REMEDIAL ACTION WORK PLAN
BROWNFIELDS CLEANUP PROGRAM

for
132 DINGENS ST., BUFFALO, NY
(Site #: C915263)

JULY 2015

Prepared for
132 Dingens St, LLC
Buffalo, NY

by

Iyer Environmental Group, PLLC
Orchard Park, NY 14127

REPORT
TABLE OF CONTENTS
REMEDIAL ACTION WORK PLAN
BROWNFIELDS CLEANUP PROGRAM
132 Dingens St. Site, Buffalo, NY

FIGURES

DRAWING

TABLES

APPENDICES

REMEDIAL ACTION WORK PLAN
BROWNFIELDS CLEANUP PROGRAM
132 DINGENS STREET SITE, BUFFALO, NY

1.0 INTRODUCTION

This Remedial Action Work Plan (RAWP) follows up on the Remedial Investigation and Alternatives Analysis (see RI and AAR/RAWP Reports dated May 2015) completed by Iyer Environmental Group PLLC (IEG) for the 132 Dingens St. Site located in Buffalo, NY. On June 4, 2015 the NYSDEC issued a Decision Document presenting the selected remedy for the site. This RAWP provides specific details on the implementation of the remedy to meet the remedial objectives and in accordance with the NYSDEC's DER-10 technical guidance document.

2.0 SITE DESCRIPTION AND HISTORY

This irregular shaped, 13-acre parcel located at 132 & 136 Dingens Street (see location on Figure 1 and Site layout on Figure 2) contained an 85,000-sf manufacturing and warehouse facility which burned down in a 2010 fire, leaving behind only the foundation. The existing site topography and layout are shown on Drawing 1.

This Site was used for food storage and distribution dating back to 1966. Most recently, one half of the warehouse was used for warehousing/distribution of household/office trash containers, and the other half for recycling and refurbishing wood pallets. An ammonia refrigeration system located in the pump-house building in the northwest section provided cold storage for the food warehouse. The property was previously also used for a fuel service station. Historically there had been numerous petroleum tanks, both above ground and below ground dating back to the 1930s. The warehouse also had pad-mounted transformers outside. The Site is surrounded by commercial properties and is zoned as such.

The debris from the warehouse fire was cleared by Pinto Construction Services. During the course of the BCP remedial investigation, Pinto continued to remove old refrigeration equipment from the pump-house building and the pad-mounted transformers outside, and process them for recycling. Drums containing various chemicals were also properly disposed off-site. The Site with its one remaining building is secured by a chain link fence surrounding the paved areas. Half the space in the pump-house building is currently rented out to a commercial business.

The ground surface slopes gently to the south, and surface water runoff from the Site is directed to numerous storm catch basins throughout the paved parking areas that discharge into the City of Buffalo's municipal sewer system. The Site and its surrounding area contained numerous rail lines and yards dating back to 1917, and this area was built up to its current grade with various types of industrial fill. Soils on the Site are mapped by the Soil Conservation Service as "Urban Land" which can typically contain fill materials with little native soil conditions remaining. The nature

of the subsurface materials at the Site is shown on the geologic cross-sections in Appendix A.

No sensitive ecological receptors were identified in and around the Site. Potable water is supplied from Lake Erie by the City of Buffalo, and there are no drinking water wells in the area. The groundwater table is approximately 7 to 10 feet below ground surface. The local regional groundwater flow is generally to the south toward the Buffalo River, although extensive past construction activities in the area may have significantly altered localized groundwater flow patterns.

3.0 SUMMARY OF ENVIRONMENTAL CONDITIONS

Previous investigations at the Site included the following:

- Two Phase I ESAs (1997 by Acres International, and 2004 by Kay Ver Group)
- Two Phase II ESAs (2004 by Baron Associates, and 2011 by IEG).
- Remedial Investigation (2012/2013 by IEG)

The 2011 Phase II ESA and the 2012/2013 RI field work by IEG included:

- Collected soil samples from seventeen (17) test pit locations across unpaved, vegetated areas of the Site
- Collected soil samples from thirty one (31) borings,
- Installed permanent monitoring wells at eight (8) soil boring locations and developed them for sampling
- Analyzed soil samples from the test pits and borings for VOCs, SVOCs, PCBs, pesticides, total cyanides, TCLP lead, and landfill parameters.
- Completed two rounds of groundwater sampling at the eight monitoring wells and analyzed the samples for VOCs, SVOCs, PCBs, pesticides, metals and total cyanides
- Sampled and analyzed the contents of the chemical drums and transformer oil for disposal
- Sampled and pumped out water accumulated in the underground tunnel connecting between the pump-house and the old warehouse building

The site investigations revealed various types of industrial type fill that was used to elevate the ground surface to its present grade in and around the Site. The fill includes randomly deposited heterogeneous materials, construction debris (bricks, concrete and wood), trash (rubbish, glass and paper), oil soaked materials and sludge. The fill is underlain by various types of natural soils (clay, silt, sand and gravel). The thickness of the fills ranged from four feet along the southeastern boundary to twenty feet along the northern boundary.

Volatile organics, pesticides and cyanide were found only at trace levels in soil and groundwater and are therefore not of significance at this Site. No petroleum compounds of significance was found in any of the soil samples, even in the paved area northeast of the old building foundation that was the location of petroleum USTs.

The bulk of the contamination appears to be limited to the industrial fill material, while the underlying natural soil (clay, silt) appears to be minimally impacted. The highest levels of soil contamination exceeding SCOs for restricted commercial and industrial use appear to be in vegetated areas along the northern property boundary and the eastern section. Elevated levels were also found in the old UST area just northeast of the warehouse foundation. Relatively lower levels of contamination were found in the paved areas surrounding the old warehouse foundation, and even lower along the southeastern property boundary.

Of greater significance is soil contamination with several semi-volatile compounds, PCBs and a few metals which are listed in Table 1 along with the range of concentrations found in site soils during the Phase II and RI investigations. SVOC and metals contamination in the soil is widespread across the vegetated areas of the site. These two parameters are typically associated with the industrial type fill material making up the top four to twenty feet of the subsurface. Among the metals, lead is of the greatest concern since high concentrations of total lead (greater than 5,000 mg/Kg) can result in exceedance of its TCLP limit.

Based on the results of two rounds of sampling, groundwater does not appear to be adversely impacted at the site. Unfiltered groundwater samples from eight overburden monitoring wells straddling the fill materials were found to have low levels of contaminants consistent with the carryover of fine solids from the formation. Filtered groundwater samples from the first round and unfiltered samples from the second round were found to have only trace levels of semivolatile organics and metals typical of the area. These findings indicate that the site contaminants are not readily leaching from the fill materials into the groundwater.

4.0 NATURE AND EXTENT OF CONTAMINATION

4.1 Groundwater

Groundwater contamination is not a significant concern for this Site. Filtered groundwater samples from the first round and unfiltered samples from the second round were found to have only trace levels of semivolatile organics and heavy metals typical of the area. Groundwater is therefore not included in the remedy for the Site.

4.2 Soil

Table 1 lists the range of concentrations of various parameters from the remedial investigation, along with Part 375 commercial/industrial use SCOs (CSCOs/ISCOs). Six SVOC compounds, two PCBs and seven heavy metals exceed either just their corresponding commercial use SCOs or also the industrial use SCOs. Figures 3A, 3B and 3C show the distribution of SVOCs and metals in soil at three depth intervals (surface, 0'-4' and 4' – 12' respectively), and Figure 3D shows the distribution of PCBs in the soil.

Semivolatile Organics are present at a wide range of concentrations (35 to 7,163 mg/Kg total SVOCs) in the fill layer. SVOC exceedances of the Part 375 restricted

commercial/industrial use SCOs occur predominantly in subsurface soils in the northern unpaved areas, with the highest SVOC concentrations found in two samples in the northwest portion of the Site.

PCBs, with totals ranging from 0.077 to 59 mg/Kg, were found mostly in surficial soils. Exceedances of the SCOs for PCBs occurred only in the northwest unpaved area of the Site, including one location with the highest PCB contamination.

The distribution of heavy metals in the soil is typical of industrial fill. Barium, copper and nickel represent heavy metals with exceedances of the Part 375 SCOs for restricted commercial use, while arsenic, lead, zinc and mercury also exceeded the industrial use SCOs. Among the heavy metals, lead is of primary concern because of potential exceedance of the RCRA Toxicity Characteristic Leaching Procedure (TCLP) limit at high concentrations. The data indicates that lead is not readily leachable from the fill material, and that only soil containing around 5,000 mg/Kg or more total lead has the likelihood of exceeding the TCLP limit of 5 mg/L.

The qualitative human health risk assessment identified dermal contact, ingestion and inhalation as the pathways for human exposure to contaminated soil at the Site under current/future conditions. Human exposure to the soil contaminants is limited because a relatively large area of the Site is paved, site access is restricted by security fencing, and the unpaved areas are mostly vegetated.

4.3 Area and Volume of Contaminated Soil

Proposed excavation threshold limits (PETLs) were developed for this Site by analyzing soil data using the USEPA's ProUCL statistical software analysis, and based on the distribution of the parameters of concern across the Site, the feasibility of removing all soil exceeding the PETLs and intended Site use.

For remediation of this Site to Track 4, PETLs were established (see Table 2) for Total SVOCs, PCBs, arsenic, lead and mercury. These PETLs allow for the removal of meaningful quantities of contaminated soil/fill SVOCs and yet be protective of human health and the environment. The recommended soil cleanup level of 500 mg/Kg for total PAHs in the NYSDEC's CP-51 Soil Cleanup Guidance is proposed as the PETL for Total SVOCs. For arsenic, the proposed PETL of 79 mg/Kg is the mean plus two standard deviations (excluding the outlier). In the case of lead, a soil cleanup level of 5,000 mg/Kg is proposed as the PETL for lead, based on a correlation between total lead and TCLP lead, instead of a statistically determined value. The PETL of 5.7 mg/Kg for mercury is set at its ISCO.

Table 2 also includes the range of observed concentrations and soil sample locations exceeding PETLs for one or more parameters. These soil sample locations are also highlighted on Figure 4 with tabulated data for individual locations that exceed one or more PETLs (some locations have multiple samples by depth). Of these soil sample locations, only two (2) locations have exceedances of the PETL for Total SVOCs and two (2) locations exceed the PETLS for PCBs. Five (5) locations exceed lead PETL, while arsenic and mercury PETLs are exceeded at two and three locations respectively. Only three locations exceed PETLs for two parameters.

Figure 5 shows the different areas of the Site based on surface features and contamination levels, as well as proposed hot spot areas that will be excavated due to PETL exceedances. The physical dimensions of these areas and the location of soil samples with exceedances of the PETLs were used to calculate the volumes of significantly impacted fill. Table 3 presents these excavation volumes by area.

An estimated 1,300 cubic yards of contaminated soil/industrial fill, which form the source area of concern will be excavated and disposed off-site at permitted facilities.

5.0 REMEDIAL ACTION OBJECTIVES

Remedial action objectives (RAOs) are established to be protective of human health and the environment. The goal for remedial actions undertaken pursuant to NYSDEC's DER-10 Technical Guidance is the restoration of the Site to pre-disposal/pre-release conditions to the extent feasible and authorized by law. At a minimum, the remedy should eliminate or mitigate all significant threats to public health and the environment presented by contaminants at the Site through the proper application of scientific and engineering principles.

Soil is the primary contaminated medium identified at the Site, with the potential to impact the underlying groundwater. The Site is currently vacant except for a commercial business renting one half of the old pump-house building. The area is surrounded by commercial properties. Groundwater is not adversely impacted at the Site and does not require long term monitoring. Taking these and the exposure assessment into consideration, the following RAOs were established for the Site:

- RAOs for Public Health Protection:
  Prevent ingestion/direct contact with contaminated soil

- RAOs for Environmental Protection:
  Prevent potential migration of contaminants that will result in groundwater contamination

6.0 STANDARDS, CRITERIA AND GUIDANCE (SCGs)

The Site is remediated through the Brownfield Cleanup Program, and is subject to requirements under 6 NYCRR Part 375 and DER-10 guidelines. The following SCGs are considered for implementation of the selected remedy for the Site:

Soil SCGs**:** The intent of this remedial effort is to clean up this property to Track 4 restricted commercial/industrial use. Any excavation and off-site disposal of the contaminated soils will be compliant with the Resource Conservation and Recovery Act (RCRA), the Toxic Substances Control Act (TSCA) and all other applicable regulations.

Groundwater SCGs: The Site groundwater is not used as a primary source of drinking water. Site groundwater does not appear to be adversely impacted by the fill material.

Action-Specific SCGs: Action-specific SCGs are technology or activity based requirements during remedy implementation. Potential remedial activities for this Site include excavation of soil/fill exceeding SCOs, off-site disposal as solid or hazardous waste depending on the chemical constituents, and backfill/restoration. These activities have to comply with New York State Land Disposal regulations (6 NYCRR 376), RCRA Treatment, Storage and Disposal Requirements (40 CFR Parts 262 and 264), OSHA regulations (29 CFR Parts 1904, 1910 and 1916), New York State Air Pollution Control regulations (6 NYCRR Chapter 3, Part 212), and Department of Transportation rules for transport of hazardous materials (49 CFR Parts 107, 171 and 712). In addition, groundwater encountered during excavation will be handled in accordance with the Buffalo Sewer Authority's (BSA) requirements for permitting, treatment and discharge to the sewer.

7.0 DESCRIPTION OF REMEDY

The selected remedy is a Track 4: Restricted use with site-specific soil cleanup objectives remedy. The selected remedy is Excavation, Off-site Disposal & Cover. The elements of the remedy are shown on Figure 5 and described below.

Excavation: Areas with soil exceeding PETLs (approximately 14,000 sq. ft.) will be targeted for excavation. Referring to Figure 5, these areas include those with significantly high SVOCs, arsenic, lead and/or mercury (Areas A, B, D, E, F, I and L) or with elevated PCBs (Areas F and G) in the soil.

Confirmatory soil/fill samples will be collected from the excavations to determine the need for further excavation based on the PETLs, and to document residual contaminants levels in the remaining soil/fill. The PETLs or site-specific excavation objectives are as follows:

PARAMETER	PETL (mg/Kg)
Total SVOCs	500
Total PCBs	1.0
Arsenic	79
Lead	5,000
Mercury	5.7

All excavated materials will be disposed off-site. Any excavated soil with potential to exceed the TCLP limit for lead will be stock piled and analyzed for TCLP lead to determine its suitability for disposal at a solid waste landfill. Any soil/fill exceeding the TCLP limit for lead will be disposed at a hazardous waste facility.

Excavation water, if any, will be pumped out for on-site treatment (bag filters and activated carbon drums) and discharged to the storm sewer with appropriate testing and permit from the Buffalo Sewer Authority.

The excavated areas will be backfilled with clean fill from a known source meeting the SCOs in DER-10 for at least restricted commercial use (preferably restricted residential).

Cover System: A cover system is required for commercial use of the Site. As shown on Drawing 2, the cover system for the Site will consist of either asphalt, concrete, gravel, floor slab, building or a soil cover in areas where the upper one foot of exposed surface soil exceed the PETLs.

The currently exposed vegetated areas will be regraded and covered by a delineating layer of geotextile. These will then be capped with a minimum 1-foot layer of crushed stone except along the property boundaries where they will be covered with a minimum 1-foot layer of clean back fill and a minimum 4" layer of topsoil to establish vegetative growth. The crushed stone, clean fill and top-soil will meet contaminant-specific SCOs as per DER-10 requirements for restricted commercial use at a minimum (preferably restricted residential use).

All clean soil from off-site to be used as fill on-site will be pre-tested at the frequency and for the parameters stipulated in DER-10. Areas with asphalt/concrete will be repaired and the existing gravel area west of the pump-house will be paved with asphalt.

Institutional controls: An institutional control in the form of an environmental easement will be implemented for the Site. As part of this institutional control, the Site owner will complete and submit to the NYSDEC a periodic certification of institutional and engineering controls in accordance with the BCP requirements:

- Allows the use and development of the controlled property for commercial and industrial uses as defined by Part 375-1.8(g), with subject to local zoning laws;
- Restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or Erie County DOH; and
- Requires compliance with the Department approved Site Management Plan

Site Management Plan: A Site Management Plan (SMP) will be prepared for NYSDEC/NYSFOH approval near the completion of Site remediation. The SMP will include:

- An Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the Site and details steps and media-specific requirements necessary to ensure the institutional (i.e. environmental easement) and engineering (i.e. soil cover) controls are in place;
- An Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- Descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
- Provisions for the management and inspection of the identified engineering controls;
- Maintaining site access controls and NYSDEC notification; and
- The steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

8.0 MOBILIZATION AND STAGING

Pinto Construction Services will mobilize with necessary equipment and stage them at the site. The locations of various components for site mobilization and staging are shown on Figure 2. A staging area with a small office trailer will be set up in a clean area near the pump-house building for on-site personnel.

A decontamination pad (see Figure 6) will be set up in an area to the east of the pump-house building as it will be central to areas that will require excavation. The decontamination pad will include provisions for cleaning equipment and personnel before leaving the Site. Decon water will be collected in a sump and pumped to the storage/settling tank used for the excavation water. This will then be treated through a bag filter and activated carbon and discharged into the city sewer.

The source areas of concern (see Figure 5) targeted for excavation will be staked during mobilization along with the Phase II/RI soil samples that are associated with these areas and exceed the PETLs.

A sewer use permit will be obtained from the Buffalo Sewer Authority for the discharge of excavation water from a frac tank into a manhole at the Site.

Dust control measures (e.g., wetting of dry surfaces in the work areas) will be implemented to prevent off-site migration of contaminated airborne particulates. Pinto's Standard Operating Procedures (SOP) for Spill Control and Contingency Measures included as Appendix B will be followed for any spills occurring at the Site during remediation activities. All field activities will follow the Health & Safety Plan in Appendix C.

9.0 SOIL EXCAVATION

Various types of industrial type fill were used to elevate the Site and the surrounding area to its present grade. This fill is underlain by natural soils (clay, silt, sand and gravel). The subsurface soil/fill was characterized through test pits and Geoprobe borings during the site investigations. Semivolatile organics and a few heavy metals are present at a wide range of concentrations within the fill layer. PCBs were found in surficial soils only in the northwest unpaved area of the Site. Groundwater is not adversely impacted at the Site.

The site-specific PETLs for Total SVOCs, PCBs, arsenic, lead and/or mercury were exceeded in mostly the unpaved areas of the Site highlighted on Figure 4 and delineated on Figure 5. Soil/fill with lead concentrations greater 5,000 mg/Kg has the likelihood of exceeding the TCLP limit of 5 mg/L. Site remediation entails the removal of soil/fill exceeding the site-specific PETLs.

9.1 Soil Excavation Procedure

The anticipated excavation areas with soil exceeding PETLS are shown on Figure 5. Additional areas will be included for excavation as necessary for site redevelopment so that all excavated fill/soil are disposed off-site appropriately.

All excavation will be carried out with a backhoe large enough to reach the required depth of industrial type fill at the Site. The walls of the excavation will be adequately sloped or stepped to prevent cave-ins and washouts, and to allow access for excavators into the excavation. To the extent possible and depending on access, the contaminated soils will be excavated and directly loaded on to dump trucks for off-site disposal. Otherwise the contaminated soils will be stockpiled near the excavation over a plastic liner, sampled and analyzed as necessary, and then loaded on to the dump truck. The dump trucks will be lined and covered during transport to the disposal facility. An HDPE liner will be placed in the stockpile areas before any soil placement.

All excavated soil will be disposed at a NY State permitted solid waste (and hazardous waste landfill if necessary) facility with approval from the landfill. Modern Landfill's Model City facility will be utilized for the disposal of excavated soil considered non-hazardous, and Waste Management's Niagara Falls facility for soil considered hazardous based on TCLP lead testing. Waste profiles will be completed for both the landfills based on the Phase II and RI data in order to obtain prior approval for disposal and establish procedures for characterization.

The drums of drill cuttings from the monitoring well installation during the BCP RI were staged within the fenced corner northeast of the pump-house. These drums have been characterized and will be disposed off-site along with the excavated materials during site remediation.

Soil from the source areas of concern will be sequentially excavated and the excavation will proceed in each area until confirmatory soil samples meet the site-specific excavation objectives (PETLs). The sequence of operation will be as follows:

A. An HDPE liner (minimum 10 mil) will be placed next to the source area for staging of excavated soil.
B. Fill/soil across the entire cross-section of the source area will be excavated initially to a depth of 4 feet.
C. The excavated soil will be staged on the HDPE liner next to the source area in piles of 100 CY to allow sampling to determine disposal options.
D. The excavated soil layers will be logged by depth intervals in accordance with the Unified Soil Classification System.
E. Confirmatory wall and bottom samples will be collected from the excavation at a frequency of at least 1 per 30 feet, and submitted for laboratory analysis for the parameter of concern identified for that area.
F. Composite soil samples will also be collected from the excavated soil stockpile at a frequency of 1 sample per 100 CY and submitted for laboratory analysis for TCLP Lead.
G. The results of the confirmatory soil samples will be used to determine the need for further excavation at each source area. Excavation will proceed in each source area until the confirmatory samples meet the PETLs.
H. Based on the results of the soil testing for TCLP lead, soil stockpiles with TCLP lead below the RCRA toxicity limit (5 mg/L) will be loaded on to waste haulers for disposal at a solid waste landfill.

I. Based on the results of the soil testing for TCLP lead, soil stockpiles with TCLP lead above the RCRA toxicity limit (5 mg/L) will be loaded on to waste haulers for disposal at a hazardous waste landfill.
J. Every effort will be made to stage the trucks so as to prevent excavation spoils from being tracked off-site. Also, any spills of contaminated materials during excavation will be immediately removed as outlined in Pinto's SOP for Spill Control (Appendix B).
K. Water infiltrating into the excavation bottom will be pumped into a 20,000-gal frac tank to settle out suspended solids, and then discharged into the on-site sewer.
L. The excavated area will be progressively backfilled following confirmatory sampling of the wall and bottom. Only off-site fill meeting DER-10 requirements will be used for backfill.
M. The backfilled areas will be allowed to compact in lifts and graded as necessary.
N. The excavations will be surveyed and updated on the site map.

9.2 Confirmatory Soil Sampling

Confirmatory soil samples will be collected at the bottom of the excavations and from the side walls in accordance with NYSDEC requirements to determine the need for further excavation based on the PETLs for restricted commercial use, and to document residual levels of contaminants at the Site. Given the size of the anticipated excavation and the relative uniformity of historical industrial fill across this Site, post-excavation samples will be collected using a grid spacing of 30'x30', subject to the approval of the NYSDEC's field representative. A higher sampling frequency may be required by the NYSDEC for excavation side walls along the property boundary.

The confirmatory samples will be collected using the backhoe bucket (walls and bottom) and/or a trowel/shovel. All field sampling equipment will be rinsed with distilled water between samples. The soil samples will be analyzed for the parameters of concern associated with each source area of concern (see Figure 5) and in concurrence with the NYSDEC representative. Quality assurance and quality control protocols for the post-excavation sampling and analyses are discussed in Section 12 below.

The anticipated source areas targeted for excavation and their corresponding analytical parameters for confirmatory soil analysis are summarized below (see Figure 5 for locations):

SOURCE AREAS TO BE EXCAVATION	PARAMETERS FOR CONFIRMATORY ANALYSIS
A	Pb
B	Pb
D	As, Hg
E	SVOCs
F	SVOCs, Pb, PCBs
G	PCBs
L	Hg

9.3 Dust Control and Community Air Monitoring

Air monitoring and dust control measures will be implemented in accordance with the NYSDOH Generic Community Air Monitoring Plan (CAMP; included as Appendix D). The purpose of this real-time air monitoring is to prevent the site workers and the surrounding community from potential exposure to airborne contaminants from the Site.

Particulates will be monitored upwind and downwind of the work areas during soil excavation and backfilling operations. Real-time air monitoring will include visual observations for fugitive dust and particulate measurements with a MIE Miniram PDM-3 (or similar equipment) around the excavation and Site perimeter. The PDM-3 with an audible alarm is capable of measuring particulates less than 10 micrometers in size (PM-10) and integrating over time for comparison to the airborne particulate action level.

Dust suppression (wetting of dry surfaces) will be activated if fugitive dust emissions are distinctly visible or downwind particulate level is at least 100 micrograms per cubic meter ($\mu cg/m^3$) above background. Work stoppage may be required if downwind particulate levels remain 100 $\mu cg/m^3$ above background.

Also, a power broom will be used to sweep around the truck loading area (if on asphalt or concrete) to minimize the spread of contaminated soil.

10.0 GROUNDWATER MANAGEMENT

10.1 Excavation Water Handling

Excavation of the soils to the known depths of hot-spot contamination may result in perched groundwater ex-filtrating into the excavation. At the Site, the water table appears to be around 8 feet below ground level.

The schematic for construction/excavation water handling is included as Figure 7. This excavation water will be pumped into a 20,000-gallon frac tank. The suspended solids will be allowed to settle and then the settled supernatant will be discharged to a sanitary sewer on site under a permit obtained from the Buffalo Sewer Authority. The settled solids will be disposed off-site along with excavated fill/soils. All treatment equipment will be washed and cleaned prior to demobilization from the Site.

10.2 Monitoring Well Decommissioning

Groundwater is not adversely impacted at the Site based on the results of two rounds of groundwater monitoring. All eight overburden wells installed during the RI will be decommissioned during Site remediation as they no longer be needed. The wells will be decommissioned in accordance with the NYSDEC's CP-43, Groundwater Well Decommissioning Procedures. SVOCs and metal contaminants present in the overburden fill layer are not likely to spread. Taking into account these site conditions, the overburden wells will be decommissioned by grouting in-place followed by casing pulling, consistent with the selection process in CP-43.

11.0 COVER SYSTEM

11.1 Backfill

The excavated areas will be backfilled with clean fill from an off-site source, properly sampled and tested to ensure it meets DER-10 analytical parameter and frequency requirements for use at this Site.

All off-site clean soil for backfill, soil cover or topsoil will meet the 6NYCRR Part 375-6.7(d) requirements, and will be obtained from known sources that do not show evidence of disposal or release of hazardous substances or wastes. The backfill source will be required to provide backup analytical data to demonstrate acceptability, or will be sampled and analyzed (VOCs, SVOCs, metals, PCBs/pesticides and Cyanide) prior to acceptance and delivery to the Site, and will be subject to NYSDEC approval.

The following sources are tentatively identified:

- Soil backfill: From the Children's Hospital construction site in Buffalo, NY. A BUD application with supporting data (source and analytical data from DER-10 sampling) has been submitted to the NYSDEC for approval.
- Topsoil: From construction excavation work at the St. Joseph Collegiate Institute in Tonawanda, NY and the Boulevard Mall in Amherst, NY. A memo with supporting data (source and analytical data from DER-10 sampling) for this topsoil source has been to the NYSDEC for approval.
- Crushed stone: From LaFarge's Lockport quarry.

11.2 Demarcation Layer

The cover system across the existing vegetated areas will consist of a layer of geotextile over the existing ground surface (after grading) to delineate the subsurface soil/fill. The demarcation layer will also be placed in the excavations prior to backfilling.

The delineating layer will allow identification, segregation and proper handling of contaminated soil/fill that may be excavated during any intrusive work at the Site for redevelopment in the future.

11.3 One Foot of Clean Cover

The Site will have four types of cover systems as shown on Figure 5 to prevent exposure and be protective of human health:

- Soil cover, mostly along the property boundary
- Crushed stone cover for the eastern portion
- Asphalt cover for paved parking areas
- Concrete cover, including the warehouse foundation and building

Over most of the area that is currently vegetated, a minimum 1-foot layer of crushed stone will be placed above the demarcation layer. Before placement of stone, clean backfill will be used to bring up the grade in some areas, particularly the southeast section of the property.

Areas along property boundaries will be covered with a minimum 1-foot layer of clean fill and 4" of top-soil to establish vegetation.

The northwest section of the Site with gravel will be paved over with an asphalt cover. Areas that currently have asphalt/concrete will be repaired as necessary to render them suitable for use after Site redevelopment.

The crushed stone, clean fill and top-soil will be obtained from known sources and pre-characterized to confirm with DER-10 requirements for imports from off-site. This cover system will be maintained and repaired as necessary to provide the protective barrier to human contact that is a key element of the selected remedy.

11.4 Vegetation and Restoration

Exposed areas will be seeded and vegetated in a manner consistent with future development plans for the Site.

12.0 QUALITY ASSURANCE AND QUALITY CONTROL PROTOCOLS

12.1 Sampling Methods

Sampling locations and procedures are discussed in Section 8 above. The schedule of sampling and analysis is listed in Table 4A, and associated QA/QC, holding times and containers are included in Table 4B. All confirmatory soil sampling will include field duplicates, matrix spike/matrix spike duplicates (MS/MSD) and rinse blanks. Additional sample containers will be included at the required frequencies for site specific matrix spikes and matrix spike duplicates.

All samples will be analyzed by Test America (Amherst, NY), a NYSDOH ELAP certified analytical laboratory. Procedures for chain of custody, holding times, and laboratory analyses will be in accordance with NYSDEC ASP and the laboratory's internal Quality Assurance Plan. Holding times will begin with validated time of sample receipt (VTSR) at the laboratory. The laboratory will meet the required detection limits for corresponding analytical methods.

12.2 Analytical Protocols

Analytical procedures for the media sampled and data deliverables (Category B deliverable) will meet the requirements in the most recent NYSDEC Analytical Services Protocol (ASP). Table 4B includes analytical methods for the source area parameters of concern. The laboratory will cleanup matrix interferences to the extent practicable. The data quality indicators of precision, accuracy, representativeness, comparability, and completeness will be measured during chemical analysis by the analytical laboratory.

12.3 Documentation

The analytical reports provided by the laboratory will be reviewed. The data validation will include a review of all holding times, completeness of all required deliverables, review of all QC results (surrogates, spikes, duplicates), and a 10% check of samples analyzed to ensure they were analyzed and quantified properly. A complete analytical data validation is not anticipated.

Data validation will follow the general guidelines presented in the USEPA Contract Laboratory Program (CLP) Organic Data Review, SOP Nos. HW-6, Revision #11, USEPA Evaluation of Metals Data for the Contract Laboratory Program based on 3/90, SOW, Revision XI. In addition, review of holding times will be in accordance with NYSDEC ASP, 10/95 edition, and review of organic calibration and QC criteria will be in accordance with NYSDEC ASP, 10/95 edition. Where possible, discrepancies will be resolved with the analytical laboratory. Data that do not meet NYSDEC ASP, 10/95 criteria will be qualified.

A Data Usability Summary Reports (DUSRs) will be generated in accordance with DER-10 requirements after completion of Site remediation and receipt of laboratory analytical reports.

13.0 Health & Safety

13.1 Health & Safety Plan

A site-specific Health & Safety Plan (HASP) is included as Appendix C for the protection of workers and other personnel on-site during the course of the remedial work. The HASP has been developed in accordance with 29CFR1910, and is based on site conditions, chemical hazards known or suspected, and anticipated construction activities.

13.2 NYSDOH Community Air Monitoring Plan

Ambient air quality monitoring will follow the NYSDOH's Community Air Monitoring Plan. As outlined in Section 8.3 above, the remedial action will include real time air monitoring for particulates and contingency measures for addressing situations during excavation activities where dust levels exceed background levels.

14.0 REPORTING

During remedial activities, daily field reports will be prepared and maintained. Construction activities during construction will be summarized in monthly reports which will be submitted to the NYSDEC. The final remedy includes long-term maintenance and monitoring of the cover system which will be included in the Site Management Plan (SMP). Within 90 days after completion of the remedial work, a Final Engineering Report (FER) will be submitted with details of the implemented remedy and as-built drawings. The report and drawings will be certified by a professional engineer registered in New York State.

15.0 PROJECT ORGANIZATION & SCHEDULE

The project organization is shown on Figure 8.

The following schedule is anticipated for the remedial action:

- Remedial Action Work Plan — June 2015
- Site Work (excavation/backfill/restoration) — July– September 2015
- Site Management Plan (SMP) — December 2015
- Final Engineering Report (FER) — January 2016
- Certificate of Completion — March 2016
- Site Redevelopment — Spring 2016

16.0 INSTITUTIONAL CONTROLS

Institutional controls (IC) will be established as required for the final remedy since this Site is anticipated to be cleaned up to Track 4, restricted commercial use. The institutional controls will restrict activities on the Site and protect current and future users from exposure to the residual environmental contamination at the Site. The following will be part of the IC:

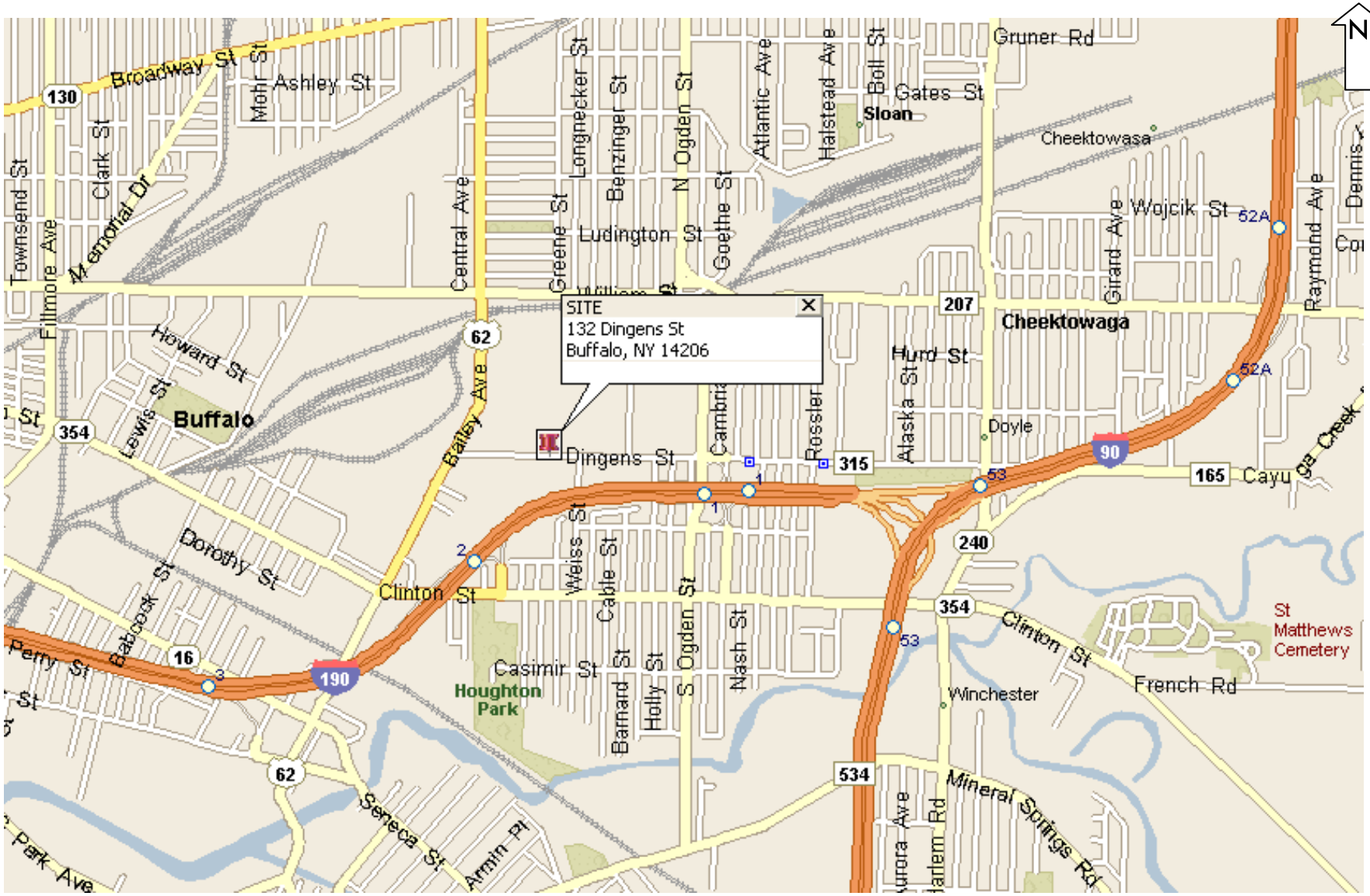
- An environmental easement as per NYSDEC requirements in DER-10
- Limitations on site use based on the proposed remedial action

17.0 SITE MANAGEMENT PLAN

A Site Management Plan (SMP) will be prepared in accordance with DER-10 after the completion of the field work. The SMP will include the activities listed below that are necessary for the proper and effective management of the institutional controls and to monitor the effectiveness of the implemented remedy.

- Institutional and engineering control (IEC): Restrictions on site access and use will be described in detail in the IEC plan along with steps necessary for its implementation and periodic certification.
- Inspection: Regular inspections (at least monthly at the outset) to ensure the remedy, including the cover system, remains in place and is effective in preventing human exposure to site contaminants.
- Operation & Maintenance (O&M): The O&M plan will include procedures for routine maintenance requirements to minimize damage to or failure of the implemented remedy.
- Corrective Measures: Procedures for corrective measures such as repairs to/or erosion of the soil cover or damages to the asphalt/concrete surfaces.
- Reporting: The results of all inspections, corrective actions and monitoring will be reported in the Periodic Review Report (PRR) for the Site.

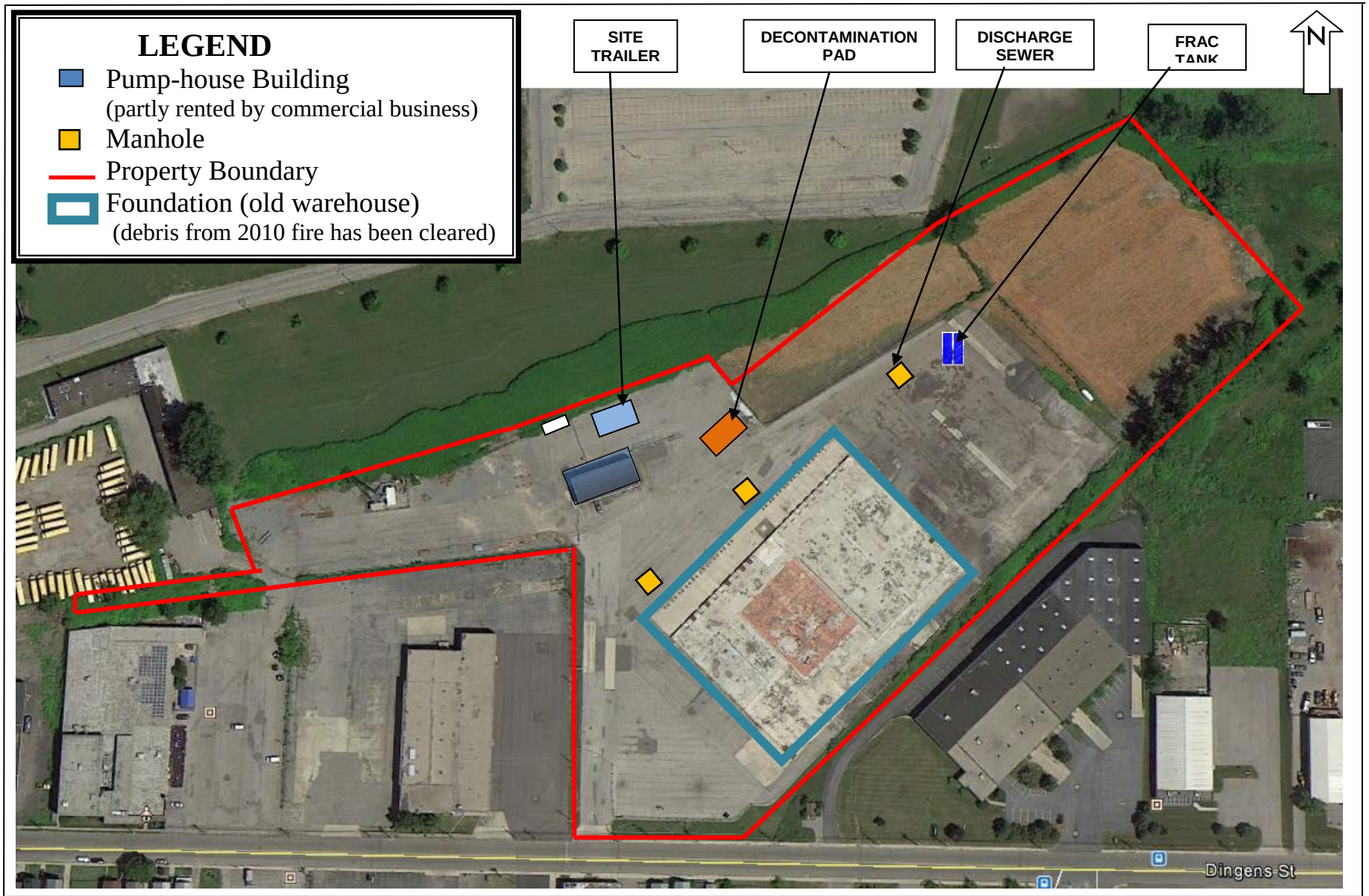
FIGURES



132 DINGENS ST. SITE, BUFFALO, NY
SITE LOCATION MAP

FIGURE 1

IEG



132 DINGENS ST. SITE, BUFFALO, NY
AERIAL PHOTO WITH PROPERTY BOUNDARY

FIGURE 2

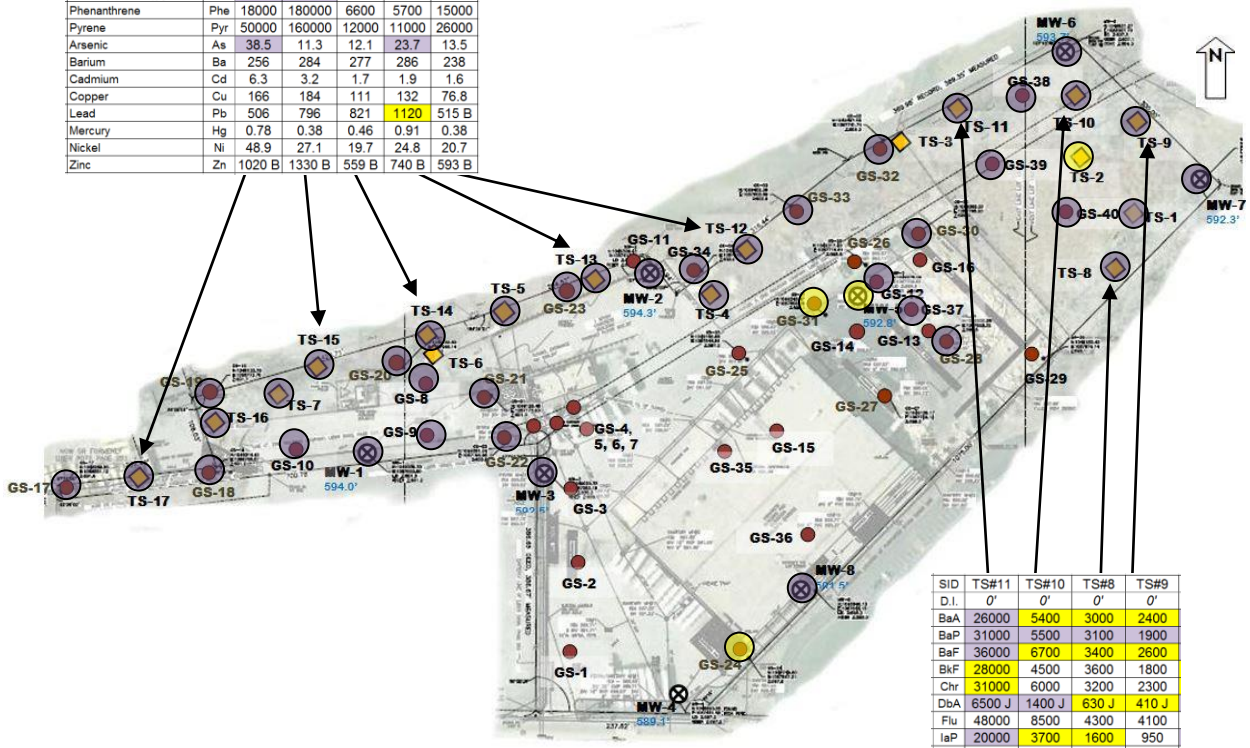
IEG

SAMPLE ID	SID	TS#17	TS#15	TS#14	TS#13	TS#12
DEPTH INTERVAL (ft)	D.I.	0'	0'	0'	0'	0'
Benzo(a)anthracene	BaA	20000	72000	6200	4600	9600
Benzo(a)pyrene	BaP	19000	56000	5900	4600	8000
Benzo(b)fluoranthene	BaF	28000	46000	6700	5700	9000
Benzo(k)fluoranthene	BkF	21000	55000	5300	3800	7700
Chrysene	Chr	28000	69000	6700	4900	9600
Dibenz(a,h)anthracene	DbA	2200 J	12000 J	1500 J	1000 J	1600 J
Fluoranthene	Flu	34000	150000	8400	7400	15000
Indeno(1,2,3-cd)pyrene	IaP	13000	27000	4100	2700	4600
Phenanthrene	Phe	18000	180000	6600	5700	15000
Pyrene	Pyr	50000	160000	12000	11000	26000
Arsenic	As	38.5	11.3	12.1	23.7	13.5
Barium	Ba	256	284	277	286	238
Cadmium	Cd	6.3	3.2	1.7	1.9	1.6
Copper	Cu	166	184	111	132	76.8
Lead	Pb	506	796	821	1120	515 B
Mercury	Hg	0.78	0.38	0.46	0.91	0.38
Nickel	Ni	48.9	27.1	19.7	24.8	20.7
Zinc	Zn	1020 B	1330 B	559 B	740 B	593 B

LEGEND

- Exceed Commercial SCOs
- Exceed Industrial SCOs
- Geoprobe soil sample
- Test pit soil sample
- Monitoring well

SVOCs in µg/Kg; metals in mg/Kg



SID	TS#11	TS#10	TS#8	TS#9
D.I.	0'	0'	0'	0'
BaA	26000	5400	3000	2400
BaP	31000	5500	3100	1900
BaF	36000	6700	3400	2600
BkF	28000	4500	3600	1800
Chr	31000	6000	3200	2300
DbA	6500 J	1400 J	630 J	410 J
Flu	48000	8500	4300	4100
IaP	20000	3700	1600	950
Phe	30000	5000	3200	880
Pyr	74000	11000	6500	5800
As	17.8	23.1	13.4	6.3
Ba	165	1290	453	113
Cd	1.9	3.6	1.9	0.45
Cu	304	139	123	147
Pb	332	1430	1010	133
Hg	0.22	0.91	1.6	0.094
Ni	27.5	20.6	23.6	17.1
Zn	1230 B	14300 B	1610 B	187 B

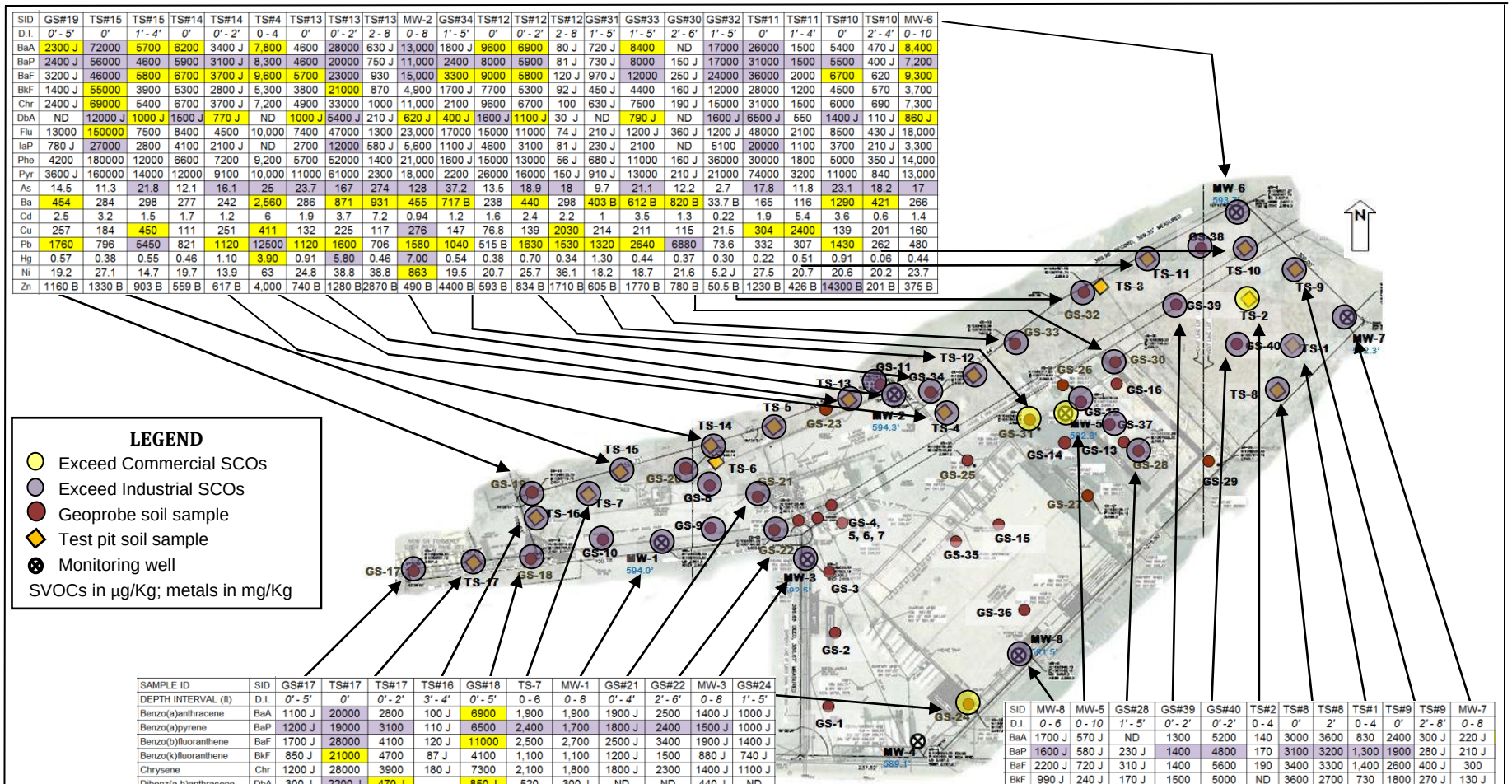
132 DINGENS ST. SITE, BUFFALO, NY

SURFACE SOIL SAMPLES - SVOCs/METALS EXCEEDING SCOs

FIGURE 3A

IEG

SID	GS#19	TS#15	TS#15	TS#14	TS#14	TS#4	TS#13	TS#13	TS#13	MW-2	GS#34	TS#12	TS#12	TS#12	GS#31	GS#33	GS#30	GS#32	TS#11	TS#11	TS#10	TS#10	MW-6
D.I.	0' - 5'	0'	1' - 4'	0'	0' - 2'	0 - 4	0'	0' - 2'	2 - 8	0 - 8	1' - 5'	0'	0' - 2'	2 - 8	1' - 5'	1' - 5'	2' - 6'	1' - 5'	0'	1' - 4'	0'	2' - 4'	0 - 10
BaA	2300 J	72000	5700	6200	3400 J	7,800	4600	28000	630 J	13,000	1800 J	9600	6900	80 J	720 J	8400	ND	17000	26000	1500	5400	470 J	8,400
BaP	2400 J	56000	4600	5900	3100 J	8,300	4600	20000	750 J	11,000	2400	8000	5900	81 J	730 J	8000	150 J	17000	31000	1500	5500	400 J	7,200
BaF	3200 J	46000	5800	6700	3700 J	9,600	5700	23000	930	15,000	3300	9000	5800	120 J	970 J	12000	250 J	24000	36000	2000	6700	620	9,300
BkF	1400 J	55000	3900	5300	2800 J	5,300	3800	21000	870	4,900	1700 J	7700	5300	92 J	450 J	4400	160 J	12000	28000	1200	4500	570	3,700
Chr	2400 J	69000	5400	6700	3700 J	7,200	4900	33000	1000	11,000	2100	9600	6700	100	630 J	7500	190 J	15000	31000	1500	6000	690	7,300
DbA	ND	12000 J	1000 J	1500 J	770 J	ND	1000 J	5400 J	210 J	620 J	400 J	1600 J	1100 J	30 J	ND	790 J	ND	1600 J	6500 J	550	1400 J	110 J	860 J
Flu	13000	150000	7500	8400	4500	10,000	7400	47000	1300	23,000	17000	15000	11000	74 J	210 J	1200 J	360 J	1200 J	48000	2100	8500	430 J	18,000
IaP	780 J	27000	2800	4100	2100 J	ND	2700	12000	580 J	5,600	1100 J	4600	3100	81 J	230 J	2100	ND	5100	20000	1100	3700	210 J	3,300
Phe	4200	180000	12000	6600	7200	9,200	5700	52000	1400	21,000	1600 J	15000	13000	56 J	680 J	11000	160 J	36000	30000	1800	5000	350 J	14,000
Pyr	3600 J	160000	14000	12000	9100	10,000	11000	61000	2300	18,000	2200	26000	16000	150 J	910 J	13000	210 J	21000	74000	3200	11000	840	13,000
As	14.5	11.3	21.8	12.1	16.1	25	23.7	167	274	128	37.2	13.5	18.9	18	9.7	21.1	12.2	2.7	17.8	11.8	23.1	18.2	17
Ba	454	284	298	277	242	2,560	286	871	931	455	717 B	238	440	298	403 B	612 B	820 B	33.7 B	165	116	1290	421	266
Cd	2.5	3.2	1.5	1.7	1.2	6	1.9	3.7	7.2	0.94	1.2	1.6	2.4	2.2	1	3.5	1.3	0.22	1.9	5.4	3.6	0.6	1.4
Cu	257	184	450	111	251	411	132	225	117	276	147	76.8	139	2030	214	211	115	21.5	304	2400	139	201	160
Pb	1760	796	5450	821	1120	12500	1120	1600	706	1580	1040	515 B	1630	1530	1320	2640	6880	73.6	332	307	1430	262	480
Hg	0.57	0.38	0.55	0.46	1.10	3.90	0.91	5.80	0.46	7.00	0.54	0.38	0.70	0.34	1.30	0.44	0.37	0.30	0.22	0.51	0.91	0.06	0.44
Ni	19.2	27.1	14.7	19.7	13.9	63	24.8	38.8	38.8	863	19.5	20.7	25.7	36.1	18.2	18.7	21.6	5.2 J	27.5	20.7	20.6	20.2	23.7
Zn	1160 B	1330 B	903 B	559 B	617 B	4,000	740 B	1280 B	2870 B	490 B	4400 B	593 B	834 B	1710 B	605 B	1770 B	780 B	50.5 B	1230 B	426 B	14300 B	201 B	375 B



SAMPLE ID	SID	GS#17	TS#17	TS#17	TS#16	GS#18	TS-7	MW-1	GS#21	GS#22	MW-3	GS#24
DEPTH INTERVAL (ft)	D.I.	0' - 5'	0'	0' - 2'	3' - 4'	0' - 5'	0 - 6	0 - 8	0' - 4'	2' - 6'	0 - 8	1' - 5'
Benzo(a)anthracene	BaA	1100 J	20000	2800	100 J	6900	1,900	1,900	1900 J	2500	1400 J	1000 J
Benzo(a)pyrene	BaP	1200 J	19000	3100	110 J	6500	2,400	1,700	1800 J	2400	1500 J	1000 J
Benzo(b)fluoranthene	BaF	1700 J	28000	4100	120 J	11000	2,500	2,700	2500 J	3400	1900 J	1400 J
Benzo(k)fluoranthene	BkF	850 J	21000	4700	87 J	4100	1,100	1,100	1200 J	1500	880 J	740 J
Chrysene	Chr	1200 J	28000	3900	180 J	7300	2,100	1,800	1800 J	2300	1400 J	1100 J
Dibenz(a,h)anthracene	DbA	300 J	2200 J	470 J		850 J	520	300 J	ND	ND	440 J	ND
Fluoranthene	Flu		34000	5600	84 J	2000 J	3,800	11000	5100	3600 J	2,800	2700 J
Indeno(1,2,3-cd)pyrene	IaP	690 J	13000	1500	57 J	2400 J	1,500	910 J	ND	770 J	860 J	ND
Phenanthrene	Phe	830 J	18000	1600	110 J	3800	3,100	1,100	2300 J	2000	1800 J	1000 J
Pyrene	Pyr	1600 J	50000	4100	180 J	9900	3,200	2,400	2500 J	3500	2,200	1600 J
Arsenic	As	12.3	38.5	21.3	18.3	43.1	20	7.8	15.9	34.8	14.4	11.4
Barium	Ba	205	256	219	307	91.7	1,500	69.3	511	379	418	116
Cadmium	Cd	7	6.3	1.7	1.5	1.1	3	0.3	1.7	0.77	1.7	0.20 J
Copper	Cu	341	166	71.8	173	143	124	51.7	102	90.3	148	32.1
Lead	Pb	1080	506	209	410	165	1,030	126	979	2870	1170	82
Mercury	Hg	0.85	0.78	0.16	0.12	0.06	2.30	1.60	8.30	0.28	0.80	0.06
Nickel	Ni	79.6	48.9	16.3	13.1	20.4	17	8.8	12.4	19.5	15.4	25.4
Zinc	Zn	737 B	1020 B	301 B	877 B	498 B	2,980	158 B	598 B	457 B	790	67.0 B

SID	MW-8	MW-5	GS#28	GS#39	GS#40	TS#2	TS#8	TS#8	TS#1	TS#9	TS#9	MW-7
D.I.	0 - 6	0 - 10	1' - 5'	0' - 2'	0' -2'	0 - 4	0'	2'	0 - 4	0'	2' - 8'	0 - 8
BaA	1700 J	570 J	ND	1300	5200	140	3000	3600	830	2400	300 J	220 J
BaP	1600 J	580 J	230 J	1400	4800	170	3100	3200	1,300	1900	280 J	210 J
BaF	2200 J	720 J	310 J	1400	5600	190	3400	3300	1,400	2600	400 J	300
BkF	990 J	240 J	170 J	1500	5000	ND	3600	2700	730	1800	270 J	130 J
Chr	1700 J	600 J	230 J	1600	5400	200	3200	3900	1,100	2300	340 J	210 J
DbA	440 J	99 J	ND	140 J	810 J	ND	630 J	730 J	ND	410 J	97 J	42 J
Flu	2900 J	1100 J	2000 J	15000	820	180	4300	5900	1,600	4100	490 J	330
IaP	730 J	250 J	ND	610	2100	ND	1600	1800	750	950	200 J	120 J
Phe	1200 J	1000 J	260 J	1400	5400	88	3200	4900	740	880	390 J	91 J
Pyr	2400 J	880 J	280 J	3000	9500	ND	6500	9200	1,500	5800	620 J	300
As	19.5	8.7	27.8	22	26.1	15	13.4	22.8	25	6.3	43.6	23.3
Ba	79.5 B	751	1800 B	669	1150	376	453	816	1,270	113	954	4530
Cd	0.48	2.7	9.5	3.4	8.4	1	1.9	3.4	2	0.45	3.6	4
Cu	189	90.2	110	197	171	106	123	263	382	147	1290	58.6
Pb	180	1330	2370	2240	2880	2,970	1010	2760	4,160	133	93500	6770
Hg	0.26	0.65	3.60	0.71	0.60	0.42	1.60	0.60	0.63	0.09	0.25	0.12
Ni	16.5	11.6	40.6	28.1	24.5	20	23.6	27.8	23	17.1	17.6	25.1
Zn	251 B	946 B	14400 B	975 B	13100 B	525	1610 B	1820 B	2,600	187 B	1120 B	22900 B

132 DINGENS ST. SITE, BUFFALO, NY

SOIL SAMPLES at 0' to 4' - SVOCs/METALS EXCEEDING SCOs

FIGURE 3B

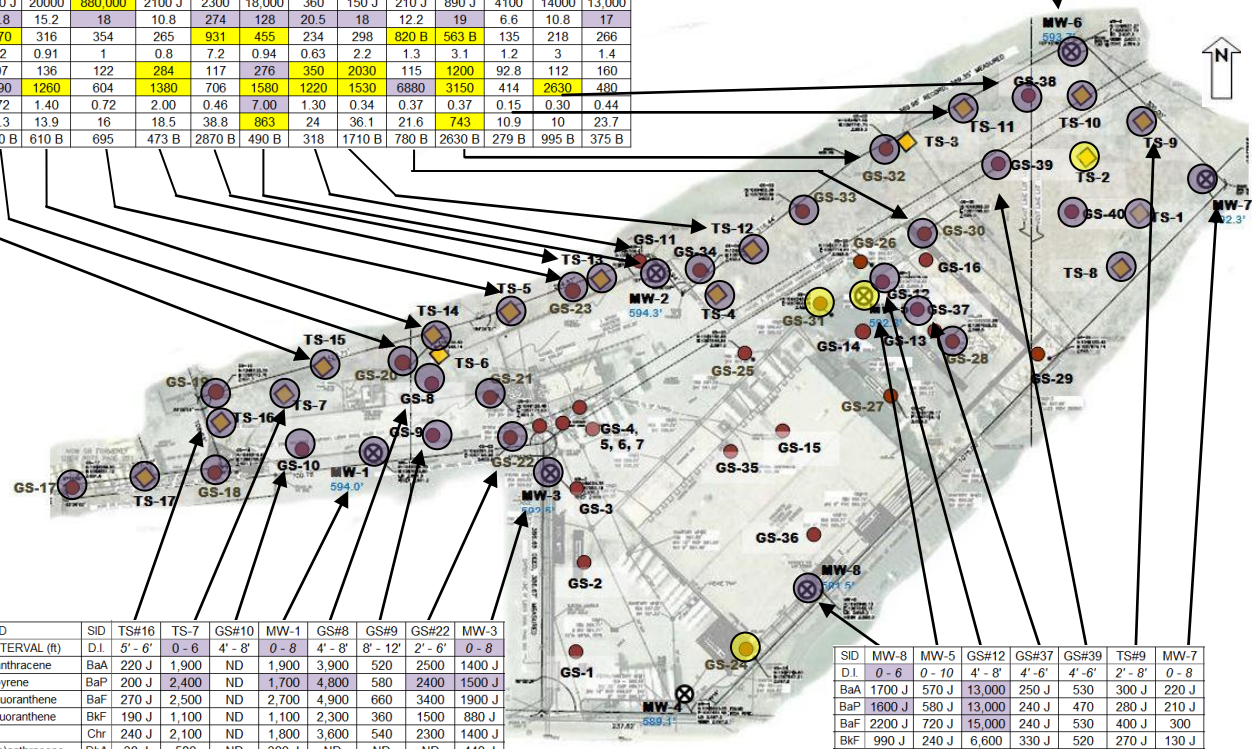
IEG

SID	TS#15	GS#20	TS#14	TS#5	GS#23	TS#13	MW-2	GS#11	TS#12	GS#30	GS#32	TS#11	GS#38	MW-6
D.I.	*4' - 8'*	*4' - 8'*	*4' - 8'*	*4 - 8*	*4' - 8'*	*2 - 8*	*0 - 8*	*4' - 8'*	*2 - 8*	*2' - 6'*	*12'*	*5' - 8'*	*4' - 6'*	*0 - 10*
BaA	2400	2600 J	8700	490,000	1300 J	630 J	13,000	240	80 J	ND	680 J	1500	5400	8,400
BaP	2200	2200 J	6200	550,000	1300 J	750 J	11,000	320	81 J	150 J	740 J	1700	4900	7,200
BaF	2800	3000 J	6900	600,000	1800 J	930	15,000	300	120 J	250 J	980 J	2400	4800	9,300
BkF	1800 J	1400 J	7100	240,000	740 J	870	4,900	140	92 J	160 J	490 J	1500	4800	3,700
Chr	2600	2300 J	8800	450,000	1400 J	1000	11,000	220	100	190 J	690 J	1800	5600	7,300
DbA	380 J	ND	1200 J	86,000	ND	210 J	620 J	58	30 J	ND	99 J	390 J	ND	860 J
Flu	3300	4800	17000	1,200,000	4600	1300	23,000	410	74 J	360 J	34000	1900	430 J	18,000
IaP	1300 J	750 J	3400 J	250,000	270 J	580 J	5,600	170	81 J	ND	220 J	1200	2100 J	3,300
Phe	4200	3800 J	17000	1,200,000	2300 J	1400	21,000	230	56 J	160 J	1000 J	1300	18000	14,000
Pyr	6300	3900 J	20000	880,000	2100 J	2300	18,000	360	150 J	210 J	890 J	4100	14000	13,000
As	20.6	21.8	15.2	18	10.8	274	128	20.5	18	12.2	19	6.6	10.8	17
Ba	238	2370	316	354	265	931	455	234	298	820 B	563 B	135	218	266
Cd	1.3	2.2	0.91	1	0.8	7.2	0.94	0.63	2.2	1.3	3.1	1.2	3	1.4
Cu	83.8	207	136	122	284	117	276	350	2030	115	1200	92.8	112	160
Pb	1250	9790	1260	604	1380	706	1580	1220	1530	6880	3150	414	2630	480
Hg	0.40	0.72	1.40	0.72	2.00	0.46	7.00	1.30	0.34	0.37	0.37	0.15	0.30	0.44
Ni	13.1	18.3	13.9	16	18.5	38.8	863	24	36.1	21.6	743	10.9	10	23.7
Zn	927 B	1830 B	610 B	695	473 B	2870 B	490 B	318	1710 B	780 B	2630 B	279 B	995 B	375 B

LEGEND

- Exceed Commercial SCOs
- Exceed Industrial SCOs
- Geoprobe soil sample
- Test pit soil sample
- Monitoring well

SVOCs in µg/Kg; metals in mg/Kg



SAMPLE ID	SID	TS#16	TS-7	GS#10	MW-1	GS#8	GS#9	GS#22	MW-3
DEPTH INTERVAL (ft)	D.I.	*5' - 6'*	*0 - 6*	*4' - 8'*	*0 - 8*	*4' - 8'*	*8' - 12'*	*2' - 6'*	*0 - 8*
Benzo(a)anthracene	BaA	220 J	1,900	ND	1,900	3,900	520	2500	1400 J
Benzo(a)pyrene	BaP	200 J	2,400	ND	1,700	4,800	580	2400	1500 J
Benzo(b)fluoranthene	BaF	270 J	2,500	ND	2,700	4,900	660	3400	1900 J
Benzo(k)fluoranthene	BkF	190 J	1,100	ND	1,100	2,300	360	1500	880 J
Chrysene	Chr	240 J	2,100	ND	1,800	3,600	540	2300	1400 J
Dibenz(a,h)anthracene	DbA	38 J	520	ND	300 J	ND	ND	ND	440 J
Fluoranthene	Flu	280 J	3,800	ND	11000	9,600	1,100	3600 J	2,800
Indeno(1,2,3-cd)pyrene	IaP	110 J	1,500	ND	910 J	2,600	270	770 J	860 J
Phenanthrene	Phe	310 J	3,100	ND	1,100	8,000	730	2000	1800 J
Pyrene	Pyr	510 J	3,200	ND	2,400	8,300	890	3500	2,200
Arsenic	As	22.4	20	21.4	7.8	8.5	36.7	34.8	14.4
Barium	Ba	924	1,500	202	69.3	162	736	379	418
Cadmium	Cd	0.9	3	0.98	0.3	0.52	3.3	0.77	1.7
Copper	Cu	117	124	137	51.7	45.7	143	90.3	148
Lead	Pb	909	1,030	641	126	417	2470	2870	1170
Mercury	Hg	0.45	2.30	0.12	1.60	1.80	0.36	0.28	0.80
Nickel	Ni	28.2	17	25.1	8.8	13.6	20.2	19.5	15.4
Zinc	Zn	947 B	2,980	470	158 B	196	1450	457 B	790

SID	MW-8	MW-5	GS#12	GS#37	GS#39	TS#9	MW-7
D.I.	*0 - 6*	*0 - 10*	*4' - 8'*	*4' -6'*	*4' -6'*	*2' - 8'*	*0 - 8*
BaA	1700 J	570 J	13,000	250 J	530	300 J	220 J
BaP	1600 J	580 J	13,000	240 J	470	280 J	210 J
BaF	2200 J	720 J	15,000	240 J	530	400 J	300
BkF	990 J	240 J	6,600	330 J	520	270 J	130 J
Chr	1700 J	600 J	14,000	330 J	620	340 J	210 J
DbA	440 J	99 J	2,800	ND	ND	97 J	42 J
Flu	2900 J	1100 J	27,000	2900	2300	490 J	330
IaP	730 J	250 J	5,600	170 J	240 J	200 J	120 J
Phe	1200 J	1000 J	24,000	300 J	510	390 J	91 J
Pyr	2400 J	880 J	18,000	720	1300	620 J	300
As	19.5	8.7	34.4	23.6	11.9	43.6	23.3
Ba	79.5 B	751	1890	475	2120	954	4530
Cd	0.48	2.7	3.2	2.5	2	3.6	4
Cu	189	90.2	111	177	94.7	1290	58.6
Pb	180	1330	2440	3320	941	93500	6770
Hg	0.26	0.65	ND	3.30	0.32	0.25	0.12
Ni	16.5	11.6	18.9	29.3	11.1	17.6	25.1
Zn	251 B	946 B	1600	1270 B	1410 B	1120 B	22900 B

132 DINGENS ST. SITE, BUFFALO, NY

SOIL SAMPLES at 4' to 12' - SVOCs/METALS EXCEEDING SCOs

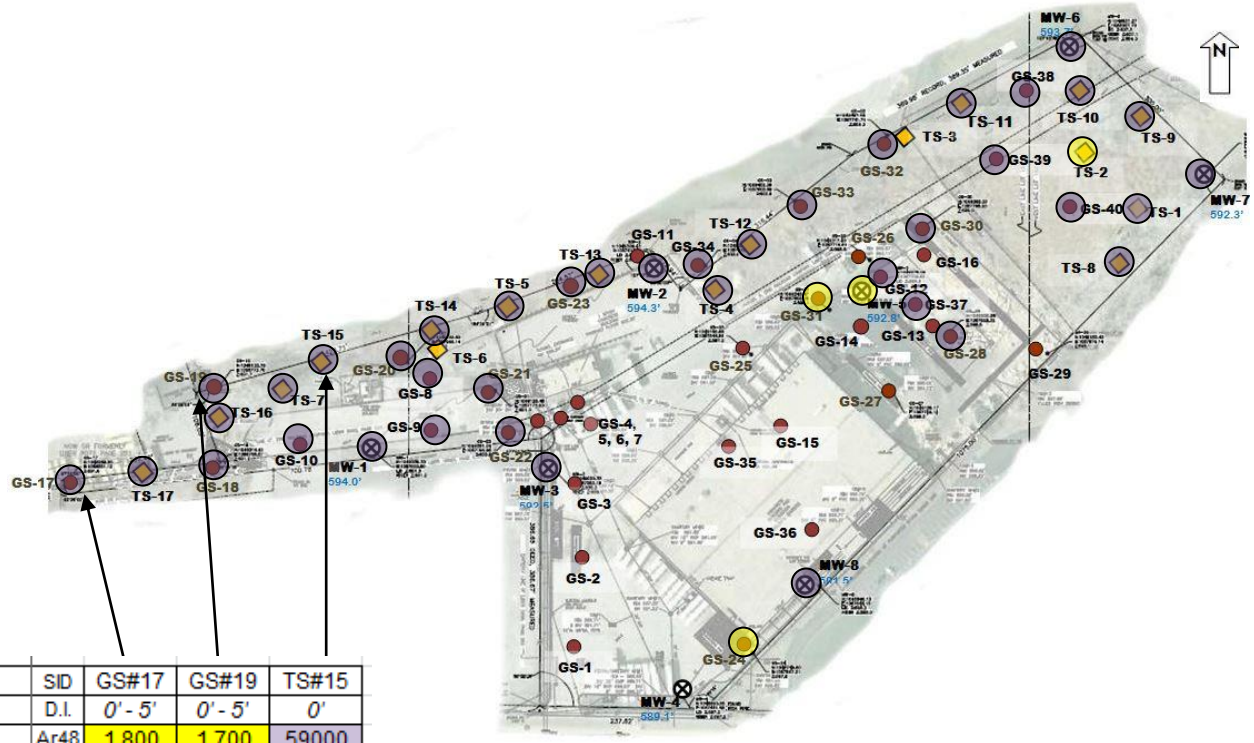
FIGURE 3C

IEG

LEGEND

- Exceed Commercial SCOs
- Exceed Industrial SCOs
- Geoprobe soil sample
- Test pit soil sample
- Monitoring well

PCBs in µg/Kg



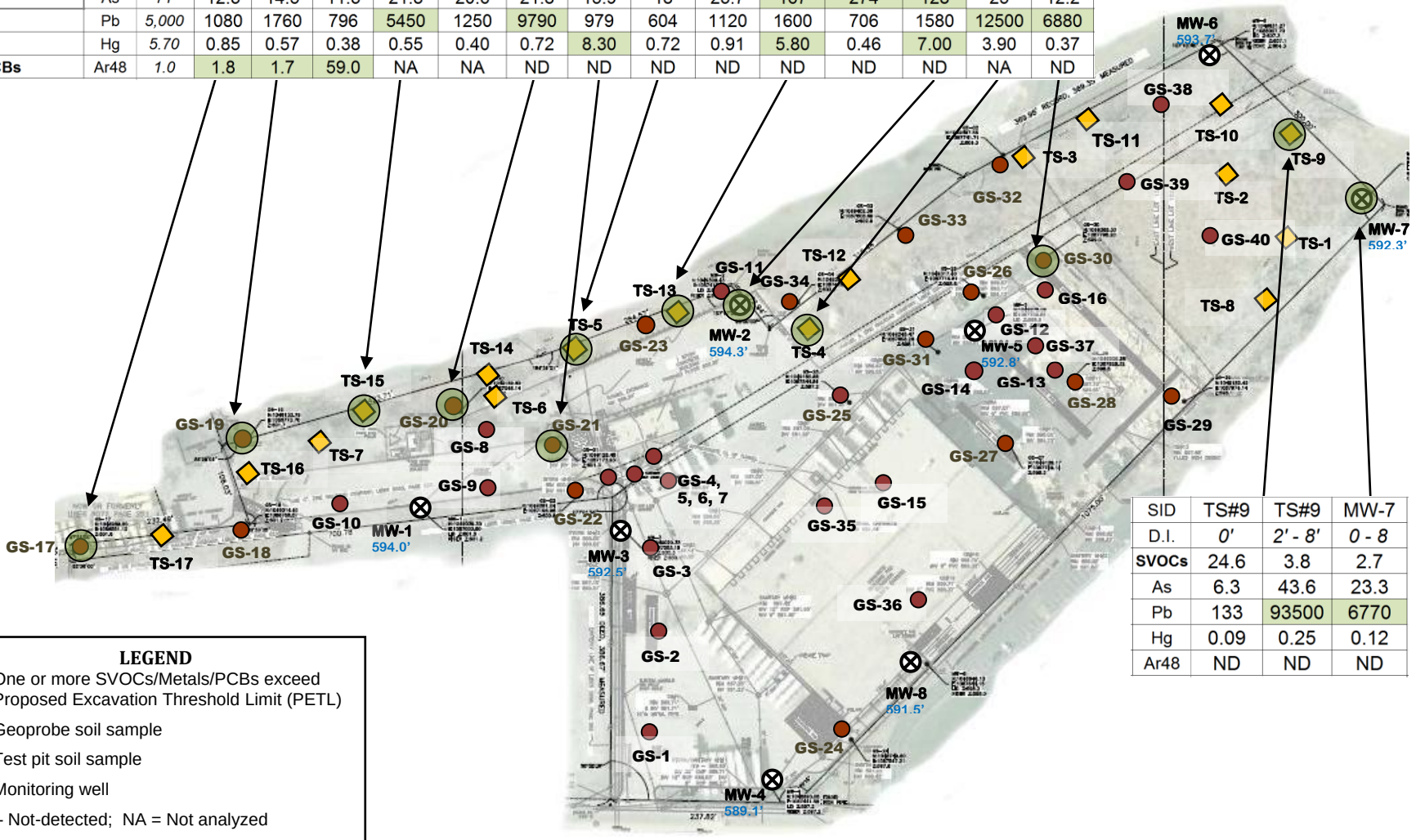
SAMPLE ID	SID	GS#17	GS#19	TS#15
DEPTH INTERVAL (ft)	D.I.	*0' - 5'*	*0' - 5'*	*0'*
Aroclor 1248	Ar48	1,800	1,700	59000
Aroclor 1254	Ar54	3,100	3,400	ND

132 DINGENS STREET SITE, BUFFALO, NY
ALL SOIL SAMPLES - PCBs EXCEEDING SCOs

FIGURE 3D

IEG

SAMPLE ID	SID	PETL	GS#17	GS#19	TS#15	TS#15	TS#15	GS#20	GS#21	TS#5	TS#13	TS#13	TS#13	MW-2	TS#4	GS#30
DEPTH INTERVAL (ft)	D.I.		0' - 5'	0' - 5'	0'	1' - 4'	4' - 8'	4' - 8'	0' - 4'	4 - 8	0'	0' - 2'	2 - 8	0 - 8	0 - 4	2' - 6'
Total SVOCs	SVOCs	500	12.0	29.1	1032	76.0	31.3	27.0	17.6	7163	57.9	350.3	11.1	148.3	92.4	1.3
Arsenic	As	71	12.3	14.5	11.3	21.8	20.6	21.8	15.9	18	23.7	167	274	128	25	12.2
Lead	Pb	5,000	1080	1760	796	5450	1250	9790	979	604	1120	1600	706	1580	12500	6880
Mercury	Hg	5.70	0.85	0.57	0.38	0.55	0.40	0.72	8.30	0.72	0.91	5.80	0.46	7.00	3.90	0.37
Total PCBs	Ar48	1.0	1.8	1.7	59.0	NA	NA	ND	ND	ND	ND	ND	ND	ND	NA	ND



SID	TS#9	TS#9	MW-7
D.I.	0'	2' - 8'	0 - 8
SVOCs	24.6	3.8	2.7
As	6.3	43.6	23.3
Pb	133	93500	6770
Hg	0.09	0.25	0.12
Ar48	ND	ND	ND

LEGEND

- One or more SVOCs/Metals/PCBs exceed Proposed Excavation Threshold Limit (PETL)
- Geoprobe soil sample
- Test pit soil sample
- Monitoring well

ND – Not-detected; NA = Not analyzed

SVOCs, PCBs and metals in mg/Kg

132 DINGENS ST., BUFFALO, NY

SOIL SAMPLE LOCATIONS EXCEEDING PETLs

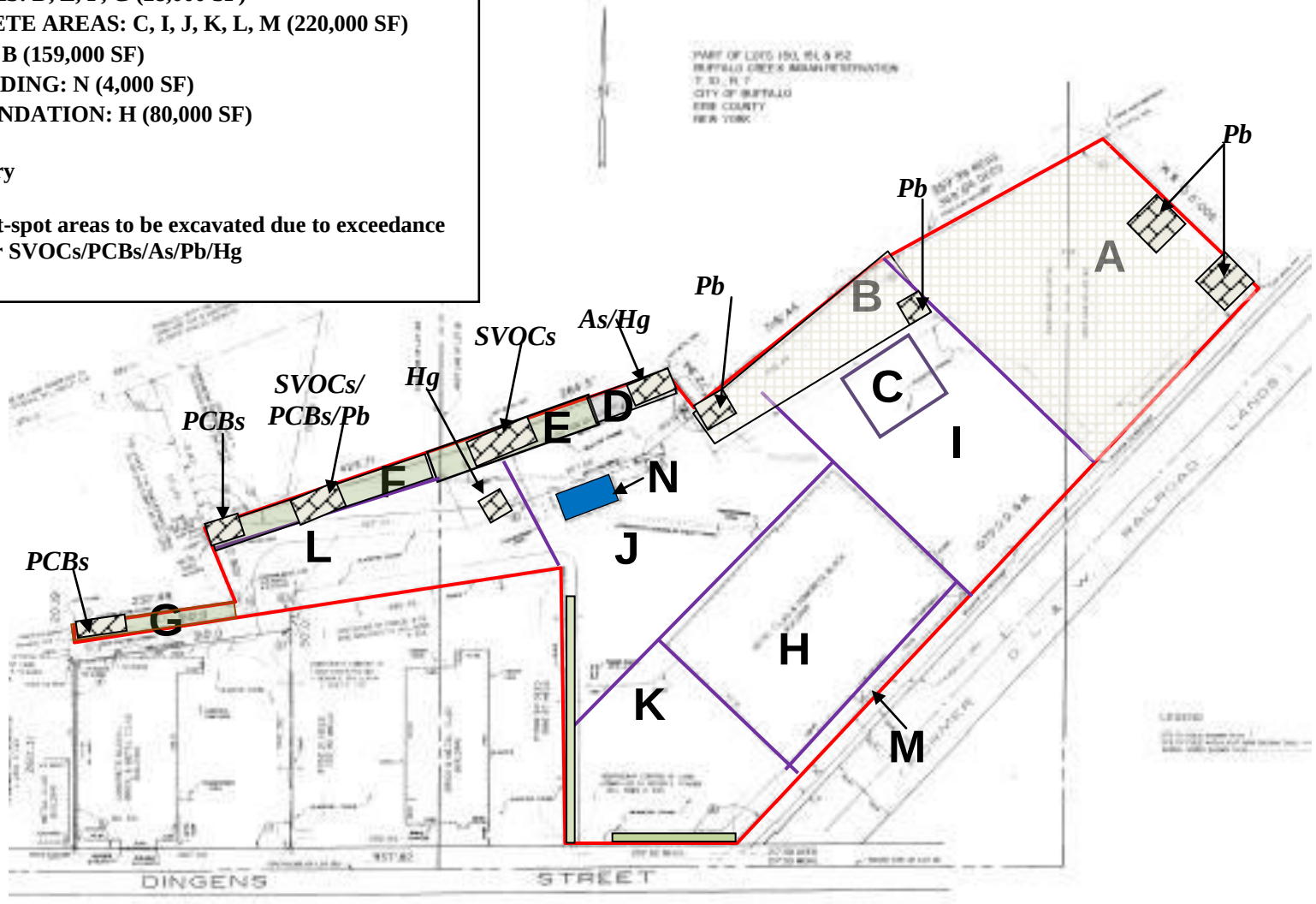
FIGURE 4

IEG

NOTE:
THE COVER SYSTEM WILL CONSIST OF THE FOLLOWING:
VEGETATED AREAS: D, E, F, G (28,000 SF)
ASPHALT/CONCRETE AREAS: C, I, J, K, L, M (220,000 SF)
GRAVEL AREA: A, B (159,000 SF)
PUMPHOUSE BUILDING: N (4,000 SF)
WAREHOUSE FOUNDATION: H (80,000 SF)

Site Boundary

Proposed hot-spot areas to be excavated due to exceedance of PETLs for SVOCs/PCBs/As/Pb/Hg



132 DINGENS STREET, BUFFALO, NY
HOT SPOT EXCAVATION AREAS & SURFACE FEATURES

FIGURE 5

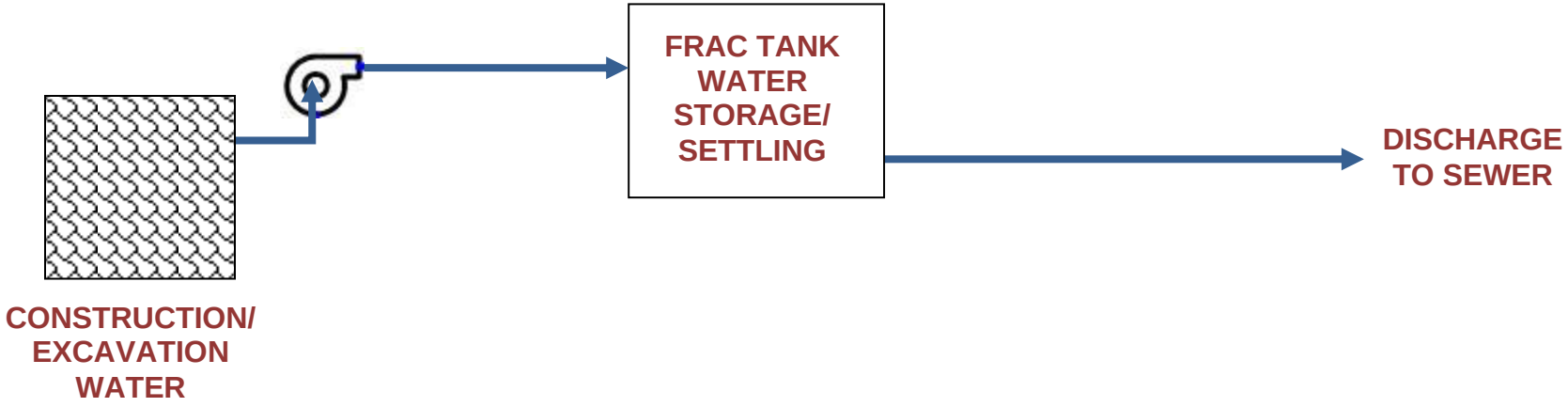
IEG

Note: Decon pad is sloped to one corner with sump to collect wash water for treatment

132 DINGENS ST. SITE, BUFFALO, NY
DECONTAMINATION PAD CROSS-SECTION

FIGURE 6

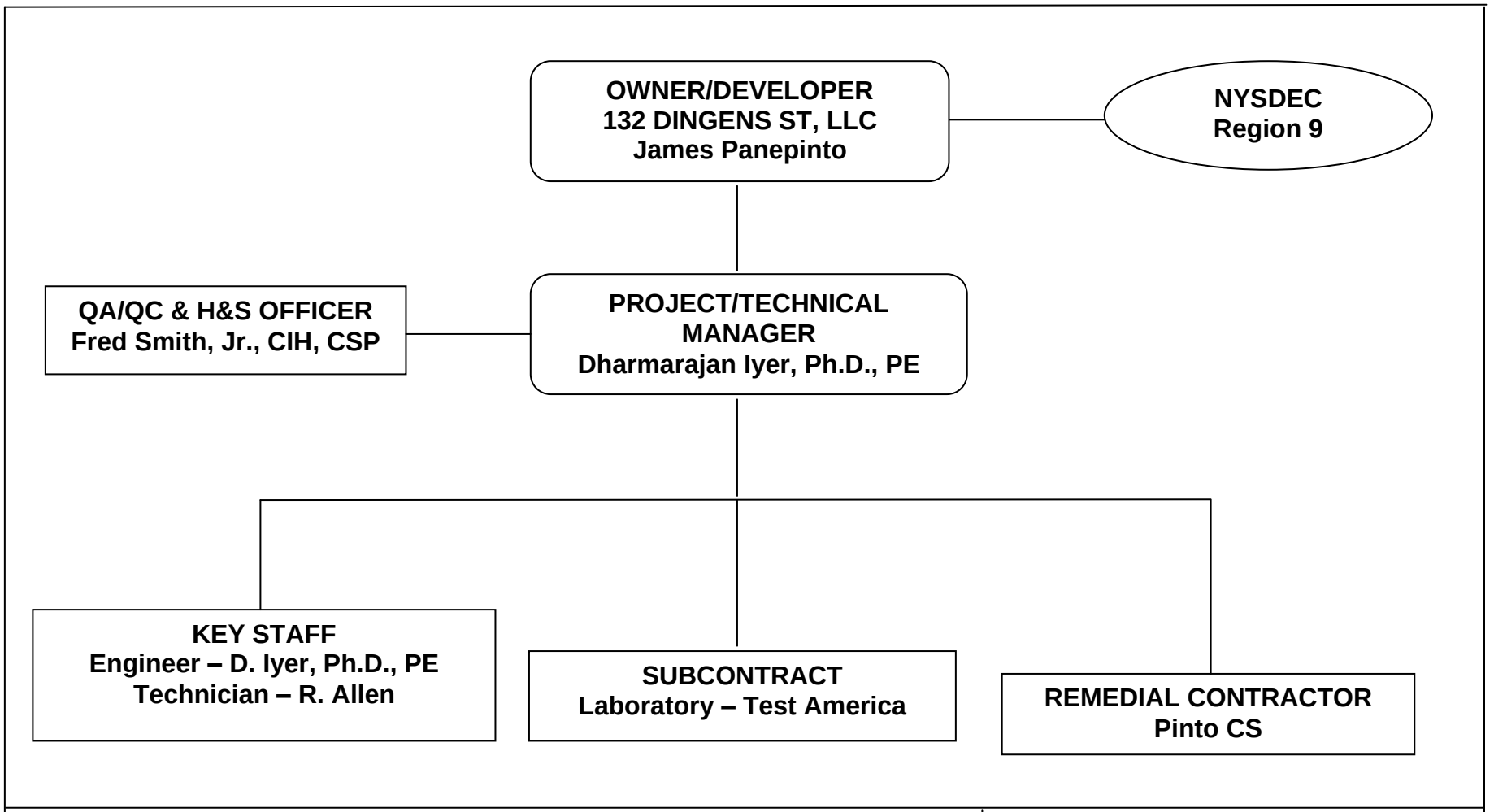
IEG



132 DINGENS ST. SITE, BUFFALO, NY
CONSTRUCTION/EXCAVATION WATER HANDLING

FIGURE 7

IEG

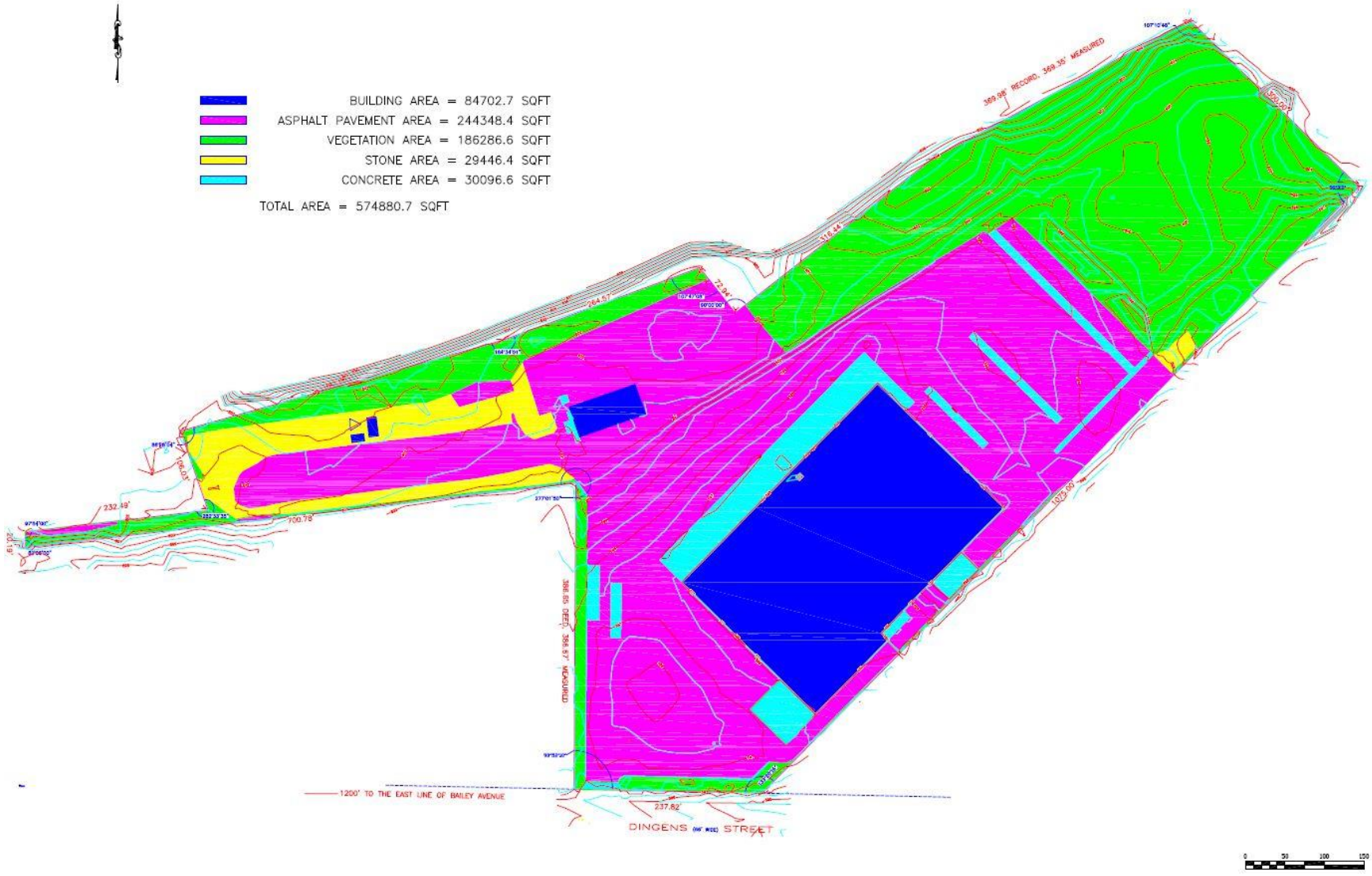


132 DINGENS ST., BUFFALO, NY
PROJECT ORGANIZATION CHART

FIGURE 8

IEG

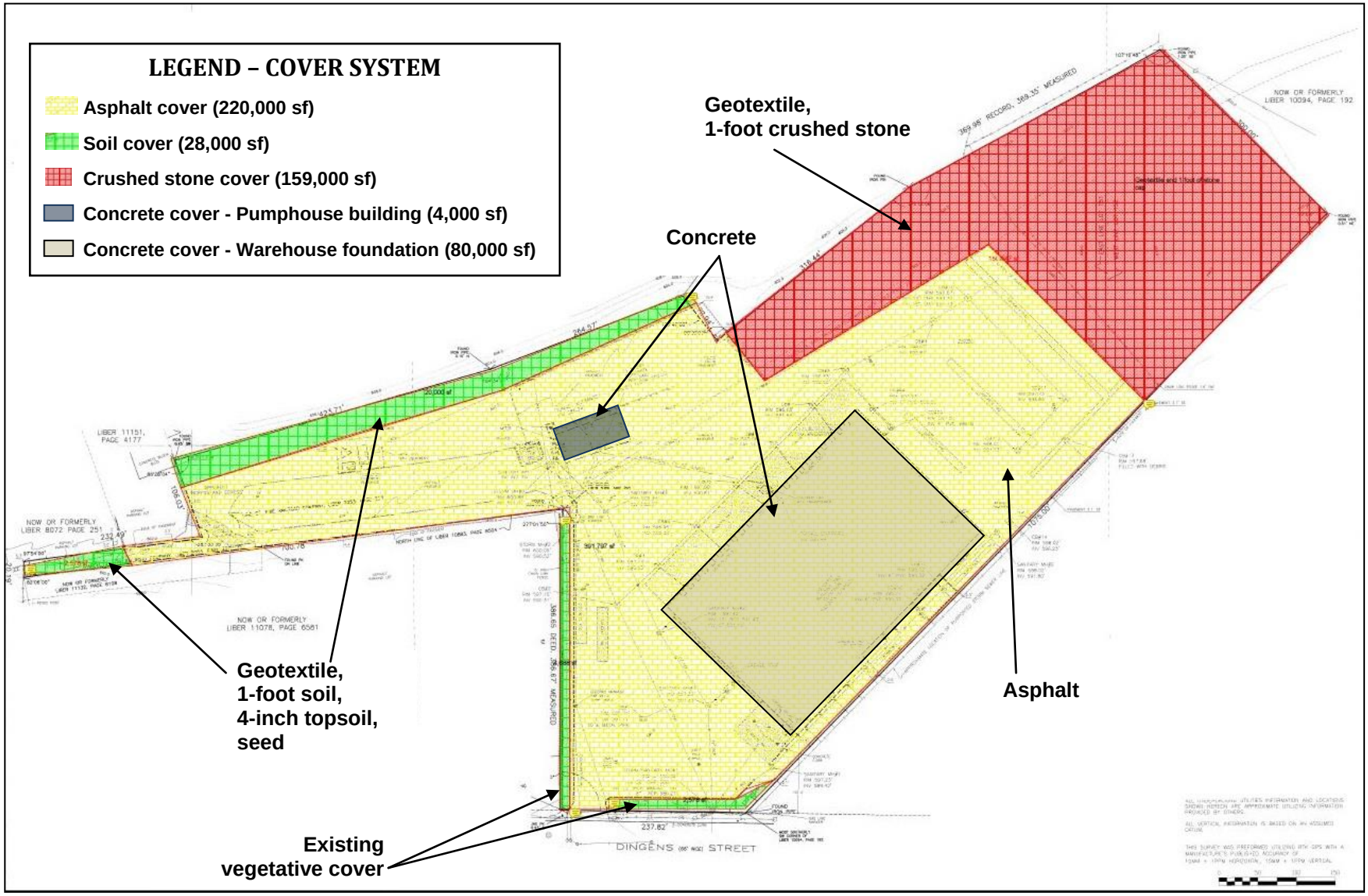
DRAWINGS



132 DINGENS STREET SITE, BUFFALO, NY
EXISTING SITE TOPO AND LAYOUT

DRAWING 1

IEG



132 DINGENS STREET SITE, BUFFALO, NY
PROPOSED COVER SYSTEM

DRAWING 2

IEG

TABLES

TABLE 1
132 DINGENS STREET - BCP REMEDIATION
PARAMETERS OF CONCERN

PARAMETER	PART 375 SCOs		RANGE of DETECTED CONCENTRATIONS IN SOIL			TOTAL NUMBER OF SAMPLES	NUMBER OF SAMPLES EXCEEDING COMMERCIAL USE SCOs	NUMBER OF SAMPLES EXCEEDING INDUSTRIAL USE SCOs
	RESTRICTED COMMERCIAL	RESTRICTED INDUSTRIAL	MINIMUM	AVERAGE	MAXIMUM			
SEMIVOLATILE ORGANICS (SVOCs, ug/Kg**)**								
Benzo(a)anthracene	5,600	11,000	ND	10,299	490,000	81	23	8
Benzo(a)pyrene	1,000	1,100	ND	10,673	550,000		21	43
Benzo(b)fluoranthene	5,600	11,000	ND	12,008	600,000		23	9
Benzo(k)fluoranthene	56,000	110,000	ND	6,237	240,000		4	1
Chrysene	56,000	110,000	ND	9,996	450,000		5	1
Dibenz(a,h)anthracene	560	1,100	ND	1,704	86,000		19	11
Fluoranthene	500,000	1,000,000	ND	22,727	1,200,000		1	1
Indeno(1,2,3-cd)pyrene	5,600	11,000	ND	5,015	250,000		21	5
Phenanthrene	500,000	1,000,000	31	21,955	1,200,000		1	1
Pyrene	500,000	1,000,000	35	19,588	880,000		2	0
PCBs (ug/Kg)								
Aroclor 1248	1,000	25,000	ND	1,125	59,000	56	3	1
Aroclor 1254			ND	133	3,400		2	0
METALS (mg/Kg)								
Arsenic	16	16	1	24	274	79	40	40
Barium	400	10,000	7	550	4,530		31	0
Copper	270	10,000	5	221	2,400		12	0
Lead	1,000	3,900	3	2,981	93,500	86	36	9
Nickel	310	10,000	2	41	863	79	2	0
Zinc	10,000	10,000	9	1,655	22,900		2	3
Mercury	2.8	5.7	ND	0.90	8.30		5	3
TCLP Lead (mg/L)	5		ND	8	34	13	3	

TABLE 2
132 DINGENS STREET SITE REMEDIAL ACTION
PROPOSED EXCAVATION THRESHOLD LIMITS & EXCEEDANCES
BASED ON PHASE II ESA & RI ALL SOIL SAMPLES (EXCLUDING OUTLIERS)

PARAMETER	PART 375 SCOs		PROPOSED EXCAVATION THRESHOLD LIMIT (PETL)	MINIMUM	AVERAGE	MAXIMUM	TOTAL NUMBER OF SAMPLES (for stats)	NO. OF SAMPLES > PETL	LOCATIONS EXCEEDING PETLs (excluding outliers)
	RESTRICTED COMMERCIAL (CSCOs)	RESTRICTED INDUSTRIAL (ISCOs)							
SEMIVOLATILE ORGANICS (SVOCs, ug/Kg) (PETL is based on NYSDEC's CP-51 Soil Cleanup Guidance									
Total SVOCs	500,000	1,000,000	**500,000**	ND	56,753	1,031,800	80	1	TS-15
PCBs (ug/Kg) (PETL is based on CSCO)									
Total PCBs	1,000	25,000	**1,000**	ND	215	5,100	55	2	GS-17, GS-19
METALS (mg/Kg) (PETLs: Pb based on Total vs TCLP correlation; As based on 95% UCL; & Hg based on ISCO)									
Arsenic	16	16	**79**	1.4	22	274	78	2	TS-13, MW-2
Lead	1,000	3,900	**5,000**	2.9	1,916	25,800	85	7	TS-4, TS-15, MW-7, GS-20, GS-30
Mercury	2.8	5.7	**5.7**	ND	0.9	8.3	79	3	TS-13, MW-2, GS-21

TABLE 3
132 DINGENS STREET SITE RAWP
NATURE/EXTENT OF SOIL CONTAMINATION AND CLEANUP QUANTITIES

AREAS BY SITE FEATURES		TYPE/LEVEL OF EXCEEDENCE OF PROPOSED EXCAVATION THRESHOLD LIMIT (PETL)	DEPTH OF CONTAMINATED SOIL/FILL	AREA (sq.ft.)	ESTIMTED EXCAVATION VOLUME (CY)
AREA	LOCATION				
Area A	Eastern vegetated portion	TS#9 & MW-7 exceed PETL for Total SVOCs	8' to 18'; 12' average	125,000	200
Area B	Vegetated strip NE boundary	Second highest Pb at TS-4	10' to 13'; 12' average	34,000	120
Area C	Paved, old UST area NE of foundation	No PETL exceedance	12' to 16'; 14' average	10,000	0
Area D	Area northeast of pump-house building	As & Hb PETLs exceeded at MW-2	10' to 12'; 11' average	4,000	120
Area E	Area north of cell tower	SVOCs maximum at TS-5 (outlier) at >4' depth	10' to 12'; 11' average	10,000	250
Area F	Area NW of cell tower	Second highest SVOCs at TS-15 Highest PCB level at TS-15 PETL for PCBs also exceeded at GS-19	8' to 11'; 10' average	9,000	300
Area G	Strip on western end of property	PETL for PCB exceeded at GS-17	7' to 12'; 10' average	5,000	130
Area H	Warehouse building foundation	NOT SIGNIICANT	16' average	80,000	0
Area I	Paved area east of foundation	Pb exceeds PETL at GS-30	8' to 15'; 12' average	74,000	100
Area J	Paved area pump-house building	No PETL exceedance	10' to 12'; 11' average	104,000	0
Area K	Paved area west of foundation	No PETL exceedance	10' to 16'; 13' average	44,000	0
Area L	Gravel area west of pump-house building	Hg PETL exceeded at GS-21	8' to 12; 10' average	62,000	100
Area M	Asphalt/concrete south of foundation	No PETL exceedance	8' to 12'; 10' average	10,000	0
Area N	Pump-house building	NONE	--	4,000	0
TOTAL OF ALL AREAS				575,000	
TOTAL HOT-SPOT AREAS (EXCEEDING PETLs, PROPOSED EXCAVATION THRESHOLD LIMITS)				**14,000**	**1,320**

DISTRIBUTION OF AREAS BY EXISTING SURFACE COVER	
VEGETATION: Areas D, E, F, G	28,000
ASPHALT/CONCRETE: Areas C, I, J, K, L, M	304,000
CRUSHED STONE: Areas A, B	159,000
BUILDING AREA: Areas H, N	84,000
TOTAL	575,000

TABLE 4A
132 DINGENS ST. SITE - BCP REMEDIATION
SCHEDULE OF SAMPLING AND ANALYSIS

SAMPLE MATRIX	ANTICIPATED MINIMUM NUMBER OF SAMPLES						
	BSA DISCHARGE PARAMETERS	SVOCs (PAHs)	PCBs	TOTAL Arsenic	TOTAL Mercury	TOTAL Lead	TCLP Pb
		Method 8270C	Method 8082	Method 6010B	Method 6010B	Method 6010B	Method 6010B
SOIL CONFIRMATORY	--	10	15	5	10	30	--
SOIL LANDFILL	--	--	--	--	--	--	--
GROUNDWATER DISCHARGE	2	--	--	--	--	--	--

NOTES: (1) BSA Discharge parameters to be determined based on discharge permit
(2) Additional soil samples subject to results of confirmatory sampling

TABLE 4B

132 DINGENS STREET - BCP REMEDIATION

SAMPLE QA/QC, HOLDINGS TIMES AND CONTAIMERS

ANALYTICAL PARAMETER	ANALYTICAL METHOD	QA/QC REQUIREMENTS						SAMPLE HOLDING TIMES	CONTAINER TYPE/# PER SAMPLE	
		SOIL				GROUNDWATER			SOIL	GROUNDWATER
		# OF SAMPLES	FIELD DUPLICATE	MS/MSD	RINSE BLANK	# OF SAMPLES	FIELD DUPLICATE			
Semivolatile Organics (SVOCs)	8270	10	1	1	1	NA		Soil: 14 days GW: 7 days	4-OZ GLASS (1 each)	NA
PCBs	8082	15	1	1	1	NA		1 year (laboratory)		NA
TAL Metals As, Hg, Pb	6010/ 7470	30	2	2	2	NA		Metals: 180 days Hg: 28 days	4-OZ GLASS (1 each)	NA
TCLP Lead	SW8463/ 6010	13	1	--	--	NA		14 days	4-OZ GLASS (1 each)	NA
BSA Discharge Parameters	various	5	1	--	--	2	--	varies	NA	TO BE DETERMINED

NOTE: "NA" = not applicable

APPENDICES

NORTH

MW-6
E'
GS-38
A
TS-10
TS-11
TS-9
D'
A'
MW-7
GS-33
B
GS-39
GS-30
GS-40
MW-2
TS-12
GS-26
GS-34
GS-23
MW-5
TS-8
GS-31
GS-37
GS-25
GS-28
GS-29
B'
C
GS-20
TS-15
GS-19
GS-27
GS-21
TS-16
GS-22
MW-3
GS-35
TS-17
GS-17
MW-1
GS-18
E
GS-36
C'
MW-8
GS-24
D
MW-4

DINGENS STREET

LEGEND:

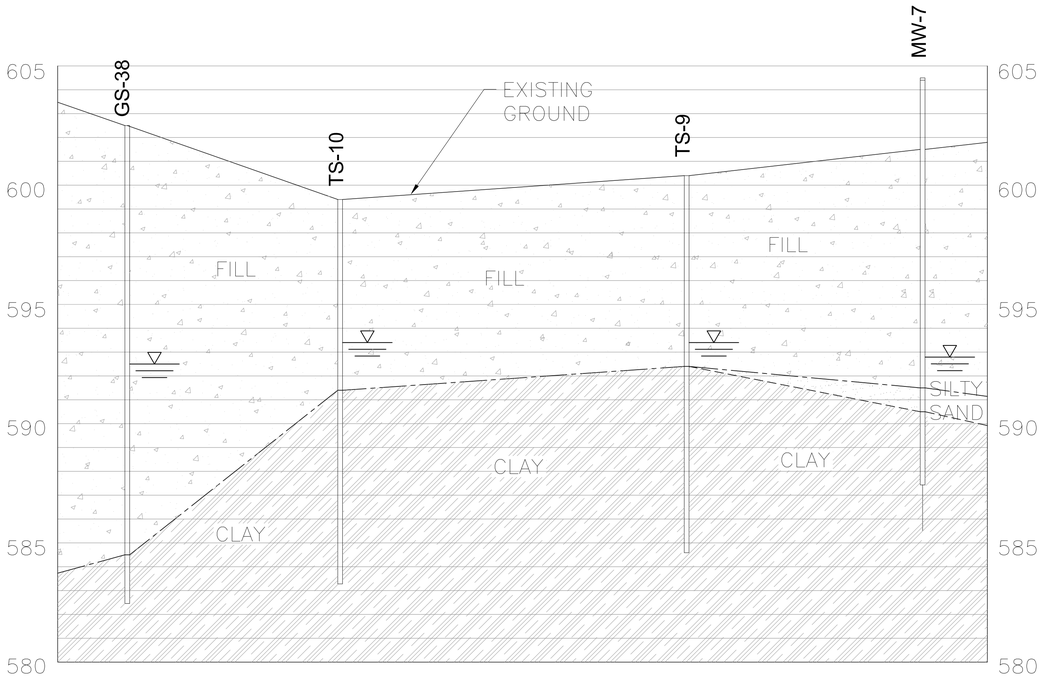
- TESTPIT/SOIL BORING
- GEOPROBE/SOIL BORING
- MONITORING WELL

IEG

SUB-SURFACE CROSS SECTION LOCATION PLAN
132 DINGENS STREET
BUFFALO, NEW YORK

FIGURE

A-1



A — SECTION A-A' — A'

HORIZ SCALE: 1"=30'-0"
VERT SCALE: 1"=3'-0"

B — SECTION B-B' — B'

HORIZ SCALE: 1"=30'-0"
VERT SCALE: 1"=3'-0"

LEGEND:

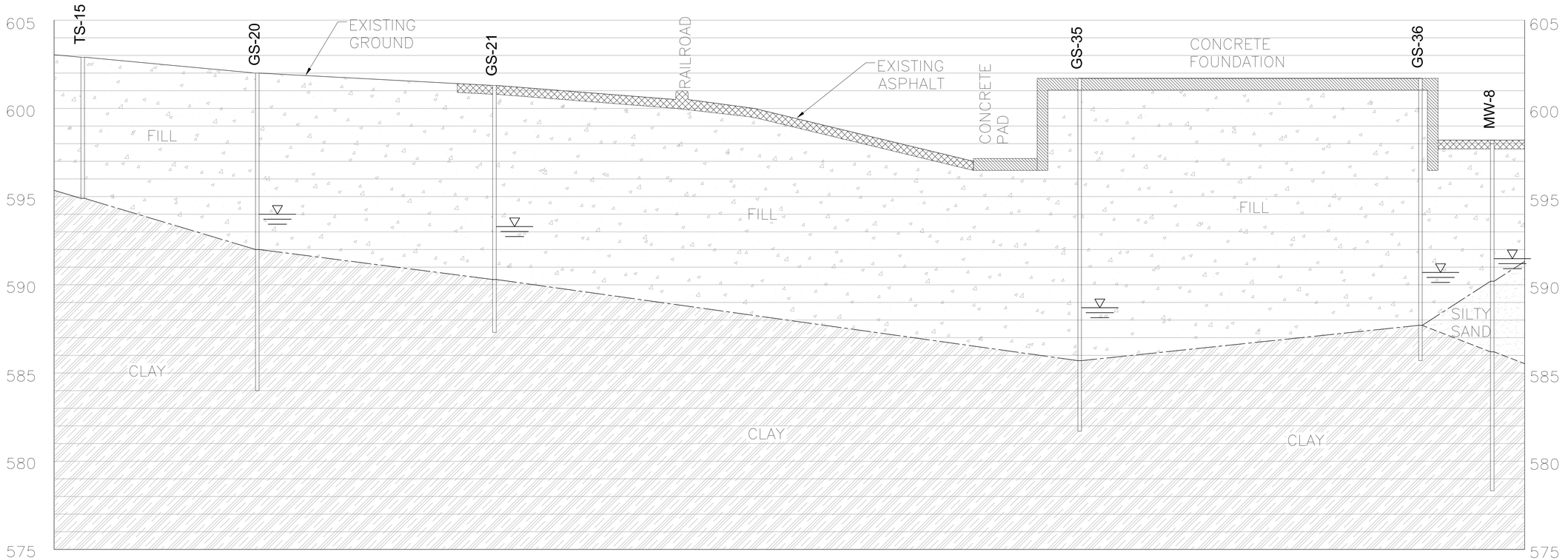
TS	TESTPIT/SOIL BORING
GS	GEOPROBE/SOIL BORING
MW	MONITORING WELL
▽	WATER ELEVATION

FILL
SILTY SAND
CLAY

SUB-SURFACE CROSS SECTION
A-A' & B-B'
132 DINGENS STREET
BUFFALO, NEW YORK

FIGURE

A-2



SECTION C-C'

HORIZ SCALE: 1"=30'-0"
VERT SCALE: 1"=3'-0"

LEGEND:

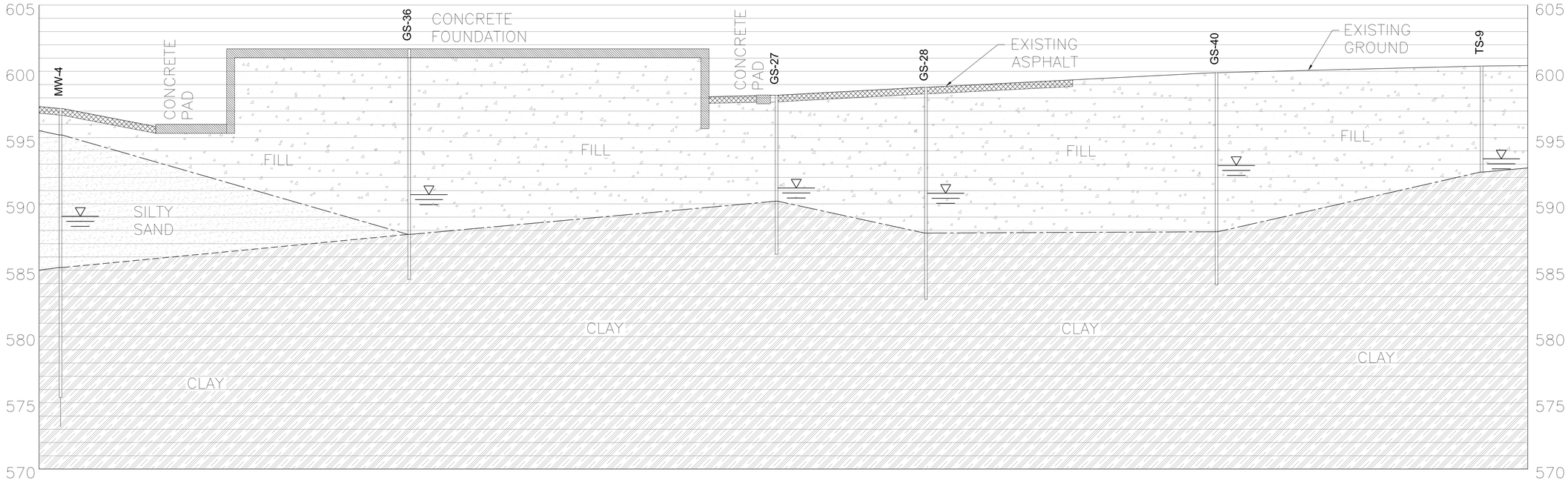
TS	SOIL BORING
GS	SOIL BORING
MW	MONITORING WELL
▽	WATER ELEVATION

FILL
SILTY SAND
CLAY

SUB-SURFACE CROSS SECTION
C-C'
132 DINGENS STREET
BUFFALO, NEW YORK

FIGURE

A-3



D D'

SECTION D-D'

HORIZ SCALE: 1"=40'-0"
VERT SCALE: 1"=4'-0"

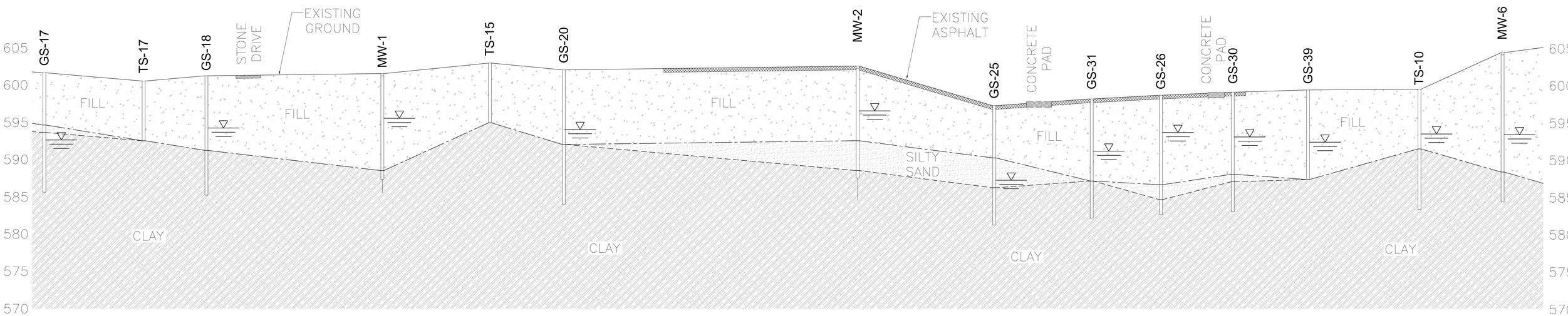
LEGEND:

TS	SOIL BORING
GS	SOIL BORING
MW	MONITORING WELL
▽	WATER ELEVATION

FILL
SILTY SAND
CLAY

SUB-SURFACE CROSS SECTION
D-D'
132 DINGENS STREET
BUFFALO, NEW YORK

FIGURE
A-4



SECTION E-E'

HORIZ SCALE: 1"=60'-0"
VERT SCALE: 1"=6'-0"

LEGEND:

TS	SOIL BORING
GS	SOIL BORING
MW	MONITORING WELL
▽	WATER ELEVATION

FILL
SILTY SAND
CLAY

SUB-SURFACE CROSS SECTION
E-E'
132 DINGENS STREET
BUFFALO, NEW YORK

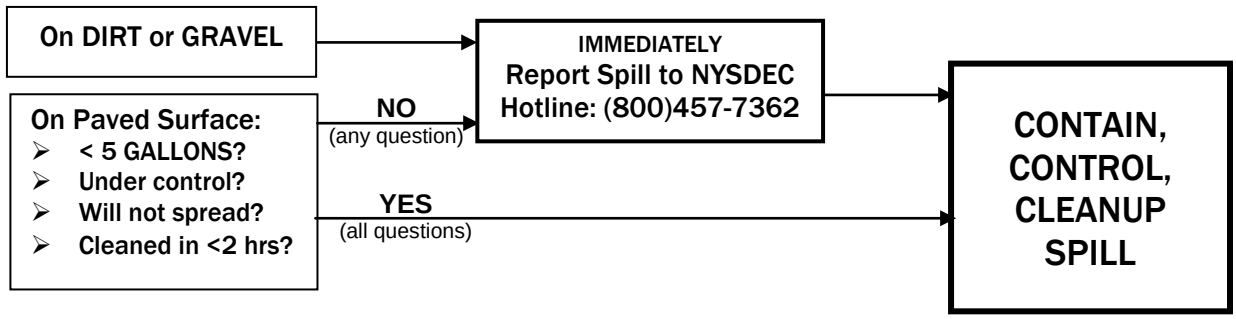
FIGURE
A-5

APPENDIX B

STANDARD OPERATING PROCEDURE
SPILL CONTROL AND CONTINGENCY PLAN

MATERIAL	Contaminated soils, equipment leakage (fuel, hydraulic fluids)
REGULATIONS	Report spills, particularly petroleum, under the following circumstances: ➢ Spill on impacted land (dirt or gravel areas or parking lot) ➢ Spill on paved surface (asphalt or concrete) if one or more of these conditions are not met: less than 5 gallons; contained and under control; will not reach State's water or land; cleaned up within 2 hours
EXPOSURE	Eyes, skin and inhalation are principle routes of exposure, and can cause irritation of the eyes and respiratory tract
PPE	➢ Gloves, safety shoes (oil resistant), safety glasses, hard hats ➢ Avoid contact with skin, eyes and clothing
CONTROL & CLEANUP	➢ Eliminate source of spill (closing valves, etc.) ➢ Do not wash or flush into surface water or sanitary drain ➢ Immediately contain and control spill (within 2 hours) ➢ Soak up liquid spills with inert absorbents (sand, silica gel) ➢ Scoop up soiled areas into drum for disposal ➢ On water, skim and drum material for off-site disposal ➢ Clean soils that are contaminated may require laboratory analysis: VOAs (Method 8260+TICs) and SVOAs (Method 8270+TICs)
PREVENTION & CONTROL	➢ Service and check equipment for leaks regularly ➢ Keep equipment (with potential to leak) on paved areas ➢ Keep spill cleanup/absorbent materials at hand at all times
NOTIFICATION	Coordinate NYSDEC notification with others to avoid duplication
CONTACT	Dharma Iyer; cell: (716)445-9684; office: (716)662-4157

DECISION TREE
Petroleum/Solvent Spills



SITE SPECIFIC HEALTH & SAFETY PLAN:

LIMITING WORKER EXPOSURE TO AIRBORNE METALS DURING URBAN FILL EXCAVATION OPERATIONS

132 DINGENS STREET
BUFFALO, NY

Prepared by

PINTO CONSTRUCTION SERVICES, INC.
1 BABCOCK STREET
BUFFALO, N.Y. 14210

The following is in accordance with good industrial hygiene practice

FRED L. SMITH Jr. CIH, CSP

The undersigned have reviewed and understand this Site-Specific Safety & Health Plan and agree to apply these hazard control procedures, as well as Pinto Construction Services' established general health and safety principals, to this specific construction situation.

PROJECT MANAGER: _____ DATE 4-6-2015
James Panepinto

COMPETENT PERSON: _____ DATE 4-6-2015
Gary Catlin

April 2014

TABLE OF CONTENTS

FIGURES:

APPENDICES:

1.0 INTRODUCTION

1.1 Purpose

The purpose of this Health and Safety Plan (HASP) is to establish appropriate health and safety procedures to be followed by Pinto Construction Services, Inc. (PINTO) to limit worker exposures to various heavy metals during the excavation of approximately 2000 tons of contaminated soil in various "hot spots" identified in the Alternative Analysis Report and Remedial Action Work Plan - Alternative S4.

The HASP addresses specific construction operations and potential worker exposures related to them at this particular project. It applies PINTO's overall worker safety and health programs and policies to the unique hazards of this project under the following basic principles:

- Basic health, safety, and environmental protection policies and programs are in place and enforced.
- Hazards have been identified and addressed at this site from the project specification and from PINTO's experience with these types of projects.
- A Competent Person has been given the authority and responsibility of monitoring compliance with the HASP at the site, identifying any additional hazards as the work proceeds, and making adjustments as necessary.

1.2 Site Description and History

The Site is an irregular shaped, 13-acre parcel located at 132 & 136 Dingens Street in Buffalo NY (See attached Alternative Analysis Report - Figure 2). It includes vegetated and paved areas and one remaining pump house building. An 85,000 square foot warehouse and manufacturing facility at the Site was destroyed by fire in 2010.

The ground surface slopes gently to the south, and surface water runoff from the Site is directed to numerous storm catch basins throughout the paved parking areas that discharge into the City of Buffalo's municipal sewer system. The Site has been built up to its current grade with various types of industrial fill. Soils on the Site are mapped by the Soil Conservation Service as "Urban Land" which can typically contain fill materials with little native soil conditions remaining.

Historically the Site was used for food storage and distribution dating back to 1966. Recently, one half of the warehouse has been used for warehousing/distribution of household/office trash containers, and the other half for recycling and refurbishing wood pallets. An ammonia refrigeration system located in the pump-house building in the northwest section provided cold storage for the food warehouse. The property has also been used as a fuel service station with numerous petroleum tanks, both above ground and below ground, dating back to the 1930s. The warehouse also had pad-mounted transformers outside. The Site is surrounded by commercial properties and is zoned as such.

1.3 Nature and Extent of Contamination

Investigations of the Site revealed that various types of industrial fill have been used to elevate the ground surface to its present grade. The fill includes randomly deposited heterogeneous materials, construction debris (bricks, concrete and wood), trash (rubbish, glass and paper), oil soaked materials and sludge. The fill is underlain by various types of natural soils (clay, silt, sand and gravel). The thickness of the fills ranged from four feet along the southeastern boundary to twenty feet along the northern boundary.

The bulk of the contamination appears to be limited to the industrial fill material. This includes several semi-volatile compounds, PCBs**,** and several heavy metals which are typically associated with the industrial type fill material making up the top four to twenty feet of the subsurface. The highest levels of soil contamination exceeding NYS DEC Soil Cleanup Objectives (SCOs) for restricted commercial and industrial use appear to be in vegetated areas along the northern property boundary and the eastern section. Elevated levels were also found in the old UST area just northeast of the warehouse foundation. Relatively lower levels of contamination were found in the paved areas surrounding the old warehouse foundation, and along the southeastern property boundary**.**

1.4 Primary Chemical Constituents of Concern

Problematic metals, those with the lowest personal exposure limits and significant potential health effects, primarily include lead and arsenic.

PCBs, Aroclor 1248 and 1254, were also found mostly in surficial soils. However, exceedances of the SCOs for PCBs occurred only in the northwest unpaved area of the Site.

1.5 Scope of Work

PINTO's major construction operations include:

1. Mobilize to site and establish work zones and equipment areas.
2. Construct truck wash station and equipment decon pad.
3. Verify utilities.
4. Excavate urban fill materials by "hot spot" areas, and load into trucks for disposal. Some material may be stockpiled for confirmatory sampling. All stockpiled material will be placed on and covered by polyethylene sheeting.
5. Barricade all open excavations, take confirmatory samples as necessary.
6. Backfill and compact with clean, off-site material as well as replacement of any asphalt areas.

2.0 REFERENCES

The procedures presented in this HASP have been developed using various regulatory, guidance, and contract documents. These include, but are not limited to:

- *Alternative Analysis Report and Remedial Action Work Plan: Iyer Environmental February 2015*
- *Occupational Safety and Health Administration (OSHA) Regulations: 29 CFR 1926 Construction Industry Standards*

- *Pinto Construction Services Corporate Health and Safety Manual.*

3.0 ROLES AND RESPONSIBILITIES

3.1 Statement of Policy

PINTO considers no phase of its operations or administration of greater importance than maintaining the highest occupational safety and health standards. This approach is both a moral obligation and a sound business practice. The Company places the responsibility for workplace safety and health at all levels of management and on each employee. To accomplish this goal it is therefore necessary to provide leadership and support in order to develop and maintain:

- A Company Safety and Health focus designed to prevent human suffering, pain, and economic loss from workplace accidents, injuries, or property damage.
- A Company commitment to provide insofar as possible a workplace free from recognized hazards by adherence to federal, state, and local safety and health regulations and standard industry safe work practices.
- A Company work force aware of the workplace hazards that confront them, and aware of their safety responsibility to themselves, their fellow workers, and to the Company.
- A Company attitude to encourage the incorporation of safety and health awareness at each of its work operations and to ensure the security, protection, and well being of personnel and property at all our work sites.
- The success of PINTO's Safety and Health program requires the combined efforts of management, supervision and employees. We want our operations to be among the safest in our industry. This can only be achieved if every person contributes to this team effort.

PINTO also understands that in order to assure a safe work environment, cooperation of its employees is necessary. Therefore, all employees are expected and are required to do the following:

- Properly wear all assigned personal protective equipment prior to entering the work area.
- Maintain all assigned personal protective equipment.
- Properly decontaminate upon exiting the work area.
- Pay attention during training.
- Immediately report to the site supervisor any unsafe acts/conditions/equipment.
- Ask for clarification on any health and safety issue not understood.

PINTO understands that health and safety compliance during construction operations depends on clear responsibilities and lines of authority. The following is a summary of the health and safety responsibilities and key personnel for this project.

3.2 Health and Safety Organizational Chart

An organizational chart, resumes and training certificates of key individuals is attached as Exhibit A.

3.3 Project Manager

The Project Manager is responsible for the overall Work including the organization, operation and safety for all fieldwork conducted at the Site. The specific health and safety related responsibilities of the Project Manager include, but are not limited to:

- Managing the administrative requirements of the HASP.
- Preparing and organizing all project work assignments.
- Coordinating between office and field personnel.

This individual will be: Mr. James Panepinto

3.4 Superintendent/Competent Person

The PINTO Superintendent/Competent Person is a full-time, on-site role. This is an individual that can recognize specific hazards, and has the authority to take actions to control them.

General Responsibilities

- Ensures all employees at the job site are properly trained.
- Enforces all applicable health and safety rules on-site.
- Approves all visitors.
- Ensures that all employees wear required protective work clothing (PWC) and personal protective equipment (PPE) and are trained in, and use, appropriate exposure control methods.
- Maintains project documentation, such as exposure assessment results, personal monitoring results, results of site safety inspections, medical surveillance results, etc.
- Records inspection findings and identify and correct deficiencies in a timely and consistent fashion.
- Maintains a copy of this site-specific plan at the jobsite.

Superintendent/Competent Person Authority

The PINTO Superintendent/Competent Person has the complete support of the Company's ownership and management, and further has the authority to ensure operations are carried out in accordance with compliance plans and governmental regulations, independent of production pressures.

This individual will be: Mr. Gary Catlin

3.5 Project Industrial Hygienist

An independent health and safety professional responsible for assisting the Project Manager and Superintendent/Competent Person in recognizing, evaluating, and controlling chemical and physical stressors to workers on the job. Qualifications for this role are: Certification by the American Board of Industrial Hygiene (ABIH) in Comprehensive Practice, as well as:

- Possess a minimum of five years experience in developing and implementing health and safety programs at civil construction sites.

- Have demonstrable experience in supervising professional and technical level personnel.
- Have demonstrable experience in developing worker exposure assessment programs and ambient air monitoring programs.
- Have working knowledge of State and Federal occupational safety and health regulations.

The Project Industrial Hygienist/Health and Safety Coordinator responsibilities include:

- Develop the HASP
- Conduct personal air monitoring of representative workers during initial construction operations
- Visit the site and assist the Project Manager and Supervisor/Competent Person as requested

This individual will be: Fred L. Smith Jr. CIH, CSP

4.0 TRAINING AND EDUCATION

4.1 Employee Training

4.1.1 Superintendent/Competent Person

A PINTO Project Superintendent/Competent Person must have a minimum of 5 years construction experience and formal training that includes, but is not limited to:

- OSHA 40-hour HAZWOPER, and current 8-hour refresher, as per 29 CFR 1910.120
- OSHA 30-hour Construction Safety Training
- Current First Aid / CPR training.
- An understanding of the Company's health and safety policies and procedures including hazard evaluation and risk assessment.
- Operation, inspection, and maintenance requirements of equipment used at the job-site.

To manage and/or supervise on-site activities involving excavations, a PINTO Superintendent/Competent Person must also have a minimum of five years of work experience as well as training that includes, but is not limited to:

- Contents of applicable OSHA standards in 29 CFR including, but not limited to: OSHA Subpart P 1926.650, 1926.651, 1926.652 (Excavations), 1910.134 (Respiratory Protection), 1926.21 (Safety Training and Education), and 1926.59 (Hazard Communication).
- The Company's health and safety policies and procedures including hazard evaluation and risk assessment.
- Selection and use of personal protective equipment (PPE), use and care of monitoring equipment, accident causation and prevention, and accident investigation.

4.1.2 Field Personnel

All field personnel will have the following training that includes, but is not limited to:

- OSHA 40-hour HAZWOPER, and current 8-hour refresher, as per 29 CFR 1910.120
- OSHA 10-hour Construction Safety Training
- Contents of applicable OSHA standards in 29 CFR including, but not limited to: OSHA Subpart P 1926.650, 1926.651, 1926.652 (Excavations), 1910.134 (Respiratory Protection), 1926.21 (Safety Training and Education), and 1926.59 (Hazard Communication).
- Operation, inspection, and maintenance requirements of equipment used at the job-site.

4.2 Site Specific Training

All personnel will receive an on-site Health and Safety Kick-Off Briefing given by the Superintendent/Competent Person prior to participating in onsite fieldwork.

In addition, all personnel, including any subcontractors, will participate in daily "tailgate" meetings conducted by the Superintendent/Competent Person with emphasis on the following:

- The proper observance of daily health and safety practices.
- Attention to health effects and hazards of substances known to be present onsite, including electrical hazards, equipment hazards, and other safety procedures.
- The need for vigilance in personal protection, and the importance of attention to proper use, fit, and care of personal protective equipment.
- The effectiveness and limitations of personal protective equipment.
- Site control, including work zones, access, and security.
- Recognition in oneself or in others of physical conditions requiring immediate medical attention, and application of simple first aid measures.
- Emergency procedures.

4.3 Hazard Communication

4.3.1 General

PINTO understands that the objective of hazard communication is to provide information to employees about chemicals in the workplace so that they may understand the hazards involved in working with them. This training teaches the basic skills of hazard recognition and reading and understanding Safety Data Sheets (SDS). The goal of the training is help employees use this information to reduce the risk of injury or illness to themselves. To be effective, a hazard communication program must be a dynamic process that includes continuous updating of information and training, program audits, quality control, and continued management commitment.

Safety Data Sheets for all hazardous chemicals used at the job site will be procured by and transmitted to the on-site Competent Person / Safety Officer. The SDS's will be bound separately available to all employees during each work shift. When a new hazardous chemical is obtained for use, each employee who could be exposed will be given the information and training as

described below, and a copy of the SDS for the chemical will be obtained and distributed to those who actually use the chemical in the work place.

4.3.2 Hazard Communication Training

The Superintendent/Competent Person will instruct employees in the specific hazards of the hazardous materials used on-site and will maintain the material safety data sheets for them. The information and training will include, but is not limited to, the following topics:

- The symptoms of overexposure to the chemicals.
- How to determine the hazardous presence or release of a chemical in the work place.
- Methods to reduce or prevent the exposure to hazardous chemicals, such as control procedures, work practices, or personal protective equipment.
- Procedures to follow in the event of an exposure to hazardous chemicals.
- The location of the log containing the SDS's.
- How to review an SDS and how to read the labels, which are required on the chemical containers.
- Proper disposal procedures of waste materials will be enforced.
- Labeling of waste containers and disposal of all hazardous materials by a licensed disposal facility is required.

4.3.3 Container Labeling

All chemical containers at the site will be clearly labeled by the Superintendent/Competent Person as to the contents, the hazards involved, and the name and address of the manufacturer. All secondary containers of hazardous chemicals will also be clearly labeled with the same information as the original container.

5.0 SITE HAZARD IDENTIFICATION

5.1 General

PINTO understands that identifying specific hazards on individual projects is the key to minimizing accidents and injuries. This Section identifies those hazards which are anticipated to be part of this type of construction activity, as well as those identified in other project specific information.

PINTO further understands that no Health and Safety Plan can identify every hazard and predict exactly when it will occur. Construction projects are dynamic situations. Successful safety and health planning also involves reacting to new, or unanticipated hazards as the project proceeds. This recognition of new, or changing hazards, and adapting to them is the fundamental role of the Superintendent/Competent Person.

The remainder of this Section discusses the major hazards PINTO has identified at the Site. It is not meant to be an all-inclusive listing of each and every hazard and every worker exposure situation. Rather, it utilizes PINTO's health and safety insights and construction experiences in developing a solid starting point to anticipate obvious problems, and provides mechanisms to recognize and evaluate the more subtle ones as the project proceeds.

5.2 Chemical Hazards

The major chemical hazards appear to be those associated with excavating and handling urban fill materials. These include inorganic heavy metals, the most prevalent and problematic of which appear to be arsenic and lead, as well as the organic PCBs.

An overview of exposure pathways, health effects, and exposure limits for each of these metals is attached as Exhibit B.

5.2.1 Chemical Hazard Exposure Pathways and Controls

The major exposure pathway for heavy metals associated with the excavation and load-out of urban fill materials is potential inhalation of finely divided dusts resulting from materials handling. A less significant, but important, exposure pathway is accidental ingestion by contaminated food, drink, etc.

The major exposure pathway for PCBs during excavation and load-out of urban fill materials in outdoor construction operations appears to be dermal contact with contaminated soils.

The classic engineering and work practice controls include dilution ventilation (as in working outdoors), limiting skin contact with protective clothing, practicing good hygiene to limit accidental ingestion, and avoiding dusting.

5.3 Physical Hazards

PINTO understands that the major causes of accidents and injuries on construction sites are related to: motor vehicle accidents, falls from heights; electrocution; struck by objects; and caught-in-between equipment or suspended loads. Other physical hazards at this particular site include a wide range of hazards including, but not limited to, those associated with the operation of heavy equipment such as excavators, etc.

5.3.1 Excavation Hazards

5.3.1.1 General

The remediation approach at the Site does not include excavating to depths greater than 4 feet. However, if any excavations are made at depths greater than 4 feet the following procedures will be followed.

5.3.1.2 Excavation Procedures

Working in excavations, or adjacent to excavations, may present serious risk to employees. An excavation is defined as any cut, cavity, trench or depression in the earth's surface formed by earth removal. A trench is defined as a narrow excavation made below the surface of the ground in which the depth is greater than the width.

PINTO understands the physical hazards of excavation and will employ the following procedures prior to and during excavating:

- Prior to opening any excavation or trench, the Superintendent/Competent Person will be responsible for contacting the Underground Facilities Protective Organization (UFPO) to check for any underground utilities in the area if necessary, and completing the Excavation Pre-planning Worksheet (Exhibit C).
- Excavations and trenches will be inspected and conditions recorded on the Daily Excavation Report (Exhibit C) by the Superintendent/Competent Person daily, and after every rainfall, to determine if they are safe.
- Ladders or steps will be provided in all trenches four (4) feet or more in depth. Ladders or steps will be located to require employees to move no more than 25 feet of lateral travel before having access or egress.
- Spoil dirt used as a barricade will be at least two (2) feet from the edge of excavation.
- All trenches and excavations will be properly barricaded to prevent persons from walking into them.
- All walkways or ramps crossing over excavations will be securely fastened and equipped with standard guardrails.
- Mechanical equipment will be used to place and remove material from excavation.

PINTO understands that the soils at the Site may have poor unconfined compressive strength and are classified as Type C at best.

5.3.2 Motor Vehicle Safety

PINTO understands that operating motor vehicles and motorized construction equipment including excavators, loaders, and heavy trucks present hazards to operators and nearby construction personnel.

Motor vehicles must have the following:

- Seatbelts and anchorages meeting Federal Motor Vehicles Standards
- Service brake system, emergency brakes and parking brakes
- At least two headlights and two taillights where visibility requires additional light
- Brake lights in operable condition
- Safety glass or equivalent distortion-free glass in the cab
- Unbroken and un-cracked cab glass and powered wipers

Excavators, loaders, dump bodies and similar equipment will be fully lowered or blocked when not in use. When equipment is parked, parking brakes will be set. Equipment parked on an incline will also have the wheels chocked. Equipment that is left unattended at night adjacent to an active highway or next to a construction area where work is in progress will be equipped with lights or reflectors, or have barricades equipped with light or reflectors to identify the location of the equipment.

Employees are not permitted to ride in or on construction vehicles and equipment except in seats or other areas specifically designed to accommodate passengers and equipped with seat belts.

Spotters will be utilized during on-site operations when heavy equipment and/or truck traffic poses a hazard to other on-site employees or equipment.

5.3.3 Electrical Safety

General electrical safety requirements to be followed on site include:

- Electrical wiring and equipment will be a type listed by UL, Factory Mutual Engineering Corporation (FM), or other recognized testing or listing agency.
- Portable and semi portable tools and equipment will be grounded by a multi conductor cord having an identified (type "S") grounding conductor and a multi-contact polarized plug-in receptacle.
- Tools protected by an approved system of double insulation, or its equivalent, need not be grounded. Double insulated tools will be distinctly marked and listed by UL or FM.
- Live parts of wiring or equipment will be guarded to prevent persons or objects from touching them.
- Electric wire or flexible cord passing through work areas will be covered or elevated to protect it from damage by foot traffic, vehicles, sharp corners, projections, or pinching.
- All circuits will be protected from overload.
- Temporary power lines, switch boxes, receptacle boxes, metal cabinets, and enclosures around equipment will be marked to indicate the maximum operating voltage.
- Plugs and receptacles will be kept out of water unless of an approved submersible construction.
- All extension outlets will be equipped with ground fault circuit interrupters (GFCI).
- Attachment plugs or other connectors will be equipped with a cord grip and be constructed to endure rough treatment.
- Extension cords or cables will be inspected prior to each use, and replaced if worn or damaged. Cords and cables will not be fastened with staples, hung from nails, or suspended by bare wire.

Lockout and Tagging of Circuits - PINTO understands that work on energized circuits is not within its scope and is to be avoided.

5.3.4 Noise

PINTO requires all employees with potential exposure to excessive noise (levels in excess of 85 dBA or equivalent over an 8-hour period) to use hearing protective devices, and undergo annual audiometric testing.

Work tasks with exposures above 85dBA include, but are not limited to, equipment operation, work around large generators, compressors, etc. Generally, work in areas where noise interferes with worker communication can exceed 85 dBA.

5.4.5 Miscellaneous Hazards

Cuts and Lacerations - Field activities that involve excavation, and waste relocation, etc. usually involve contact with various types of machinery. A first aid kit approved by the American Red Cross will be present and available during all field activities to take care of cuts and bruises as well as other minor injuries.

Lifting Hazards - Improper lifting by workers is one of the leading causes of occupational injuries and construction workers are often required to lift heavy objects. Therefore, members of the work crew will be made aware of the proper methods of lifting heavy objects using the legs. Workers will be cautioned against lifting objects too heavy for one person.

Hazards Resulting from Buried Objects - Buried drums, cylinders, or tanks encountered during excavation activities can pose a health/safety and environmental hazard if penetrated. If such hazards are encountered, intrusive activities will cease immediately. The situation will be monitored and the Superintendent/Competent Person who will make a determination whether to continue, or discontinue excavation in close proximity to where the buried object was encountered.

All injuries will be reported to the Superintendent/Competent Person.

6.0 PERSONAL AIR MONITORING

6.1 General

PINTO understands that airborne contaminants can present a significant health and safety threat to workers. Therefore, the identification of these types of contaminants, and measuring representative exposures by personal air monitoring, is essential.

Sample collection and analysis will be accomplished in accordance with the National Institute for Occupational Safety and Health (NIOSH) Method 7300. Personal sample results will be compared to current occupational safety and health exposure limits by the Project Industrial Hygienist.

6.2 Contaminant Identification

The major airborne exposures to workers are expected to be those associated with the heavy metals identified in the urban fill. The most problematic of these appear to be arsenic and lead.

6.3 Monitoring Schedule

PINTO will conduct personal air monitoring at the start of excavation operations to document exposures to arsenic and lead. Samples will be collected in accordance with NIOSH Methods under the direction of the Project Industrial Hygienist.

Based on several past exposure assessments during handling of fill materials, PINTO does not expect exposures to be above current OSHA Action Levels for these metals.

7.0 PERSONAL PROTECTIVE EQUIPMENT

7.1 General

PINTO understands that the purpose of personal protective equipment (PPE) is to shield or isolate individuals from the chemical, physical, and biologic hazards that may be encountered on-site.

However, no single combination of protective clothing and equipment is capable of protecting against all hazards. Therefore, PPE should be used in conjunction with (not in place of) engineering controls and safe work practices.

PINTO supplies Personnel Protective Equipment (PPE) to its employees under the following basic guidelines:

- Personnel are protected conservatively until exposure assessments are made to determine representative worker exposures.
- Protective equipment is provided in conjunction with air sampling so that adjustments (upgrading or downgrading the level of protection) can be made based on changing employee exposures, or work tasks.
- Protective equipment cannot be supplied to employees that are medically unfit and without the employee understanding the equipment's operation and limitations.
- Protective equipment is not a substitute for good engineering controls and work practices.

7.1.1 Hard Hats

All workers will be required to wear non conductive hard hats meeting the requirements of ANSI Z89.1 at all times when working within the Contract Limits.

7.1.2 Eye and Face Protection

All workers will be required to wear industrial safety glasses at all times when working within the Contract Limits.

7.1.3 Reflectorized Apparel

Reflective vests / high visibility clothing are to be worn on site at all times within the Contract Limits.

- Vests and high visibility apparel will be orange, yellow, or strong yellow-green in color or fluorescent versions of these colors (flaggers will wear orange) and will include retroreflective material, white or silver in color, visible for a minimum of 300 m in all directions under headlight illumination.
- Retroreflective clothing will be designed to clearly identify the wearer as a person and be visible through a full range of body motions.
- Retroreflective clothing and vests will be closed front and rear. Open front vests will not be permitted.
- All reflective clothing and vests will be in clean condition or replaced as necessary to maintain visibility and reflectivity.

7.2 PPE Levels of Protection and Components

The following items constitute minimum protective clothing and equipment ensembles to be used during this project:

Level D

- Work Clothing (cotton coverall), as dictated by the weather
- Safety (steel toe/shank) shoes
- Hard hat
- Safety glasses, goggles, or face-shield
- Hearing Protection (where required)
- Gloves

Modified Level D

- Level D PPE and:
- Washable cotton, or disposable, one-piece, full-body coveralls constructed of spun bonded olefin or polypropylene fabrics (e.g., Tyvek, or equivalent).
- Washable rubber boots, or disposable boot covers.

Level C

- Modified Level D PPE and:
- Half-face piece, air purifying respirator equipped with NIOSH approved combination organic vapor and P-100 filter cartridges.

7.3 PPE Upgrade/Downgrade Action Levels

The analytical data and field experience indicates that work can be conducted in level D protection. Changing work conditions and/or concentrations of contaminants identified by the ambient air quality monitoring personnel may require upgrading or downgrading of personal protective equipment by the Superintendent/Competent Person in accordance with the action levels in Table 8-1 below:

TABLE 8-1

Item	Exposure Limits	Response Actions
Metals (arsenic and lead)	Arsenic: $\leq$ 10.0 ug/m^3 Lead: $\leq$ 30 ug/m^3	Modified Level D protection. Respirators available. Repeat monitoring if work operations change significantly
	Arsenic: $\geq$ 1.0 mg/m^3 Lead: $\geq$ 50 ug/m^3	Level C protection

Site activities involving contact with the urban fill materials will be conducted in Modified Level D protection. Changing work conditions and/or concentrations of contaminants may require upgrading or downgrading of personal protective equipment in consultation with the Project Industrial Hygienist.

7.4 Respiratory Protection

PINTO's Corporate Respiratory Protection Program contains overall instructions for the selection, use, and care of respiratory protective equipment (respirators), including both air purifying (e.g., chemical cartridge, gas mask, dust/mist) and air-supplied self-contained breathing apparatus (SCBA) and other airline respirators.

The Program delegates responsibilities and applies to all employees who are assigned respirators. The Program will be overseen and administered by the Superintendent/Competent Person. Elements of the Program are presented below.

7.4.1 Respiratory Equipment Training

All workers required to wear respirators will be trained in the proper use, cleaning, maintenance and storage of respirators, as well as filter replacement and proper fitting (functional fit test).

7.4.2 Respirator Fit Testing

All workers required to wear negative pressure respirators will be quantitatively fit-tested at the time of initial fitting, and annually thereafter. Respirator fit test and training records will be maintained at the project site.

A good facial seal is essential with all tight-fitting face piece respirators to ensure proper fit. Mustaches and goatees do not generally interfere with the facial seal. However, hair on facial sealing surfaces (beards, long sideburns, etc.) will not be allowed on personnel using a respirator with a tight-fitting face piece.

7.4.3 Respirator Cleaning, Maintenance, Storage

Respirators will be cleaned by the wearer at the end of the workday. No sharing of respirators will be allowed. Baby wipe type towellettes will be available for daily cleaning. Extra filters will be made available and replaced whenever breathing resistance is noticed by the user. The Superintendent/Competent Person will:

- Establish and maintain a respirator wash area.
- Provide instructions on proper respirator cleaning.
- Assure respirators are inspected daily for cleanliness.

8.0 DECONTAMINATION PROCEDURES

8.1 General

PINTO understands that an important consideration in limiting the potential exposure to off-site receptors is proper decontamination.

8.2 Decontamination of Personnel

Decontamination of personnel will be monitored by the Superintendent/Competent Person. The general decontamination sequence for activities conducted in Level D, or Modified Level D are as follows:

1. Rinse outer gloves and boots,
2. Remove disposable coveralls, or remove gross contamination from washable coveralls,
3. Remove and rinse goggles and hard hat

Personnel decontamination equipment and supplies consist of, but are not limited to, the following:

- Potable water
- Washtubs
- Mild detergent
- Brushes, hand sprayers
- Plastic sheeting
- 5-gallon buckets with lids
- Garbage bags.

8.3 Decontamination of Equipment

PINTO understands that decontamination means the removal of hazardous substances from equipment to the extent necessary to preclude the transfer of contaminated materials off-site. Therefore, large equipment (vehicles, etc.) will be decontaminated in a wash area.

9.0 MEDICAL SURVEILLANCE

9.1 General

PINTO understands that the purpose of medical surveillance is to identify conditions that could present an increased risk of adverse health effects to workers as they relate to the tasks they perform.

The following outlines the annual physical examinations biological monitoring provided by PINTO.

9.2 Annual Physical Exam and Biological Monitoring

PINTO conducts the following medical surveillance for each of its employees annually:

DOT physical examination
Respirator Fit Test (Quantitative - "Portacount")
Respirator Clearance Exam
Pulmonary Function Test
Drug Screen - 9 Panel
Comprehensive Metabolic Panel
Complete Blood Count (CBC)
Blood lead & ZPP

10.0 EMERGENCY RESPONSE AND ACCIDENT PREVENTION

10.1 General

The most likely incidents for which emergency measures might be required during construction operations are:

- A heavy equipment-related accident, or other accident resulting in personal injury
- Slipping, tripping, or falling resulting in personal injury
- An exposure-related worker illness

General emergency response procedures include, but are not limited to:

- Non-emergency personnel will be removed from the area until any hazard associated with the emergency has been contained and controlled.
- Following containment and control of the emergency situation, the Superintendent/Competent Person will assess the situation to determine if contaminated materials generated by the emergency response personnel have been collected and disposed of properly on the premises.
- The Superintendent/Competent Person will check that emergency equipment is restored to full operational status by the emergency response personnel.
- The Superintendent/Competent Person will investigate the cause of the emergency and will take steps to prevent the reoccurrence of such an emergency.

10.2 First Aid

First aid for minor personal injuries will be administered by the Superintendent/Competent Person. If a site worker should require further treatment, an ambulance will be summoned for transportation to the medical facility/hospital.

A first aid kit (ANSI 308.1-1978) will be maintained by the Superintendent/Competent Person. All personnel designated to administer first aid will have received a minimum of eight hours training in first aid and CPR, and be certified by the American Red Cross.

Suitable facilities for quick drenching or flushing of the eyes will be provided and maintained by the Competent Person near the work area for immediate use.

10.3 Emergency Assistance

The name, telephone number, and location of police, fire, and other agencies whose services might be required, or from whom information might be needed, will be maintained by the Superintendent/Competent Person and posted at the Site. A listing is attached at the end of this Section.

If a head, neck, back, or spinal injury is suspected, or the person is unconscious for any reason, the injured person will not be moved. An ambulance will be summoned to the site and directed to the injured person.

10.4 Route to Hospital

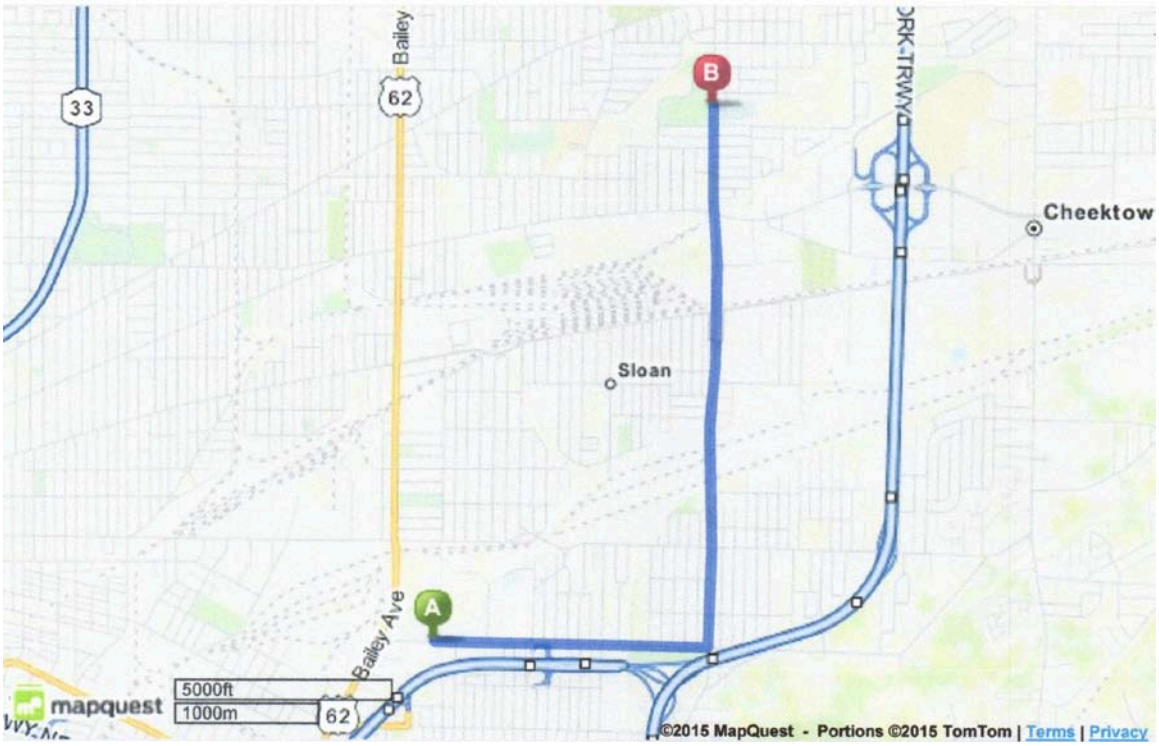
PINTO has identified the following emergency medical provider:

ST. JOSEPH'S HOSPITAL
2605 Harlem Road
Buffalo, NY 14225
716 891-2445 (Emergency Services)

1. Start out going east on Dingens St toward Weiss St. - 1.3 miles
2. Turn left onto Harlem Rd / NY-240. - 2.6 miles
3. 2605 HARLEM RD is on the right.

Total time: about 9 minutes
Total Distance: 3.9 miles

otal Travel Estimate: **3.88 miles - about 8 minutes**



10.5 Accident Report

All accidents, however insignificant, will be reported to the Superintendent/Competent Person. An example accident report is attached at the end of this Section.

10.6 Site Record Keeping

The OSHA Job Safety & Health protection poster will be posted, and copies of 29 CFR 1910.120 and 40 CFR 311 will be maintained at the site.

PINTO understands that there must be a mechanism to inform employees of the procedures used to report health and safety problems and concerns. Therefore, the Superintendent/Competent Person will notify employees at the project kick-off briefing that health and safety complaints can be reported to him verbally, recorded in the field notebook, and addressed.

EMERGENCY CONTACTS

In the event of any situation or unplanned occurrence requiring assistance, the appropriate contact(s) will be made by the Competent Person / Safety Officer from the list below. This emergency contacts list will be in an easily accessible location at the Site.

Emergency Contacts	Phone Number
NYSDEC Jasper Walia	716 851-7220
PINTO CONSTRUCTION SERVICES:	
Main Office	716 825-6666
James Panepinto - Project Manager	716 570-0371 (Cell)
Gary Catlin - Superintendent/Competent Person	716 662-0160 (Cell)
Fire / Police Department	911
ST. Joseph's Hospital (Emergency Services)	716 891-2445
Poison Control Center	800 888-7655
Pollution Toxic Chemical	800 424-8802
UFPO	800 962-7962
Utility Emergencies (Electric)	800 637-2770
Utility Emergencies (Gas)	800 627-6466
NYSDOH	716 847-4385
NYSDEC	716 851-7220

PINTO CONSTRUCTION SERVICES, INC.
REPORT OF ACCIDENT/INJURY

Project_____ Date of Occurrence_____

Location _____

_____

Type of Occurrence: (check all that Apply)

☐ Disabling Injury ☐ Other Injury
☐ Property Damage ☐ Equip. Failure
☐ Chemical Exposure ☐ Fire
☐ Explosion ☐ Vehicle Accident
☐ Other
(explain)_____

_____

Witnesses to Accident/Injury:

_____ _____

Injuries:

Name of Injured _____

What was being done at the time of the accident/injury?

_____

_____

What corrective actions will be taken to prevent recurrence? _____

_____

SIGNATURES

Health and Safety Officer _____ Date _____
Site Superintendent _____ Date _____
Reviewer _____ Date _____

Comments by reviewer _____
_____
_____

FIGURES

132 DINGENS STREET SITE, BUFFALO, NY

AERIAL PHOTO WITH PROPERTY BOUNDARY

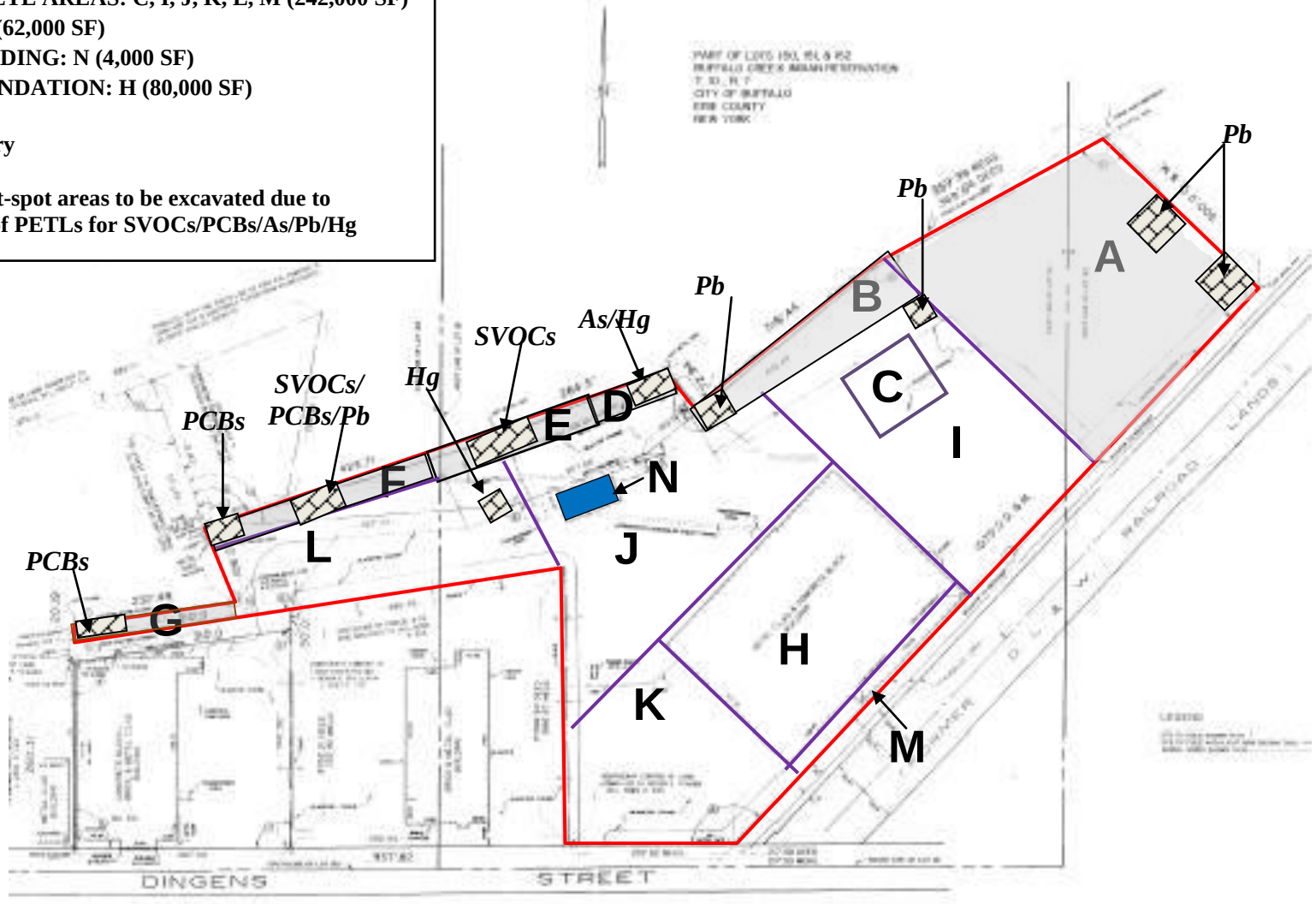
FIGURE 2

IEG

NOTE:
VEGETATED AREAS: A, B, D, E, F, G (187,000 SF)
ASPHALT/CONCRETE AREAS: C, I, J, K, L, M (242,000 SF)
GRAVEL AREA: L (62,000 SF)
PUMPHOUSE BUILDING: N (4,000 SF)
WAREHOUSE FOUNDATION: H (80,000 SF)

Site Boundary

Proposed hot-spot areas to be excavated due to exceedance of PETLs for SVOCs/PCBs/As/Pb/Hg



132 DINGENS STREET, BUFFALO, NY
HOT SPOT EXCAVATION AREAS & SURFACE FEATURES

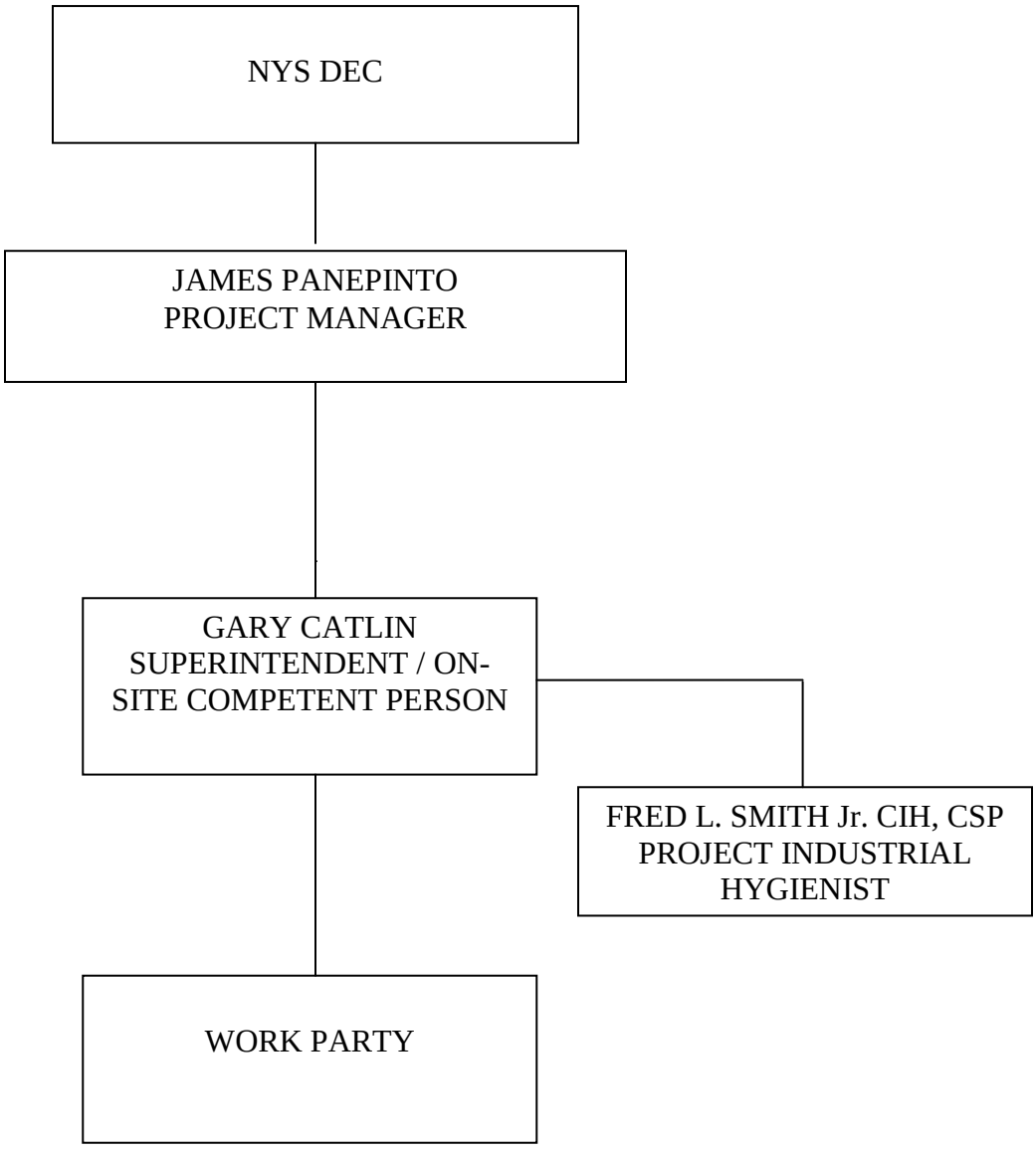
FIGURE 5

IEG

EXHIBIT No. A

ORGANIZATIONAL CHART & TRAINING CERTIFICATES

HEALTH & SAFETY ORGANIZATIONAL CHART
132 DINGENS STREET
BUFFALO, NY



Gary Catlin
Superintendent
41 Years Experience

PINTO CONSTRUCTION SERVICES, INC.

Education & Training
Tri-State University, Angola, IN, B.S., Civil Engineering, 1966
SHECN
40-hour Haz
80-hour Hazwoper
PCS Safety Awareness
PCS Corporate Access System
Fall Protection
Radiation Worker I & II
Excavation Safety
OSHA 10-hour General Safety
OSHA 30-hour
OSHA Physical
Fork Lift Training
First Aid & CPR
Confined Space Entry and Rescue
Electrical Safety
Lead and Silica Awareness
Corp. of Engineers Safety Training
DuPont Safely Training
AES Somerset Orientation Training
FMC Safety Orientation

Experience Summary
Mr. Catlin joined Pinto Construction Services in 2007, offering 41 years of construction experience. Prior to joining Pinto, 30 years of this service belonged mainly in the Civil Field, with concentration in the hazardous waste field with construction of hazardous waste landfills, non-hazardous waste landfills and hazardous remediation projects. Overlapping this experience, Mr. Catlin also had 15 years experience in management of personnel, estimating and problem solving as developed while co-owner of SLC Consultants/Constructors from 1976 to 1991 and owner of TRI-C Inc. from 1988-2007. While working for the New York State Department of Transportation, Mr. Catlin served as a Survey Party Chief and Soils Engineer dealing with soils analysis and compaction testing, material gradation testing and field inspection. He became acting engineer-in-charge of a $20 million construction project on a major, federally funded highway. Some of Mr. Catlin's work includes:

Project History
2008 — Chemical Waste Management, South ramp extension, Balmer Rd. facility, Somerset, NY.
— U.S. Federal Courthouse, Buffalo, NY.
2007 — AES Somerset, FMC, coal basin liner repair, Niagara Falls, NY.
— Entact Services, slope repair, Middleport, NY.
1988 to 1991 — Reviewed and evaluated design drawings and specifications, interviewed and selected contractors, and supervised and directed field construction personnel in slurry wall construction, utility relocation, hazardous material excavation and installation of monitoring and extraction walls, Williamsville and Niagara Falls, NY.
1976 to 1991 — Served as project manager for jobs up to $4.3 million each and $9.0 million annually. Was responsible for all phases of estimating and bid preparation in landfill construction, landfill closure, highway construction, residential development, HDPE liners and commercial site-work and development, Lockport, NY.

Pinto Construction Services, Inc.
1 Babcock Street
Buffalo, NY 14210
www.pintoheavyconst.com

Phone: 716-825-6666
Fax: 716-825-6773
Email: gcatlin@pintoheavyconst.com

PROJECT HISTORY CONT.

1972 to 1977 — Managed projects, bid preparation, estimating, equipment specification, customer relations and personnel management. Managed construction of first five landfills at Chem-Waste Management Facility in Model City, NY.

1969 — Was responsible for soils analysis and compaction tests, material gradation tests, and supervision of five to eight inspectors on MYS bridge construction projects, Bighamton, NY

1966 to 1969 — Served as test engineer for Bell Aerospace, Niagara Falls, NY.

OSHA Occupational Safety and Health Administration

12-600532676

This card acknowledges that the recipient has successfully completed a 30-hour Occupational Safety and Health Training Course in

Construction Safety and Health

Gary Catlin

Sam Leone

(Trainer name – print or type)

02/14/2013

(Course end date)

Fred L. Smith Jr. CIH, CSP

PO Box 2204
Niagara University, NY 14109

Telephone (716) 830-5350
e-mail: flsmithjr@usa.net

BACKGROUND SUMMARY

- Founded an industrial hygiene analytical/consulting firm. Sold this firm to a British multinational engineering/life sciences company and operated it, as well as an environmental analytical services center. Efforts included full Profit and Loss responsibility, business planning, capital budgeting, human resources and marketing.

- Chief environmental scientist in the Buffalo office of a nation-wide environmental engineering firm. Responsible for a group of environmental scientists, chemists, biologists, regulatory specialists and field personnel involved in hazardous waste and landfill closure RI/FS projects including Quality Assurance Project Plans, Health Risk Assessments, Superfund/RCRA chemical data audits, and field sampling design.

- Provided environmental science and industrial hygiene professional services for construction projects totaling over 100 million dollars in the past five years. Includes: conducting worker exposure assessments, developing environmental compliance and worker protection plans, as well as construction period services.

PROFESSIONAL REGISTRATIONS

Certified Industrial Hygienist (*CIH*) No. 4785 - Comprehensive Practice
Certified Safety Professional (*CSP*) No. 10740 - Comprehensive Practice

EXPERIENCE

9/93 - present

Independent environmental, industrial hygiene, and safety consultant. Practice includes regulatory compliance (OSHA, EPA), and classical industrial hygiene including: worker exposure assessments, construction hazard analysis, noise, ventilation, and training. Also involved in current health and safety issues of: lead paint removal from complex steel structures, hazardous waste investigation and remediation, contaminant fate and transport modeling, and health risk assessment.

9/91 - 9/93 Environmental Manager - THE SEAR-BROWN GROUP
755 Center Street, Lewiston NY 14092

Responsibilities include environmental, industrial hygiene, and safety business development and project management for this thirty year old Rochester NY headquartered A/E firm. Efforts here include establishing the first Sear-Brown office in Western New York with a fee base of 350K in the first year.

12/90 - 9/91 Chief Environmental Scientist - URS CONSULTANTS
282 Delaware Avenue, Buffalo NY 14202

Responsibilities in this Buffalo office of a New Jersey-based A/E firm included management of a group of environmental scientists, chemists, biologists, regulatory specialists, and field personnel involved in hazardous waste RI/FS projects including Field Sampling, Health and Safety, & Quality Assurance Project Plans, Health Risk Assessments, and Superfund/RCRA chemical data audits.

12/83 - 8/90 President - ASTECO, INC.
PO BOX 2204 Niagara University, NY 14109

Responsibilities included the founding, management and operation of this AIHA accredited industrial hygiene consultation/analytical firm with sales of approximately 2 million in FY 1990, and 5 million over three years. ASTECO's professional staff included certified industrial hygienists, professional engineers, geologists, microscopists, and construction inspectors. Sold this firm to HUNTINGDON INTERNATIONAL HOLDINGS, plc in 1986.

Also served as Vice President - EMPIRE SOILS INVESTIGATIONS, INC. - Division of Huntingdon International Holdings, plc. Full P/L and business development responsibility of an analytical service center with 65 employees (BS through Ph.D. chemists) and combined sales averaging 350K per month. Laboratory operations included: Environmental with GS, GS/MS, ICAP, AA and wet chemistry capabilities; Agrichemical pesticide residue testing with GC, HPLC, TLC capabilities; and Geotechnical testing with contaminated soils capability.

6/76 - 12/83 Development Engineer - UNION CARBIDE CORPORATION
PO Box 579 Niagara Falls, NY 14302

Responsible for operating a nationwide asbestos product stewardship program for the Metals Division involving the collection and analysis of asbestiform minerals at customer and end user locations across the U.S. Union Carbide was involved in mining and hydraulically beneficiating approximately 20,000 tons/year of asbestos ore into a high surface area fiber filler material. End users included chemical producers, coal mining operations, oil well drilling fluids, construction materials, high performance fluid systems, and consumer products. Exposure assessments and regulatory compliance audits were conducted for customers to ensure the Company's asbestos products were being used according to state and federal regulations as well as professional practice standards.

EDUCATION

Syracuse University: BA Arts & Sciences
State University of NY - Buffalo: BS Industrial Hygiene

EXHIBIT No. B

POTENTIAL CONTAMINANTS OF CONCERN

ATSDR
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

ARSENIC

CAS # 7440-38-2

Division of Toxicology and Environmental Medicine ToxFAQs™ **August 2007**

This fact sheet answers the most frequently asked health questions (FAQs) about arsenic. For more information, call the ATSDR Information Center at 1-800-232-4636. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It is important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Exposure to higher than average levels of arsenic occur mostly in the workplace, near hazardous waste sites, or in areas with high natural levels. At high levels, inorganic arsenic can cause death. Exposure to lower levels for a long time can cause a discoloration of the skin and the appearance of small corns or warts. Arsenic has been found in at least 1,149 of the 1,684 National Priority List sites identified by the Environmental Protection Agency (EPA).

What is arsenic?

Arsenic is a naturally occurring element widely distributed in the earth's crust. In the environment, arsenic is combined with oxygen, chlorine, and sulfur to form inorganic arsenic compounds. Arsenic in animals and plants combines with carbon and hydrogen to form organic arsenic compounds.

Inorganic arsenic compounds are mainly used to preserve wood. Copper chromated arsenate (CCA) is used to make "pressure-treated" lumber. CCA is no longer used in the U.S. for residential uses; it is still used in industrial applications. Organic arsenic compounds are used as pesticides, primarily on cotton fields and orchards.

What happens to arsenic when it enters the environment?

❑ Arsenic occurs naturally in soil and minerals and may enter the air, water, and land from wind-blown dust and may get into water from runoff and leaching.
❑ Arsenic cannot be destroyed in the environment. It can only change its form.
❑ Rain and snow remove arsenic dust particles from the air.
❑ Many common arsenic compounds can dissolve in water. Most of the arsenic in water will ultimately end up in soil or sediment.
❑ Fish and shellfish can accumulate arsenic; most of this arsenic is in an organic form called arsenobetaine that is much less harmful.

How might I be exposed to arsenic?

❑ Ingesting small amounts present in your food and water or breathing air containing arsenic.
❑ Breathing sawdust or burning smoke from wood treated with arsenic.
❑ Living in areas with unusually high natural levels of arsenic in rock.
❑ Working in a job that involves arsenic production or use, such as copper or lead smelting, wood treating, or pesticide application.

How can arsenic affect my health?

Breathing high levels of inorganic arsenic can give you a sore throat or irritated lungs.

Ingesting very high levels of arsenic can result in death. Exposure to lower levels can cause nausea and vomiting, decreased production of red and white blood cells, abnormal heart rhythm, damage to blood vessels, and a sensation of "pins and needles" in hands and feet.

Ingesting or breathing low levels of inorganic arsenic for a long time can cause a darkening of the skin and the appearance of small "corns" or "warts" on the palms, soles, and torso.

Skin contact with inorganic arsenic may cause redness and swelling.

ToxFAQs™ Internet address is http://www.atsdr.cdc.gov/toxfaq.html

Almost nothing is known regarding health effects of organic arsenic compounds in humans. Studies in animals show that some simple organic arsenic compounds are less toxic than inorganic forms. Ingestion of methyl and dimethyl compounds can cause diarrhea and damage to the kidneys

How likely is arsenic to cause cancer?

Several studies have shown that ingestion of inorganic arsenic can increase the risk of skin cancer and cancer in the liver, bladder, and lungs. Inhalation of inorganic arsenic can cause increased risk of lung cancer. The Department of Health and Human Services (DHHS) and the EPA have determined that inorganic arsenic is a known human carcinogen. The International Agency for Research on Cancer (IARC) has determined that inorganic arsenic is carcinogenic to humans.

How can arsenic affect children?

There is some evidence that long-term exposure to arsenic in children may result in lower IQ scores. There is also some evidence that exposure to arsenic in the womb and early childhood may increase mortality in young adults.

There is some evidence that inhaled or ingested arsenic can injure pregnant women or their unborn babies, although the studies are not definitive. Studies in animals show that large doses of arsenic that cause illness in pregnant females, can also cause low birth weight, fetal malformations, and even fetal death. Arsenic can cross the placenta and has been found in fetal tissues. Arsenic is found at low levels in breast milk.

How can families reduce the risks of exposure to arsenic?

❑ If you use arsenic-treated wood in home projects, you should wear dust masks, gloves, and protective clothing to decrease exposure to sawdust.

❑ If you live in an area with high levels of arsenic in water or soil, you should use cleaner sources of water and limit contact with soil.

❑ If you work in a job that may expose you to arsenic, be aware that you may carry arsenic home on your clothing, skin, hair, or tools. Be sure to shower and change clothes before going home.

Is there a medical test to determine whether I've been exposed to arsenic?

There are tests available to measure arsenic in your blood, urine, hair, and fingernails. The urine test is the most reliable test for arsenic exposure within the last few days. Tests on hair and fingernails can measure exposure to high levels of arsenic over the past 6-12 months. These tests can determine if you have been exposed to above-average levels of arsenic. They cannot predict whether the arsenic levels in your body will affect your health.

Has the federal government made recommendations to protect human health?

The EPA has set limits on the amount of arsenic that industrial sources can release to the environment and has restricted or cancelled many of the uses of arsenic in pesticides. EPA has set a limit of 0.01 parts per million (ppm) for arsenic in drinking water.

The Occupational Safety and Health Administration (OSHA) has set a permissible exposure limit (PEL) of 10 micrograms of arsenic per cubic meter of workplace air (10 $\mu g/m^3$) for 8 hour shifts and 40 hour work weeks.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2007. Toxicological Profile for Arsenic (Update). Atlanta, GA: U.S. Department of Public Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology and Environmental Medicine, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-800-232-4636, FAX: 770-488-4178. ToxFAQs Internet address via WWW is http://www.atsdr.cdc.gov/toxfaq.html. ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

ATSDR
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

LEAD

CAS # 7439-92-1

Division of Toxicology and Environmental Medicine ToxFAQs™ **August 2007**

This fact sheet answers the most frequently asked health questions (FAQs) about lead. For more information, call the ATSDR Information Center at 1-800-232-4636. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It is important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Exposure to lead can happen from breathing workplace air or dust, eating contaminated foods, or drinking contaminated water. Children can be exposed from eating lead-based paint chips or playing in contaminated soil. Lead can damage the nervous system, kidneys, and reproductive system. Lead has been found in at least 1,272 of the 1,684 National Priority List sites identified by the Environmental Protection Agency (EPA).

What is lead?

Lead is a naturally occurring bluish-gray metal found in small amounts in the earth's crust. Lead can be found in all parts of our environment. Much of it comes from human activities including burning fossil fuels, mining, and manufacturing.

Lead has many different uses. It is used in the production of batteries, ammunition, metal products (solder and pipes), and devices to shield X-rays. Because of health concerns, lead from paints and ceramic products, caulking, and pipe solder has been dramatically reduced in recent years. The use of lead as an additive to gasoline was banned in 1996 in the United States.

What happens to lead when it enters the environment?

- ❏ Lead itself does not break down, but lead compounds are changed by sunlight, air, and water.
- ❏ When lead is released to the air, it may travel long distances before settling to the ground.
- ❏ Once lead falls onto soil, it usually sticks to soil particles.
- ❏ Movement of lead from soil into groundwater will depend on the type of lead compound and the characteristics of the soil.

How might I be exposed to lead?

- ❏ Eating food or drinking water that contains lead. Water pipes in some older homes may contain lead solder. Lead can leach out into the water.
- ❏ Spending time in areas where lead-based paints have been used and are deteriorating. Deteriorating lead paint can contribute to lead dust.
- ❏ Working in a job where lead is used or engaging in certain hobbies in which lead is used, such as making stained glass.
- ❏ Using health-care products or folk remedies that contain lead.

How can lead affect my health?

The effects of lead are the same whether it enters the body through breathing or swallowing. Lead can affect almost every organ and system in your body. The main target for lead toxicity is the nervous system, both in adults and children. Long-term exposure of adults can result in decreased performance in some tests that measure functions of the nervous system. It may also cause weakness in fingers, wrists, or ankles. Lead exposure also causes small increases in blood pressure, particularly in middle-aged and older people and can cause anemia. Exposure to high lead levels can severely damage the brain and kidneys in adults or children and ultimately cause death. In pregnant women, high levels of exposure to lead may cause miscarriage. High-level exposure in men can damage the organs responsible for sperm production.

How likely is lead to cause cancer?

We have no conclusive proof that lead causes cancer in humans. Kidney tumors have developed in rats and mice that had been given large doses of some kind of lead compounds. The Department of Health and Human Services

(DHHS) has determined that lead and lead compounds are reasonably anticipated to be human carcinogens and the EPA has determined that lead is a probable human carcinogen. The International Agency for Research on Cancer (IARC) has determined that inorganic lead is probably carcinogenic to humans and that there is insufficient information to determine whether organic lead compounds will cause cancer in humans.

How can lead affect children?

Small children can be exposed by eating lead-based paint chips, chewing on objects painted with lead-based paint, or swallowing house dust or soil that contains lead.

Children are more vulnerable to lead poisoning than adults. A child who swallows large amounts of lead may develop blood anemia, severe stomachache, muscle weakness, and brain damage. If a child swallows smaller amounts of lead, much less severe effects on blood and brain function may occur. Even at much lower levels of exposure, lead can affect a child's mental and physical growth.

Exposure to lead is more dangerous for young and unborn children. Unborn children can be exposed to lead through their mothers. Harmful effects include premature births, smaller babies, decreased mental ability in the infant, learning difficulties, and reduced growth in young children. These effects are more common if the mother or baby was exposed to high levels of lead. Some of these effects may persist beyond childhood.

How can families reduce the risks of exposure to lead?

❑ Avoid exposure to sources of lead.

❑ Do not allow children to chew or mouth surfaces that may have been painted with lead-based paint.

❑ If you have a water lead problem, run or flush water that has been standing overnight before drinking or cooking with it.

❑ Some types of paints and pigments that are used as make-up or hair coloring contain lead. Keep these kinds of products away from children

❑ If your home contains lead-based paint or you live in an area contaminated with lead, wash children's hands and faces often to remove lead dusts and soil, and regularly clean the house of dust and tracked in soil.

Is there a medical test to determine whether I've been exposed to lead?

A blood test is available to measure the amount of lead in your blood and to estimate the amount of your recent exposure to lead. Blood tests are commonly used to screen children for lead poisoning. Lead in teeth or bones can be measured by X-ray techniques, but these methods are not widely available. Exposure to lead also can be evaluated by measuring erythrocyte protoporphyrin (EP) in blood samples. EP is a part of red blood cells known to increase when the amount of lead in the blood is high. However, the EP level is not sensitive enough to identify children with elevated blood lead levels below about 25 micrograms per deciliter (μg/dL). These tests usually require special analytical equipment that is not available in a doctor's office. However, your doctor can draw blood samples and send them to appropriate laboratories for analysis.

Has the federal government made recommendations to protect human health?

The Centers for Disease Control and Prevention (CDC) recommends that states test children at ages 1 and 2 years. Children should be tested at ages 3–6 years if they have never been tested for lead, if they receive services from public assistance programs for the poor such as Medicaid or the Supplemental Food Program for Women, Infants, and Children, if they live in a building or frequently visit a house built before 1950; if they visit a home (house or apartment) built before 1978 that has been recently remodeled; and/or if they have a brother, sister, or playmate who has had lead poisoning. CDC considers a blood lead level of 10 μg/dL to be a level of concern for children.

EPA limits lead in drinking water to 15 μg per liter.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2007. Toxicological Profile for lead (Update). Atlanta, GA: U.S. Department of Public Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology and Environmental Medicine, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-800-232-4636, FAX: 770-488-4178. ToxFAQs Internet address via WWW is http://www.atsdr.cdc.gov/toxfaq.html. ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

Polychlorinated Biphenyls - ToxFAQs™

This fact sheet answers the most frequently asked health questions (FAQs) about polychlorinated biphenyls. For more information, call the CDC Information Center at 1-800-232-4636. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It's important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Polychlorinated biphenyls (PCBs) are a mixture of individual chemicals which are no longer produced in the United States, but are still found in the environment. Health effects that have been associated with exposure to PCBs include acne-like skin conditions in adults and neurobehavioral and immunological changes in children. PCBs are known to cause cancer in animals. PCBs have been found in at least 500 of the 1,598 National Priorities List (NPL) sites identified by the Environmental Protection Agency (EPA).

What are polychlorinated biphenyls?

Polychlorinated biphenyls are mixtures of up to 209 individual chlorinated compounds (known as congeners). There are no known natural sources of PCBs. PCBs are either oily liquids or solids that are colorless to light yellow. Some PCBs can exist as a vapor in air. PCBs have no known smell or taste. Many commercial PCB mixtures are known in the U.S. by the trade name Aroclor.

PCBs have been used as coolants and lubricants in transformers, capacitors, and other electrical equipment because they don't burn easily and are good insulators. The manufacture of PCBs was stopped in the U.S. in 1977 because of evidence they build up in the environment and can cause harmful health effects. Products made before 1977 that may contain PCBs include old fluorescent lighting fixtures and electrical devices containing PCB capacitors, and old microscope and hydraulic oils.

What happens to PCBs when they enter the environment?

- PCBs entered the air, water, and soil during their manufacture, use, and disposal; from accidental spills and leaks during their transport; and from leaks or fires in products containing PCBs.
- PCBs can still be released to the environment from hazardous waste sites; illegal or improper disposal of industrial wastes and consumer products; leaks from old electrical transformers containing PCBs; and burning of some wastes in incinerators.
- PCBs do not readily break down in the environment and thus may remain there for very long periods of time. PCBs can travel long distances in the air and be deposited in areas far away from where they were released. In water, a small amount of PCBs may remain dissolved, but most stick to organic particles and bottom sediments. PCBs also bind strongly to soil.
- PCBs are taken up by small organisms and fish in water. They are also taken up by other animals that eat these aquatic animals as food. PCBs accumulate in fish and marine mammals, reaching levels that may be many thousands of times higher than in water.

How might I be exposed to PCBs?

- Using old fluorescent lighting fixtures and electrical devices and appliances, such as television sets and refrigerators, that were made 30 or more years ago. These items may leak small amounts of PCBs into the air when they get hot during operation, and could be a source of skin exposure.
- Eating contaminated food. The main dietary sources of PCBs are fish (especially sportfish caught in contaminated lakes or rivers), meat, and dairy products.
- Breathing air near hazardous waste sites and drinking contaminated well water.
- In the workplace during repair and maintenance of PCB transformers; accidents, fires or spills involving transformers, fluorescent lights, and other old electrical devices; and disposal of PCB materials.

How can PCBs affect my health?

The most commonly observed health effects in people exposed to large amounts of PCBs are skin conditions such as acne and rashes. Studies in exposed workers have shown changes in blood and urine that may indicate liver damage. PCB exposures in the general population are not likely to result in skin and liver effects. Most of the studies of health effects of PCBs in the general population examined children of mothers who were exposed to PCBs.

Animals that ate food containing large amounts of PCBs for short periods of time had mild liver damage and some died. Animals that ate smaller amounts of PCBs in food over

several weeks or months developed various kinds of health effects, including anemia; acne-like skin conditions; and liver, stomach, and thyroid gland injuries. Other effects of PCBs in animals include changes in the immune system, behavioral alterations, and impaired reproduction. PCBs are not known to cause birth defects.

How likely are PCBs to cause cancer?

Few studies of workers indicate that PCBs were associated with certain kinds of cancer in humans, such as cancer of the liver and biliary tract. Rats that ate food containing high levels of PCBs for two years developed liver cancer. The Department of Health and Human Services (DHHS) has concluded that PCBs may reasonably be anticipated to be carcinogens. PCBs have been classified as probably carcinogenic, and carcinogenic to humans (group 1) by the Environmental Protection Agency (EPA) and International Agency for Research on Cancer (IARC), respectively.

How can PCBs affect children?

Women who were exposed to relatively high levels of PCBs in the workplace or ate large amounts of fish contaminated with PCBs had babies that weighed slightly less than babies from women who did not have these exposures. Babies born to women who ate PCB-contaminated fish also showed abnormal responses in tests of infant behavior. Some of these behaviors, such as problems with motor skills and a decrease in short-term memory, lasted for several years. Other studies suggest that the immune system was affected in children born to and nursed by mothers exposed to increased levels of PCBs. There are no reports of structural birth defects caused by exposure to PCBs or of health effects of PCBs in older children. The most likely way infants will be exposed to PCBs is from breast milk. Transplacental transfers of PCBs were also reported In most cases, the benefits of breast-feeding outweigh any risks from exposure to PCBs in mother's milk.

How can families reduce the risks of exposure to PCBs?

- You and your children may be exposed to PCBs by eating fish or wildlife caught from contaminated locations. Certain states, Native American tribes, and U.S. territories have issued advisories to warn people about PCB-contaminated fish and fish-eating wildlife. You can reduce your family's exposure to PCBs by obeying these advisories.
- Children should be told not play with old appliances, electrical equipment, or transformers, since they may contain PCBs.
- Children should be discouraged from playing in the dirt near hazardous waste sites and in areas where there was a transformer fire. Children should also be discouraged from eating dirt and putting dirty hands, toys or other objects in their mouths, and should wash hands frequently.
- If you are exposed to PCBs in the workplace it is possible to carry them home on your clothes, body, or tools. If this is the case, you should shower and change clothing before leaving work, and your work clothes should be kept separate from other clothes and laundered separately.

Is there a medical test to show whether I've been exposed to PCBs?

Tests exist to measure levels of PCBs in your blood, body fat, and breast milk, but these are not routinely conducted. Most people normally have low levels of PCBs in their body because nearly everyone has been environmentally exposed to PCBs. The tests can show if your PCB levels are elevated, which would indicate past exposure to above-normal levels of PCBs, but cannot determine when or how long you were exposed or whether you will develop health effects.

Has the federal government made recommendations to protect human health?

The EPA has set a limit of 0.0005 milligrams of PCBs per liter of drinking water (0.0005 mg/L). Discharges, spills or accidental releases of 1 pound or more of PCBs into the environment must be reported to the EPA. The Food and Drug Administration (FDA) requires that infant foods, eggs, milk and other dairy products, fish and shellfish, poultry and red meat contain no more than 0.2-3 parts of PCBs per million parts (0.2-3 ppm) of food. Many states have established fish and wildlife consumption advisories for PCBs.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 2000. Toxicological profile for polychlorinated biphenyls (PCBs). Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information?

For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology and Human Health Sciences, 1600 Clifton Road NE, Mailstop F-57, Atlanta, GA 30333.

Phone: 1-800-232-4636.

ToxFAQs™ Internet address via WWW is http://www.atsdr.cdc.gov/toxfaqs/index.asp.

ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

EXHIBIT C

PINTO EXCAVATION PRE-PLANNING WORKSHEET & DAILY EXCAVATION REPORT

PINTO CONSTRUCTION SERVICES

PREPLANNING WORKSHEET: *Excavation / Trenching*

Project Name:_____ Project Number:_____

Project Location:_____

Name of Project Competent Person:_____

Employee Training and Pre- Excavation Briefing

Does this job require special training: YES____ NO____

Safe Excavation and rescue training conducted on :_____ Date

Mandatory pre-excavation briefing conducted on: _____ Date

Soil Classification

Will the competent person classify the soil based on its properties and site conditions? YES____ NO____

If yes, continue. If no, then soil is assumed to be Type C; skip to *Electrical Safety.*

Based on visual observation, which best describes the moisture in this excavation?

Stable Rock____ Cemented Soil____ Cohesive Soil____

Granular Cohesionless____ Layered System____ Granular Soil____

Based on visual observation, which best describes the moisture condition of the soil?

Dry Soil ____ Moist Soil ____ Wet Soil ____ Saturated Soil ____

Is a pocket penetrometer available for use on site?

YES ____ NO ____ N/A ____

If yes, what is the average tons per square foot of the soil in this excavation?

____ tsf

Based on at least one manual test, what classification is the soil in this excavation?

Stable Rock ____ Type A Soil ____ Type B Soil ____ Type C Soil ____

What manual test was used to determine the soil type?

Plasticity ____ Dry Strength ____ Thumb Penetration ____

Other (list) _____

Electrical Safety

Are all electrical devices grounded and /or GFCI protected?

YES ____ NO ____ N/A ____

Surface Encumbrances

Have all surface encumbrances that are located so as to potentially create a hazard to employees been removed or supported as necessary to safeguard employees?

YES____ NO____ N/A____

Underground Installations

Have the estimated locations of all underground installations been determined prior to excavation?

YES____ NO____ N/A____

Have utility companies been contacted and advised of proposed work?

YES____ NO____ N/A____

If underground installations are exposed, have they been protected, supported, or removed while excavation is open?

YES____ NO____ N/A____

Access and Egress

Are stairways, ladders, or ramps provided every 25 ft.?

YES____ NO____ N/A____

Are structural ramps that are used for access of equipment and/or personnel designed by a competent person qualified in structural design, and are they constructed in accordance with the design?

YES____ NO____ N/A____

Exposure to Vehicular Traffic

Are personnel who are exposed to public or project vehicular traffic wearing reflectorized or high visibility vests?

YES____ NO____ N/A____

Exposure to falling loads

Are employees prohibited from standing underneath loads handled by lifting or digging equipment?

YES____ NO____ N/A____

Warning Systems for Mobile Equipment

Are warning systems utilized when mobile equipment is operated adjacent to or at the edge of an excavation?

YES____ NO____ N/A____

If yes, which type is being used?

Hand signals____ Stop logs____ Earthen Berm____

Other (list)_____ Travel Alarms_____

Testing for Hazardous Atmospheres

Are the atmospheric hazards that can be reasonably expected to exist in excavation greater than 4 ft. deep tested and controlled?

YES____ NO____ N/A____

Is testing conducted as often as necessary to ensure safety of personnel?

YES____ NO____ N/A____

Times and Readings		
Time: ____ LEL: _____% Oxygen: ____% Toxic: _____ppm	Time: ____ LEL: ____% Oxygen: _____ % Toxic: ____ppm	Time: ____ LEL: ____% Oxygen: _____% Toxic: ____ppm
Time: ____ LEL: ____% Oxygen: _____% Toxic: _____ppm	Time: ____ LEL: ____% Oxygen: _____% Toxic: _____ppm	Time: ____ LEL: _____% Oxygen: _____% Toxic: ____ppm
Special Precautions:		

Emergency Rescue Equipment

Is emergency equipment such as self-contained breathing apparatus, s safety harness and line, or a basketstretcher, readily available and attended when hazardous atmospheric conditions exist? YES____ NO____ N/A____

Protections From Hazards Associated With Water Accumulation

Is water being controlled or prevented from accumulating in an excavation by the use of water-removal equipment?

YES____ NO____ N/A____

Is operation of the water-control equipment being monitored by a competent person? YES____ NO____ N/A____

Stability of Adjacent Structures

Are support systems, such as shoring, bracing, or underpinning, provided to ensure stability of adjoining structures (i.e., buildings, wall(s) endangered by excavation activities?

YES____ NO____ N/A____

Has the support system been designed by a registered professional engineer? YES____ NO____ N/A____

Protection of Employees From Loose Rock or Soil

Are the employees protected from equipment and excavated or other material by placing this material a minimum of 2 ft. from the edge of excavations or by the use of retaining devices?

YES____ NO____ N/A____

Inspections (Use this section for safety inspections)

Are daily inspections of excavations, where employee exposure can be reasonably anticipated, being done by the competent person? YES____ NO____ N/A____

Are inspections being performed by a competent person after every rainstorm or other hazard-increasing occurrences?

YES____ NO____ N/A____

Are employees removed from the excavation if the competent person finds evidence at any time of a situation that could result in a possible cave-in, protective-system failure, a hazardous atmosphere, or other hazardous conditions?

YES____ NO____ N/A____

Fall Protection

Are standard guardrails provided on walkways and bridges that cross over 6 ft.-plus excavations?

YES____ NO____ N/A____

Are all excavations accessible to the public adequately barricaded or covered when unattended?

YES____ NO____ N/A____

Shoring and Other Protective Systems

Have all shoring and other protective systems been designed by a registered professional engineer or accompanied by tabulated data from the manufacutrer?

YES____ NO____ N/A____

Are shoring and other systems checked and measured each day to detect movement and possible failure?

YES____ NO____ N/A____

I have inspected the excavation described in this checklist:

X_____ _____

(Signature of Competent Person) (Date)

PINTO CONSTRUCTION SERVICES
DAILY EXCAVATION INSPECTION REPORT

Site Location _____

Location of Excavation _____

Depth _____ Soil Type _____

ITEMS	CONDITION			REMARKS
	Good	Rejected	N/A	
Slope Ratio				
Shoring				
Shielding				
Barricades				
Water Removal				
Traffic Control				
Spoil Pile				

TIME	CONFINED SPACE AIR MONITORING PARAMETERS				
	% Oxygen	% LEL	H_2S	CO	Toxic Vapor
	>19.5 % <23.5%	<10%	<5 ppm	<20 ppm	<50% of PEL
Pre-Entry					

COMPETENT PERSON _____

DATE _____

APPENDIX D

New York State Department of Health
Generic Community Air Monitoring Plan

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for volatile organic compounds (VOCs) and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate NYSDEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. "Periodic" monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

All 15-minute readings must be recorded and be available for State (DEC and DOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

All readings must be recorded and be available for State (DEC and DOH) personnel to review.