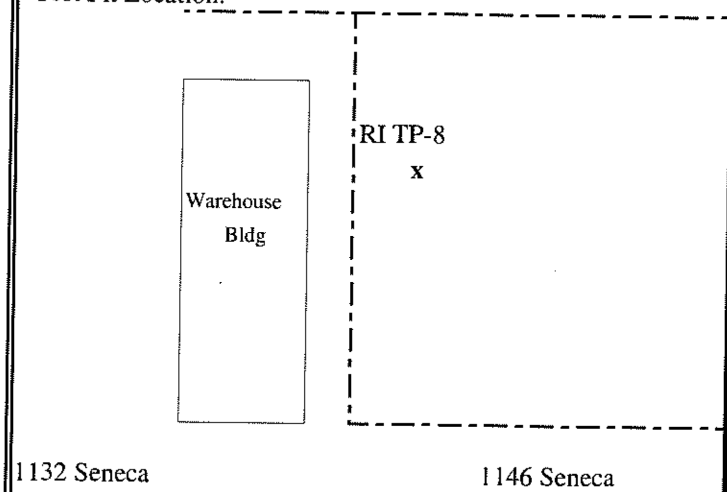
Depth bgs	Soil Description	Graphic Log	Photos Y / N	Samples Y / N	Comments (Include seepage horizons)
0.0 -2.3'	**Fill** as Sand and Gravel, black, fine-med. grain w/ fine - med. Gravel to 1/2" dia., admixed debris as wood, brick and metal, Fe stained interbed			Y	Wet - Sat.
					PID = 0.0 ppm
3.7' - 4.5'	Native soil, Silt dark gray w/ carbonized plant mat'l, grading to dark gray Silt and fine grain Sand			N	Perched water at native soil contact
					Collected soil sample(s)
					RITP-7 (0.0 - 2")
					Soil samples collected for:
					SVOCs/PCBs
					TAL Metals
					Cyanide

Sheet ___ of ___

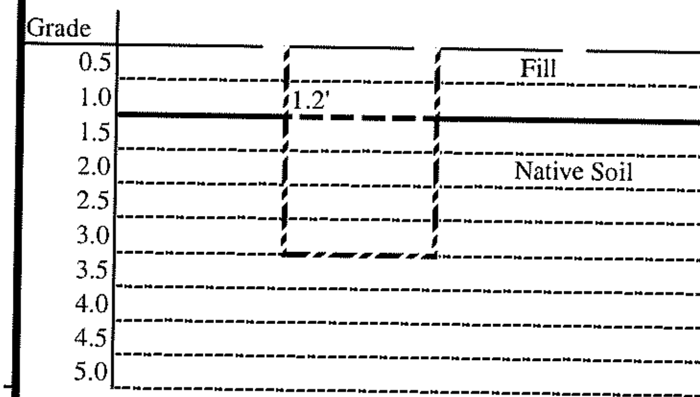
MALCOLM PIRNIE

Project:	Flexo-Transparent RI	Excavation Dates:	10/15/2009
Project No.:	6105-002	Excavation Method:	10/15/2009
Client:	Flexo-Transparent RI	Logged / Checked By:	JPH
Location:	Buffalo	Test Pit Location #:	RI TP - 8

Test Pit Location:



Test Pit Cross Section:



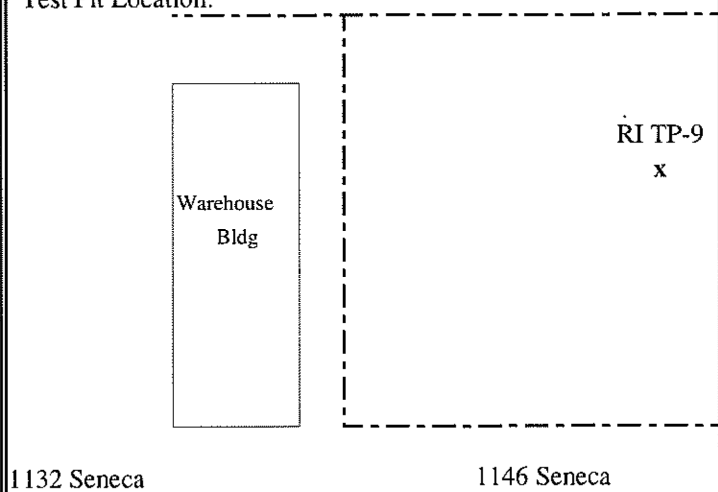
Depth bgs	Soil Description	Graphic Log	Photos Y / N	Samples Y / N	Comments (Include seepage horizons)
0.0 - 1.2'	**Fill** as Sand and Gravel, dark brown, fine-medium grain w/ fine gravel to 1/2" dia., some Fe staining,			Y	Moist - Wet
1.2' - 2.7'	Native soil, Silt lt. brown-yellow, trace- little fine Sand			N	Saturated
					Perched water at native soil contact
					PID = 0.0 ppm
					Collected soil sample(s)
					RITP-8 (0.5 - 1.2')
					Soil samples collected for:
					TCL VOCs
					SVOCs/PCBs
					TAL Metals
					Cyanide

Sheet of

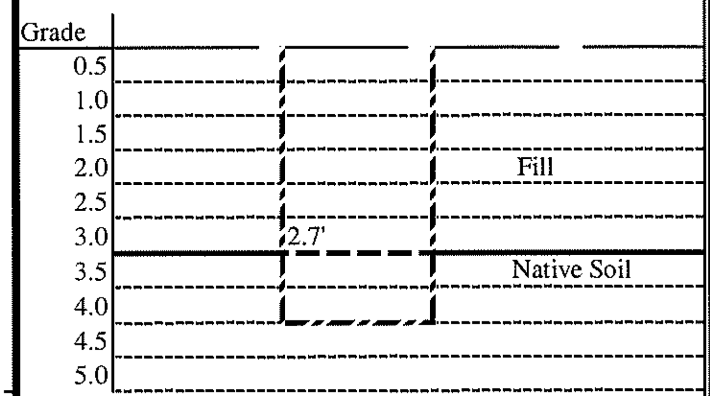
MALCOLM PIRNIE

Project:	Flexo-Transparent RI	Excavation Dates:	10/15/2009
Project No.:	6105-002	Excavation Method:	10/15/2009
Client:	Flexo-Transparent RI	Logged / Checked By:	JPH
Location:	Buffalo	Test Pit Location #:	RI TP - 9

Test Pit Location:



Test Pit Cross Section:

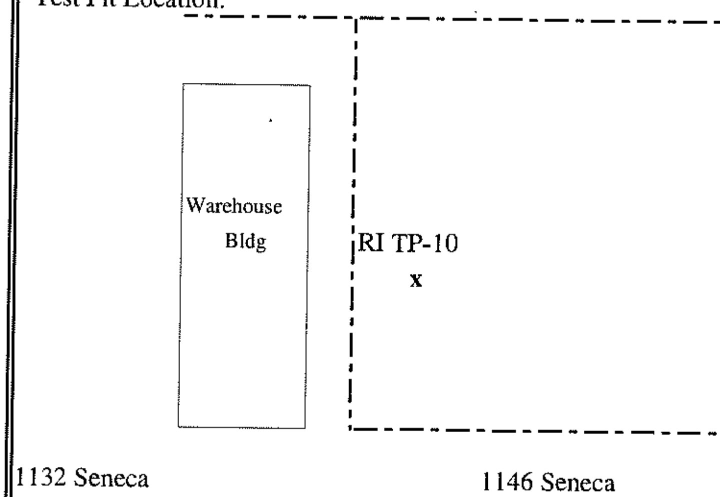


Depth bgs	Soil Description	Graphic Log	Photos Y / N	Samples Y / N	Comments (Include seepage horizons)
0.0 -2.7'	**Fill** as Silt and Sand, dark gray-black, fine grain w/ admixed C&D debris consisting of brick, concrete, plastic and wood, sharp contact w/			Y	
					Moist
2.7' - 3.8'	Native soil, Silt, med. gray, w/ carbonized plant fragments, grading to yellow-brown Sand and Silt, trace Clay.			N	
					Collected soil sample(s)
					RITP-9 (0.0 - 2")
					and ms/msd
					Soil samples collected for:
					SVOCs/PCBs
					TAL Metals
					Cyanide
Sheet of					

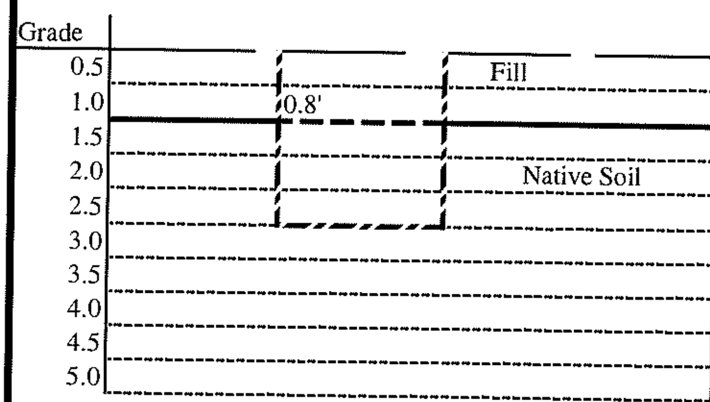
MALCOLM PIRNIE

Project:	Flexo-Transparent RI	Excavation Dates:	10/15/2009
Project No.:	6105-002	Excavation Method:	10/15/2009
Client:	Flexo-Transparent RI	Logged / Checked By:	JPH
Location:	Buffalo	Test Pit Location #:	RI TP - 10

Test Pit Location:



Test Pit Cross Section:



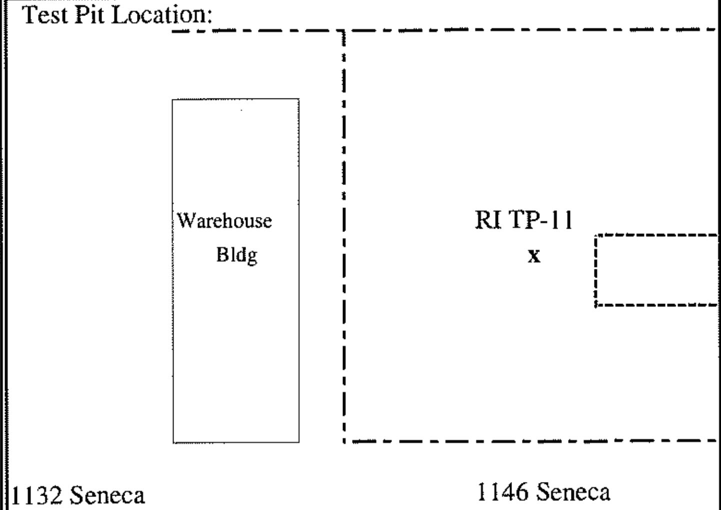
Depth bgs	Soil Description	Graphic Log	Photos Y / N	Samples Y / N	Comments (Include seepage horizons)
0.0 - 0.8'	**Fill** as Silt, dark brown w/ little fine grain Sand, trace Clay			Y	Moist - wet PID = 0.0 ppm
0.8' - 2.5'	Native soil, Silt moderate brown, w/ downward gradation to Silt and Sand matrix, Fe stained mottling				
					Collected soil sample(s)
					RITP-10 (0.0 - 2")
					Soil samples collected for:
					SVOCs/PCBs
					TAL Metals
					Cyanide

Sheet ___ of ___

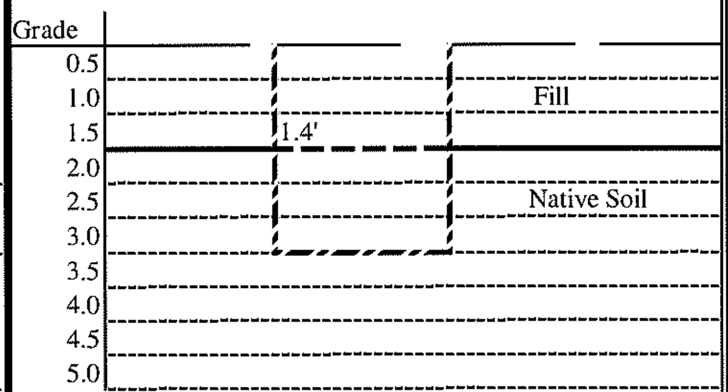
MALCOLM PIRNIE

Project:	Flexo-Transparent RI	Excavation Dates:	10/15/2009
Project No.:	6105-002	Excavation Method:	10/15/2009
Client:	Flexo-Transparent RI	Logged / Checked By:	JPH
Location:	Buffalo	Test Pit Location #:	RI TP - 11

Test Pit Location:



Test Pit Cross Section:



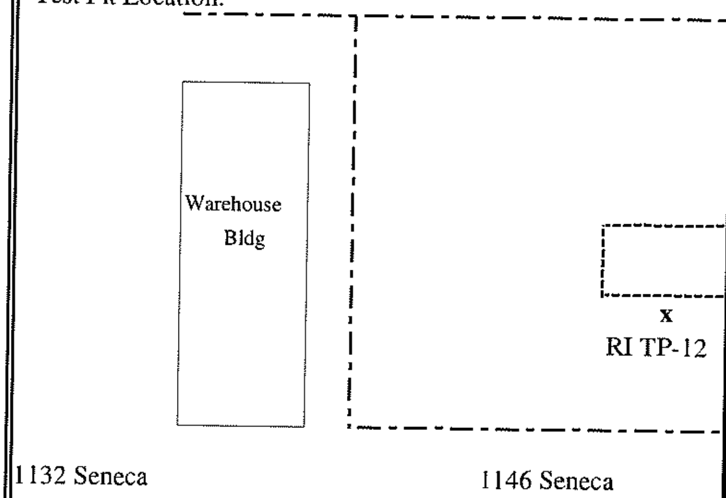
Depth bgs	Soil Description	Graphic Log	Photos Y / N	Samples Y / N	Comments (Include seepage horizons)
0.0 - 1.4'	Fill as Gravel and Silt roadbase to 2" dia., dark gray-brown Silt, trace - little fine Sand, sharp contact w/			N	Dry - Moist PID = 0.0 ppm
1.4' - 2.8'	Native soil, Silt, light brown-orange, mottled, trace-little Sand and Clay			N	Moist

Sheet of

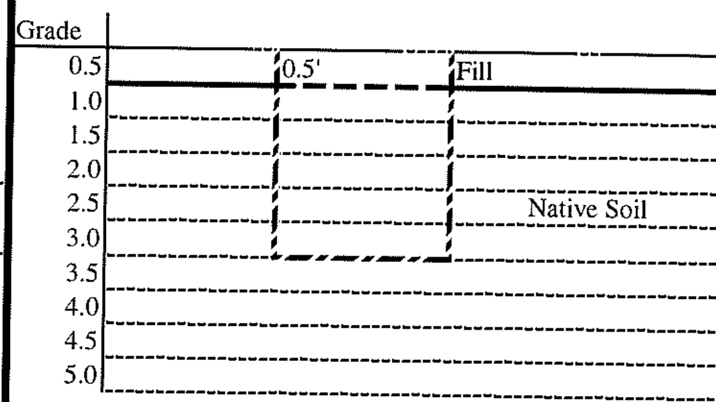
MALCOLM PIRNIE

Project:	Flexo-Transparent RI	Excavation Dates:	10/15/2009
Project No.:	6105-002	Excavation Method:	10/15/2009
Client:	Flexo-Transparent RI	Logged / Checked By:	JPH
Location:	Buffalo	Test Pit Location #:	RI TP - 12

Test Pit Location:



Test Pit Cross Section:



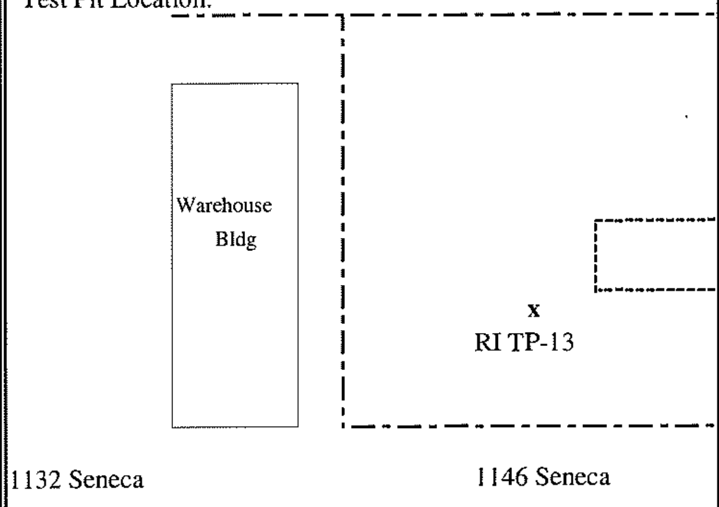
Depth bgs	Soil Description	Graphic Log	Photos Y / N	Samples Y / N	Comments (Include seepage horizons)
0.0 - 0.5'	**Fill** as Silt, dark gray-brown, trace fine Sand, admixed w/ plastic, wood and brick			N	Moist PID = 0.0 ppm
0.5' - 3.0'	Native soil, Silt, light brown-orange, mottled, grading to Clay-Silt @ 2.7' bgs, stiff, dense			N	Moist

Sheet of

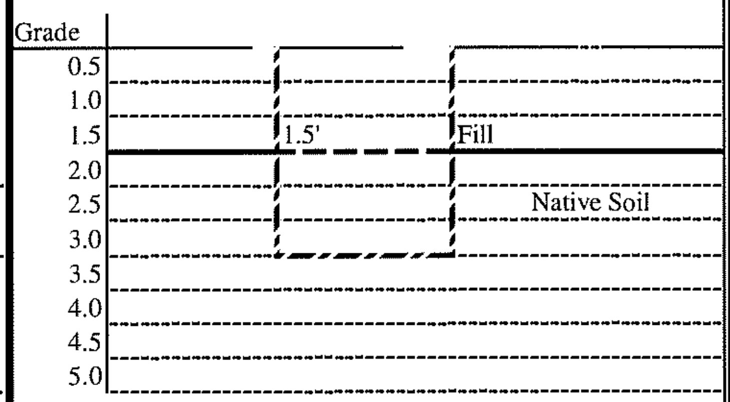
MALCOLM PIRNIE

Project:	Flexo-Transparent RI	Excavation Dates:	10/15/2009
Project No.:	6105-002	Excavation Method:	10/15/2009
Client:	Flexo-Transparent RI	Logged / Checked By:	JPH
Location:	Buffalo	Test Pit Location #:	RI TP - 13

Test Pit Location:



Test Pit Cross Section:



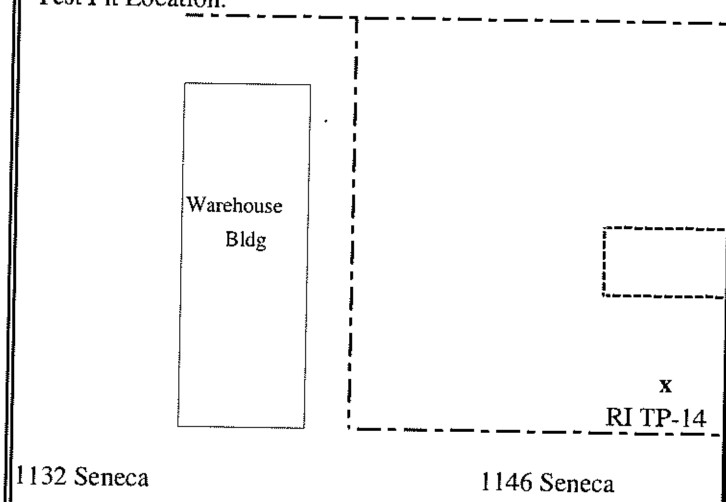
Depth bgs	Soil Description	Graphic Log	Photos Y / N	Samples Y / N	Comments (Include seepage horizons)
0.0 - 1.5'	Fill as Silt, dark gray-brown Silt, trace-little fine Sand and Gravel to 1" dia., sharp contact w/			Y	Moist
					PID = 0.0 ppm
1.5' - 3.2'	Native soil, Clay and Silt buff brwn-red, stiff, dense			N	Moist
					Collected soil sample(s)
					RITP-13 (0.0 - 2")
					Soil samples collected for:
					SVOCs/PCBs
					TAL Metals
					Cyanide

Sheet of

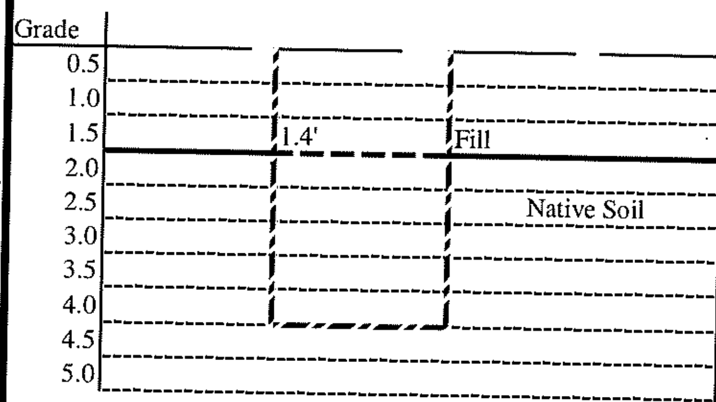
MALCOLM PIRNIE

Project:	Flexo-Transparent RI	Excavation Dates:	10/15/2009
Project No.:	6105-002	Excavation Method:	10/15/2009
Client:	Flexo-Transparent RI	Logged / Checked By:	JPH
Location:	Buffalo	Test Pit Location #:	RI TP - 14

Test Pit Location:



Test Pit Cross Section:



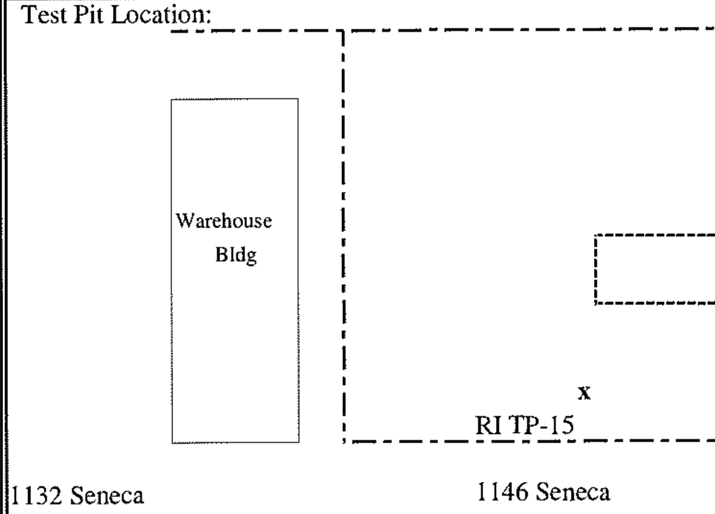
Depth bgs	Soil Description	Graphic Log	Photos Y / N	Samples Y / N	Comments (Include seepage horizons)
0.0 - 1.4'	**Fill** as Silt, dark gray-brown , trace -little fine Sand and Gravel, sharp contact w/			Y	Moist
					PID = 0.0 ppm
1.4' - 2.4'	Native soil, Sand, brown-orange, fine grain, trace Silt sharp contact w/			N	Moist
2.4' - 3.8'	Clay, buff-brown, stiff, dense, trace Silt				
					North - South trending 2" dia soil filled steel pipe identified. No PID measurements recorded
					Collected soil sample(s)
					RITP-14 (0.0 - 2")
					Soil samples collected for:
					SVOCs/PCBs
					TAL Metals
					Cyanide

Sheet of

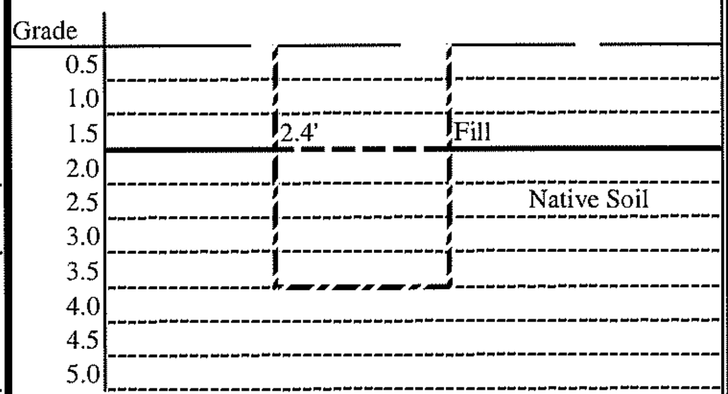
MALCOLM PIRNIE

Project:	Flexo-Transparent RI	Excavation Dates:	10/16/2009
Project No.:	6105-002	Excavation Method:	10/16/2009
Client:	Flexo-Transparent RI	Logged / Checked By:	JPH
Location:	Buffalo	Test Pit Location #:	RI TP - 15

Test Pit Location:



Test Pit Cross Section:



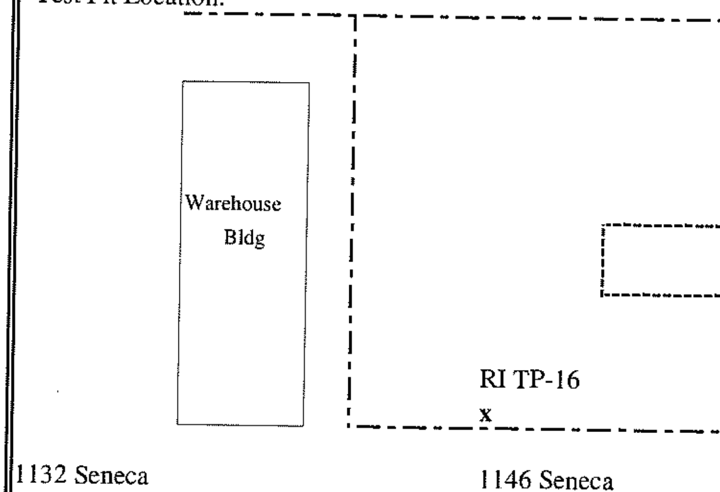
Depth bgs	Soil Description	Graphic Log	Photos Y / N	Samples Y / N	Comments (Include seepage horizons)
0.0 - 0.7'	**Fill** as Slag and Gravel to 2" dia.			N	Moist
					PID = 0.0 ppm
0.7' - 2.4'	Fill as Gravel and Silt, 2-3" dia. cobbles w/ dark gray-black Silt, sharp contact w/			N	Moist
2.4' - 3.4'	Native soil, Silt and Sand, light brown, fine, trace Clay				

Sheet ____ of ____

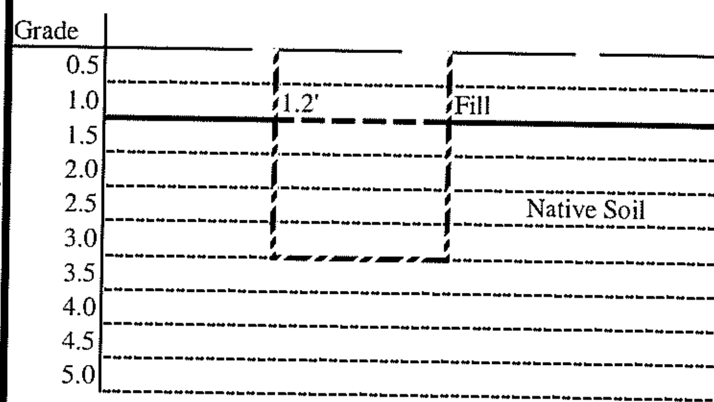
MALCOLM PIRNIE

Project:	Flexo-Transparent RI	Excavation Dates:	10/16/2009
Project No.:	6105-002	Excavation Method:	10/16/2009
Client:	Flexo-Transparent RI	Logged / Checked By:	JPH
Location:	Buffalo	Test Pit Location #:	RI TP - 16

Test Pit Location:



Test Pit Cross Section:



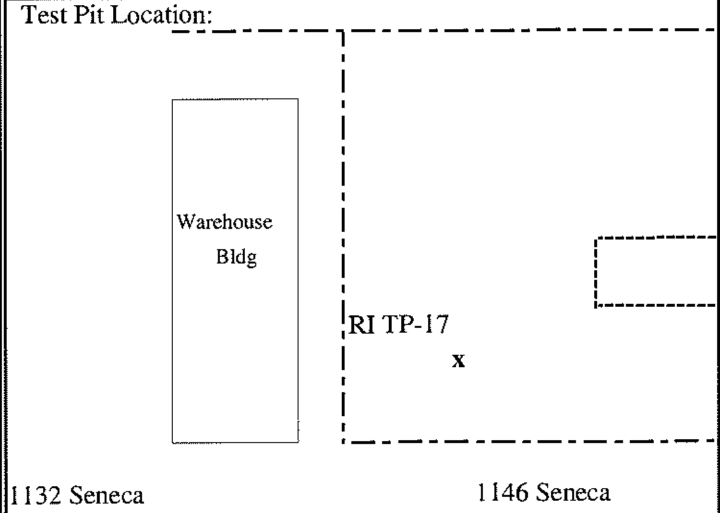
Depth bgs	Soil Description	Graphic Log	Photos Y / N	Samples Y / N	Comments (Include seepage horizons)
0.0 - 1.2'	**Fill** as Silt, dark gray-brown, trace fine Sand admixed w/ plastic, wood, and clay tile, sharp contact w/			N	Moist PID = 0.0 ppm
1.5' - 3.2'	Native soil, Silt lt. brown, trace Sand and Clay			N	

Sheet *of*

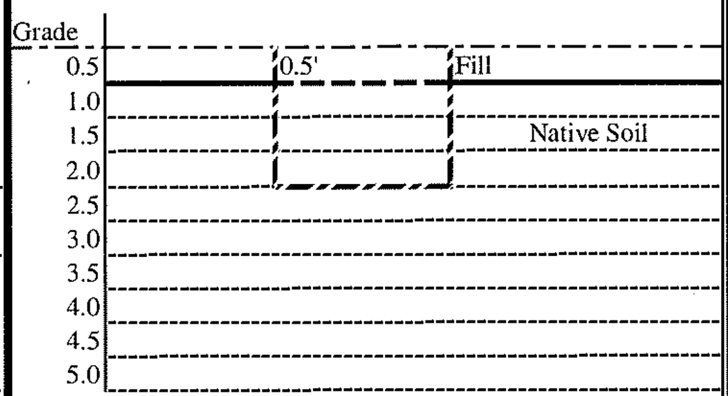
MALCOLM PIRNIE

Project:	Flexo-Transparent RI	Excavation Dates:	10/16/2009
Project No.:	6105-002	Excavation Method:	10/16/2009
Client:	Flexo-Transparent RI	Logged / Checked By:	JPH
Location:	Buffalo	Test Pit Location #:	RI TP - 17

Test Pit Location:



Test Pit Cross Section:



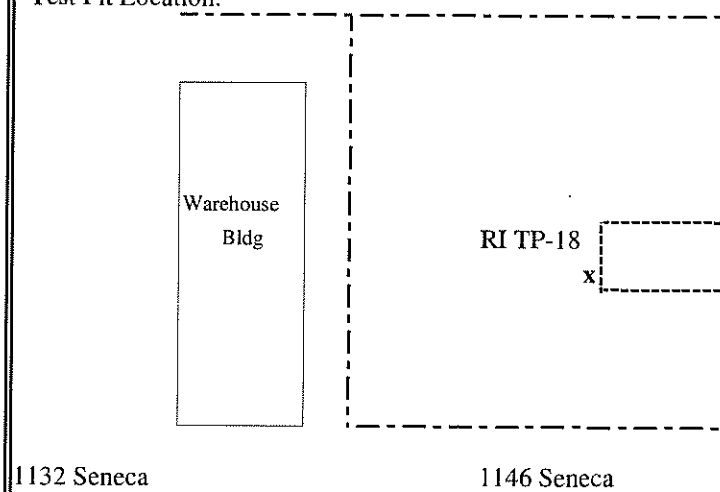
Depth bgs	Soil Description	Graphic Log	Photos Y / N	Samples Y / N	Comments (Include seepage horizons)
0.0 - 1.2'	**Fill** as Silt, dark gray, little fine Gravel and crushed stone, sharp contact w/			N	Moist
					PID = 0.0 ppm
1.5' - 3.2'	Native soil, Silt lt. yellow-brown, trace fine Sand and Clay			N	

Sheet ____ of ____

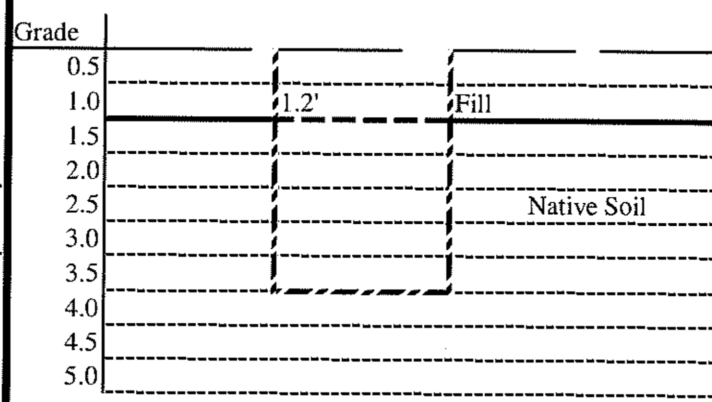
MALCOLM PIRNIE

Project:	Flexo-Transparent RI	Excavation Dates:	10/16/2009
Project No.:	6105-002	Excavation Method:	10/16/2009
Client:	Flexo-Transparent RI	Logged / Checked By:	JPH
Location:	Buffalo	Test Pit Location #:	RI TP - 18

Test Pit Location:



Test Pit Cross Section:



Depth bgs	Soil Description	Graphic Log	Photos Y / N	Samples Y / N	Comments (Include seepage horizons)
0.0 - 1.2'				N	Moist
	Fill as Silt, dark gray-brown, trace-little fine Sand and gravel admixed w/brick and wood, sharp contact w/				
					PID = 0.0 ppm
1.2' - 3.4'	Native soil, Silt , yellow-brown, trace-little Sand, trace Clay, gradation downward to Clay-silt			Y	
					RITP-18 (0.5 - 1.0')
					Soil samples collected for:
					TCL VOCs
					SVOCs/PCBs
					TAL Metals
					Cyanide
					Collected ms/msd

Sheet of

MALCOLM PIRNIE

OVERBURDEN BOREHOLE LOG

Project :	Flexo RI Investigation	Surface Elev.:		Borehole No.:	RIB- 1
		Ref. Elev.:		Date Started:	10/ 17 /2009
Project No.:	6105-002	Contractor:	Earth Dimensions, Inc.	Date Finished:	10/ 17/2009
Client:	Flexo Transparent, Inc.	Driller:		Drilling Method:	Direct push
Location:	Buffalo, NY	Rig Type:	Deitrich D-50	Water Depth (bgs):	
				Logged By:	JPH

Depth (BGS)	Sample ID	Sample Type	Blows / 6 inches	Recovery / Length (ft.)	Soil Classification / Symbol (include depths)	Lithology Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, PID measurments	Moisture (dry, moist, wet, saturated)	PID Scan (ppm)	PID Headspace (ppm)
0						1.7 Fill as sand and gravel dark gray-black, f-med w/ fine crushed stone gravel,			
1				3.4			M-W	0.0	—
2						1.1 Silt olive-gray, trace fine sand, grading to			
3				4.0		0.5 Clay, lt gray-brown, stiff, w/ trace - little silt as thin laminae	M	0.0	
4						3.5 Clay, lt brown-gray, as above w/ silt-sand laminae			
5				3.5			M	0.0	
6									
7				4.0					
8						Installed 1" dia PVC well			
9						(3.5') Riser +2.5' - 1' bgs			
10						(7') Screen 1 - 8' bgs			
11									

Notes:

Field Logsmod Flexo.xlsB-1

MALCOLM PIRNIE

OVERBURDEN BOREHOLE LOG

Project : Flexo RI Investigation
Project No.: 6105-002
Client: Flexo Transparent, Inc.
Location: Buffalo, NY

Surface Elev.:
Ref. Elev.:
Contractor: Earth Dimensions, Inc.
Driller:
Rig Type: Deitrich D-50

Borehole No.: RIB- 2
Date Started: 10/ 19 /2009
Date Finished: 10/ 19 /2009
Drilling Method: Direct push
Water Depth (bgs):
Logged By: JPH

Depth (BGS)	Sample ID	Sample Type	Blows /6 inches	Recovery / Length (ft.)	Soil Classification / Symbol (include	Lithology Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture	Moisture (dry, moist, wet, saturated)	PID Scan (ppm)	PID Headspace (ppm)
0			--	3.1		1.1 Fill as GRAVEL AND SAND, gray-black, fine grain, w/ trace Silt sharp contact w/		0.0	
1			--			0.7 Silt dark gray-black, trace fine SAND and Clay, grading to		0.0	
2			--	4.0		1.3 Clay gray-brown olive, mottled, stiff, w/ silt-SAND laminae		0.0	
3			--			3.5 Clay brown-olive, stiff w/ little-some fine SAND AND Silt as laminae		0.0	
4			--	3.5		Installed 1" PVC well +2.5' stickup		0.0	
5			--			Riser 0.0-1.0' bgs Screen 1.0'-8' bgs		0.0	
6			--	4.0				0.0	
7			--					0.0	

Notes:

MALCOLM PIRNIE

OVERBURDEN BOREHOLE LOG

Project : Flexo RI Investigation	Surface Elev.:	Borehole No.:	RIB- 3
	Ref. Elev.:	Date Started:	10/19/2009
Project No.: 6105-002	Contractor: Earth Dimensions, Inc.	Date Finished:	10/19/2009
Client: Flexo Transparent, Inc.	Driller:	Drilling Method:	Direct push
Location: Buffalo, NY	Rig Type: Deitrich D-50	Water Depth (bgs):	
		Logged By:	JPH

Depth (BGS)	Sample ID	Sample Type	Blows /6 inches	Recovery / Length (ft.)	Soil Classification / Symbol (include	**Lithology Description and Remarks** *Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture*	Moisture (dry, moist, wet, saturated)	PID Scan (ppm)	PID Headspace (ppm)
0			--	3.2 / 4.0		0.6 Concrete	—	—	
						0.3 Fill black SAND, fine grain w/ wood	W	0.0	
1			--			0.4 SAND gray, fine grain, little silt			
						1.9 Clay lt brown-olive, stiff, trace - little silt w/ thin fine grain SAND parting	M	0.0	
2			--			terminated boring @ 4' bgs			
3			--			Installed 5' screen +1 - 4' bgs			
4			--			11:00 Collected soil for PCB analysis			
5			--						
6			--						
7			--						

Notes:

MALCOLM PIRNIE

OVERBURDEN BOREHOLE LOG

Project : Flexo RI Investigation
Project No.: 6105-002
Client: Flexo Transparent, Inc.
Location: Buffalo, NY

Surface Elev.:
Ref. Elev.:
Contractor: Earth Dimensions, Inc.
Driller:
Rig Type: Deitrich D-50

Borehole No.: RIB- 4
Date Started: 10/ 9 /2009
Date Finished: 10/ 9 /2009
Drilling Method: Direct push
Water Depth (bgs):
Logged By: JPH

Depth (BGS)	Sample ID	Sample Type	Blows /6 inches	Recovery / Length (ft.)	Soil Classification / Symbol (include	Lithology Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture	Moisture (dry, moist, wet, saturated)	PID Scan (ppm)	PID Headspace (ppm)
0			--	1.1 / 2.0		1.1 Fill as SAND and Silt gray, fine grain w/ concrete	W	0.0	
1			--				M	0.0	
2			4 -- 2	.7 / 2.0		0.7 Fill as above w/ wood and gravel	S	0.0	
3			9 -- 3					–	
4		2 3	--	1.5 / 2.0		0.2 Fill A/A 0.4 SAND dark gray, fine slight odor 0.9 Clay med gray/brown stiff, dense w/ trace silt	S M	0.0	
5		4 6	--						
6		2 6	--	2.0 / 2.0		2.0 Clay red-brown, stiff, dense moderate plasticity	M	0.0	
7		7 11	--			Installed 1" screen 3 - 9' bgs			

Notes:

MALCOLM PIRNIE

OVERBURDEN BOREHOLE LOG

Project: Flexo RI Investigation	Surface Elev.:	Borehole No.: RIB- 5	
	Ref. Elev.:	Date Started: 10/19/2009	13:45 - 14:15
Project No.: 6105-002	Contractor: Earth Dimensions, Inc.	Date Finished: 10/19/2009	
Client: Flexo Transparent, Inc.	Driller:	Drilling Method: Direct push	
Location: Buffalo, NY	Rig Type: Deitrich D-50	Water Depth (bgs):	
		Logged By: JPH	

Depth (BGS)	Sample ID	Sample Type	Blows / 6 inches	Recovery / Length (ft.)	Soil Classification / Symbol (Include depths)	Lithology Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, PID measurements	Moisture (dry, moist, wet, saturated)	PID Scan (ppm)	PID Headspace (ppm)
0				3.0 / 4.0		0.0 - 0.5 Concrete slab 0.5 - 0.9 Fill as SAND, brown-black, fine w/ red brick 1.6 SAND lt brown-gray, fine grain, w/ tr-little silt	M	0.0	
1									
2									
3							M	0.0	
4				2.4 / 4.0		2.4 SAND (Till) lt gray-brown, fine, w/ little fine-crs, sub-[illegible] gravel, tr-little silt			
5							W	0.0	
6							S		
7								0.0	
8				1.8 / 1.8		1.8 SAND (Till) lt gray-brown, fine, trace-little f-crs gravel and silt spoon refusal @ 9.8' bgs			
9								0.0	
10									
11									

Notes: Collected soil sample @ 0.5 - 2.0' bgs

Field Logsmod Flexo.xlsB-1

Borehole Log Summary Form
Supplemental IRM Pre-Characterization
Flexo Transparent Site
1132 Seneca Street, Buffalo, NY

Sample Cell	Boring #	Fill Thickness	Max PID	PID Depth	Depth Drilled	Depth to water	Description/Comments
12/16/09 0840 A MS/MSD A-L	SBA1	1.2'	0	—	3.0/4.0	—	0-0.5 Tan-gray Sand + Gravel Fill, tr. Silt 0.5-1.2 Black Cinders, Slag + Gravel
	SBA2	2.0	0	—	3.0/4.0	—	Fill: Gray Sand + Gravel to 0.4' Black Gravel, Cinders + Slag to 2.0'
	SBA3	1.1	0	—	3.0/4.0	—	Fill: Gray-brn Sand + Gravel, tr. rusty metal fragments to 0.7'; Black Cinders + Slag w/more sheet metal fragments to 1.1'
	SBA4	1.0	0	—	3.0/4.0	—	Fill: Black Cinders Slag and Gravel
12/15/09 1320 B	SBB1	1.8	0	—	3.2/4.0	—	Brn Gravel + Slag Blk Cinders + Slag at 1.0'
	SBB2	1.3	0	—	2.0/4.0	—	Dk Gray Gravel + Slag, tr. Cinders
	SBB3	1.2	0	—	1.5/4.0	—	Gray-Blk Gravel w/Cinders, Cement Block Fragments
	SBB4	1.0	0	—	1.6/4.0	—	Gray-Blk Gravel + Cinders
1055 12/15/09 C Dup-L	1 SBC1	1.5	0	—	3.0/4.0	—	Fill: Gray-brn Gravel + F/c Sand tr. Silt Cinders + Slag 0.5-1.5
	2 SBC2	2.0	0	—	3.0/4.0	—	Fill 0-0.5 Clay + Silt, reworked native 0.5-2.0 Black Cinders, Slag, Brick + Gravel
	3 SBC3	1.0	0	—	2.0/4.0	—	Fill: Gravel w. Silt, Dk gray-black Cinders + Slag at 0.5
	4 SBC4	1.0	0	—	2.0/4.0	—	Fill: Gray-brn Gravel + F/c Sand tr. Brick
1020 12/15/09 D	SBD1	1.9'	0	—	3.0/4.0	—	Fill-Gravel + Sand + Silt w/Clay Chunks, reworked native Soils, Clay 0.5-0.9 Gravel/Cinders + Sand 0.9-1.9 Dk Gray
	SBD2	1.3	0	—	3.0/4.0	—	Fill-Gravel and Sand, little Silt. Cinders + Slag at 0.6' to 1.3'
	1 SBD3	1.5'	0	—	2.5/4.0	—	Fill Gray-blk Gravel + F/c Sand, 1. ~~Little~~ Slag
	SBD4	0.6'	0	—	2.5/4.0	—	Fill-Gray-tan Gravel + Sand, tr. Slag, tr. Brick, Wood + organics at 0.5' No Lower Sample

Borehole Log Summary Form
Supplemental IRM Pre-Characterization
Flexo Transparent Site
1132 Seneca Street, Buffalo, NY

Sample Cell	Boring #	Fill Thickness	Max PID	PID Depth	Depth Drilled	Depth to water	Description/Comments
12/16/09 E 0910	SBE1	1.6	0	—	3.0/4.0	—	Gray Gravel & Sand to 0.3' Black Cinders Gravel & Slag tr. Wood
	SBE2	1.2	0	—	3.3/4.0	—	Black Cinders, Gravel & Slag
	SBE3	1.7	0	—	3.5/4.0	—	Gray-brn Sand & Gravel to 0.3' Black Cinders & Slag to 1.7
	SBE4	2.0	0	—	3.5/4.0	—	Tan-Gray Gravel & Sand (crushed stone) to 0.5' Black Gravel, Cinders, tr-little Silt, Slag, Petro odor (SEE BACK)
12/17/09 1400 F	SBF1	1.0	0	—	~~1.3~~ 4.0	—	Gray-Black Gravel, Cinders & f/c Sand
	SBF2	2.0	14.4	1.0	3.0/4.0	-	Same as ↑
	SBF3	2.0	0	—	2.6/4.0	—	Gray Gravel & Sand (crushed stone) to 0.5 Gray-Blk Cinders/Slag & Brick
	SBF4	1.0	—		2.4/4.0	—	Dk gray Gravel, some f/c Sand, tr. Silt, tr. Wood @ 0.4'
12/15/09 1130 G	SBG1	1.0	0	—	1.5/4.0	—	Gray-tan Gravel, little c-s Sand, tr. Silt DK Gray-blk @ 0.5', tr. Cinders, little Silt, tr. Brick
	SBG2	1.0	0	—	1.5/4.0	—	Gray-tan Gravel & Sand, tr. Silt 0.5-1.0 Brick, Cinders, Slag
	SBG3	1.8	0	—	2.0/4.0	—	Fill-Gray Gravel, little Sand, tr. Clay chunks (crushed native) 0.7-1.8 Gray-black Cinders, Gravel, brick, f/c Sand
	SBG4	1.5	0	—	2.5/4.0	—	Gray Gravel little Sand (crushed stone) 0.5 - DK gray-black Gravel, Cinders, Slag
12/15/09 0940 H	SBH1	1.5'	0	—	3.2/4.0	—	Fill: Gravel & f/c Sand, lit Silt. Cinders & Slag w/ iron stain at 1.0-1.5
	SBH2	1.0	0	—	3.0/4.0	—	Fill: Brn-tan Gravel & Sand to 0.3' DK gray-black Gravel, Cinders & Slag to 1.0', iron stain @ 0.7-1.0'
	SBH3	2.3'	0	—	4.5/6.0	—	Fill. Brn Gravel & Sand, RR tie from 1-1.5
	SBH4	0.5'	0	—	3.2/4.0	—	Fill: Brn Gravel & Sand to 0.3'. Organics (wood) and Silty Gravel 0.3'-0.5'

Borehole Log Summary Form
Supplemental IRM Pre-Characterization
Flexo Transparent Site
1132 Seneca Street, Buffalo, NY

Sample Cell	Boring #	Fill Thickness	Max PID	PID Depth	Depth Drilled	Depth to water	Description/Comments
12/16/09 0950 I	SBI1	2.3	0	–	3.5/4.0	–	Gray-tan Gravel + Sand to 0.4'. Black-DkGray Gravel, Silty from 1-1.5
	SBI2	2.0	0	–	3.5/4.0	~1.8	Gray Gravel + Sand to 0.6'. Black Cinders, Gravel, tr. Brick
	SBI3	2.5	0	–	2.5/4.0	~1.6'	Tan-Gravel + Sand little Silt. 0.6' Black Gravel + Sand, Slag
	SBI4	1.6	0	–	2.7/4.0	~1.0'	DK gray Gravel + Sand w/Slag + Cinders
12/15/09 1255 J	SBJ1	1.3	0	–	2.5/4.0	–	Gray crushed Stone, little Silt 0.5-1.3 irreg. black Gravel + Cinders
	SBJ2	2.0	0	–	2.5/4.0	–	DK-Gray Gravel and ltl Sand/Cinders, tr. Silt, Wood (ROTTE!) at 1.5'
	SBJ3	1.5	24	1.4	2.5/4.0	–	DK Gray Gravel, ltl Sand + Silt, tr. organics, 0.7 Cinders + Slag (some sme) Thin Organic layer at 1.4'
	SBJ4	1.0	0	–	3.0/4.0	–	Gray Gravel over Black Cinders Gravel to 0.7' Cinders to 1.0
0800 12/15/09 K K-4 MS/MSD	SBK1	2.0	0	–	2.8/4.0	–	Fill: Gravel + Sand, brn-blk, Cinders + Slag.
	SBK2	0.3'	0	–	3.5/4.0	–	Fill: Gravel + Sand, tr. Brick
	SBK3	1.5'	0	–	3.0/4.0	–	Fill; Gravel + Sand, brn-blk
	SBK4	0.2'	0	–	3.0/4.0	–	6" Concrete, Fill Brn - Blk Gravel, Cinders + Sand No lower Sample
0820 DUP-U L 12/15/09	SBL1	2.0'	0	–	3.5/4.0	– 2" HSP	Sand + Gravel Fill, Brn - Blk. ~~Brn~~ Stone @1.6; Cinders,
	SBL2	0.3'	0	–	3.5/4.0	–	Concrete 6". Fill ~ 4" Sand + Gravel Brn - Black
	SBL3	1.0'	0	–	3.0/4.0	–	Rec. 3'. Fill is brn Sand + Gravel "Cleaner" than other samples. Gray blk @ 0.8'
	SBL4	0.5' below concrete	0	–	3.5/4.0	–	6" Concrete. 6" of Fill. Brn - DK Gray Sand + Gravel. No lower Sample

Borehole Log Summary Form
Supplemental IRM Pre-Characterization
Flexo Transparent Site
1132 Seneca Street, Buffalo, NY

Sample Cell	Boring #	Fill Thickness	Max PID	PID Depth bgs	Depth Drilled bgs	Depth to water bgs	Description/Comments
1505 MU 1510 ML 12/14/09 M	SBM1	1.5	0	—	4.0	—	Concrete ~ 2" Fill to 1.5' bgs Gray - Gravel + f/c Sand
	SBM2	0.2	0	—	4.0	—	Concrete ~~0.5~~ +0.0.5' Fill to 0.7' bgs No Lower Sample
	SBM3	2.0	0	—	4.0	—	Fill to 2' bgs Gravel, concrete + Sand
	SBM4	~~0.4~~ 0.3'	0	—	4.0	—	Concrete to 0.5' Fill to 0.5' bgs Fill - Gray - black Gravel + f/c Sand No Lower Sample
1415 NU 1420 NL 12/14/09 N	SBN1	1.5	0	—	4.0	—	Fill to 1.5' - Gravel & f/c Sand
	SBN2	0.3' below conc	0	—	4.0	—	Concrete 0.5' then 0.3' of Fill Gravel + Sand - No Lower Sample
	SBN3	1.5'	23.1	1.0	4.0		Fill to 1.5' Gravel + Sand Wood 0.5-1.2' (RRT?)
	SBN4	0.4'	0	—	4.0		Fill to 0.4' Gravel + Sand Fill - No Lower Sample
1255 OU 1300 OL 12/14/09 O	SBO1	1.0 below concrete	0	—	4.0		concrete 6" Fill ~~to~~ to 1.5' bgs
	SBO2	0.2' below conc	0.3	0.7'	4.0'		~~Concrete fill Fill to 2.5' Concrete 2.5 to 4'~~ 1' concrete, Gravel fill to 1.2' bgs
	SBO3	1.0 below concrete	0.3	0.5'	4.0	—	Gravel Fill, f/c Sand
	SBO4	1.8 between conc	23.0 in asphalt		4.0		Concrete to 5" Fill to 2.3' Concrete to 4' - Refusal 2nd Hole broke through tank
1040 PU 1045 PL 12/14/09 P	SBP1	2'	3.2	0.5'	4'	—	2.8' Rec. DK Gray Gravel + CS Sand
	SBP2	4.3 (3.3' thick)	0	—	4.5'	—	~~2.5~~ 6" concrete obstruction @ 2' DK Gray Gravel
	SBP3	2.6'	0.8	2.3'	6'	—	No ~~???~~, 2' crushed stone Black silt, Gravel + Wood
	SBP4	1.2'	0	—	4'	—	3' Rec Gravel, blk, f/c Sand Asphalt on top

Table ??-??
Borehole Summary
Supplemental IRM Pre-Characterization
Flexo Transparent Site
1132 Seneca Street, Buffalo, NY

Sample Cell	Boring #	Date Drilled	Fill Thickness[1] (ft.)	Average Fill Thickness (ft.)	Max PID (ppm)	PID Depth (ft. BGS)	Depth Drilled (ft. BGS)	Approx. Depth to Water (ft. BGS)	Fill Description/Comments
	SB-1146 D1-1	3-18	1.2		0		2.6/4.0		0-1.2 Fill Black slag, [illegible] brick wet
1146 D1					0				1.2-2.6 silty clay med BRN
	SB-1146 D1-2	3-18	1.4'		0		2.4/4.0		0-1.4 Fill black, Red (brick) white wet 1.4-2.4 silty clay med BRN, moist
					0				
	SB-1146 H1-1	3-18	1.4		0		2.7/4.0		0-1.4 Fill Black w/Brick Red gravel, slag - wet
1146 H1					0				1.4-2.7 clay-silty, Med BRN
	SB-1146 H1-2	3-18	2.0		0		2.3/4.0		0-0.6 Fill Black silt + gravel wet 0.6-1.5 Fill Black + Brick Red slag gravel wet
					0				1.5-2.0 wood-Lumber 2.0-2.3 silty clay brown/gray damp
0933	SB-1146 K1-1	3-18	1.7		0		3.1/4.0		Fill 0 to 1.7' Black/Brick Red slag + gravel wet
1146 K1					0				1.7-3.1 clay-silty [illegible] LT gray
0925	SB-1146 K1-2	3-18	1.6		0		2.6/4.0		0-0.5 Fill Black gravel wet 0.5-1.6 Fill Black + Brick Red gravel wet
					0				1.6-2.6 silty clay med BRN. moist
1005	SB-146L1-1	3-18	1.4'		0		2.5/4.0		0-1.4 Fill Black, gravel, slag C+D, wet
146 L1					0				1.4-2.5 silty clay gray to med BRN moist
	SB-146L1-2	3-18	1.3		0		2.2/4.0		0-1.3 Fill, Black, Brick Red slag gravel, silt wet
					0				1.3-2.2 clay silty, Med BRN, moist

Table ??-??
Borehole Summary
Supplemental IRM Pre-Characterization
Flexo Transparent Site
1132 Seneca Street, Buffalo, NY

Sample Cell	Boring #	Date Drilled	Fill Thickness[1] (ft.)	Average Fill Thickness (ft.)	Max PID (ppm)	PID Depth (ft. BGS)	Depth Drilled (ft. BGS)	Approx. Depth to Water (ft. BGS)	Fill Description/Comments
1146 O1	SB-1146 O1-1	3-18	0.7		0		3.5/4.0		0-0.7 Fill Gravel, sand, crushed stone Black wet 0.7-3.5 silty clay - Md Brown moist
	SB-1146 O1-2	3-18	0.6		0		3.0/4.0		0-0.6 Topsoil + Fill, Black, wet, gravel sand, silt, brick. 0.6-1.1 clay, Dk gray silty 1.1-3.0 silty clay med Brn.
1146 P1	SB-1146 P1-1	3-18	1.1		0	—	3.2/4.0		0-0.2 topsoil 0.2-0.4 gravel + crushed stone wet 0.4-1.1 Fill, Black, gravel, brick, sand 1.1-3.2 silty clay - tan moist
	SB-1146 P1-2	3-18-18	0.7		0	—	3.2/4.0		0-0.7 Fill black gravel + slag wet. PID 0.7 to 3.2 silty clay, med brn moist
Q 1100	SB-Q-1	3-18	0.2		0 0		3.5/4.0	0.6 concrete	0-0.2 Fill, gravel, slag Black. trace brick, red 0.2-3.5 silty clay Md gray w/ tan mottling silty moist
1040	SB-Q-2	3-18		—	0 0		3.9/4.0	0.6 concrete	concrete 0.6 thick 0-0.1 Fill, Gravel Black wet 0.1-3.9 clay md brn moist

NO Q-1 TO SAMPLE

Table ??-??
Borehole Summary
Supplemental IRM Pre-Characterization
Flexo Transparent Site
1132 Seneca Street, Buffalo, NY

Sample Cell	Boring #	Date Drilled	Fill Thickness[1] (ft.)	Average Fill Thickness (ft.)	Max PID (ppm)	PID Depth (ft. BGS)	Depth Drilled (ft. BGS)	Approx. Depth to Water (ft. BGS)	Fill Description/Comments
	SB-U-1	3-18	1.8		0		2.5/4.0		0-1.8 Fill gravel w/silt Black loose
	1148 HRS			—	0				1.8-2.5 clay silty BRN.
	SB-U-2	3-18	1.8		0		2.7/4.0		0-1.8 Fill gravel. ~~concrete~~ slag cod Brick Black, wet
U	1130 HRS				0	0.1' Black tod			1.8-2.7 silty clay ~~mgs~~ BRN Black stained upper 0.2'
	SB-U-3	3-18	1.6				2.8/4.0		0-1.6 Fill gravel Black wet
	1146 HRS			—					1.6-2.8 clay silty-Brown moist
1 2	SB-U-4	3-18	1.5		0		2.4/4.0		0-1.5 Fill gravel, crush stone cod Black wet.
3 4	1125 HRS				0	0.1' Black tod			1.5-2.4 clay silty, Black stained in upper 0.4' then BRN moist

Table ??-??
Borehole Summary
Supplemental IRM Pre-Characterization
Flexo Transparent Site
1132 Seneca Street, Buffalo, NY

Sample Cell	Boring #	Date Drilled	Fill Thickness[1] (ft.)	Average Fill Thickness (ft.)	Max PID (ppm)	PID Depth (ft. BGS)	Depth Drilled (ft. BGS)	Approx. Depth to Water (ft. BGS)	Fill Description/Comments

BGS - Below Ground Surface
NA - Not Applicable
[1] Fill thickness includes asphalt or concrete at surface. Locations indicated with * after Boring ID.
* - Fill thickness includes asphalt or concrete at surface.

MALCOLM PIRNIE

OVERBURDEN MONITORING WELL SHEET

WELL NO. RIB-1

PROJECT Flexo Remedial Inv. START DATE 10/19/09 END DATE 10/19/09

PROJECT NO. 6105-002 FIELD GEOLOGIST J.P. Hilton

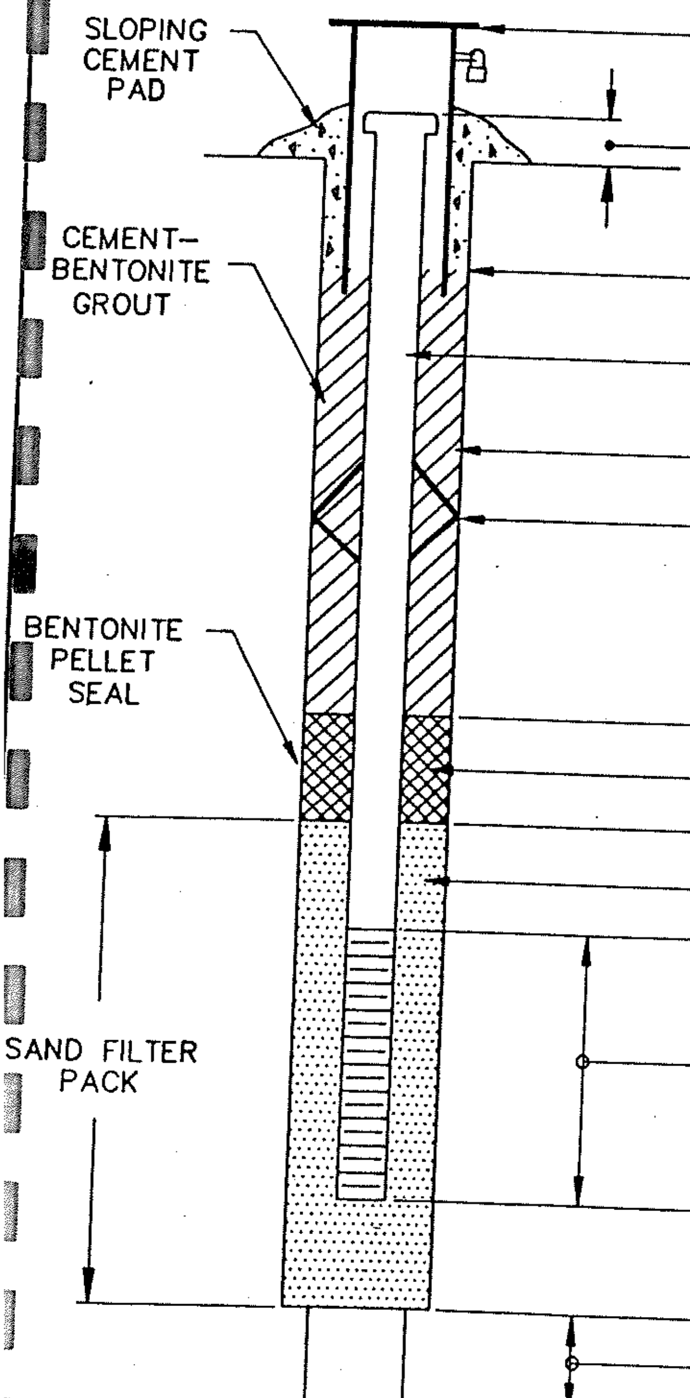
LOCATION 1132 Seneca

DRILLING CO. Earth Dimensions

DRILLER(S)

DRILLING METHOD(S) Mod Direct Push

DEVELOPMENT METHOD(S)



SIZE AND LENGTH OF LOCKABLE PROTECTIVE STEEL CASING NA

LOCKED? ___ YES X NO

STICK-UP 2.5'

DEPTH TO TOP OF GROUT/ BOTTOM OF CEMENT NA

RISER DIAMETER 1" AND MATERIAL Sch 40 PVC

BOREHOLE DIAMETER 2"

DEPTH TO CENTRALIZERS NA

DEPTH 0.0

PELLET SIZE Granular

DEPTH 1.0'

SAND SIZE #00

DEPTH 1.0'

SCREEN DIAMETER, 1" SLOT SIZE, .010" AND MATERIAL Sch 40 PVC

DEPTH 8.0'

DEPTH 8.0'

BACKFILL MATERIAL NA

BOTTOM OF BOREHOLE

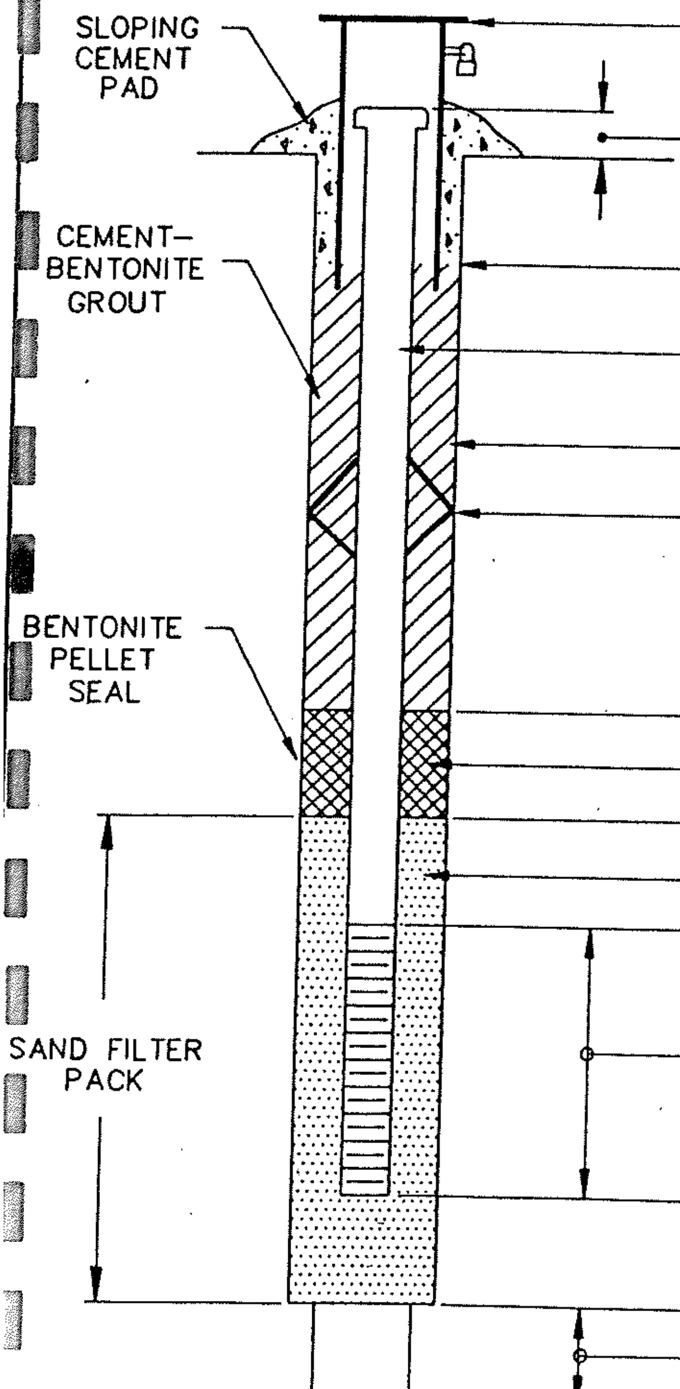
NOTE: DEPTHS ARE FEET BELOW GRADE

MALCOLM PIRNIE

OVERBURDEN MONITORING WELL SHEET

WELL NO. RIB-2

PROJECT: Flexo Remedial Inv. START DATE: 10/19/09 END DATE: 10/19/09	DRILLING CO. Earth Dimensions
PROJECT NO. 6105-002 FIELD GEOLOGIST: JPH	DRILLER(S)
LOCATION: 1132 Seneca	DRILLING METHOD(S): MOD Direct Push
	DEVELOPMENT METHOD(S)



SIZE AND LENGTH OF LOCKABLE PROTECTIVE STEEL CASING: NA

LOCKED? ___ YES X NO

STICK-UP: 2.5'

DEPTH TO TOP OF GROUT/BOTTOM OF CEMENT: NA

RISER DIAMETER AND MATERIAL: 1" Sch 40 PVC

BOREHOLE DIAMETER: 2"

DEPTH TO CENTRALIZERS: NA

DEPTH: 0.0

PELLET SIZE: Granular

DEPTH: 1.0'

SAND SIZE: #00

DEPTH: 1.0'

SCREEN DIAMETER, SLOT SIZE, AND MATERIAL: 1", .010", Sch 40 PVC

DEPTH: 8.0'

DEPTH: 8.0'

BACKFILL MATERIAL: NA

BOTTOM OF BOREHOLE:

NOTE: DEPTHS ARE FEET BELOW GRADE

MALCOLM PIRNIE

OVERBURDEN MONITORING WELL SHEET

WELL NO. RIB-3

PROJECT Remedial Inv. (Flexo) START DATE 10/19/09 END DATE 10/19/09

PROJECT NO. 605-002 FIELD GEOLOGIST JPH

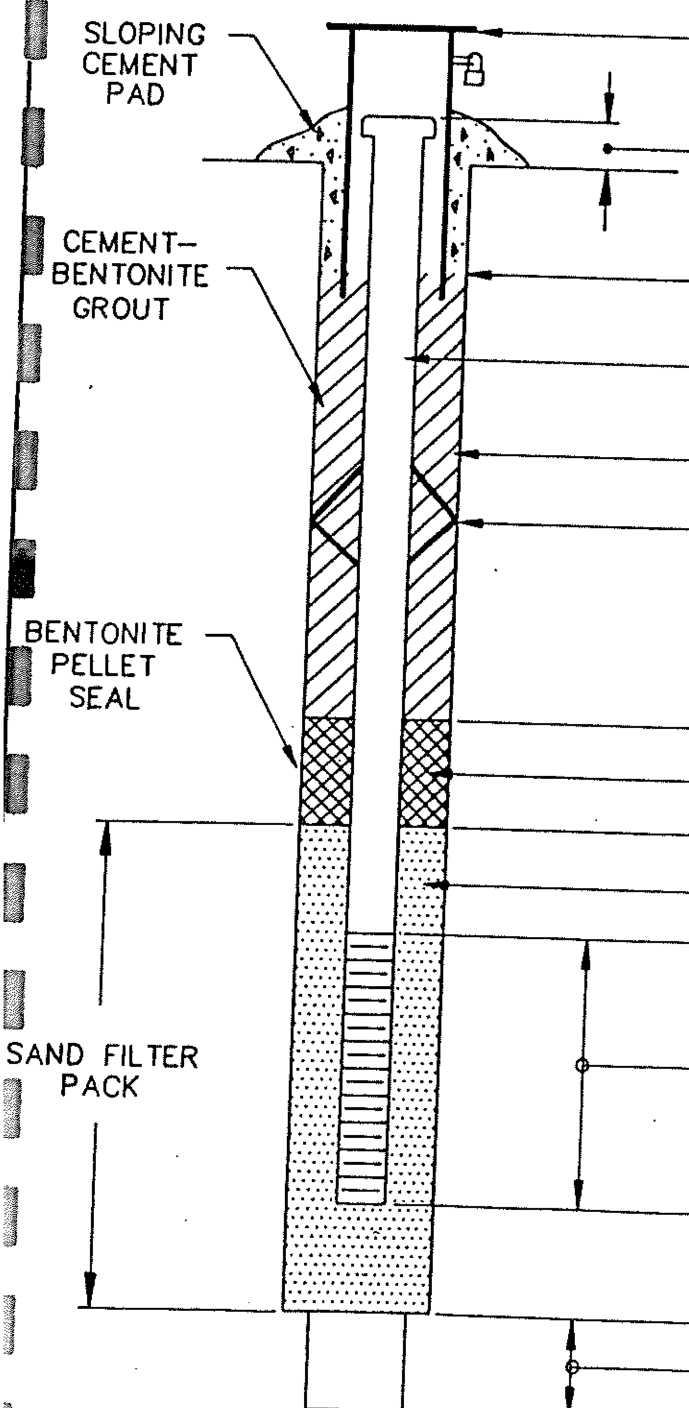
LOCATION 1132 Seneca

DRILLING CO. Earth Dimensions

DRILLER(S)

DRILLING METHOD(S) Man. Direct Push

DEVELOPMENT METHOD(S)



SIZE AND LENGTH OF LOCKABLE PROTECTIVE STEEL CASING NA

LOCKED? ___ YES X NO

STICK-UP 1.0'

DEPTH TO TOP OF GROUT/ BOTTOM OF CEMENT NA

RISER DIAMETER 1" AND MATERIAL Sch 40 PVC

BOREHOLE DIAMETER 2"

DEPTH TO CENTRALIZERS NA

DEPTH 0.0

PELLET SIZE Granular

DEPTH 0.5'

SAND SIZE #00

DEPTH +1.0'

SCREEN DIAMETER, 1" SLOT SIZE, .010" AND MATERIAL Sch 40 PVC

DEPTH 4.0'

DEPTH 4.0'

BACKFILL MATERIAL

BOTTOM OF BOREHOLE

NOTE: DEPTHS ARE FEET BELOW GRADE

MALCOLM PIRNIE

OVERBURDEN MONITORING WELL SHEET

WELL NO. REB-4

PROJECT Flexo Remedial Inv. START DATE 10/18/08 END DATE 10/19/09

PROJECT NO. 6105-002 FIELD GEOLOGIST JPH

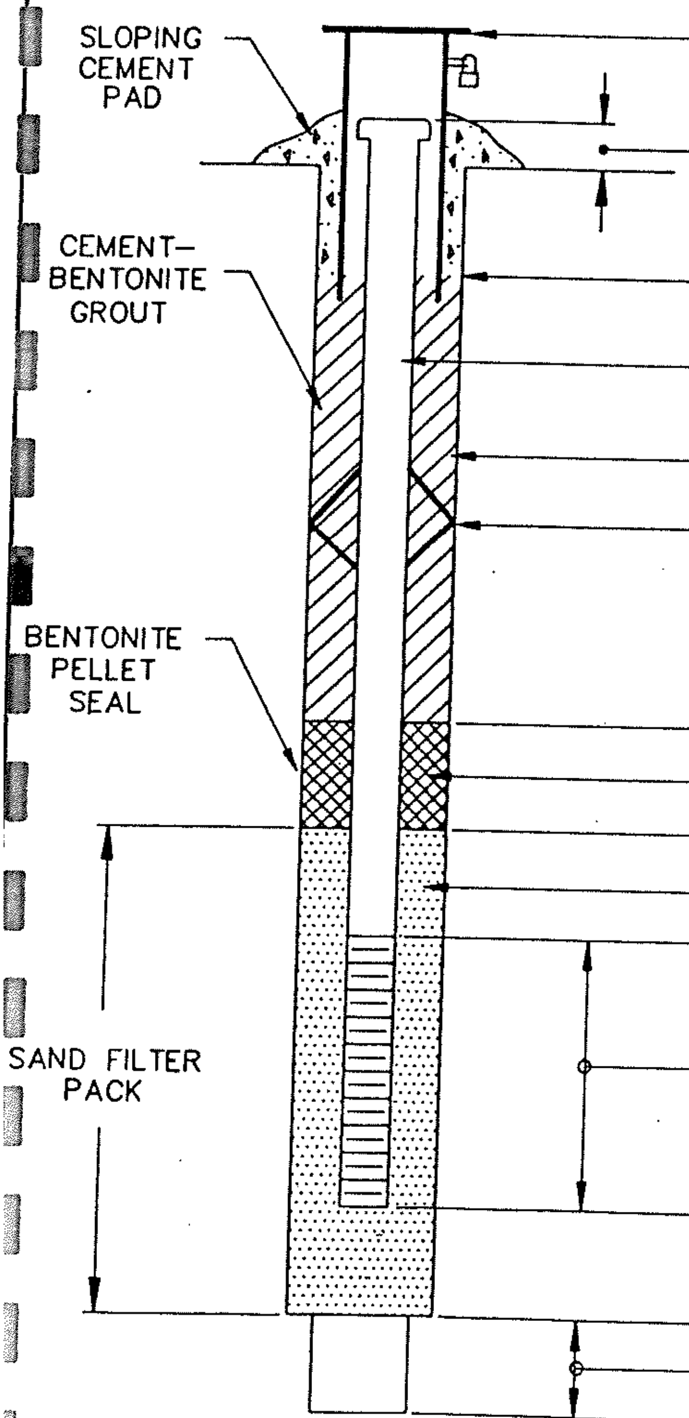
LOCATION 1146 Seneca

DRILLING CO. Earth Dimensions

DRILLER(S)

DRILLING METHOD(S) Mod. Direct Push

DEVELOPMENT METHOD(S)



SIZE AND LENGTH OF LOCKABLE PROTECTIVE STEEL CASING NA

LOCKED? __ YES X NO

STICK-UP 2.0'

DEPTH TO TOP OF GROUT/ BOTTOM OF CEMENT NA

RISER DIAMETER 1" AND MATERIAL Sch 40 PVC

BOREHOLE DIAMETER 3½"

DEPTH TO CENTRALIZERS NA

DEPTH 0.0

PELLET SIZE Granular

DEPTH 1.0'

SAND SIZE #00

DEPTH 3.0'

SCREEN DIAMETER, 1" SLOT SIZE, 0.010" AND MATERIAL Sch 40 PVC

DEPTH 8.0'

DEPTH 8.0'

BACKFILL MATERIAL NA

BOTTOM OF BOREHOLE

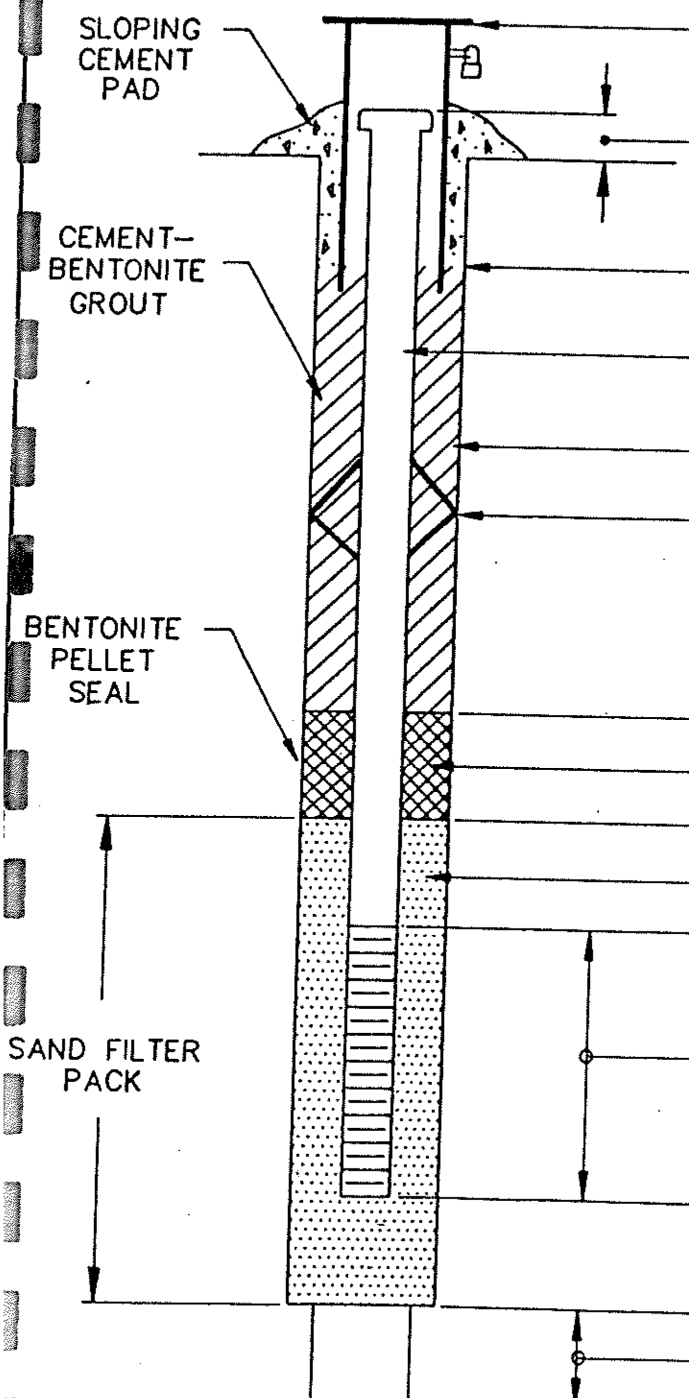
NOTE: DEPTHS ARE FEET BELOW GRADE

MALCOLM PIRNIE

OVERBURDEN MONITORING WELL SHEET

WELL NO. REB-5

PROJECT: Flexo Remedial Invest.	DRILLING CO.: Earth Dimensions
START DATE: 10/19/09	DRILLER(S):
END DATE: 10/19/09	DRILLING METHOD(S): Mod Direct Push
PROJECT NO.: 6105-002	DEVELOPMENT METHOD(S):
FIELD GEOLOGIST: JPH	
LOCATION: 1146 Seneca	



SIZE AND LENGTH OF LOCKABLE PROTECTIVE STEEL CASING: NA

LOCKED? ___ YES X NO

STICK-UP: 2.5'

DEPTH TO TOP OF GROUT/ BOTTOM OF CEMENT: NA

RISER DIAMETER AND MATERIAL: 1" Sch 40 PVC

BOREHOLE DIAMETER: 3½"

DEPTH TO CENTRALIZERS: NA

DEPTH: 0.0

PELLET SIZE: Granular

DEPTH: 1.0'

SAND SIZE: #00

DEPTH: 1.8'

SCREEN DIAMETER, SLOT SIZE, AND MATERIAL: 1" 0.010" Sch 40 PVC

DEPTH: 9.8'

DEPTH: 9.8'

BACKFILL MATERIAL: NA

BOTTOM OF BOREHOLE:

NOTE: DEPTHS ARE FEET BELOW GRADE

Flexo Transparent, Inc.
REMEDIAL INVESTIGATION REPORT

Appendix E

Well Development Records

MALCOLM PIRNIE

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: Flexo Remedial Investigation

PROJECT NO.: 6105-002

STAFF: JPH / Dwight Symonds

DATE: 10/21/09

WELL NO.: RIB-1

(1) TOTAL CASING AND SCREEN LENGTH (ft.): 10.35

(2) CASING INTERNAL DIAMETER (in.): 1"

(3) WATER LEVEL BELOW TOP OF CASING (ft.): 3.28

(4) VOLUME OF WATER IN CASING (gal.): .3 gal

WELL I.D.	VOL. GAL/DAY
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$V = 0.0408 [(2)^2 \times \{ (1) - (3) \}] =$ ______ GAL.

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	13:05 2.5	13:15 3.5	13:40 4.5	13:55 5.5	14:05 6.5		10/22 Final smpl parameters				
pH	7.05	7.02	7.04	7.05	7.08		7.13				
CONDUCTIVITY mS/cm	1.40	1.38	1.38	1.41	1.38		1.40				
TEMPERATURE	13.5	12.9	13.3	13.0	12.8		13.02				
TURBIDITY	215	85	51	63	64.1		13.8				
APPEARANCE	black turbid	slightly turbid	cloudy	cloudy	cloudy		clear				
D.O	3.11	4.15	3.29	3.33	4.32		7.93				
ORP	-68	-83	-87	-90	-96		-98				

COMMENTS: 0900 - 0920 Purged approx 1.2 gal to remove sediment from well prior to developing. Well recharges readily.
- used peristaltic pump for development

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: Flexo Remedial Investigation

PROJECT NO. : 6105-002

STAFF: JPH / Dwight Symonds

DATE: 10/21/09

WELL NO.: RIB-2

(1) TOTAL CASING AND SCREEN LENGTH (ft.): 9.1

(2) CASING INTERNAL DIAMETER (in.): 1"

(3) WATER LEVEL BELOW TOP OF CASING (ft.): 2.8'

(4) VOLUME OF WATER IN CASING (gal.): .25

WELL I.D.	VOL. GAL/DAY
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$V = 0.0408\ [\ (2)^2\ x\ \{\ (1) - (3)\ \}\ ]$ = ______ GAL.

Time PARAMETERS gallons	ACCUMULATED VOLUME PURGED (GALLONS)										
	14:15 4.0	14:30 5.0	14:40 6.0	14:50 7.0	15:00 8.0		Final Sample parameters				
pH	6.86	6.84	6.85	6.88	6.8		6.9				
CONDUCTIVITY mS/cm	1.43	1.43	1.39	1.43	1.35		1.40				
TEMPERATURE	13.6	13.5	13.6	13.5	13.5		13.5				
TURBIDITY	>1000	>1000	>1000	>1000	359		7.7				
APPEARANCE	Black	Turbid	Black	Gray-blk	gray/Turb		Clear				
D.O.	4.47	4.21	3.57	2.89	2.29		7.82				
ORP	-55	-51	-53	-52	-54		-52				

COMMENTS: 10:10 - 10:30 Purged initial 2 gal volume to remove sediment from well casing

1515 completed purging ops @ RIB-2

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: Flexo Remedial Investigation

PROJECT NO. : 6105-002

STAFF: JPH

DATE: 10/21/09

WELL NO.: RFB-3

(1) TOTAL CASING AND SCREEN LENGTH (ft.): ______

(2) CASING INTERNAL DIAMETER (in.): 1"

(3) WATER LEVEL BELOW TOP OF CASING (ft.): Dry

(4) VOLUME OF WATER IN CASING (gal.): ______

WELL I.D.	VOL. GAL/DAY
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$V = 0.0408\ [\ (2)^2\ x\ \{\ (1) - (3)\ \}\ ]$ = ______ GAL.

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
pH											
CONDUCTIVITY											
TEMPERATURE											
TURBIDITY											
APPEARANCE											

COMMENTS:

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: Flexo Remedial Investigation

PROJECT NO. : 6105-002

STAFF: J.PH / Dwight Symonds

DATE: 10/21/09

WELL NO.: RIB-4

(1) TOTAL CASING AND SCREEN LENGTH (ft.): 11.06'

(2) CASING INTERNAL DIAMETER (in.): 1"

(3) WATER LEVEL BELOW TOP OF CASING (ft.): 10/21 Dry / 11/3 @ 5.1'

(4) VOLUME OF WATER IN CASING (gal.): .24 gal

WELL I.D.	VOL. GAL/DAY
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$V = 0.0408 [(2)^2 \times \{ (1) - (3) \}] =$ ______ GAL.

Time	14:00	1405	ACCUMULATED VOLUME PURGED (GALLONS)								
PARAMETERS Volume purged	initial	1 gal	14:30 2gal		11/4 Final	+.5 gal sample	parameters				
pH	9.35	7.9	7.5		7.7	7.6					
CONDUCTIVITY mS/cm	1.42	2.03	1.84		1.31	1.38					
TEMPERATURE	15.3	14.3	12.74		13.7	12.3					
TURBIDITY	59	621	162		102	210					
APPEARANCE D.O.	brown silty	brown silty	brown Tint		sl brown turbid 5.9	brown turbid 4.8					
ORP/EH	+23	+25	+108		+163	+197					

COMMENTS: Slow recharge, well purges "dry"

- 11/3 Collected 1 Liter SVOC, CN
- 11/4 10:30 completed sampling all parameters

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: Flexo Remedial Investigation

PROJECT NO. : 6105-002

STAFF: JPH / Dwight Symonds

DATE: 10/21/09

WELL NO.: RIB-5

(1) **TOTAL CASING AND SCREEN LENGTH (ft.):** 11.76

(2) **CASING INTERNAL DIAMETER (in.):** 1"

(3) **WATER LEVEL BELOW TOP OF CASING (ft.):** 6.12

(4) **VOLUME OF WATER IN CASING (gal.):** .23

WELL I.D.	VOL. GAL/DAY
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$$V = 0.0408 \; [\,(2)^2 \times \{(1) - (3)\}\,] = \_\_\_\_\_\_ \text{ GAL.}$$

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	2 gal 12:30	2.5 12:45	15:30 3.5		Final sample parameters						
pH	6.64	7.04	6.92		7.49						
CONDUCTIVITY ms/cm	.979	.968	.912		.887						
TEMPERATURE	15.4	14.85	14.65		15.08						
TURBIDITY	301	278	274		88						
APPEARANCE	silty	silty	silty		clear						
D.O	6.04	8.14	7.79		8.94						
ORP	+67	+87	+95		+85						

COMMENTS: 12:00 Purged initial 2 gal to remove silt/sediment from well casing.

- Purged w/peristaltic pump.

Appendix F

Data Usability Summary Reports/Laboratory Data

February 16, 2010

Malcolm Pirnie, Inc.
Att: Mr. James Richert
50 Fountain Plaza, Suite 600
Buffalo, New York 14202

Re: Flexo Remediation Investigation Site Data Deliverables; Laboratory No. **RSJ0961**

Malcolm Pirnie Project / Task Order No. : **6105-002**

Dear Mr. Richert,

Enclosed with this cover letter are the results of our data review of the laboratory deliverables pertaining to the referenced site. The review was conducted according to the guidelines established by NYSDEC's Data Usability Summary Review ('DUSR') process; data flags (qualifiers) were assigned to samples based on guidance contained in EPA Region II's Inorganic and Organic data validation guidelines .

Site Name: Flexo Transparent R.I.; 1132 & 1146 Seneca Street Site, Buffalo, NY

Fractions:
Volatile Organics
Semi-volatile Organics
Polychlorinated Biphenyls (PCBs)
TAL Metals + Cyanide

Laboratory: TestAmerica
Matrix: Non-Aqueous

Reviewer: Chris Taylor

Prepared By: Environmental Quality Associates, Inc.

SECTION A
Sample Information

The above-referenced analytical job numbers / samples were analyzed by TestAmerica Buffalo, Amherst, New York. Samples were analyzed for volatile organics (VOC, 11), semivolatile organics (SVOC, 16), polychlorinated biphenyls (PCB, 16), TAL metals and cyanide (TAL/CN, 16), in addition to matrix spikes and duplicates for each analytical fraction.

Samples were collected on 10/14 and 10/15/2009, and were received at the laboratory (VTSR) on 10/15 and 10/16/2009 in good condition, at 3.2 and 4.8 degrees Centigrade, with ice noted as present.

SECTION B
General Comments

Summary of data completeness and overall quality of data deliverables package

Data deliverables were complete as received.

Overall data quality

Data quality was acceptable, incorporating applied data qualifiers as detailed in the accompanying QC and calibration summary forms, and discussed in the fraction-specific sections below.

SECTION C
Volatile Organic Fraction

Four method blanks were processed for VOC samples. 9J23031-BLK1 and 9J23102-BLK1 presented low – level positives for methylene chloride resulting in the adjustment of methlene chloride results in sample RITP-8 (0.5-1.2) to 6.4 U ug/Kg and in sample RITP-18 (0.5-1.0) to 11 U ug/Kg.

Sample RITP-18 (0.5-1.0) was provided as a matrix spike and duplicate sample (MS/MSD). Recoveries of target compounds benzene, chlorobenzene, toluene and trichloroethene were below lower acceptance limits in both MS and MSD samples; reported results for these compounds were flagged as estimated 'UJ' or 'J', with low bias indicated, in the parent sample.

Samples RITP-5 (3.5-4.5) and RITP-DUPL#1 were identified as collocated field duplicate samples. Precision values between samples exceeded 50%RPD for 2-butanone, acetone and methylene chloride; results for these target compounds were flagged 'J' as estimated values in both collocated samples, with indeterminate bias direction.

Continuing calibrations (4) each presented several compounds which presented %D values outside the (+/-) 20% acceptance range; these are detailed on the attached calibration summary. Compounds which required qualification due to these excursions were flagged on the associated EDD file with the appropriate annotation and bias direction.
Note to data user: in cases where %Ds were >+20.0%, with CCAL RRF values > corresponding ICAL average values (i.e., greater sensitivity), no QA action was taken if there were no positives found for these compounds in the associated field samples.

SECTION D
Semi-volatile Organics

All samples were analyzed and reported at extract dilutions ranging from 5x to 50x, resulting in corresponding increases in analyte RL values.

Spike recoveries for RITP-9 (0-2) MS/MSD presented recovery limit exceedances in 33 target compounds, with 16 of these exhibiting differences in recovery bias directions between the MS and MSD runs. This swing in recovery direction is unexplained; these are detailed on the attached calibration summary.
Spike recoveries for RITP-18 (0.5-1.0) MS/MSD presented recovery limit exceedances in 3 target compounds; these are detailed on the attached calibration summary.
Compounds which required qualification due to these excursions were flagged on the associated EDD file with the appropriate annotation and bias direction.

Recoveries of several target compounds were outside limits in LCS (Blank Spike) samples 9J16094-BS1, 9J16099-BS1, and 9J17040-BS1; these are detailed on the attached QC summary.
Compounds which required qualification due to these excursions were flagged on the associated EDD file with the appropriate annotation and bias direction.

Continuing calibrations of 10/19 and 10/20/09 presented several compounds which presented %D values outside the (+/-) 20% acceptance range; these are detailed on the attached calibration summary. Compounds which required qualification due to these excursions were flagged on the associated EDD file with the appropriate annotation and bias direction.
Note to data user: in cases where %Ds were >+20.0%, with CCAL RRF values > corresponding ICAL average values (i.e., greater sensitivity), no QA action was taken if there were no positives found for these compounds in the associated field samples.

Samples RITP-5 (3.5-4.5) and RITP-DUPL#1 were identified as collocated field duplicate samples. Both samples were analyzed at 5x extract dilutions; no positives were reported for target compounds at elevated RLs in either sample.

SECTION E
Polychlorinated Biphenyls (PCBs)

Several samples presented inter-column precision results above 25%D for Aroclors 1254 and/or 1260. These results were flagged as quantitatively estimated 'J'. Results which exceeded 100%D inter-column, and exhibited acceptable pattern-match for Aroclor confirmation were flagged as 'NJ', to indicate presumptive presence at estimated quantitation value. These samples and Aroclors are detailed on the attached QC summary form.

Samples RITP-5 (3.5-4.5) and RITP-DUPL#1 were identified as collocated field duplicate samples. Reported positive results for Aroclor 1254 and 1260 exhibited RPD values between samples above 50% (at 70% and 67%, respectively), and were flagged as estimated values, 'J', in both collocated samples, with indeterminate bias direction.

Continuing calibration (CCV) response %D results exceeded -15% for Aroclor 1260 in all CCV performed on 10/19/09, affecting all samples collected on 10/15/09. CCV response %D results exceeded -15% for Aroclors 1016 and 1260 in all CCV performed on 10/20/09, affecting all samples collected on 10/14/09. Results for the noted Aroclors in affected samples were flagged 'UJ' or 'J', as estimated RL values or positive results, with negative bias indicated due to reduced calibration sensitivity in the calibration verifications.

SECTION G
Metals / Wet Chemistry

Recoveries of antimony and magnesium in the matrix spike of sample RITP-9 (0-2) were below the lower control limits of 75%. Reported results for these elements were flagged as estimated, 'UJ' or 'J', with low bias indicated due to matrix effects.

Recoveries of mercury, antimony, magnesium, aluminum, calcium and potassium in the matrix spikes of sample RITP-18 (0.5-1.0) were below the lower control limits. Reported results for these elements were flagged as estimated, 'UJ' or 'J', with low bias indicated due to matrix effects.

Recoveries of all ICP analytes except barium* and iron* were below the lower recovery limits of 75% in the matrix spike of sample RITP-2 (1.5-2); (* barium and iron native sample concentrations were >4x spike added concentrations and therefore were not considered for qualification). Reported results for these elements were flagged as estimated, 'UJ' or 'J', with low bias indicated due to matrix effects.

Recoveries for elements spiked in the post-digestion spike (PDS) samples were not considered for qualification, since the elements were either (a) not applicable for PDS based upon native sample concentration exceeding MS concentration by >4x, or (b) inappropriate spike-added concentrations in the PDS sample, which should be at either 2x element RL value or 2x native sample concentration, whichever is greater.

Precision (RPD) values for iron and manganese in the matrix duplicate of RITP-9 (0-2) exceeded the soil guidance limit of 35% (at 36% and 41%, respectively).

Serial dilution sample %D values exceeded 10.0%, while undiluted sample concentrations were >50x IDL values for aluminum, barium, calcium, iron, magnesium, manganese, nickel and zinc in sample RITP-2 (1.5-2), and were flagged 'J', as quantitatively estimated values, in associated positives for these elements above 50x IDL; negative bias is suggested, due to matrix effects, since the undiluted concentrations were lower than the adjusted dilution values.

Serial dilution sample %D values exceeded 10.0%, while undiluted sample concentrations were >50x IDL values for nickel and zinc in sample RITP-9 (0-2), and were flagged 'J', as quantitatively estimated values, in associated positives for these elements above 50x IDL; negative bias is suggested, due to matrix effects, since the undiluted concentrations were lower than the adjusted dilution values.

Samples RITP-5 (3.5-4.5) and RITP-DUPL1 were identified as a collocated field duplicate pair. Precision values between the samples for barium, copper and mercury exceeded the applicable limits of either 35% RPD or delta >MRL. Results for these elements in both collocated samples were flagged as estimated, 'J', with indeterminate bias direction.

QC parameters for total cyanide were within limits. No data qualifiers for cyanide were necessary.

SECTION H
Overall Recommendations

The results of the review and qualification process for the above analytical fractions and associated samples are summarized on the attached QC and Calibration summary tables for each specific analytical fraction, in order to facilitate the end-user's' review of these data. Data qualifiers have been applied directly to the laboratory EDD spreadsheet (database), and are detailed in the corresponding QC / Calibration summaries.

Very truly yours,
Environmental Quality Associates, Inc.

Chris W. Taylor
Vice President

/cwt
Attachments

VOLATILE ORGANICS
QC PARAMETER / QUALIFIER SUMMARY
SW-846, Method 8260

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSJ0961

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

A. HOLDING TIMES (NYSDEC-ASP)

AQUEOUS MATRIX:	10 DAYS MAX. FROM VTSR TO ANALYSIS, IF PRESERVED TO pH <2 & 4 DEGREES C
AQUEOUS MATRIX:	7 DAYS MAX. FROM VTSR TO ANALYSIS, IF NOT PRESERVED TO pH <2 & 4 DEGREES C
NON-AQUEOUS MATRIX:	10 DAYS MAXIMUM FROM VTSR TO ANALYSIS, IF PRESERVED TO 4 +/- 2 DEGREES C
NON-AQUEOUS MATRIX:	7 DAYS MAXIMUM FROM VTSR TO ANALYSIS, IF NOT PRESERVED TO 4 +/- 2 DEGREES C

All non-aqueous samples were analyzed within 8 days of VTSR.

B. METHOD BLANKS

Date Analyzed	Blank ID (-BLK1)	File ID	Matrix	Analytes Present	Conc., ppb	Affected Samples
10/19/09	9J19018	F1028	soil	none	n/a	n/a
10/22/09	9J22040	F1169	soil	none	n/a	n/a
10/23/09	9J23031	F1194	soil	none	n/a	n/a
10/23/09	9J23102	F1220	soil	cyclohexane	1.3 J	RITP-4 (1-1.5RE);
				methylene chloride	2.0 J	RITP-8 (0.5-1.2);
						RITP-18 (0.5-1.0)

QA Action :		
	RITP-8 (0.5-1.2)	MeCl2 to 6.4 U
	RITP-18 (0.5-1.0)	MeCl2 to 11 U

C. SURROGATE RECOVERY

Surrogate recoveries for all SDG field samples were within acceptable limits.

D. MATRIX SPIKE / DUPLICATE RITP-18 0.5-1.0

Compound	Recovery %	QA Action
benzene	68, 69 / 79	Flag results for low-recovery targets as estimated 'U J' or 'J', in native sample only,
chlorobenzene	54, 51 / 76	with indication of low bias in RL value or reported positive result.
toluene	63, 63 / 74	
trichloroethene	61, 59 / 77	MS/MSD precision (%RPD) results were within acceptable limits.

E. BLANK SPIKE (LCS) 9J19018-BS1 9J22040-BS1 9J23031-BS1 9J23102-BS1

Recoveries of all reported analytes were within limits in associated Blank Spike samples.

F. INTERNAL STANDARDS (IS)

IS recoveries & RTs for all SDG samples were within acceptable limits.

G. FIELD DUPLICATE PRECISION RITP-5 3.5-4.5 RITP-DUPL#1

Criteria: if both results >5x RL, <50%RPD; if either or both <5x RL, <RL

Compound ID	RITP-5 3.5-4.5	RITP-DUPL#1	RPD,%	Difference, ug/Kg	QA Action
2-butanone	120	14	158	106	Flag results >criteria 'J'; quantitatively
acetone	410	86	131	324	estimated w/ indeterminate bias directic
MeCl2	24	2.3	165	21.7	

Note: Sample RITP-5 3.5-4.5 was analyzed at a 5x dilution, while the duplicate was analyzed undiluted.

VOLATILE ORGANICS
CALIBRATION SUMMARY
SW-846, Method 8260

Client: Malcolm Pirnie, Inc. | Project: Flexo Site R.I. ; Seneca St. | Laboratory Job No.: RSJ0961

Review Level: NYSDEC 'DUSR' | Laboratory: TestAmerica Buffalo

A. INSTRUMENT PERFORMANCE (BFB TUNE)

TUNE DATE:	10/17/09	10/19/09	10/22/09	10/23/09	10/23/09
TUNE FILE:	F1001.D	F1024.D	F1164.D	F1190.D	F1215.D
BFB INJECTION TIME:	12:28	10:36	10:58	10:46	21:30
LAST SAMPLE INJECTION:	16:38	20:28	20:58	20:39	9:17
m/z RATIOS ACCEPTABLE ?	Yes	Yes	Yes	Yes	Yes

B. INITIAL CALIBRATION

CALIBRATION DATE :	10/17/09
FILE IDs :	F1003-04; 06-07; 11
ALL target RRFs > 0.05 ?	Yes
SPCC RRFs > min.values?	Yes
CCC %RSDs < 30% ?	Yes
All Targets < 15% RSD?	Yes
If No, regression r > 0.99 ?	n/a
(If No, list compounds)===>	
Associated samples:	all

C. CONTINUING CALIBRATIONS

CALIBRATION DATE :	10/19/09
FILE ID :	F1025.D
ALL target RRFs > 0.05 ?	Yes
SPCC RRFs > min. values ?	Yes
CCC %Ds < 20% ?	Yes
Targets < 20%D or Drift ?	NO
(If No, list compounds)===>	bromomethane (-)
	carbon disulfide (-)
	chloroethane (-)
	methyl acetate (+)
Associated samples:	RITP-5 3.5-4.5

C. CONTINUING CALIBRATIONS

CALIBRATION DATE :	10/22/09		10/23/09	10/23/09
FILE ID :	F1166.D		F1191.D	F1218.D
ALL target RRFs > 0.05 ?	Yes		Yes	Yes
SPCC RRFs > min. values ?	Yes		Yes	Yes
CCC %Ds < 20% ?	Yes		Yes	Yes
Targets < 20%D or Drift ?	NO		NO	NO
(If No, list compounds)===>	112triCl122triFethane (-)	vinyl acetate (-)	112triCl122triFethane (+)	112triCl122triFethane (+)
	12diBr3Clpropane (-)		12diBr3Clpropane (-)	12diBr3Clpropane (-)
	2-butanone (-)	bromomethane (+)	methyl acetate (-)	methyl acetate (-)
	bromoform (-)	chloroethane (+)	chloroethane (+)	chloroethane (+)
	carbon disulfide (-)	diCldiFmethane (+)	toluene-d8 (+)	triClFmethane (+)
	cyclohexane (-)	triClFmethane (+)	triClFmethane (+)	
	methyl cyclohexane (-)			
Affected samples:	RITP-1 1.4-2.0; RITP-2 1.5-2; RITP-3 0-2		RITP-2 0-2; RITP-3 1-1.5; RITP-4 1-1.5; RITP-5 0-2; RITP-DUPL#1	RITP-4 1-1.5 RE; RITP-8 0.5-1.2; RITP-18 0.5-1.0; RITP-18 0.5-1.0 MS, MSD

QA ACTION : Compounds w/ %D >-20% (-) ; flag as estimated ('UJ' or 'J') w/ negative bias on RL or reported positive result.

Compounds w/ %D >+20% (+) ; flag as estimated ('J') w/ positive bias on reported positive result.

D. SAMPLE RESULT VERIFICATION

SAMPLE ID : RITP-4 1-1.5 RE* | * 5x dilution; 1.16 gm / 5mL

COMPOUND : 1,2,4-trichlorobenzene | Int. Std. : 1,4-dichlorobenzene-d4

REPORTED VALUE : 250 ug/Kg

Non-Aqueous (low-level): (Ax) (Is) (Df) / (Ais) (RRF) (Ws) (D)

Ax	Is	Df	
244752	250	1.0	
311135	0.926	1.16	0.736
Ais	RRF	Ws	D

ug/Kg = **249** | Result verified ? **Yes** | *OK for rounding*

SEMI-VOLATILE ORGANICS
QC PARAMETER / QUALIFIER SUMMARY
SW846 8270

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSJ0961

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

A. HOLDING TIMES (NYSDEC-ASP)

AQUEOUS MATRIX:	5 DAYS MAX. VTSR TO EXTRACTION / 40 DAYS MAX. EXTRACTION TO ANALYSIS SAMPLES AND EXTRACTS MUST BE MAINTAINED AT 4 +/- 2 DEGREES C
NON-AQUEOUS MATRIX:	10 DAYS MAX. VTSR TO EXTRACTION / 40 DAYS MAX. EXTRACTION TO ANALYSIS SAMPLES AND EXTRACTS MUST BE MAINTAINED AT 4 +/- 2 DEGREES C

All non-aqueous samples were extracted within 2 days of VTSR; all samples were analyzed within 26 days of extraction.

QA Action : n/a

B. METHOD BLANKS

Blank ID	File ID	Date Extracted	Matrix	Analytes Present	Conc., ppb	Affected Batch
9J16094-BLK1	W7956.D	10/17/09	soil	none	n/a	9J16094
9J17099-BLK1	W7962.D	10/17/09	soil	none	n/a	9J16099
9J17040-BLK1	W7996.D	10/18/09	soil	none	n/a	9J17040

FIELD BLANKS

No field blanks were submitted with this SDG. QA Action: n/a

C. SURROGATE RECOVERY

Sample ID	Compound	Recovery	QA Action
RITP-2 0-2	2,4,6-triBrphenol	none	n/a; this sample was concentrated to 10 mL final extract volume, rather than
	2-fluorophenol	none	the normal 1.0 mL, due to extract viscosity (per extraction log annotation).
	nitrobenzene-d5	none	Results are reported from effective 20x dilution. See DV narrative.
RITP-9 0-2	2,4,6-triBrphenol	36 / 39%	n/a; this sample was analyzed at 40x extract dilution; the low recovery reflects lower detector sensitivity at this dilution level

D. MATRIX SPIKE / DUPLICATE

Compound	RITP-9 0-2 MS, MSD %		RPD %	RITP-9 0-2 Positive?	DV Flag	Bias
2,4,5-Trichlorophenol	51				UJ	low
2,4,6-Trichlorophenol	54, 58				UJ	low
2,4-Dinitrophenol	0, 0				UJ	low
2-Nitroaniline	0, 0				UJ	low
3,3'-Dichlorobenzidine	0, 0				UJ	low
3-Nitroaniline	53, 53				UJ	low
4,6-Dinitro-2-methylphenol	224, 0		nc		UJ	
4-Chloroaniline	0, 0				UJ	low
4-Nitroaniline	36, 39				UJ	low
4-Nitrophenol	0, 0				UJ	low
Acenaphthene		197	73		UJ	
Anthracene		397	123		UJ	
Atrazine	0, 0				UJ	low
Benzaldehyde		0	nc		UJ	low
Benzo(a)anthracene		453	118	yes	J	high
Benzo(a)pyrene		398	101	yes	J	high
Benzo(b)fluoranthene		453	118	yes	J	high
Benzo(ghi)perylene		303	85	yes	J	high
Benzo(k)fluoranthene		324	84		UJ	
Bis(2-chloroethoxy)methane	57, 53				UJ	low
Caprolactam	0, 0				UJ	low
Carbazole		133	43		UJ	
Chrysene		422	107	yes	J	high
Dibenzo(a,h)anthracene		160	55		UJ	
Dibenzofuran		172	58		UJ	
Di-n-octyl phthalate	55, 58				UJ	low
Fluoranthene		1060	151	yes	J	high
Fluorene		226	85		UJ	
Hexachlorocyclopentadiene	0, 0				UJ	low
Indeno(1,2,3-cd)pyrene		277	91	yes	J	high
Pentachlorophenol	0, 0				UJ	low
Phenanthrene		1240	161	yes	J	high
Pyrene		819	140	yes	J	high

SEMI-VOLATILE ORGANICS
QC PARAMETER / QUALIFIER SUMMARY
SW846 8270

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSJ0961

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

D. MATRIX SPIKE / DUPLICATE

Compound	RITP-18 0.5-1.0 MS, MSD %	RPD %	RITP-18 0.5-1.0 Positive?	DV Flag	Bias
2,4-Dinitrophenol	0, 0			UJ	low
Atrazine	57, 55			UJ	low
Bis(2-chloroethoxy)methane	60			UJ	low

E. BLANK SPIKE (LCS)

Compound	Recovery %	DV Flag	Bias	Samples Affected
	9J16094-BS1			
Atrazine	70	UJ	low	RITP-5 3.5-4.5
N-nitrosodiphenylamine	121, 130	J	high	
benzo(a)pyrene	128	J	high	
	9J16099-BS1			RITP-1 1.4-2.0
Atrazine	72	UJ	low	RITP-2 0-2
2,4-dinitrotoluene	128	J	high	RITP-2 1.5-2
3,3'-dichlorobenzidine	129	J	high	RITP-3 0-2
N-nitrosodiphenylamine	136	J	high	RITP-3 1-1.5
benzo(a)pyrene	135	J	high	
	9J17040-BS1			RITP-7 0-2
Atrazine	67	UJ	low	RITP-9 0-2
Bis(2-chloroethoxy)methane	57	UJ	low	RITP-10 0-2
				RITP-13 0-2
				RITP-14 0-2
				RITP-8 0.5-1.2
				RITP-18 0.5-1.0

F. INTERNAL STANDARDS (IS)

IS recoveries & RTs for all SDG samples were within acceptable limits.

G. FIELD DUPLICATE

RITP-5 3.5-4.5 was identified as the collocated sample with RITP-DUPL1; both samples were reported from 5x extract dilutions and all target compounds were reported as non-detects at the elevated RL values.

SEMI-VOLATILE ORGANICS
CALIBRATION SUMMARY
SW846 METHOD 8270C

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSJ0961

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

A. INSTRUMENT PERFORMANCE (DFTPP TUNE)

TUNE DATE:	09/16/09	10/19/09	10/20/09	11/13/09
TUNE FILE:	W7078.D	W7946.D	W7993.D	W8589.D
DFTPP INJECTION TIME:	09:53	09:28	09:44	10:02
LAST INJECTION WITHIN 12-HR. WINDOW ?	Yes	Yes	Yes	Yes
m/z RATIOS ACCEPTABLE ?	Yes	Yes	Yes	Yes

B. INITIAL CALIBRATION

SPCC Compounds			
Base/Neutrals	CALIBRATION DATE :	09/16/09	11/13/09
N-Nitroso-di-n-propylamine	FILE ID:	W7079-84; 86-91.D	W8590-95; 598-603.D
Hexachlorocyclopentadiene	All target RRFs >0.05 ?	Yes	Yes
Acids	All target %RSDs < 15% ?	No	No
2,4-Dinitrophenol	If No, Regression established?	Yes	Yes
4-Nitrophenol	Correlation > 0.99 ?	Yes	Yes
MINIMUM RRF = 0.050	(If No, list compounds) ==>		

QA ACTION: n/a n/a

CCC Compounds
Base/Neutrals
Acenaphthene
1,4-Dichlorobenzene
Hexachlorobutadiene
Diphenylamine
Di-n-octylphthalate
Fluoranthene
Benzo(a)pyrene
Acids
4-Chloro-3-methylphenol
2,4-Dichlorophenol
2-Nitrophenol
Phenol
Pentachlorophenol
2,4,6-Trichlorophenol
MAXIMUM %RSD = 30.0%
MAXIMUM %D = 20.0%

NOTE:
Linear or non-linear regression acceptable alternatives for compounds w/ %RSD >15%.
Linear regression r values must be 0.99 minimum for these compounds.
Non-linear COD values must be 0.99 minimum for these compounds, with minimum 6-pts.
for second-order, and minimum 7-pts. for third-order equations.

C. CONTINUING CALIBRATIONS

CALIBRATION DATE :	10/19/09	10/20/09	11/13/09
FILE ID:	W7947,48	W7994, 95	W8593, 8601
All target & SPCC RRFs >0.0	Yes	Yes	Yes
CCC %Ds < 20% ?	Yes	Yes	Yes
All targets +/- 20%D or 80 -120% True Value?	NO	NO	Yes
(If No, list compounds) ==>	2,2'-Oxybis(1-Clpropane) -28%	2,2'-Oxybis(1-Clpropane) -27% benzo(k)fluoranthene +22%	
Affected samples :	RSJ0961-01; RSJ0963-01-05	RSJ0997-01, 02, 05-09	RSJ0963-06, 07, 08

QA Action : For targets w/ %D >-20% : Flag non-detects 'UJ' and positives 'J' in affected samples; negative bias on RL or positive value.
For targets w/ %D >+20% : Flag positives 'J' in affected samples; positive bias on positive value.

SEMI-VOLATILE ORGANICS
CALIBRATION SUMMARY
SW846 METHOD 8270C

CLIENT: Malcolm Pirnie, Inc.
PROJECT: Flexo Site R.I. ; Seneca St.

Lab Job No.: RSJ0961

Review Level: NYSDEC 'DUSR'

Laboratory : TestAmerica Buffalo

D. SAMPLE RESULT VERIFICATION

SAMPLE ID: RITP-5 0-2 (RSJ0963-07)
COMPOUND: fluoranthene
Int. Std.: phenanthrene-d10
REPORTED VALUE: 18000 ug/Kg

	Ax	Is	Vt	Df	GPC
ug/Kg =	166405	40	1000	50	1.0
	546016	1.388	1.0	30.27	0.821
	Ais	RRF	Vi	Ws	D

ug/Kg = **17665**

Result verified ? **Yes** OK - rounding

Where :

Ax	=	area of quant ion for target compound
Is	=	amount of internal standard injected, ng
Vt	=	volume of extract concentrate, uL
Df	=	Extract dilution factor
GPC	=	GPC factor (1.0 for no cleanup; 2.0 for GPC cleanup)
Ais	=	area of quant ion for internal standard
RRF	=	relative response factor, average from ICAL
Vi	=	extract volume injected, uL
Ws	=	sample mass extracted, gm (wet)
D	=	% Solids / 100

PCB ANALYSIS
QC PARAMETER / QUALIFIER SUMMARY
SW-846 Method 8082

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSJ0961

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

A. HOLDING TIMES (NYSDEC-ASP)

AQUEOUS MATRIX:	5 DAYS MAX. VTSR TO EXTRACTION / 40 DAYS MAX. EXTRACTION TO ANALYSIS SAMPLES AND EXTRACTS MUST BE MAINTAINED AT 4 +/- 2 DEGREES C
NON-AQUEOUS MATRIX:	10 DAYS MAX. VTSR TO EXTRACTION / 40 DAYS MAX. EXTRACTION TO ANALYSIS SAMPLES AND EXTRACTS MUST BE MAINTAINED AT 4 +/- 2 DEGREES C

Non-aqueous samples were extracted within 4 days of VTSR; samples were analyzed within 1 day of extraction.

QA Action : n/a

B. METHOD BLANKS

Blank ID	Date Extracted	Date Analyzed	Matrix	Analytes Present	Conc., ppb
9J17039-BLK1	10/18/09	10/19/09	soil	none	n/a
9J19084-BLK1	10/19/09	10/20/09	soil	none	n/a

QA Action : n/a

C. INSTRUMENT BLANKS

Injection logs indicated that instrument blanks were run following each CCV.

D. SURROGATE RECOVERY

Sample ID	Surrogate	Recovery / Bias	QA Action
RITP-2 0-2	TCMX & DCBP	no recovery	n/a; samples were run at dilution due to high levels of
RITP-3 0-2	TCMX & DCBP	no recovery	target analytes. Surrogates were diluted out.
RITP-3 1-1.5	TCMX & DCBP	no recovery	
RITP-4 1-1.5	TCMX & DCBP	no recovery	
RITP-7 0-2	DCBP 1	11/34% low	n/a; recovery on second column was within limits.

E. MATRIX SPIKE / DUPLICATE RITP-9 0-2 RITP-18 0.5-1.0

MS / MSD recoveries and precision values were within limits.

F. BLANK SPIKE / BLANK SPIKE DUPLICATE (LCS / LCSD)

LCS / LCSD recoveries and precision values were within limits.

G. SAMPLE QUALITATIVE VERIFICATION

Aroclor-1254 and/or Aroclor-1260 (AR1254; AR1260) were reported in several SDG samples.
The following samples exhibited inter-column concentrations which exceeded 25% difference (%D), and were qualified as indicated.

Sample ID (RITP-)	Aroclor (AR-)	% Diffference	QA Action
2 0-2	1260	58	Flag reported result 'J', as quantitatively estimated value
1 1.4-2.0	1260	57	Flag reported result 'J', as quantitatively estimated value
2 1.5-2	1260	36	Flag reported result 'J', as quantitatively estimated value
3 0-2	1260	100	Flag reported result 'J', as quantitatively estimated value
3 1-1.5	1254	35	Flag reported result 'J', as quantitatively estimated value
3 1-1.5	1260	134	Flag reported result 'NJ', as quantitatively estimated value
DUPL#1	1260	62	Flag reported result 'J', as quantitatively estimated value
5 3.5-4.5	1260	48	Flag reported result 'J', as quantitatively estimated value
9 0-2	1254	26	Flag reported result 'J', as quantitatively estimated value
13 0-2	1260	37	Flag reported result 'J', as quantitatively estimated value
14 0-2	1254	30	Flag reported result 'J', as quantitatively estimated value

H. FIELD DUPLICATE PRECISION

RITP-DUPL#1 was identified as a field duplicate of RITP-5 3.5-4.5. Aroclors-1254 and -1260 were reported positive in both samples.
The RPD between duplicate sample results was calculated as 69.6% for AR1254 and 66.7% for AR1260.

QA Action : Flag reported AR1254 and AR1260 in parent and duplicate samples 'J', as estimated values, with indeterminate bias.

PCB ANALYSIS
CALIBRATION SUMMARY
SW-846 Method 8082

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSJ0961

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

A. INITIAL CALIBRATION

CALIBRATION DATE :	10/11/09 HP6890-7	11/09/08 HP5890-19
FILE IDs :	7a94146-152	19a49175-181
Mean RSD ≤ 20%?	yes	yes
Lin Regression r>0.99 ?	yes	n/a
2nd-order COD >0.99 ?	n/a	n/a
Associated samples :	RSJ0997-01,02,05-09 (collected 10/15/09; xtr. 10/19)	RSJ0963-01-09 (collected 10/14/09; xtr. 10/18))

B. CONTINUING CALIBRATIONS (CCV)

HP6890-7

CALIBRATION DATE :	10/19/09	10/19/09	10/19/09
FILE IDs :	7a96051	7a96063	7a96072
TIME :	11:40	15:19	18:04
At start of sequence?	Yes	n/a	n/a
After every 10 samples?	n/a	Yes	n/a
At end of sequence?	n/a	n/a	Yes
|%D| ≤ 15?	NO	NO	NO
If No, list compounds ===>	AR1260 -22%	AR1260 -17%	AR1260 -17%
Affected Samples :	RSJ0997-01,02,05-09		

QA ACTION : %D results were >15% for AR1260 for at least one quant. peak; since responses were negative with respect to ICAL average (i.e., reduced sensitivity) reported results for AR1260 were flagged as quantitatively estimated, 'U J' or 'J', with low bias indicated.

HP5890-19

CALIBRATION DATE :	10/20/09	10/20/09	10/20/09
FILE IDs :	19a072	19a080	19A088
TIME :	07:40	09:37	11:35
At start of sequence?	Yes	n/a	n/a
After every 10 samples?	n/a	Yes	n/a
At end of sequence?	n/a	n/a	Yes
|%D| ≤ 15?	NO	NO	NO
If No, list compounds ===>	AR1016 -20%	AR1016 -23%	AR1016 -22%
	AR1260 -16%	AR1260 -21%	AR1260 -19%
Affected Samples :	RSJ0963-01-09		

QA ACTION : %D results were >15% for AR1016 &/or AR1260 for at least one quant. peak; since responses were negative with respect to ICAL average (i.e., reduced sensitivity) reported results for AR1016 and AR1260 were flagged as quantitatively estimated, 'U J' or 'J', with low bias indicated.

POLYCHLORINATED BIPHENYLS (PCBs)
CALIBRATION SUMMARY
SW846 METHOD 8082

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSJ0961

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

D. SAMPLE RESULT VERIFICATION

Sample ID	Analyte	Reported Result		Column 1
RITP-9 0-2	AR1260	240	ug/Kg	peak at RT = 5.70 minutes

File ID = 7a96058

Primary column

	peak response	final volume, uL	dilution factor		
ug/Kg =	419831	10000	1.0	ug/Kg =	238
	778911	30.43	0.7447		
	CalFactor	sample wet weight	%solids/100		

Result verified ? yes *OK - rounding*

INORGANICS / METALS ANALYSIS
QC PARAMETER / CALIBRATION / QUALIFIER SUMMARY

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSJ0961

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

A. CALIBRATION

	ICV	CCV	Outliers ?
ICP & AA Analytes	90 -110%	90 -110%	none
Mercury	80 - 120%	80 - 120%	none
Cyanide	85 - 115%	85 - 115%	none
Mercury	Blank + 5 Standards, r^2 >/ = 0.995		none
Cyanide	Blank + 4 Standards, r^2 >/ = 0.995		none

CRDL Standards		% Recovery	Outliers ?
ICP Analytes	CRI	70 - 130%	none
Mercury	CRA	70 - 130%	none
Cyanide	Mid-Range	70 - 130%	n/a

B. BLANKS

		Outliers ?
ICB / CCB	< RL	none
PrepBlank	< RL	none

C. ICP INTERELEMENT CORRECTION (ICSA / ICSAB)

		Outliers ?
ICSA	<2x RL for RL <10 ug/L	none
ICSAB	80 - 120% recovery	none

D. MATRIX SPIKE

RITP-9 0-2
75 - 125% recovery (if sample conc. < 4x spike conc.)
Affects samples in: Prep Batch # 9J22107

Outliers ?		QA ACTION
Sb	43; 50%	Flag reported results estimated, 'UJ' or 'J', w/ low bias indicated
Mg	72%	

RITP-18 0.5-1.0
75 - 125% recovery (if sample conc. < 4x spike conc.)
Affects samples in: Prep Batch # 9J22107

Outliers ?		QA ACTION
Hg	71; 72%	Flag reported results estimated, 'UJ' or 'J', w/ low bias indicated
Sb	55; 59%	Flag reported results estimated, 'UJ' or 'J', w/ low bias indicated
Mg	55; 45%	
Al	0%	
Ca	66%	
K	70%	

RITP-2 1.5-2
75 - 125% recovery (if sample conc. < 4x spike conc.)
* Ba and Fe sample conc. > 4x spike added conc.
Affects samples in: Prep Batch # 9J21022

Outliers ?	QA ACTION
All ICP analytes except Ba* and Fe*	Flag reported results estimated, 'UJ' or 'J', w/ low bias indicated

E. POST-DIGESTION SPIKE (PDS)

ICP [only required for non-compliant matrix spike analytes[
75 - 125% recovery; PDS conc. should be 2x RL or
2x sample conc., whichever is >.

Note: Listed non-compliant PDS recoveries were either (a) not applicable to analytes due to MS native sample concs. >4x spike added or (b) PDS spike added was too low relative to native sample concentration (e.g., Ba, Ca, Fe, Mn)

F. MATRIX SPIKE DUPLICATE (OR MATRIX DUPLICATE)

Max. 35% RPD for non-aqueous samples > 5x CRDL
Max. (+/-) CRQL value if either sample < 5x CRDL

Outliers ?	% RPD	Sample ID
Fe	36%	RITP-9 0-2
Mn	41%	RITP-9 0-2

INORGANICS / METALS ANALYSIS
QC PARAMETER / CALIBRATION / QUALIFIER SUMMARY

Client: Malcolm Pirnie, I Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSJ0961

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

G. LABORATORY CONTROL SAMPLE — Outliers ?
Recovery within range for non-aqueous samples — none

H. SERIAL DILUTION SAMPLE
Maximum 10.0% D if undiluted sample > 50x IDL

Sample	Outliers ?	%D	QA ACTION
RITP-2 1.5-2	Al	-11	Flag results estimated 'J' for listed elements results >50x IDLs w/ negative bias indicated
	Ba	-11	
	Ca	-12	
	Fe	-12	
	Mg	-13	
	Mn	-11	
	Ni	-12	
	Zn	-11	
RITP-9 0-2	Ni	-11	Flag results estimated 'J' for listed elements results >50x IDLs w/ negative bias indicated
	Zn	-12	

I. FIELD DUPLICATE TP-5 3.5-4.5 / TP-DUPL#1
Criteria: if both results >5x MRL, <35%RPD;
if either or both <5x MRL, delta <MRL

Outliers ?	RPD,%	QA ACTION
Ba	53	Flag results estimated 'J' for listed elements; indeterminate bias direction
Cu	41	
Hg	delta = 0.044 (>MRL)	

J. NYSDEC-ASP HOLDING TIMES (from VTSR)

Metals except mercury	6 months	All samples were analyzed within allowable holding times.
Mercury	26 days	
Cyanide	12 days	

K. VERIFICATION OF INSTRUMENTAL PARAMETERS

	Frequency	Outliers ?
Method / Instrument Detection Limits	every 6 months	date not listed
Interelement Correction Factors	every 6 months	date not listed
Linear Range Analysis	every 6 months	date not listed

L. VERIFICATION OF REPORTED RESULTS

Sample ID : RITP-5 3.5-4.5 Analyte: Pb
Reported value: 43.2 mg/Kg

$$\text{mg/Kg} = \frac{\text{conc. mg/L} \times \text{final volume, mL}}{\text{wet wgt, gm} \times \text{\%solids/100}} = \frac{0.28086 \times 50}{0.471 \times 0.689} = \text{mg/Kg} = 43.24$$

Result verified ? **Yes**

VERIFICATION OF REPORTED RESULTS

Sample ID : RITP-18 05-1.0 Analyte: Hg
Reported value: 0.486 mg/Kg

$$\text{mg/Kg} = \frac{\text{conc. mg/L} \times \text{final volume, mL}}{\text{wet wgt, gm} \times \text{\%solids/100}} = \frac{0.00485 \times 50}{0.625 \times 0.798} = \text{mg/Kg} = 0.486$$

Result verified ? **Yes**

February 18, 2010

Malcolm Pirnie, Inc.
Att: Mr. James Richert
50 Fountain Plaza, Suite 600
Buffalo, New York 14202

Re: Flexo Remediation Investigation Site Data Deliverables; Laboratory No. **RSK0332**

Malcolm Pirnie Project / Task Order No. : **6105-002**

Dear Mr. Richert,

Enclosed with this cover letter are the results of our data review of the laboratory deliverables pertaining to the referenced site. The review was conducted according to the guidelines established by NYSDEC's Data Usability Summary Review ('DUSR') process; data flags (qualifiers) were assigned to samples based on guidance contained in EPA Region II's Inorganic and Organic data validation guidelines .

Site Name: Flexo Transparent R.I.; 1132 & 1146 Seneca Street Site, Buffalo, NY

Fractions:
Volatile Organics
Semi-volatile Organics
Polychlorinated Biphenyls (PCBs)
TAL Metals + Cyanide

Laboratory: TestAmerica
Matrix: Aqueous

Reviewer: Chris Taylor

Prepared By: Environmental Quality Associates, Inc.

SECTION A
Sample Information

The above-referenced analytical job numbers / samples were analyzed by TestAmerica Buffalo, Amherst, New York. Samples were analyzed for volatile organics (VOC, 2), semivolatile organics (SVOC, 2), polychlorinated biphenyls (PCB, 1), TAL metals and cyanide (TAL/CN, 1), in addition to any matrix spikes and duplicates for each analytical fraction.

Samples were collected on 11/03/2009, and were received at the laboratory (VTSR) on 11/05/2009 in good condition, at 4.8 degrees Centigrade, with ice noted as present.

SECTION B
General Comments

Summary of data completeness and overall quality of data deliverables package

Data deliverables were complete as received.

Overall data quality

Data quality was acceptable, incorporating applied data qualifiers as detailed in the accompanying QC and calibration summary forms, and discussed in the fraction-specific sections below.

SECTION C
Volatile Organic Fraction

No MS/MSD samples were reported for this sample group; no field duplicates were identified for this sample group.

No data qualifications were required for these samples in this fraction.

SECTION D
Semi-volatile Organics

No MS/MSD samples were reported for this sample group; no field duplicates were identified for this sample group.

Calibration verification on 11/11/09 presented %D for 4-methylphenol which exceeded -20%. Results for 4-methylphenol were qualified as estimated, 'UJ', in both samples, with low bias on reported RL values indicated.

SECTION E
Polychlorinated Biphenyls (PCBs)

No MS/MSD samples were reported for this sample group; no field duplicates were identified for this sample group.

Continuing calibration (CCV) response %D results exceeded ±15% for Aroclor 1016 and Aroclor 1260 in both opening and closing CCV on 11/07/09, affecting all samples. Results for the noted Aroclors in affected samples were flagged 'UJ', as estimated RL values, with indeterminate bias indicated due to inconsistent sensitivity in the calibration verifications.

Recovery of Aroclor 1016 in the batch LCS (9K124-BS1) was below the lower limit (59/61%); the reported result for Aroclor 1016 in the associated sample (RIB-4) was flagged 'UJ', as estimated RL value, with low bias indicated.

SECTION G
Metals / Wet Chemistry

No MS/MSD samples were reported for this sample group; no field duplicates were identified for this sample group. No serial dilution sample were reported for this sample group.

Arsenic recovered high (+35%) in the low-level CCV standard; the result for As was flagged as estimated, 'J', in sample RIB-4, with slight high bias indicated.

QC parameters for total cyanide were within limits. No data qualifiers for cyanide were necessary.

SECTION H
Overall Recommendations

The results of the review and qualification process for the above analytical fractions and associated samples are summarized on the attached QC and Calibration summary tables for each specific analytical fraction, in order to facilitate the end-user's' review of these data. Data qualifiers have been applied directly to the laboratory EDD spreadsheet (database), and are detailed in the corresponding QC / Calibration summaries.

Very truly yours,
Environmental Quality Associates, Inc.

Chris W. Taylor
Vice President

/cwt
Attachments

VOLATILE ORGANICS
QC PARAMETER / QUALIFIER SUMMARY
SW-846, Method 8260

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSK0332

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

A. HOLDING TIMES (NYSDEC-ASP)

AQUEOUS MATRIX:	10 DAYS MAX. FROM VTSR TO ANALYSIS, IF PRESERVED TO pH <2 & 4 DEGREES C
AQUEOUS MATRIX:	7 DAYS MAX. FROM VTSR TO ANALYSIS, IF NOT PRESERVED TO pH <2 & 4 DEGREES C
NON-AQUEOUS MATRIX:	10 DAYS MAXIMUM FROM VTSR TO ANALYSIS, IF PRESERVED TO 4 +/- 2 DEGREES C
NON-AQUEOUS MATRIX:	7 DAYS MAXIMUM FROM VTSR TO ANALYSIS, IF NOT PRESERVED TO 4 +/- 2 DEGREES C

All aqueous samples were analyzed within 5 days of VTSR.

B. METHOD BLANKS

Date Analyzed	Blank ID (-BLK1)	File ID	Matrix	Analytes Present
11/10/09	9K10009	N0574.D	water	none

The associated Trip Blank sample was free of target analytes.

C. SURROGATE RECOVERY

Surrogate recoveries were within acceptable limits.

D. MATRIX SPIKE / DUPLICATE (MS/MSD)

No VOC MS/MSD samples were reported in this SDG.

E. BLANK SPIKE (LCS) 9K10009-BS1

Recoveries of all reported analytes were within limits in associated Blank Spike samples.

F. INTERNAL STANDARDS (IS)

IS recoveries & RTs for all SDG samples were within acceptable limits.

G. FIELD DUPLICATE PRECISION

No field duplicate samples were identified for this sampling event.

VOLATILE ORGANICS CALIBRATION SUMMARY

SW-846, Method 8260

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. : Seneca St. Laboratory Job No.: RSK0332

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

A. INSTRUMENT PERFORMANCE (BFB TUNE) HP5973N

TUNE DATE:	11/09/09	11/10/09
TUNE FILE:	N0533.D	N0570.D
BFB INJECTION TIME:	11:24	09:28
LAST SAMPLE INJECTION:	14:07	19:52
m/z RATIOS ACCEPTABLE ?	Yes	Yes

B. INITIAL CALIBRATION

CALIBRATION DATE :	11/09/09
FILE IDs :	N0535-40.D
ALL target RRFs > 0.05 ?	Yes
SPCC RRFs > min.values?	Yes
CCC %RSDs < 30% ?	Yes
All Targets < 15% RSD?	No
If No, regression r > 0.99 ?	Yes
(If No, list compounds)===>	
Associated samples:	all

C. CONTINUING CALIBRATIONS

CALIBRATION DATE :	11/10/09
FILE ID :	N0571.D
ALL target RRFs > 0.05 ?	Yes
SPCC RRFs > min. values ?	Yes
CCC %Ds < 20% ?	Yes
Targets < 20%D or Drift ?	Yes
(If No, list compounds)===>	
Associated samples:	all

QA ACTION : n/a

D. SAMPLE RESULT VERIFICATION

SAMPLE ID : RIB-4 RSK0332-03

COMPOUND : methylene chloride Int. Std. : 1,4-difluorobenzene

REPORTED VALUE : 1.2 JD ug/L

Aqueous quantitation
(Ax) (Is) (Df)
(Ais) (RRF) (Wo)

Ax	Is	Df
4123	125	2.0
511903	0.329	5.0
Ais	RRF	Wo

ug/L = **1.22** Result verified ? **Yes**

SEMI-VOLATILE ORGANICS
QC PARAMETER / QUALIFIER SUMMARY
SW846 8270

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSK0332

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

A. HOLDING TIMES (NYSDEC-ASP)

AQUEOUS MATRIX:	5 DAYS MAX. VTSR TO EXTRACTION / 40 DAYS MAX. EXTRACTION TO ANALYSIS SAMPLES AND EXTRACTS MUST BE MAINTAINED AT 4 +/- 2 DEGREES C
NON-AQUEOUS MATRIX:	10 DAYS MAX. VTSR TO EXTRACTION / 40 DAYS MAX. EXTRACTION TO ANALYSIS SAMPLES AND EXTRACTS MUST BE MAINTAINED AT 4 +/- 2 DEGREES C

All aqueous samples were extracted within 1 day of VTSR; all samples were analyzed within 5 days of extraction.

QA Action : n/a

B. METHOD BLANKS

Blank ID	File ID	Date Extracted	Matrix	Analytes Present	Conc., ppb	Affected Samples
905121-BLK1	V7294.D	11/06/09	water	none	n/a	all

C. SURROGATE RECOVERY

Sample ID	Surrogate ID	Recovery %	QA Action
RIB-4 (RSK0332-01)	nitrobenzene-d5	175	n/a (only one out in one fraction; high rec.)
RIB-4 (RSK0332-02)	nitrobenzene-d5	138	

D. MATRIX SPIKE / DUPLICATE (MS/MSD)

No MS/MSD samples were reported with this SDG.

E. BLANK SPIKE (LCS) 905121-BS1; -BSD1

Compound	Recovery %	QA Action
3,3'-dichlorobenzidine	149, 158 / 140	n/a; no positives found for this compound in SDG samples
N-nitrosodiphenylamine	131, 138 / 125	n/a; no positives found for this compound in SDG samples

F. INTERNAL STANDARDS (IS)

IS recoveries & RTs for all SDG samples were within acceptable limits.

G. FIELD DUPLICATE

No field duplicates were identified for this SDG.

SEMI-VOLATILE ORGANICS
CALIBRATION SUMMARY
SW846 METHOD 8270C

Client: Malcolm Pirnie, Inc. | Project: Flexo Site R.I. ; Seneca St. | Laboratory Job No.: RSK0332

Review Level: NYSDEC 'DUSR' | Laboratory: TestAmerica Buffalo

A. INSTRUMENT PERFORMANCE (DFTPP TUNE)

TUNE DATE:	11/06/09	11/11/09
TUNE FILE:	V7146.D	V7280.D
DFTPP INJECTION TIME:	10:40	09:34
LAST INJECTION WITHIN 12-HR. WINDOW ?	Yes	Yes
m/z RATIOS ACCEPTABLE ?	Yes	Yes

B. INITIAL CALIBRATION

SPCC Compounds
Base/Neutrals
N-Nitroso-di-n-propylamine
Hexachlorocyclopentadiene
Acids
2,4-Dinitrophenol
4-Nitrophenol
MINIMUM RRF = 0.050

CALIBRATION DATE :	11/06/09
FILE ID:	V7147-52; 55-60.D
All target RRFs >0.05 ?	Yes
All target %RSDs < 15% ?	No
If No, Regression established?	Yes
Correlation > 0.99 ?	Yes
(If No, list compounds) ==>	

QA ACTION: n/a

CCC Compounds
Base/Neutrals
Acenaphthene
1,4-Dichlorobenzene
Hexachlorobutadiene
Diphenylamine
Di-n-octylphthalate
Fluoranthene
Benzo(a)pyrene
Acids
4-Chloro-3-methylphenol
2,4-Dichlorophenol
2-Nitrophenol
Phenol
Pentachlorophenol
2,4,6-Trichlorophenol
MAXIMUM %RSD = 30.0%
MAXIMUM %D = 20.0%

NOTE:
Linear or non-linear regression acceptable alternatives for compounds w/ %RSD >15%.
Linear regression r values must be 0.99 minimum for these compounds.
Non-linear COD values must be 0.99 minimum for these compounds, with minimum 6-pts. for second-order, and minimum 7-pts. for third-order equations.

C. CONTINUING CALIBRATIONS

CALIBRATION DATE :	11/11/09
FILE ID:	V7281.D
All target & SPCC RRFs >0.05 ?	Yes
CCC %Ds < 20% ?	Yes
All targets +/- 20%D or 80 -120% True Value?	No
(If No, list compounds) ==>	4-methylphenol -26%
Affected samples :	all samples

QA Action : For targets w/ %D >-20% : Flag non-detects 'UJ' and positives 'J' in affected samples; negative bias on RL or positive value.

PCB ANALYSIS
QC PARAMETER / QUALIFIER SUMMARY
SW-846 Method 8082

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSK0332

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

A. HOLDING TIMES (NYSDEC-ASP)

AQUEOUS MATRIX:	5 DAYS MAX. VTSR TO EXTRACTION / 40 DAYS MAX. EXTRACTION TO ANALYSIS SAMPLES AND EXTRACTS MUST BE MAINTAINED AT 4 +/- 2 DEGREES C
NON-AQUEOUS MATRIX:	10 DAYS MAX. VTSR TO EXTRACTION / 40 DAYS MAX. EXTRACTION TO ANALYSIS SAMPLES AND EXTRACTS MUST BE MAINTAINED AT 4 +/- 2 DEGREES C

Aqueous samples were extracted within 1 day of VTSR; samples were analyzed within 1 day of extraction.

QA Action : n/a

B. METHOD BLANKS

Blank ID	Date Extracted	Date Analyzed	Matrix	Analytes Present	Conc., ppb	Associated Samples
9K05124-BLK1	11/06/09	11/06/09	water	none	n/a	RIB-4

C. INSTRUMENT BLANKS

Injection logs indicated that instrument blanks were run following each CCV.

D. SURROGATE RECOVERY

Surrogate recoveries were within acceptable limits.

E. MATRIX SPIKE / DUPLICATE (MS/MSD)

No MS/MSD were reported for this SDG.

F. BLANK SPIKE (LCS) 9K05124-BS1

Aroclor	Recovery	QA Action
AR 1016	59 / 61%	Flag AR1016 as estimated, 'UJ', with low bias on RL indicated.

G. SAMPLE QUALITATIVE & QUANTITATIVE VERIFICATION

No positive results for target Aroclors were reported in field samples.

H. FIELD DUPLICATE PRECISION

No Field Duplicates were identified for this SDG.

PCB ANALYSIS
CALIBRATION SUMMARY
SW-846 Method 8082

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSK0332

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

A. INITIAL CALIBRATION

CALIBRATION DATE :	10/11/09	HP6890-7
FILE IDs :	7a94146-152	
Mean RSD ≤ 20%?	yes	
Lin Regression r>0.99 ?	yes	
2nd-order COD >0.99 ?	n/a	
Associated samples :	RIB-4	

B. CONTINUING CALIBRATIONS (CCV)

	CCV1	CCV2
CALIBRATION DATE :	11/07/09	11/07/09
FILE IDs :	7a97166	7a97174
TIME :	17:02	19:28
At start of sequence?	Yes	n/a
After every 10 samples?	n/a	n/a
At end of sequence?	n/a	Yes
|%D| ≤ 15?	NO	NO
If No, list compounds ===>	AR1016	AR1016
	AR1260	AR1260
Affected Samples :	RIB-4	

QA ACTION : %D results were >15% for AR1016 &/or AR1260 for at least one quant. peak; responses were mixed (some high / some low) within a set of quant peaks for a particular Aroclor.
Results for non-detects for both Aroclors were flagged 'UJ', as quantitatively estimated RL values.

INORGANICS / METALS ANALYSIS
QC PARAMETER / CALIBRATION / QUALIFIER SUMMARY

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSK0332

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

A. CALIBRATION

	ICV	CCV	Outliers ?
ICP & AA Analytes	90 -110%	90 -110%	none
Mercury	80 - 120%	80 - 120%	none
Cyanide	85 - 115%	85 - 115%	none
Mercury	Blank + 5 Standards, r^2 >/ = 0.995		none
Cyanide	Blank + 4 Standards, r^2 >/ = 0.995		none

CRDL Standards		% Recovery	Outliers ?		QA ACTION
ICP Analytes	CRI	70 - 130%	As	+35%	Flag positive As estimated, 'J'
			Tl	+36%	n/a; Tl 'U' in affected sample
Mercury	CRA	70 - 130%	none		
Cyanide	Mid-Range	70 - 130%	n/a		

B. BLANKS

		Outliers ?
ICB / CCB	< RL	none
PrepBlank	< RL	none

C. ICP INTERELEMENT CORRECTION (ICSA / ICSAB)

		Outliers ?
ICSA	<2x RL for RL <10 ug/L	none
ICSAB	80 - 120% recovery	none

D. MATRIX SPIKE — Outliers ? Comments

75 - 125% recovery (if sample conc. < 4x spike conc.) — No MS / MSD reported for this SDG.

E. POST-DIGESTION SPIKE (PDS) — Outliers ? Comments

ICP [only required for non-compliant matrix spike analytes]
75 - 125% recovery; PDS conc. should be 2x RL or
2x sample conc., whichever is >. — n/a; see above Comments

F. MATRIX SPIKE DUPLICATE (OR MATRIX DUPLICATE) — Outliers ? Comments

Max. 35% RPD for non-aqueous samples > 5x CRDL
Max. (+/-) CRQL value if either sample < 5x CRDL — No MS / MSD reported for this SDG.

G. LABORATORY CONTROL SAMPLE — Outliers ?

Recovery within 80 - 120% for aqueous samples, OR
Recovery within specified range for non-aqueous samples — none

H. SERIAL DILUTION SAMPLE — Outliers ? Comments

Maximum 10.0% D if
undiluted sample > 50x IDL — No Serial Dilution reported for this SDG.

I. FIELD DUPLICATE — Outliers ? Comments

Criteria: if both results >5x MRL, <35%RPD;
if either or both <5x MRL, delta <MRL — No Field Duplicates identified for this SDG.

INORGANICS / METALS ANALYSIS
QC PARAMETER / CALIBRATION / QUALIFIER SUMMARY

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSK0332

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

J. NYSDEC-ASP HOLDING TIMES (from VTSR)

Metals except mercury	6 months	All samples were analyzed within allowable holding times.
Mercury	26 days	
Cyanide	12 days	

K. VERIFICATION OF INSTRUMENTAL PARAMETERS

	Frequency	Outliers ?
Method / Instrument Detection Limits	every 6 months	date not listed
Interelement Correction Factors	every 6 months	date not listed
Linear Range Analysis	every 6 months	date not listed

February 18, 2010

Malcolm Pirnie, Inc.
Att: Mr. James Richert
50 Fountain Plaza, Suite 600
Buffalo, New York 14202

Re: Flexo Remediation Investigation Site Data Deliverables; Laboratory No. **RSJ1254**

Malcolm Pirnie Project / Task Order No. : **6105-002**

Dear Mr. Richert,

Enclosed with this cover letter are the results of our data review of the laboratory deliverables pertaining to the referenced site. The review was conducted according to the guidelines established by NYSDEC's Data Usability Summary Review ('DUSR') process; data flags (qualifiers) were assigned to samples based on guidance contained in EPA Region II's Inorganic and Organic data validation guidelines .

Site Name: Flexo Transparent R.I.; 1132 & 1146 Seneca Street Site, Buffalo, NY

Fractions:
Volatile Organics
Semi-volatile Organics
Polychlorinated Biphenyls (PCBs)
TAL Metals + Cyanide

Laboratory: TestAmerica
Matrix: Non-Aqueous

Reviewer: Chris Taylor

Prepared By: Environmental Quality Associates, Inc.

SECTION A
Sample Information

The above-referenced analytical job numbers / samples were analyzed by TestAmerica Buffalo, Amherst, New York. Samples were analyzed for volatile organics (VOC, 2), semivolatile organics (SVOC, 4), polychlorinated biphenyls (PCB, 4), TAL metals and cyanide (TAL/CN, 3), in addition to any matrix spikes and duplicates for each analytical fraction.

Samples were collected on 10/19/2009, and were received at the laboratory (VTSR) on 10/22/2009 in good condition, at 6.0 degrees Centigrade, with ice noted as present.

SECTION B
General Comments

Summary of data completeness and overall quality of data deliverables package

Data deliverables were complete as received.

Overall data quality

Data quality was acceptable, incorporating applied data qualifiers as detailed in the accompanying QC and calibration summary forms, and discussed in the fraction-specific sections below.

SECTION C
Volatile Organic Fraction

Method blank 9J28038-BLK1 presented a low–level positive for methylene chloride resulting in the adjustment of methylene chloride results in samples RIB-2 (0.5-1.0) to 11 U ug/Kg and in sample RIB-5 (0.5-2.0) to 5.6 U ug/Kg.

No MS/MSD samples were reported for this sample group; no field duplicates were identified for this sample group.

Continuing calibration of 10/28/09 exhibited several compounds which presented %D values outside the (+/-) 20% acceptance range; these are detailed on the attached calibration summary. Compounds which required qualification due to these excursions were flagged on the associated EDD file with the appropriate annotation and bias direction.
Note to data user: in cases where %Ds were >+20.0%, with CCAL RRF values > corresponding ICAL average values (i.e., greater sensitivity), no QA action was taken if there were no positives found for these compounds in the associated field samples.

SECTION D
Semi-volatile Organics

All SDG samples, with the exception of RIB-5 (0.5-2.0), were analyzed and reported at extract dilutions ranging from 20x to 40x, resulting in corresponding increases in analyte RL values.

No MS/MSD samples were reported for this sample group; no field duplicates were identified for this sample group.

No data qualifications were required for these samples in this fraction.

SECTION E
Polychlorinated Biphenyls (PCBs)

All SDG samples, with the exception of RIB-5 (0.5-2.0), were analyzed and reported at extract dilutions ranging from 10x to 500x, resulting in corresponding increases in analyte RL values.

Several samples presented inter-column precision results above 25%D for Aroclors 1248 and/or 1260. These results were flagged as quantitatively estimated 'J'. Results which exceeded 100%D inter-column, and exhibited acceptable pattern-match for Aroclor confirmation were flagged as 'NJ', to indicate presumptive presence at estimated quantitation value. These samples and Aroclors are detailed on the attached QC summary form.

No MS/MSD samples were reported for this sample group; no field duplicates were identified for this sample group.

Continuing calibration (CCV) response %D results exceeded -15% for Aroclor 1016 and Aroclor 1260 in the closing CCV on 10/27/09, affecting all SDG samples. Results for the noted Aroclors in affected samples were flagged 'UJ' or 'J', as estimated RL values or positive results, with negative bias indicated due to reduced calibration sensitivity in the calibration verifications.

SECTION G
Metals / Wet Chemistry

No MS/MSD samples were reported for this sample group; no field duplicates were identified for this sample group. No LCS or serial dilution sample were reported for this sample group. A standard reference material was reported for this SDG; recoveries were within acceptable limits.

QC parameters for total cyanide were within limits. No data qualifiers for cyanide were necessary.

SECTION H
Overall Recommendations

The results of the review and qualification process for the above analytical fractions and associated samples are summarized on the attached QC and Calibration summary tables for each specific analytical fraction, in order to facilitate the end-user's' review of these data. Data qualifiers have been applied directly to the laboratory EDD spreadsheet (database), and are detailed in the corresponding QC / Calibration summaries.

Very truly yours,
Environmental Quality Associates, Inc.

Chris W. Taylor
Vice President

/cwt
Attachments

VOLATILE ORGANICS
QC PARAMETER / QUALIFIER SUMMARY
SW-846, Method 8260

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSJ1254

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

A. HOLDING TIMES (NYSDEC-ASP)

AQUEOUS MATRIX:	10 DAYS MAX. FROM VTSR TO ANALYSIS, IF PRESERVED TO pH <2 & 4 DEGREES C
AQUEOUS MATRIX:	7 DAYS MAX. FROM VTSR TO ANALYSIS, IF NOT PRESERVED TO pH <2 & 4 DEGREES C
NON-AQUEOUS MATRIX:	10 DAYS MAXIMUM FROM VTSR TO ANALYSIS, IF PRESERVED TO 4 +/- 2 DEGREES C
NON-AQUEOUS MATRIX:	7 DAYS MAXIMUM FROM VTSR TO ANALYSIS, IF NOT PRESERVED TO 4 +/- 2 DEGREES C

All non-aqueous samples were analyzed within 6 days of VTSR.

B. METHOD BLANKS

Date Analyzed	Blank ID (-BLK1)	File ID	Matrix	Analytes Present	Conc., ppb	Affected Samples
10/28/09	9J28038	F1326	soil	cyclohexane	1.5 J	RIB-2 0.5-1.0
				methylene chloride	3.2 J	RIB-5 0.5-2.0

QA Action :	RIB-2 0.5-1.0	MeCl2 to 11 U
	RIB-5 0.5-2.0	MeCl2 to 5.6 U

C. SURROGATE RECOVERY

Surrogate recoveries were within acceptable limits.

D. MATRIX SPIKE / DUPLICATE (MS/MSD)

No VOC MS/MSD samples were reported in this SDG.

E. BLANK SPIKE (LCS) 9J28038-BS1

Recoveries of all reported analytes were within limits in associated Blank Spike samples.

F. INTERNAL STANDARDS (IS)

IS recoveries & RTs for all SDG samples were within acceptable limits.

G. FIELD DUPLICATE PRECISION

No VOC Field Duplicates were identified for this SDG.

VOLATILE ORGANICS
CALIBRATION SUMMARY
SW-846, Method 8260

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSJ1254

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

A. INSTRUMENT PERFORMANCE (BFB TUNE) HP5973F

TUNE DATE:	10/17/09	10/28/09
TUNE FILE:	F1001.D	F1321.D
BFB INJECTION TIME:	12:28	12:04
LAST SAMPLE INJECTION:	16:38	23:00
m/z RATIOS ACCEPTABLE ?	Yes	Yes

B. INITIAL CALIBRATION

CALIBRATION DATE :	10/17/09
FILE IDs :	F1003-04;06-07;11.D
ALL target RRFs > 0.05 ?	Yes
SPCC RRFs > min.values?	Yes
CCC %RSDs < 30% ?	Yes
All Targets < 15% RSD?	Yes
If No, regression r > 0.99 ?	n/a
(If No, list compounds)===>	
Associated samples:	all

C. CONTINUING CALIBRATIONS

CALIBRATION DATE :	10/28/09
FILE ID :	F1323.D
ALL target RRFs > 0.05 ?	Yes
SPCC RRFs > min. values ?	Yes
CCC %Ds < 20% ?	Yes
Targets < 20%D or Drift ?	NO
(If No, list compounds)===>	112-triCl-122-triF-ethane +33% 12-diBr-3-Cl-propane -30% bromoform -20.3% chloroethane +28% methyl acetate -29% triCl-F-methane +21%
Associated samples:	all

QA ACTION : Compounds w/ %D >-20% (-) ; flag as estimated ('UJ' or 'J') w/ negative bias on RL or reported positive result.

Compounds w/ %D >+20% (+) ; flag as estimated ('J') w/ positive bias on reported positive result.

D. SAMPLE RESULT VERIFICATION

SAMPLE ID : LCS 9J28038-BS1
COMPOUND : trichloroethene Int. Std. : 1,4-difluorobenzene
REPORTED VALUE : 50.9 ug/Kg

Non-Aqueous (low-level): $\frac{(Ax)(Is)(Df)}{(Ais)(RRF)(Ws)(D)}$

Ax	Is	Df	
164959	250	1.0	
599953	0.270	5.00	1.000
Ais	RRF	Ws	D

ug/Kg = **50.9** Result verified ? **Yes**

SEMI-VOLATILE ORGANICS
QC PARAMETER / QUALIFIER SUMMARY
SW846 8270

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSJ1254

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

A. HOLDING TIMES (NYSDEC-ASP)

AQUEOUS MATRIX:	5 DAYS MAX. VTSR TO EXTRACTION / 40 DAYS MAX. EXTRACTION TO ANALYSIS SAMPLES AND EXTRACTS MUST BE MAINTAINED AT 4 +/- 2 DEGREES C
NON-AQUEOUS MATRIX:	10 DAYS MAX. VTSR TO EXTRACTION / 40 DAYS MAX. EXTRACTION TO ANALYSIS SAMPLES AND EXTRACTS MUST BE MAINTAINED AT 4 +/- 2 DEGREES C

All non-aqueous samples were extracted within 4 days of VTSR; all samples were analyzed within 3 days of extraction.

QA Action : n/a

B. METHOD BLANKS

Blank ID	File ID	Date Extracted	Matrix	Analytes Present	Conc., ppb	Affected Batch
9J25023-BLK1	W8190.D	10/26/09	soil	2-Me_naphthalene	6.8 J	9J25023
				naphthalene	25 J	

QA Action: No action taken, since any positives in associated samples were above 5x Blank Action Levels.

C. SURROGATE RECOVERY

Surrogate recoveries were within acceptable limits, with the exception noted below; no QA action was necessary.
Note: no recovery of surrogate 2,4,6-triBrphenol was found; this sample was analyzed at 20x extract dilution

D. MATRIX SPIKE / DUPLICATE (MS/MSD)

No MS/MSD samples were reported with this SDG.

E. BLANK SPIKE (LCS)

Compound	9J25023-BS1 Recovery %	DV Flag	Bias	Samples Affected
3,3'-dichlorobenzidine	129 / 126	none	n/a	none; no positives present for
N-nitrosodiphenylamine	121 / 119%	none	n/a	affected compounds

F. INTERNAL STANDARDS (IS)

IS recoveries & RTs for all SDG samples were within acceptable limits.

G. FIELD DUPLICATE

No Field Duplicate samples were identified for this SDG.

SEMI-VOLATILE ORGANICS
CALIBRATION SUMMARY
SW846 METHOD 8270C

Client: Malcolm Pirnie, Inc.　　Project: Flexo Site R.I. ; Seneca St.　　Laboratory Job No.: RSJ1254

Review Level: NYSDEC 'DUSR'　　Laboratory: TestAmerica Buffalo

A. INSTRUMENT PERFORMANCE (DFTPP TUNE)

TUNE DATE:	10/27/09	10/29/09
TUNE FILE:	W8153.D	W8221.D
DFTPP INJECTION TIME:	15:32	10:12
LAST INJECTION WITHIN 12-HR. WINDOW ?	Yes	Yes
m/z RATIOS ACCEPTABLE ?	Yes	Yes

B. INITIAL CALIBRATION

SPCC Compounds		
Base/Neutrals	CALIBRATION DATE :	10/27/09
	FILE ID:	W8155-60; 63-68.D
N-Nitroso-di-n-propylamine	All target RRFs >0.05 ?	Yes
Hexachlorocyclopentadiene	All target %RSDs < 15% ?	No
Acids	If No, Regression established?	Yes
2,4-Dinitrophenol	Correlation > 0.99 ?	Yes
4-Nitrophenol	(If No, list compounds) ==>	
MINIMUM RRF = 0.050		

QA ACTION: n/a

CCC Compounds
Base/Neutrals
Acenaphthene
1,4-Dichlorobenzene
Hexachlorobutadiene
Diphenylamine
Di-n-octylphthalate
Fluoranthene
Benzo(a)pyrene
Acids
4-Chloro-3-methylphenol
2,4-Dichlorophenol
2-Nitrophenol
Phenol
Pentachlorophenol
2,4,6-Trichlorophenol
MAXIMUM %RSD = 30.0%
MAXIMUM %D = 20.0%

NOTE:
Linear or non-linear regression acceptable alternatives for compounds w/ %RSD >15%.
Linear regression r values must be 0.99 minimum for these compounds.
Non-linear COD values must be 0.99 minimum for these compounds, with minimum 6-pts. for second-order, and minimum 7-pts. for third-order equations.

C. CONTINUING CALIBRATIONS

CALIBRATION DATE :	10/29/09
FILE ID:	W8222,23
All target & SPCC RRFs >0.0	Yes
CCC %Ds < 20% ?	Yes
All targets +/- 20%D or 80 -120% True Value?	Yes
(If No, list compounds) ==>	
Affected samples :	all field samples

QA Action : n/a

SEMI-VOLATILE ORGANICS
CALIBRATION SUMMARY
SW846 METHOD 8270C

CLIENT: Malcolm Pirnie, Inc. Lab Job No.: RSJ1254
PROJECT: Flexo Site R.I. ; Seneca St.

Review Level: NYSDEC 'DUSR' Laboratory : TestAmerica Buffalo

D. SAMPLE RESULT VERIFICATION

SAMPLE ID: RIB-5 0.5-2.0 (RSJ1254-04)
COMPOUND: naphthalene Int. Std.: naphthalene-d8
REPORTED VALUE: 540 ug/Kg

	Ax	Is	Vt	Df	GPC
ug/Kg =	210152	40	1000	1	1.0
	551253	1.130	1.0	30.23	0.840
	Ais	RRF	Vi	Ws	D

ug/Kg = **531** Result verified ? **Yes** OK - rounding

Where :			
	Ax	=	area of quant ion for target compound
	Is	=	amount of internal standard injected, ng
	Vt	=	volume of extract concentrate, uL
	Df	=	Extract dilution factor
	GPC	=	GPC factor (1.0 for no cleanup; 2.0 for GPC cleanup)
	Ais	=	area of quant ion for internal standard
	RRF	=	relative response factor, average from ICAL
	Vi	=	extract volume injected, uL
	Ws	=	sample mass extracted, gm (wet)
	D	=	% Solids / 100

PCB ANALYSIS
QC PARAMETER / QUALIFIER SUMMARY
SW-846 Method 8082

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSJ1254

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

A. HOLDING TIMES (NYSDEC-ASP)

AQUEOUS MATRIX:	5 DAYS MAX. VTSR TO EXTRACTION / 40 DAYS MAX. EXTRACTION TO ANALYSIS SAMPLES AND EXTRACTS MUST BE MAINTAINED AT 4 +/- 2 DEGREES C
NON-AQUEOUS MATRIX:	10 DAYS MAX. VTSR TO EXTRACTION / 40 DAYS MAX. EXTRACTION TO ANALYSIS SAMPLES AND EXTRACTS MUST BE MAINTAINED AT 4 +/- 2 DEGREES C

Non-aqueous samples were extracted within 1 day of VTSR; samples were analyzed within 4 days of extraction.

QA Action : n/a

B. METHOD BLANKS

Blank ID	Date Extracted	Date Analyzed	Matrix	Analytes Present	Conc., ppb
9J22124-BLK1	10/23/09	10/26/09	soil	none	n/a

QA Action : n/a

C. INSTRUMENT BLANKS

Injection logs indicated that instrument blanks were run following each CCV.

D. SURROGATE RECOVERY

Sample ID	Surrogate	Recovery / Bias	QA Action
RIB-2 0.5-1.0	TCMX & DCBP	no recovery	n/a; samples were run at dilution due to high levels of target analytes. Surrogates were diluted out.
RIB-2 0.0-2	TCMX & DCBP	no recovery	
RIB-3 0.6-0.9	TCMX & DCBP	no recovery	

E. MATRIX SPIKE / DUPLICATE

No MS/MSD were reported for this SDG.

F. BLANK SPIKE / BLANK SPIKE DUPLICATE (LCS / LCSD) 9J22124-BS1 9J22124-BSD1

LCS / LCSD recoveries and precision values were within limits.

G. SAMPLE QUALITATIVE VERIFICATION

The following samples exhibited inter-column concentrations which exceeded 25% difference (%D), and were qualified as indicated.

Sample ID (RIB-)	Aroclor (AR-)	% Diffference	QA Action
2 0.5-1.0	1248	52	Flag reported result 'J', as quantitatively estimated value
2 0.5-1.0	1260	135	Flag reported result 'NJ', as quantitatively estimated value
2 0.0-2	1248	64	Flag reported result 'J', as quantitatively estimated value
2 0.0-2	1260	144	Flag reported result 'NJ', as quantitatively estimated value
3 0.6-0.9	1248	107	Flag reported result 'NJ', as quantitatively estimated value
3 0.6-0.9	1260	164	Flag reported result 'NJ', as quantitatively estimated value

H. FIELD DUPLICATE PRECISION

No Field Duplicates were identified for this SDG.

PCB ANALYSIS
CALIBRATION SUMMARY
SW-846 Method 8082

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSJ1254

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

A. INITIAL CALIBRATION

CALIBRATION DATE :	11/09/08	HP5890-19
FILE IDs :	19a49175-181	
Mean RSD ≤ 20%?	yes	
Lin Regression r>0.99 ?	n/a	
2nd-order COD >0.99 ?	n/a	
Associated samples :	RSJ1254-01-04	

B. CONTINUING CALIBRATIONS (CCV)

	CCV3	CCV4
CALIBRATION DATE :	10/26/09	10/27/09
FILE IDs :	19a049	19a055
TIME :	22:57	00:55
At start of sequence?	Yes	n/a
After every 10 samples?	n/a	n/a
At end of sequence?	n/a	Yes
|%D| ≤ 15?	NO	Yes
If No, list compounds ===>	AR1260 +18%	AR1016 -20%
		AR1260 -17%
Affected Samples :	RSJ1254-01-04	

QA ACTION : %D results were >15% for AR1016 &/or AR1260 for at least one quant. peak; since responses were negative with respect to ICAL average (i.e., reduced sensitivity) reported results for AR1016 and AR1260 were flagged as quantitatively estimated, 'U J' or 'J', with low bias indicated.

C. SAMPLE RESULT VERIFICATION

Sample ID	Analyte	Reported Result		Column 1
RIB-3 0.6-0.9	AR1260	6400	ug/Kg	peak at RT = 5.22 minutes

File ID = 19a053

Primary column

	peak response	final volume, uL	dilution factor
ug/Kg =	17345	10000	100.0
	128677	30.37	0.6917
	CalFactor	sample wet weight	%solids/100

ug/Kg = 6417

Result verified ? yes *OK - rounding*

INORGANICS / METALS ANALYSIS
QC PARAMETER / CALIBRATION / QUALIFIER SUMMARY

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSJ1054

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

A. CALIBRATION

	ICV	CCV	Outliers ?
ICP & AA Analytes	90 -110%	90 -110%	none
Mercury	80 - 120%	80 - 120%	none
Cyanide	85 - 115%	85 - 115%	none
Mercury	Blank + 5 Standards, r^2 >/ = 0.995		none
Cyanide	Blank + 4 Standards, r^2 >/ = 0.995		none

CRDL Standards		% Recovery	Outliers ?		QA ACTION
ICP Analytes	CRI	70 - 130%	Na	+34%	Flag pos. Na <2x RL estimated 'J'
Mercury	CRA	70 - 130%	none		
Cyanide	Mid-Range	70 - 130%	n/a		

B. BLANKS

		Outliers ?
ICB / CCB	< RL	none
PrepBlank	< RL	none

C. ICP INTERELEMENT CORRECTION (ICSA / ICSAB)

		Outliers ?
ICSA	<2x RL for RL <10 ug/L	none
ICSAB	80 - 120% recovery	none

D. MATRIX SPIKE

No ICP metals MS/MSD were reported with this SDG. Standard Reference Material recoveries were within acceptable limits.

E. POST-DIGESTION SPIKE (PDS) — See D. above.

ICP [only required for non-compliant matrix spike analytes]
75 - 125% recovery; PDS conc. should be 2x RL or
2x sample conc., whichever is >.

F. MATRIX SPIKE DUPLICATE (OR MATRIX DUPLICATE) — See D. above.

Max. 35% RPD for non-aqueous samples > 5x CRDL
Max. (+/-) CRQL value if either sample < 5x CRDL

G. LABORATORY CONTROL SAMPLE

Recovery within range for non-aqueous samples

Comments: SRM was reported; no LCS reported

H. SERIAL DILUTION SAMPLE

Maximum 10.0% D if
undiluted sample > 50x IDL

Comments: No serial dilution sample was reported

I. FIELD DUPLICATE

Criteria: if both results >5x MRL, <35%RPD;
if either or both <5x MRL, delta <MRL

Comments: No Field Duplicates were reported

INORGANICS / METALS ANALYSIS
QC PARAMETER / CALIBRATION / QUALIFIER SUMMARY

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSJ1054

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

J. NYSDEC-ASP HOLDING TIMES (from VTSR)

Metals except mercury	6 months	All samples were analyzed within allowable holding times.
Mercury	26 days	
Cyanide	12 days	

K. VERIFICATION OF INSTRUMENTAL PARAMETERS

	Frequency	Outliers ?
Method / Instrument Detection Limits	every 6 months	date not listed
Interelement Correction Factors	every 6 months	date not listed
Linear Range Analysis	every 6 months	date not listed

L. VERIFICATION OF REPORTED RESULTS

Sample ID : RIB-2 0.0-2 Analyte: Pb
Reported value: 81.5 mg/Kg

	conc. mg/L	x	final volume, mL		
mg/Kg =	0.6677		50	= mg/Kg =	81.52
	0.501		0.818		
	wet wgt, gm	x	%solids/100	Result verified ?	Yes

VERIFICATION OF REPORTED RESULTS

Sample ID : RIB-2 0.0-2 Analyte: Hg
Reported value: 0.113 mg/Kg

	conc. mg/L	x	final volume, mL		
mg/Kg =	0.0011		50	= mg/Kg =	0.113
	0.594		0.818		
	wet wgt, gm	x	%solids/100	Result verified ?	Yes

February 18, 2010

Malcolm Pirnie, Inc.
Att: Mr. James Richert
50 Fountain Plaza, Suite 600
Buffalo, New York 14202

Re: Flexo Remediation Investigation Site Data Deliverables; Laboratory No. **RSL0710**

Malcolm Pirnie Project / Task Order No. : **6105-002**

Dear Mr. Richert,

Enclosed with this cover letter are the results of our data review of the laboratory deliverables pertaining to the referenced site. The review was conducted according to the guidelines established by NYSDEC's Data Usability Summary Review ('DUSR') process; data flags (qualifiers) were assigned to samples based on guidance contained in EPA Region II's Inorganic and Organic data validation guidelines .

Site Name: Flexo Transparent R.I.; 1132 & 1146 Seneca Street Site, Buffalo, NY

Fractions:
Volatile Organics
Semi-volatile Organics
Polychlorinated Biphenyls (PCBs)

Laboratory: TestAmerica
Matrix: Non-Aqueous

Reviewer: Chris Taylor

Prepared By: Environmental Quality Associates, Inc.

SECTION A
Sample Information

The above-referenced analytical job numbers / samples were analyzed by TestAmerica Buffalo, Amherst, New York. Samples were analyzed for volatile organics (VOC, 1), semivolatile organics (SVOC, 1), and polychlorinated biphenyls (PCB, 37), in addition to any matrix spikes and duplicates for each analytical fraction.

Samples were collected between 12/14-16/2009, and were received at the laboratory (VTSR) on 12/16/2009 in good condition, at 6.0 degrees Centigrade, with ice noted as present.

SECTION B
General Comments

Summary of data completeness and overall quality of data deliverables package

Data deliverables were complete as received.

Overall data quality

Data quality was acceptable, incorporating applied data qualifiers as detailed in the accompanying QC and calibration summary forms, and discussed in the fraction-specific sections below.

SECTION C
Volatile Organic Fraction

No VOC MS/MSD samples were reported for this sample group; no VOC field duplicates were identified for this sample group.

No data qualifications were required for these samples in this fraction.

SECTION D
Semi-volatile Organics

No SVOC MS/MSD samples were reported for this sample group; no SVOC field duplicates were identified for this sample group.

The CCV on 12/18/09 presented %D for 4-methylphenol above -20%; the result for 4-methylphenol in associated sample E4 (0.8-1.1) was flagged as estimated, 'UJ', with low bias of RL value indicated.

SECTION E
Polychlorinated Biphenyls (PCBs)

All SDG samples, with the exception of A-L, were analyzed and reported at extract dilutions ranging from 4x to 10,000x, resulting in corresponding increases in analyte RL values.

Numerous samples presented inter-column precision results above 25%D for Aroclors 1242, 1248, 1254 and/or 1260. These results were flagged as quantitatively estimated 'J'. Results which exceeded 100%D inter-column, and exhibited acceptable pattern-match for Aroclor confirmation were flagged as 'NJ', to indicate presumptive presence at estimated quantitation value. These samples and Aroclors are detailed on the attached QC summary.

Continuing calibration (CCV) response %D results exceeded +15% for Aroclor 1260 in the analytical sequence of 12/18-19/09 (CCV 1-4), affecting all SDG samples with prefix P, O, N, M, L, K, H, G, C and D, and samples DUP-L and F-U. Results for positive Aroclor 1260 in affected samples were flagged 'J', as estimated positive results, with high bias indicated due to increased calibration sensitivity in the calibration verifications.
Continuing calibration (CCV) response %D results exceeded +15% for Aroclor 1016 in the analytical sequence of 12/20/09 (CCV 2-3), affecting all SDG samples with prefix J, B, A, E, and I, and samples E-4, LD-W and LD-S. Results for positive Aroclor 1016 in affected samples were flagged 'J', as estimated positive results, with high bias indicated due to increased calibration sensitivity in the calibration verifications.

Precision values between collocated samples L-U and DUP-U for Aroclor 1254, Aroclor 1260, and Total Aroclors exceeded 50% RPD (at 98%, 105% and 99%, respectively. Reported results for these analytes in both noted samples were flagged as estimated, 'J', with indeterminate bias direction.

SECTION G
Metals / Wet Chemistry

No metals or wet chemistry samples were analyzed for this sample group.

SECTION H
Overall Recommendations

The results of the review and qualification process for the above analytical fractions and associated samples are summarized on the attached QC and Calibration summary tables for each specific analytical fraction, in order to facilitate the end-user's' review of these data. Data qualifiers have been applied directly to the laboratory EDD spreadsheet (database), and are detailed in the corresponding QC / Calibration summaries.

Very truly yours,
Environmental Quality Associates, Inc.

Chris W. Taylor
Vice President

/cwt
Attachments

VOLATILE ORGANICS
QC PARAMETER / QUALIFIER SUMMARY
SW-846, Method 8260

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSL0710

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

A. HOLDING TIMES (NYSDEC-ASP)

AQUEOUS MATRIX:	10 DAYS MAX. FROM VTSR TO ANALYSIS, IF PRESERVED TO pH <2 & 4 DEGREES C
AQUEOUS MATRIX:	7 DAYS MAX. FROM VTSR TO ANALYSIS, IF NOT PRESERVED TO pH <2 & 4 DEGREES C
NON-AQUEOUS MATRIX:	10 DAYS MAXIMUM FROM VTSR TO ANALYSIS, IF PRESERVED TO 4 +/- 2 DEGREES C
NON-AQUEOUS MATRIX:	7 DAYS MAXIMUM FROM VTSR TO ANALYSIS, IF NOT PRESERVED TO 4 +/- 2 DEGREES C

All non-aqueous samples were analyzed within 1 day of VTSR.

B. METHOD BLANKS

Date Analyzed	Blank ID (-BLK1)	File ID	Matrix	Analytes Present
12/17/09	9L17082	F2355	soil	none

C. SURROGATE RECOVERY

All surrogate recoveries were within acceptable limits.

D. MATRIX SPIKE / DUPLICATE (MS/MSD)

No VOC MS/MSD samples were reported for this SDG.

E. BLANK SPIKE (LCS) 9L17082-BS1

Recoveries of all reported analytes were within limits in associated Blank Spike samples.
Note: only the CLP-suite of five target compounds were spiked in the LCS.

F. INTERNAL STANDARDS (IS)

All IS recoveries & RTs samples were within acceptable limits.

G. FIELD DUPLICATE PRECISION

No VOC field duplicate samples were reported for this SDG.

VOLATILE ORGANICS
CALIBRATION SUMMARY
SW-846, Method 8260

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSL0710

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

A. INSTRUMENT PERFORMANCE (BFB TUNE)

TUNE DATE:	12/15/09	12/17/09
TUNE FILE:	F2307.D	F2352.D
BFB INJECTION TIME:	12:58	16:30
LAST SAMPLE INJECTION:	15:34	22:38
m/z RATIOS ACCEPTABLE ?	Yes	Yes

B. INITIAL CALIBRATION

CALIBRATION DATE :	12/15/09
FILE IDs :	F2309 - 13
ALL target RRFs > 0.05 ?	Yes
SPCC RRFs > min.values?	Yes
CCC %RSDs < 30% ?	Yes
All Targets < 15% RSD?	No
If No, regression r > 0.99 ?	Yes
(If No, list compounds)===>	
Associated samples:	all

C. CONTINUING CALIBRATIONS

CALIBRATION DATE :	12/17/09
FILE ID :	F2353.D
ALL target RRFs > 0.05 ?	Yes
SPCC RRFs > min. values ?	Yes
CCC %Ds < 20% ?	Yes
Targets < 20%D or Drift ?	Yes
(If No, list compounds)===>	n/a
Associated samples:	all

D. SAMPLE RESULT VERIFICATION

SAMPLE ID : E4 (0.8-1.1)
COMPOUND : acetone
REPORTED VALUE : 32 ug/Kg

Int. Std. : 1,4-difluorobenzene

Non-Aqueous (low-level)

$$\frac{(Ax)\ (Is)\ (Df)}{(Ais)\ (RRF)\ (Ws)\ (D)}$$

Ax	Is	Df	
20332	250	1.0	
406743	0.096	5.09	0.789
Ais	RRF	Ws	D

ug/Kg = 32.4 Result verified ? Yes

SEMI-VOLATILE ORGANICS
QC PARAMETER / QUALIFIER SUMMARY
SW846 8270

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSL0710

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

A. HOLDING TIMES (NYSDEC-ASP)

AQUEOUS MATRIX:	5 DAYS MAX. VTSR TO EXTRACTION / 40 DAYS MAX. EXTRACTION TO ANALYSIS SAMPLES AND EXTRACTS MUST BE MAINTAINED AT 4 +/- 2 DEGREES C
NON-AQUEOUS MATRIX:	10 DAYS MAX. VTSR TO EXTRACTION / 40 DAYS MAX. EXTRACTION TO ANALYSIS SAMPLES AND EXTRACTS MUST BE MAINTAINED AT 4 +/- 2 DEGREES C

All non-aqueous samples were extracted within 1 day of VTSR; all samples were analyzed within 1 day of extraction.

QA Action : n/a

B. METHOD BLANKS

Blank ID	File ID	Date Extracted	Matrix	Analytes Present	Conc., ppb	Affected Batch
9L16086-BLK1	V8571.D	12/17/09	soil	none	n/a	RL91807

FIELD BLANKS

No field blanks were submitted with this SDG. QA Action: n/a

C. SURROGATE RECOVERY

Surrogate recoveries were within acceptable limits.

D. MATRIX SPIKE / DUPLICATE

No SVOC MS/MSD samples were reported for this SDG.

E. BLANK SPIKE (LCS) 9L16086-BS1 9L16086-BSD1

Reported recoveries for LCS and LCSD samples were within laboratory-derived limits.

Reported precision (RPD) results between LCS and LCSD concentrations were within acceptable limits.

F. INTERNAL STANDARDS (IS)

IS recoveries & RTs for all SDG samples were within acceptable limits.

G. FIELD DUPLICATE PRECISION

No SVOC field duplicate samples were reported for this SDG.

SEMI-VOLATILE ORGANICS
CALIBRATION SUMMARY
SW846 METHOD 8270C

Client: Malcolm Pirnie, Inc. | Project: Flexo Site R.I. ; Seneca St. | Laboratory Job No.: RSL0710

Review Level: NYSDEC 'DUSR' | Laboratory: TestAmerica Buffalo

A. INSTRUMENT PERFORMANCE (DFTPP TUNE)

TUNE DATE:	12/09/09	12/18/09
TUNE FILE:	V8269.D	V8567.D
DFTPP INJECTION TIME:	16:53	13:07
LAST INJECTION WITHIN 12-HR. WINDOW ?	Yes	Yes
m/z RATIOS ACCEPTABLE ?	Yes	Yes

B. INITIAL CALIBRATION

SPCC Compounds		
Base/Neutrals	CALIBRATION DATE :	12/09/09
N-Nitroso-di-n-propylamine	FILE ID:	V8272 - 77.D
Hexachlorocyclopentadiene	All target RRFs >0.05 ?	Yes
Acids	All target %RSDs < 15% ?	No
2,4-Dinitrophenol	If No, Regression established?	Yes
4-Nitrophenol	Correlation > 0.99 ?	Yes
MINIMUM RRF = 0.050	(If No, list compounds) ==>	

QA ACTION: n/a n/a

CCC Compounds
Base/Neutrals
Acenaphthene
1,4-Dichlorobenzene
Hexachlorobutadiene
Diphenylamine
Di-n-octylphthalate
Fluoranthene
Benzo(a)pyrene
Acids
4-Chloro-3-methylphenol
2,4-Dichlorophenol
2-Nitrophenol
Phenol
Pentachlorophenol
2,4,6-Trichlorophenol
MAXIMUM %RSD = 30.0%
MAXIMUM %D = 20.0%

NOTE:
Linear or non-linear regression acceptable alternatives for compounds w/ %RSD >15%.
Linear regression r values must be 0.99 minimum for these compounds.
Non-linear COD values must be 0.99 minimum for these compounds, with minimum 6-pts. for second-order, and minimum 7-pts. for third-order equations.

C. CONTINUING CALIBRATIONS

CALIBRATION DATE :	12/18/09
FILE ID:	V8567,68
All target & SPCC RRFs >0.0	Yes
CCC %Ds < 20% ?	Yes
All targets +/- 20%D or 80 -120% True Value?	NO
(If No, list compounds) ==>	nitrobenzene +20.5%
	2-nitroaniline +24%
	4-nitrophenol +27%
	benzaldehyde +35%
	4-methylphenol -29%
Affected samples :	E4 (0.8 - 1.1)

QA Action : For targets w/ %D >-20% : Flag non-detects 'UJ' and positives 'J' in affected samples; negative bias on RL or positive value.
For targets w/ %D >+20% : Flag positives 'J' in affected samples; positive bias on positive value.

SEMI-VOLATILE ORGANICS
CALIBRATION SUMMARY
SW846 METHOD 8270C

CLIENT: Malcolm Pirnie, Inc. Lab Job No.: RSL0710
PROJECT: Flexo Site R.I. : Seneca St.

Review Level: NYSDEC 'DUSR' Laboratory : TestAmerica Buffalo

D. SAMPLE RESULT VERIFICATION

SAMPLE ID: E4 (0.8 - 1.1)
COMPOUND: benzo(b)fluoranthene Int. Std.: perylene-d12
REPORTED VALUE: 450 ug/Kg

	Ax	Is	Vt	Df	GPC
ug/Kg =	5312	40	1000	10	1.0
	148974	1.345	1.0	30.17	0.789
	Ais	RRF	Vi	Ws	D

ug/Kg = **446** Result verified ? **Yes** OK - rounding

Where :

Ax	=	area of quant ion for target compound
Is	=	amount of internal standard injected, ng
Vt	=	volume of extract concentrate, uL
Df	=	Extract dilution factor
GPC	=	GPC factor (1.0 for no cleanup; 2.0 for GPC cleanup)
Ais	=	area of quant ion for internal standard
RRF	=	relative response factor, average from ICAL
Vi	=	extract volume injected, uL
Ws	=	sample mass extracted, gm (wet)
D	=	% Solids / 100

PCB ANALYSIS
QC PARAMETER / QUALIFIER SUMMARY
SW-846 Method 8082

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSL0710

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

A. HOLDING TIMES (NYSDEC-ASP)

AQUEDUS MATRIX:	5 DAYS MAX. VTSR TO EXTRACTION / 40 DAYS MAX. EXTRACTION TO ANALYSIS SAMPLES AND EXTRACTS MUST BE MAINTAINED AT 4 +/- 2 DEGREES C
NON-AQUEOUS MATRIX:	10 DAYS MAX. VTSR TO EXTRACTION / 40 DAYS MAX. EXTRACTION TO ANALYSIS SAMPLES AND EXTRACTS MUST BE MAINTAINED AT 4 +/- 2 DEGREES C

Non-aqueous samples were extracted within 2 days of VTSR; samples were analyzed within 2 days of extraction.

B. METHOD BLANKS

Blank ID	Date Extracted	Date Analyzed	Matrix	Analytes Present	Conc., ppb	Action Level
9L16110-BLK1	12/17/09	12/18/09	soil	AR-1254	33	33
9L16111-BLK1	12/17/09	12/18/09	soil	AR-1242	7.1 J	7.1
				AR-1254	27 P	27
				AR-1260	3.8 JP	3.8
9L17095-BLK1	12/18/09	12/20/09	soil	AR-1254	4.1 J	4.1

QA Action : 1) If blank result is positive but <RL, and associated sample result is positive but <RL, report RL value with 'U' flag.
2) If blank result is positive >RL, and associated sample result is >RL and <Blank, report sample with 'U' flag.
3) If blank result is positive >RL, and associated sample result is >RL and >Blank, report sample unflagged.

Comments: All positive sample results were compared to associated blank action levels, with adjustment for dilutions.
Sample results were > Action Levels; no sample results required qualification due to blank contamination.

C. INSTRUMENT BLANKS

Injection logs indicated that instrument blanks were run following each CCV.

D. SURROGATE RECOVERY

All SDG samples, with the exception of A-L, were analyzed at extract dilutions ranging from 4x to 10,000x, due to high concentrations of Aroclors in the samples. Therefore, all surrogate recoveries, with the exception of sample A-L, exhibited no quantifiable recoveries of surrogates due to these dilutions, and were labeled as 'D' (diluted-out) by the laboratory.

E. MATRIX SPIKE / DUPLICATE

	H-U (100x)	K-U (2000x)	QA Action
AR1016	no recovery	no recovery	Samples were analyzed at high extract dilution factors
AR1260	1700%, 2680%	no recovery	which precluded spike recovery. See comments below.

Comments: The one sample which was not diluted (A-L) was spiked and exhibited acceptable recoveries and precision.
Both spike samples shown above were not spiked at an appropriate level based on Aroclor concentrations present in the native (unspiked) samples and the resultant extract dilutions necessary to bring these concentrations within calibrated range. Effectively, the spike-added concentrations were masked by the dilution (for AR1016) and overwhelmed by the native concentration (for AR1260). Therefore, these samples provide no meaningful information relative to potential sample matrix effects which may be present.

F. BLANK SPIKE / BLANK SPIKE DUPLICATE (LCS / LCSD) 9L16110-BS1 9L16111-BS1 9L17095-BS1

LCS / LCSD recoveries and precision values were within limits.

PCB ANALYSIS
QC PARAMETER / QUALIFIER SUMMARY
SW-846 Method 8082

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. : Seneca St. Laboratory Job No.: RSL0710

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

G. SAMPLE QUALITATIVE VERIFICATION

The following samples exhibited inter-column concentrations which exceeded 25% difference (%D), and were qualified as indicated.

Sample ID	Aroclor (AR-)	% Diffference	QA Action
G-L	1260	33	Flag reported result 'J', as quantitatively estimated value
C-U	1242	28	Flag reported result 'J', as quantitatively estimated value
DUP-U	1260	172	Flag reported result 'NJ', as quantitatively estimated value
O-U	1260	30	Flag reported result 'J', as quantitatively estimated value
O-L	1260	43	Flag reported result 'J', as quantitatively estimated value
N-U	1260	79	Flag reported result 'J', as quantitatively estimated value
N-L	1260	77	Flag reported result 'J', as quantitatively estimated value
M-U	1260	156	Flag reported result 'NJ', as quantitatively estimated value
M-L	1260	127	Flag reported result 'NJ', as quantitatively estimated value
L-U	1260	187	Flag reported result 'NJ', as quantitatively estimated value
L-L	1260	125	Flag reported result 'NJ', as quantitatively estimated value
K-U	1260	79	Flag reported result 'J', as quantitatively estimated value
K-L	1260	84	Flag reported result 'J', as quantitatively estimated value
J-U	1254	67	Flag reported result 'J', as quantitatively estimated value
J-L	1254	42	Flag reported result 'J', as quantitatively estimated value
B-U	1248	71	Flag reported result 'J', as quantitatively estimated value
B-U	1254	56	Flag reported result 'J', as quantitatively estimated value
B-U	1260	60	Flag reported result 'J', as quantitatively estimated value
B-L	1248	180	Flag reported result 'NJ', as quantitatively estimated value
B-L	1254	87	Flag reported result 'J', as quantitatively estimated value
A-U	1248	193	Flag reported result 'NJ', as quantitatively estimated value
A-U	1254	75	Flag reported result 'J', as quantitatively estimated value
A-L	1254	59	Flag reported result 'J', as quantitatively estimated value
E-U	1254	51	Flag reported result 'J', as quantitatively estimated value
E-L	1248	245	Flag reported result 'NJ', as quantitatively estimated value
E-L	1254	79	Flag reported result 'J', as quantitatively estimated value
I-U	1254	62	Flag reported result 'J', as quantitatively estimated value
E4 (0.8-1.1)	1254	52	Flag reported result 'J', as quantitatively estimated value
LD-W	1254	60	Flag reported result 'J', as quantitatively estimated value

H. FIELD DUPLICATE PRECISION

	C-L	DUP-L	RPD, %	QA Action
AR1242	3500	2800	22.2	n/a
AR1254	14000	11000	24.0	
AR1260	22000	16000	31.6	
Total Aroclors	39500	29800	28.0	

	L-U	DUP-U	RPD, %	QA Action
AR1254	2800000	960000	97.9	Flag results for AR1254, AR1260 and
AR1260	290000	90000	105.3	Total Aroclors in samples L-U and DUP-U
Total Aroclors	3090000	1050000	98.6	as estimated, J, with indeterminate bias direction

CALIBRATION SUMMARY
SW-846 Method 8082

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSL0710

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

A. INITIAL CALIBRATION

CALIBRATION DATE :	11/15/09 HP6890-7	11/16/09 HP5890-19
Mean RSD ≤ 20%?	yes	yes
Lin Regression r>0.99 ?	yes	yes
2nd-order COD >0.99 ?	n/a	n/a
Associated samples :	C, D, F, G, H, DUP, K, L, M, N, O, P * * Above samples are prefix IDs	A, B, E, I, J, LD, E4 * * Above samples are prefix IDs

B. CONTINUING CALIBRATIONS (CCV)

HP6890-7	CCV1	CCV2	CCV3	CCV4	CCV5	CCV1	CCV2
CALIBRATION DATE :	12/18/09	12/18/09	12/18/09	12/19/09	12/19/09	12/19/09	12/19/09
FILE IDs :	7a102_128	7a102_140	7a102_148	7a102_160	7a102_170	7a102_180	7a102_188
TIME :	12:09	18:57	21:23	01:02	04:05	07:08	11:21
At start of sequence?	Yes	n/a	n/a	n/a	n/a	Yes	n/a
After every 10 samples?	n/a	Yes	Yes	Yes	Yes	n/a	n/a
At end of sequence?	n/a	n/a	n/a	n/a	n/a	n/a	Yes
|%D| ≤ 15?	NO	Yes	NO	Yes	NO	Yes	Yes
If No, list compounds ===>	AR1260 +19%		AR1260 +17%		AR1260 +18%		
Affected Samples :	P, 0, N (-U, -L)	M, L, K (-U, -L)	H, G (-U, -L)	C, D (-U, -L)	DUP-L, F-U	DUP-U, F-L	

QA ACTION : Average %D results were >+15% for AR1260 for at least one column; method requires both columns to meet criteria. Since exceedances were positive with respect to ICAL average (i.e., increased sensitivity) positive results for 1260 were flagged 'J' as quantitatively estimated, with potential high bias indicated.

HP5890-19	CCV1	CCV2	CCV3
CALIBRATION DATE :	12/20/09	12/20/09	12/20/09
FILE IDs :	19a108_058	19a108_070	19a108_079
TIME :	06:37	11:37	14:33
At start of sequence?	Yes	n/a	n/a
After every 10 samples?	n/a	Yes	n/a
At end of sequence?	n/a	n/a	Yes
|%D| ≤ 15?	Yes	NO	NO
If No, list compounds ===>		AR1016 +17%	AR1016 +15.2%
Affected Samples :	J, B, A (-U, -L)	E, I (-U, -L)	E4, LD-W,-S

QA ACTION : %D results were >+15% for AR1016 ; since no positive responses were found for AR1016 in affected samples, no data qualifiers were assigned.

CALIBRATION SUMMARY
SW846 METHOD 8082

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSL0710

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

D. SAMPLE RESULT VERIFICATION

Sample ID	Analyte	Reported Result		HP6890-7 Column 1
F-U	AR1260	1100000	ug/Kg	peak at RT = 5.69 minutes

File ID = 7a102_168

ug/Kg =

peak response	final volume, uL	dilution factor
346970	10000	10000
1199405	30.31	0.8861
CalFactor	sample wet weight	%solids/100

ug/Kg = 1077103

Result verified ? yes *OK - rounding*

Sample ID	Analyte	Reported Result		HP5890-19 Column 2
A-U	AR1260	29000	ug/Kg	peak at RT = 4.83 minutes

File ID = 19b108_068

ug/Kg =

peak response	final volume, uL	dilution factor
54306	10000	100
85034	30.95	0.7132
CalFactor	sample wet weight	%solids/100

ug/Kg = 28932

Result verified ? yes *OK - rounding*

February 15, 2010

Malcolm Pirnie, Inc.
Att: Mr. James Richert
50 Fountain Plaza, Suite 600
Buffalo, New York 14202

Re: Flexo Site Data Deliverables; Laboratory SDG No. **NY134355**

Malcolm Pirnie Project No. : 6105-002

Dear Mr. Richert,

Enclosed with this cover letter are the results of our data review of the laboratory deliverables pertaining to the referenced site. The review was conducted according to the guidelines established by NYSDEC's Data Usability Summary Review ('DUSR') process; data flags (qualifiers) were assigned to samples based on guidance contained in EPA Region II's TO-15 Volatile Organic data validation guidelines .

Site Name: Flexo Site

Fractions:		Laboratory:	TestAmerica Burlington
TO-15 Volatile Organics		Matrix:	Air (Soil Gas)

Reviewer: Chris Taylor

Prepared By: Environmental Quality Associates, Inc.

SECTION A
Sample Information

The above-referenced analytical SDG numbers / samples were analyzed by Test America Laboratories, Inc., South Burlington, VT. Four canisters plus one field duplicate were collected on 10/21/09. Sample canisters were received at the laboratory on 10/23/09, in good condition and at appropriate post-sample vacuum levels, as noted by the laboratory sample receipt log. Samples were analyzed for volatile organics by EPA Air Toxics Method TO-15.

SECTION B
General Comments

Summary of data completeness and overall quality of data deliverables package

Data deliverables were complete as received. The laboratory narrative indicated that sample 'SV-2' was analyzed at a 4x dilution, based on pre-analysis screening scan; the reported RL values for SV-2 therefore reflect a 4x increase due to this dilution.

Overall data quality
Data quality was acceptable, incorporating any data qualifiers as detailed in the accompanying QC and calibration summary forms.

SECTION C
Volatile Organic Fraction

Method holding times from collection to analysis of 30-days maximum were met for all samples.

Internal standard recoveries were within acceptable limits for all samples. Method blank (MBLK102909CA) was free of contamination. Initial and continuing calibration criteria were within acceptable ranges, with the following exception: the %D value for bromoform exceeded 30% (at +34%). Since the exceedance was positive, i.e., greater sensitivity relative to the initial calibration average response factor, and no positives for bromoform were found in associated field samples, no QA action was necessary..

Samples 'SV-4' and "DUP' were identified as collocated field duplicate samples. RPD values were calculated for positive results and are shown on the QC summary form noted below. Per EPA Region II validation guidance, no action levels or RPD limits are specified for field duplicates for this method.

Chromatographic spectra for reported positive compounds were randomly verified and no disparities with reported results were noted.

SECTION D
Sample Result Verification

A positive target compound in a sample was randomly selected for verification of reported result from the raw data. The reported value for 1,1,1-trichloroethane in sample 'SV-2' was successfully verified.

SECTION E
Overall Recommendations

The results of the review and qualification process for the above analytical fractions and associated samples are summarized on the attached QC and Calibration summary tables for each specific analytical fraction, in order to facilitate the end-user's' review of these data. No data qualifiers were necessary for the associated samples.

Very truly yours,
Environmental Quality Associates, Inc.

Chris W. Taylor
Vice President

/cwt
Attachments

VOLATILE ORGANICS IN AMBIENT AIR / SOIL GAS
QC PARAMETER / QUALIFIER SUMMARY
EPA - ORD Method TO-15

Client: Malcolm Pirnie, Inc. Project: Flexo Site Laboratory SDG No.: NY134355

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Burlington

A. HOLDING TIMES

MAXIMUM 30 DAYS FROM COLLECTION TO ANALYSIS

All air samples were analyzed within 8 days of collection.

B. METHOD BLANKS

Date Analyzed	Blank ID	File ID	Matrix	Analytes Present	Conc., ppbv
10/29/09	MBLK102909CA	CIPB01B	air	none	n/a

C. BLANK SPIKE (LCS) CA102909LCS

All target compound recoveries were within acceptable limits in the LCS.

D. FIELD DUPLICATE SAMPLE PRECISION

Compound	ppbv SV-4	ppbv DUP	RPD, %	QA Action
Methylene Chloride	0.58	0.50 U	---	n/a
n-Hexane	1.8	3.0	50	
Cyclohexane	0.44	1.1	86	
n-Heptane	0.56	1.4	86	

All other results for target compounds in the field duplicates were reported as non-detects 'U'.

E. INTERNAL STANDARDS

All internal standard recoveries and retention times were within acceptable method ranges.

VOLATILE ORGANICS IN AMBIENT AIR / SOIL GAS
CALIBRATION SUMMARY
EPA - ORD Method TO-15

Client: Malcolm Pirnie, Inc. Project: Flexo Site Laboratory SDG No.: NY134355

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Burlington

A. INSTRUMENT PERFORMANCE (BFB TUNE)

TUNE DATE:	10/27/09	10/29/09
TUNE FILE:	CIP01PV	CIP03PV
BFB INJECTION TIME:	16:30	13:44
LAST SAMPLE INJECTION:	23:23	20:48
m/z RATIOS ACCEPTABLE ?	Yes	Yes
	ical	ccal

B. INITIAL CALIBRATION

CALIBRATION DATE :	10/27/09
FILE IDs :	CIP002V - 40V
Minimum 5-points ?	Yes
Target* RRFs > 0.05 ?	Yes
All Targets < 30% RSD?	Yes
(If No, list compounds)===>	
Affected samples:	SV-1,2,3,4,DUP

* 2-butanone (MEK), CS2, chloroethane, chloromethane, 1,2-dibromoethane, 1,2-dichloropropane, 1,4-dioxane, 1,2-dibromo-3-chloropropane and methylene chloride must meet RRF ≥0.01

C. CONTINUING CALIBRATIONS

CALIBRATION DATE :	10/29/09
FILE ID :	CIP10BV
Target* RRFs > 0.05 ?	Yes
All Targets <30%D ?	NO
(If No, list compounds)===>	bromoform +30.4%
Affected samples:	SV-1,2,3,4,DUP

QA ACTION

Comments : no positives for the above compound was found in field samples; no QA action necessary.

D. SAMPLE RESULT VERIFICATION

SAMPLE ID : SV-2
COMPOUND : 1,1,1-trichloroethane Int. Std. : 1,4-difluorobenzene
REPORTED VALUE : 15 ppbv

Air Samples ppbv = $\frac{(Ax)(Is)(Df)}{(Ais)(RRF)}$

Ax	Is	Df
747311	10.0	4.0
4923941	0.414	
Ais	RRF	

ppbv = **14.7** Result verified ? **Yes**

OK - rounding

February 18, 2010

Malcolm Pirnie, Inc.
Att: Mr. James Richert
50 Fountain Plaza, Suite 600
Buffalo, New York 14202

Re: Flexo Remediation Investigation Site Data Deliverables; Laboratory No. **RSJ1493**

Malcolm Pirnie Project / Task Order No. : **6105-002**

Dear Mr. Richert,

Enclosed with this cover letter are the results of our data review of the laboratory deliverables pertaining to the referenced site. The review was conducted according to the guidelines established by NYSDEC's Data Usability Summary Review ('DUSR') process; data flags (qualifiers) were assigned to samples based on guidance contained in EPA Region II's Inorganic and Organic data validation guidelines .

Site Name: Flexo Transparent R.I.; 1132 & 1146 Seneca Street Site, Buffalo, NY

Fractions:
Polychlorinated Biphenyls (PCBs)

Laboratory: TestAmerica
Matrix: Non-Aqueous

Reviewer: Chris Taylor

Prepared By: Environmental Quality Associates, Inc.

SECTION A
Sample Information

The above-referenced analytical job numbers / samples were analyzed by TestAmerica Buffalo, Amherst, New York. Samples were analyzed for polychlorinated biphenyls (PCB, 9), in addition to any matrix spikes and duplicates for each analytical fraction.

Samples were collected on 10/26 and 10/28/2009, and were received at the laboratory (VTSR) on 10/28/2009 in good condition, at 5.6 degrees Centigrade, with ice noted as present.

SECTION B
General Comments

Summary of data completeness and overall quality of data deliverables package

Data deliverables were complete as received.

Overall data quality

Data quality was acceptable, incorporating applied data qualifiers as detailed in the accompanying QC and calibration summary forms, and discussed in the fraction-specific sections below.

SECTION C
Polychlorinated Biphenyls (PCBs)

All SDG samples, with the exception of RILD-BTM(NO) and RILD-BTM(SO), were analyzed and reported at extract dilutions ranging from 2x to 5,000x, resulting in corresponding increases in analyte RL values.

Several samples presented inter-column precision results above 25%D for Aroclors 1242 and/or 1260. These results were flagged as quantitatively estimated 'J'. These samples and Aroclors are detailed on the attached QC summary form.

No MS/MSD samples were reported for this sample group; no field duplicates were identified for this sample group.

Continuing calibration (CCV) response %D results exceeded -15% for Aroclor 1016 and Aroclor 1260 in the analytical sequence CCV on 10/30/09, affecting all SDG samples. Results for the noted Aroclors in affected samples were flagged 'UJ' or 'J', as estimated RL values or positive results, with negative bias indicated due to reduced calibration sensitivity in the calibration verifications.

SECTION D
Overall Recommendations

The results of the review and qualification process for the above analytical fractions and associated samples are summarized on the attached QC and Calibration summary tables for each specific analytical fraction, in order to facilitate the end-user's' review of these data. Data qualifiers have been applied directly to the laboratory EDD spreadsheet (database), and are detailed in the corresponding QC / Calibration summaries.

Very truly yours,
Environmental Quality Associates, Inc.

Chris W. Taylor
Vice President

/cwt
Attachments

PCB ANALYSIS
QC PARAMETER / QUALIFIER SUMMARY
SW-846 Method 8082

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSJ1493

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

A. HOLDING TIMES (NYSDEC-ASP)

AQUEOUS MATRIX:	5 DAYS MAX. VTSR TO EXTRACTION / 40 DAYS MAX. EXTRACTION TO ANALYSIS SAMPLES AND EXTRACTS MUST BE MAINTAINED AT 4 +/- 2 DEGREES C
NON-AQUEOUS MATRIX:	10 DAYS MAX. VTSR TO EXTRACTION / 40 DAYS MAX. EXTRACTION TO ANALYSIS SAMPLES AND EXTRACTS MUST BE MAINTAINED AT 4 +/- 2 DEGREES C

Non-aqueous samples were extracted within 1 day of VTSR; samples were analyzed within 1 day of extraction.

QA Action : n/a

B. METHOD BLANKS

Blank ID	Date Extracted	Date Analyzed	Matrix	Analytes Present	Conc., ppb
9J29037-BLK1	10/29/09	10/30/09	wipe	none	n/a
9J28119-BLK1	10/29/09	10/30/09	soil	none	n/a

QA Action : n/a

C. INSTRUMENT BLANKS

Injection logs indicated that instrument blanks were run following each CCV.

D. SURROGATE RECOVERY

Sample ID	Surrogate	Recovery / Bias	QA Action
RI-RAIL (WIPE)	TCMX & DCBP	no recovery	n/a; samples were run at dilutions from 100x to 5000x due to high levels of target analytes. Surrogates were diluted out.
LD-A1	TCMX & DCBP	no recovery	
LD-B1	TCMX & DCBP	no recovery	
LD-C1	TCMX & DCBP	no recovery	
RILD-EAST-N	TCMX & DCBP	no recovery	
RILD-EAST-S	TCMX & DCBP	no recovery	

E. MATRIX SPIKE / DUPLICATE

No MS/MSD were reported for this SDG.

F. BLANK SPIKE / BLANK SPIKE DUPLICATE (LCS / LCSD) 9J29037-BS1 9J28119-BS1

Recoveries were within acceptable limits in the blank spike and duplicate samples.
Blank spike duplicate precision results were within acceptable limits.

G. SAMPLE QUALITATIVE VERIFICATION

The following samples exhibited inter-column concentrations which exceeded 25% difference (%D), and were qualified as indicated.

Sample ID	Aroclor (AR-)	% Diffference	QA Action
LD-B1	1242	30	Flag reported result 'J', as quantitatively estimated value
LD-B1	1260	32	Flag reported result 'J', as quantitatively estimated value
RILD-BTM(NO)	1242	43	Flag reported result 'J', as quantitatively estimated value
RILD-BTM(NO)	1260	32	Flag reported result 'J', as quantitatively estimated value
RILD-EAST(SO)	1260	30	Flag reported result 'J', as quantitatively estimated value
RI-RAIL	1260	27	Flag reported result 'J', as quantitatively estimated value

H. FIELD DUPLICATE PRECISION

No field duplicates were identified for this SDG.

PCB ANALYSIS
CALIBRATION SUMMARY
SW-846 Method 8082

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSJ1493

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

A. INITIAL CALIBRATION

CALIBRATION DATE :	11/09/08	HP5890-19
FILE IDs :	19a49175-181	
Mean RSD ≤ 20%?	yes	
Lin Regression r>0.99 ?	n/a	
2nd-order COD >0.99 ?	n/a	
Associated samples :	All Samples	

B. CONTINUING CALIBRATIONS (CCV)

	CCV1	CCV2	CCV1	CCV2	CCV3
CALIBRATION DATE :	10/30/09	10/30/09	10/30/09	10/30/09	10/30/09
FILE IDs :	19a156	19a163	19a163	19a173	19a178
TIME :	08:36	10:36	10:36	14:47	16:01
At start of sequence?	Yes	n/a	Yes	n/a	n/a
After every 10 samples?	n/a	Yes	n/a	Yes	n/a
At end of sequence?	n/a	Yes	n/a	n/a	Yes
|%D| ≤ 15?	NO	NO	NO	NO	NO
If No, list compounds ===>	AR1016 -25%	AR1016 -25%	AR1016 -25%	AR1016 -23%	AR1016 -25%
	AR1260 -22%	AR1260 -19%	AR1260 -19%	AR1260 -17%	AR1260 -18%
Affected Samples :	RI-RAIL (WIPE)		All samples EXCEPT RI-RAIL (WIPE)		

QA ACTION : %D results were >15% for AR1016 &/or AR1260 for at least one quant. peak; since responses were negative with respect to ICAL average (i.e., reduced sensitivity) reported results for AR1016 and AR1260 were flagged as quantitatively estimated, 'U J' or 'J', with low bias indicated.

C. SAMPLE RESULT VERIFICATION

Sample ID	Analyte	Reported Result		Column 1
LD-A1	AR1260	230000	ug/Kg	peak at RT = 5.22 minutes

File ID = 19a168

Primary column

ug/Kg =

peak response	final volume, uL	dilution factor
16628	10000	5000
128677	30.22	0.9329
CalFactor	sample wet weight	%solids/100

ug/Kg = 229182

Result verified ? yes *OK-rounding*

February 18, 2010

Malcolm Pirnie, Inc.
Att: Mr. James Richert
50 Fountain Plaza, Suite 600
Buffalo, New York 14202

Re: Flexo Remediation Investigation Site Data Deliverables; Laboratory No. **RSJ1639**

Malcolm Pirnie Project / Task Order No. : **6105-002**

Dear Mr. Richert,

Enclosed with this cover letter are the results of our data review of the laboratory deliverables pertaining to the referenced site. The review was conducted according to the guidelines established by NYSDEC's Data Usability Summary Review ('DUSR') process; data flags (qualifiers) were assigned to samples based on guidance contained in EPA Region II's Inorganic and Organic data validation guidelines .

Site Name: Flexo Transparent R.I.; 1132 & 1146 Seneca Street Site, Buffalo, NY

Fractions:
Polychlorinated Biphenyls (PCBs)

Laboratory: TestAmerica
Matrix: Non-Aqueous

Reviewer: Chris Taylor

Prepared By: Environmental Quality Associates, Inc.

SECTION A
Sample Information

The above-referenced analytical job numbers / samples were analyzed by TestAmerica Buffalo, Amherst, New York. Samples were analyzed for polychlorinated biphenyls (PCB, 6), in addition to any matrix spikes and duplicates for each analytical fraction.

Samples were collected on 10/29/2009, and were received at the laboratory (VTSR) on 10/30/2009 in good condition, at 2.0 degrees Centigrade, with ice noted as present.

SECTION B
General Comments

Summary of data completeness and overall quality of data deliverables package

Data deliverables were complete as received.

Overall data quality

Data quality was acceptable, incorporating applied data qualifiers as detailed in the accompanying QC and calibration summary forms, and discussed in the fraction-specific sections below.

SECTION C
Polychlorinated Biphenyls (PCBs)

Samples IRM2-North, IRM2-East and IRM2-DUP#1 were analyzed and reported at extract dilutions of 10x, 5x and 10x, respectively, resulting in corresponding increases in analyte RL values.

Several samples presented inter-column precision results above 25%D for Aroclors 1248 and/or 1260. These results were flagged as quantitatively estimated 'J'. Results which exceeded 100%D inter-column, and exhibited acceptable pattern-match for Aroclor confirmation were flagged as 'NJ', to indicate presumptive presence at estimated quantitation value. These samples and Aroclors are detailed on the attached QC summary.

Continuing calibration (CCV) response %D results exceeded -15% for Aroclor 1016 and Aroclor 1260 in the analytical sequence CCV on 11/01 and 11/02/09, affecting all SDG samples. Results for the noted Aroclors in affected samples were flagged 'UJ' or 'J', as estimated RL values or positive results, with negative bias indicated due to reduced calibration sensitivity in the calibration verifications.

SECTION D
Overall Recommendations

The results of the review and qualification process for the above analytical fractions and associated samples are summarized on the attached QC and Calibration summary tables for each specific analytical fraction, in order to facilitate the end-user's' review of these data. Data qualifiers have been applied directly to the laboratory EDD spreadsheet (database), and are detailed in the corresponding QC / Calibration summaries.

Very truly yours,
Environmental Quality Associates, Inc.

Chris W. Taylor
Vice President

/cwt
Attachments

PCB ANALYSIS
QC PARAMETER / QUALIFIER SUMMARY
SW-846 Method 8082

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSJ1639

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

A. HOLDING TIMES (NYSDEC-ASP)

AQUEOUS MATRIX:	5 DAYS MAX. VTSR TO EXTRACTION / 40 DAYS MAX. EXTRACTION TO ANALYSIS SAMPLES AND EXTRACTS MUST BE MAINTAINED AT 4 +/- 2 DEGREES C
NON-AQUEOUS MATRIX:	10 DAYS MAX. VTSR TO EXTRACTION / 40 DAYS MAX. EXTRACTION TO ANALYSIS SAMPLES AND EXTRACTS MUST BE MAINTAINED AT 4 +/- 2 DEGREES C

Non-aqueous samples were extracted within 1 day of VTSR; samples were analyzed within 2 days of extraction.

QA Action : n/a

B. METHOD BLANKS

Blank ID	Date Extracted	Date Analyzed	Matrix	Analytes Present	Conc., ppb
9J30107-BLK1	10/31/09	11/02/09	soil	none	n/a

QA Action : n/a

C. INSTRUMENT BLANKS

Injection logs indicated that instrument blanks were run following each CCV.

D. SURROGATE RECOVERY

Sample ID	Surrogate	Recovery / Bias	QA Action
IRM2-NORTH	TCMX & DCBP	no recovery	n/a; samples were run at dilution due to high levels of
IRM2-DUP#1	TCMX & DCBP	no recovery	target analytes. Surrogates were diluted out.

E. MATRIX SPIKE / DUPLICATE IRM2-BTM

Recoveries and precision values were within acceptable limits.

F. BLANK SPIKE (LCS) 9J30107-BS1

LCS recoveries were within limits.

G. SAMPLE QUALITATIVE VERIFICATION

The following samples exhibited inter-column concentrations which exceeded 25% difference (%D), and were qualified as indicated.

Sample ID (RIB-)	Aroclor (AR-)	% Diffference	QA Action
IRM2-NORTH	1260	60	Flag reported result 'J', as quantitatively estimated value
IRM2-SOUTH	1248	59	Flag reported result 'J', as quantitatively estimated value
IRM2-EAST	1260	75	Flag reported result 'J', as quantitatively estimated value
IRM2-WEST	1248	164	Flag reported result 'NJ', as quantitatively estimated value
IRM2-WEST	1260	63	Flag reported result 'J', as quantitatively estimated value
IRM2-BTM	1260	46	Flag reported result 'J', as quantitatively estimated value
IRM2-DUP#1	1248	2262	Flag reported result 'NJ', as quantitatively estimated value
IRM2-DUP#1	1260	1035	Flag reported result 'NJ', as quantitatively estimated value

H. FIELD DUPLICATE PRECISION

	IRM-2 NORTH	IRM2-DUP#1	% RPD
AR1248	310	290	6.7
AR1260	1500	1700	12.5

PCB ANALYSIS
CALIBRATION SUMMARY
SW-846 Method 8082

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Job No.: RSJ1639

Review Level: NYSDEC 'DUSR' Laboratory: TestAmerica Buffalo

A. INITIAL CALIBRATION

CALIBRATION DATE :	11/09/08	HP5890-19
FILE IDs :	19a49175-181	
Mean RSD < 20%?	yes	
Lin Regression r>0.99 ?	n/a	
2nd-order COD >0.99 ?	n/a	
Associated samples :	IRM2-N,S,E,W,BTM,-MS,-MSD, DUP#1	

B. CONTINUING CALIBRATIONS (CCV)

	CCV1	CCV2	CCV1	CCV2
CALIBRATION DATE :	11/01/09	11/01/09	11/02/09	11/02/09
FILE IDs :	19a031	19a041	19a044	19a054
TIME :	17:06	19:32	06:36	09:02
At start of sequence?	Yes	n/a	Yes	n/a
After every 10 samples?	n/a	Yes	n/a	n/a
At end of sequence?	n/a	Yes	n/a	Yes
|%D| < 15?	NO	NO	NO	NO
If No, list compounds ===>	AR1016 -21%	AR1016 -24%	AR1016 -25%	AR1016 -25%
	AR1260 -20%	AR1260 -23%	AR1260 -24%	AR1260 -21%
Affected Samples :	IRM2-N,S,E,W,BTM,-MS,-MSD		IRM2-DUP#1	

QA ACTION : %D results were >15% for AR1016 &/or AR1260 for at least one quant. peak; since responses were negative with respect to ICAL average (i.e., reduced sensitivity) reported results for AR1016 and AR1260 were flagged as quantitatively estimated, 'U J' or 'J', with low bias indicated.

C. SAMPLE RESULT VERIFICATION

Sample ID	Analyte	Reported Result		Column 1
IRM2-NORTH	AR1260	1000	ug/Kg	peak at RT = 5.22 minutes

File ID = 19a035

Primary column

	peak response	final volume, uL	dilution factor
ug/Kg =	27388	10000	10
	128677	30.02	0.7079
	CalFactor	sample wet weight	%solids/100

ug/Kg = 1002

Result verified ? yes

April 23, 2010

Malcolm Pirnie, Inc.
Att: Mr. James Richert
50 Fountain Plaza, Suite 600
Buffalo, New York 14202

Re: Flexo Remediation Investigation Site Data Deliverables; Laboratory No. **10-1100A; SDG No. 4241**

Malcolm Pirnie Project / Task Order No. : **6105-002**

Dear Mr. Richert,

Enclosed with this cover letter are the results of our data review of the laboratory deliverables pertaining to the referenced site. The review was conducted according to the guidelines established by NYSDEC's Data Usability Summary Review ('DUSR') process; data flags (qualifiers) were assigned to samples based on guidance contained in EPA Region II's Organic data validation guidelines .

Site Name: Flexo Transparent R.I.; Buffalo, NY

Fractions		
Polychlorinated Biphenyls (PCBs)	Laboratory:	Paradigm Environmental Services
	Matrix:	Non-Aqueous

Reviewer: Chris Taylor
Prepared By: Environmental Quality Associates, Inc.

SECTION A
Sample Information

The above-referenced analytical project numbers / samples were analyzed by Paradigm Environmental Services, Inc. Rochester, New York. Eighteen soil samples were analyzed for polychlorinated biphenyls (PCB), in addition to any matrix spikes and duplicates assigned by the client.

Samples were collected on 03/18/2010, and were received under custody seal at the laboratory (VTSR) on 03/19/2010 in good condition, at 6.0 degrees Centigrade, with ice noted as present.

SECTION B
General Comments

Summary of data completeness and overall quality of data deliverables package

Data deliverables were complete as received.

SECTION C
Polychlorinated Biphenyls (PCBs, as Aroclors) by SW-846, Method 8082

The following samples were analyzed and reported at extract dilutions ranging from 2x to 5,000x, resulting in corresponding increases in analyte RL values.

Field Sample ID	Lab ID	Dilution
1146D1-U	4241	5x
1146H1-U	4243	2x
U-U	4255	10x
U-L	4256	10x
FD-1	4257	5000x
FD-2	4258	50x

All samples were analyzed by single-column, single detector gas chromatography. Since the soil sample areas under consideration have been previously shown to exhibit the presence of Aroclor material, and review of the sample chromatograms provided reasonable pattern-match with standards, the presence of the reported positive Aroclors (1254 and 1260) may be presumed.

Positive results reported for Aroclors 1254 and 1260 were determined to have been quantitated using a shared peak at 8.92 minutes retention time (R.T.); this shared peak was identified as (Aroclor) 1254 'Peak 3' and as (Aroclor) 1260 'Peak 2'. Since at least three peaks for each discrete Aroclor are required per the method (8082A, Sect. 11.4.6.1), excluding this shared peak area from either Aroclor 1254 or 1260 does not provide adequate representation of either material. Based on the reviewer's discussions with the laboratory and client, it was determined as the most feasible alternative to qualify the positives for 1254 and 1260 as quantitatively estimated, with indication of potential high bias for each.

Therefore, all reported positive Aroclor results for AR-1254 and AR-1260 were flagged as 'NJ', to indicate presumptive presence at estimated quantitation value.

Overall data quality

Data quality was acceptable, incorporating applied data qualifiers as detailed in the accompanying QC and calibration summary forms, and discussed in the fraction-specific sections below.

Positive results for Aroclors 1254 and 1260 were qualified 'NJ', as presumptively present at estimated concentration.

Precision value between collocated samples 1146 L1-U and DUP31810 for Aroclor 1260 exceeded 50% RPD (at 75%). Reported results for Aroclor 1260 in both collocated samples were flagged as estimated, 'J', with indeterminate bias direction.

SECTION D
Overall Recommendations

The results of the review and qualification process for the above analytical fractions and associated samples are summarized on the attached QC and Calibration summary tables for each specific analytical fraction, in order to facilitate the end-user's' review of these data.

Very truly yours,
Environmental Quality Associates, Inc.

Chris W. Taylor
Vice President

/cwt
Attachments

PCB ANALYSIS
QC PARAMETER / QUALIFIER SUMMARY
SW-846 Method 8082

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. ; Seneca St. Laboratory Project No.: 10-1100A SDG No.: 4241

Review Level: NYSDEC 'DUSR' Laboratory: PARADIGM Environmental Svcs.

A. HOLDING TIMES (NYSDEC-ASP)

NON-AQUEOUS MATRIX: 10 DAYS MAX. VTSR TO EXTRACTION / 40 DAYS MAX. EXTRACTION TO ANALYSIS
SAMPLES AND EXTRACTS MUST BE MAINTAINED AT 4 +/- 2 DEGREES C

Non-aqueous samples were extracted within 5 days of VTSR; all samples were analyzed within 3 days of extraction.

B. METHOD BLANKS

Blank ID	Date Extracted	Date Analyzed	Matrix	Analytes Present	Conc., ppb	Action Level
SOIL PB 03/24	03/24/10	03/24/10	soil	none	n/a	n/a

C. INSTRUMENT BLANKS

Injection logs indicated that instrument blanks (solvent blanks / hexane) were run following each CCV.

D. SURROGATE RECOVERY

1 SDG samples U-U, U-L, FD-1 and FD-2 were analyzed at extract dilutions ranging from 10x to 5,000x, due to high concentrations of Aroclors in the samples. Therefore, surrogate recoveriesfor these samples exhibited no quantifiable recoveries of surrogates and were labeled as 'D' (diluted-out) by the laboratory. No QA action is applicable to these samples based on these dilutions.

2 The lab reported several recoveries of surrogate TCX (tetrachloro-m-xylene) below lab-derived recovery limits. It is noted that this surrogate is not required for 8082 Aroclor analysis when not using internal-standard calibration; no QA action was warranted.

E. MATRIX SPIKE / DUPLICATE

MATRIX SPIKE / DUPLICATE	U-L (10x)	QA Action
AR1242	196%, 212%	AR 1242 was not detected in samples and recovered above limits, possibly due to matrix interference. No QA action was was warranted.

F. BLANK SPIKE (LCS) RECOVERY

LCS recoveries were within limits.

G. SAMPLE QUALITATIVE VERIFICATION

The laboratory did not perform confirmatory analysis on positive results, as specified by Method 8082, Sect. 1.5. However, since the sampling site has been previously demonstrated to exhibit PCB contamination, and both positive Aroclors present (1254 ; 1260) exhibited reasonably close matches to respective standard materials, these Aroclors may be considered as presumptively present in the respective samples reported as positive.

QA Action: Positive results for Aroclors 1254 and 1260 are flagged 'NJ', as presumptively present at estimated concentration. The data user is referred to the DUSR narrative for further comments regarding data qualification.

H. FIELD DUPLICATE PRECISION

	1146 L1-U	DUP 31810	RPD, %	QA Action
AR1260, mg/Kg	0.148	0.0674	74.8	Flag results for AR1260 in samples 1146 L1-U and DUP 31810 as estimated 'J', with indeterminate bias direction.

Client: Malcolm Pirnie, Inc.   Project: Flexo Site R.I.   Laboratory Project No.: 10-1 t00A   SDG No.: 4241

Review Level: NYSDEC 'DUSR'   Laboratory: PARADIGM Environmental Svcs.

A. INITIAL CALIBRATION

CALIBRATION DATE :	03/12/10
Mean RSD ≤ 20%?	n/a
Lin Regression r>0.99 ?	yes
2nd-order COD >0.99 ?	n/a
Associated samples :	All SDG samples

B. CONTINUING CALIBRATIONS (CCV)

	CCV1	CCV2	CCV3	CCV4	CCV5	CCV6	CCV7
CALIBRATION DATE :	03/24/10	03/24/10	03/25/10	03/25/10	03/25/10	03/26/10	03/26/10
FILE IDs :	002F1501.D	002F4001.D	002F6101.D	002F0201.D	002F1801.D	002F0201.D	002F1101.D
TIME :	14:01	23:13	07:18	16:24	22:18	10:56	14:15
At start of sequence?	Yes	n/a	n/a	n/a	n/a	n/a	n/a
After every 10 samples?	n/a	Yes	Yes	Yes	Yes	n/a	n/a
At end of sequence?	n/a	n/a	n/a	n/a	n/a	n/a	Yes
|%D| ≤ 15?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
If No, list compounds ===>							
Affected Samples :							

QA ACTION : n/a

C. See page 2 for Calibration regression / sample result verification

CALIBRATION SUMMARY
SW846 METHOD 8082

Client: Malcolm Pirnie, Inc. Project: Flexo Site R.I. Laboratory Project No.: 10-1100A SDG No.: 4241

Review Level: NYSDEC 'DUSR' Laboratory: PARADIGM Environmental Svcs.

C. SAMPLE RESULT VERIFICATION

Calibration
Aroclor 1260, Peak 2
R.T. = 8.898 minutes

Std. Conc. (ng/uL)	Area Response
0.05	225.29709
0.10	445.55307
0.25	1052.68762
0.50	2038.37024
0.75	3053.56128
1.00	3915.38696

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.999616561
R Square	0.999233269
Adjusted R Square	0.999041586
Standard Error	45.86630721
Observations	6

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	10966578.1	10966578.1	5212.9503	2.2051E-07
Residual	4	8414.87255	2103.718138		
Total	5	10974992.97			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	61.26511529	30.3792338	2.016677434	0.1139283	-23.0811597	145.6113903
X Variable 1	3910.666252	54.16377949	72.20076385	2.205E-07	3760.283492	4061.049013

Sample ID : U-U

Aroclor 1260 peak at R.T. = 8.92 minutes
Sample peak response : 3774.28955
Reported ng/uL : 0.948

$$\text{Conc. (ng/uL)} = \frac{\text{Response - Intercept}}{\text{X variable}}$$

$$\text{Conc. (ng/uL)} = \frac{3774.28955 \quad 61.26511529}{3910.666252}$$

Conc. (ng/uL) = 0.949

Result verified ? yes