132 DINGENS ST. SITE
ERIE COUNTY
BUFFALO, NY

SITE MANAGEMENT PLAN
BROWNFIELDS CLEANUP PROGRAM

NYSDEC Site Number: C915263

Prepared for
132 Dingens St, LLC
Buffalo, NY

Prepared by
Iyer Environmental Group, PLLC
Orchard Park, NY 14127

JULY 2016
(Revised October 2016)

Revision No.	Date Submitted	Summary of Revision	NYSDEC Approval Date

October 2016

CERTIFICATION STATEMENT

I Dharmarajan Iyer certify that I am currently a [NYS registered professional engineer or Qualified Environmental Professional as is defined in 6 NYCRR Part 375] and that this Site Management Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

Dharmarajan Iyer, P.E.

10/31/2016 DATE

TABLE OF CONTENTS
SITE MANAGEMENT PLAN
132 DINGENS ST. SITE
ERIE COUNTY
BUFFALO, NEW YORK

LIST OF FIGURES

DRAWINGS

TABLES

APPENDICES

List of Acronyms

ASP	Analytical Services Protocol
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
CBS	Confirmatory Bottom Soil sample
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CAMP	Community Air Monitoring Plan
CFR	Code of Federal Regulation
CLP	Contract Laboratory Program
COC	Certificate of Completion
CSCO	Commercial Use Soil Cleanup Objective
CWS	Confirmatory Wall Soil sample
DER	Division of Environmental Remediation
EC	Engineering Control
ECL	Environmental Conservation Law
ELAP	Environmental Laboratory Approval Program
ERP	Environmental Restoration Program
EWP	Excavation Work Plan
GHG	Green House Gas
HASP	Health and Safety Plan
IC	Institutional Control
NA	Not Analyzed (or Not Applicable)
ND	Not Detected
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYCRR	New York Codes, Rules and Regulations
O&M	Operation and Maintenance
OM&M	Operation, Maintenance and Monitoring
OSHA	Occupational Safety and Health Administration
PCBs	Polychlorinated Biphenyls
PETL	Proposed Excavation Threshold Limit (site-specific)
PRP	Potentially Responsible Party
PRR	Periodic Review Report
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
RAO	Remedial Action Objective
RAWP	Remedial Action Work Plan
RCRA	Resource Conservation and Recovery Act
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RP	Remedial Party
RSO	Remedial System Optimization
SAC	State Assistance Contract
SCGs	Standards, Criteria and Guidelines
SCO	Soil Cleanup Objective
SMP	Site Management Plan
SOP	Standard Operating Procedures
SOW	Statement of Work
SVOCs	Semi-volatile Organic Compounds
TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristic Leachate Procedure
USEPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds

132 DINGENS ST. SITE
SITE MANAGEMENT PLAN

ES EXECUTIVE SUMMARY

The following provides a brief summary of the controls implemented for the site, as well as the inspections, monitoring, maintenance and reporting activities required by this Site Management Plan:

SITE IDENTIFICATION:	Number: C915263 Name: 132 DINGENS ST. SITE Address: Buffalo, NY 14206
Institutional Controls:	1. The property may be used for Restricted Commercial and Industrial use as described in 6NYCRR Part 375-1.8(g); although land use is subject to local zoning laws
	2. Institutional controls as per environmental easement signed/filed with Erie County Clerk: • Requires compliance with Department-approved SMP • The use of groundwater underlying the property as a source of potable or process water is prohibited without necessary water quality treatment as determined by the NYSDOH or County DOH. • Data and information pertinent to site management must be reported at the frequency and in a manner as defined in this SMP. • All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP. • Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in this SMP. • Vegetable gardens and farming on the site are prohibited. • Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement
	3. All ECs must be inspected at a frequency and in a manner defined in the SMP.
Engineering Controls:	1. Cover system
	2. All ECs must be operated and maintained as specified in this SMP
	3. All intrusive activities in areas of remaining contamination will follow the Excavation Plan

Inspection:		Frequency
1.	Cover Inspection	Annually; and after severe storms
Maintenance:		
1.	Cover system	As needed
Reporting:		
1.	Inspection/Maintenance Report	Annual
2.	Periodic Review Report	Annual or as directed by the NYSDEC

1. INTRODUCTION

1.1 General

This Site Management Plan (SMP) is a required element of the remedial program for the 132 Dingens St. site located in Buffalo, New York (hereinafter referred to as the "site"). See Figure 1. The site is currently in the New York State (NYS) Brownfield Cleanup Program (BCP), Site No. C915263, which is administered by New York State Department of Environmental Conservation (NYSDEC).

132 Dingens St. LLC entered into a Brownfield Cleanup Agreement (BCA) on June 12, 2012 with the NYSDEC to remediate the site. The site layout and boundaries are shown on Figures 2A (Aerial Photo) and 2B (Tax Map). The boundaries of the site are more fully described in the metes and bounds site description that is part of the Environmental Easement provided in Appendix E, and in Drawing D-1, Site Survey Map.

After completion of the remedial work, some contamination was left at this site, which is hereafter referred to as "remaining contamination." Institutional and Engineering Controls (ICs and ECs) have been incorporated into the site remedy to control exposure to remaining contamination to ensure protection of public health and the environment. An Environmental Easement granted to the NYSDEC, and recorded with the Erie County Clerk, requires compliance with this SMP and all ECs and ICs placed on the site.

This SMP was prepared to manage remaining contamination at the site until the Environmental Easement is extinguished in accordance with ECL Article 71, Title 36. This plan has been approved by the NYSDEC, and compliance with this plan is required by the grantor of the Environmental Easement and the grantor's successors and assigns. This SMP may only be revised with the approval of the NYSDEC.

It is important to note that:

- This SMP details the site-specific implementation procedures that are required by the Environmental Easement. Failure to properly implement the SMP is a violation of the Environmental Easement, which is grounds for revocation of the Certificate of Completion (COC);

- Failure to comply with this SMP is also a violation of Environmental Conservation Law, 6NYCRR Part 375 and the BCA (Index #C915263-05-12; Site # C915263) for the site, and thereby subject to applicable penalties.

All reports associated with the site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State. A list of contacts for persons involved with the site is provided in Appendix A of this SMP.

This SMP was prepared by Iyer Environmental Group, PLLC on behalf of 132 Dingens St. LLC, in accordance with the requirements of the NYSDEC's DER-10 ("Technical Guidance for Site Investigation and Remediation"), dated May 3, 2010, and the guidelines provided by the NYSDEC. This SMP addresses the means for implementing the ICs and/or ECs that are required by the Environmental Easement for the site.

1.2 Revisions

Revisions to this plan will be proposed in writing to the NYSDEC's project manager. Revisions will be necessary upon, but not limited to, the following occurring: a change in post-remedial removal of contaminated soil or other significant change to the site conditions. In accordance with the Environmental Easement for the site, the NYSDEC will provide a notice of any approved changes to the SMP, and append these notices to the SMP that is retained in its files.

1.3 Notifications

Notifications will be submitted by the property owner to the NYSDEC, as needed, in accordance with NYSDEC's DER – 10 for the following reasons:

- 60-day advance notice of any proposed changes in site use that are required under the terms of the BCA, 6NYCRR Part 375 and/or Environmental Conservation Law.
- 7-day advance notice of any field activity associated with the remedial program.
- 15-day advance notice of any proposed ground-intrusive activity pursuant to the Excavation Work Plan.
- Notice within 48-hours of any damage or defect to the foundation, structures or EC that reduces or has the potential to reduce the effectiveness of an EC, and likewise, any action to be taken to mitigate the damage or defect.
- Verbal notice by noon of the following day of any emergency, such as a fire; flood; or earthquake that reduces or has the potential to reduce the effectiveness of ECs in place at the site, with written confirmation within 7 days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.
- Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action submitted to the NYSDEC within 45 days describing and documenting actions taken to restore the effectiveness of the ECs.

Any change in the ownership of the site or the responsibility for implementing this SMP will include the following notifications:

- At least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser/Remedial Party has been provided with a copy of the BCA, and all approved work plans and reports, including this SMP.
- Within 15 days after the transfer of all or part of the site, the new owner's name, contact representative, and contact information will be confirmed in writing to the NYSDEC.

Table 1 includes contact information for the above notification. The information on this table will be updated as necessary to provide accurate contact information. A full listing of site-related contact information is provided in Appendix A.

2. SUMMARY OF PREVIOUS INVESTIGATIONS AND REMEDIAL ACTIONS

2.1 Site Location and Description

The site is located in Buffalo, Erie County, New York and is identified as Section 112.19, Block 1 and Lot 14.11 on the Erie County Tax Map (see Figure 2C). The site is an approximately irregular shaped, 13.22-acre area parcel. It is bounded by UPS ground terminal and Buffalo Games to the north, Dingens Street to the south, Niagara Tying Service to the east, and warehouses owned by Buffalo News and FPPF Chemical Company to the west. The Tax Map in Figure 2B shows the site boundary and surrounding tax parcels. The boundaries of the site are more fully described in Appendix E – Environmental Easement and the Drawing D-1 - Site Survey Map.

The owner of the site parcel at the time of issuance of this SMP is 132 Dingens St., LLC.

2.2 Physical Setting

2.2.1 Land Use

The site and its surrounding areas 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/urban 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. 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 site consists of the following: an 85,000 square-foot foundation (remaining from an old warehouse that burned down in 2010) and a one-story storage building. Most of the remaining land area is covered with asphalt/concrete/stone with small areas of vegetation. The site is zoned commercial/light industrial, and is currently vacant except for new automobiles temporarily parked in the paved area to the south.

The properties adjoining the site and in the surrounding neighborhood primarily include commercial and residential properties. The properties immediately south of the site across Dingens St. include commercial and residential properties; the properties immediately north of the site include commercial properties; the properties immediately east of the site include commercial properties; and the properties to the west of the site include commercial properties.

2.2.2 Geology

The site is located in the Erie-Ontario Lake plain physiographic province, and subsequently the topography surrounding the site is relatively flat and represents a partially landscaped commercial/industrial district. Soils on the site are mapped as Urban Land which can typically contain fill materials with little native soil conditions remaining. Below that is natural clay, sand and silt. Bedrock beneath is composed of the Onondaga Limestone of Middle Devonian age, which is a light grey limestone intermixed with dark grey chert. Depth to bedrock is estimated to occur within 25 feet. The geologic cross-sections for the site and their locations are shown on Figure 3.

2.2.3 Hydrogeology

The ground surface slopes gently to the south, and surface water runoff from the site is directed to numerous storm water catch basins throughout the paved parking areas that discharge into the City of Buffalo's combined sewer system. There are no surface water bodies on the site. Groundwater at the site is approximately 7 to 10 feet below ground surface. The local regional groundwater flow is generally to the south toward the Buffalo River based on groundwater level measurements during the BCP RI and associated contour plots. Past construction activities in the area could alter localized groundwater flow patterns.

2.3 Investigation and Remedial History

The following narrative provides a remedial history timeline and a brief summary of the available project records to document key investigative and remedial milestones for the site. Full titles for each of the reports referenced below are provided in Section 8.0 - References.

2.3.1 Site Investigations

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:

- Soil samples from seventeen (17) test pit locations across unpaved, vegetated areas of the site.
- Soil samples from thirty-one (31) borings.
- Monitoring wells at eight (8) soil boring locations.
- Analysis of soil samples from test pits and borings for VOCs, SVOCs, PCBs, pesticides, total cyanides, TCLP lead, and landfill parameters.
- Two rounds of groundwater sampling at eight monitoring wells and analysis of the samples for VOCs, SVOCs, PCBs, pesticides, metals and total cyanides.
- Sampling and analysis of the contents of chemical drums and transformer oil for disposal.
- Sampling and pump out of water accumulated in an underground tunnel connecting the pump-house and the old warehouse building

The site investigations revealed various types of industrial/urban 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, paper and scrap metal), 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 were found in any of the soil samples, even in the paved area northeast of the old warehouse foundation that was the location of petroleum USTs.

The bulk of the contamination appeared to be limited to the industrial fill material, while the underlying natural soil (clay, silt) appeared 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 warehouse foundation, and even lower along the southeastern property boundary.

Of greater significance has been soil contamination with several semi-volatile compounds, PCBs and a few metals which are listed in Table 2 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 was 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 did 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 indicated that the site contaminants do not readily leach from the fill materials into the groundwater.

2.3.2 Site Remedial History

The debris from the 2010 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 pad-mounted transformers outside, and processed 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.

The site was remediated in 2015 in accordance with the Remedial Action Work Plan (July 2015). The range of concentrations of the parameters of concern at the site prior to remediation are listed in Table 2. Contaminated soil/industrial fill, which formed the source areas of concern, was excavated and disposed off-site at a permitted solid waste facility. Site specific excavation objectives (PETLs, Proposed Excavation Threshold Limits) were established for arsenic (79 ppm), lead (5,000 ppm), mercury (5.7 ppm), and semi-volatile organic compounds (total PAHs-500 ppm). PCBs were remediated to meet Part 375 commercial use soil cleanup objectives of 1 ppm which meets the Toxic Substances Control Act (TSCA) self-implementing requirements. Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) was brought in to complete the backfilling of the excavations. The site was re-graded to accommodate installation of a cover system.

The source areas (see locations on Drawing D-2) with high levels of contamination were identified during the BCP remedial investigation. A total of 2033 cubic yards of contaminated soils and industrial fill were excavated from these areas during the 2015 remedial action and disposed off-site. Some of this excavated soil had to be treated on-site with cement to stabilize its lead content before disposal as non-hazardous waste. A total of 11,782 cubic yards of clean off-site fill was used to backfill the excavated areas and to regrade the surrounding areas. The excavation/backfill areas and post-remediation grading plan is shown on Drawing D-3. A protective cover system was established in accordance with DER-10 requirements for restricted commercial use. A geotextile fabric was placed in all areas between the site fill and all clean off-site material brought in to make up the cover system.

A site cover is required to allow for a commercial use of the site. The cover system illustrated on Figure 6, and Drawing D-4 includes asphalt, concrete, gravel, floor slab, building, or a soil cover in areas where the upper one foot of exposed surface soil exceeds the applicable soil cleanup objectives (SCOs). The soil or crushed stone cover has a minimum thickness of one foot, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for commercial use. The asphalt cover includes a 2" base of crushed stone, and 4" of blacktop material on top of that. The cover system was placed over a demarcation layer of Geotextile fabric to distinguish it from the industrial/urban fill or clean fill used to establish the required grade. All fill material brought to the site met the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

As shown on Figures 6A and 6B and the as-built drawing (Drawing D-4), the cover system includes crushed stone in the eastern section of the site, existing paved areas in the middle and northern section, and a combination of new asphalt paving and crushed stone in the northern and western sections. Photopages in Appendix B show site conditions immediately after completion of remediation.

2.4 Remedial Action Objectives

Soil is the primary contaminated medium identified at the site, with the potential to impact the underlying groundwater. The area is bordered 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 Remedial Action Objectives (RAOs) for the site as listed in the Decision Document (May 2015) are as follows:

- 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

2.5 Remaining Contamination

2.5.1 Soil

The entire site and its surrounding areas are underlain by industrial/urban fill down to depths of up to 20 below ground surface. Heavy metals (arsenic, mercury and lead) are of concern across the site, SVOCs in the middle north section and PCBs in the western section. The SVOC compounds of concern include benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene and pyrene. Aroclor 1248 and 1254 are the two PCB compounds of concern. These site-specific contaminants of concern have relatively low mobility.

An estimated 212,000 cubic yards make up the layer of industrial/urban fill with contaminated soil across the site. Over 2,000 cubic yards of contaminated soil were removed from all highly contaminated areas identified during the Phase II ESA and RI. The clay layer beneath the urban fill layer is relatively unimpacted. The source areas excavated during this remediation are shown on Figure 2D and Drawing D-2, and the investigation samples exceeding PETLs that are associated with these source areas are also shown on Figure 2D.

The elevations of the top of remaining soil contamination and the thickness of the remaining contamination are shown on the Geologic cross sections in Figures 3-2 (A-A') through 3-8 (G-G'). The cross-section locations are shown on Figure 3-1. These cross-sections also show the cover system across various portions of the site, while the layout of the cover system is shown on Drawing D-4. A geotextile membrane serves as the demarcation layer between the remaining contaminated soil layer and cover system made up of clean off-site fill, crushed stone and asphalt. All the excavations were lined with the geotextile membrane prior to backfill. After regrading with additional clean fill, all areas that received an asphalt or crushed stone cover were lined with the geotextile.

Figures 4A through 4C summarize the results of all soil samples that were collected during previous investigations (Phase II and RI) but remain after excavation of the source areas of concern. Figures 5A through 5D summarize the results of all confirmatory soil samples collected during the remedial action. While some of these investigation and confirmatory samples may exceed Unrestricted Use SCOs, they all meet the PETLs or site-specific restricted commercial Use SCOs at the site after completion of remedial action. Full analytical data for these investigation and remediation samples are included as Appendix G along with survey coordinates for these samples.

2.5.2 Groundwater

Groundwater has not been adversely impacted by the industrial/urban fill at the site, and is therefore not a media of concern. Groundwater samples from seven monitoring wells across the site were found to have only trace levels of semivolatile organics and heavy metals typical of the site and its surrounding area. All monitoring wells were decommissioned during the site remediation.

3. INSTITUTIONAL AND ENGINEERING CONTROL PLAN

3.1 General

Since remaining contamination exists at the site, Institutional Controls (ICs) and Engineering Controls (ECs) are required to protect human health and the environment. This IC/EC Plan describes the procedures for the implementation and management of all IC/ECs at the site. The IC/EC Plan is one component of the SMP and is subject to revision by the NYSDEC. Overall responsibilities of the owner and remedial party are enumerated in Appendix C.

This plan provides:

- A description of all IC/ECs on the site;
- The basic implementation and intended role of each IC/EC;
- A description of the key components of the ICs set forth in the Environmental Easement;
- A description of the controls to be evaluated during each required inspection and periodic review;
- A description of plans and procedures to be followed for implementation of IC/ECs, such as the implementation of the Excavation Work Plan (EWP) (as provided in Appendix D) for the proper handling of remaining contamination that may be disturbed during maintenance or redevelopment work on the site; and
- Any other provisions necessary to identify or establish methods for implementing the IC/ECs required by the site remedy, as determined by the NYSDEC.

3.2 Institutional Controls

A series of ICs is required by the Decision Document to: (1) implement, maintain and inspect Engineering Control systems; (2) prevent future exposure to remaining contamination; and, (3) limit the use and development of the site to restricted commercial uses only. Adherence to these ICs on the site is required by the Environmental Easement and will be implemented under this SMP. ICs identified in the Environmental Easement may not be discontinued without an amendment to or extinguishment of the Environmental Easement. The IC boundaries are the same as the property boundary shown on the cover system layout in Drawing D-4.

Imposition of an institutional control in the form of an environmental easement for the controlled property requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3).

The ICs for this site are:

- Requires compliance with the Department approved Site Management Plan.

- The controlled property may be used and developed for commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;

- The use of groundwater underlying the property as a source of potable or process water is prohibited without necessary water quality treatment as determined by the NYSDOH or County DOH;

- All ECs must be operated and maintained as specified in this SMP;
- All ECs must be inspected at a frequency and in a manner defined in the SMP;
- Data and information pertinent to site management must be reported at the frequency and in a manner as defined in this SMP;
- All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP;
- Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in this SMP;
- Vegetable gardens and farming on the site are prohibited;
- Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement.

3.3 Engineering Controls

The cover system over the industrial/urban fill across the site is the engineering control required to maintain the effectiveness of the remediation and continue to meet the remedial objectives.

All intrusive work in areas of remaining contamination during site redevelopment will follow the Excavation Plan (see Appendix D) which details provisions for management of future excavations

3.3.1 Cover

Exposure to remaining contamination in soil/urban fill at the site is prevented by a cover system placed over the site. The Site has four types of cover systems (see details and layout on Figures 6A and 6B and Drawing D-4) to prevent exposure and be protective of human health:

- New Crushed Stone, mostly along the property boundary and the eastern portion (see details on Figure 6A);
- New and existing impermeable Asphalt Cover (minimum 4” blacktop over minimum 2” crushed stone) for paved parking areas (see Figure 6A for new and Figure 6B for existing);
- Existing Concrete Cover (4” to 8” concrete over 2” to 4” crushed stone), including the warehouse foundation and building (see Figure 6B for existing); and

- Existing Soil Cover (minimum 12" of soil), mostly along the sidewalks near the front entrance (Dingens St.) to the property (see Figure 6B)

All new asphalt and crushed stone cover systems have a Geotextile fabric as the demarcation layer between the cover system and the underlying industrial/urban fill. The Geotextile demarcation layer was also placed over the industrial/urban fill in areas that that had to be backfilled/regraded with clean fill from off-site and also between this clean fill and the asphalt or crushed stone cover.

The crushed stone, clean backfill and top-soil was obtained from known sources and pre-characterized to confirm with DER-10 requirements for imports from off-site.

The Excavation Work Plan (EWP) provided in Appendix D outlines the procedures required to be implemented in the event the cover system is breached, penetrated or temporarily removed, and any underlying remaining contamination is disturbed.

All material excavated and removed from the site will be treated as contaminated and regulated material and will be transported and disposed in accordance with all local, State (including 6NYCRR Part 360) and Federal regulations. Any new excavations will be properly backfilled with clean, pre-tested off-site fill, cover material as applicable, and geotextile layers to delineate between existing on-site materials, clean fill and cover material.

Procedures for the inspection of this cover are provided in the Inspection and Maintenance Plan included in Section 4.0 of this SMP. Any work conducted pursuant to the EWP must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP, included as Appendix H) and associated Community Air Monitoring Plan (CAMP) prepared for the site.

The elements of the Engineering Control for the site include the following:

- The cover systems over the industrial/urban fill across the site
- An Excavation Plan in Appendix D which details provisions for management of future excavations in areas of remaining contamination;
- Provisions in the environmental easement in Appendix E regarding land use and groundwater use restrictions;
- Provisions for the management and inspection of the identified engineering controls;
- Maintaining site access controls and Department notification; and
- Steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

3.3.2 Criteria for Completion of Remediation

Generally, remedial processes are considered completed when monitoring indicates that the remedy has achieved the remedial action objectives identified by the decision document. The framework for determining when remedial processes are complete is provided in Section 6.4 of NYSDEC DER-10.

The composite cover system is a permanent control and the quality and integrity of this system will be inspected at defined, regular intervals in accordance with this SMP in perpetuity.

4. INSPECTION AND MAINTENANCE PLAN

4.1 General

The site remedy does not rely on any mechanical systems to protect public health and the environment. Therefore, the operation and maintenance of such components is not included in this SMP.

Further detail regarding the inspection and maintenance of the cover system is provided in Appendix D – Excavation Work Plan. A copy of this Plan, along with the complete SMP, is to be maintained at the site.

4.2 Site-Wide Inspection

Site-wide inspections, particularly the cover system, will be performed annually as part of the maintenance of any commercial/industrial facility to be developed at the site. Modification to the frequency or duration of the inspections will require approval from the NYSDEC. Site-wide inspections will also be performed after all severe weather conditions that may affect the ECs. During these inspections, an inspection form will be completed as provided in Appendix F – Site Management Forms. The form will compile sufficient information to assess the following:

- Compliance with all ICs, including site usage;
- An evaluation of the condition and continued effectiveness of ECs;
- General site conditions at the time of the inspection;
- The site management activities being conducted including, where appropriate, confirmation sampling and a health and safety inspection; and
- Confirm that site records are up to date.

The site-wide inspection will be conducted and documented according to the SMP schedule, regardless of the frequency of the Periodic Review Report. The inspections will determine and document the following:

- Whether ECs continue to perform as designed;
- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP and the Environmental Easement;
- If site records are complete and up to date; and
- Reporting requirements are outlined in Section 6.0 of this plan.

Inspections will also be performed in the event of an emergency. If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs that reduces or has the potential to reduce the effectiveness of ECs in place at the site, verbal notice to the NYSDEC will be given by noon of the following day. In addition, an inspection of the

site will be conducted within 5 days of the event to verify the effectiveness of the IC/ECs implemented at the site by a qualified environmental professional, as determined by the NYSDEC. Written confirmation will be provided to the NYSDEC within 7 days of the event that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.

4.3 Routine Maintenance

Routine maintenance of the crushed stone and asphalt cover systems will be performed so as to preserve the integrity of the cover system. This will include replacement of crushed stone from loss in the depth due to erosion or other factors. The asphalt layer will be recoated as conditions warrant depending on annual inspections and weather.

4.4 Non-Routine Maintenance

The asphalt surface conditions will be assessed periodically and resurfaced as conditions warrant to maintain the integrity of the impermeable surface. The crushed stone layer will also be replenished and graded to maintain cover depth and drainage.

5. PERIODIC ASSESSMENTS/EVALUATIONS

5.1 Climate Change Vulnerability Assessment

Increases in both the severity and frequency of storms/weather events, an increase in sea level elevations along with accompanying flooding impacts, shifting precipitation patterns and wide temperature fluctuation, resulting from global climactic change and instability, have the potential to significantly impact the performance, effectiveness and protectiveness of a given site and associated remedial systems. Vulnerability assessments provide information so that the site and associated remedial systems are prepared for the impacts of the increasing frequency and intensity of severe storms/weather events and associated flooding.

This section provides a summary of vulnerability assessments that will be conducted for the site during periodic assessments, and briefly summarizes the vulnerability of the site and/or engineering controls to severe storms/weather events and associated flooding.

- Flood Plain: The site is not located in a flood plain.
- Site Drainage and Storm Water Management: This area is served by the City of Buffalo's combined sewer system. The entire site is graded such that surface water flows into the drainage manholes shown on the aerial photo in Figure 2A.
- Erosion: There are no signs of erosion at the site (see post-remediation photos in Appendix B). The berms on the adjacent property along the northern perimeter of the site may be susceptible to erosion during periods of severe rain events. These will be inspected during routine inspections and after severe storms, and any erosions identified will be immediately repaired.
- High Wind: There are no structures currently at the site which may be susceptible to damage from the wind itself or falling objects, such as trees or utility structures during periods of high wind. This may change once the site is redeveloped with a new commercial/light industrial facility, and will be re-assessed at that time.
- Electricity: Although the site may be susceptible to power loss and/or dips/surges in voltage during severe weather events, including lightning strikes, there should be no impact on the cover system.
- Spill/Contaminant Release: Areas on the asphalt or stone cover system used for automobile and equipment parking may be susceptible to a spill or other contaminant release due to storm-related damage caused by flooding, erosion, high winds, loss of power etc.

5.2 Green Remediation Evaluation

NYSDEC's DER-31 Green Remediation requires that green remediation concepts and techniques be considered during all stages of the remedial program including site management, with the goal of improving the sustainability of the cleanup and summarizing the net environmental benefit of any implemented green technology. Contaminated soil/urban fill excavated during development of the site is not expected to be used on-site and will be disposed off-site with appropriate testing and landfill approval.

This section of the SMP provides a summary of any green remediation evaluations to be completed for the site during site management, and as reported in the Periodic Review Report (PRR).

- The site is currently vacant except for the front section that is temporarily leased to park new automobiles for sale. Waste reduction options will be considered during design/construction for the redevelopment of the site for new facility.
- Energy usage for site lighting, security systems, etc. for a new facility to be developed at the site will be assessed.
- Emissions from fuel usage for transportation to and from the site for inspections, potential operation of gas-powered generators, etc. will be assessed.
- Water usage is minimal at this time and will be assessed as part of any new facility to be developed at the site.
- No ecosystems are present at the site, and no land is impacted as part of the implementation of the remedy.

6. REPORTING REQUIREMENTS

6.1 Site Management Reports

All site inspection and maintenance will be recorded on the appropriate site management forms provided in Appendix F. These forms are subject to NYSDEC revision.

All applicable inspection forms and other records, generated for the site during the reporting period will be provided in electronic format to the NYSDEC in accordance with the requirements of Table 5 and summarized in the Periodic Review Report.

All interim inspections reports will include, at a minimum:

- Date of event or reporting period;
- Name, company, and position of person(s) conducting inspection activities;
- Description of the activities performed;
- Where appropriate, color photographs or sketches will be included showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet);
- Any observations, conclusions, or recommendations

Routine maintenance event reporting forms will include, at a minimum:

- Date of event;
- Name, company, and position of person(s) conducting maintenance activities;
- Description of maintenance activities performed;
- Any modifications to the cover system;
- Where appropriate, color photographs or sketches will be included showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet); and,
- Other documentation such as copies of invoices for maintenance work (attached to the checklist/form).

Non-routine maintenance/repair event reporting forms will include, at a minimum:

- Date of event;
- Name, company, and position of person(s) conducting non-routine maintenance/repair activities;
- Description of non-routine activities performed;
- Any modifications to the system;
- Where appropriate, color photographs or sketches will be included showing the approximate location of any problems or incidents (included either on the checklist/form or on an attached sheet); and,
- Other documentation such as copies of invoices for repair work (attached to the checklist/form).

Data will be reported in digital format as determined by the NYSDEC. Currently, data is to be supplied electronically and submitted to the NYSDEC EQuIS™ database in accordance with the requirements found at this link http://www.dec.ny.gov/chemical/62440.html.

6.2 Periodic Review Report

A Periodic Review Report (PRR) will be submitted to the Department beginning sixteen (16) months after the Certificate of Completion is issued. After submittal of the initial Periodic Review Report, the next PRR shall be submitted annually to the Department or at another frequency as may be required by the Department. After the site is developed, the PRR submittal period may be changed with Department approval. The cover system will be inspected annually and after severe storms.

In the event that the site is subdivided into separate parcels with different ownership, a single Periodic Review Report will be prepared that addresses the site described in Appendix E - Environmental Easement. The report will be prepared in accordance with NYSDEC's DER-10 and submitted within 30 days of the end of each certification period.

The report will include:

- Identification, assessment and certification of all ECs/ICs required by the remedy for the site.
- Results of the required annual site inspections and severe condition inspections, if applicable.
- All applicable site management forms and other records generated for the site during the reporting period in the NYSDEC-approved electronic format, if not previously submitted.
- A site evaluation, which includes the following:
    - The compliance of the remedy with the requirements of the site-specific Decision Document;
    - Any new conclusions or observations regarding site contamination based on inspections;
    - The overall performance and effectiveness of the remedy.

6.2.1 Certification of Institutional and Engineering Controls

Certification of Institutional and Engineering Controls will be included in the Periodic Review Report. Following the last inspection of the reporting period, a Professional Engineer (PE) or a Qualified Environmental Professional (QEP) licensed to practice in New York State will prepare, and include in the Periodic Review Report, the following certification as per the requirements of NYSDEC DER-10:

For each institutional or engineering control identified for the site, I certify that all of the following statements are true:

- *The inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;*
- *The institutional control and/or engineering control employed at this site is unchanged from the date the control was put in place, or last approved by the Department;*
- *Nothing has occurred that would impair the ability of the control to protect the public health and environment;*
- *Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;*
- *No new information has come to my attention, including groundwater monitoring data from wells located at the site boundary, if any, to indicate that*

the assumptions made in the qualitative exposure assessment of off-site contamination are no longer valid;

- *The assumptions made in the qualitative exposure assessment remain valid (to be included every five years);*
- *Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;*
- *If a financial assurance mechanism is required under the oversight document for the site, the mechanism remains valid and sufficient for the intended purpose under the document;*
- *Use of the site is compliant with the environmental easement;*
- *The engineering control systems are performing as designed and are effective;*
- *To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program [and generally accepted engineering practices]; and*
- *The information presented in this report is accurate and complete.*

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [name], of [business address], am certifying as [Owner/Remedial Party or Owner's/Remedial Party's Designated Site Representative] (and if the site consists of multiple properties): *[I have been authorized and designated by all site owners/remedial parties to sign this certification] for the site."*

The signed certification will be included in the Periodic Review Report.

The Periodic Review Report will be submitted, in electronic format, to the NYSDEC Central Office, Regional Office in which the site is located and the NYSDOH Bureau of Environmental Exposure Investigation. The Periodic Review Report may need to be submitted in hard-copy format, as requested by the NYSDEC project manager.

6.3 Corrective Measures Work Plan

If any component of the remedy is found to have failed, or if the periodic certification cannot be provided due to the failure of an institutional or engineering control, a Corrective Measures Work Plan will be submitted to the NYSDEC for approval. This plan will explain the failure and provide the details and schedule for performing work necessary to correct the failure. Unless an emergency condition exists, no work will be performed pursuant to the Corrective Measures Work Plan until it has been approved by the NYSDEC.

7. REFERENCES

6NYCRR Part 375, Environmental Remediation Programs. December 14, 2006.

NYSDEC DER-10 – “Technical Guidance for Site Investigation and Remediation”.

NYSDEC, 1998. Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1. June 1998 (April 2000 addendum).

BCP Remedial Investigation Report, 132 Dingens St. Site, Iyer Environmental Group, January 2013.

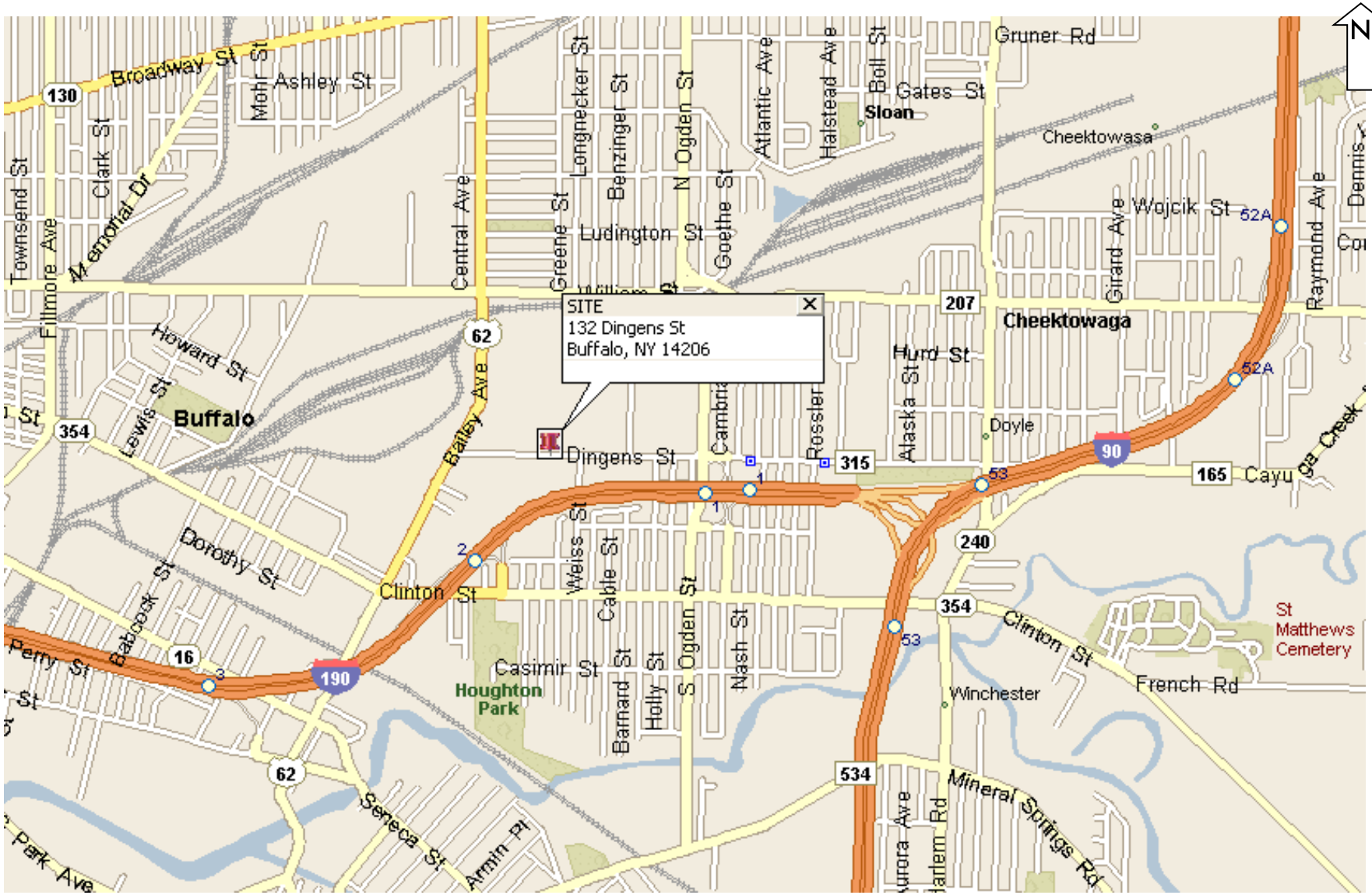
BCP Alternative Analysis Report, 132 Dingens St. Site, Iyer Environmental Group, May 2015.

Decision Document, Brownfield Cleanup Program, 132 Dingens St. Site, NYSDEC, May 2015

BCP Remedial Action Work Plan Report, 132 Dingens St. Site, Iyer Environmental Group, July 2015.

SMP
132 DINGENS ST. SITE

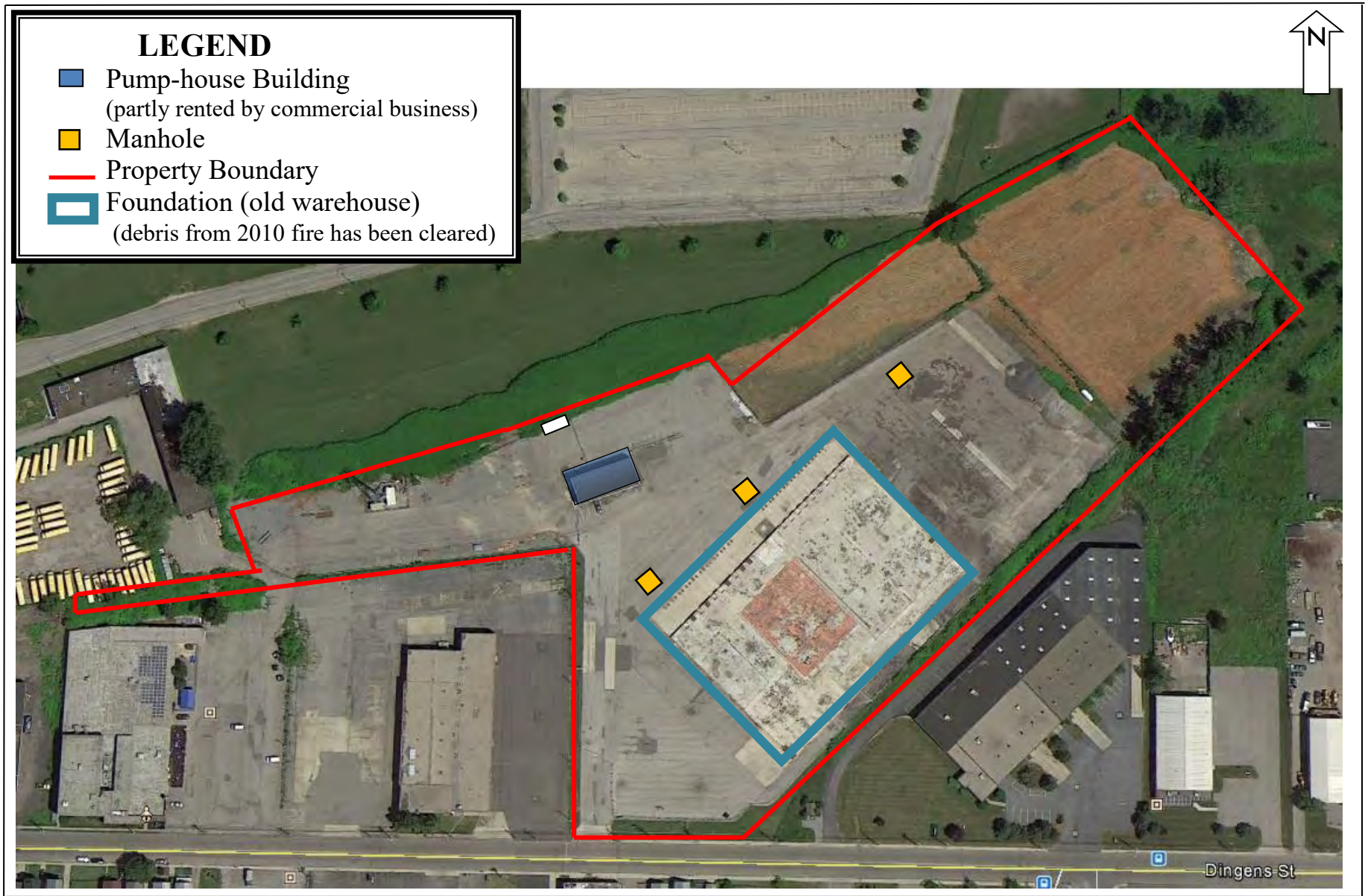
FIGURES



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

FIGURE 1

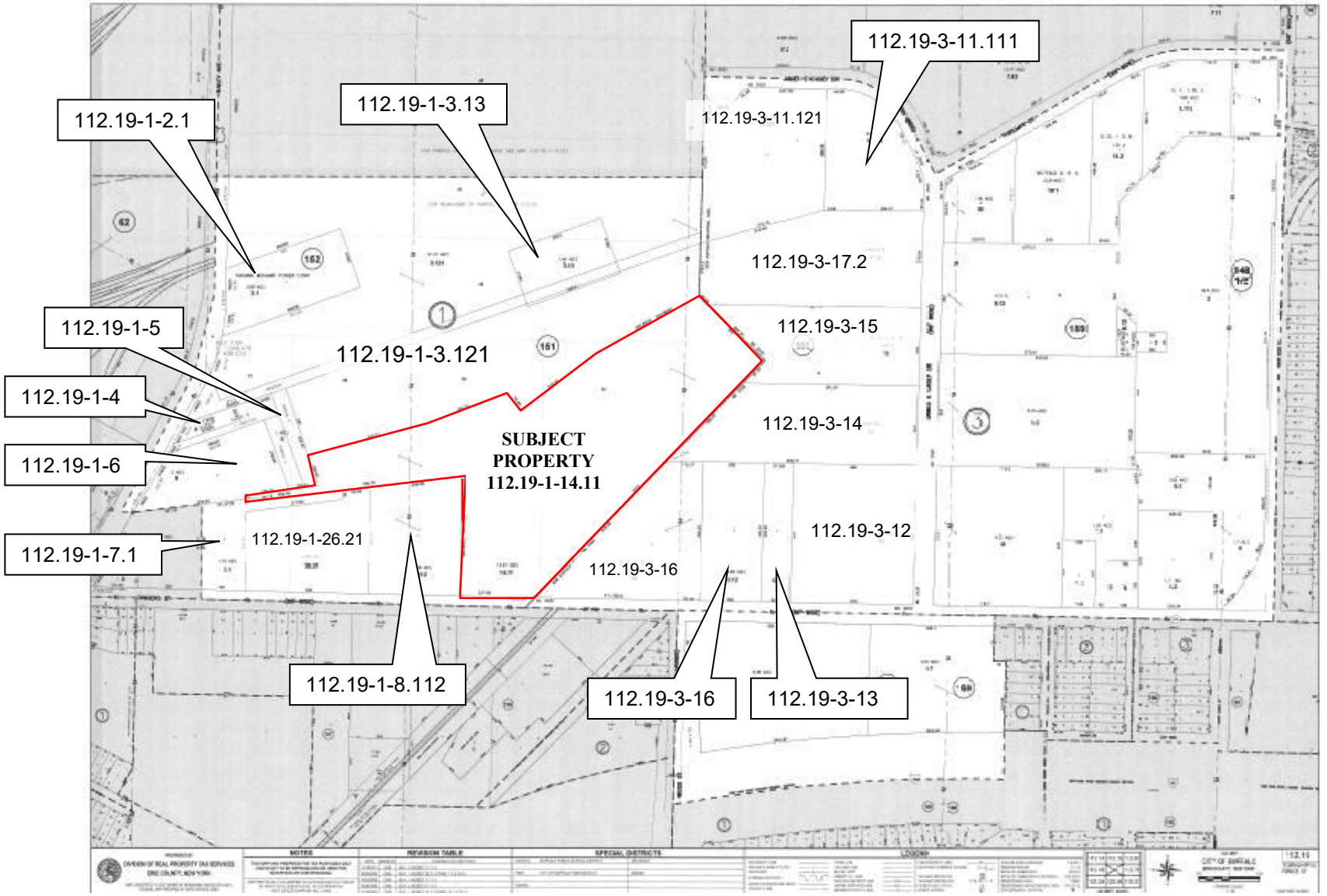
IEG



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

FIGURE 2A

IEG



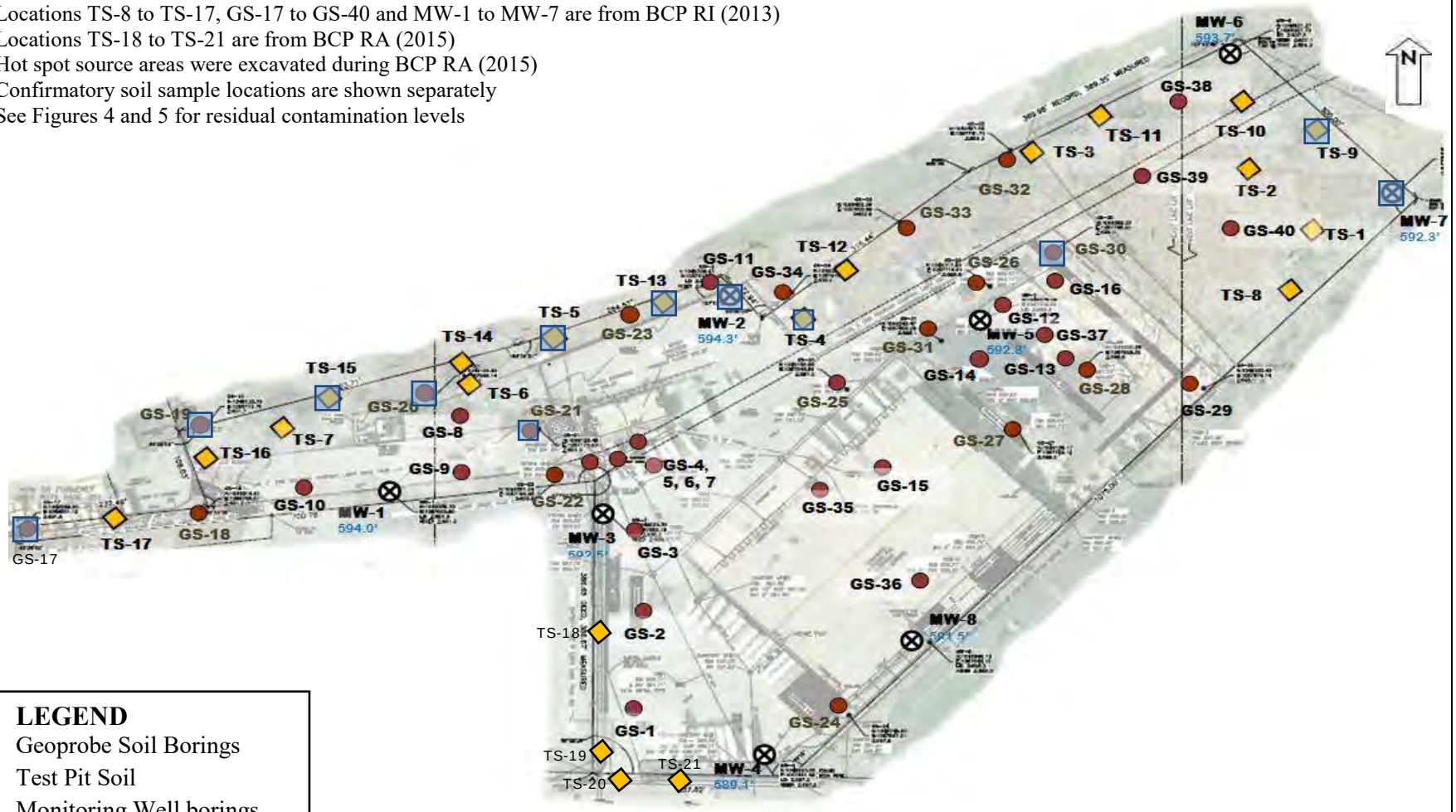
132 DINGENS STREET, BUFFALO, NY
SITE LAYOUT: TAX MAP WITH PARCEL NUMBERS

FIGURE 2B

IEG

Notes:

1. GS - Geoprobe boring; TS - Test pit soil; MW – Monitoring Well boring
2. Locations TS-1 to TS-7 and GS-1 to GS-16 are from Phase II ESA (2011)
3. Locations TS-8 to TS-17, GS-17 to GS-40 and MW-1 to MW-7 are from BCP RI (2013)
4. Locations TS-18 to TS-21 are from BCP RA (2015)
5. Hot spot source areas were excavated during BCP RA (2015)
6. Confirmatory soil sample locations are shown separately
7. See Figures 4 and 5 for residual contamination levels



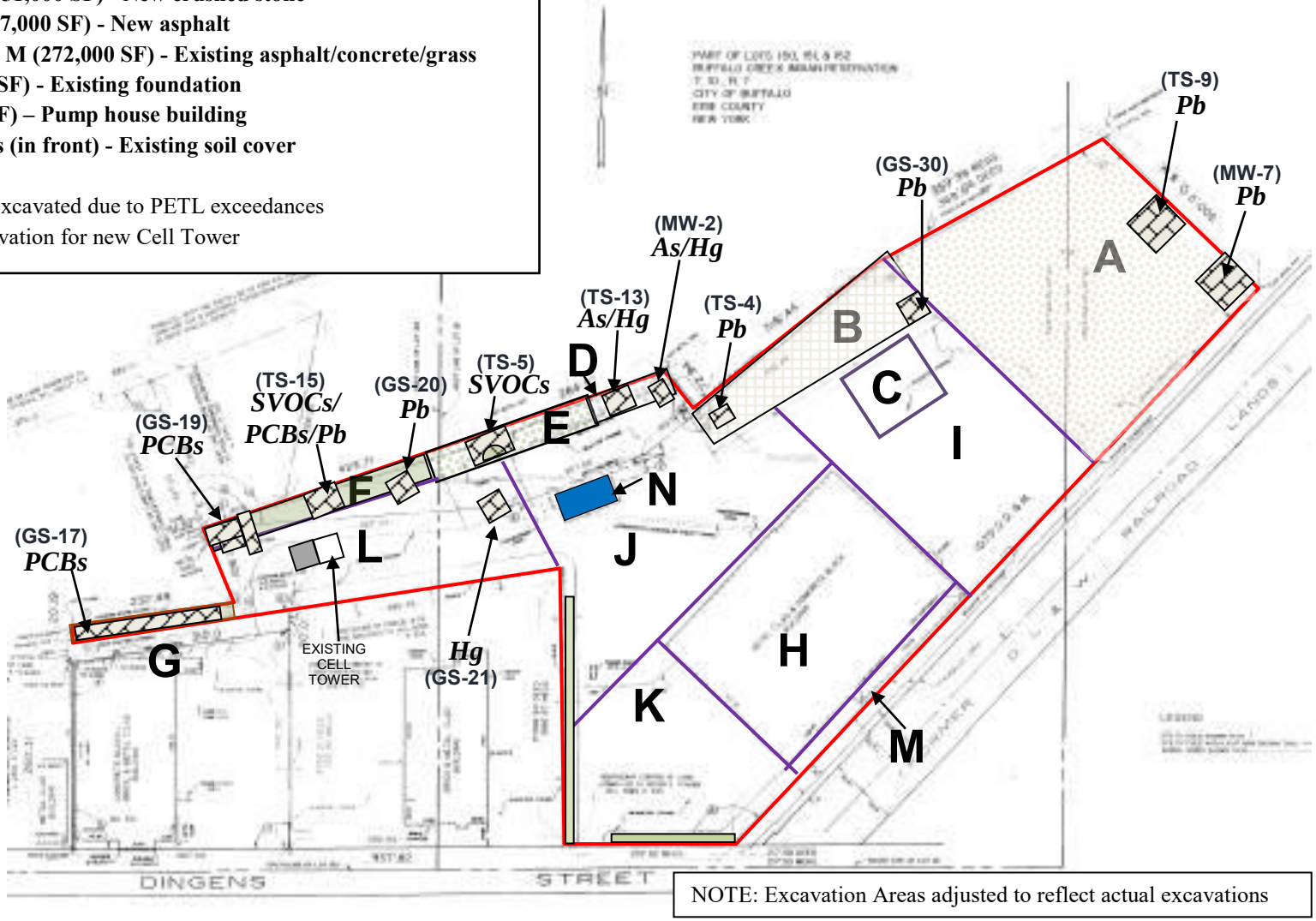
132 DINGENS STREET SITE, BUFFALO, NY
SITE LAYOUT: PHASE II/RI/RA SAMPLE LOCATIONS

FIGURE 2C

IEG

LEGENDS/NOTES:
COVER SYSTEM INCLUDES THE FOLLOWING:

- **Areas A, B, D (151,000 SF) - New crushed stone**
- **Areas F, L, G (57,000 SF) - New asphalt**
- **Areas C, I, J, K, M (272,000 SF) - Existing asphalt/concrete/grass**
- **Area H (81,300 SF) - Existing foundation**
- **Area N (4,000 SF) – Pump house building**
- **Vegetated Strips (in front) - Existing soil cover**
- Site Boundary
- Hot-spot areas excavated due to PETL exceedances
- Additional excavation for new Cell Tower



NOTE: Excavation Areas adjusted to reflect actual excavations

132 DINGENS STREET, BUFFALO, NY

SITE LAYOUT: HOT SPOT SOURCE AREAS EXCAVATED DURING RA

FIGURE 2D

IEG

NORTH

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

DINGENS STREET

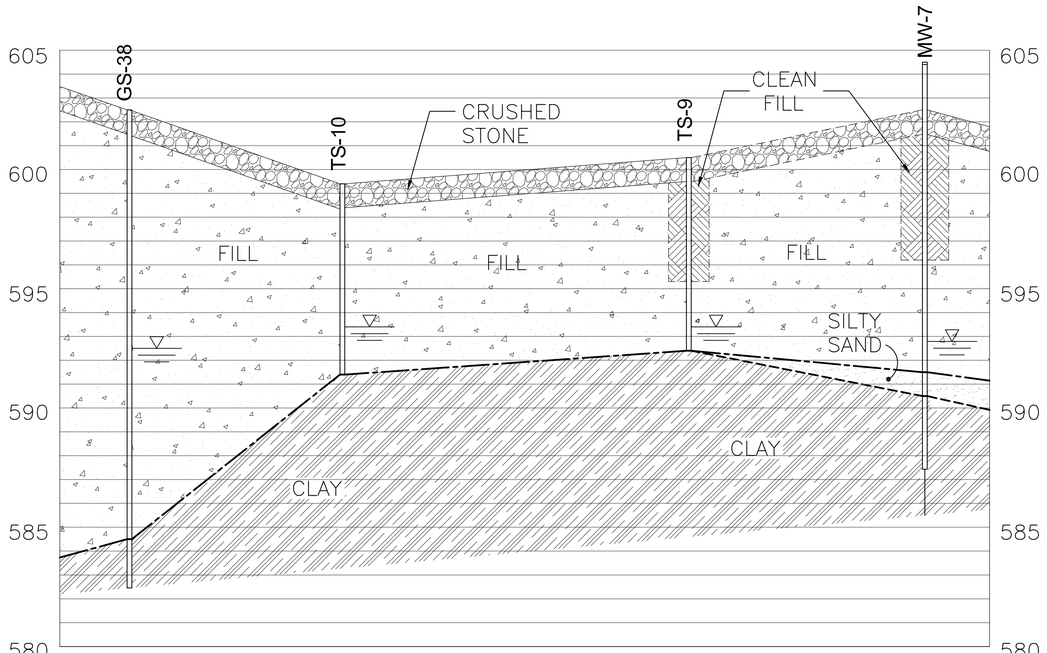
NOTES:
1. GEOLOGIC DATA FROM BCP RI REPORT (2015).
2. MONITORING WELLS (MWs) WERE DECOMMISSIONED DURING BCP REMEDIATION.

0 50 100
SCALE: 1"=50'-0"

LEGEND:
- TEST PIT/SOIL BORING
- GEOPROBE/SOIL BORING
- MONITORING WELL

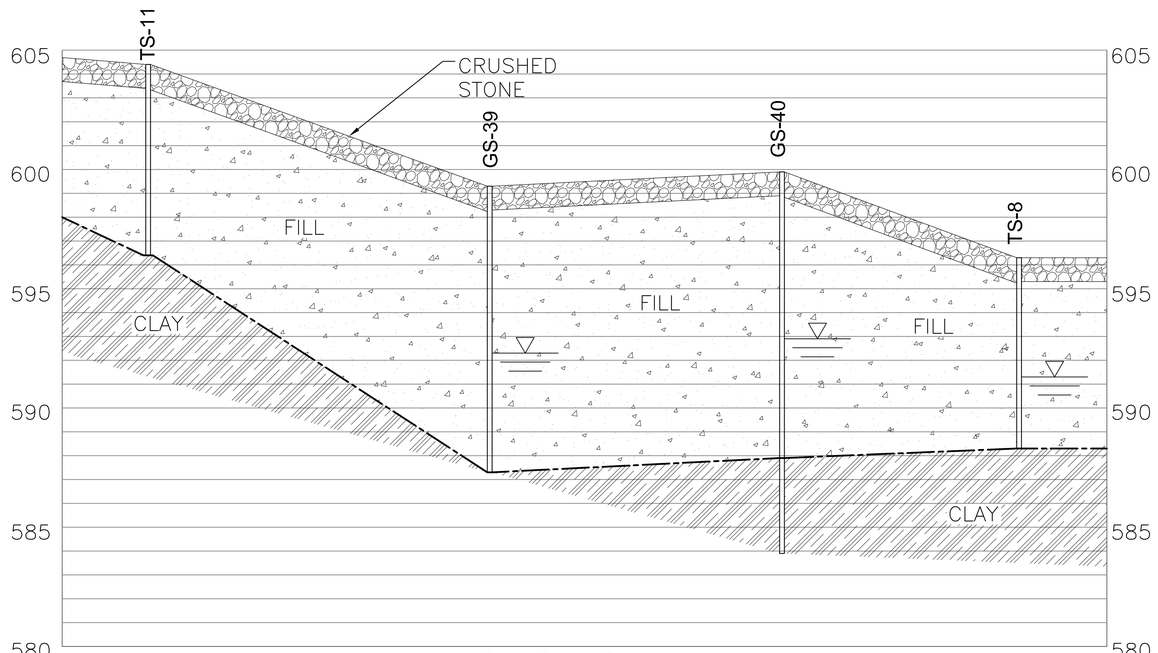
SUB-SURFACE CROSS SECTION LOCATION PLAN
132 DINGENS STREET
BUFFALO, NEW YORK

FIGURE
3-1



SECTION A-A'

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



SECTION 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

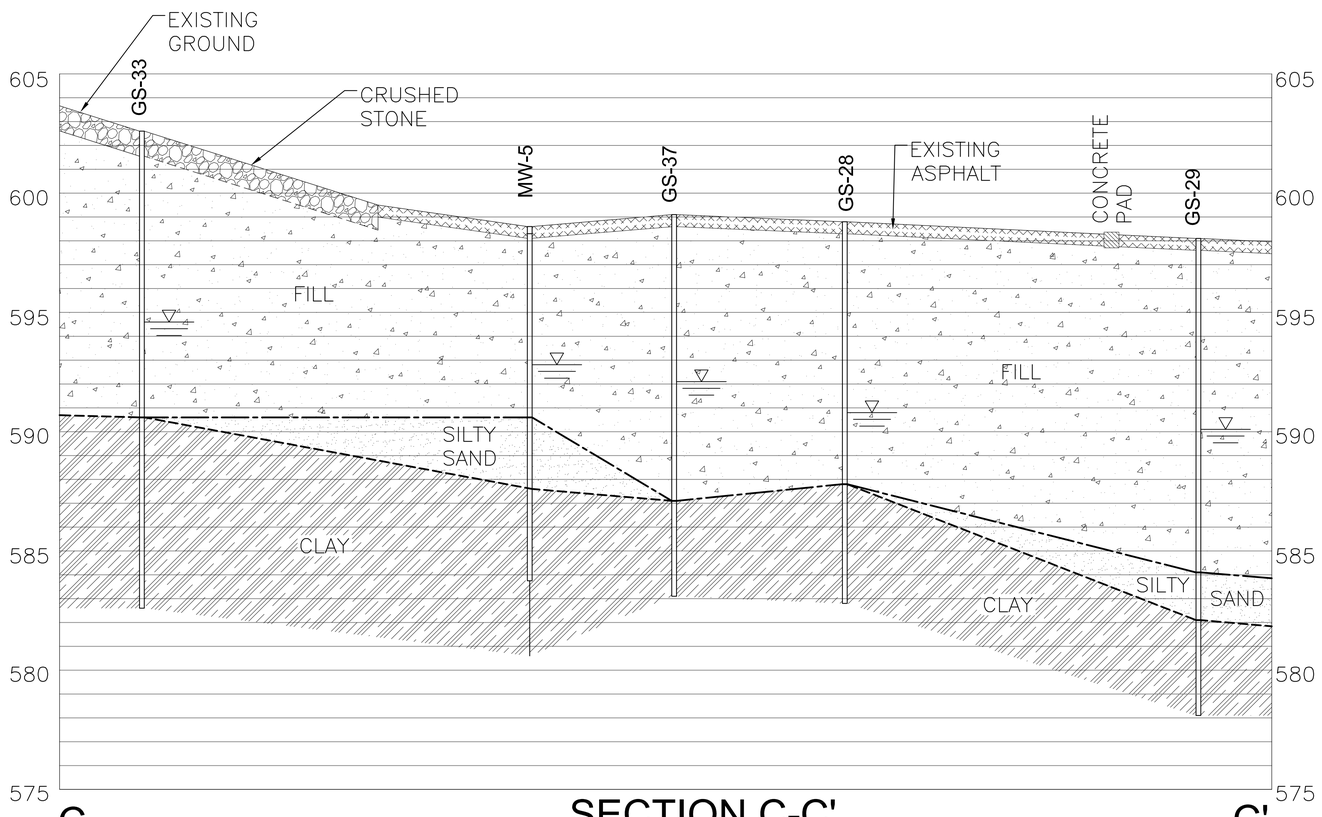
	FILL
	SILTY SAND
	CLAY
	CLEAN FILL
	CRUSHED STONE

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

FIGURE

3-2

MAR 2016



SECTION C-C'

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

LEGEND:

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

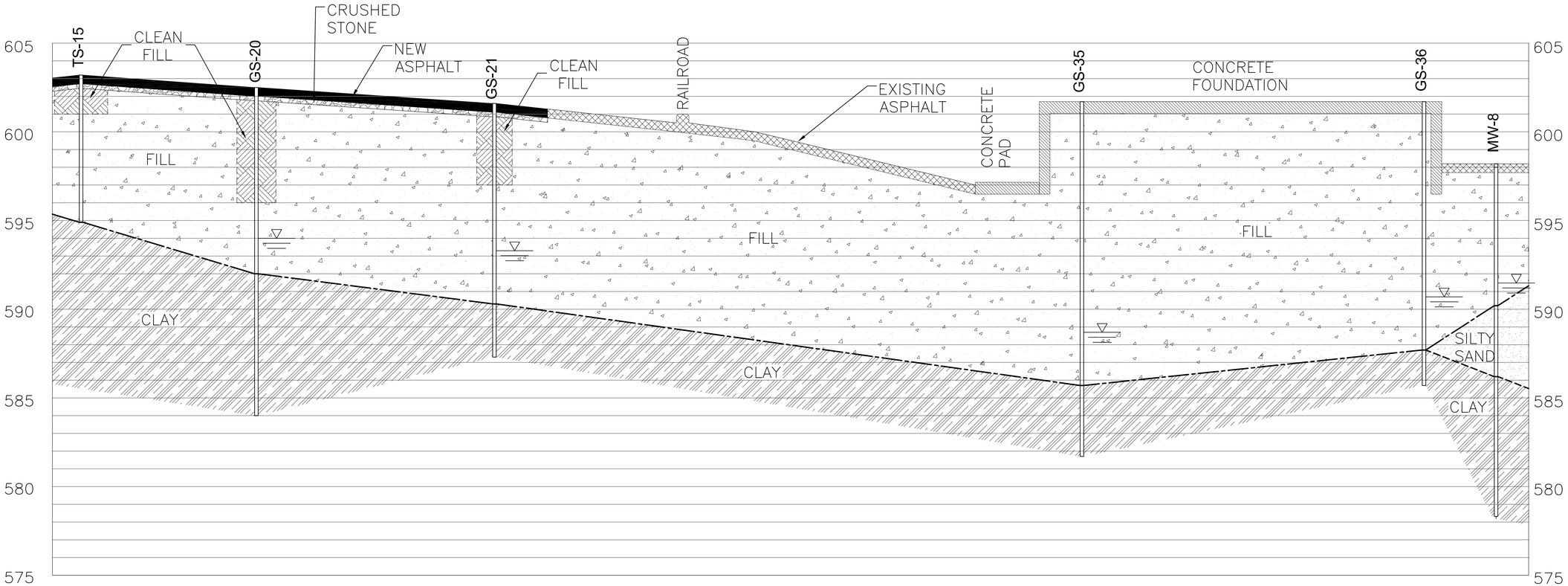
FILL
SILTY SAND
CLAY
CLEAN FILL
CRUSHED STONE

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

FIGURE

3-3

MAY 2016



SECTION D-D'

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

LEGEND:

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

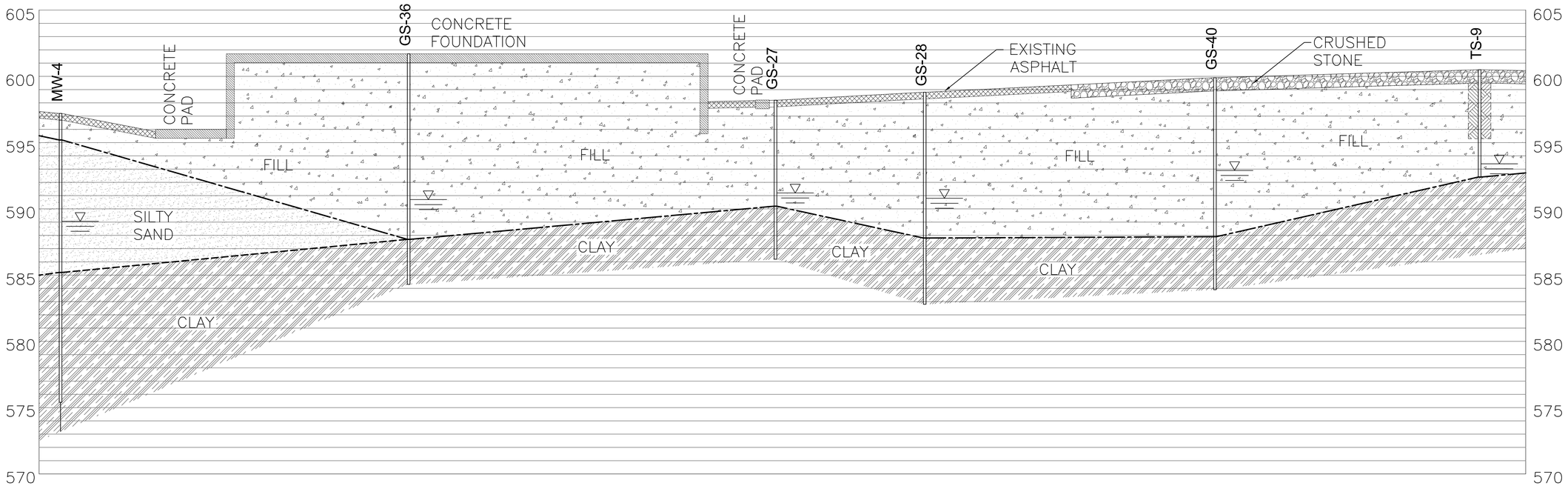
FILL
SILTY SAND
CLAY
CLEAN FILL
CRUSHED STONE

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

FIGURE

3-4

MAR 2016



SECTION E-E'

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

LEGEND:

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

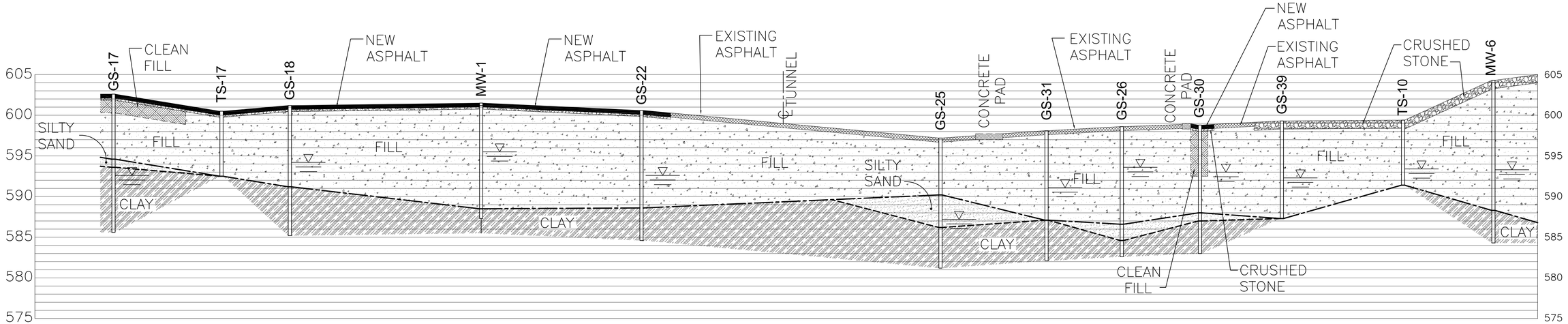
	FILL
	SILTY SAND
	CLAY
	CLEAN FILL
	CRUSHED STONE

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

FIGURE

3-5

MAY 2016



SECTION F-F'

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

LEGEND:

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

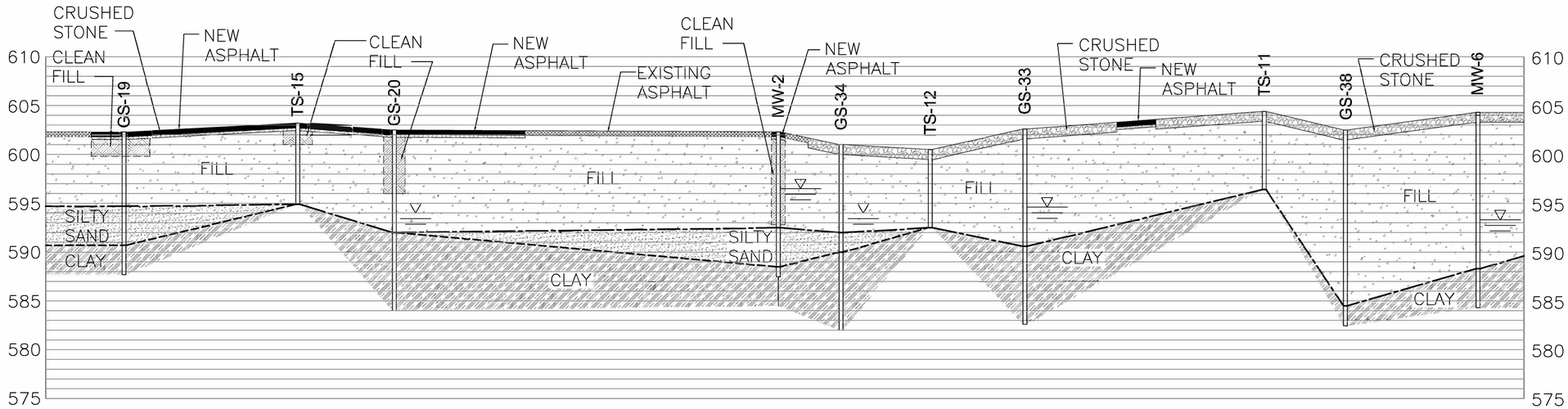
FILL
SILTY SAND
CLAY
CLEAN FILL
CRUSHED STONE

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

FIGURE

3-6

MAY 2016



SECTION G-G'

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
CLEAN FILL
CRUSHED STONE

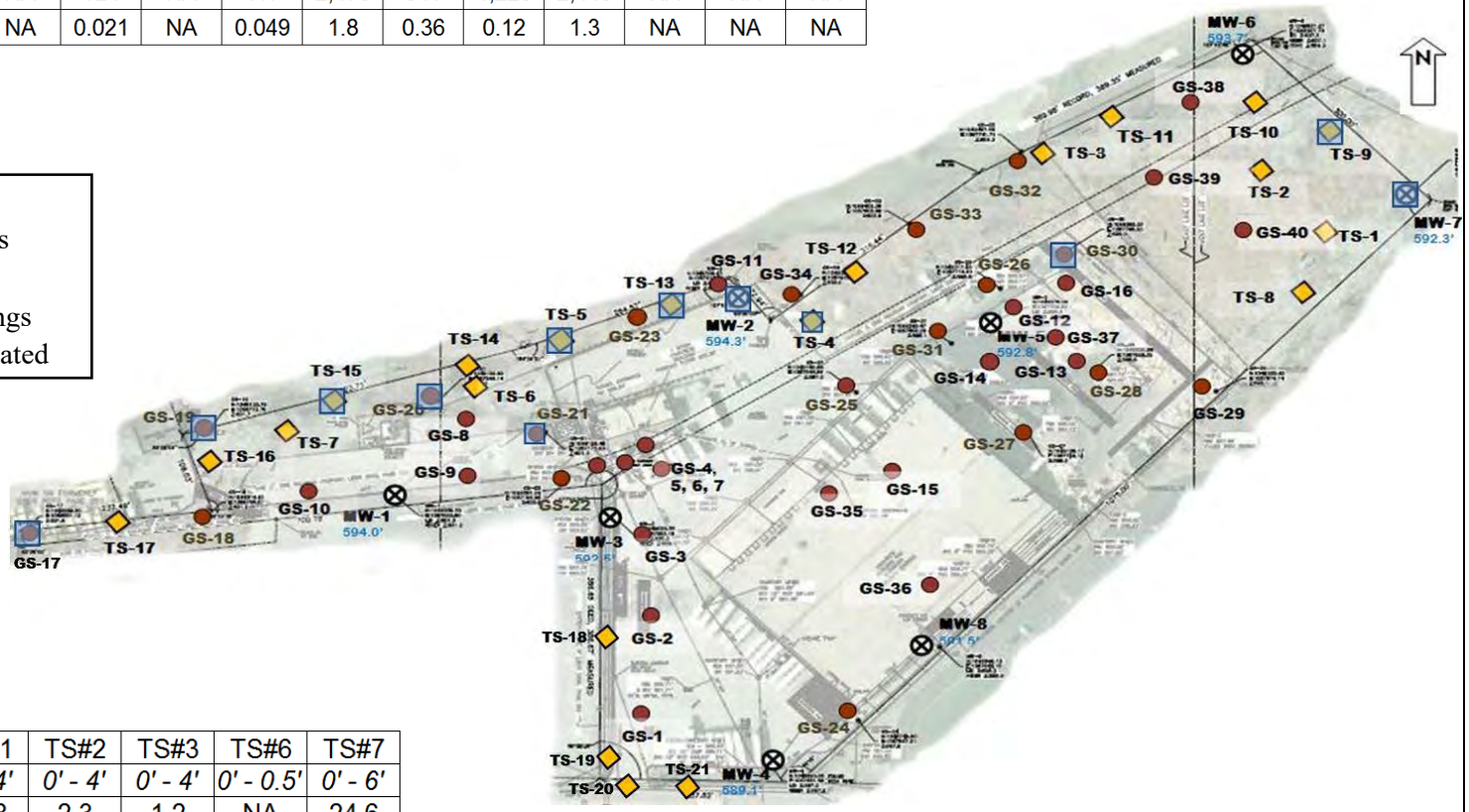
SUB-SURFACE CROSS SECTION
G-G'
132 DINGENS STREET
BUFFALO, NEW YORK

FIGURE
3-7

MAY 2016

SAMPLE	PETLs	GS#1	GS#2	GS#3	GS#7	GS#8	GS#9	GS#10	GS#11	GS#12	GS#13	GS#14	GS#16
DEPTH		*0' - 4'*	*4' - 8'*	*4' - 8'*	*8' - 12'*	*4' - 8'*	*8' - 12'*	*4' - 8'*	*4' - 8'*	*4' - 8'*	*8' - 12'*	*4' - 8'*	*8' - 12'*
TOTAL SVOCs	**500**	0.1	1.0	0.0	0.0	56.9	5.9	0.0	2.9	261.1	1.7	5.6	4.0
TOTAL PCBs	**1.0**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	**71**	15.0	NA	14.1	NA	8.5	36.7	21.4	20.5	34.4	NA	NA	NA
Lead	**5,000**	549	NA	124	NA	417	2,470	641	1,220	2,440	NA	NA	NA
Mercury	**5.7**	0.051	NA	0.021	NA	0.049	1.8	0.36	0.12	1.3	NA	NA	NA

LEGEND
- Geoprobe Soil Borings
- Test Pit Soil
- Monitoring Well borings
- Hot Spot Areas Excavated



SAMPLE	PETLs	TS#1	TS#2	TS#3	TS#6	TS#7
DEPTH		*0' - 4'*	*0' - 4'*	*0' - 4'*	*0' - 0.5'*	*0' - 6'*
TOTAL SVOCs	**500**	10.8	2.3	1.2	NA	24.6
TOTAL PCBs	**1.0**	NA	NA	NA	ND	NA
Arsenic	**71**	25.3	15	1.5	5.1	20.4
Lead	**5,000**	4160	2970	6.5	40.5	1030
Mercury	**5.7**	0.63	0.42	ND	0.1	2.3

Notes: 1. Remaining contamination shown on this figure is below CSCOs/PETLs for this site
2. Concentrations are in mg/Kg; sample depths in feet bgs
3. NA=Not analyzed; ND=Not Detected
4. See Figure 5 for confirmatory soil results at hot spot excavations during RA
5. See Appendix G for full listing of analytical results from RI Report (2015)

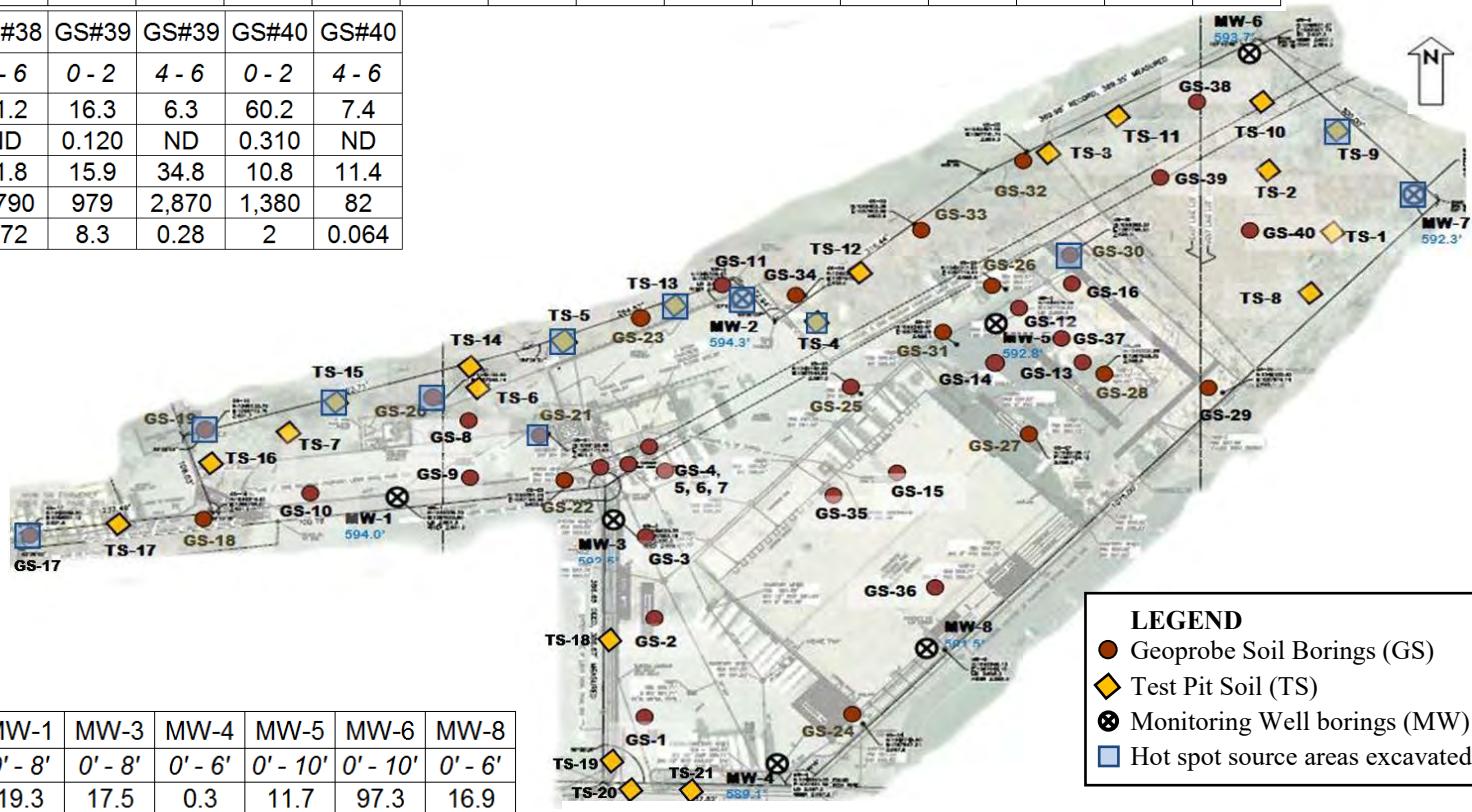
132 DINGENS STREET SITE, BUFFALO, NY
REMAINING CONTAMINATION – PHASE II SOILS

FIGURE 4A

IEG

SAMPLE	PETLs	GS#18	GS#22	GS#23	GS#24	GS#25	GS#26	GS#27	GS#28	GS#29	GS#31	GS#32	GS#33	GS#34	GS#35	GS#36
DEPTH		*0 - 5*	*2 - 6*	*4 - 8*	*1 - 5*	*1 - 5*	*1 - 5*	*1 - 5*	*1 - 5*	*1 - 5*	*1 - 5*	*1 - 5*	*1 - 5*	*1 - 5*	*6 - 8*	*9 - 10*
TOTAL SVOCs	500	62.6	24.6	14.7	9.8	6.5	0.1	8.5	1.8	15.2	6.9	231.1	94.5	21.5	13.9	4.5
TOTAL PCBs	1.0	0.717	ND	ND	ND	ND	0.190	ND	0.140	ND	ND	ND	ND	ND	ND	ND
Arsenic	71	43.1	34.8	10.8	11.4	6.7	2.3	10.0	27.8	2.8	9.7	19.0	21.1	37.2	12.3	43.1
Lead	5,000	165	2,870	1,380	82	229	93	433	2,370	25	1,320	3,150	2,640	1,040	1,080	165
Mercury	5.7	0.087	0.28	2	0.064	0.045	0.02	1.1	3.6	0.063	1.3	0.37	0.44	0.54	0.85	0.087

SAMPLE	GS#37	GS#38	GS#39	GS#39	GS#40	GS#40
DEPTH	*4 - 6*	*4 - 6*	*0 - 2*	*4 - 6*	*0 - 2*	*4 - 6*
TOTAL SVOCs	4.1	91.2	16.3	6.3	60.2	7.4
TOTAL PCBs	ND	ND	0.120	ND	0.310	ND
Arsenic	14.5	21.8	15.9	34.8	10.8	11.4
Lead	1,760	9,790	979	2,870	1,380	82
Mercury	0.57	0.72	8.3	0.28	2	0.064



SAMPLE	PETLs	MW-1	MW-3	MW-4	MW-5	MW-6	MW-8
DEPTH		*0' - 8'*	*0' - 8'*	*0' - 6'*	*0' - 10'*	*0' - 10'*	*0' - 6'*
TOTAL SVOCs	500	19.3	17.5	0.3	11.7	97.3	16.9
TOTAL PCBs	1.0	ND	ND	ND	ND	0.088	ND
Arsenic	71	7.8	14.4	11.0	8.7	17.0	19.5
Lead	5,000	126	1,170	19	1,330	480	180
Mercury	5.7	1.60	0.80	ND	0.65	0.44	0.26

LEGEND
- Geoprobe Soil Borings (GS)
- Test Pit Soil (TS)
- Monitoring Well borings (MW)
- Hot spot source areas excavated

Notes:
1. Remaining contamination shown on this figure is below CSCOs/PETLs for this site
2. Concentrations are in mg/Kg; sample depths in feet bgs
3. NA=Not analyzed; ND=Not Detected
4. See Figure 5 for confirmatory soil results at hot spot excavations during RA
5. See Appendix G for full listing of analytical results from RI Report (2015)

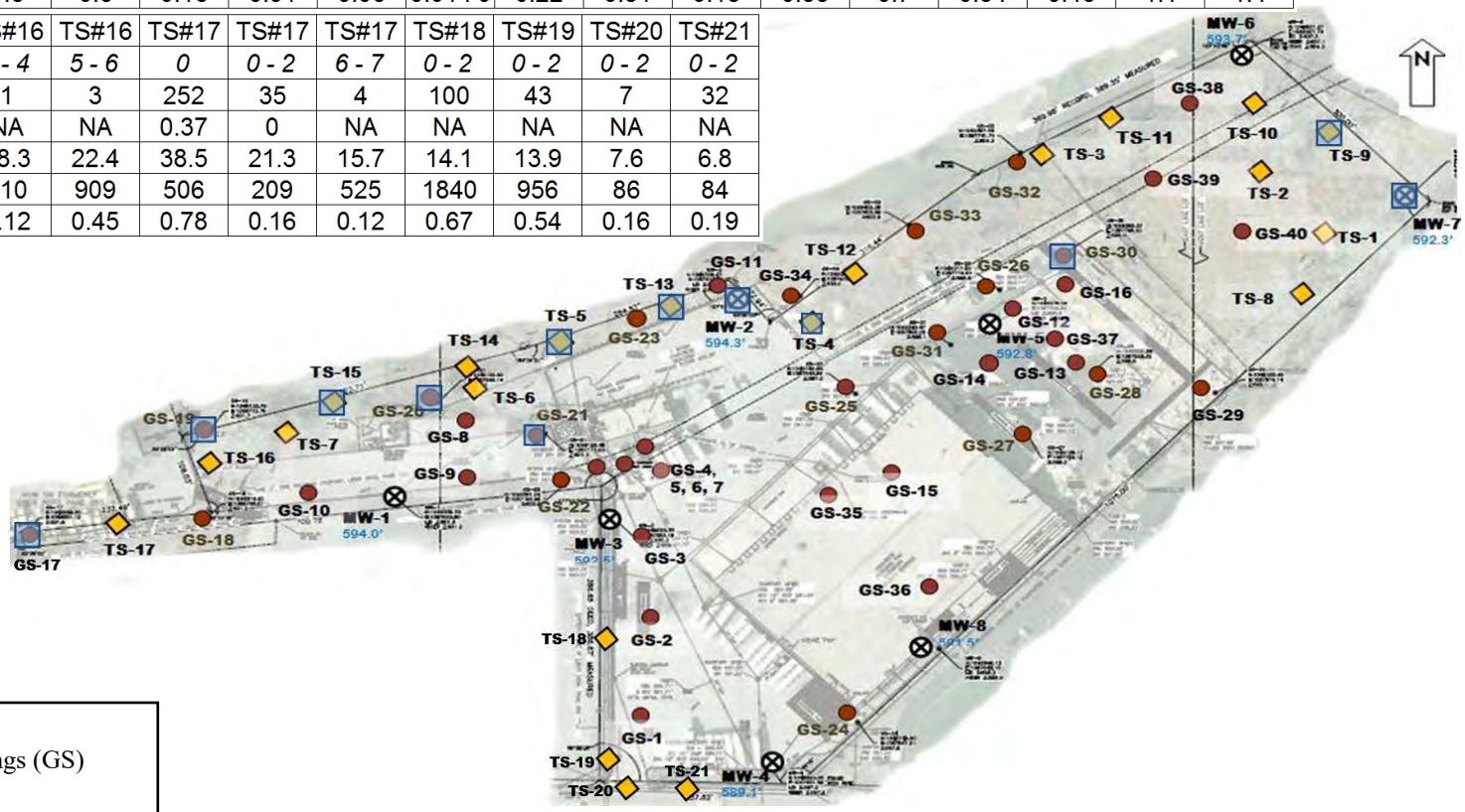
132 DINGENS STREET SITE, BUFFALO, NY
REMAINING CONTAMINATION – RI SOIL BORINGS

FIGURE 4B

IEG

SAMPLE	PETLs	TS#8	TS#8	TS#8	TS#10	TS#10	TS#10	TS#11	TS#11	TS#11	TS#12	TS#12	TS#12	TS#14	TS#14	TS#14
DEPTH		*0*	*2*	*6 - 7*	*0*	*2 - 4*	*4 - 7*	*0*	*1 - 4*	*5 - 8*	*0*	*0 - 2*	*2 - 8*	*0*	*0 - 2*	*4 - 8*
TOTAL SVOCs	**500**	36	44	2.7	66	5	1	372	19	20	121	88	1	72	48	107
TOTAL PCBs	**1.0**	0	0.28	NA	0.08	NA	NA	0	0.25	0.71	0	0	0	0.20	NA	NA
Arsenic	**71**	13.4	22.8	11.4	23.1	18.2	11.6	17.8	11.8	6.6	13.5	18.9	18	12.1	16.1	15.2
Lead	**5,000**	1010	2760	241	1430	262	29.5	332	307	414	515	1630	1530	821	1120	1260
Mercury	**5.7**	1.6	0.6	0.16	0.91	0.06	0.014 J	0.22	0.51	0.15	0.38	0.7	0.34	0.46	1.1	1.4

SAMPLE	PETLs	TS#16	TS#16	TS#17	TS#17	TS#17	TS#18	TS#19	TS#20	TS#21
DEPTH		*3 - 4*	*5 - 6*	*0*	*0 - 2*	*6 - 7*	*0 - 2*	*0 - 2*	*0 - 2*	*0 - 2*
TOTAL SVOCs	**500**	1	3	252	35	4	100	43	7	32
TOTAL PCBs	**1.0**	NA	NA	0.37	0	NA	NA	NA	NA	NA
Arsenic	**71**	18.3	22.4	38.5	21.3	15.7	14.1	13.9	7.6	6.8
Lead	**5,000**	410	909	506	209	525	1840	956	86	84
Mercury	**5.7**	0.12	0.45	0.78	0.16	0.12	0.67	0.54	0.16	0.19



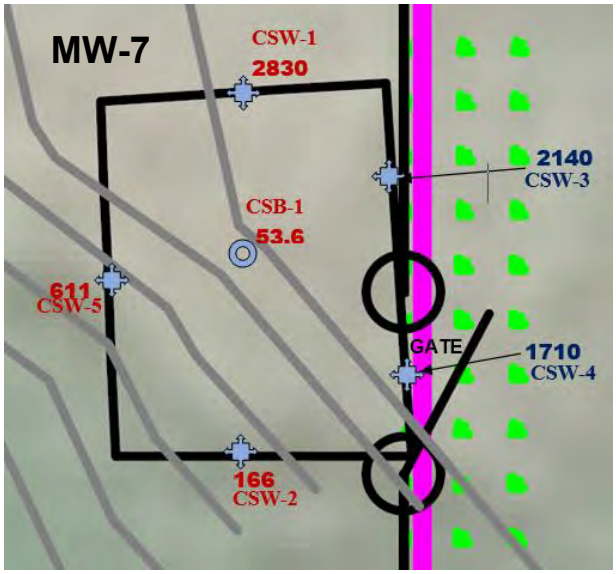
LEGEND
- Geoprobe Soil Borings (GS)
- Test Pit Soil (TS)
- Monitoring Well borings (MW)
- Hot spot source areas excavated

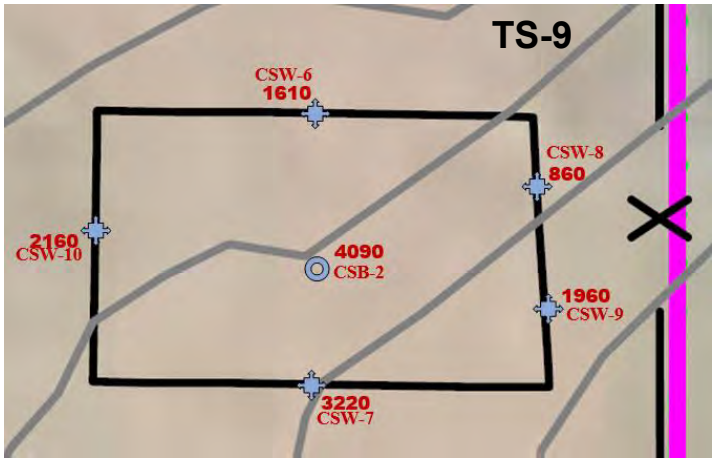
Notes:
1. Remaining contamination shown on this figure is below CSCOs/PETLs for this site
2. Concentrations are in mg/Kg; sample depths in feet bgs
3. NA=Not analyzed; ND=Not Detected; TS-8 to 17 from RI and TS-18 to 21 from RA
4. See Figure 5 for confirmatory soil results at hot spot excavations during RA
5. See Appendix G for full listing of analytical results

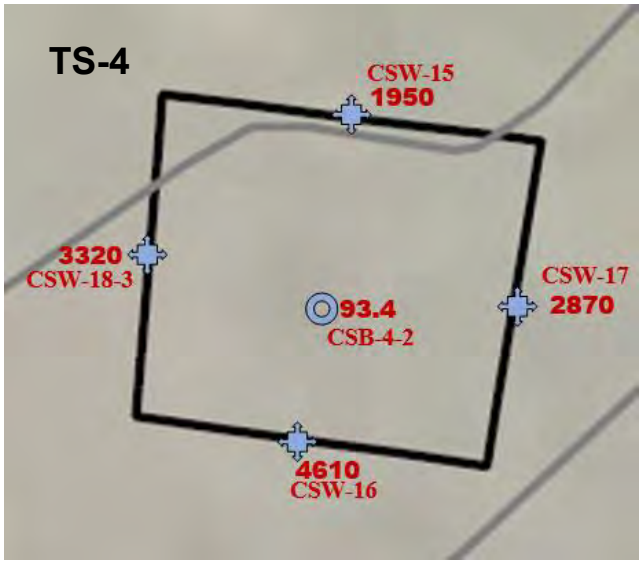
132 DINGENS STREET SITE, BUFFALO, NY
REMAINING CONTAMINATION – RI/RA TEST PITS

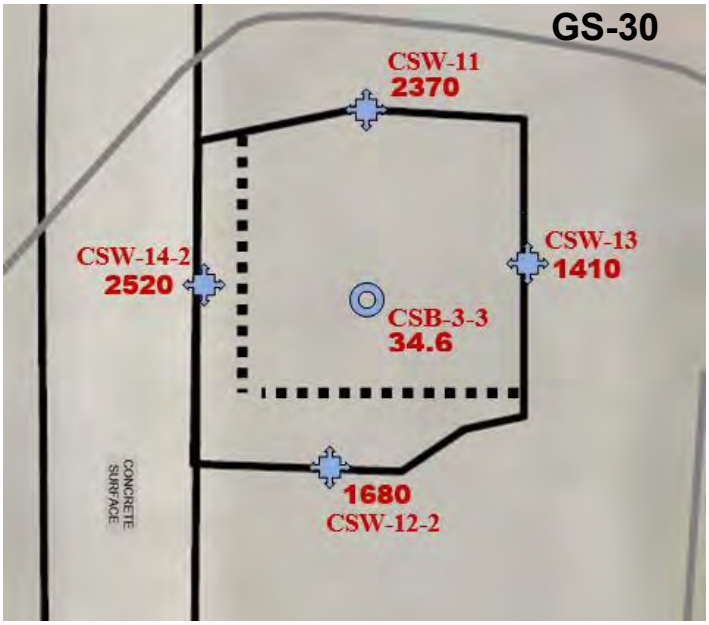
FIGURE 4C

IEG









LEGEND

- Limits of excavation
- Property Boundary
- Fence
- CSW – Confirmatory soil wall samples
- CSB – Confirmatory soil bottom samples
- Vegetation
- Intermediate excavation
- 4610 Total Lead mg/Kg (within property)
- 1710 Total Lead mg/Kg (property boundary)

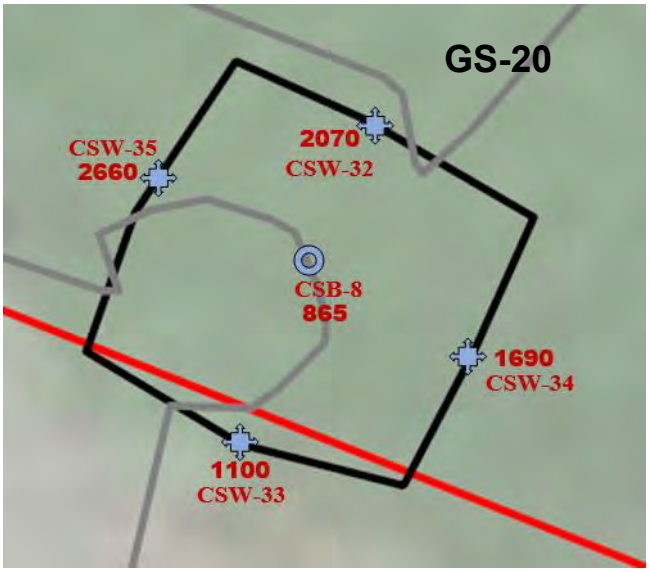
PETL:
Pb = 5000 mg/Kg

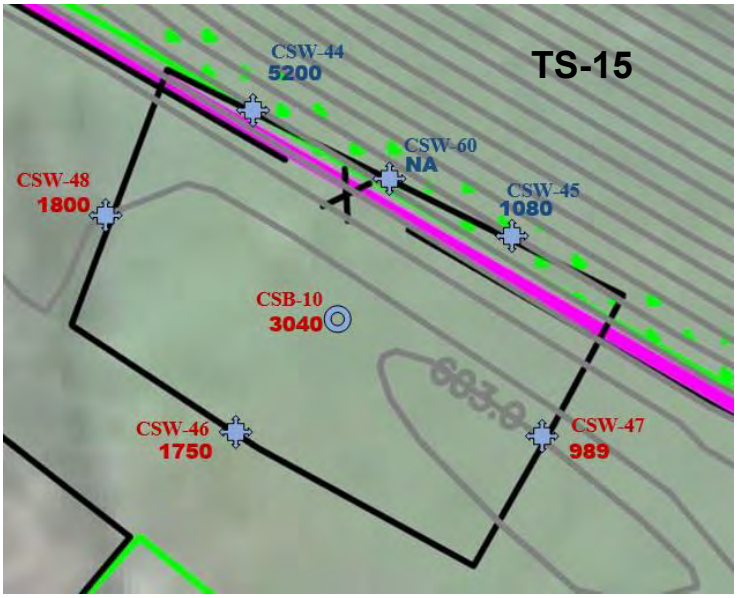
Note: Remaining contamination shown is below PETL for this site

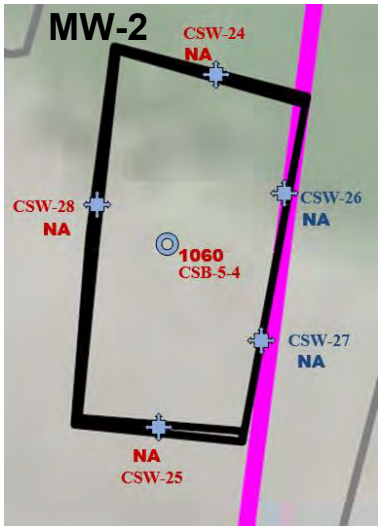
132 DINGENS STREET SITE, BUFFALO, NY
REMAINING SOIL CONTAMINATION
RA FINAL CONFIRMATORY SAMPLES - LEAD

FIGURE 5A-1

IEG







PETL:
Pb = 5000 mg/Kg

LEGEND

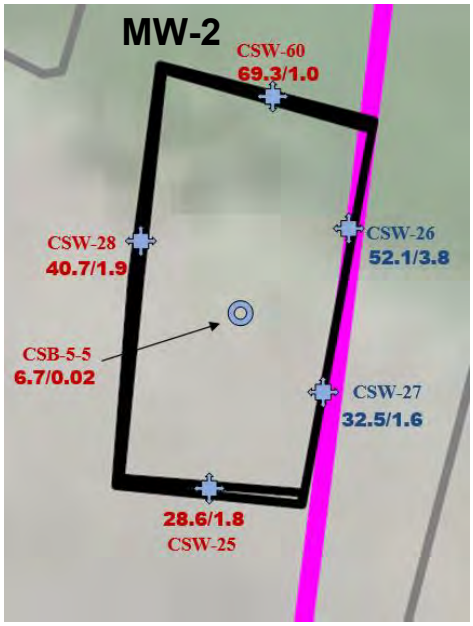
- Limits of excavation
- Property Boundary
- Fence
- Overhead electric
- CSW – Confirmatory soil wall samples
- CSB – Confirmatory soil bottom samples
- Vegetation
- 3040 Total Lead mg/Kg (within property)
- 1080 Total Lead mg/Kg (property boundary
  (NA = Not analyzed)

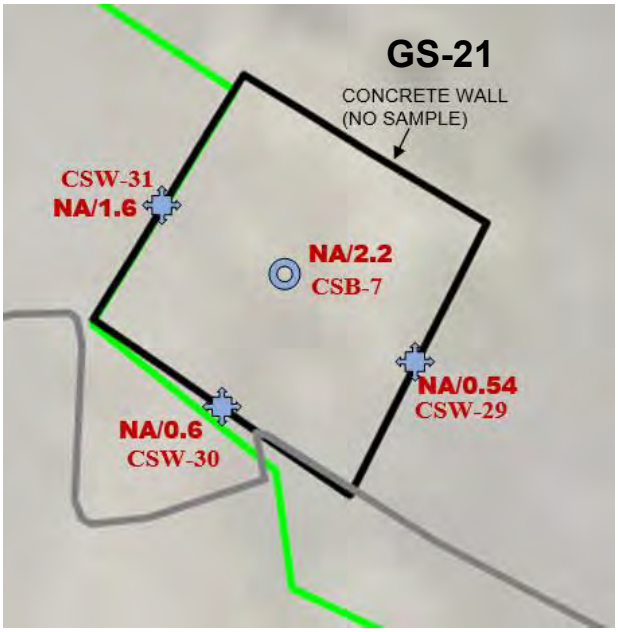
Note: Remaining contamination shown is below PETL for this site

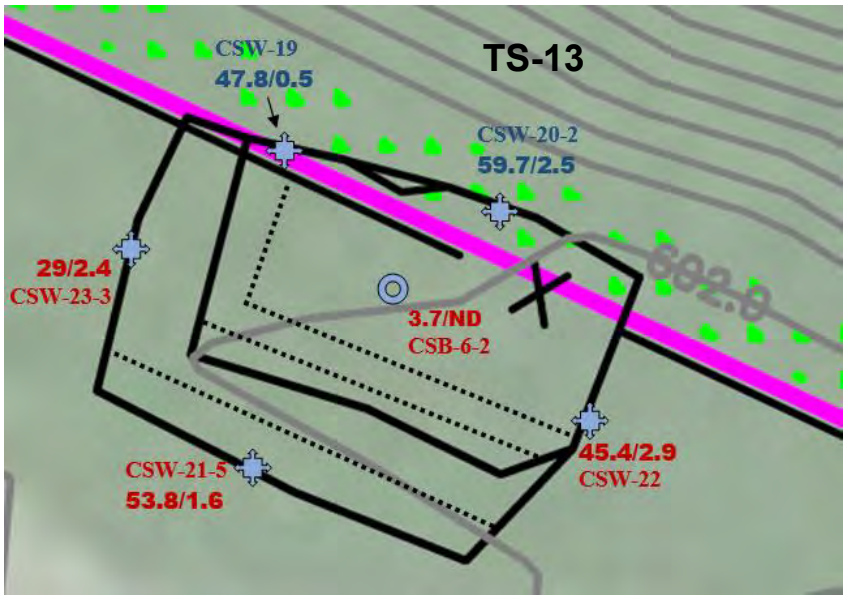
132 DINGENS STREET SITE, BUFFALO, NY
REMAINING SOIL CONTAMINATION
RA FINAL CONFIRMATORY SAMPLES - LEAD

FIGURE 5A-2

IEG







LEGEND

- Limits of excavation
- Property Boundary
- Fence
- Overhead electric
- CSW – Confirmatory soil wall samples
- CSB – Confirmatory soil bottom samples
- Vegetation
- Intermediate excavation
- 53.8/1.6 Total As/Hg mg/Kg (within property)
- 59.7/2.5 Total As/Hg mg/Kg (property boundary)

(NA = Not Analyzed)

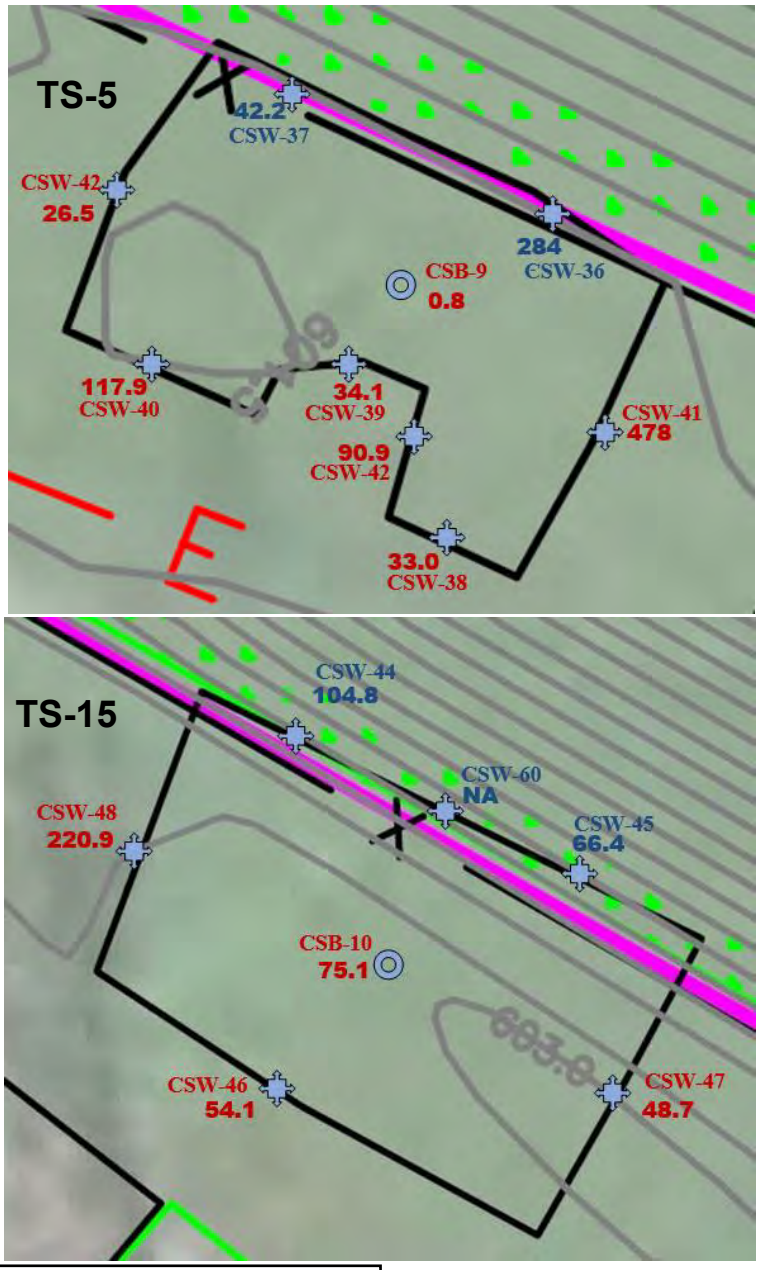
PETLs:
As = 71 mg/Kg
Hg = 5.7 mg/Kg

Note:
Remaining contamination shown is below PETL for this site

132 DINGENS STREET SITE, BUFFALO, NY
REMAINING SOIL CONTAMINATION
RA FINAL CONFIRMATORY SAMPLES – ARSENIC/MERCURY

FIGURE 5B

IEG



LEGEND

- Limits of excavation
- Property Boundary
- Overhead electric
- Fence
- Delineates existing/new asphalt
- CSW – Confirmatory soil wall samples
- CSB – Confirmatory soil bottom samples
- Vegetation
- 75.1 Total SVOCs mg/Kg (within property)
- 66.4 Total SVOCs mg/Kg (property boundary)

(NA = Not analyzed)

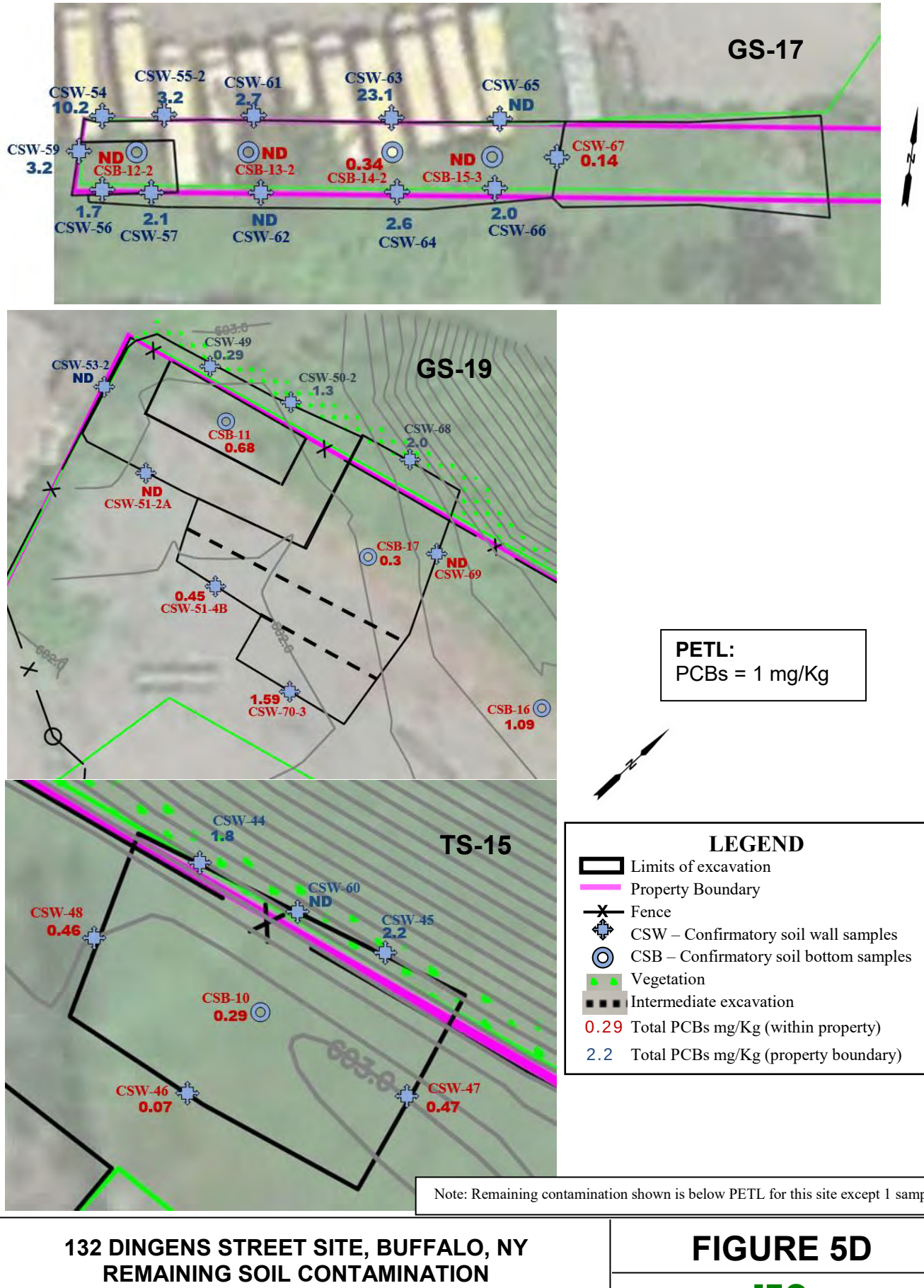
PETL:
SVOCs = 500 mg/Kg

Note: Remaining contamination shown is below PETL for this site

132 DINGENS STREET SITE, BUFFALO, NY
REMAINING SOIL CONTAMINATION
RA CONFIRMATORY SAMPLES - SVOCs

FIGURE 5C

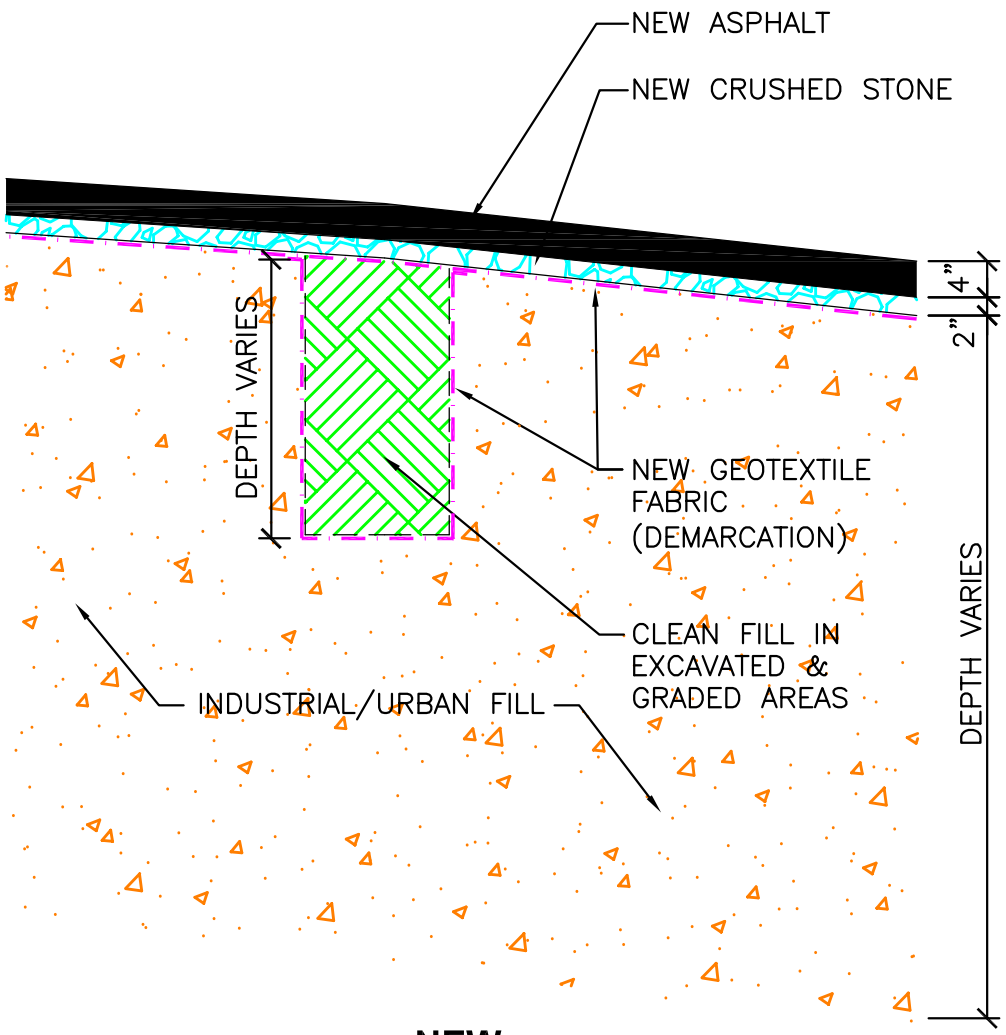
IEG



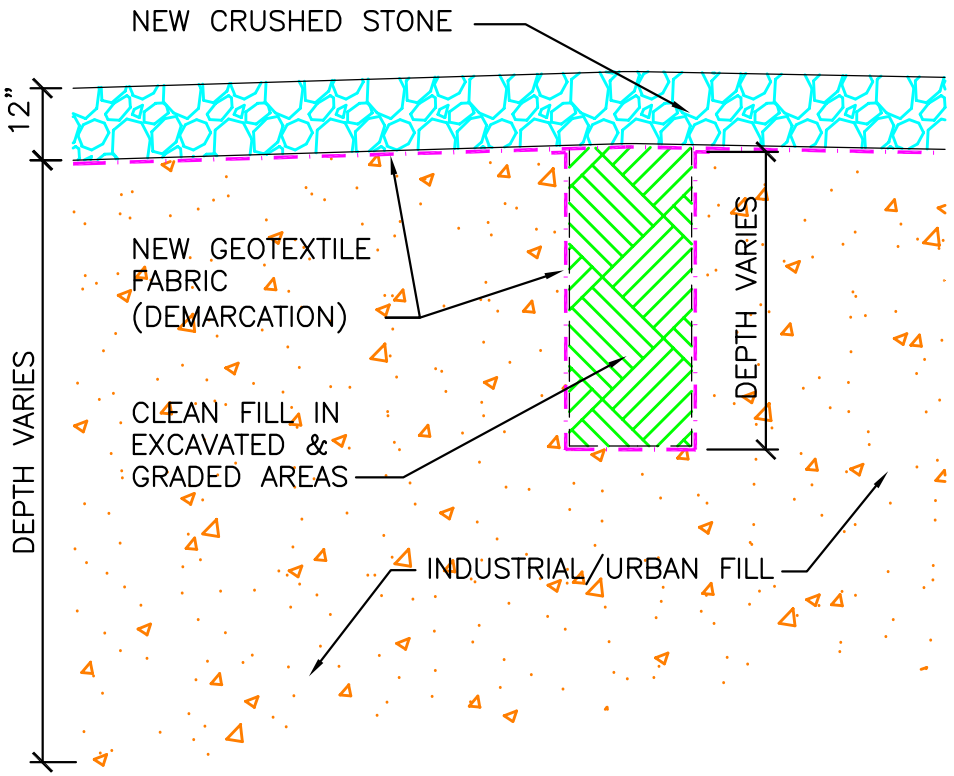
132 DINGENS STREET SITE, BUFFALO, NY
REMAINING SOIL CONTAMINATION
RA FINAL CONFIRMATORY SAMPLES - PCBs

FIGURE 5D

IEG



NEW
ASPHALT COVER



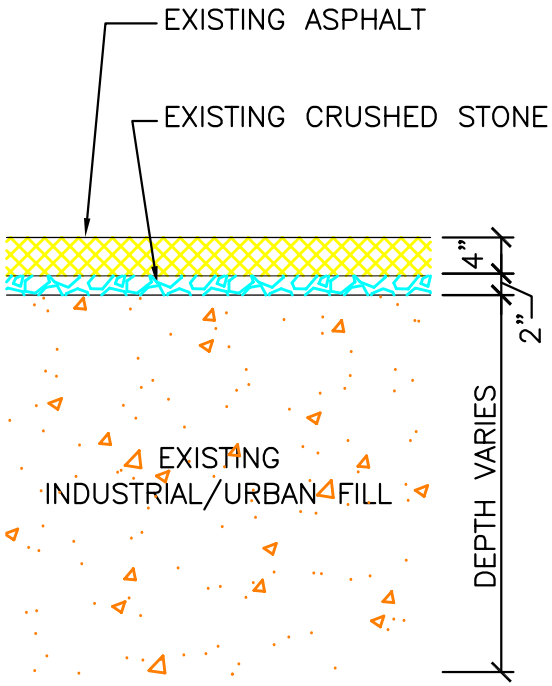
NEW
CRUSHED STONE COVER

NOT TO SCALE

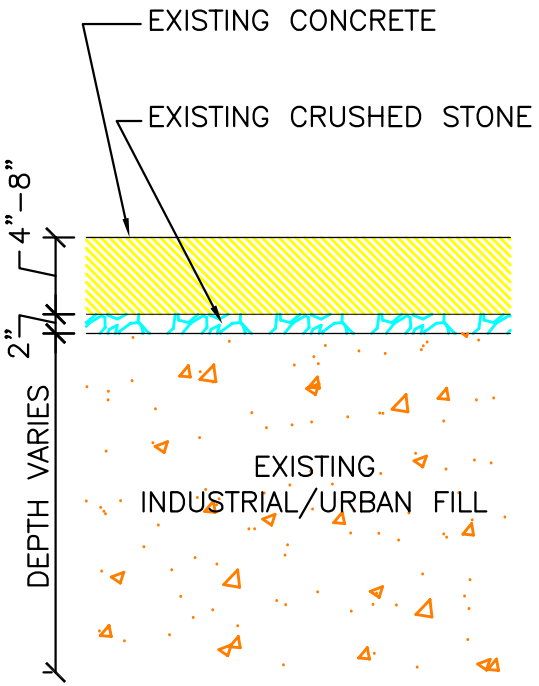
ENGINEERING CONTROLS - NEW COVER SYSTEM
132 DINGENS STREET
BUFFALO, NEW YORK

FIGURE 6A

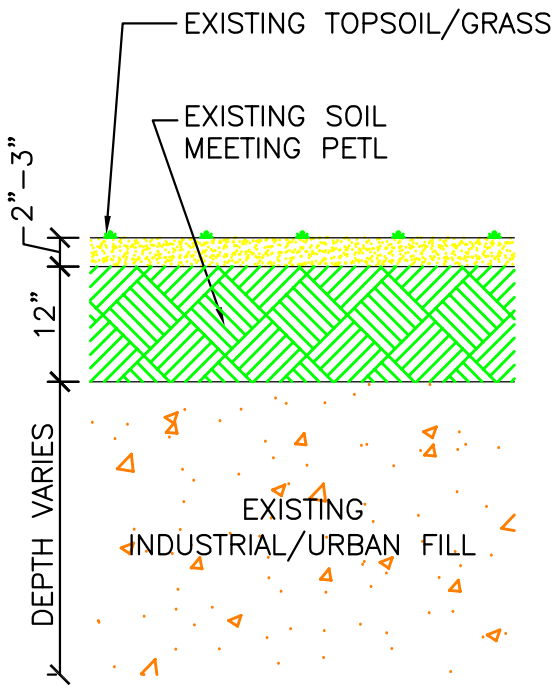
SEPT 2016



EXISTING ASPHALT COVER



EXISTING CONCRETE COVER



EXISTING TOPSOIL COVER

NOT TO SCALE

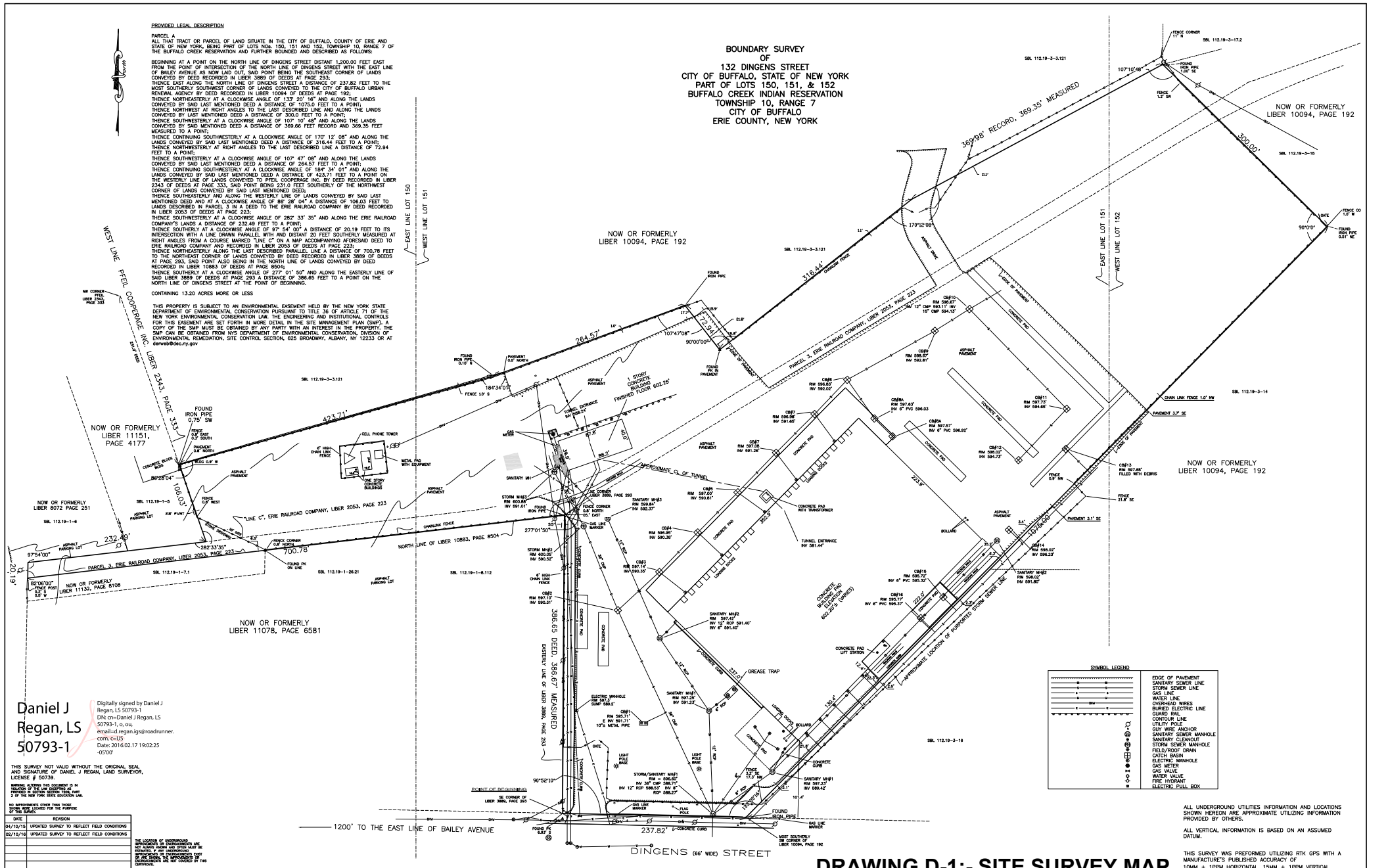
ENGINEERING CONTROLS - EXISTING COVER SYSTEM
132 DINGENS STREET
BUFFALO, NEW YORK

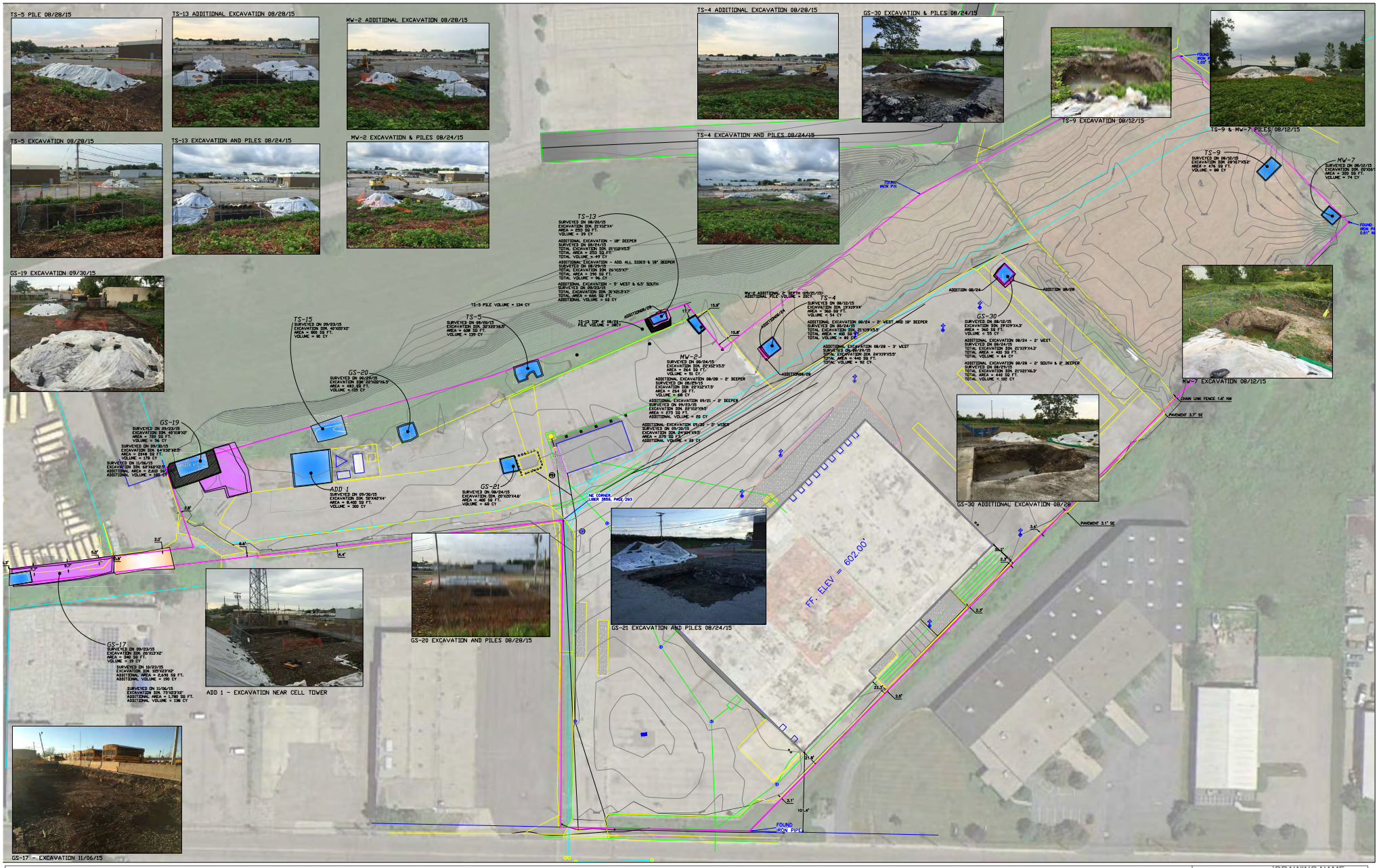
FIGURE 6B

SEPT 2016

SMP
132 DINGENS ST. SITE

DRAWINGS


BOUNDARY SURVEY
OF
132 DINGENS STREET
CITY OF BUFFALO, STATE OF NEW YORK
PART OF LOTS 150, 151, & 152
BUFFALO CREEK INDIAN RESERVATION
TOWNSHIP 10, RANGE 7
CITY OF BUFFALO
ERIE COUNTY, NEW YORK
PROVIDED LEGAL DESCRIPTION
PARCEL A
ALL THAT TRACT OR PARCEL OF LAND SITUATE IN THE CITY OF BUFFALO, COUNTY OF ERIE AND STATE OF NEW YORK, BEING PART OF LOTS Nos. 150, 151 AND 152, TOWNSHIP 10, RANGE 7 OF THE BUFFALO CREEK RESERVATION AND FURTHER BOUNDED AND DESCRIBED AS FOLLOWS:
BEGINNING AT A POINT ON THE NORTH LINE OF DINGENS STREET DISTANT 1,200.00 FEET EAST FROM THE POINT OF INTERSECTION OF THE NORTH LINE OF DINGENS STREET WITH THE EAST LINE OF BAILEY AVENUE AS NOW LAID OUT, SAID POINT BEING THE SOUTHEAST CORNER OF LANDS CONVEYED BY DEED RECORDED IN LIBER 3889 OF DEEDS AT PAGE 293;
THENCE EAST ALONG THE NORTH LINE OF DINGENS STREET A DISTANCE OF 237.82 FEET TO THE MOST SOUTHERLY SOUTHWEST CORNER OF LANDS CONVEYED TO THE CITY OF BUFFALO URBAN RENEWAL AGENCY BY DEED RECORDED IN LIBER 10094 OF DEEDS AT PAGE 192;
THENCE NORTHEASTERLY AT A CLOCKWISE ANGLE OF 133° 20' 16" AND ALONG THE LANDS CONVEYED BY SAID LAST MENTIONED DEED A DISTANCE OF 1075.0 FEET TO A POINT;
THENCE NORTHWEST AT RIGHT ANGLES TO THE LAST DESCRIBED LINE AND ALONG THE LANDS CONVEYED BY LAST MENTIONED DEED A DISTANCE OF 300.0 FEET TO A POINT;
THENCE SOUTHWESTERLY AT A CLOCKWISE ANGLE OF 107° 10' 48" AND ALONG THE LANDS CONVEYED BY SAID MENTIONED DEED A DISTANCE OF 369.66 FEET RECORD AND 369.35 FEET MEASURED TO A POINT;
THENCE CONTINUING SOUTHWESTERLY AT A CLOCKWISE ANGLE OF 170° 12' 08" AND ALONG THE LANDS CONVEYED BY SAID LAST MENTIONED DEED A DISTANCE OF 316.44 FEET TO A POINT;
THENCE NORTHWESTERLY AT RIGHT ANGLES TO THE LAST DESCRIBED LINE A DISTANCE OF 72.94 FEET TO A POINT;
THENCE SOUTHWESTERLY AT A CLOCKWISE ANGLE OF 107° 47' 08" AND ALONG THE LANDS CONVEYED BY SAID LAST MENTIONED DEED A DISTANCE OF 264.57 FEET TO A POINT;
THENCE CONTINUING SOUTHWESTERLY AT A CLOCKWISE ANGLE OF 184° 34' 01" AND ALONG THE LANDS CONVEYED BY SAID LAST MENTIONED DEED A DISTANCE OF 423.71 FEET TO A POINT ON THE WESTERLY LINE OF LANDS CONVEYED TO PFEIL COOPERAGE INC. BY DEED RECORDED IN LIBER 2343 OF DEEDS AT PAGE 333, SAID POINT BEING 231.0 FEET SOUTHERLY OF THE NORTHWEST CORNER OF LANDS CONVEYED BY SAID LAST MENTIONED DEED;
THENCE SOUTHEASTERLY AND ALONG THE WESTERLY LINE OF LANDS CONVEYED BY SAID LAST MENTIONED DEED AND AT A CLOCKWISE ANGLE OF 86° 28' 04" A DISTANCE OF 106.03 FEET TO LANDS DESCRIBED IN PARCEL 3 IN A DEED TO THE ERIE RAILROAD COMPANY BY DEED RECORDED IN LIBER 2053 OF DEEDS AT PAGE 223;
THENCE SOUTHWESTERLY AT A CLOCKWISE ANGLE OF 282° 33' 35" AND ALONG THE ERIE RAILROAD COMPANY'S LANDS A DISTANCE OF 232.49 FEET TO A POINT;
THENCE SOUTHERLY AT A CLOCKWISE ANGLE OF 97° 54' 00" A DISTANCE OF 20.19 FEET TO ITS INTERSECTION WITH A LINE DRAWN PARALLEL WITH AND DISTANT 20 FEET SOUTHERLY MEASURED AT RIGHT ANGLES FROM A COURSE MARKED "LINE C" ON A MAP ACCOMPANYING AFORESAID DEED TO ERIE RAILROAD COMPANY AND RECORDED IN LIBER 2053 OF DEEDS AT PAGE 223;
THENCE NORTHEASTERLY ALONG THE LAST DESCRIBED PARALLEL LINE A DISTANCE OF 700.78 FEET TO THE NORTHEAST CORNER OF LANDS CONVEYED BY DEED RECORDED IN LIBER 3889 OF DEEDS AT PAGE 293, SAID POINT ALSO BEING IN THE NORTH LINE OF LANDS CONVEYED BY DEED RECORDED IN LIBER 10883 OF DEEDS AT PAGE 8504;
THENCE SOUTHEASTERLY AT A CLOCKWISE ANGLE OF 277° 01' 50" AND ALONG THE EASTERLY LINE OF SAID LIBER 3889 OF DEEDS AT PAGE 293 A DISTANCE OF 386.65 FEET TO A POINT ON THE NORTH LINE OF DINGENS STREET AT THE POINT OF BEGINNING.
CONTAINING 13.20 ACRES MORE OR LESS
THIS PROPERTY IS SUBJECT TO AN ENVIRONMENTAL EASEMENT HELD BY THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION PURSUANT TO TITLE 36 OF ARTICLE 71 OF THE NEW YORK ENVIRONMENTAL CONSERVATION LAW. THE ENGINEERING AND INSTITUTIONAL CONTROLS FOR THIS EASEMENT ARE SET FORTH IN MORE DETAIL IN THE SITE MANAGEMENT PLAN (SMP). A COPY OF THE SMP MUST BE OBTAINED BY ANY PARTY WITH AN INTEREST IN THE PROPERTY. THE SMP CAN BE OBTAINED FROM NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION, DIVISION OF ENVIRONMENTAL REMEDIATION, SITE CONTROL SECTION, 625 BROADWAY, ALBANY, NY 12233 OR AT derweb@dec.ny.gov
NOW OR FORMERLY LIBER 10094, PAGE 192
NOW OR FORMERLY LIBER 11151, PAGE 4177
NOW OR FORMERLY LIBER 8072 PAGE 251
NOW OR FORMERLY LIBER 11132, PAGE 8108
NOW OR FORMERLY LIBER 11078, PAGE 6581
PARCEL 3, ERIE RAILROAD COMPANY, LIBER 2053, PAGE 223
"LINE C", ERIE RAILROAD COMPANY, LIBER 2053, PAGE 223
NORTH LINE OF LIBER 10883, PAGE 8504
WEST LINE PFEIL COOPERAGE INC., LIBER 2343, PAGE 333
EAST LINE LOT 150
WEST LINE LOT 151
EAST LINE LOT 151
WEST LINE LOT 152
369.98' RECORD, 369.35' MEASURED
316.44'
264.57'
423.71'
232.49'
700.78'
20.19'
386.65' DEED, 386.67' MEASURED
EASTERLY LINE OF LIBER 3889, PAGE 293
1200' TO THE EAST LINE OF BAILEY AVENUE
237.82'
DINGENS (66' WIDE) STREET
POINT OF BEGINNING
SE CORNER OF LIBER 3889, PAGE 293
MOST SOUTHERLY SW CORNER OF LIBER 10094, PAGE 192
1 STORY CONCRETE BUILDING FINISHED FLOOR 602.25'
ONE STORY CONCRETE BUILDINGS
CELL PHONE TOWER
METAL PAD WITH EQUIPMENT
APPROXIMATE CL OF TUNNEL
CONCRETE BUILDING ELEVATION 602.25' (WIRES)
APPROXIMATE LOCATION OF PURPORTED STORM SEWER LINE
GREASE TRAP
CONCRETE PAD LIFT STATION
SYMBOL LEGEND
EDGE OF PAVEMENT
SANITARY SEWER LINE
STORM SEWER LINE
GAS LINE
WATER LINE
OVERHEAD WIRES
BURIED ELECTRIC LINE
GUARD RAIL
CONTOUR LINE
UTILITY POLE
GUY WIRE ANCHOR
SANITARY SEWER MANHOLE
SANITARY CLEANOUT
STORM SEWER MANHOLE
FIELD/ROOF DRAIN
CATCH BASIN
ELECTRIC MANHOLE
GAS METER
GAS VALVE
WATER VALVE
FIRE HYDRANT
ELECTRIC PULL BOX
Daniel J Regan, LS 50793-1
Digitally signed by Daniel J Regan, LS 50793-1
DN: cn=Daniel J Regan, LS 50793-1, o, ou, email=d.regan.igs@roadrunner.com, c=US
Date: 2016.02.17 19:02:25 -05'00'
THIS SURVEY NOT VALID WITHOUT THE ORIGINAL SEAL AND SIGNATURE OF DANIEL J REGAN, LAND SURVEYOR, LICENSE # 50739.
WARNING: ALTERING THIS DOCUMENT IS IN VIOLATION OF THE LAW EXCEPTING AS PROVIDED IN SECTION 7209, PART 2 OF THE NEW YORK STATE EDUCATION LAW.
NO IMPROVEMENTS OTHER THAN THOSE SHOWN WERE LOCATED FOR THE PURPOSE OF THIS SURVEY.
DATE | REVISION
04/15/16 | UPDATED SURVEY TO REFLECT FIELD CONDITIONS
02/10/16 | UPDATED SURVEY TO REFLECT FIELD CONDITIONS
THE LOCATION OF UNDERGROUND IMPROVEMENTS OR ENCROACHMENTS ARE NOT ALWAYS KNOWN AND OFTEN MUST BE ESTIMATED. ONLY THOSE IMPROVEMENTS OR ENCROACHMENTS OBSERVED OR ARE SHOWN, THE IMPROVEMENTS OR ENCROACHMENTS ARE NOT COVERED BY THIS CERTIFICATE.
DATE : 01/12/2012 | SHEET 1 OF 1
JOB No. DJR-12-0001 | SCALE 1" = 50'
DWN: | CHD:
FILE NAME: 120001_BASE_041015
Daniel J Regan PLS, PSM
7031 Trido Lane
Boston, New York, 14025
Ph (716) 941-3812
SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD
THIS SURVEY WAS PREFORMED WITHOUT THE BENEFIT OF AN ABSTRACT OF TITLE AND IS SUBJECT TO ANY FACTS THAT MAY BE REVEALED BY AN EXAMINATION OF SUCH.
ALL UNDERGROUND UTILITIES INFORMATION AND LOCATIONS SHOWN HEREON ARE APPROXIMATE UTILIZING INFORMATION PROVIDED BY OTHERS.
ALL VERTICAL INFORMATION IS BASED ON AN ASSUMED DATUM.
THIS SURVEY WAS PREFORMED UTILIZING RTK GPS WITH A MANUFACTURE'S PUBLISHED ACCURACY OF 10MM + 1PPM HORIZONTAL, 15MM + 1PPM VERTICAL
0 50 100 150
DRAWING D-1:- SITE SURVEY MAP



132 DINGENS STREET - EXCAVATION AREAS

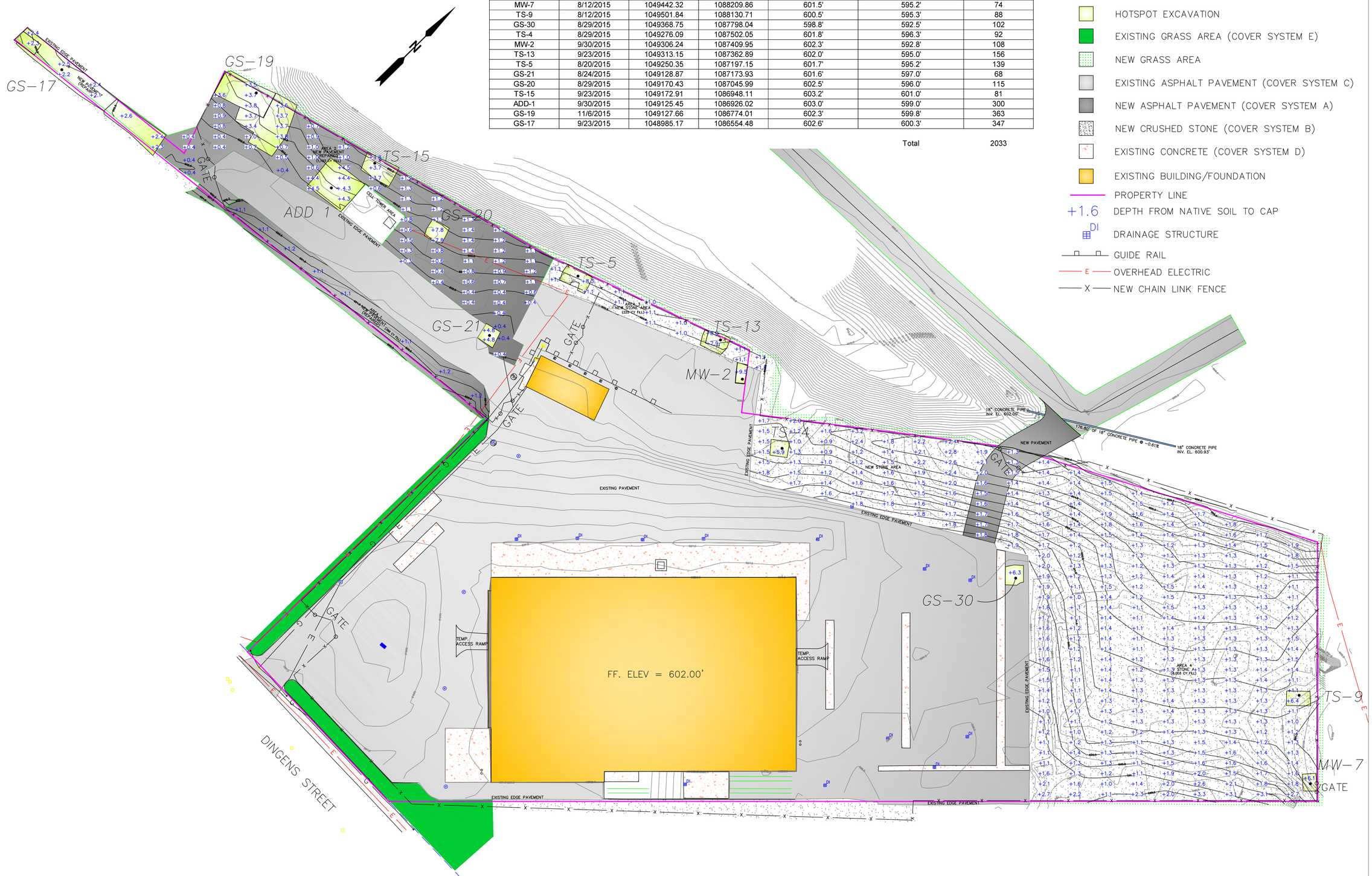
PINTO CONSTRUCTION SERVICES INC.

Pinto Construction Services
1 Babcock Street, Buffalo, NY 14210-2250
Phone: (716) 825-6666
Fax: 716-825-6773

DATE:	11/06/15
DRAWN BY:	GM
SCALE:	1"=50'
DRAWING NAME:	DINGENS REM.
SHEET NO.	D- 2

132 DINGENS STREET - HOT SPOT DATA

DESCRIPTION	SURVEY DATE	NORTHING (FT)	EASTING (FT)	GROUND ELEV. (FT)	EXCAVATION ELEV. (FT)	QUANTITY (CY)
MW-7	8/12/2015	1049442.32	1088209.86	601.5'	595.2'	74
TS-9	8/12/2015	1049501.84	1088130.71	600.5'	595.3'	88
GS-30	8/29/2015	1049368.75	1087798.04	598.8'	592.5'	102
TS-4	8/29/2015	1049276.09	1087502.05	601.8'	596.3'	92
MW-2	9/30/2015	1049306.24	1087409.95	602.3'	592.8'	108
TS-13	9/23/2015	1049313.15	1087362.89	602.0'	595.0'	156
TS-5	8/20/2015	1049250.35	1087197.15	601.7'	595.2'	139
GS-21	8/24/2015	1049128.87	1087173.93	601.6'	597.0'	68
GS-20	8/29/2015	1049170.43	1087045.99	602.5'	596.0'	115
TS-15	9/23/2015	1049172.91	1086948.11	603.2'	601.0'	81
ADD-1	9/30/2015	1049125.45	1086926.02	603.0'	599.0'	300
GS-19	11/6/2015	1049127.66	1086774.01	602.3'	599.8'	363
GS-17	9/23/2015	1048985.17	1086554.48	602.6'	600.3'	347
					Total	2033



KEY

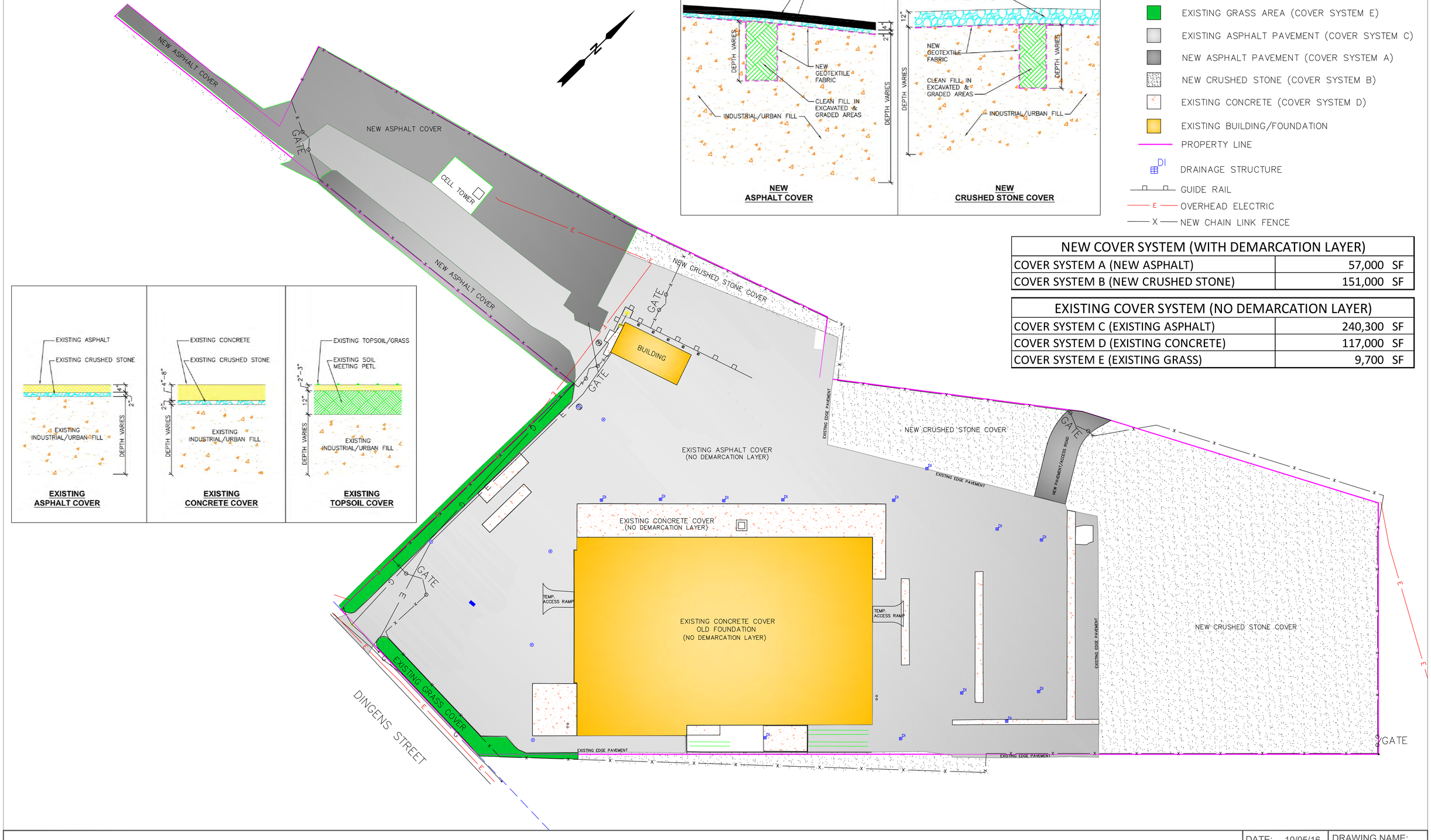
- HOTSPOT EXCAVATION
- EXISTING GRASS AREA (COVER SYSTEM E)
- NEW GRASS AREA
- EXISTING ASPHALT PAVEMENT (COVER SYSTEM C)
- NEW ASPHALT PAVEMENT (COVER SYSTEM A)
- NEW CRUSHED STONE (COVER SYSTEM B)
- EXISTING CONCRETE (COVER SYSTEM D)
- EXISTING BUILDING/FOUNDATION
- PROPERTY LINE
- +1.6 DEPTH FROM NATIVE SOIL TO CAP
- DI DRAINAGE STRUCTURE
- GUIDE RAIL
- E OVERHEAD ELECTRIC
- X NEW CHAIN LINK FENCE

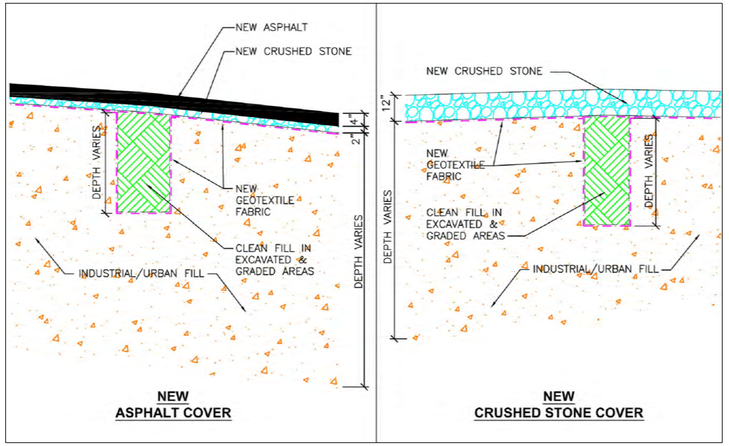
132 DINGENS STREET SITE - BACKFILL / GRADING LAYOUT

PINTO CONSTRUCTION SERVICES INC.

Pinto Construction Services
1 Babcock Street, Buffalo, NY 14210-2250
Phone: (716) 825-6666
Fax: 716-825-6773

DATE: 10/05/16	DRAWING NAME: DIN-4X225 - 03
DRAWN BY: GM	SHEET NO. D-3
SCALE: 1"=50'	





KEY

- EXISTING GRASS AREA (COVER SYSTEM E)
- EXISTING ASPHALT PAVEMENT (COVER SYSTEM C)
- NEW ASPHALT PAVEMENT (COVER SYSTEM A)
- NEW CRUSHED STONE (COVER SYSTEM B)
- EXISTING CONCRETE (COVER SYSTEM D)
- EXISTING BUILDING/FOUNDATION
- PROPERTY LINE
- DI DRAINAGE STRUCTURE
- GUIDE RAIL
- E OVERHEAD ELECTRIC
- X NEW CHAIN LINK FENCE

NEW COVER SYSTEM (WITH DEMARCATION LAYER)	
COVER SYSTEM A (NEW ASPHALT)	57,000 SF
COVER SYSTEM B (NEW CRUSHED STONE)	151,000 SF

EXISTING COVER SYSTEM (NO DEMARCATION LAYER)	
COVER SYSTEM C (EXISTING ASPHALT)	240,300 SF
COVER SYSTEM D (EXISTING CONCRETE)	117,000 SF
COVER SYSTEM E (EXISTING GRASS)	9,700 SF

132 DINGENS STREET SITE- FINAL ASBUILT

PINTO CONSTRUCTION SERVICES INC.
Pinto Construction Services
1 Babcock Street, Buffalo, NY 14210-2250
Phone: (716) 825-6666
Fax: 716-825-6773

DATE: 10/05/16
DRAWN BY: GM
SCALE: 1"=50'

DRAWING NAME: DIN-4X225 - 03
SHEET NO. D-4

SMP
132 DINGENS ST. SITE

TABLES

TABLE 1
132 DINGENS ST. BCP SITE
SITE MANAGEMENT PLAN
NOTIFICATIONS

Name	Contact Information
Jaspal Walia, PE, NYSDEC Project Manager	(716)851-7220 Jaspal.Walia@dec.ny.gov
NYSDEC Site Control	(518)402-9543

TABLE 2

132 DINGENS STREET SITE REMEDIAL ACTION

SUMMARY OF SOIL EXCEEDANCES of PETL - PRE-REMEDIATION

PARAMETER	PART 375 SCOs		PETL	PRE-REMEDIATION		
	RESTRICTED COMMERCIAL (CSCOs)	RESTRICTED INDUSTRIAL (ISCOs)		MINIMUM	AVERAGE	MAXIMUM
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
PCBs (ug/Kg) (PETL is based on CSCO)						
Total PCBs	1,000	25,000	**1,000**	ND	215	5,100
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
Lead	1,000	3,900	**5,000**	2.9	1,916	25,800
Mercury	2.8	5.7	**5.7**	ND	0.9	8.3

Note: 1. "ND" = Not Detected
2. PETL = Proposed Excavation Threshold Limit; PETL exceedances are highlighted
3. C/ISCO = Commercial/Industrial Soil Cleanup Objective

TABLE 3
132 DINGENS ST. BCP SITE
SITE MANAGEMENT PLAN

A. Routine Maintenance Summary/Schedule

Task	Summary/Schedule
Cover System Inspection	Annual; and After severe storms
Cover System Maintenance/Repair	As required to prevent exposure

B. Interim Reporting Summary/Schedule

Task/Report	Reporting Frequency*
Inspection Report	Annually
Periodic Review Report	Annually, or as otherwise determined by the Department

SMP
132 DINGENS ST. SITE

APPENDICES

SMP
132 DINGENS ST. SITE

APPENDIX A
LIST OF SITE CONTACTS

Appendix A
132 DINGENS ST. SITE SMP
List of Site Contacts

NAME	PHONE/EMAIL ADDRESS
Site Owner: 132 Dingens St, LLC	James Panepinto (716)825-6666 / jpinto@pintocs.com
Remedial Party: 132 Dingens St, LLC	James Panepinto (716)825-6666 / jpinto@pintocs.com
NYSDEC DER Project Manager	Jaspal Walia (716)851-7220 / jaspal.walia@dec.ny.gov
NYSDEC Regional HW Engineer	TBD
NYSDEC Site Control	(518)402-9569
On and off-site access contacts	Gary Catlin (716)825-6666 / gcatlin@pintocs.com
Remedial Party Attorney	Robert Knoer, Esq. (716)332-0032 / rknoer@knoergroup.com

SMP
132 DINGENS ST. SITE

APPENDIX B
POST-REMEDIATION PHOTOPAGES

1. Looking east from the middle of the property

2. The east side of concrete foundation showing stone ramp

3. Looking north across paved area showing UPS driveway

4. Looking south along border of graveled east end and paved area to the west

5. Looking west from the east end of the property

6. View of the north central section of the property

BCP REMEDIATION **132 DINGENS ST. SITE, BUFFALO, NY**	IEG	**SITE PHOTOGRAPHS (Interior East Half)** DATE: March 30, 2016

1. Looking south across the property from the Building

2. Looking east from near property entrance toward concrete foundation

3. Looking east from the Cell Tower toward the Building

4. View of the new asphalt east of the Cell Tower

5. View of the new asphalt to the west of the Cell Tower

6. The newly paved west leg of the property

BCP REMEDIATION **132 DINGENS ST. SITE, BUFFALO, NY**	IEG	**SITE PHOTOGRAPHS (Interior West Half)** DATE: March 30, 2016

1. Looking east along the south border next to large paved area

2. Close view of graded topsoil after seeding and mulch just outside property border fence on the east end

3. Looking north along the eastern border

4. Looking west along the northeastern border

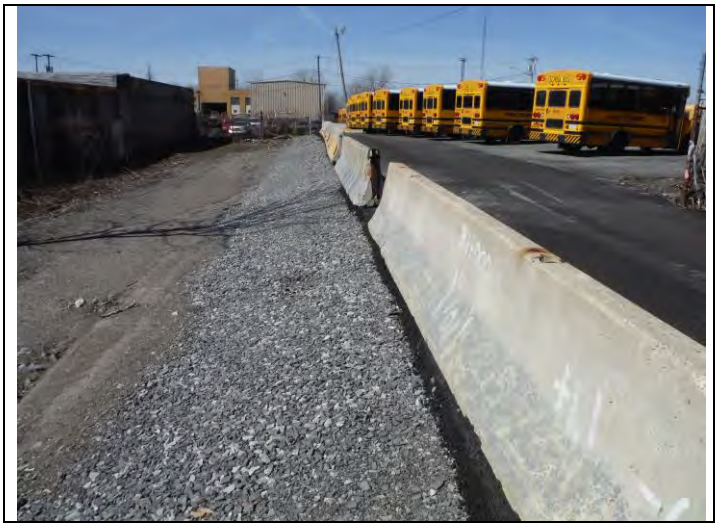
5. The driveway access to the UPS property on the north border

6. Looking west along the north border near the driveway access

BCP REMEDIATION **132 DINGENS ST. SITE, BUFFALO, NY**	IEG	**SITE PHOTOGRAPHS (Borders East Half)** DATE: March 30, 2016

1. Looking west along the north border near the Building

2. Looking west along the north border near the Cell Tower



3. View of the west leg of the property

4. Looking east along the south border across from Cell Tower

5. Looking south from near the Building along the west border

6. Looking east along the south border near the foundation

BCP REMEDIATION **132 DINGENS ST. SITE, BUFFALO, NY**	IEG	**SITE PHOTOGRAPHS (Borders West Half)** DATE: March 30, 2016

SMP
132 DINGENS ST. SITE

APPENDIX C
EXCAVATION WORK PLAN

Appendix C
132 DINGENS ST. BCP SITE
EXCAVATION PLAN

1. NOTIFICATION

At least 15 days prior to the start of any activity that is anticipated to encounter remaining contamination, the site owner or their representative will notify the NYSDEC. Table 1 includes contact information for the above notification. The information on this table will be updated as necessary to provide accurate contact information. A full listing of site-related contact information is provided in Appendix A.

TABLE 1: NOTIFICATIONS*

NAME	PHONE/EMAIL ADDRESS
Central Office NYSDEC Representative	TBD
Regional Office NYSDEC Representative	Jaspal Walia (716)851-7220 jaspal.walia@dec.ny.gov
NYSDEC Site Control	TBD

* Note: Notifications are subject to change and will be updated as necessary.

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent of excavation, plans/drawings for site re-grading, intrusive elements or utilities to be installed below the soil cover, estimated volumes of contaminated soil to be excavated and any work that may impact an engineering control;
- A summary of environmental conditions anticipated to be encountered in the work areas, including the nature and concentration levels of contaminants of concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling;
- A schedule for the work, detailing the start and completion of all intrusive work;
- A summary of the applicable components of this EWP;
- A statement that the work will be performed in compliance with this EWP and 29 CFR 1910.120;
- A copy of the contractor's health and safety plan (HASP), in electronic format, if it differs from the HASP provided in Appendix F of this SMP;
- Identification of disposal facilities for potential waste streams; and
- Identification of sources of any anticipated backfill, along with all required chemical testing results.

During development of the site, the Department will be provided with monthly reports. The monthly reports will address handling of any excavated fill and maintenance of the cover system.

2. SOIL SCREENING METHODS

Visual, olfactory and instrument-based (e.g. photoionization detector) soil screening will be performed by a qualified environmental professional during all excavations into known or potentially contaminated material (remaining contamination). Soil screening will be performed when invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the COC.

Soils will be segregated based on previous environmental data and screening results into material that requires off-site disposal (all industrial/urban fill) and material (underlying native clay, silt, sand) that requires testing to determine if the material can be reused on-site as soil beneath a cover or if the material can be used as cover soil. All excavated industrial/urban fill will be properly tested and disposed off-site. Further discussion of off-site disposal of materials and on-site reuse is provided in Sections 6 and 7 of this Appendix.

3. SOIL STAGING METHODS

Soil stockpiles will be continuously encircled with a berm and/or silt fence. Hay bales will be used as needed near catch basins, surface waters and other discharge points. Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by the NYSDEC.

4. MATERIALS EXCAVATION AND LOAD-OUT

A qualified environmental professional or person under their supervision will oversee all invasive work and the excavation and load-out of all excavated material.

Excavated materials may require testing for confirmation and off-site disposal. Pre-characterization of soil in the target excavation areas for landfill parameters may minimize material handling. The sampling frequency and analytical will be as required by the landfill for acceptance. Appendix I provides a field sampling plan and Appendix J provides analytical QA/QC requirements.

The owner of the property and remedial party (if applicable) and its contractors are responsible for safe execution of all invasive and other work performed under this Plan.

The presence of utilities and easements on the site will be investigated by the qualified environmental professional. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the site.

Loaded vehicles leaving the site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements).

A truck wash will be operated on-site, as appropriate. The qualified environmental professional will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the site until the activities performed under this section are complete Truck wash waters will be collected and disposed of off-site in an appropriate manner.

Locations where vehicles enter or exit the site shall be inspected daily for evidence of off-site soil tracking.

The qualified environmental professional will be responsible for ensuring that all egress points for truck and equipment transport from the site are clean of dirt and other materials derived from the site during intrusive excavation activities. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to site-derived materials.

5. MATERIALS TRANSPORT OFF-SITE

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

Truck transport route will depend on the landfill accepting the waste material. All trucks loaded with site materials will exit the vicinity of the site using only approved truck routes. The most appropriate route will be used taking into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off-site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport.

Material transported by trucks exiting the site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

Trucks will be prohibited from stopping and idling in the neighborhood outside the project site. Egress points for truck and equipment transport from the site will be kept clean of dirt and other materials during site remediation and development.

Queuing of trucks will be performed on-site in order to minimize off-site disturbance. Off-site queuing will be prohibited.

6. MATERIALS DISPOSAL OFF-SITE

All material excavated and removed from the site will be treated as contaminated and regulated material and will be transported and disposed in accordance with all local, State (including 6NYCRR Part 360) and Federal regulations. If disposal of material from this site is proposed for unregulated off-site disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to the NYSDEC. Unregulated off-site management of materials from this site will not occur without formal NYSDEC approval.

Industrial/fill, soil and other contaminated materials excavated at this site will be disposed off-site and are not expected to be reused at the site.

Off-site disposal locations for excavated soils will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate, i.e. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, C/D recycling facility, etc. Actual disposal quantities and associated documentation will be reported to the NYSDEC in the Periodic Review Report. This documentation will include: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.
Non-hazardous historic fill and contaminated soils taken off-site will be handled, at minimum, as a Municipal Solid Waste per 6NYCRR Part 360-1.2. Material that does not meet Unrestricted SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility).

7. MATERIALS REUSE ON-SITE

The qualified environmental professional will ensure that procedures defined for materials reuse in this SMP are followed and that unacceptable material does not remain on-site. Reuse of contaminated on-site material, including historic fill and contaminated soil, is not anticipated at this site. If acceptable for reuse on-site, such material will be placed below the demarcation layer or impervious surface, and will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines.

Any demolition material proposed for reuse on-site will be sampled for asbestos and the results will be reported to the NYSDEC for acceptance. Concrete crushing or processing on-site will not be performed without prior NYSDEC approval. Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the site will not be reused on-site.

8. FLUIDS MANAGEMENT

All liquids to be removed from the site, including but not limited to, excavation dewatering, decontamination waters and groundwater monitoring well purge and development waters, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Dewatering, purge and development fluids will not be recharged back to the land surface or subsurface of the site, and will be managed off-site, unless prior approval is obtained from NYSDEC.

Discharge of water generated during large-scale construction activities to surface waters (i.e. a local pond, stream or river) will be performed under a SPDES permit.

9. COVER SYSTEM RESTORATION

After the completion of soil removal and any other invasive activities the excavation will be backfilled with clean off-site fill meeting DER-10 requirements. The cover system will then be restored in a manner that complies with the Decision Document and the SMP. The new cover system may be crushed stone, asphalt or concrete pavement, clean soil covered sidewalk or concrete. These cover systems are illustrated on Figure 6A of the SMP.

The demarcation layer, consisting of geotextile fabric, will be replaced to provide a visual reference to the top of the remaining contamination zone, the zone that requires adherence to special conditions for disturbance of remaining contaminated soils defined in this SMP. If the type of cover system changes from that which exists prior to the excavation, this will constitute a modification of the cover element of the remedy and the upper surface of the remaining contamination. A figure showing the modified surface and an updated site layout drawing will be included in the subsequent Periodic Review Report and in an updated SMP.

10. BACKFILL FROM OFF-SITE SOURCES

Only pre-tested clean material (e.g. clean soil, crushed stone) from known sources will be imported for use as backfill at this site. A background check will be performed on the source area and the source facility's DOT certificate will be obtained where available. The sampling frequency and analytical parameters for source area materials will follow the NYSDEC's DER-10 guidance document. Imported soil will meet DER-10 requirements for acceptance at a BCP site.

All materials proposed for import onto the site will be approved by the qualified environmental professional and will be in compliance with provisions in this SMP prior to receipt at the site. A Request to Import/Reuse Fill or Soil form, which can be found at http://www.dec.ny.gov/regulations/67386.html, will be prepared and submitted to the NYSDEC

project manager allowing a minimum of 5 business days for review. Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the site.

Imported material will be stockpiled, if necessary, at the site only over a clean ground surface free of potential contamination. An HDPE liner will first be placed over the ground surface before soil placement. The stockpile will be covered with HDPE liner and secured around the perimeter with erosion control to prevent runoff through the stockpile.
All imported soils will meet the backfill and cover soil quality standards established in 6NYCRR 375-6.7(d). Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this site, will not be imported onto the site without prior approval by NYSDEC. Solid waste will not be imported onto the site.

Trucks entering the site with imported soils will be securely covered with tight fitting covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

11. STORMWATER POLLUTION PREVENTION

Barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by the NYSDEC. All necessary repairs shall be made immediately. Accumulated sediments will be removed as required to keep the barrier and hay bale check functional.

Accumulated sediments will be removed as required to keep the barrier and hay bale check functional.

Silt fencing or hay bales will be installed around the entire perimeter of the construction area. All undercutting or erosion of the silt fence toe anchor will be repaired immediately with appropriate backfill materials. Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

Erosion and sediment control measures identified in the SMP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.

12. EXCAVATION CONTINGENCY PLAN

If previously unidentified contaminant sources are found during post-remedial subsurface excavations or development related construction, excavation activities will be suspended until sufficient equipment is mobilized to address the condition.

Sampling will be performed as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for a full list of analytes (TAL metals; TCL volatiles and semi-volatiles, TCL pesticides and PCBs), unless the site history and previous sampling results provide a sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC for approval prior to sampling.

Identification of unknown or unexpected contaminated media identified by screening during invasive site work will be promptly communicated by phone to NYSDEC's Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in the Periodic Review Report.

13. COMMUNITY AIR MONITORING PLAN

Ambient air quality monitoring will follow the NYSDOH's Community Air Monitoring Plan., This will include real time air monitoring for particulates during intrusive activities, and contingency measures for addressing situations during excavation activities where dust levels exceed background levels. The locations of air sampling stations will be specific to the type of excavation activity (utilities, foundation, etc.) and based on generally prevailing wind conditions. The locations will be adjusted on a daily or more frequent basis based on actual wind directions to provide an upwind and at least two downwind monitoring stations. No sensitive receptors have been identified in the immediate vicinity of the site.

Exceedances of action levels listed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers.

14. ODOR CONTROL PLAN

No nuisance odors were observed or reported during intrusive remediation work at this site, and no significant odors are associated with the industrial/urban fill. Regardless, if nuisance odors are identified at the site boundary, or if odor complaints are received, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of any other complaints about the project. Implementation of all odor controls, including the halt of work, is the responsibility of the remedial party's Remediation Engineer, and any measures that are implemented will be discussed in the Periodic Review Report.

All necessary means will be employed to prevent on- and off-site nuisances. At a minimum, these measures will include: (a) limiting the area of open excavations and size of soil stockpiles; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils; [add other elements as appropriate]. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods [add others as necessary].

If nuisance odors develop during intrusive work that cannot be corrected, or where the control of nuisance odors cannot otherwise be achieved due to on-site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering the excavation and handling areas in a temporary containment structure equipped with appropriate air venting/filtering systems.

15. DUST CONTROL PLAN

A dust suppression plan that addresses dust management during invasive on-site work will include, at a minimum, the items listed below:

- Dust suppression will be achieved through the use of a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.

- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, unvegetated soils vulnerable to dust production.

- Gravel will be used on roadways to provide a clean and dust-free road surface.

- On-site roads will be limited in total area to minimize the area required for water truck sprinkling.

16. OTHER NUISANCES

A plan for rodent control, if warranted, will be developed and utilized by the contractor prior to and during site clearing and site grubbing, and during all remedial work. A plan will be developed and utilized by the contractor for all remedial work to ensure compliance with local noise control ordinances.

17. REPORTING

All intrusive work performed during site development and pursuant to this Excavation Plan will be reported with the following information:

- Date of event or reporting period;
- Name, company, and position of person(s) conducting activities;
- Detailed description of work performed, including location and areal extent of excavation, site re-grading, intrusive elements or utilities installed below the soil cover, estimated volumes of contaminated soil excavated and any work that may impact the engineering control;
- A summary of environmental conditions encountered in work areas, including the nature and concentration levels of contaminants of concern, and any pre-construction sampling;
- Description of the cover system replaced/repaired.
- Disposal facilities for generated waste streams, along with all test results for landfill parameters and landfill approval letter;
- Sources of any backfill, along with all chemical testing results.
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet);

SMP
132 DINGENS ST. SITE

APPENDIX D
RESPONSIBILITIES OF OWNER AND REMEDIAL PARTY

Appendix D
132 DINGENS ST. SITE SMP
RESPONSIBILITIES of
OWNER and REMEDIAL PARTY

The responsibilities for implementing the Site Management Plan ("SMP") for the 132 Dingens St. site (the "site"), number C915263, is the site owner currently listed as: 132 Dingens ST, LLC (the "owner"). Nothing on this page shall supersede the provisions of an Environmental Easement, Consent Order, Consent Decree, agreement, or other legally binding document that affects rights and obligations relating to the site.

1) The owner will follow the provisions of the SMP as they relate to future construction and excavation at the site.

2) In accordance with a periodic time frame determined by the NYSDEC, the owner will periodically certify, in writing, that all Institutional Controls set forth in an Environmental Easement remain in place and continue to be complied with. The owner will provide this certification in the site's Periodic Review Report (PRR) to the NYSDEC.

3) In the event the site is delisted, the owner remains bound by the Environmental Easement, and will submit, upon request by the NYSDEC, a written certification that the Environmental Easement is still in place and has been complied with.

4) The owner will grant access to the site to the NYSDEC and its agents for the purposes of performing activities required under the SMP and assuring compliance with the SMP.

5) The owner is responsible for assuring the security of the remedial components located on its property to the best of its ability. In the event that damage to the remedial components or vandalism is evident, the owner will notify the NYSDEC in accordance with the timeframes indicated in Section 1.3 - Notifications.

6) In the event some action or inaction by the owner adversely impacts the site, the owner will notify the NYSDEC in accordance with the time frame indicated in Section 1.3 - Notifications and (ii) perform the necessary corrective actions.

7) The owner will notify the NYSDEC of any change in ownership of the site property (identifying the tax map numbers in any correspondence) and provide contact information for the new owner of the site property. 6 NYCRR Part contains notification requirements applicable to any construction or activity changes and changes in ownership. Among the notification requirements is the following: Sixty days prior written notification must be made to the NYSDEC. Notification is to be submitted to the NYSDEC Division of Environmental Remediation's Site Control Section. Notification requirements for a change in use are detailed in Section 1.3 of the SMP. A 60-Day Advance Notification Form and Instructions are found at http://www.dec.ny.gov/chemical/76250.html.

8) The owner will maintain fences, conduct mowing, etc., and will remain ultimately responsible for maintaining the engineering controls.

9) The owner will report to the NYSDEC all activities required for inspection, maintenance and reporting. Such reporting includes, but is not limited to, periodic review reports and certifications, corrective action work plans and reports, and updated SMPs.

10) If the NYSDEC determines that an update of the SMP is necessary, the owner will update the SMP and obtain final approval from the NYSDEC. Within 5 business days after NYSDEC approval, the owner will submit a copy of the approved SMP to the owner(s).

11) Any change in use, change in ownership, change in site classification (*e.g.*, delisting), reduction or expansion of remediation, and other significant changes related to the site may result in a change in responsibilities and, therefore, necessitate an update to the SMP and/or legal documents. The owner will contact the Department to discuss the need to update such documents. Future site owners and RPs and their successors and assigns are required to carry out the activities set forth above.

SMP
132 DINGENS ST. SITE

APPENDIX E
Environmental Easement/ Notice/Deed Restriction

CHRISTOPHER L. JACOBS, ERIE COUNTY CLERK
REF:

DATE:5/17/2016
TIME:11:42:28 AM
RECEIPT: 16079532

PARALEGAL SERVICES OF BUFFALO
ACCOUNT #: 9273

ITEM - 01 785
RECD: 5/17/2016 11:44:24 AM
FILE: 2016099658 BK/PG D 11296/1444
Deed Sequence: TT2015020561
132 DINGENS ST LLC
PEOPLE OF THE STATE OF NEW YORK (THE)

Recording Fees	95.00
TP584	10.00
Subtotal	105.00
TOTAL DUE	$105.00
PAID TOTAL	$105.00
PAID ESCROW	$105.00

REC BY: Sharon
COUNTY RECORDER

PARALEGAL SERVICES OF BUFFALO
1133 LIBERTY BUILDING, BUFFALO, NY 14202
www.paralegalservicesofbuffalo.com
856-3818 - 852-2028
Fax: 853-0184

DATE 5/16/16
FILE NO. 09-2262-A

FIRM TKG

ORIGINATOR Deanne

SUBJECT: 132 Dingens Easement

INSTRUCTIONS:

Please file the attached Easement + return file stamped copies. TYI.

CHECK ATTACHED:

ATTACHMENTS:

PERFORMANCE REPORT

DISBURSMT. 105.00
BY EE
SERVICE FEE
NO. OF SERV 2
DATE COMPLETE 5/17/16

RECEIVED BY:

D11296 1444

County: Erie Site No: C915263 Brownfield Cleanup Agreement Index : C915263-05-12 as amended August 14, 2012

FILED

MAY 17 2016

ERIE COUNTY CLERK'S OFFICE

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

THIS INDENTURE made this 2ND day of MAY, 2016, between Owner(s) 132 Dingens St, LLC, having an office at 1 Babcock Street, Buffalo, New York 14210, County of Erie, State of New York (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

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

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

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

WHEREAS, Grantor, is the owner of real property located at the address of 132-136 Dingens Street in the City of Buffalo, County of Erie and State of New York, known and designated on the tax map of the County Clerk of Erie as tax map parcel numbers: Section 112.19 Block 1 Lot 14.11, being the same as that property conveyed to Grantor by deed dated June 20, 2012 and recorded in the Erie County Clerk's Office in Liber and Page 11225/899. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 13.2 +/- acres, and is hereinafter more fully described in the Land Title Survey dated January 12, 2012 and last revised March 10, 2016 prepared by Daniel J. Regan, NYSLLS, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation

established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the mutual covenants contained herein and the terms and conditions of Brownfield Cleanup Agreement Index Number: C915263-05-12 as amended August 14, 2012, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement").

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

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

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

Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv)

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

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

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Erie County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

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

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

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

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

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

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

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

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

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

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

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held

by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation Law.

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

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

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5) the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

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

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

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

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

5. Enforcement

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

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

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

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

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

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

Parties shall address correspondence to:

Site Number: C915263
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to:

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

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail

and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

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

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

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

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

Remainder of Page Intentionally Left Blank

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

132 Dingens St, LLC:

By: _____

Print Name: James Panepinto

Title: Manager Date: 4/5/16

Grantor's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF)

On the 5th day of April, in the year 2016, before me, the undersigned, personally appeared James Panepinto, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Allison Laurienzo
Notary Public - State of New York

Allison K. Laurienzo
Notary Public State of New York
Qualified in Erie County
My Commission Expires 10/22/16

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

By: _____

Robert W. Schick, Director
Division of Environmental Remediation

Grantee's Acknowledgment

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

On the 2nd day of May, in the year 2016, before me, the undersigned, personally appeared Robert W. Schick, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

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

SCHEDULE "A" PROPERTY DESCRIPTION

ALL THAT TRACT OR PARCEL OF LAND situate in the City of Buffalo, County of Erie and State of New York, being part of Lots Nos. 150, 151 and 152, Township 10, Range 7 of the Buffalo Creek Reservation and further bounded and described as follows:

Beginning at a point on the north line of Dingens Street distant 1,200.00 feet east from the point of intersection of the north line of Dingens Street with the east line of Bailey Avenue as now laid out, said point being the southeast corner of lands conveyed by Deed recorded in Liber 3889 of Deeds at page 293;

Thence east along the north line of Dingens Street a distance of 237.82 feet to the most southerly southwest corner of lands conveyed to the City of Buffalo Urban Renewal Agency by Deed recorded in Liber 10094 of Deeds at page 192;

Thence northeasterly at a clockwise angle of 133° 20' 16" and along the lands conveyed by said last mentioned Deed a distance of 1075.0 feet to a point;

Thence northwest at right angles to the last described line and along the lands conveyed by last mentioned Deed a distance of 300.0 feet to a point;

Thence southwesterly at a clockwise angle of 107° 10' 48" and along the lands conveyed by said mentioned Deed a distance of 369.66 feet record and 369.35 feet measured to a point;

Thence continuing southwesterly at a clockwise angle of 170° 12' 08" and along the lands conveyed by said last mentioned Deed a distance of 316.44 feet to a point;

Thence northwesterly at right angles to the last described line a distance of 72.94 feet to a point;

Thence southwesterly at a clockwise angle of 107° 47' 08" and along the lands conveyed by said last mentioned Deed a distance of 264.57 feet to a point;

Thence continuing southwesterly at a clockwise angle of 184° 34' 01" and along the lands conveyed by said last mentioned Deed a distance of 423.71 feet to a point on the westerly line of lands conveyed to Pfeil Cooperage Inc. by Deed recorded in Liber 2343 of Deeds at page 333, said point being 231.0 feet southerly of the northwest corner of lands conveyed by said last mentioned Deed;

Thence southeasterly and along the westerly line of lands conveyed by said last mentioned Deed and at a clockwise angle of 86° 28' 04" a distance of 106.03 feet to lands described in Parcel 3 in a Deed to the Erie Railroad Company by Deed recorded in Liber 2053 of Deeds at page 223;

Thence southwesterly at a clockwise angle of 282° 33' 35" and along the Erie Railroad Company's lands a distance of 232.49 feet to a point;

Thence southerly at a clockwise angle of 97° 54' 00" a distance of 20.19 feet to its intersection with a line drawn parallel with and distant 20 feet southerly measured at right angles from a course marked "Line C" on a map accompanying aforesaid Deed to Erie Railroad Company and recorded

in Liber 2053 of Deeds at page 223;

Thence northeasterly at a clockwise angle of 82° 06' 00" a distance of 700.78 feet to the northeast corner of lands conveyed by Deed recorded in Liber 3889 of Deeds at page 293, said point also being in the north line of lands conveyed by Deed recorded in Liber 10883 of Deeds at page 8504;

Thence southerly at a clockwise angle of 277° 01' 50" and along the easterly line of said Liber 3889 of Deeds at page 293 a distance of 386.65 feet record and 386.67 feet measured to a point on the north line of Dingens Street at the point of beginning.

Containing 13.20 acres more or less.

TP-584 (4/13)

New York State Department of Taxation and Finance

Combined Real Estate Transfer Tax Return, Credit Line Mortgage Certificate, and Certification of Exemption from the Payment of Estimated Personal Income Tax

Recording office time stamp

FILED
MAY 17 2016
ERIE COUNTY CLERK'S OFFICE

See Form TP-584-I, Instructions for Form TP-584, *before completing this form. Print or type.*

Schedule A — Information relating to conveyance

Grantor/Transferor ☐ Individual ☐ Corporation ☐ Partnership ☐ Estate/Trust ☒ Single member LLC ☐ Other	Name *(if individual, last, first, middle initial)* (☐ *check if more than one grantor*) 132 Dingens St, LLC	Social security number
	Mailing address 132 Dingens Street	Social security number
	City: Buffalo; State: NY; ZIP code: 14206	Federal EIN: 35-2438055
	Single member's name if grantor is a single member LLC *(see instructions)* James Panepinto	Single member EIN or SSN: 051-60-2697
Grantee/Transferee ☐ Individual ☐ Corporation ☐ Partnership ☐ Estate/Trust ☐ Single member LLC ☒ Other	Name *(if individual, last, first, middle initial)* (☐ *check if more than one grantee*) The People of the State of NY, acting through their Commissioner of the NYSDEC	Social security number
	Mailing address 625 Broadway	Social security number
	City: Albany; State: NY; ZIP code: 12233	Federal EIN: 14-6013200
	Single member's name if grantee is a single member LLC *(see instructions)*	Single member EIN or SSN

Location and description of property conveyed

Tax map designation – Section, block & lot *(include dots and dashes)*	SWIS code (six digits)	Street address	City, town, or village	County
112.19-1-14.11	140200	132 Dingens Street	Buffalo	Erie

Type of property conveyed *(check applicable box)*

1 ☐ One- to three-family house
2 ☐ Residential cooperative
3 ☐ Residential condominium
4 ☐ Vacant land
5 ☒ Commercial/Industrial
6 ☐ Apartment building
7 ☐ Office building
8 ☐ Other _____

Date of conveyance: 05 (month) | 02 (day) | 2016 (year)

Percentage of real property conveyed which is residential real property 0 % *(see instructions)*

Condition of conveyance *(check all that apply)*

a. ☐ Conveyance of fee interest
b. ☐ Acquisition of a controlling interest (state percentage acquired _____ %)
c. ☐ Transfer of a controlling interest (state percentage transferred _____ %)
d. ☐ Conveyance to cooperative housing corporation
e. ☐ Conveyance pursuant to or in lieu of foreclosure or enforcement of security interest *(attach Form TP-584.1, Schedule E)*
f. ☐ Conveyance which consists of a mere change of identity or form of ownership or organization *(attach Form TP-584.1, Schedule F)*
g. ☐ Conveyance for which credit for tax previously paid will be claimed *(attach Form TP-584.1, Schedule G)*
h. ☐ Conveyance of cooperative apartment(s)
i. ☐ Syndication
j. ☐ Conveyance of air rights or development rights
k. ☐ Contract assignment
l. ☐ Option assignment or surrender
m. ☐ Leasehold assignment or surrender
n. ☐ Leasehold grant
o. ☐ Conveyance of an easement
p. ☒ Conveyance for which exemption from transfer tax claimed *(complete Schedule B, Part III)*
q. ☐ Conveyance of property partly within and partly outside the state
r. ☐ Conveyance pursuant to divorce or separation
s. ☒ Other *(describe)* Env. Easement

For recording officer's use	Amount received Schedule B., Part I $ Schedule B., Part II $	Date received	Transaction number

Schedule B — Real estate transfer tax return (Tax Law, Article 31)

Part I – Computation of tax due

1	Enter amount of consideration for the conveyance *(if you are claiming a total exemption from tax, check the exemption claimed box, enter consideration and proceed to Part III)* ☒ **Exemption claimed**	1.	
2	Continuing lien deduction *(see instructions if property is taken subject to mortgage or lien)*	2.	
3	Taxable consideration *(subtract line 2 from line 1)*	3.	
4	Tax: $2 for each $500, or fractional part thereof, of consideration on line 3	4.	
5	Amount of credit claimed for tax previously paid *(see instructions and attach Form TP-584.1,* Schedule G*)*	5.	
6	Total tax due* *(subtract line 5 from line 4)*	6.	

Part II – Computation of additional tax due on the conveyance of residential real property for $1 million or more

1	Enter amount of consideration for conveyance *(from* Part I*, line 1)*	1.	
2	Taxable consideration *(multiply line 1 by the percentage of the premises which is residential real property, as shown in* Schedule A*)*	2.	
3	Total additional transfer tax due* *(multiply line 2 by 1% (.01))*	3.	

Part III – Explanation of exemption claimed on Part I, line 1 *(check any boxes that apply)*

The conveyance of real property is exempt from the real estate transfer tax for the following reason:

a. Conveyance is to the United Nations, the United States of America, the state of New York, or any of their instrumentalities, agencies, or political subdivisions (or any public corporation, including a public corporation created pursuant to agreement or compact with another state or Canada) ..... a ☒

b. Conveyance is to secure a debt or other obligation ..... b ☐

c. Conveyance is without additional consideration to confirm, correct, modify, or supplement a prior conveyance ..... c ☐

d. Conveyance of real property is without consideration and not in connection with a sale, including conveyances conveying realty as bona fide gifts ..... d ☐

e. Conveyance is given in connection with a tax sale ..... e ☐

f. Conveyance is a mere change of identity or form of ownership or organization where there is no change in beneficial ownership. (This exemption cannot be claimed for a conveyance to a cooperative housing corporation of real property comprising the cooperative dwelling or dwellings.) Attach Form TP-584.1, Schedule F ..... f ☐

g. Conveyance consists of deed of partition ..... g ☐

h. Conveyance is given pursuant to the federal Bankruptcy Act ..... h ☐

i. Conveyance consists of the execution of a contract to sell real property, without the use or occupancy of such property, or the granting of an option to purchase real property, without the use or occupancy of such property ..... i ☐

j. Conveyance of an option or contract to purchase real property with the use or occupancy of such property where the consideration is less than $200,000 and such property was used solely by the grantor as the grantor's personal residence and consists of a one-, two-, or three-family house, an individual residential condominium unit, or the sale of stock in a cooperative housing corporation in connection with the grant or transfer of a proprietary leasehold covering an individual residential cooperative apartment ..... j ☐

k. Conveyance is not a conveyance within the meaning of Tax Law, Article 31, section 1401(e) *(attach documents supporting such claim)* ..... k ☐

*The total tax (from Part I, line 6 and Part II, line 3 above) is due within 15 days from the date conveyance. Please make check(s) payable to the county clerk where the recording is to take place. If the recording is to take place in the New York City boroughs of Manhattan, Bronx, Brooklyn, or Queens, make check(s) payable to the ***NYC Department of Finance.*** If a recording is not required, send this return and your check(s) made payable to the ***NYS Department of Taxation and Finance,*** directly to the NYS Tax Department, RETT Return Processing, PO Box 5045, Albany NY 12205-5045.

Schedule C — Credit Line Mortgage Certificate (Tax Law, Article 11)

Complete the following only if the interest being transferred is a fee simple interest.
I (we) certify that: *(check the appropriate box)*

1. ☒ The real property being sold or transferred is not subject to an outstanding credit line mortgage.

2. ☐ The real property being sold or transferred is subject to an outstanding credit line mortgage. However, an exemption from the tax is claimed for the following reason:

   ☐ The transfer of real property is a transfer of a fee simple interest to a person or persons who held a fee simple interest in the real property (whether as a joint tenant, a tenant in common or otherwise) immediately before the transfer.

   ☐ The transfer of real property is (A) to a person or persons related by blood, marriage or adoption to the original obligor or to one or more of the original obligors or (B) to a person or entity where 50% or more of the beneficial interest in such real property after the transfer is held by the transferor or such related person or persons (as in the case of a transfer to a trustee for the benefit of a minor or the transfer to a trust for the benefit of the transferor).

   ☐ The transfer of real property is a transfer to a trustee in bankruptcy, a receiver, assignee, or other officer of a court.

   ☐ The maximum principal amount secured by the credit line mortgage is $3,000,000 or more, and the real property being sold or transferred is **not** principally improved nor will it be improved by a one- to six-family owner-occupied residence or dwelling.

   Please note: for purposes of determining whether the maximum principal amount secured is $3,000,000 or more as described above, the amounts secured by two or more credit line mortgages may be aggregated under certain circumstances. See TSB-M-96(6)-R for more information regarding these aggregation requirements.

   ☐ Other *(attach detailed explanation).*

3. ☐ The real property being transferred is presently subject to an outstanding credit line mortgage. However, no tax is due for the following reason:

   ☐ A certificate of discharge of the credit line mortgage is being offered at the time of recording the deed.

   ☐ A check has been drawn payable for transmission to the credit line mortgagee or his agent for the balance due, and a satisfaction of such mortgage will be recorded as soon as it is available.

4. ☐ The real property being transferred is subject to an outstanding credit line mortgage recorded in ______________ (insert liber and page or reel or other identification of the mortgage). The maximum principal amount of debt or obligation secured by the mortgage is ______________. No exemption from tax is claimed and the tax of ______________ is being paid herewith. *(Make check payable to county clerk where deed will be recorded or, if the recording is to take place in New York City but not in Richmond County, make check payable to the **NYC Department of Finance.**)*

Signature (both the grantor(s) and grantee(s) must sign)

The undersigned certify that the above information contained in schedules A, B, and C, including any return, certification, schedule, or attachment, is to the best of his/her knowledge, true and complete, and authorize the person(s) submitting such form on their behalf to receive a copy for purposes of recording the deed or other instrument effecting the conveyance.

Grantor signature	Title	Grantee signature	Title
[signature]	[signature]	Andrew Guglielmi [signature] Andrew Guglielmi	Esq.

Grantor signature — Title — Grantee signature — Title

Reminder: Did you complete all of the required information in Schedules A, B, and C? Are you required to complete Schedule D? If you checked *e*, *f*, or *g* in Schedule A, did you complete Form TP-584.1? Have you attached your check(s) made payable to the county clerk where recording will take place or, if the recording is in the New York City boroughs of Manhattan, Bronx, Brooklyn, or Queens, to the ***NYC Department of Finance***? If no recording is required, send your check(s), made payable to the ***Department of Taxation and Finance***, directly to the NYS Tax Department, RETT Return Processing, PO Box 5045, Albany NY 12205-5045.

Schedule D - Certification of exemption from the payment of estimated personal income tax (Tax Law, Article 22, section 663)

Complete the following only if a fee simple interest or a cooperative unit is being transferred by an individual or estate or trust.

If the property is being conveyed by a referee pursuant to a foreclosure proceeding, proceed to Part II, and check the second box under *Exemptions for nonresident transferor(s)/seller(s)* and sign at bottom.

Part I - New York State residents

If you are a New York State resident transferor(s)/seller(s) listed in Schedule A of Form TP-584 (or an attachment to Form TP-584), you must sign the certification below. If one or more transferors/sellers of the real property or cooperative unit is a resident of New York State, **each** resident transferor/seller must sign in the space provided. If more space is needed, please photocopy this Schedule D and submit as many schedules as necessary to accommodate all resident transferors/sellers.

Certification of resident transferor(s)/seller(s)

This is to certify that at the time of the sale or transfer of the real property or cooperative unit, the transferor(s)/seller(s) as signed below was a resident of New York State, and therefore is not required to pay estimated personal income tax under Tax Law, section 663(a) upon the sale or transfer of this real property or cooperative unit.

Signature	Print full name	Date
Signature	Print full name	Date
Signature	Print full name	Date
Signature	Print full name	Date

Note: A resident of New York State may still be required to pay estimated tax under Tax Law, section 685(c), but not as a condition of recording a deed.

Part II - Nonresidents of New York State

If you are a nonresident of New York State listed as a transferor/seller in Schedule A of Form TP-584 (or an attachment to Form TP-584) but are not required to pay estimated personal income tax because one of the exemptions below applies under Tax Law, section 663(c), check the box of the appropriate exemption below. If any one of the exemptions below applies to the transferor(s)/seller(s), that transferor(s)/seller(s) is not required to pay estimated personal income tax to New York State under Tax Law, section 663. **Each** nonresident transferor/seller who qualifies under one of the exemptions below must sign in the space provided. If more space is needed, please photocopy this Schedule D and submit as many schedules as necessary to accommodate all nonresident transferors/sellers.

If none of these exemption statements apply, you must complete Form IT-2663, *Nonresident Real Property Estimated Income Tax Payment Form*, or Form IT-2664, *Nonresident Cooperative Unit Estimated Income Tax Payment Form.* For more information, see *Payment of estimated personal income tax,* on page 1 of Form TP-584-I.

Exemption for nonresident transferor(s)/seller(s)

This is to certify that at the time of the sale or transfer of the real property or cooperative unit, the transferor(s)/seller(s) (grantor) of this real property or cooperative unit was a nonresident of New York State, but is not required to pay estimated personal income tax under Tax Law, section 663 due to one of the following exemptions:

☐ The real property or cooperative unit being sold or transferred qualifies in total as the transferor's/seller's principal residence (within the meaning of Internal Revenue Code, section 121) from _____ (Date) to _____ (Date) *(see instructions).*

☐ The transferor/seller is a mortgagor conveying the mortgaged property to a mortgagee in foreclosure, or in lieu of foreclosure with no additional consideration.

☐ The transferor or transferee is an agency or authority of the United States of America, an agency or authority of the state of New York, the Federal National Mortgage Association, the Federal Home Loan Mortgage Corporation, the Government National Mortgage Association, or a private mortgage insurance company.

Signature	Print full name	Date
Signature	Print full name	Date
Signature	Print full name	Date
Signature	Print full name	Date

SMP
132 DINGENS ST. SITE

APPENDIX F
SITE MANAGEMENT FORMS

FORM A: SITE WIDE INSPECTION
132 DINGENS ST. BCP SITE
SITE MANAGEMENT PLAN

Site Name: 132 DINGENS ST. SITE Site Code: C915263 **REPORT DATE:** _____

Address: 132 Dingens St. City: Buffalo State: NY Zip Code: 14206 County: Erie

Reporting Period From: _____ **To:** _____

INSPECTED BY: _____ Phone No.: _____ Affiliation: _____

A. GENERAL OBSERVATIONS

SITE MANAGEMENT ACTIVITIES:
EFFECTIVENESS/PROTECTIVENESS OF ECs:
COMPLIANCE WITH ICs:
SITE RECORDS UP TO DATE?

B. COVER SYSTEM

Indicate whether: Conditions are: ACCEPTABLE, NOT-ACCEPTABLE; Erosion damage YES or NO

COVER TYPE	CONDITION	EROSION	REMARKS
EASTERN SECTION - NEW CRUSHED STONE			
MIDDLE SECTION - EXISTING FOUNDATION			
MIDDLE SECTION - NEW CRUSHED STONE			
MIDDLE SECTION - NEW ASPHALT			
WESTERN SECTION - NEW CRUSHED STONE			
WESTERN SECTION - NEW ASPHALT			
EXISTING ASPHALT COVER			
EXISTING CONCRETE COVER			
EXISTING VEGETATIVE COVER			

C. DRAINAGE

Check for pools of water; plugged manholes; etc.

	CONDITION	EROSION	REMARKS
SURFACE DRAINAGE			
MANHOLES			

D. MAINTENANCE AND REPAIR

AREAS	MAINTENANCE/REPAIR	REMARKS

E. INTRUSIVE WORK/SOIL EXCAVATION

DESCRIPTION OF INTRUSIVE WORK	DURATION	VOLUME EXCAVATED	TESTING/TREATMENT/DISPOSAL

ADDITIONAL NOTES/REMARKS

FORM B: REPAIR/MAINTENANCE/EXCAVATION

132 DINGENS ST. BCP SITE

SITE MANAGEMENT PLAN

Site Name: 132 DINGENS ST. SITE Site Code: C915263 **REPORT DATE:** _____

Address: 132 Dingens St. City: Buffalo State: NY Zip Code: 14206 County: Erie

Reporting Period From: _____ **To:** _____

REPAIR/MAINTENCE BY: _____ Phone No.: _____ Affiliation: _____

A. SUMMARY OF ACTIVITIES PERFORMED

B. COVER SYSTEM - REPAIR/MAINTENANCE

LOCATION / CONDITION	WORK PERFORMED	REMARKS

C. DRAINAGE

LOCATION / CONDITION	WORK PERFORMED	REMARKS

D. INTRUSIVE WORK/SOIL EXCAVATION

DESCRIPTION OF INTRUSIVE WORK	DURATION	VOLUME EXCAVATED	TESTING/TREATMENT/DISPOSAL

ADDITIONAL NOTES/REMARKS

FORM C: Summary of Green Remediation Metrics
132 DINGENS ST. BCP SITE
SITE MANAGEMENT PLAN

Site Name: 132 DINGENS ST. SITE Site Code: C915263
Address: 132 Dingens St. City: Buffalo State: NY Zip Code: 14206 County: Erie

Initial Report Period (Start Date of period covered by the Initial Report submittal)
Start Date: _____

Current Reporting Period
Reporting Period From: _____ To: _____

Contact Information
Preparer's Name: _____ Phone No.: _____ Preparer's Affiliation: _____

I. Energy Usage:
Quantify the amount of energy used directly on-site and the portion of that derived from renewable energy sources.

	Current Reporting Period	Total to Date
Fuel Type 1 (e.g. natural gas (cf))		
Fuel Type 2 (e.g. fuel oil, propane (gals))		
Electricity (kWh)		
Of that Electric usage, provide quantity:		
Derived from renewable sources (e.g. solar, wind)		
Other energy sources (e.g. geothermal, solar thermal (Btu))		

Provide a description of all energy usage reduction programs for the site in the space provided on next page

II. Solid Waste Generation: Quantify the management of solid waste generated on-site

	Current Reporting Period	Total to Date (tons)
Total waste generated on-site		
OM&M generated waste		
Of that total amount, provide quantity:		
Transported off-site to landfills		
Transported off-site to other disposal facilities		
Transported off-site for recycling/reuse		
Reused on-site		

Provide a description of any implemented waste reduction programs for the site in the space provided on next page

III. Transportation/Shipping:
Quantify the distances travelled for delivery of supplies, shipping of laboratory samples, and the removal of waste.

	Current Reporting Period	Total to Date (miles)
Standby Engineer/Contractor		
Laboratory Courier/Delivery Service		
Waste Removal/Hauling		

Provide a description of all mileage reduction programs for the site in the space provided on next page
Include specifically any local vendor/services utilized that are within 50 miles of the site.

IV. Water Usage: Quantify the volume of water used on-site from various sources.

	Current Reporting Period (gallons)	Total to Date (gallons)
Total		
Of that		
Public		
Surface		
On-site		
Collected or		

Provide a description of any implemented water consumption reduction programs for the site in space provided on next page

V. Land Use and Ecosystems: Quantify the amount of land and/or ecosystems disturbed and the area of land and/or ecosystems restored to a pre-development condition (i.e. Green Infrastructure).

	Current Reporting Period (acres)	Total to Date (acres)
Land		
Land		

Provide a description of any implemented land restoration/green infrastructure programs on next page

FORM C: Summary of Green Remediation Metrics
132 DINGENS ST. BCP SITE
SITE MANAGEMENT PLAN

Site Name: 132 DINGENS ST. SITE Site Code: C915263
Address: 132 Dingens St. City: Buffalo State: NY Zip Code: 14206 County: Erie

Description of green remediation programs reported above (Attach additional sheets if needed)

Energy Usage:

Waste Generation:

Transportation/Shipping:

Water usage:

Land Use and Ecosystems:

Other:

CERTIFICATION BY CONTRACTOR

I, _____ (**Name**) do hereby certify that I am _____ (**Title**) of the Company/Corporation herein referenced and contractor for the work described in the foregoing application for payment. According to my knowledge and belief, all items and amounts shown on the face of this application for payment are correct, all work has been performed and/or materials supplied, the foregoing is a true and correct statement of the contract account up to and including that last day of the period covered by this application.

Date: _____ **Contractor**

SMP
132 DINGENS ST. SITE

APPENDIX G
REMAINING SOIL CONTAMINATION

TABLE G-1A

132 DINGENS STREET - BCP RI/RA

REMAINING CONTAMINATION BELOW PETLs AND CSCOs

PHASE II ESA (2011) TEST PIT SOIL SAMPLES

(SAMPLED 12/19/11 DURING PHASE II)

SAMPLE ID/ LOCATION	PETLs or CSCOs	TS-1	TS-2	TS-3	TS-6	TS-7
		eastern section			northern section	
DEPTH INTERVAL (ft)		0' - 4'	0' - 4'	0' - 4'	0' - 0.5'	0' - 6'
Percent Solids (%)		56.5	70.5	90.3	75.3	74.2
SEMIVOLATILE ORGANICS (SVOCs, ug/Kg)						
2-Methylnaphthalene				14		
Anthracene						650
Benzo(a)anthracene		830	140	60		1,900
Benzo(a)pyrene		1,300	170	170		2,400
Benzo(b)fluoranthene		1,400	190	240		2,500
Benzo(k)fluoranthene		730		88		1,100
Benzo(g,h,i)perylene		720		200		1,800
Bis(2-ethylhexyl) phthalate	--		1,300		NA	
Carbazole		120				
Chrysene		1,100	200	82		2,100
Dibenz(a,h)anthracene				71		520
Fluoranthene		1,600	180	39		3,800
Indeno(1,2,3-cd)pyrene		750		170		1,500
Phenanthrene		740	88	31		3,100
Pyrene		1,500		35		3,200
TOTAL SVOCs	**500,000**	10,790	2,268	1,200		24,570
PCBs (ug/Kg)	**1,000**	NA	NA	NA	NA	ND
ASBESTOS	**--**	NA	NA	NA	NA	ND

TABLE G-1A

132 DINGENS STREET - BCP RI/RA

REMAINING CONTAMINATION BELOW PETLs AND CSCOs

PHASE II ESA (2011) TEST PIT SOIL SAMPLES

(SAMPLED 12/19/11 DURING PHASE II)

SAMPLE ID/ LOCATION	PETLs or CSCOs	TS-1	TS-2	TS-3	TS-6	TS-7
		eastern section			northern section	
DEPTH INTERVAL (ft)		0' - 4'	0' - 4'	0' - 4'	0' - 0.5'	0' - 6'
Percent Solids (%)		56.5	70.5	90.3	75.3	74.2
METALS (mg/Kg)						
Aluminum	--	12,700	7,200	1,190	13,600	6,010
Antimony	--	9.6	3.3			4.1
Mercury	**5.7**	0.6	0.4		0.1	2.3
Arsenic	**71**	25.3	15.0	1.5	5.1	20.4
Barium	*400*	**1,270**	376	7	80	**1,500**
Beryllium	*590*	1.0	0.8	0.1	0.6	0.6
Cadmium	*9.3*	2.2	1.1	0.0	0.4	2.9
Calcium	--	12,600	11,100	769	16,400	25,600
Chromium	*1,500*	50.7	20.5	2.6	45.5	17.3
Cobalt	--	7.7	8.0	0.2	7.1	6.7
Copper	*270*	382	106	16	18	124
Iron	--	47,000	16,200	4,060	22,300	21,300
Lead	**5,000**	4,160	2,970	6.5	41	1,030
Magnesium	--	2,230	771	157	3,280	3,450
Manganese	*10,000*	254	426	61	1,080	334
Nickel	*310*	23	20	2	17	17
Potassium	--	1,240	772	93	1,620	799
Selenium	*1,500*	4.0	0.8		1.7	1.2
Silver	*1,500*	4.4	0.3			0.4
Sodium	--	369	312	32	78	275
Thallium	--				1.1	
Vanadium	--	41.0	30.7	1.3	37.9	24.5
Zinc	*10,000*	2,600	525	11	133	2,980

Note: 1. "ND" = Not Detected; "NA" = Not Analyzed; Sample interval based on observed soil layers

2. Only detected organic compounds are listed; All metals analyzed are listed; Blank cells indicate non-detect

3. CSCOs are listed in italics ; PETLs are listed in bold; Compounds exceeding CSCOs or PETLs are shown in bold numbers

4. Table of sample coordinates is in this appendix, and location figure is in this report

5. CSCO = Commercial Soil Cleanup Objective; PETL = Proposed Excavation Threshold Limit

TABLE G-1B
132 DINGENS STREET - BCP REMEDIATION
REMAINING CONTAMINATION BELOW PETLs AND CSCOs
PHASE II ESA (2011) GEOPROBE SOIL SAMPLES
(SAMPLED 12/16/11 DURING PHASE II)

SAMPLE ID/ LOCATION	PETLs or CSCOs	GS#1	GS#2	GS#3	GS#7	GS#8	GS#9	GS#10	GS#11	GS#12	GS#13	GS#14	GS#16
		southwest area			refr. bldg.	northwest area			north corner	eastern section			
DEPTH INTERVAL (ft)		0 - 4	4 - 8	4 - 8	8 - 12	4 - 8	8 - 12	4 - 8	4 - 8	4 - 8	8 - 12	4 - 8	8 - 12
Percent Solids (%)		76.6	84.3	78.6	86.3	62.0	67.1	72.3	59.2	41.5	60.1	84.0	68.7
VOLATILE ORGANICS (VOCs, ug/Kg)													
Acetone	*500,000*		48		28		160			460		33	100
Methylene chloride	*500,000*		3.5		4.8								
Cyclohexane	--				1.7					27		6.1	
Benzene	*45,000*									5			
Toluene	*500,000*									1.3		0.58	
Ethylbenzene	*390,000*									20		2.1	
Total Xylenes	*500,000*	NA		NA		NA		NA	NA	89	NA	3.2	
2-Butanone (MEK)	*500,000*		11		6.1		25			120		8.2	23
Methylcyclohexane	--									150		22	
Methylene Chloride	*500,000*									9.7			
Isopropylbenzene	*500,000*									150		20	
TOTAL BTEX			0		0		0			115		6	0
TOTAL VOCs			63		41		185			1,032		95	123
SEMIVOLATILE ORGANICS (SVOCs, ug/Kg)													
Naphthalene			25										
2-Methylnaphthalene										82,000		470	41
Anthracene						2,200	230		47	5,300	51		140
Acenaphthene						920				3,900			110
Acenaphthylene										4,400			42
Acetophenone										3,500			
Benzo(a)anthracene		13	84			3,900	520		240	13,000	120	470	250
Benzo(a)pyrene			89			4,800	580		320	13,000	120	440	300
Benzo(b)fluoranthene		21	120			4,900	660		300	15,000	140	690	400
Benzo(k)fluoranthene			40			2,300	360		140	6,600	83	270	120
Benzo(g,h,i)perylene	--	19	76	ND		3,200			190	5,900	98	400	190
Bis(2-ethylhexyl) phthalate					NA			NA	210		180		
Carbazole						710			30	1,200	23		85
Chrysene		19	88			3,600	540		220	14,000	120	290	260
Dibenzofuran						880							
Dibenz(a,h)anthracene									58	2,800	30		51
Fluoranthene		15	200			9,600	1,100		410	27,000	250	740	690
Fluorene						940				7,800	33	400	100
Indeno(1,2,3-cd)pyrene		14	58			2,600	270		170	5,600	82		160
Naphthalene										8,100			56
Phenanthrene						8,000	730		230	24,000	190	900	450
Pyrene			180			8,300	890		360	18,000	200	570	520
TOTAL SVOCs	**500,000**	101	960	0		56,850	5,880		2,925	261,100	1,720	5,640	3,965

TABLE G-1B
132 DINGENS STREET - BCP REMEDIATION
REMAINING CONTAMINATION BELOW PETLs AND CSCOs
PHASE II ESA (2011) GEOPROBE SOIL SAMPLES
(SAMPLED 12/16/11 DURING PHASE II)

SAMPLE ID/ LOCATION	PETLs or CSCOs	GS#1	GS#2	GS#3	GS#7	GS#8	GS#9	GS#10	GS#11	GS#12	GS#13	GS#14	GS#16
		southwest area			refr. bldg.	northwest area			north corner	eastern section			
DEPTH INTERVAL (ft)		0 - 4	4 - 8	4 - 8	8 - 12	4 - 8	8 - 12	4 - 8	4 - 8	4 - 8	8 - 12	4 - 8	8 - 12
Percent Solids (%)		76.6	84.3	78.6	86.3	62.0	67.1	72.3	59.2	41.5	60.1	84.0	68.7
METALS (mg/Kg)													
Aluminum	--	6400		4570		5260	4890	6880	6910	5810			
Antimony	--	1.6					2.7	1.8		2.4			
Mercury	**5.7**	0.05		0.02		0.05	1.80	0.36	0.12	1.30			
Arsenic	**71**	15		14.1		8.5	36.7	21.4	20.5	34.4			
Barium	*400*	352		90.3		162	**736**	202	234	**1890**			
Beryllium	*590*	0.98		0.52		0.54	0.59	0.72	0.81	0.7			
Cadmium	*9.3*	0.43		0.29		0.52	3.3	0.98	0.63	3.2			
Calcium	--	8510		3190		4310	19200	7490	7360	34600			
Chromium	*1,500*	12.4		12		9.9	52.7	16.9	10.8	55.3			
Cobalt	--	6.4		10.4		5	6.6	6.5	7.5	9.9			
Copper	*270*	63.8	NA	139	NA	45.7	143	137	**350**	111	NA	NA	NA
Iron	--	32800		87400		9680	51300	21700	9600	51100			
Lead	**5,000**	549		124		417	2470	641	1220	2440			
Magnesium	--	626		273		577	3280	2180	556	3480			
Manganese	*10,000*	280		697		88.1	453	298	168	566			
Nickel	*310*	17.5		21.7		13.6	20.2	25.1	24	18.9			
Potassium	--	770		460		757	902	803	971	1190			
Selenium	*1,500*	0.8		2.3		ND	5.1	2.4	1.4	2.8			
Silver	*1,500*			0.3		0.33	0.69	ND	ND	11			
Sodium	--	411		201		371	860	160	551	1710			
Vanadium	--	23.6		28.2		26.5	20.3	29.8	31.3	18.6			
Zinc	*10,000*	276		282		196	1450	470	318	1600			

Note: 1. "ND" = Not Detected; "NA" = Not Analyzed; Sample interval based on observed soil layers

2. Only detected organic compounds are listed; All metals analyzed are listed; Blank cells indicate non-detect

3. CSCOs are listed in italics ; PETLs are listed in bold; Compounds exceeding CSCOs or PETLs are shown in bold numbers

4. Table of sample coordinates is in this appendix, and location figure is in this report

5. CSCO = Commercial Soil Cleanup Objective; PETL = Proposed Excavation Threshold Limit

TABLE G-2A
132 DINGENS STREET - BCP REMEDIATION
REMAINING CONTAMINATION BELOW PETLs AND CSCOs
RI TEST PIT SOIL SAMPLES

(SAMPLED 9/25/12 DURING RI)

SAMPLE ID/ LOCATION	PETLS or CSCOs	TS#8	TS#8	TS#8	TS#9	TS#9	TS#10	TS#10	TS#10	TS#11	TS#11	TS#11	TS#12	TS#12	TS#12
		East End					East End						North Center		
VOLATILE ORGANICS (ug/Kg)															
DEPTH INTERVAL (ft)		NA	*0' - 2'*	NA	NA	NA	NA	NA	NA	NA	*1' - 4'*	NA	NA	NA	NA
Percent Solids (%)			*72.5*								*75.3*				
Trichloroethene	*21,000*		2.4 J								2.5 J				
PESTICIDES (ug/Kg)															
DEPTH INTERVAL (ft)		*0*	*2*		*0*	*2 - 8*	*0*	NA	NA	*0*	*1 - 4*	*5 - 8*	*0*	*0 - 2*	*2 - 8*
Percent Solids (%)		*71.6*	*72.5*		*72.9*	*82 8*	*63.8*			*73.7*	*75.3*	*89.9*	*90.7*	*79.4*	*83.1*
4,4'-DDE	*62,000*			NA						330 J	100 J	76 J			
4,4'-DDT	*47,000*				46 J		78 J				160 J		74 J	86 J	
Dieldrin	*1,400*										73 J	82 J			
Endosulfan II	*200,000*						24 J								
Endrin	*89,000*	33 J			31 J	27 J									11 J
gamma-Chlordane	*9,200*										140 J				
Methoxychlor	--						72 J								
TOTAL PEST		33	ND		77	27	174			330	473	158	74	86	11
PCBs (ug/Kg)															
DEPTH INTERVAL (ft)		*0*	*2*		*0*	*2 - 8*	*0*	NA	NA	*0*	*1 - 4*	*5 - 8*	*0*	*0 - 2*	*2 - 8*
Percent Solids (%)		*71.6*	*72.5*		*72.9*	*82 8*	*63.8*			*73.7*	*75.3*	*89.9*	*90.7*	*79.4*	*83.1*
Aroclor 1242	--		280 J	NA			79 J								
Aroclor 1248															
Aroclor 1254															
Aroclor 1260											250	710			
TOTAL PCBs	**1,000**	ND	280		ND	ND	79			ND	250	710	ND	ND	ND

TABLE G-2A
132 DINGENS STREET - BCP REMEDIATION
REMAINING CONTAMINATION BELOW PETLs AND CSCOs
RI TEST PIT SOIL SAMPLES

(SAMPLED 9/25/12 DURING RI)

SAMPLE ID/ LOCATION	PETLS or CSCOs	TS#8	TS#8	TS#8	TS#9	TS#9	TS#10	TS#10	TS#10	TS#11	TS#11	TS#11	TS#12	TS#12	TS#12
		East End					East End						North Center		
SEMIVOLATILE ORGANICS (ug/Kg)															
DEPTH INTERVAL (ft)		*0*	*2*	*6 - 7*	*0*	*2 - 8*	*0*	*2 - 4*	*4 - 7*	*0*	*1 - 4*	*5 - 8*	*0*	*0 - 2*	*2 - 8*
Percent Solids (%)	--	*71.6*	*72.5*	*74.5*	*72.9*	*82.8*	*63.8*	*68.2*	*88.7*	*73.7*	*75.3*	*89.9*	*90.7*	*79.4*	*83.1*
Biphenyl				45 J				22 J			22 J		310 J	210 J	
2-Methylnaphthalene		94 J	100 J	120 J	47 J		160 J	89 J	83 J		68 J	50 J	410 J	680 J	
3 & 4-Methylphenol															
Acenaphthene		230 J	270 J	63 J			430 J			2200 J	140 J	110 J	1100 J	1100 J	
Acenaphthylene			52 J		43 J						53 J		240 J		
Acetophenone															
Anthracene		700 J	1200	85 J	260 J	110 J	1200 J	55 J		6000 J	440	280 J	3200 J	3200	
Benzaldehyde															
Benzo(a)anthracene		3000	3600	160 J	2400	300 J	5400	470 J	78 J	26000	1500	1500	9600	6900	80 J
Benzo(a)pyrene		3100	3200	120 J	1900	280 J	5500	400 J	53 J	31000	1500	1700	8000	5900	81 J
Benzo(b)fluoranthene		3400	3300	130 J	2600	400 J	6700	620	75 J	36000	2000	2400	9000	5800	120 J
Benzo(g,h,i)perylene		1700	2100	94 J	970	240 J	4100	230 J	31 J	25000	1300	1500	4800	2300 J	85 J
Benzo(k)fluoranthene		3600	2700	130 J	1800	270 J	4500	570	84 J	28000	1200	1500	7700	5300	92 J
Bis(2-ethylhexyl) phthalate	--	200 J			64 J		560 J	44 J	35 J		140 J	160 J			
Butyl benzyl phthalate											30 J				
Carbazole		280 J	370 J				650 J	40 J		4600 J	230 J	110 J	1600 J	1500 J	
Chrysene		3200	3900	180 J	2300	340 J	6000	690	120 J	31000	1500	1800	9600	6700	100
Dibenz(a,h)anthracene		630 J	730 J		410 J	97 J	1400 J	110 J	14 J	6500 J	550	390 J	1600 J	1100 J	30 J
Dibenzofuran		170 J	240 J	120 J		46 J	290 J	57 J	25 J	1100 J	110 J	57 J	1100 J	1200 J	
Di-n-butyl phthalate		42 J						43 J			43 J	55 J			
Fluoranthene		4300	5900	290 J	4100	490 J	8500	430 J	43 J	48000	2100	1900	15000	11000	74 J
Fluorene		340 J	480 J	100 J	62 J	45 J	450 J	23 J		2100 J	220 J	86 J	1600 J	1600 J	
Indeno(1,2,3-cd)pyrene		1600	1800	77 J	950	200 J	3700	210 J	26 J	20000	1100	1200	4600	3100	81 J
Naphthalene		110 J	140 J	180 J	32 J		340 J	120 J	40 J	600 J	100 J	57 J	840 J	1900 J	
Phenanthrene		3200	4900	340 J	880	390 J	5000	350 J	120 J	30000	1800	1300	15000	13000	56 J
Pyrene		6500	9200	500 J	5800	620 J	11000	840	100 J	74000	3200	4100	26000	16000	150 J
TOTAL SVOCs	**500,000**	36,396	44,182	2,734	24,618	3,828	65,880	5,413	927	372,100	19,346	20,255	121,300	88,490	949

TABLE G-2A
132 DINGENS STREET - BCP REMEDIATION
REMAINING CONTAMINATION BELOW PETLs AND CSCOs
RI TEST PIT SOIL SAMPLES

(SAMPLED 9/25/12 DURING RI)

SAMPLE ID/ LOCATION	PETLS or CSCOs	TS#8	TS#8	TS#8	TS#9	TS#9	TS#10	TS#10	TS#10	TS#11	TS#11	TS#11	TS#12	TS#12	TS#12
		East End					East End						North Center		
METALS (mg/Kg)															
DEPTH INTERVAL (ft)		*0*	*2*	*6 - 7*	*0*	*2 - 8*	*0*	*2 - 4*	*4 - 7*	*0*	*1 - 4*	*5 - 8*	*0*	*0 - 2*	*2 - 8*
Percent Solids (%)		*71.6*	*72.5*	*74.5*	*72.9*	*82 8*	*63.8*	*68.2*	*88.7*	*73.7*	*75.3*	*89.9*	*90.7*	*79.4*	*83.1*
Aluminum	--	8400	10300	3860	8100	3610	5660	3160	2400	5710	3900	3240	7900	7950	4770
Antimony	--	1.5	2			4460	32.8	9.4	1.8	11	0.5	1.1		0.65	
Arsenic	**71.0**	13.4	22.8	11.4	6.3	43.6	23.1	18.2	11.6	17.8	11.8	6.6	13.5	18.9	18
Barium	*400*	**453**	**816**	191	113	**954**	**1290**	421	75.5	165	116	135	238	**440**	298
Beryllium	*590*	0.85	1.3	0.42	0.57	0.38	0.74	0.92	0.57	0.69	0.34	0.27	0.8	0.98	0.58
Cadmium	*9.3*	1.9	3.4	0.47	0.45	3.6	3.6	0.6	0.076	1.9	5.4	1.2	1.6	2.4	2.2
Calcium	--	28300	33900	183000	41700	15700	15700	4150	3380	126000	11500	13600	28100	35900	2710
Chromium	*1,500*	29.6	32.8	8.2	13.4	13.6	24.7	11.2	2.8	76.8	18.7	12.1	21.4	24.8	14.3
Cobalt	--	8	9.1	4.4	6.6	3.6	4.7	6.8	3.2	4.8	3.2	2.4	6.1	7.7	16.3
Copper	*270*	123	263	31.9	147	1290	139	201	41.1	304	2400	92.8	76.8	139	2030
Iron	--	23600	51400	18700	16000	14000	17200	33800	20200	25800	17900	9680	20400	22900	134000
Lead	**5,000**	1010	2760	241	133	93500	1430	262	29.5	332	307	414	515	1630	1530
Magnesium	--	7540	4470	5910	12500	2070	3310	478	206	13300	1730	2990	7160	6310	206
Manganese	*10,000*	626	749	580	302	384	395	64.8	34.2	2310	315	235	486	547	236
Nickel	*310*	23.6	27.8	11.8	17.1	17.6	20.6	20.2	8.7	27.5	20.7	10.9	20.7	25.7	36.1
Potassium	--	1830	1340	776	1730	548	1140	365	366	1330	496	499	1620	1180	400
Selenium	*1,500*	2.5	4.7	1.2	0.86	2.1	1.8	1.8	1.3	2.3	1.1	0.89	1.8	2.1	4.1
Silver	*1,500*	0.39	1.2			17.2	0.75			0.35	0.49		0.27	0.31	0.75
Sodium	--	157	346	179	299	514	135	124	90.5	258	84.1	71.8	135	161	593
Thallium	--														
Vanadium	--	24.1	29.3	14.7	20.2	19	18	16.8	9	41.6	11.5	8.7	20.3	23.8	30.8
Zinc	*10,000*	1610	1820	672	187	1120	14300	201	26.2	1230	426	279	593	834	1710
Mercury	**5.7**	1.6	0.6	0.16	0.094	0.25	0.91	0.06	0.014	0.22	0.51	0.15	0.38	0.7	0.34
Total Cyanide (mg/Kg)	*27*	1.2	1.1	NA		1.4	1.8	NA	NA	0.89	1	0.55	1.2	0.99	1.1

TABLE G-2A
132 DINGENS STREET - BCP REMEDIATION
REMAINING CONTAMINATION BELOW PETLs AND CSCOs
RI TEST PIT SOIL SAMPLES

(SAMPLED 9/25/12 DURING RI)

SAMPLE ID/ LOCATION	PETLS or CSCOs	TS#13	TS#13	TS#13	TS#14	TS#14	TS#14	TS#16	TS#16	TS#17	TS#17	TS#17
		North Center			West End							
VOLATILE ORGANICS (ug/Kg)												
DEPTH INTERVAL (ft)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Solids (%)												
Trichloroethene	*21,000*											
PESTICIDES (ug/Kg)												
DEPTH INTERVAL (ft)		*0*	*0 - 2*	*2 - 8*	*0*	NA	NA	NA	NA	*0*	*0 - 2*	NA
Percent Solids (%)		*66.1*	*72.8*	*73.9*	*70.2*					*69.3*	*80.2*	
4,4'-DDE	*62,000*											
4,4'-DDT	*47,000*	110 J			100 J					180 J	160 J	
Dieldrin	*1,400*											
Endosulfan II	*200,000*									44 J		
Endrin	*89,000*		94 J	17 J						120 J	100 J	
gamma-Chlordane	*9,200*			17 J								
Methoxychlor	--											
TOTAL PEST		110	94	34	100					344	260	
PCBs (ug/Kg)												
DEPTH INTERVAL (ft)		*0*	*0 - 2*	*2 - 8*	*0*	NA	NA	NA	NA	*0*	*0 - 2*	NA
Percent Solids (%)		*66.1*	*72.8*	*73.9*	*70.2*					*69.3*	*80.2*	
Aroclor 1242	--											
Aroclor 1248												
Aroclor 1254												
Aroclor 1260					200 J					370		
TOTAL PCBs	**1,000**	ND	ND	ND	200					370	ND	

TABLE G-2A
132 DINGENS STREET - BCP REMEDIATION
REMAINING CONTAMINATION BELOW PETLs AND CSCOs
RI TEST PIT SOIL SAMPLES

(SAMPLED 9/25/12 DURING RI)

SAMPLE ID/ LOCATION	PETLS or CSCOs	TS#13	TS#13	TS#13	TS#14	TS#14	TS#14	TS#16	TS#16	TS#17	TS#17	TS#17
		North Center			West End							
SEMIVOLATILE ORGANICS (ug/Kg)												
DEPTH INTERVAL (ft)		*0*	*0 - 2*	*2 - 8*	*0*	*0 - 2*	*4 - 8*	*3 - 4*	*5 - 6*	*0*	*0 - 2*	*6 - 7*
Percent Solids (%)	--	*66.1*	*72.8*	*73.9*	*70.2*	*79.4*	*87.1*	*91.6*	*72.4*	*69.3*	*80.2*	*78.8*
Biphenyl												
2-Methylnaphthalene		150 J	1600 J		140 J	320 J	200 J	36 J			110 J	
3 & 4-Methylphenol												
Acenaphthene		410 J	4000 J	37 J	450 J	760 J	370 J			1000 J	87 J	
Acenaphthylene			460 J								220 J	
Acetophenone												
Anthracene		1300 J	12000	150 J	1600 J	1600 J	3300 J		56 J	3200 J	330 J	88 J
Benzaldehyde												
Benzo(a)anthracene		4600	28000	630 J	6200	3400 J	8700	100 J	220 J	20000	2800	330 J
Benzo(a)pyrene		4600	20000	750 J	5900	3100 J	6200	110 J	200 J	19000	3100	310 J
Benzo(b)fluoranthene		5700	23000	930	6700	3700 J	6900	120 J	270 J	28000	4100	310 J
Benzo(g,h,i)perylene		2900	12000	690 J	4600	2400 J	3500 J	75 J	140 J	9700	1500	220 J
Benzo(k)fluoranthene		3800	21000	870	5300	2800 J	7100	87 J	190 J	21000	4700	270 J
Bis(2-ethylhexyl) phthalate	--											
Butyl benzyl phthalate												
Carbazole		610 J	6400 J	100 J	940 J	490 J	830 J			2300 J	270 J	46 J
Chrysene		4900	33000	1000	6700	3700 J	8800	180 J	240 J	28000	3900	380 J
Dibenz(a,h)anthracene		1000 J	5400 J	210 J	1500 J	770 J	1200 J		38 J	2200 J	470 J	55 J
Dibenzofuran		350 J	3300 J	83 J	310 J	530 J	980 J			750 J	93 J	
Di-n-butyl phthalate											91 J	
Fluoranthene		7400	47000	1300	8400	4500	17000	84 J	280 J	34000	5600	460 J
Fluorene		540 J	5500 J	75 J	530 J	720 J	1700 J			1000 J	78 J	
Indeno(1,2,3-cd)pyrene		2700	12000	580 J	4100	2100 J	3400 J	57 J	110 J	13000	1500	230 J
Naphthalene		210 J	2600 J	44 J	160 J	350 J		36 J		710 J	130 J	
Phenanthrene		5700	52000	1400	6600	7200	17000	110 J	310 J	18000	1600	450 J
Pyrene		11000	61000	2300	12000	9100	20000	180 J	510 J	50000	4100	800 J
TOTAL SVOCs	**500,000**	57,870	350,260	11,149	72,130	47,540	107,180	1,175	2,564	251,860	34,779	3,949

TABLE G-2A
132 DINGENS STREET - BCP REMEDIATION
REMAINING CONTAMINATION BELOW PETLs AND CSCOs
RI TEST PIT SOIL SAMPLES

(SAMPLED 9/25/12 DURING RI)

SAMPLE ID/ LOCATION	PETLS or CSCOs	TS#13	TS#13	TS#13	TS#14	TS#14	TS#14	TS#16	TS#16	TS#17	TS#17	TS#17
		North Center			West End							
METALS (mg/Kg)												
DEPTH INTERVAL (ft)		*0*	*0 - 2*	*2 - 8*	*0*	*0 - 2*	*4 - 8*	*3 - 4*	*5 - 6*	*0*	*0 - 2*	*6 - 7*
Percent Solids (%)		*66.1*	*72.8*	*73.9*	*70.2*	*79.4*	*87.1*	*91.6*	*72.4*	*69.3*	*80.2*	*78.8*
Aluminum	--	8240	4060	7110	10600	4080	5730	5250	7600	3580	2760	5570
Antimony	--	0.72	11.9	2	1.3	7.4	0.68	4.5	0.74	5.2	2.2	1.3
Arsenic	**71.0**	23.7	167	274	12.1	16.1	15.2	18.3	22.4	38.5	21.3	15.7
Barium	*400*	286	**871**	**931**	277	242	316	307	**924**	256	219	269
Beryllium	*590*	0.79	0.44	1.8	0.82	0.43	0.6	0.81	0.88	0.53	0.72	0.72
Cadmium	*9.3*	1.9	3.7	7.2	1.7	1.2	0.91	1.5	0.9	6.3	1.7	0.69
Calcium	--	27500	31700	72900	73100	26400	21100	10500	13600	31900	5220	3710
Chromium	*1,500*	23.5	42.9	15.9	140	15	27.6	8.8	21.2	52	21.3	23.9
Cobalt	--	7.8	10	7.7	5.7	4.1	5.6	5.2	8.5	6.8	4.1	5.2
Copper	*270*	132	225	117	111	251	136	173	117	166	71.8	113
Iron	--	29600	136000	26300	28900	16800	21000	9670	31600	39500	24500	17300
Lead	**5,000**	1120	1600	706	821	1120	1260	410	909	506	209	525
Magnesium	--	7230	3280	2130	6760	4330	3750	1750	3760	2740	515	857
Manganese	*10,000*	503	810	1220	4710	344	414	154	377	439	113	393
Nickel	*310*	24.8	38.8	38.8	19.7	13.9	13.9	13.1	28.2	48.9	16.3	14.2
Potassium	--	1630	594	1060	1890	679	935	498	912	666	894	702
Selenium	*1,500*	2	3.6	3.1	4.3	1.6	1.3	2.6	2.9	2.4	2	1.4
Silver	*1,500*	0.45			0.41	0.35	0.33		0.55	0.4		0.31
Sodium	--	167	356	1020	173	138	195	350	316	119	99.6	266
Thallium	--			0.86	0.8						0.94	
Vanadium	--	23	20.6	38.7	78.6	12.4	20.4	22.1	38.3	19.1	15.6	29.7
Zinc	*10,000*	740	1280	2870	559	617	610	877	947	1020	301	405
Mercury	**5.7**	0.91	5.8	0.46	0.46	1.1	1.4	0.12	0.45	0.78	0.16	0.12
Total Cyanide (mg/Kg)	*27*	1	1.8	1.1	0.9	NA	NA	NA	NA	3.0	1.6	NA

Note: 1. "ND" = Not Detected; "NA" = Not Analyzed; Sample interval based on observed soil layers

2. Only detected organic compounds are listed; All metals analyzed are listed; Blank cells indicate non-detect

3. CSCOs are listed in italics ; PETLs are listed in bold; Compounds exceeding CSCOs or PETLs are shown in bold numbers

4. Table of sample coordinates is in this appendix, and location figure is in this report

5. CSCO = Commercial Soil Cleanup Objective; PETL = Proposed Excavation Threshold Limit

TABLE G-2B
132 DINGENS STREET - BCP REMEDIATION
REMAINING CONTAMINATION BELOW PETLs AND CSCOs
RI GEOPROBE SOIL BORING SAMPLES
(SAMPLED 7/23/12, 7/24/12 9/21/12 DURING RI)

SAMPLE ID/ LOCATION	PETL or CSCOs	GS#18	GS#18D	GS#22	GS#23	GS#24	GS#25	GS#26	GS#27	GS#28	GS#29	GS#31
					north	south	central area				eastern area	central area
VOLATILE ORGANICS (ug/Kg)												
DEPTH INTERVAL (ft)		*7*	*7*	*7*	*10*	*7*	*10*	*5*	*6*	*9*	*8*	*7*
Percent Solids (%)		*78.1*	*78.4*	*73.3*	*37*	*63.1*	*84.3*	*93.2*	*62.9*	*77.1*	*57.3*	*79.2*
2-Hexanone	--										4.8 JB	
Acetone	*100,000*			15 J		410	76	12 J	250	26 J	17 J	110
Benzene	*4,800*											
Carbon disulfide	--							4.4 J				
Cyclohexane	--							1.2 J				
Ethylbenzene	*41,000*											
Isopropylbenzene	*100,000*											
2-Butanone (MEK)	*100,000*					88	15 J		44	4.2 J		14 J
Toluene	*100,000*							1.2 JB				
Methylcyclohexane	--											
Methylene Chloride	*100,000*											
Tetrachloroethene	*3,500*											
Trichloroethene	*21,000*											
Total Xylenes	*100,000*											
TOTAL VOCs	--	ND	ND	15	ND	498	91	19	294	30	22	124
PESTICIDES (ug/Kg)												
DEPTH INTERVAL (ft)		*0 - 5*	*0 - 5*	*2 - 6*	*4 - 8*	*1 - 5*	*1 - 5*	*1 - 5*	*1 - 5*	*1 - 5*	*1 - 5*	*1 - 5*
Percent Solids (%)		*93.2*	*91*	*82.8*	*78.6*	*81*	*82.5*	*88.7*	*83*	*88.5*	*88.3*	*85.1*
4,4'-DDE	*62,000*							21 J	9.8 J		8.9 J	
4,4'-DDT	*47,000*		36 J	8.2 J	11 J	52 J						
Dieldrin	*1,400*											
Endosulfan II	*200,000*											
Endrin	*89,000*											
Methoxychlor	--		120									
TOTAL PEST	--	ND	156	8	11	52	ND	21	10	ND	9	ND
PCBs (ug/Kg)												
DEPTH INTERVAL (ft)		*0 - 5*	*0 - 5*	*2 - 6*	*4 - 8*	*1 - 5*	*1 - 5*	*1 - 5*	*1 - 5*	*1 - 5*	*1 - 5*	*1 - 5*
Percent Solids (%)		*93.2*	*91*	*82.8*	*78.6*	*81*	*82.5*	*88.7*	*83*	*88.5*	*88.3*	*85.1*
Aroclor 1248		190 J	230 J									
Aroclor 1254	--	450	490									
Aroclor 1260		77 J	140 J					190 J		140 J		
TOTAL PCBs	**1,000**	717	860	ND	ND	ND	ND	190	ND	140	ND	ND

TABLE G-2B
132 DINGENS STREET - BCP REMEDIATION
REMAINING CONTAMINATION BELOW PETLs AND CSCOs
RI GEOPROBE SOIL BORING SAMPLES
(SAMPLED 7/23/12, 7/24/12 9/21/12 DURING RI)

SAMPLE ID/ LOCATION	PETL or CSCOs	GS#18	GS#18D	GS#22	GS#23	GS#24	GS#25	GS#26	GS#27	GS#28	GS#29	GS#31
					north	south	central area				eastern area	central area
SEMIVOLATILE ORGANICS (ug/Kg)												
DEPTH INTERVAL (ft)		*0 - 5*	*0 - 5*	*2 - 6*	*4 - 8*	*1 - 5*	*1 - 5*	*1 - 5*	*1 - 5*	*1 - 5*	*1 - 5*	*1 - 5*
Percent Solids (%)	--	*93.2*	*91*	*82.8*	*78.6*	*81*	*82.5*	*88.7*	*83*	*88.5*	*88.3*	*85.1*
Biphenyl												
2-Methylnaphthalene												
3 & 4-Methylphenol												
Acenaphthene			200 J	61 J	220 J		44 J				590 J	
Acenaphthylene			480 J	180 J								
Acetophenone												
Anthracene		850 J	1000 J	470 J	530 J		180 J		170 J		490 J	130 J
Benzaldehyde												
Benzo(a)anthracene		6200	6900	2500	1300 J	1000 J	580 J		930 J		1000 J	720 J
Benzo(a)pyrene		5800	6500	2400	1300 J	1000 J	600 J		860 J	230 J	890 J	730 J
Benzo(b)fluoranthene		9800	11000	3400	1800 J	1400 J	850 J	86 J	1000 J	310 J	1200 J	970 J
Benzo(g,h,i)perylene		1800 J	2000 J	660 J			120 J		260 J		240 J	230 J
Benzo(k)fluoranthene		3700	4100	1500	740 J	740 J	350 J	46 J	450 J	170 J	710 J	450 J
Bis(2-ethylhexyl) phthalate	--		2400 JB									
Butyl benzyl phthalate												
Carbazole			540 J	87 J							180 J	
Chrysene		6600	7300	2300	1400 J	1100 J	570 J		800 J	230 J	860 J	630 J
Dibenz(a,h)anthracene		710 J	850 J									
Dibenzofuran				46 J							490 J	
Di-n-butyl phthalate												
Fluoranthene		12000	13000	4600	2700 J	2000 J	1300		1600 J	360 J	2700	1200 J
Fluorene				100 J							770 J	
Indeno(1,2,3-cd)pyrene		2300 J	2400 J	770 J	270 J		140 J		270 J		270 J	230 J
Naphthalene											250 J	
Phenanthrene		3700	3800	2000	2300 J	1000 J	810 J		720 J	260 J	2800	680 J
Pyrene		9100	9900	3500	2100 J	1600 J	910 J		1400 J	280 J	1800 J	910 J
TOTAL SVOCs	**500,000**	62,560	72,370	24,574	14,660	9,840	6,454	132	8,460	1,840	15,240	6,880

TABLE G-2B
132 DINGENS STREET - BCP REMEDIATION
REMAINING CONTAMINATION BELOW PETLs AND CSCOs
RI GEOPROBE SOIL BORING SAMPLES
(SAMPLED 7/23/12, 7/24/12 9/21/12 DURING RI)

SAMPLE ID/ LOCATION	**PETL or CSCOs**	GS#18	GS#18D	GS#22	GS#23	GS#24	GS#25	GS#26	GS#27	GS#28	GS#29	GS#31
					north	south	central area				eastern area	central area
METALS (mg/Kg)												
DEPTH INTERVAL (ft)		*0 - 5*	*0 - 5*	*2 - 6*	*4 - 8*	*1 - 5*	*1 - 5*	*1 - 5*	*1 - 5*	*1 - 5*	*1 - 5*	*1 - 5*
Percent Solids (%)		*93.2*	*91*	*82.8*	*78.6*	*81*	*82.5*	*88.7*	*83*	*88.5*	*88.3*	*85.1*
Aluminum	--	2190	2710	6610	8050	9870	13600	20000	6250	4890	26300	10700
Antimony	--	1.7	3.3	3.6	2.5				2.9	111	0.78	1.7
Arsenic	**71.0**	43	43.1	34.8	10.8	11.4	6.7	2.3	10	27.8	2.8	9.7
Barium	*400*	81.7	91.7	379	265	116	163	230	357	**1800**	206	403
Beryllium	*590*	0.41	0.51	0.7	0.71	0.55	1.8	4.9	0.8	0.62	4.8	2
Cadmium	*9.3*	0.6	1.1	0.77	0.8	0.2	0.42	0.21	1	9.5	0.15	1
Calcium	--	7080	21800	30000	6640	43200	47300	199000	15900	33800	187000	37300
Chromium	*1,500*	11.8	27.4	27.7	13.3	18.2	14.9	11.5	19.8	265	8.9	20.2
Cobalt	--	3.7	9.1	7.4	7	11.1	7.3	0.62	5.5	6.2	1.6	6
Copper	*270*	64.1	143	90.3	**284**	32.1	25.8	18.1	170	110	7.1	214
Iron	--	29600	40300	31300	10100	23200	18500	3470	17100	73700	4480	19400
Lead	**5,000**	149	165	2870	1380	82	229	93.3	433	2370	25.3	1320
Magnesium	--	858	1270	2480	946	15400	17100	29500	2450	4950	35300	10300
Manganese	*10,000*	135	231	357	382	412	1100	1690	344	805	2630	650
Nickel	*310*	12.2	20.4	19.5	18.5	25.4	17.1	3.1	13.5	40.6	5.1	18.2
Potassium	--	487	497	625	764	2770	1800	1460	532	458	1970	1070
Selenium	*1,500*	1.1	1.1	2.8	0.81	1.2	1.6	3	2.2	1.3	3.9	2.9
Silver	*1,500*			0.64					0.69			
Sodium	--	51.6	65.5	236	265	244	735	661	340	208	649	433
Thallium	--						0.41	1.1		0.9	3.2	0.46
Vanadium	--	12.4	15.4	18.4	20.8	21.6	18.9	5	23.1	18.4	6.5	22.2
Zinc	*10,000*	210	498	457	473	67	144	44.4	1320	14400	45.6	605
Mercury	**5.7**	0.087	0.057	0.28	2	0.064	0.045	0.02	1.1	3.6	0.063	1.3
Total Cyanide (mg/Kg)	*27*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE G-2B
132 DINGENS STREET - BCP REMEDIATION
REMAINING CONTAMINATION BELOW PETLs AND CSCOs
RI GEOPROBE SOIL BORING SAMPLES
(SAMPLED 7/23/12, 7/24/12 9/21/12 DURING RI)

SAMPLE ID/ LOCATION	PETL or CSCOs	GS#32	GS#32	GS#33	GS#34	GS#35	GS#36	GS#37	GS#38	GS#39	GS#39	GS#40	GS#40
		northeast		northern area		Concrete Slab		Central	Eastern End				
VOLATILE ORGANICS (ug/Kg)													
DEPTH INTERVAL (ft)		*11*		*8*	*8*	*5*							
Percent Solids (%)		*67.6*		*76.5*	*74.7*	*88.6*							
2-Hexanone	--												
Acetone	*100,000*	150		39									
Benzene	*4,800*			4.5 J									
Carbon disulfide	--												
Cyclohexane	--												
Ethylbenzene	*41,000*		NA	2.5 J									
Isopropylbenzene	*100,000*						NA	NA	NA	NA	NA	NA	NA
2-Butanone (MEK)	*100,000*	20 J		4.6 J									
Toluene	*100,000*			6.4									
Methylcyclohexane	--												
Methylene Chloride	*100,000*												
Tetrachloroethene	*3,500*												
Trichloroethene	*21,000*												
Total Xylenes	*100,000*			13									
TOTAL VOCs	--	170		70	ND	ND							
PESTICIDES (ug/Kg)													
DEPTH INTERVAL (ft)		*1 - 5*		*1 - 5*	*1 - 5*	*6-8*	*9-10*	*4-6*	*4-6*	*0-2*	*4-6*	*0-2*	*4-6*
Percent Solids (%)		*91.3*		*87.2*	*82.5*	*83.8*	*72.7*	*66.6*	*90.1*	*83.2*	*78.4*	*82*	*69*
4,4'-DDE	*62,000*	21 J		26 J	9.3 J								
4,4'-DDT	*47,000*			34 J						39 J		80 J	
Dieldrin	*1,400*												
Endosulfan II	*200,000*		NA	34 J									
Endrin	*89,000*			25 J									
Methoxychlor	--									69 J			
TOTAL PEST	--	21	NA	119	9	ND	ND	ND	ND	108	ND	80	ND
PCBs (ug/Kg)													
DEPTH INTERVAL (ft)		*1 - 5*		*1 - 5*	*1 - 5*	*6-8*	*9-10*	*4-6*	*4-6*	*0-2*	*4-6*	*0-2*	*4-6*
Percent Solids (%)		*91.3*		*87.2*	*82.5*	*83.8*	*72.7*	*66.6*	*90.1*	*83.1*	*78.4*	*82*	*69*
Aroclor 1248													
Aroclor 1254	--		NA										
Aroclor 1260										120 J		310	
TOTAL PCBs	**1,000**	ND	NA	ND	ND	ND	ND	ND	ND	120	ND	310	ND

TABLE G-2B
132 DINGENS STREET - BCP REMEDIATION
REMAINING CONTAMINATION BELOW PETLs AND CSCOs
RI GEOPROBE SOIL BORING SAMPLES
(SAMPLED 7/23/12, 7/24/12 9/21/12 DURING RI)

SAMPLE ID/ LOCATION	PETL or CSCOs	GS#32	GS#32	GS#33	GS#34	GS#35	GS#36	GS#37	GS#38	GS#39	GS#39	GS#40	GS#40
		northeast		northern area		Concrete Slab		Central	Eastern End				
SEMIVOLATILE ORGANICS (ug/Kg)													
DEPTH INTERVAL (ft)		*1 - 5*	*12*	*1 - 5*	*1 - 5*	*6-8*	*9-10*	*4-6*	*4-6*	*0-2*	*4-6*	*0-2*	*4-6*
Percent Solids (%)	--	*91.3*	*66.7*	*87.2*	*82.5*	*83.8*	*72.7*	*66.6*	*90.1*	*83.2*	*78.4*	*82*	*69*
Biphenyl		630 J				26 J			190 J				
2-Methylnaphthalene		2000		340 J	110 J	100 J	46 J	44 J	630 J	37 J	29 J	94 J	
3 & 4-Methylphenol			270 J					160 J					
Acenaphthene		3500	100 J	980 J	96 J	160 J		40 J	2500 J	84 J	26 J	190 J	24 J
Acenaphthylene				170 J						36 J		470 J	
Acetophenone													
Anthracene		12000	240 J	3200	410 J	400 J	59 J	65 J	4000	280 J	120 J	1300 J	180 J
Benzaldehyde							120 J	120 J			27 J		
Benzo(a)anthracene		17000	680 J	8400	1800 J	1000	260 J	250 J	5400	1300	530	5200	670
Benzo(a)pyrene		17000	740 J	8000	2400	930	330 J	240 J	4900	1400	470	4800	590
Benzo(b)fluoranthene		24000	980 J	12000	3300	950	360 J	240 J	4800	1400	530	5600	720
Benzo(g,h,i)perylene		5200	230 J	2300	1200 J	450	270 J	220 J	2400 J	560	220 J	1900 J	190 J
Benzo(k)fluoranthene		12000	490 J	4400	1700 J	1100	410 J	330 J	4800	1500	520	5000	610
Bis(2-ethylhexyl) phthalate	--					87 J	120 J	280 J		110 J	170 J	210 J	150 J
Butyl benzyl phthalate						27 J		57 J					40 J
Carbazole		8000	150 J	1200 J	190 J	140 J	47 J		1800 J	140 J	45 J	370 J	27 J
Chrysene		15000	690 J	7500	2100	1000	360 J	330 J	5600	1600	620	5400	680
Dibenz(a,h)anthracene		1600 J	99 J	790 J	400 J	160 J				140 J		810 J	
Dibenzofuran		4900		630 J		130 J	31 J	28 J	1500 J	59 J	23 J	190 J	
Di-n-butyl phthalate										180 J		120 J	
Fluoranthene		34000	1200 J	17000	2900	1700	480	430 J	15000	2300	820	11000	1100
Fluorene		7100		1000 J		220 J	26 J	43 J	2100 J	85 J	25 J	410 J	44 J
Indeno(1,2,3-cd)pyrene		5100	220 J	2100	1100 J	430	190 J	170 J	2100 J	610	240 J	2100	260 J
Naphthalene		5100	270 J	450 J		160 J	59 J	68 J	1500 J	51 J	33 J	140 J	
Phenanthrene		36000	1000 J	11000	1600 J	1700	430 J	300 J	18000	1400	510	5400	710
Pyrene		21000	890 J	13000	2200	3000	910	720	14000	3000	1300	9500	1400
TOTAL SVOCs	**500,000**	231,130	8,249	94,460	21,506	13,870	4,508	4,135	91,220	16,272	6,258	60,204	7,395

TABLE G-2B
132 DINGENS STREET - BCP REMEDIATION
REMAINING CONTAMINATION BELOW PETLs AND CSCOs
RI GEOPROBE SOIL BORING SAMPLES
(SAMPLED 7/23/12, 7/24/12 9/21/12 DURING RI)

SAMPLE ID/ LOCATION	PETL or CSCOs	GS#32	GS#32	GS#33	GS#34	GS#35	GS#36	GS#37	GS#38	GS#39	GS#39	GS#40	GS#40
		northeast		northern area		Concrete Slab		Central	Eastern End				
METALS (mg/Kg)													
DEPTH INTERVAL (ft)		*1 - 5*	*12*	*1 - 5*	*1 - 5*	*6-8*	*9-10*	*4-6*	*4-6*	*0-2*	*4-6*	*0-2*	*4-6*
Percent Solids (%)		*91.3*	*66.7*	*87.2*	*82.5*	*83.8*	*72.7*	*66.6*	*90.1*	*83.2*	*78.4*	*82*	*69*
Aluminum	--	2140	7840	8570	5070	10900	15200	8740	3260	7210	3890	7270	6860
Antimony	--	0.65	11.8	7	6.5				4.3	2.4		7	
Arsenic	**71.0**	2.7	19	21.1	37.2	9	9.7	23.6	10.8	22	11.9	26.1	12.5
Barium	*400*	33.7	**563**	**612**	**717**	150	187	**475**	218	**669**	**2120**	**1150**	217
Beryllium	*590*	0.15	0.9	0.58	0.63	1.2	1.3	1.6	0.33	1.1	0.47	0.86	0.68
Cadmium	*9.3*	0.22	3.1	3.5	1.2	0.78	0.99	2.5	3	3.4	2	8.4	0.49
Calcium	--	2020	8130	33800	12600	49300	29300	73200	9320	14500	6390	23600	89800
Chromium	*1,500*	21.9	48.2	32.5	32.1	23.5	34.6	38.6	15.7	27	12.3	28.7	11
Cobalt	--	1.1	9.6	6.1	5.5	8	10.1	7.8	2.5	6.1	3.7	6.9	7.2
Copper	*270*	21.5	**1200**	211	147	49.1	72.2	177	112	197	94.7	171	43
Iron	--	10000	38300	32600	35000	19400	33400	74000	15600	20100	21600	30900	21700
Lead	**5,000**	73.6	3150	2640	1040	250	392	3320	2630	2240	941	2880	258
Magnesium	--	537	960	4470	1590	11400	9350	10700	1770	2680	687	5270	31500
Manganese	*10,000*	1000	273	376	407	664	664	1010	231	506	160	536	404
Nickel	*310*	5.2	743	18.7	19.5	22.7	22	29.3	10	28.1	11.1	24.5	17.3
Potassium	--	187	640	795	565	1690	1710	916	348	892	496	980	1080
Selenium	*1,500*		1	1.9	3	1.4	2	4.6	1.4	2.5	1.8	2.1	0.93
Silver	*1,500*		1.6	0.52				0.9	0.3	5	0.29	0.64	
Sodium	--	51.9	728	557	178	345	305	797	90.1	266	313	183	1720
Thallium	--	1.7		0.39									
Vanadium	--	5.5	27.9	16.8	21.9	21.2	31	23.7	10.1	26.1	14.8	23.6	24.5
Zinc	*10,000*	50.5	2630	1770	4400	194	361	1270	995	975	1410	13100	278
Mercury	**5.7**	0.3	0.37	0.44	0.54	0.5	0.26	3.3	0.3	0.71	0.32	0.6	0.25
Total Cyanide (mg/Kg)	*27*	ND	ND	ND	ND	ND	ND	1.7	0.6	ND	0.84	1.5	0.95

Note: 1. "ND" = Not Detected; "NA" = Not Analyzed; Sample interval based on observed soil layers

2. Only detected organic compounds are listed; All metals analyzed are listed; Blank cells indicate non-detect

3. CSCOs are listed in italics ; PETLs are listed in bold; Compounds exceeding CSCOs or PETLs are shown in bold numbers

4. Table of sample coordinates is in this appendix, and location figure is in this report

5. CSCO = Commercial Soil Cleanup Objective; PETL = Proposed Excavation Threshold Limit

TABLE G-2C
132 DINGENS STREET - BCP RI/RA
REMAINING CONTAMINATION BELOW PETLs AND CSCOs
MONITORING WELL SOIL BORING SAMPLES
(SAMPLED 7/16/12 - 7/19/12 during RI)

SAMPLE ID/ LOCATION	PETL or CSCOs	MW-1 west section	MW-3 middle section	MW-4 south section	MW-5 middle section	MW-5 middle section	MW-5 middle section	MW-6 east section	MW-8 south section
VOLATILE ORGANICS (VOCs, ug/Kg)									
DEPTH INTERVAL (ft)		*7.0*	*9.0*	*3.0*	*5.0*	*12.0*	*15.0*	*11.0*	*3.0*
Percent Solids (%)		*85.3*	*79.3*	*86.6*	*83.8*	*76.7*	*76.4*	*69.7*	*85.7*
Acetone	*500,000*		20 J	78.0	60.0	12 J	15 J		
Benzene	*45,000*								1.0 J
Cyclohexane	--				140.0				
Ethylbenzene	*390,000*								1.2 J
Isopropylbenzene	*500,000*				78.0				
2 - Butanone (MEK)	*500,000*		3.6 J	15 J	19 J				
Methylcyclohexane	--				310.0				
Methylene chloride	*500,000*								
Tetrachloroethene	*150,000*	0.86 J			1.6 J				
Toluene	*500,000*				3.5 J				2.6 J
Total Xylenes	*500,000*								3.7 J
TOTAL VOCs	**--**	0.9	23.6	93.0	612.1	12.0	15.0	ND	8.5
PESTICIDES (ug/Kg)									
DEPTH INTERVAL (ft)		*0 - 8*	*0 - 8*	*0 - 6*	*0 - 10*			*0 - 10*	*0 - 6*
Percent Solids (%)		*88.4*	*81.4*	*88.4*	*82.7*	*NA*	*NA*	*82.6*	*92.0*
4,4'-DDT	*47,000*	20 J						11 J	
PCBs (ug/Kg)									
DEPTH INTERVAL (ft)		*0 - 8*	*0 - 8*	*0 - 6*	*0 - 10*			*0 - 10*	*0 - 6*
Percent Solids (%)		*88.4*	*81.4*	*88.4*	*82.7*	*NA*	*NA*	*82.6*	*92.0*
Aroclor 1248	**1,000**							88 J	
SEMIVOLATILE ORGANICS (SVOCs, ug/Kg)									
DEPTH INTERVAL (ft)		*0 - 8*	*0 - 8*	*0 - 6*	*0 - 10*			*0 - 10*	*0 - 6*
Percent Solids (%)		*88*	*81*	*88*	*83*			*83*	*92*
Biphenyl									
2-Methylnaphthalene		85 J			1500 J			240 J	
Acenaphthene					220 J			950 J	
Acenaphthylene		230 J			62 J			380 J	
Anthracene		310 J	390 J		180 J			3,700	330 J
Benzo(a)anthracene		1,900	1400 J	28 J	570 J			8,400	1700 J
Benzo(a)pyrene		1,700	1500 J	24 J	580 J			7,200	1600 J
Benzo(b)fluoranthene		2,700	1900 J	36 J	720 J			9,300	2200 J
Benzo(g,h,i)perylene		880 J	1000 J	23 J	250 J			2,800	700 J
Benzo(k)fluoranthene		1,100	880 J	25 J	240 J			3,700	990 J
Bis(2-ethylhexyl) phthalate	--	840 J	680 J			*NA*	*NA*		
Caprolactam					3,100				
Carbazole		130 J	200 J		120 J			970 J	
Chrysene		1,800	1400 J	32 J	600 J			7,300	1700 J
Dibenz(a,h)anthracene		300 J	440 J	15 J	99 J			860 J	440 J
Dibenzofuran								930 J	
Fluoranthene		2,900	2,800	49 J	1100 J			18,000	2900 J
Fluorene					270 J			1900 J	
Indeno(1,2,3-cd)pyrene		910 J	860 J	23 J	250 J			3,300	730 J
Naphthalene								370 J	
Phenanthrene		1,100	1800 J	38 J	1000 J			14,000	1200 J
Pyrene		2,400	2,200	40 J	880 J			13,000	2400 J
TOTAL SVOCs	**500,000**	19,285	17,450	333	11,741	NA	NA	97,300	16,890

TABLE G-2C
132 DINGENS STREET - BCP RI/RA
REMAINING CONTAMINATION BELOW PETLs AND CSCOs
MONITORING WELL SOIL BORING SAMPLES
(SAMPLED 7/16/12 - 7/19/12 during RI)

SAMPLE ID/ LOCATION	PETL or CSCOs	MW-1 west section	MW-3 middle section	MW-4 south section	MW-5 middle section	MW-5 middle section	MW-5 middle section	MW-6 east section	MW-8 south section
METALS (mg/Kg)									
DEPTH INTERVAL (ft)		*0 - 8*	*0 - 8*	*0 - 6*	*0 - 10*			*0 - 10*	*0 - 6*
Percent Solids (%)		*88.4*	*81.4*	*88.4*	*82.7*			*82.6*	*92.0*
Aluminum	--	2580	8690	14400	16800			7630	4540
Antimony	--	0.94	3.2		0.92			1.4	3.2
Arsenic	**71.0**	7.8	14.4	11	8.7			17	19.5
Barium	*400*	69.3	418	92.3	**751**			266	79.5
Beryllium	*590*	0.36	1.3	0.84	4.3			0.6	0.69
Cadmium	*9.3*	0.3	1.7	0.2	2.7			1.4	0.48
Calcium	--	6070	48900	21000	113000			31500	61500
Chromium	*1,500*	6.3	20.6	19.7	21.4			20.9	16.9
Cobalt	--	3.5	5.2	13.8	2.9			7	6.8
Copper	*270*	51.7	148	30.8	90.2			160	189
Iron	--	16900	35800	26600	18000	*NA*	*NA*	21500	17400
Lead	**5,000**	126	1170	18.8	1330			480	180
Magnesium	--	1160	13500	9850	27200			8230	4930
Manganese	*10,000*	100	742	551	1470			492	316
Nickel	*310*	8.8	15.4	32	11.6			23.7	16.5
Potassium	--	426	1060	2320	1670			1240	609
Selenium	*1,500*		4.1		2.8			1.2	1.4
Silver	*1,500*		1.1						
Sodium	--	156	409	216	678			170	187
Thallium	--		0.37	0.4	1				
Vanadium	--	20.4	15.7	26.3	7.4			19.5	11.6
Zinc	*10,000*	158	790	68.5	946			375	251
Mercury	**5.7**	1.6	0.8		0.65			0.44	0.26

Note: 1. "ND" = Not Detected; "NA" = Not Analyzed; Sample interval based on observed soil layers

2. Only detected organic compounds are listed; All metals analyzed are listed; Blank cells indicate non-detect

3. CSCOs are listed in italics ; PETLs are listed in bold; Compounds exceeding CSCOs or PETLs are shown in bold numbers

4. Table of sample coordinates is in this appendix, and location figure is in this report

5. CSCO = Commercial Soil Cleanup Objective; PETL = Proposed Excavation Threshold Limit

TABLE G-3
132 DINGENS STREET - BCP REMEDIATION
REMAINING CONTAMINATION BELOW PETLs AND CSCOs
TEST PIT SOIL SAMPLES IN FRONT VEGETATED AREA

(SAMPLED 10/14/15 during RA); LAB SDG #J89112

SAMPLE ID/ LOCATION	PETLs or CSCOs	TS#18	TS#19	TS#20	TS#21
		WEST VEGETATED STRIP		SOUTH VEGETATED STRIP	
DEPTH INTERVAL (ft)		*0 - 2'*	*0 - 2'*	*0 - 2'*	*0 - 2'*
Percent Solids (%)	--	*79.0*	*82.6*	*74.8*	*74.7*
PCBs (ug/Kg)		ND	ND	ND	ND
SEMIVOLATILE ORGANICS (ug/Kg)					
Acenaphthene		920 J	ND	ND	190 J
Acenaphthylene		280 J	ND	ND	ND
Anthracene		3000	700 J	ND	330 J
Benzo(a)anthracene		7700	3700	510 J	2400
Benzo(a)pyrene		7000	3400	840 J	2400
Benzo(b)fluoranthene		9400 J	4800 J	1000 J	3900
Benzo(g,h,i)perylene		5100 J	3000 J	750 J	2000
Benzo(k)fluoranthene		5000	2500	300 J	1600
Carbazole		1500 J	470 J	ND	340 J
Chrysene		8300	4100	630 J	3100
Dibenzofuran		830	ND	ND	ND
Fluoranthene		19000	7200	1100 J	6000
Fluorene		1200 J	290 J	ND	160 J
Indeno(1,2,3-cd)pyrene		4400 J	2500	790 J	1800 J
Phenanthrene		12000	3900	430 J	2700
Pyrene		14000	6000	850 J	4800
TOTAL SVOCs	**500,000**	99,630	42,560	7,200	31,720
METALS (mg/Kg)					
Aluminum	--	14000	13100	19800	16800
Antimony	--	1.8	2.6		
Arsenic	**71.0**	14.1	13.9	7.6	6.8
Barium	*400*	**531**	264	114	106
Beryllium	*590*	1.5	1.2	0.78	0.75
Cadmium	*9.3*	3.2	2.1	0.88	0.93
Calcium	--	32500	32400	5820	6730
Chromium	*1,500*	49.5	39.6	42.2	42.7
Cobalt	--	7.7	9.0	9.1	9.3
Copper	*270*	127	130	36.5	36.7
Iron	--	33500	34900	24400	23400
Lead	**5,000**	1840	956	86	84.2
Magnesium	--	7610	8160	4270	4700
Manganese	*10,000*	793	632	455	457
Nickel	*310*	23.4	27.0	22.1	22.1
Potassium	--	1920	2050	2560	1860
Selenium	*1,500*	1.3	0.89	1.3	0.86
Silver	*1,500*	0.48			0.3
Sodium	--	382	297	134	114
Thallium	--				
Vanadium	--	27	25.2	37.4	32.9
Zinc	*10,000*	794	601	179	176
Mercury	**5.7**	0.67	0.54	0.16	0.19

Note: 1. "ND" = Not Detected; "NA" = Not Analyzed; Sample interval based on observed soil layers

2. Only detected organic compounds are listed; All metals analyzed are listed; Blank cells indicate non-detect
3. CSCOs are listed in italics ; PETLs are listed in bold; Compounds exceeding CSCOs or PETLs are shown in bold numbers
4. Table of sample coordinates is in this appendix, and location figure is in this report
5. CSCOs = Commercial Soil Cleanup Objective; PETL = Proposed Excavation Threshold Limit

TABLE G-4A

132 DINGENS STREET - BCP REMEDIATION

REMAINING METALS CONTAMINATION BELOW PETL AND CSCOs - FINAL CONFIRMATORY SOIL SAMPLES

SAMPLE ID	LOCATION	EXCAVATION WIDTH	EXCAVATION DEPTH	TOTAL LEAD (mg/Kg)	TOTAL ARSENIC (mg/Kg)	TOTAL MERCURY (mg/Kg)
PROPOSED EXCAVATION THRESHOLD LIMIT (PETL) >>				***5000***	***71***	***5.7***
EXCAVATION AT MW-2 LOCATION						
CSW-24	MW-2-N	12'W x 5.5'D	1' - 4'		69.3	0.96
CSW-25	MW-2-S	12'W x 5.5'D	1' - 4'		28.6	1.8
CSW-26	MW-2-EN	22'W x 5.5'D	1' - 4'	NA	52.1	3.8
CSW-27	MW-2-ES		1' - 4'		32.5	1.6
CSW-28	MW-2-W	22'W x 5.5'D	1' - 4'		40.7	1.9
CSB-5-4	MW-2-B	12'x22'W@9.5'D	9.5'	1060	NA	NA
CSB-5-5	MW-2-B	12'x22'W@10.5'D	10.5'	NA	6.7	0.022
EXCAVATION AT MW-7 LOCATION						
CSW-1	MW-7-N	20'W x 8'D	2' - 6'	2830		
CSW-2	MW-7-S	20'W x 8'D	2' - 6'	166		
CSW-3	MW-7-EN	16'W x 8'D	2' - 6'	2140	NA	NA
CSW-4	MW-7-ES		2' - 6'	1710		
CSW-5	MW-7-W	16'W x 8'D	2' - 6'	611		
CSB-1	MW-7-B	20'x16'W@8'D	8'	53.6		
EXCAVATION AT GS-20 LOCATION						
CSW-32	GS-20-N	22'W x 6.5'D	2' - 5.5'	2070		
CSW-33	GS-20-S	22'W x 6.5'D	2' - 5.5'	1100		
CSW-34	GS-20-E	22'W x 6.5'D	2' - 5.5'	1690	NA	NA
CSW-35	GS-20-W	22'W x 6.5'D	2' - 5.5'	2660		
CSB-8	GS-20-B	22'x22'W@6.5'D	6.5'	865		
EXCAVATION AT GS-21 LOCATION						
CSW-29	GS-21-N	20'W x 6.6'D	2' - 5.5'			0.54
CSW-30	GS-21-S	22'W x 6.5'D	2' - 5.5'	NA	NA	0.67
CSW-31	GS-21-W	22'W x 6.5'D	2' - 5.5'			1.6
CSB-7	GS-21-B	22'x22'W@6.5'D	6.5'			2.2
EXCAVATION AT GS-30 LOCATION						
CSW-11	GS-30-N	19'W x 4.3'D	1' - 4'	2370		
CSW-12-2	GS-30-S	21'W x 6.3'D	2' - 6'	1680		
CSW-13	GS-30-E	19'W x 4.3'D	1' - 4'	1410	NA	NA
CSW-14-2	GS-30-W	21'W x 4.3'D	1' - 4'	2520		
CSB-3-3	GS-30-B	21'x21'W@7.3'D	7.3'	34.6		
EXCAVATION AT TS-4 LOCATION						
CSW-15	TS-4-N	19'W x 4'D	0' - 4'	1950	NA	NA
CSW-16	TS-4-S	19'W x 4'D	0' - 4'	4610		
CSW-17	TS-4-E	19'W x 4'D	0' - 4'	2870		
CSW-18-3	TS-4-W	19'W x 5.5'D	2' - 5'	3320	NA	NA
CSB-4-2	TS-4-B	21'x19'W@5.5'D	5.5'	93.4		
EXCAVATION AT TS-9 LOCATION						
CSW-6	TS-9-N	17'W x 5.2'D	1' - 4'	1610		
CSW-7	TS-9-S	17'W x 5.2'D	1' - 4'	3220		
CSW-8	TS-9-EN	28'W x 5.2'D	1' - 4'	860	NA	NA
CSW-9	TS-9-ES		1' - 4'	1960		
CSW-10	TS-9-W	228'W x 5.2'D	1' - 4'	2160		
CSB-2	TS-9-B	20'x16'W@8'D	8'	4090		
EXCAVATION AT TS-13 LOCATION						
CSW-19	TS-13-NW	11'W x 4'D	1' - 4'		47.8	0.51
CSW-20-2	TS-13-NE	13'W x 7'D	2' - 6'		59.7	2.5
CSW-21-5	TS-13-S	31'W x 7'D	2' - 6'	NA	53.8	1.6
CSW-22	TS-13-E	21'W x 4'D	1' - 4'		45.4	2.9
CSW-23-3	TS-13-W	15'W x 7'D	2' - 6'		29	2.4
CSB-6-2	TS-13-B	26'x15'W@7'D	7'		3.7	ND
EXCAVATION AT TS-15 LOCATION						
CSW-44	TS-15-NW*	40'W x 2'D	0' - 2'	5200		
CSW-45	TS-15-NE		0' - 2'	1080		
CSW-46	TS-15-S	40'W x 2'D	0' - 2'	1750	NA	NA
CSW-47	TS-15-E	20'W x 2'D	0' - 2'	989		
CSW-48	TS-15-W	20'W x 2'D	0' - 2'	1800		
CSB-10	TS-15-B	20'x40'W@2'D	2'	3040		

Note: 1. ANALYSIS: ND=Not Detected; NA=Not Analyzed; SAMPLES: CSWs are wall and CSBs are bottom samples
2. Each sample is a composite of 7 to 10 grab samples; Dimensions are at time of sampling
3. LOCATION: N=North; S=South; E=East; W=West; M=Middle; B=Bottom; W=Horizontal width; D=Vertical Depth; *=site boundary
4. Confirmatory wall soil samples were taken across excavation width/depth; bottom samples were taken across excavation floor

TABLE G-4B
132 DINGENS STREET - BCP SITE REMEDIATION
REMAINING SVOC CONTAMINATION BELOW PETL and CSCOs - FINAL CONFIRMATORY SOIL

SAMPLE ID/ LOCATION	PETL	CSW-36	CSW-37	CSW-38	CSW-39	CSW-40	CSW-41	CSW-42	CSW-43	CSB-9	CSW-44	CSW-45	CSW-46	CSW-47	CSW-48	CSB-9
		EXCAVATION AT TS-5 LOCATION									EXCAVATION AT TS-15 LOCATION					
		TS-5-N		TS-5-S			TS-5-E	TS-5-W	TS-5-S	TS-5-B	TS-15-N		TS-5-S	TS-15-E	TS-15-W	TS-15-B
DATE SAMPLED		8/27/2015									9/14/2015					
SAMPLE DEPTH		2' - 6'	2' - 6'	2' - 6'	2' - 6'	2' - 6'	2' - 6'	2' - 6'	2' - 6'	6.5'	0' - 2'	0' - 2'	0' - 2'	0' - 2'	0' - 2'	2'
SEMIVOLATILE ORGANIC COMPOUNDS (SVOCs, µg/Kg)																
Percent Solids (%)	--	*73.8*	*77.1*	*74.2*	*80.6*	*80.7*	*80.1*	*74*	*75.3*	*68.7*	*83.8*	*86.7*	*78.5*	*77.5*	*76.4*	*74.3*
Biphenyl		430 J														
2-Methylnaphthalene		1400 J			230 J		920 J									
3 & 4-Methylphenol																
Acenaphthene		4400	450 J	240 J	280 J	760 J	2700 J					740 J	690 J		2000 J	960 J
Acenaphthylene		1700 J	200 J	280 J	230 J	1000 J	3800 J		690 J						1300 J	
Acetophenone																
Anthracene		12000	1400	830 J	1300	4000	17000		1700 J		2200 J	1800 J	1800 J	1400 J	5100	2400 J
Benzaldehyde																
Benzo(a)anthracene		23000	3400	3000	2800	8900	40000	2500 J	10000		9800	5800	4100 J	4600	19000	5800
Benzo(a)pyrene		18000	3800	2700	2500	8000	31000	2300 J	9000		7600	4900	3300 J	3500 J	18000	4900
Benzo(b)fluoranthene		23000	4500	3500	3000	9300	43000	3100 J	12000		11000	5800	3700 J	4700	23000	6700
Benzo(g,h,i)perylene		9400	2000	1400	1000	4600	10000	1500 J	3400 J		6000 J	4000	2800 J	2800 J	9400	4500 J
Benzo(k)fluoranthene		8200	2400	1800	1800	3600	20000	1400 J	6500		4100	3200 J	2000 J	1800 J	10000	2300 J
Bis(2-ethylhexyl) phthalate	--															
Butyl benzyl phthalate																
Carbazole		5500	680 J	430 J	630 J	960 J	4900				860 J	820 J	780 J	670 J	3400 J	1300 J
Chrysene		20000	3500	3000	2900	9100	38000	2600 J	10000		10000	5900	4100 J	4100 J	20000	5900
Dibenz(a,h)anthracene															3100 J	
Dibenzofuran		3800	410 J	160 J	350 J	930 J	4400								1200 J	630 J
Di-n-butyl phthalate																
Fluoranthene		51000	6500	6300	6400	24000	110000	5400	17000	830 J	20000	12000	11000	9300	38000	13000
Fluorene		6100 J	530 J	260 J	450 J	1600 J	7500 J					870 J	1000 J	640 J	2200 J	1100 J
Indeno(1,2,3-cd)pyrene		8800	1800	1400	1100	4100	11000	1200 J	3700 J		5200	3400 J	2200 J	2200 J	8100	3600 J
Naphthalene		2400			320 J										1100 J	
Phenanthrene		49000	5800	3500	5100	20000	77000	3100 J	5900		11000	7600	8500	6200	25000	12000
Pyrene		36000	4800	4200	3700	17000	57000	3400 J	11000		17000 J	9600 J	8100 J	6800 J	31000 J	10000 J
TOTAL SVOCs (µg/Kg)	**500,000**	284,130	42,170	33,000	34,090	117,850	478,220	26,500	90,890	830	104,760	66,430	54,070	48,710	220,900	75,090

Note: 1. ANALYSIS: ND=Not Detected; NA=Not Analyzed; J=Below MDL; SAMPLES: CSWs are wall and CSBs are bottom samples

2. Each sample is a composite of 7 to 10 grab samples; See Figures in Report for sample locations

3. Only detected semivolatile compounds are listed; all other SVOCs are non-detect; PETL = Proposed Excavation Threshold Limit

4. LOCATION: N=North; S=South; E=East; W=West; M=Middle; B=Bottom

TABLE G-4C

132 DINGENS STREET - BCP REMEDIATION

REMAINING PCB CONTAMINATION BELOW PETL AND CSCOs - FINAL CONFIRMATORY SOIL

SAMPLE ID	LOCATION	SAMPLE DEPTH	PCB-1242 (mg/Kg)	PCB-1248 (mg/Kg)	PCB-1254 (mg/Kg)	PCB-1260 (mg/Kg)	TOTAL PCBs (mg/Kg)	REMARKS
PROPOSED EXCAVATION THRESHOLD LIMIT (PETL) >>							*1*	
EXCAVATION AT TS-15 LOCATION (sampled 9/14/16)								
CSW-44	TS-15-N	0' - 2'	ND	1.8	ND	ND	1.8	OFF-SITE
CSW-45		0' - 2'	ND	1.1	0.63	0.43	2.16	
CSW-46	TS-15-S	0' - 2'	ND	0.065 J	ND	ND	0.065	
CSW-47	TS-15-E	0' - 2'	ND	0.24	0.23	ND	0.47	
CSW-48	TS-15-W	0' - 2'	ND	0.46	ND	ND	0.46	
CSW-60	TS-15-NM	1'	ND	ND	ND	ND	0	OFF-SITE
CSB-10	TS-15-B	2'	ND	0.29 J	ND	ND	0.29	
EXCAVATION AREA AT GS-17 LOCATION (sampled 9/14, 10/14 & 10/26/16)								
CSW-54	GS-17-N	0' - 2'	ND	4.5	4.2	1.5	10.2	AT BOUNDARY
CSW-55-2	GS-17-WN	0' - 3'	ND	ND	2.2	0.97	3.17	
CSW-56	GS-17-S	0' - 2'	ND	0.62	0.67	0.38	1.67	
CSW-57		0' - 2'	ND	0.65	0.96	0.48	2.09	
CSW-59	GS-17-W	0' - 2'	0.68	ND	1.8	0.76	3.24	
CSW-61	GS-17-MN	0' - 2'	ND	ND	1.9	0.78	2.68	
CSW-62	GS-17-MS	0' - 2'	ND	ND	ND	ND	0	
CSW-63	GS-17-MN	0' - 2'	18	ND	5.1	ND	23.1	AT BOUNDARY
CSW-64	GS-17-MS	0' - 2'	ND	0.78	1.2	0.61	2.59	
CSW-65	GS-17-EN	0' - 2'	ND	ND	ND	ND	0	AT BOUNDARY
CSW-66	GS-17-ES	0' - 2'	ND	0.55 J	0.94 J	0.55 J	2.04	
CSW-67	GS-17-E	0' - 2'	ND	ND	0.14 J	ND	0.14	
CSB-12-2	GS-17-EB	3'	ND	ND	ND	ND	0	
CSB-13-2	GS-17-MW	3'	ND	ND	ND	ND	0	
CSB-14-2	GS-17-ME	3'	ND	ND	ND	0.34	0.34	
CSB-15-3	GS-17-EB	3'	ND	ND	ND	ND	0	
EXCAVATION AT GS-19 LOCATION (sampled 9/14, 9/24, 10/14 & 11/2/16)								
CSW-49	GS-19-N	0' - 2'	ND	0.13 J	0.16 J	ND	0.29	OFF-SITE
CSW-50-2	GS-19-NE	0' - 2'	ND	1.3	ND	ND	1.3	OFF-SITE
CSW-51-2A	GS-19-S	0' - 2'	ND	ND	ND	ND	0	
CSW-51-4B	GS-19-SW	0' - 2'	ND	0.29	0.16 J	ND	0.45	
CSW-53-2	GS-19-W	0' - 2'	ND	ND	ND	ND	0	
CSW-68	GS-19-NE	0' - 2'	ND	1.4	0.64	ND	2.04	OFF-SITE
CSW-69	GS-19-E	0' - 2'	ND	ND	ND	ND	0	
CSW-70-3	GS-19-SE	0' - 2'	ND	0.78	0.64	0.17 J	1.59	SEE NOTE 3
CSB-11	GS-19-B	2'	ND	0.68	ND	ND	0.68	
CSB-17	GS-19-EB	2'	ND	0.3	ND	ND	0.30	
AREA BETWEEN GS-19 AND TS-15 (sampled 9/24/16)								
CSB-16	GS-19/TS-15	0' - 1'	ND	ND	0.9	0.19	1.09	

Note: 1. ANALYSIS: ND=Not Detected; NA=Not Analyzed; J= Below MDL; SAMPLES: CSWs are wall and CSBs are bottom samples

2. Each sample is a composite of 7 to 10 grab samples; See Figures in Report for sample locations

3. PETL exceedances shaded - all were off-site except GS-19 where excavation was terminated 19 based on this single on-site exceedance

4. LOCATION: N=North; S=South; E=East; W=West; M=Middle; B=Bottom

TABLE G-5

132 DINGENS STREET - BCP RI/RA
SURVEY COORDINATES FOR SAMPLE LOCATIONS

A. DECIMAL DEGREE COORDINATES (LATITUDE/LONGITUDE)

INVESTIGATION SAMPLES

Phase II: GS1 to GS16 & TS1 to TS7 (2011)
RI: MW1 to MW7, GS18 to GS40 & TS8 to TS17 (2013)
RA: TS18 to TS21 (2015)

SAMPLE ID	NORTHING	EASTING
MW-1	42.87894293	-78.81200556
MW-2	42.87968711	-78.81046630
MW-3	42.87889267	-78.81106294
MW-4	42.87799627	-78.81035675
MW-5	42.87959601	-78.80936123
MW-6	42.88057474	-78.80825407
MW-7	42.88006999	-78.80749112
MW-8	42.87841758	-78.80960279
GS1	42.87813380	-78.81088182
GS2	42.87854619	-78.81089042
GS3	42.87881638	-78.81093283
GS4	42.87905771	-78.81086096
GS5	42.87904016	-78.81085605
GS6	42.87905308	-78.81083968
GS7	42.87906487	-78.81084532
GS8	42.87927374	-78.81164264
GS9	42.87903162	-78.81169995
GS10	42.87897175	-78.81241047
GS11	42.87973853	-78.81055305
GS12	42.87964776	-78.80927635
GS13	42.87941617	-78.80900426
GS14	42.87943171	-78.80933003
GS15	42.87905431	-78.80980435
GS16	42.87975247	-78.80905325
GS17	42.87880319	-78.81368209
GS18	42.87887313	-78.81287833
GS19	42.87920053	-78.81285306
GS20	42.87930134	-78.81183712
GS21	42.87918897	-78.81135990
GS22	42.87900448	-78.81127303
GS23	42.87961945	-78.81096525
GS24	42.87815208	-78.80996334
GS25	42.87933550	-78.80997663
GS26	42.87971130	-78.80933702
GS27	42.87919514	-78.80921388
GS28	42.87941551	-78.80891920
GS29	42.87934277	-78.80837496
GS30	42.87985156	-78.80903309
GS31	42.87951359	-78.80955382
GS32	42.88020593	-78.80924518
GS33	42.87994373	-78.80974044
GS34	42.87968677	-78.81022602
GS35	42.87888150	-78.81019621
GS36	42.87851539	-78.80967590
GS37	42.87952672	-78.80915577
GS38	42.88034922	-78.80865732
GS39	42.87995460	-78.80868424
GS40	42.87979322	-78.80828332
TS1	42.87992185	-78.80789726
TS2	42.88010158	-78.80817065
TS3	42.88023550	-78.80913821
TS4	42.87956530	-78.81018006
TS5	42.87952028	-78.81129955
TS6	42.87937369	-78.81160570
TS07	42.87919699	-78.81256241
TS08	42.87959176	-78.80803336
TS09	42.88021370	-78.80780430
TS10	42.88027604	-78.80833955
TS11	42.88029211	-78.80895783
TS12	42.87975746	-78.80999944
TS13	42.87971744	-78.81067012
TS14	42.87943428	-78.81162943
TS15	42.87930966	-78.81220577
TS16	42.87908433	-78.81291904
TS17	42.87883574	-78.81318786
TS18	42.87885751	-78.81108296
TS19	42.87809141	-78.81108462
TS20	42.87796106	-78.81081888
TS21	42.87795080	-78.81032114

CONFIRMATORY SAMPLES

CSW & CSB samples collected during RA (2015)

SAMPLE ID	NORTHING	EASTING	AREA
CSW-1	42.88007247	-78.80748665	MW-7-N
CSW-2	42.88004413	-78.80752423	MW-7-S
CSW-3	42.88004396	-78.80747349	MW-7-EN
CSW-4	42.88002745	-78.80749656	MW-7-ES
CSW-5	42.88007540	-78.80753218	MW-7-W
CSB-1	42.88005844	-78.80750115	MW-7-B
CSW-6	42.88025875	-78.80778133	TS-9-N
CSW-7	42.88017994	-78.80781052	TS-9-S
CSW-8	42.88022699	-78.80774502	TS-9-EN
CSW-9	42.88020085	-78.80778112	TS-9-ES
CSW-10	42.88022463	-78.80783157	TS-9-W
CSB-2	42.88021728	-78.80779871	TS-9-B
CSW-11	42.87988505	-78.80902985	GS-30-N
CSW-12	42.87984587	-78.80900023	GS-30-S
CSW-13	42.87987246	-78.80901152	GS-30-E
CSW-14	42.87983478	-78.80905504	GS-30-W
CSB-3	42.87986665	-78.80903725	GS-30-B
CSW-15	42.87961804	-78.81015302	TS-4-N
CSW-16	42.87957860	-78.81011556	TS-4-S
CSW-17	42.87961621	-78.81010675	TS-4-E
CSW-18	42.87958290	-78.81016110	TS-4-W
CSB-4	42.87960738	-78.81013507	TS-4-B
CSW-19	42.87970478	-78.81069022	TS-13-NW
CSW-20	42.87971639	-78.81064736	TS-13-NE
CSW-21	42.87968702	-78.81064986	TS-13-S
CSW-22	42.87971013	-78.81062308	TS-13-E
CSW-23	42.87968612	-78.81069276	TS-13-W
CSB-6	42.87969988	-78.81066894	TS-13-B
CSW-24	42.87970158	-78.81050403	MW-2-N
CSW-25	42.87965475	-78.81045723	MW-2-S
CSW-26	42.87969889	-78.81047828	MW-2-EN
CSW-27	42.87967862	-78.81045843	MW-2-ES
CSW-28	42.87967004	-78.81049720	MW-2-W
CSB-5	42.87968871	-78.81049354	MW-2-B
CSW-29	42.87921474	-78.81137044	GS-21-N
CSW-30	42.87916539	-78.81135011	GS-21-S
CSW-31	42.87918534	-78.81139346	GS-21-W
CSB-7	42.87918898	-78.81135654	GS-21-B
CSW-18-2	42.87957630	-78.81016928	TS-4-W
CSB-4-2	42.87960738	-78.81013507	TS-4-B
CSW-14-2	42.87983504	-78.80906325	GS-30-W
CSW-32	42.87932875	-78.81185066	GS-20-N
CSW-33	42.87927750	-78.81181950	GS-20-S
CSW-34	42.87931376	-78.81180210	GS-20-E
CSW-35	42.87929714	-78.81187964	GS-20-W
CSB-8	42.87930572	-78.81184012	GS-20-B
CSW-36	42.87954754	-78.81125153	TS-5-N
CSW-37	42.87953287	-78.81131191	TS-5-N
CSW-38	42.87949739	-78.81121776	TS-5-S
CSW-39	42.87950938	-78.81126221	TS-5-S
CSW-40	42.87948270	-78.81129382	TS-5-S
CSW-41	42.87953114	-78.81121789	TS-5-E
CSW-42	42.87950073	-78.81133232	TS-5-W
CSW-43	42.87950969	-78.81124281	TS-5-S
CSB-9	42.87951176	-78.81130624	TS-5-B
CSW-18-3	42.87956917	-78.81016813	TS-4-W
CSW-20-2	42.87971535	-78.81061564	TS-13-NE
CSW-21-2	42.87968485	-78.81063941	TS-13-S
CSW-23-2	42.87968282	-78.81069536	TS-13-W
CSB-6-2	42.87969988	-78.81066894	TS-13-B
CSB-5-2	42.87968871	-78.81049354	MW-2-B
CSW-12-2	42.87981811	-78.80902252	GS-30-S
CSB-3-2	42.87986665	-78.80903725	GS-30-B
CSW-21-3	42.87966533	-78.81065762	TS-13-S
CSW-23-3	42.87967621	-78.81070579	TS-13-W
CSB-5-3	42.87968871	-78.81049354	MW-2-B
CSW-44	42.87933515	-78.81222154	TS-15-N
CSW-45	42.87935531	-78.81215595	TS-15-N
CSW-46	42.87893852	-78.81393144	TS-15-S
CSW-47	42.87931611	-78.81213304	TS-15-E
CSW-48	42.87929224	-78.81227249	TS-15-W
CSB-10	42.87930691	-78.81220688	TS-15-B
CSW-49	42.87920847	-78.81286018	GS-19-N
CSW-50	42.87924333	-78.81271778	GS-19-N
CSW-51	42.87916324	-78.81284024	GS-19-S
CSW-52	42.87920232	-78.81277919	GS-19-E
CSW-53	42.87916857	-78.81291749	GS-19-W
CSB-11	42.87918517	-78.81284852	GS-19-B
CSW-54	42.87881993	-78.81368439	GS-17-N
CSW-55	42.87882385	-78.81364411	GS-17-N
CSW-56	42.87876947	-78.81367189	GS-17-S
CSW-57	42.87877561	-78.81361744	GS-17-S
CSW-58	42.87879657	-78.81369960	GS-17-W
CSW-59	42.87878340	-78.81370179	GS-17-W
CSB-12	42.87879613	-78.81364513	GS-17-WB
CSB-5-4	42.87968871	-78.81049354	MW-2-B
CSW-3-3	42.87986665	-78.80903725	GS-30-B
CSW-21-4	42.87966812	-78.81063785	TS-13-S
CSB-13	42.87880341	-78.81357389	GS-17-MW
CSB-14	42.87881411	-78.81343999	GS-17-ME
CSB-15	42.87884144	-78.81349083	GS-17-E
CSB-16	42.87920951	-78.81275198	GS-19
CSW-50-2	42.87924060	-78.81271031	GS-19-NE
CSW-51-2A	42.87915990	-78.81272568	GS-19-S
CSW-51-2B	42.87915982	-78.81276299	GS-19-S
CSW-52-2	42.87918990	-78.81268102	GS-19-E
CSW-53-2	42.87911888	-78.81279455	GS-19-W
CSW-60	42.87934536	-78.81218874	TS-15-N
CSB-5-5	42.87967528	-78.81048267	MW-2-B
CSW-21-5	42.87965649	-78.81068855	TS-13-S
CSB-12-2	42.87882586	-78.81332811	GS-17-WB
CSB-13-2	42.87884517	-78.81314014	GS-17-MW
CSB-14-2	42.87886448	-78.81295255	GS-17-ME
CSB-15-2	42.87885708	-78.81308348	GS-17-EB
CSW-55-2	42.87887846	-78.81309587	GS-17-WN
CSW-61	42.87888959	-78.81301607	GS-17-MS
CSW-62	42.87889683	-78.81296498	GS-17-MN
CSW-63	42.87881433	-78.81319375	GS-17-MS
CSW-64	42.87882157	-78.81314229	GS-17-MS
CSW-65	42.87883180	-78.81296362	GS-17-EN
CSW-66	42.87882386	-78.81309305	GS-17-ES
CSW-67	42.87885671	-78.81299617	GS-17-E
CSW-68	42.87925031	-78.81265662	GS-19-NE
CSW-69	42.87918619	-78.81261199	GS-19-E
CSW-70	42.87909901	-78.81257846	GS-19-SE
CSW-51-3B	42.87907904	-78.81268136	GS-19-SW
CSB-17	42.87911441	-78.81269567	GS-19-EB
CSB-15-3	42.87880462	-78.81338101	GS-17-EB
CSW-51-4B	42.87912725	-78.81258565	GS-19-SW
CSW-70-2	42.87916098	-78.81259622	GS-19-SE
CSW-70-3	42.87910586	-78.81258072	GS-19-SE

SAMPLE KEY:

GS = Geoprobe boring soil samples; TS = Test pit soil samples;

MW = Monitoring well soil boring samples;

CSW = Confirmatory soil wall samples;

CSB = Confirmatory soil bottom samples

RI = Remedial Investigation; RA = Remedial Action

TABLE G-5

132 DINGENS STREET - BCP RI/RA
SURVEY COORDINATES FOR SAMPLE LOCATIONS

B. NEW YORK STATE PLANE COORDINATES (NAD83)

INVESTIGATION SAMPLES

Phase II: GS1 to GS16 & TS1 to TS7 (2011)
RI: MW1 to MW7, GS18 to GS40 & TS8 to TS17 (2013)
RA: TS18 to TS21 (2015)

SAMPLE ID	LONGITUDE	LATITUDE
MW-1	1049039.3	1087000.6
MW-2	1049309.4	1087413.9
MW-3	1049020.3	1087253.2
MW-4	1048693.1	1087441.6
MW-5	1049275.4	1087710.0
MW-6	1049631.3	1088007.7
MW-7	1049446.8	1088211.7
MW-8	1048846.1	1087644.1
GS1	1048743.6	1087301.0
GS2	1048893.9	1087299.1
GS3	1048992.4	1087288.0
GS4	1049080.3	1087307.5
GS5	1049073.9	1087308.8
GS6	1049078.6	1087313.2
GS7	1049082.9	1087311.7
GS8	1049159.6	1087098.2
GS9	1049071.4	1087082.6
GS10	1049050.1	1086892.1
GS11	1049328.2	1087390.7
GS12	1049294.2	1087732.8
GS13	1049209.6	1087805.5
GS14	1049215.5	1087718.2
GS15	1049078.3	1087590.7
GS16	1049332.2	1087792.7
GS17	1048989.6	1086551.1
GS18	1049014.5	1086766.6
GS19	1049133.8	1086773.7
GS20	1049169.8	1087046.1
GS21	1049128.5	1087173.9
GS22	1049061.2	1087197.0
GS23	1049285.1	1087280.1
GS24	1048749.6	1087547.2
GS25	1049180.9	1087544.8
GS26	1049317.4	1087716.6
GS27	1049129.2	1087749.1
GS28	1049209.3	1087828.3
GS29	1049182.4	1087974.1
GS30	1049368.3	1087798.2
GS31	1049245.5	1087658.3
GS32	1049497.6	1087741.7
GS33	1049402.4	1087608.7
GS34	1049309.1	1087478.3
GS35	1049015.6	1087485.5
GS36	1048881.8	1087624.6
GS37	1049250.0	1087765.0
GS38	1049549.4	1087899.4
GS39	1049405.6	1087891.8
GS40	1049346.5	1087999.1
TS1	1049393.1	1088102.7
TS2	1049458.8	1088029.6
TS3	1049508.3	1087770.4
TS4	1049264.8	1087490.5
TS5	1049249.2	1087190.4
TS6	1049196.0	1087108.2
TS07	1049132.3	1086851.6
TS08	1049272.9	1088065.9
TS09	1049499.4	1088127.9
TS10	1049522.5	1087984.5
TS11	1049528.8	1087818.8
TS12	1049334.7	1087539.1
TS13	1049320.6	1087359.3
TS14	1049218.1	1087101.9
TS15	1049173.1	1086947.3
TS16	1049091.5	1086755.9
TS17	1049001.1	1086683.6
TS18	1049007.5	1087247.8
TS19	1048728.3	1087246.6
TS20	1048680.6	1087317.7
TS21	1048676.5	1087451.1

CONFIRMATORY SAMPLES

CSW & CSB samples collected during RA (2015)

SAMPLE ID	LONGITUDE	LATITUDE	AREA
CSW-1	1049447.7	1088212.9	MW-7-N
CSW-2	1049437.4	1088202.8	MW-7-S
CSW-3	1049437.3	1088216.4	MW-7-EN
CSW-4	1049431.3	1088210.2	MW-7-ES
CSW-5	1049448.8	1088200.7	MW-7-W
CSB-1	1049442.6	1088209.0	MW-7-B
CSW-6	1049515.8	1088134.1	TS-9-N
CSW-7	1049487.1	1088126.2	TS-9-S
CSW-8	1049504.2	1088143.8	TS-9-EN
CSW-9	1049494.7	1088134.1	TS-9-ES
CSW-10	1049503.4	1088120.6	TS-9-W
CSB-2	1049500.7	1088129.4	TS-9-B
CSW-11	1049380.5	1087799.1	GS-30-N
CSW-12	1049366.2	1087807.0	GS-30-S
CSW-13	1049375.9	1087804.0	GS-30-E
CSW-14	1049362.2	1087792.3	GS-30-W
CSB-3	1049373.8	1087797.1	GS-30-B
CSW-15	1049284.0	1087497.8	TS-4-N
CSW-16	1049269.6	1087507.8	TS-4-S
CSW-17	1049283.3	1087510.2	TS-4-E
CSW-18	1049271.2	1087495.6	TS-4-W
CSB-4	1049280.1	1087502.6	TS-4-B
CSW-19	1049316.0	1087353.9	TS-13-NW
CSW-20	1049320.2	1087365.4	TS-13-NE
CSW-21	1049309.5	1087364.7	TS-13-S
CSW-22	1049317.9	1087371.9	TS-13-E
CSW-23	1049309.2	1087353.2	TS-13-W
CSB-6	1049314.2	1087359.6	TS-13-B
CSW-24	1049314.7	1087403.8	MW-2-N
CSW-25	1049297.6	1087416.3	MW-2-S
CSW-26	1049313.7	1087410.7	MW-2-EN
CSW-27	1049306.3	1087416.0	MW-2-ES
CSW-28	1049303.2	1087405.6	MW-2-W
CSB-5	1049310.0	1087406.6	MW-2-B
CSW-29	1049137.9	1087171.1	GS-21-N
CSW-30	1049119.9	1087176.5	GS-21-S
CSW-31	1049127.2	1087164.9	GS-21-W
CSB-7	1049128.5	1087174.8	GS-21-B
CSW-18-2	1049268.8	1087493.4	TS-4-W
CSB-4-2	1049280.1	1087502.6	TS-4-B
CSW-14-2	1049362.3	1087790.1	GS-30-W
CSW-32	1049179.8	1087042.5	GS-20-N
CSW-33	1049161.1	1087050.8	GS-20-S
CSW-34	1049174.3	1087055.5	GS-20-E
CSW-35	1049168.3	1087034.7	GS-20-W
CSB-8	1049171.4	1087045.3	GS-20-B
CSW-36	1049259.1	1087203.3	TS-5-N
CSW-37	1049253.8	1087187.1	TS-5-N
CSW-38	1049240.8	1087212.3	TS-5-S
CSW-39	1049245.2	1087200.4	TS-5-S
CSW-40	1049235.5	1087191.9	TS-5-S
CSW-41	1049253.1	1087212.3	TS-5-E
CSW-42	1049242.1	1087181.6	TS-5-W
CSW-43	1049245.3	1087205.6	TS-5-S
CSB-9	1049246.1	1087188.6	TS-5-B
CSW-18-3	1049266.2	1087493.7	TS-4-W
CSW-20-2	1049319.8	1087373.9	TS-13-NE
CSW-21-2	1049308.7	1087367.5	TS-13-S
CSW-23-2	1049308.0	1087352.5	TS-13-W
CSB-6-2	1049314.2	1087359.6	TS-13-B
CSB-5-2	1049310.0	1087406.6	MW-2-B
CSW-12-2	1049356.1	1087801.0	GS-30-S
CSB-3-2	1049373.8	1087797.1	GS-30-B
CSW-21-3	1049301.6	1087362.6	TS-13-S
CSW-23-3	1049305.6	1087349.7	TS-13-W
CSB-5-3	1049310.0	1087406.6	MW-2-B
CSW-44	1049182.4	1086943.1	TS-15-N
CSW-45	1049189.7	1086960.7	TS-15-N
CSW-46	1049039.1	1086484.4	TS-15-S

SAMPLE ID	LONGITUDE	LATITUDE	AREA
CSW-47	1049175.4	1086966.8	TS-15-E
CSW-48	1049166.8	1086929.4	TS-15-W
CSB-10	1049172.1	1086947.0	TS-15-B
CSW-49	1049136.7	1086771.8	GS-19-N
CSW-50	1049149.3	1086810.0	GS-19-N
CSW-51	1049120.2	1086777.1	GS-19-S
CSW-52	1049134.4	1086793.5	GS-19-E
CSW-53	1049122.2	1086756.4	GS-19-W
CSB-11	1049128.2	1086774.9	GS-19-B
CSW-54	1048995.7	1086550.5	GS-17-N
CSW-55	1048997.1	1086561.3	GS-17-N
CSW-56	1048977.3	1086553.8	GS-17-S
CSW-57	1048979.5	1086568.4	GS-17-S
CSW-58	1048987.2	1086546.4	GS-17-W
CSW-59	1048982.4	1086545.8	GS-17-W
CSB-12	1048987.0	1086561.0	GS-17-WB
CSB-5-4	1049310.0	1087406.6	MW-2-B
CSW-3-3	1049373.8	1087797.1	GS-30-B
CSW-21-4	1049302.6	1087367.9	TS-13-S
CSB-13	1048989.6	1086580.1	GS-17-MW
CSB-14	1048993.4	1086616.0	GS-17-ME
CSB-15	1049003.4	1086602.4	GS-17-E
CSB-16	1049137.0	1086800.8	GS-19
CSW-50-2	1049148.3	1086812.0	GS-19-NE
CSW-51-2A	1049118.9	1086807.8	GS-19-S
CSW-51-2B	1049118.9	1086797.8	GS-19-S
CSW-52-2	1049129.8	1086819.8	GS-19-E
CSW-53-2	1049104.0	1086789.3	GS-19-W
CSW-60	1049186.1	1086951.9	TS-15-N
CSB-5-5	1049305.1	1087409.5	MW-2-B
CSW-21-5	1049298.4	1087354.3	TS-13-S
CSB-12-2	1048997.6	1086646.0	GS-17-WB
CSB-13-2	1049004.5	1086696.4	GS-17-MW
CSB-14-2	1049011.4	1086746.7	GS-17-ME
CSB-15-2	1049008.8	1086711.6	GS-17-EB
CSW-55-2	1049016.6	1086708.3	GS-17-WN
CSW-61	1049020.6	1086729.7	GS-17-MS
CSW-62	1049023.2	1086743.4	GS-17-MN
CSW-63	1048993.3	1086682.0	GS-17-MS
CSW-64	1048995.9	1086695.8	GS-17-MS
CSW-65	1048999.5	1086743.7	GS-17-EN
CSW-66	1048996.7	1086709.0	GS-17-ES
CSW-67	1049008.6	1086735.0	GS-17-E
CSW-68	1049151.8	1086826.4	GS-19-NE
CSW-69	1049128.4	1086838.3	GS-19-E
CSW-70	1049096.6	1086847.2	GS-19-SE
CSW-51-3B	1049089.4	1086819.6	GS-19-SW
CSB-17	1049102.3	1086815.8	GS-19-EB
CSB-15-3	1048989.9	1086631.8	GS-17-EB
CSW-51-4B	1049106.9	1086845.3	GS-19-SW
CSW-70-2	1049119.2	1086842.5	GS-19-SE
CSW-70-3	1049099.1	1086846.6	GS-19-SE

SAMPLE KEY:

GS = Geoprobe boring soil samples; TS = Test pit soil samples;

MW = Monitoring well soil boring samples;

CSW = Confirmatory soil wall samples;

CSB = Confirmatory soil bottom samples

RI = Remedial Investigation; RA = Remedial Action

SMP
132 DINGENS ST. SITE

APPENDIX H
HEALTH AND SAFETY PLAN

HEALTH & SAFETY PLAN

for

132 Dingens St, Buffalo, NY
BROWNFIELDS CLEANUP PROGRAM
POST-REMEDIAL ACTIVITIES

JULY 2016

PREPARED FOR

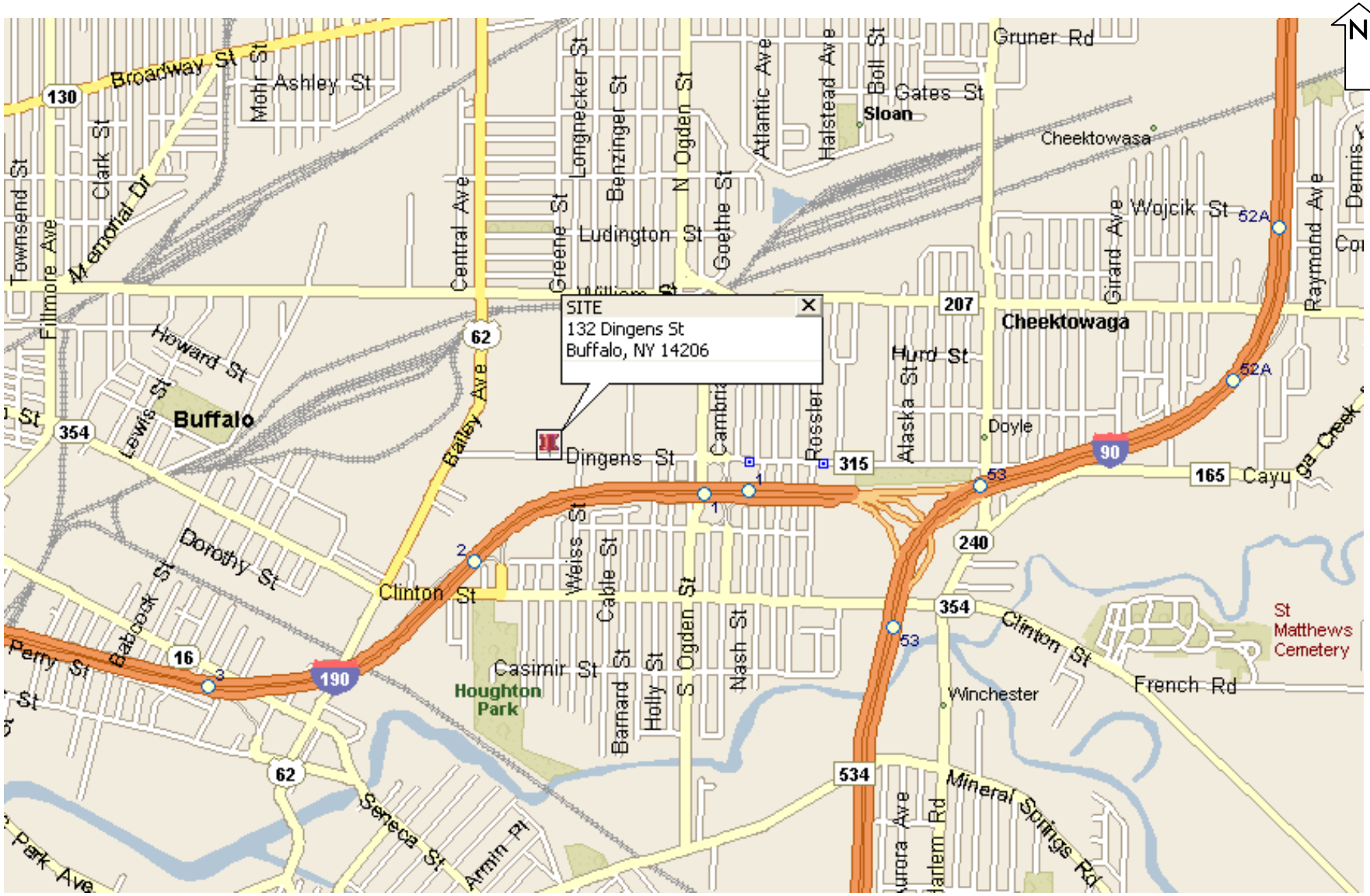
132 Dingens St, LLC,
Buffalo, NY

PREPARED BY

IYER ENVIRONMENTAL GROUP, PLLC
44 Rolling Hills Dr., Orchard Park, NY 14127

TABLE 1
EMERGENCY NOTIFICATION TABLE

Agency	Contact	Phone Number
Police / Sheriff	Emergency	911
Fire & First Aid	Emergency	911
Ambulance	Emergency	911
Hospital/ Emergency Care Facility	Buffalo General Hospital 100 High Street Buffalo, NY 14203	(716)859-5600
Poison Control Center	---	(800) 336-6997
Chemical Emergency Advise	CHEMTREC	(800) 424-9300
NYS Department of Health	Matt Forcucci NYS Dept. of Health 582 Delaware Avenue Buffalo, NY 14203-2399	(716) 847-4501
NYS Department of Environmental Conservation, Region 9	Jaspal Walia NYDEC DER 270 Michigan Avenue Buffalo, NY 14202	(716) 851-7220 - Work Hrs. (800) 342-9296 - After Hrs.
	Spill Hotline	(800) 457-7362
CONSULTANTS:	Dharmarajan Iyer, PhD, PE, Iyer Environmental Group, PLLC Fred L. Smith, Jr., CIH, CSP	(716) 445-9684 716 830-5350
DEVELOPER	James Panepinto 132 Dingens St, LLC 1 Babcock Street Buffalo, NY 14206	(716)825-6666
DIRECTIONS TO HOSPITAL (EMERGENCY ROUTE) *See Figure 2*	FROM THE SITE: Turn right on to Dingens (west); then left on to Bailey (south); left on to Clinton (east); immediately take ramp to I-190 North; From I-190 take exit 6 on to Elm Street (north); right on to Broadway (east); next left on to Michigan (north); after seven blocks, left on to High Street; Emergency Entrance to Buffalo General Hospital is on the right.	



132 DINGENS STREET SITE, BUFFALO, NY
SITE LOCATION MAP

FIGURE 1

IEG

HEALTH & SAFETY PLAN
BROWNFIELDS SITE – POST-REMEDIATION
132 Dingens St, Buffalo, NY
TABLE OF CONTENTS

HEALTH & SAFETY PLAN
BROWNFIELDS SITE SI/IRM
132 Dingens ST, Buffalo, NY
TABLE OF CONTENTS *(Continued)*

TABLES

FIGURES

Following Page

SECTION 1.0
Project Description

1.0 INTRODUCTION

The health and safety protocols established in this plan are based on site conditions and chemical hazards known, anticipated or suspected to be present from available site data. The following site Health and Safety Plan (HASP) is intended solely for use during the supplemental investigations and interim remedial measure at 132 Dingens St. in Buffalo, NY 14218 (see Figure 1). This Plan may be modified prior to the implementation of the interim remedial measure based on any changes to the proposed remedial action.

All activities and equipment used in association with the referenced supplemental investigation and interim measure will, at a minimum, comply with:

- 29 CFR 1910, General Industry, Occupational Safety and Health (OSHA) Safety and Health Standards;
- 29 CFR 1926, Construction Industry, OSHA Safety and Health Standards;
- 40 CFR 262, Standards Applicable to Generators of Hazardous Waste, Current Edition;
- 40 CFR 178, Shipping Container Specification, Current Edition;
- NIOSH 85-115, NIOSH/OSHA/USCG/USEPA, Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, October 1985;
- EPA 9285.1-03, Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (NIOSH, OSHA, USCF, and EPA), 1992;
- "Threshold Limit Values for Chemical and Physical Agents and Biological Exposure Indices," American Conference of Government Industrial Hygienists, Cincinnati, Ohio, Current Edition;
- "Guide to Occupational Exposure Values," American Conference of Governmental Industrial Hygienists, Cincinnati, Ohio, Current Edition;
- "Community Air Monitoring Plan," 93118PR00149, NYSDEC;
- NYSDOL 28.876, Article 28, Section 876 of NYS Labor Law (Right-to-Know Law), 1980; and
- Other applicable Federal, State, and Local regulations

1.0 SITE DESCRIPTION AND BACKGROUND

1.2.1 General Location

The property is located at 132 Dingens Street, just off I-190, a major interstate highway leading into downtown Buffalo (see site location map on Figure 1). The site is surrounded by a UPS ground terminal and Buffalo Games to the north, Dingens Street to the south, Family Service Center to the southwest, warehouses owned by Buffalo News and FPPF Chemical Company to the west, and Niagara Tying Service to the east.

1.1.2 Site History

This irregular shaped, 13-acre parcel located at 132 & 136 Dingens Street (see Figure 1) contained an 85,000-sf manufacturing and warehouse facility which burned down in a fire in 2010. Half of this facility was first occupied by Superior Pallet for recycling and refurbishing wood pallets, and the other half was used by Umbra for warehousing/distribution of household/office trash containers. The warehouse was used by Tops Markets since 1966, and was refrigerated at that time by an ammonia refrigeration system located in the powerhouse building in the northwest section.

The site investigations revealed various types of industrial/urban 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.

The site was remediated in with the removal of 2,033 cubic yards of contaminated soil/urban fill from hot spot source areas, and establishment of a cover system. Site specific excavation objectives (PETLs, Proposed Excavation Threshold Limits) were established for arsenic (79 ppm), lead (5,000 ppm), mercury (5.7 ppm), and semi-volatile organic compounds (total PAHs-500 ppm). PCBs were remediated to meet Part 375 commercial use soil cleanup objectives of 1 ppm which meets the Toxic Substances Control Act (TSCA) self-implementing requirements. Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) was brought in to complete the backfilling of the excavations. The site was re-graded, and a cover system was installed that includes asphalt, concrete, gravel, floor slab, building, or a soil cover in areas where the upper one foot of exposed surface soil exceeds the applicable soil cleanup objectives (SCOs).

1.3 GENERAL SUMMARY OF WORK

Site development will include the following activities:

a) Excavation, stockpiling and off-site disposal of contaminated soils
b) Soil sampling and analysis
c) Excavation water pumping, storage, treatment and discharge to sanitary sewer
d) Backfilling of excavated area with clean fill and regrading
e) Long-term inspection

SECTION 2.0
Hazard Assessment & Risk Analysis

An assessment and analysis of chemical, physical, and biological hazards associated with this project is presented in the subsections that follow. A task-by-task risk analysis of the potential exposure to the identified hazards is provided below and in Table 3 at the end of this section.

TASK	POTENTIAL EXPOSURE RISK
Soil excavation and disposal	Moderately high
Soil sampling	Moderately high
Excavation water treatment/discharge	Moderate
Backfilling and regrading	Low

Anticipated Exposure Risk Definitions:

LOW = Non-Intrusive Work – No Chance of Exposure.

SLIGHT = Non-Intrusive Work, Possible Safety Hazards with Tools - Little to No Chance of Exposure.

MODERATE = Non-Intrusive Work, Possible Safety Hazards with Powered Tools, Heavy Equipment, and/or work near or in water. Possible Exposure to Contaminants.

MODERATELY HIGH = Intrusive Work, Possible Safety Hazards with Equipment – Exposure to Contaminants Possible.

HIGH = Intrusive Work, Possible Safety Hazards with Equipment – Exposure to Contaminants Probable.

2.1 CHEMICAL HAZARDS

The primary chemical hazard substances known or suspected to exist on-site are semivolatile organics (SVOCs), including polynuclear aromatic hydrocarbons (PAHs), heavy metals, and low level volatile organic compounds (VOCs) that are associated with past development of this property with industrial fill and use as a warehouse with a filling station. There is also concern about the possible of other hazardous substances that may be related to its past. The hazards associated with these chemical substances are discussed in Table 2 at the end of this section.

The levels of personal protective equipment (PPE) identified in Section 6.0 of this HASP have been assigned by task, known/anticipated chemical toxicity, and potential exposure risks. Action levels for PPE upgrade (see Section 7.0) have been set conservatively to minimize the risk of exposure to field personnel.

2.2 PHYSICAL/GENERAL HAZARDS

The following general, physical, and ergonomic hazards may be associated with this project:

1. **Potential Hazard:** Dermal and inhalation hazards resulting from potential exposure to the chemical compounds identified in Table 2.

   Procedure(s) to Mitigate Hazard: Don PPE identified in Section 6.0 of this HASP. The levels of PPE identified in Section 6.0 of this HASP have been assigned by task, known/anticipated chemical toxicity, and potential exposure risks. Other means of minimizing or eliminating risk of exposure include: practicing contamination prevention including a thorough washing of hands and face when exiting the exclusion zone and prohibiting use of contact lenses during field activities.

2. **Potential Hazard:** Slips, Trips, and Falls.

   Procedure(s) to Mitigate Hazard:
   (1) Exercise extreme caution in all work areas.
   (2) Be sure of footing during equipment access/egress and when moving through the work area.
   (3) Avoid stepping or standing on uneven or unsteady surfaces.
   (4) Clearly delineate open pits, wells, and other fall hazards with orange safety fencing. Securely cover as appropriate.

3. **Potential Hazard:** Exposure to inclement weather.

   Procedure(s) to Mitigate Hazard:
   (1) Follow the procedures for the prevention and/or treatment of heat or cold stress (if ambient air temperatures exceed 70^{o}F or drop below 40^{o}F) described in Section 5.5 of this HASP.
   (2) Adhere to the emergency response procedures provided in Section 10.3 of this HASP.

4. **Potential Hazard:** Housekeeping

   Procedure(s) to Mitigate Hazard:
   (1) Store equipment property.
   (2) Remove rubbish/scrap material from work area.

5. **Potential Hazard:** Vehicle Traffic

   Procedure(s) to Mitigate Hazard: Utilize warning signs and flagman (men) as appropriate to direct traffic away from work area.

6. **Potential Hazard:** Hazardous Material Storage

   Procedure(s) to Mitigate Hazard:
   (1) Segregate flammable/combustible liquid from ignition sources.
   (2) Store in approved containers.
   (3) Keep solvent waste, oily rags, and liquids in fire resistant containers.

7. **Potential Hazard:** Electrical

   Procedure(s) to Mitigate Hazard:
   (1) Utilize approved grounding and bonding procedures.
   (2) Guard and maintain electrical lines/cords.

(3) Tag/remove damaged equipment from service.

8. **Potential Hazard:** Tools

Procedure(s) to Mitigate Hazard:
(1) Tag and remove defective tools from service.
(2) Maintain and inspect per manufacturer's recommendations.
(3) Utilize proper eye protection.

9. **Potential Hazard:** Above and/or Underground Utilities within Work Area(s)

Procedure(s) to Mitigate Hazard:
(1) Obtain a site utility plan or markout and ensure that electrical lines (if any) are not energized.
(2) Call Di-Safe-NY to locate utilities before any intrusive work.

2.3 BIOLOGICAL HAZARDS

Biological hazards which on-site personnel may encounter are considered minimal, but include animal bites or stings, contact with plants, and exposure to microbes.

Animal bites or stings are usually nuisances (localized swelling, itching, and minor pain) that can be handled by first aid treatment. The bites of certain snakes, lizards, and spiders contain sufficient poison to warrant medical attention. There also are diseases that can be transmitted by animal bites which will require professional medical attention. Examples are rabies (mainly from dogs, skunks, raccoons, and foxes), Lyme disease (from ticks [see discussion below]), and encephalitis (from mosquitoes).

The biggest hazard and most common cause of fatalities from animal bites and stings (particularly bees, wasps, and spiders) is a sensitivity reaction. Anaphylactic shock due to stings can lead to severe reactions to the circulatory, respiratory and central nervous system, and it can also result in death. Therefore, workers with known insect allergies must notify the site health and safety officer of his/her condition prior to engaging in remedial operations.

Workers who are bitten by an animal or stung by an insect must immediately notify the site safety and health officer.

Lyme disease is caused by an infectious agent, Borrelia burgdorferi. This agent is a spirochete transmitted to animals or humans via ticks. The early symptoms and signs, with one exception, are non-specific and easily attributed to other illnesses, such as the flu. They include fever, nausea, vomiting, fatigue, headache, photophobia (sensitivity to light), and, in approximately 75 percent of the cases, a rash. Over several days it enlarges, sometimes reaching a diameter of 20 centimeters. The border of the enlarging rash is red, slightly warm, but flat. Often, the center of the rash clears somewhat, so that it looks like an irregular ring. In about half of the persons with a rash, more than one circular eruption is present. The rash termed, erythema migrans, is essentially diagnostic of Lyme disease, and therefore is a very important finding.

Undiagnosed/untreated Lyme disease can lead to severe, sometimes life-threatening medical problems. The principal targets include the skin, the nervous system, the heart, and the joints. Early treatment is highly desirable since, in most cases, it prevents progression of the disease and is a less prolonged, less intense affair.

Preventative measures include protective clothing (see Section 6.0); head/hair protection; and the use of insect repellant containing DEET on all exposed areas and coveralls. Workers should check their bodies thoroughly for ticks and should bathe soon after returning home. Remove any ticks carefully, using a

gentle, firm, tugging motion with fine tweezers. Do not kill the tick before it has been removed. Workers should save the ticks and monitor their bites, checking for a rash and other symptoms (up to about eight weeks after the bite).

Toxic effects from plants are generally due to ingestion. Of more concern to on-site personnel are certain plants, including poison ivy, poison oak, and poison sumac, which produce adverse effects from direct contact. The usual effect is dermatitis inflammation of the skin. The protective clothing and decontamination procedures used for chemicals also reduce the exposure risk from the plant toxins. Cleaning the skin thoroughly with soap and water after contact will reduce the risk.

TABLE 2: CHEMICAL HAZARD/EXPOSURE DATA SUMMARY
Brownfield Site Post-Remediation Activities for 132 Dingens St. Site

Chemical of Concern	Maximum Concentration (If Known)	Potentially Contaminated Media	OSHA PEL/ ACGIH TLV/ NIOSH IDLH	Routes of Exposure	Exposure Symptoms/ Primary Hazards
Petroleum Hydrocarbons Benzene, Xylenes, Toluene, Ethyl benzene	Refer to RI Reports	Soil Groundwater	PEL: 1 - 10 ppm TLV: 100 ppm IDLH: 100 ppm	Inhalation Absorption	FLAMMABLE LIQUIDS/FIRE HAZARD May damage the developing fetus. They can irritate the eyes, nose and throat. High levels can cause dizziness, passing out and death. Repeated exposure may damage bone marrow causing low blood cell count. May also damage the eyes, and cause stomach problems. May cause problems with memory and concentration.
Semivolatile organics Naphthalene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, Benzo(g,h,i)perylene benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, pyrene	Refer to RI Reports	Soil Groundwater	PEL: 0.2 mg/m^3 TLV: 0.2 mg/m^3 IDLH: 80 mg/m^3	Inhalation Ingestion	Seven polynuclear aromatic hydrocarbons in the semivolatile organics group and on the hazardous substance list are suspected/known carcinogens of various degrees. These chemical can cause tumors, and affect the skin, lungs, male reproductive organs, and respiratory tract.
Heavy Metals	Not known at this time	Soil Groundwater	PEL: 5 mg/m^3 TLV: 10 mg/m^3 IDLH: NE	Inhalation Absorption	Heavy metals can affect the skin, eyes, mucous membrane, nasal cavities, lungs liver, kidneys and heart
Polychlorinated Biphenyls (PCBs)	Not known at this time	Soil Groundwater	PEL: 1 mg/m^3 TLV: 1 mg/m^3 IDLH: NE	Absorption	Confirmed carcinogen. Moderately toxic by ingestion. Has skin effect and toxic action on the liver. Some isomers are poisonous by other routes. Symptoms of systemic intoxication are nausea, vomiting, weight loss, edema and abdominal pain.

NOTES:

OSHA PEL = Occupational Safety & Health Administration's Final Rule Limits Permissible Exposure Limit for an 8-hour, time-weighted average (TWA) from CFR 1910.1000, Tables Z-1A, Z-2, and Z-3.

ACGIH TLV = American Conference of Governmental Industrial Hygienists' Threshold Limit Value for an 8-hour, TWA.

NIOSH IDLH = National Institute of Occupational Safety and Health Level Immediately Dangerous to Life and Health.

TABLE 3: TASK & RISK ANALYSIS TABLE Brownfield Site RI/IRM for 132 Dingens St. Site				
Task	**Sub-Tasks**	**Activity**	**Hazard**	**Protective Measures**
Soil excavation and off-site disposal	Excavation, backfill, field measurements, soil sampling	Use of heavy equipment, power tools, and hand tools	Potential exposure to chemicals and particulates, falls, cuts, injury from falling objects, release of kinetic or stored energy, unstable excavation walls	Engineering controls such as water for particulate control, proper work practices including proper heavy equipment operation and use of PPE.
Decontamination of Equipment and personnel	Cleaning contaminants off equipment and personnel;	Use of power-washer or spray bottles, and hand tools to remove contaminants	Potential chemical exposure, thermal burns	Proper operation of power washer and use of proper PPE
Backfill and regrading	Wells, cap, gas probes	Use of heavy equipment, power tools, and hand tools	Potential exposure to particulates, falls, cuts, injury from falling objects, release of kinetic or stored energy, electrical hazards	Engineering controls such as water for particulate control, proper work practices including proper heavy equipment operation and use of PPE.

SECTION 3.0
Project Organization & Personnel Responsibilities

The following IEG managerial personnel are assigned to this project and will assume the job functions listed below:

- **Project Manager (IEG)** - Dharmarajan R. Iyer, Ph.D., PE;
- **Health & Safety Officer** (HSO, IEG) – Fred Smith, Jr., CIH

3.1 PERSONNEL RESPONSIBILITIES

The Project Manager will be responsible for overall administration of the project and will assume corporate QA/QC requirements. In addition, the Project Manager will oversee submittals, negotiating/securing subcontracts; scheduling, personnel management, cost tracking and reporting, etc.

The HSO will be responsible for field implementation of this HASP and for insuring the project team's compliance to the site-specific health and safety protocol established herein. The HSO will be responsible for the following:

< Implementing, enforcing, and monitoring the HASP
< Preconstruction indoctrination and periodic training of all on-site personnel with regard to this safety plan and other safety requirements to be observed during construction including:
  - Potential hazards,
  - Personal hygiene principles,
  - Personal protective equipment (PPE),
  - Respiratory protection equipment usage and fit testing,
  - Emergency procedures dealing with fire and medical situations, and
  - Conduct daily update meetings in regard to health and safety
< Evaluating monitoring data to make field decisions regarding safety and health
< Informing project personnel of NYS Labor Law Section 876 (Right-to-Know Law)
< Maintaining separation of Exclusion Zone (dirty) from the Support Zone (clean)

The HSO will have the authority to:

< Enforce this HASP and stop operations if personnel safety and health may be jeopardized, and
< Effect evacuation of the site if necessary

3.2 SURVEILLANCE & INTERNAL AUDITING RESPONSIBILITIES

The HSO will monitor job-site safety via inspection and review of records. Any safety violations will be corrected and reported to the Project Manager. Safety violations will be immediately corrected, explained to the perpetrator, and reviewed at the next safety meeting. Excessive violations of the site safety rules will be grounds for disciplinary action which could lead to termination or expulsion.

SECTION 4.0
Site Personnel Training Requirements

All personnel assigned to the site will be in compliance with the training requirements of 29 CFR 1910 and 1926 as listed below. Site personnel will have met one of the following requirements prior to the start of activities at the site:

- A 40 hour minimum hazardous materials safety and health course, as stipulated in 29 CFR 1926.65 e(3); and
- An 8 hour minimum refresher course per year after the 40 hour minimum training has occurred (29 CFR 1926.65.e[8]).

On-site managers and supervisors must be in compliance with the additional supervisory training requirements of 29 CFR 1926.65.e(4). Emergency responders must be in compliance with the additional training requirements of 29 CFR 1926.65.e(7). Personnel involved in confined space entry will have completed training in accordance with OSHA requirements.

As stipulated in 29 CFR 1910.120, all IEG and subcontractor personnel assigned to this project also will receive site-specific training in:

- Provisions of OSHA regulations and legislation under OSHA Standards 1910 and 1926;
- Provisions of NYSDOL 28.876;
- Medical monitoring per Section 5.0 of this HASP;
- Hazards of the work place (chemical/physical/biological/ergonomic);
- Standard safety operation procedures (see Attachment B);
- Decontamination procedures;
- Work zones;
- Emergency procedures and contingency plans;
- Respirator equipment training, qualitative fit testing and respirator maintenance;
- Emergency first aid procedures, blood borne pathogen program, and CPR;
- On-site communication procedures;
- Air monitoring techniques and sample taking;
- Hazardous material recognition;
- Importance of "Buddy System";
- Toxicology and basic chemistry;
- Site entry; and
- Use of emergency escape packs.

Copies of applicable training certificates (i.e., 40 hour training records, 8 hour training records, 8 hour supervisor training records, medical monitoring documentation, respirator fit test results, first aid/CPR certificates, asbestos handlers cards, confined space entry training certificates, etc.) for site personnel will be retained by the HSO.

4.1 VISITORS

Only those persons who have (1) completed the same level of training as the workers for the portion of the site they wish to enter, in addition to having received the site orientation currently outlined in this HASP, and (2) signed the Visitor's Entry Log will be permitted to enter established work areas. The HSO will establish, on a case-by-case basis, a safe location from which visitors can observe the site activity of interest.

4.2 SAFETY MEETINGS

Personnel who work on the site are required to attend Pre-Entry Site Briefing as and when it is held. It will include a review of the requirements of this HASP. On-site safety meetings will occur regularly and ***on-site personnel will be required to attend***. Attending personnel must sign an attendance sheet. Any personnel who miss the on-site safety meetings will be required to attend a review by the HSO before he/she will be allowed to work at the discretion of the HSO. Items to be considered at the safety meetings may include, but are not limited to:

- Review of relevant site data that may relate to the potential for worker exposure;
- Delegation of responsibility (i.e., field technicians, equipment operators, emergency backup personnel, competent persons, logistical and support requirements);
- Type and frequency of environmental and personal monitoring to be performed;
- Mobilization of support and decontamination equipment;
- Initial levels of protection required and the anticipated potential for upgrading;
- Decontamination requirements;
- Emergency procedures;
- Functional and interpretive problems that may have been encountered while using monitoring instrumentation, personal protective or other support equipment;
- Personal hygiene;
- Fire prevention;
- Heavy equipment operation; and
- Discussion of on-going and planned work activities.

4.3 EMERGENCY RESPONSE TRAINING

Training in site-specific emergency procedures will be provided by the site health and safety officer before work begins on-site. This training will include, but is not limited to, the following;

- Emergency chain-of-command;
- Communication methods and signals;
- Location of phones and emergency numbers;
- Use of emergency equipment;
- Evacuation and emergency procedures;
- Off-site support;
- Site-specific hazards;
- Decontamination procedures;
- Standard operating procedures; and
- Location and use of first aid equipment.

SECTION 5.0
Medical Surveillance

Medical monitoring is required by OSHA as a means of monitoring worker exposure to certain toxic substances. A Medical Surveillance Program (MSP) for employees engaged in on-site activities which is consistent with the requirements of 29CFR.1926.65(b). All medical records and personnel exposure monitoring data generated from the MSP will be retained per 29 CFR 1910.1020.

A baseline medical surveillance examination will be given not more than one year prior to a 40-Hour OSHA-Trained worker reporting to the job site to work in contaminated areas. Copies of the physician's statement certifying each employee's ability to work at task-specific operations, as well as their suitability for wearing respirators will be maintained by the HSO for review by involved regulatory personnel upon request. The baseline Medical Surveillance Exam will meet the requirements of 29CFR.1926.65 (b).

5.1 EPISODIC EXAMINATIONS

Non-scheduled medical examinations may be required upon acute exposure, at the discretion of the HSO, or upon receipt of a request for a medical examination from any employee with symptoms of exposure to hazardous substances, or following injuries, etc. Episodic examinations will be provided, if required, by that person's direct employer through their Medical Surveillance Program.

5.2 ANNUAL AND/OR TERMINATION EXAMINATIONS

All personnel participating in the medical monitoring program (i.e., those personnel who are 40-Hour, OSHA-Trained) will have annual re-examinations and follow-up examinations upon completion of the work. Biological monitoring for blood lead levels will be conducted as part of these examinations in accordance with 29 CFR 1926.62. Employees will be notified of their blood lead levels within five working days of receipt of biological monitoring results.

The annual and termination exams will be complementary in scope with the baseline exams to the degree sufficient to allow comparison of individual biologic parameters. Additional testing for the purpose to further diagnose occupationally induced or significant abnormalities will be at the discretion of the examining physician.

5.3 AUDIOMETRIC TESTING

In addition to the baseline physical exam, all personnel will receive an annual audiogram. This annual audiogram will be reviewed against the baseline or most current audiogram by a certified audiologist to determine if noise-induced hearing loss has occurred. If a noise-induced hearing loss is noted during the evaluation, the employee will be notified, in writing, within 21 days of the determination. This testing is performed in compliance with 29 CFR 1210.95.

5.4 ABNORMAL MEDICAL SURVEILLANCE RESULTS

In general, whenever any medical test which is of significance yields abnormal results, the test will be repeated. Whenever abnormal results are substantiated, the worker may be restricted or excluded from areas which are potentially contaminated or thought to compromise his/her safety. Employees exhibiting elevated blood lead levels will be removed from exposures. The decision of worker disposition will rest with the examining physician.

5.5 HEAT/COLD STRESS MONITORING

The following program will be implemented when the ambient air temperatures exceed 70°F (heat stress monitoring) or drop below 40°F (cold stress monitoring).

5.5.1 Heat Stress Monitoring

Site personnel who wear protective clothing allow body heat to be accumulated with an elevation of the body temperature. Heat cramps, heat exhaustion, and heat stroke can be experienced, which, if not remedied, can threaten life or health. Therefore, an American Red Cross Standard -First Aid book (current edition) or equivalent will be maintained on site at all times so that the HSO and site personnel will be able to recognize symptoms of heat emergencies and be capable of controlling the problem.

When protective clothing is worn (especially Levels A, B, and C) the suggested guidelines for ambient temperature and maximum wearing time per excursion are:

Ambient Temperature (ºF)	**Maximum Wearing Time Per Excursion (Minutes)**
Above 90	15
85 to 90	30
80 to 85	60
70 to 80	90
60 to 70	120
50 to 60	180

Monitoring the heart rate is one method of measuring the effectiveness of employees' rest-recovery regime:

- During a 3-minute period, count the pulse rate for the last 30 seconds of the first minute, the last 30 seconds of the second minute, and the last 30 seconds of the third minute.
- Double the count.

If the recovery pulse rate during the last 30 seconds of the first minute is at 110 beats/minute or less and the deceleration between the first, second, and third minutes is at least 10 beats/minute, the work-recovery regime is acceptable. If the employee's rate is above that specified, a longer rest period is required, accompanied by an increased intake of fluids.

In the case of heat cramps or heat exhaustion, "Gatorade" or its equivalent is suggested as part of the treatment regime. The reason for this type of liquid refreshment is that such beverages will return much-needed electrolytes to the system. Without these electrolytes, body systems cannot function properly, thereby increasing the represented health hazard. NOTE: The HSO or HSTs may weigh workers before and after entry to determine if there is excessive loss of fluid.

This liquid refreshment will be stored in a cooler at the edge of the decontamination zone in plastic squeeze bottles. The plastic bottles will be marked with individual's names. Disposable cups with lids and straws may be used in place of the squeeze bottles. Prior to drinking within the decontamination zone, the project personnel will follow the following decontamination procedures:

A. Personnel will wash and rinse their outer gloves and remove them.
B. Personnel will remove their hard hats and respirators and place on table.
C. Personnel will remove their inner gloves and place them on table.
D. Personnel will wash and rinse their face and hands.
E. Personnel will carefully remove their personal bottle or cup from the cooler to ensure that their outer clothes do not touch any bottles, cups, etc. Personnel also must ensure that their hands to not touch their outer clothes.
F. The used bottle or cups will not be returned to the cooler, but will be placed in a receptacle or container to be cleaned or disposed of.
G. Personnel will replace their respirators, hard hats, gloves and tape gloves prior to re-entering the hazardous zone.

When personnel are working in situations where the ambient temperatures and humidity are high-and especially in situations where protection Levels A, B, and C are required the HSO must:

< Assure that all employees drink plenty of fluids ("Gatorade" or its equivalent);
< Assure that frequent breaks are scheduled so overheating does not occur; and
< Revise work schedules, when necessary, to take advantage of the cooler parts of the day (i.e., 5:00 a.m. to 1:00 p.m., and 6:00 p.m. to nightfall).

5.5.2 Cold Stress Monitoring

Whole-body protection will be provided to site personnel that have prolonged exposure to cold air. The right kind of protective clothing will be provided to site personnel to prevent cold stress. The following dry clothing will be provided by IEG as deemed necessary by the HSO:

< Appropriate underclothing (wool or other);
< Outer coats that repel wind and moisture;
< Face, head, and ear coverings;
< Extra pair of socks;
< Insulated safety boots; and
< Glove liners (wool) or wind- and water-repellant gloves.

The HSO will use the equivalent chill temperature when determining the combined cooling effect of wind and low temperatures on exposed skin or when determining clothing insulation requirements.

Site personnel working continuously in the cold are required to warm themselves on a regular basis in the on-site hygiene facility. Warm, sweet drinks will also be provided to site personnel to prevent dehydration. The HSO will follow the work practices and recommendations for cold stress threshold limit values as stated by the latest edition of the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices by the American Conference of Governmental Industrial Hygienists or equivalent cold stress prevention methods.

SECTION 6.0
Personal Protective Equipment

Based on an evaluation of potential hazards (see Section 2.0), the following levels of personal protective equipment are assigned for this project.

PLANNED WORK ACTIVITY	PLANNED LEVEL OF PROTECTION	ACTION LEVEL FOR PPE UPGRADE/DOWNGRADE
Soil sampling	Modified Level D	Upgrade to Level C if Sustained Readings[A] of 2.5 x Background and 150 μg/m^3 are recorded or if an IDLH Condition is Probable.
Soil Excavation and offsite disposal	Modified Level D	Upgrade to Level C if Sustained Readings[A] of 2.5 x Background and 150 μg/m^3 are recorded or if an IDLH Condition is Probable.
Backfill and regrading	Level D	Upgrade to Level C if Sustained Readings[A] of 2.5 x Background and 150 μg/m^3 are recorded or if an IDLH Condition is Probable.
Decontamination of Equipment & Vehicles	Level D	Upgrade to Level C if Sustained Readings[A] of 2.5 x Background and 150 μg/m^3 are recorded or if an IDLH Condition is Probable.

NOTES:

A. For the purposes of this discussion, a *sustained reading* is defined as a consistent reading on a real-time monitoring instrument which does not vary substantially from a peak or a result which is averaged over a period of time (i.e., 5 minutes). Sustained is called out in order to avoid downgrading PPE based on a single "hit" or "miss" instead of the average concentration present. Unless a chemical has a ceiling value, the TWA and STEL values are averages for exposure over 8-hours or 15 minutes and not single peaks. The values for the above action levels are based on TWA and STEL values.

B The action levels given are based on the potential for exposure to the chemicals listed in the contract documents. These action levels may be changed based on further chemical-specific sampling.

C. The levels of PPE identified have been assigned by task (Table 3), known/anticipated chemical toxicity (Table 2), and potential exposure risks (Table 3). Action levels for PPE upgrade have been set conservatively to minimize the risk of physical injury and/or exposure to field personnel.

D. Respiratory protection will conform to OSHA 1910.134. Personnel assigned to work in the Exclusion Zone or Contamination Reduction Zone must have passed a Respirator Fit Test in accordance with OSHA 3079. Fit tests will be administered by the HSO. Respirators will be maintained and operated per the SOP set forth in Attachment D of this HASP.

E. The HSO will be responsible for determining the need for PPE upgrade or downgrade based on actual conditions encountered in the field.

PPE levels are defined in Table 4 at the end of this section. Project-specific PPE requirements are summarized below.

< The **Level D PPE ensemble** will include work clothing as dictated by weather (sleeved shirts and long pants required); a hard hat; safety glasses; and steel-toe work boots. Hearing and fall protection will be utilized as directed by the HSO or HSTs.

< The **Modified Level D PPE ensemble** will include work clothing as dictated by weather; disposable Tyvek coveralls or equivalent; disposable nitrile (NRC) or neoprene outer gloves (worn over optional inner latex or surgical gloves); a hard hat; safety glasses; steel-toe work boots; and neoprene or butyl rubber overboots. Hearing and fall protection will be utilized as directed by the HSO or HSTs.

< The **Level C PPE ensemble** will include full face air purifying respirator (MSHA/NIOSH approved) with combination organic vapor, acid gas and high efficiency particulate cartridge/filter; Saranax-laminated Tyvek or equivalent coverall; chemical-resistant outer and inner gloves; a hard hat; safety glasses; steel-toe work boots; neoprene or butyl rubber overboots; long cotton underwear (optional); and an escape air mask (readily available). Hearing and fall protection will be utilized as directed by the HSO or HSTs.

< **Level B PPE** will be worn when confined space entry is required (i.e., during tank cleaning). The Level B PPE ensemble will include a positive-pressure SCBA (MSHA/NIOSH approved) or positive-pressure air line respirator with escape bottle for IDLH or potential IDLH atmosphere (MSHA/NIOSH approved); chemical-resistant clothing (Saranax-laminated Tyvek or equivalent coverall); long cotton underwear (optional); outer and inner chemical-resistant gloves; steel-toe work boots; disposable chemical-resistant overboots; and hard hat (face shield optional). Hearing or fall protection will be utilized as directed by the HSO or HSTs.

Taping will be used between suit and gloves, and suit and boots for Levels B, C, and Modified D PPE.

The base levels of protection identified are to be considered preliminary and may change based on air monitoring information collected by the HSO or HSTs during project work. No Changes to the specified levels of protection will be made without the approval of the HSO.

TABLE 4
DESCRIPTION OF PPE LEVELS

LEVEL OF PROTECTION	EQUIPMENT	PROTECTION PROVIDED	SHOULD BE USED WHEN:	LIMITING CRITERIA
A	**Recommended** < Pressure-demand, full-facepiece SCBA or pressure-demand supplied-air respirator with escape SCBA. < Full-encapsulating, chemical-resistant suit. < Inner chemical-resistant gloves. < Chemical-resistant safety boots/shoes. < Two-way radio communications. **Optional** < Cooling Unit. < Coveralls. < Long cotton underwear. < Hard hat. < Disposable gloves and boot covers.	The highest available level of respiratory, skin, and eye protection.	< The chemical substance has been identified and requires the highest level of protection for skin, eyes, and the respiratory system based on either: 6 measured (or potential for) high concentration of atmospheric vapors, gases, or particulates or 6 site operations and work functions involving a high potential for splash, immersion, or exposure to unexpected vapors, gases, or particulates of materials that are harmful to skin or capable of being absorbed through the intact skin. < Substances with a high degree of hazard to the skin are known or suspected to be present, and skin contact is possible. < Operations must be conducted in confined, poorly ventilated areas until the absence of conditions requiring Level A protection is determined.	< Fully-encapsulating suit material must be compatible with the substances involved.

TABLE 4
DESCRIPTION OF PPE LEVELS

LEVEL OF PROTECTION	EQUIPMENT	PROTECTION PROVIDED	SHOULD BE USED WHEN:	LIMITING CRITERIA
B	**Recommended** < Pressure-demand, full-facepiece SCBA or pressure-demand supplied-air respirator with escape SCBA. < Chemical-resistant clothing (overalls and long-sleeved jacket; hooded, one- or two-piece chemical splash suit; disposable chemical resistant one-piece suit). < Inner and outer chemical-resistant gloves. < Chemical-resistant safety boots/shoes. < Hard hat. < Two-way radio communications. **Optional** < Coveralls. < Disposable boot covers. < Face shield. < Long cotton underwear.	The same level of respiratory protection but less skin protection than Level A. It is the minimum level recommended for initial site entries until the hazards have been further identified.	< The type and atmospheric concentration of substances have been identified and require a high level of respiratory protection, but less skin protection. This involves atmospheres: 6 with IDLH concentrations of specific substances that do not represent a sever skin hazard; or 6 that do not meet the criteria for use of air-purifying respirators. < Atmosphere contains less than 19.5 percent oxygen. < Presence of incompletely identified vapors or gases is indicated by direct-reading organic vapor detection instrument, but vapors and gases are not suspected of containing high levels of chemicals harmful to skin or capable of being absorbed through the skin.	< Use only when the vapor of gases present are not suspected of containing high concentrations of chemicals that are harmful to skin or capable of being absorbed through the intact skin. < Use only when it is highly unlikely that the work being done will generate either high concentrations of vapors, gases, or particulates or splashes of material that will affect exposed skin.

TABLE 4
DESCRIPTION OF PPE LEVELS

LEVEL OF PROTECTION	EQUIPMENT	PROTECTION PROVIDED	SHOULD BE USED WHEN:	LIMITING CRITERIA
C	**Recommended** < Full-facepiece, air-purifying, canister-equipped respirator. < Chemical-resistant clothing (overalls and long-sleeved jacket; hooded, one- or two-piece chemical splash suit; disposable chemical-resistant one-piece suit). < Inner and outer chemical-resistant gloves. < Chemical-resistant safety boots/shoes. < Hard hat. < Two-way radio communications. **Optional** < Coveralls. < Disposable boot covers. < Face shield. < Escape mask. < Long cotton underwear.	The same level of skin protection as Level B, but a lower level of respiratory protection.	< The atmospheric contaminants, liquid splashes, or other direct contact will not adversely affect any exposed skin. < The types of air contaminants have been identified, concentrations measured, and a canister is available that can remove the contaminant. < All criteria for the use of air-purifying respirators are met.	< Atmospheric concentration of chemicals must not exceed IDLH levels. < The atmosphere must contain at least 19.5 percent oxygen.
D	**Recommended** < Coveralls. < Safety boots/shoes. < Safety glasses or chemical splash goggles. < Hard hat. **Optional** < Gloves. < Escape mask. < Face shield.	No respiratory protection. Minimal skin protection.	< The atmosphere contains no known hazard. < Work functions preclude splashes, immersion, or the potential for unexpected inhalation of or contact with hazardous levels of any chemical.	< This level should not be worn in the Exclusion Zone. < The atmosphere must contain at least 19.5 percent oxygen.

SECTION 7.0
Air Monitoring Program

7.1 GENERAL

Personnel, work area, and perimeter monitoring strategies have been devised to ensure that the identification of areas for which PPE, engineering, and administrative controls are required. Monitoring and documentation will be conducted as necessary by the HSO or a designated field technician to confirm that the levels of PPE, engineering, and administrative controls are adequate to protect the workers, general public, and environment.

The Project Manager and HSO will ensure that an adequate supply of appropriate monitoring equipment is available prior to commencing work at the site. The instruments will be operated only by persons with appropriate training in the care, calibration, operation, and limitations of the equipment. All instruments will be inspected regularly and field calibrated to determine background concentrations prior to use.

Sampling will be performed and samples will be analyzed using published methodologies that have been validated by OSHA or NIOSH.

Action level contaminant concentrations are based on 50 percent of the OSHA PEL or ACGIH TLV for each contaminant (see Table 2). If air samples indicate that personal exposures are greater than the action levels, then personal protection, engineering, and administrative controls will be reviewed according to the procedures outlined below.

7.2 AIR MONITORING PROCEDURE

The Air Monitoring Plan will include dust control with associated dust, volatile organics and explosives (if needed) monitoring during intrusive activities at the site. Air monitoring will be conducted in accordance with Table 5, the NYSDOH's Generic Community Air Monitoring Plan (included as Appendix A), and as follows:

1. Check and record calibration before and after use each day. All instruments will be calibrated and operated in accordance with manufacturer's specifications. Equipment manuals for all monitoring instruments will be present on-site during all operations.
2. Note weather conditions.
3. Collect and record a background reading on each air monitoring instrument to be used at day's start in an area free of site-generated airborne contaminants. This area will be located upwind of the work area.
4. Prior to initiation of operations, determine and record ambient levels within the contaminated work area(s).
5. Report ambient conditions periodically.
6. Check and record breathing zone levels during remediation and/or abatement activities.
7. Check and record levels at the perimeter of the work zone if elevated concentrations are detected in the worker's breathing zone.
8. Check and record levels following completion of any intrusive work. Monitor one (1) upwind and three (3) downwind locations at the edge of the work zone.
9. Check and record airborne particulate levels periodically. Monitor one (1) upwind and three (3) downwind locations at the edge of the work zone.
10. Check and record daily (pre/post-work) outside exclusion zone ambient air readings. Monitor one (1) upwind and three (3) downwind locations at the edge of the work zone.

TABLE 5
Summary of Air Monitoring Plan* with Action Levels

Instrument	Sampling Location	Monitoring Frequency	Action Level[A]	Response Action[B]
Real Time Monitoring				
Dust Monitors – Respirable Aerosol Monitors (RAMs)	Work zone; Perimeter of Work zone	During soil excavation; backfilling; 1 reading every 15 minutes from each monitoring station	PM_{10} dust standard of 0.15 mg/m^3 above background	Work ceases until mitigated; Enhance dust control measures
Photo-ionization detector (PID) 10.6 eV	Work Zone; Perimeter of Work zone	During sampling; well repair; Soil excavation; Backfilling; 1 reading every 15 minutes from each monitoring station	50% PEL of Measured Contaminants	Work ceases until mitigated Evaluate Need for PPE Upgrade.
Explosimeter/ Oxygen Meter	At Work Zone as Applicable	Any activity which would provide a source of ignition; Periodically during such activity.	<10% LEL >10% LEL to <20% LEL >20% LEL[C] ≤ 19.0% & ≥ 23%	Complete the activity. Complete the activity with continued monitoring. Explosion hazard; evacuate the area; Notify HSO Do not enter. Notify HSO. Ventilate Area

NOTES:

A. The toxicity action levels given above are based on established OSHA PELs for the chemical compounds known and/or anticipated to be present on-site (see Table 2 of this HASP).

B. The HSO is responsible for collecting air monitoring data and notifying site personnel of required response actions (i.e., implementation of engineering controls, upgrade/downgrade to PPE, stop work orders).

SECTION 8.0
Decontamination Procedures

Personnel and equipment decontamination procedures to be employed when exiting contaminated work areas at this project site are detailed in the following subsections.

8.1 PERSONNEL DECONTAMINATION

All personnel will be made aware of any personal habit that may allow contaminants into or onto the body. All personnel will check that regularly worn PPE (e.g., hard hats and liners, eye protection, etc.) is clean and in good condition. Any products for personal consumption or application are prohibited in any work area. Break area(s) will be limited to specific areas where eating, drinking, smoking, etc. and the storage of these materials will be allowed.

No PPE will be removed from a designated work area without proper decontamination or disposal. All personnel leaving the work area will pass through a contamination reduction zone where they will remove their PPE and thoroughly wash/rinse exposed skin with water and biodegradable soap before leaving the project site per the following seven step decontamination SOP.

Step 1: Place equipment and/or samples in area(s) designated in the Equipment Drop-Off Station.

Step 2: Scrape gross contamination from boots and outer gloves, wash using soap in water solution, and rinse with water.

Step 3: Remove tape from around boots and gloves and place in plastic bag or drum provided. Remove overboots and outer gloves and place in plastic bags.

Step 4: Remove respiratory cartridges (if used) and place in plastic bag or drum provided.

Step 5: Remove disposable coveralls and place in plastic bag or drum. Remove boots and store in appropriate location. Remove disposable inner gloves (if worn) and place in plastic bag. Remove hard hat and safety glasses: decontaminate as necessary (wash with sanitizing solution [MSA sanitizing solution or equivalent], rinse with potable water, and allow to dry at the end of each day).

Step 6: Remove respirator (if used) and deposit in plastic bag or drum provided. Avoid touching face with fingers. Respirators will be washed in a sanitizing solution (MSA sanitizer or equivalent), rinsed with potable water, and allowed to air dry at the end of each day.

Step 7: Thoroughly wash/rinse exposed skin with water and biodegradable soap (i.e., trisodium phosphate). Shower and launder personal clothing as soon as possible upon completing daily activities.

Portable decontamination stations (a.k.a., “boot wash” facilities) will be set up in the CRZ adjacent to each hazardous work zone requiring decontamination for personnel. The Boot Wash facilities will be constructed to contain spent wash water, contain a reservoir of clean wash water, a power supply to operate a pump for the wash water, a separate entrance and exit to the decontamination platform with equipment being mobile, allowing easy transport for one hazardous work zone to the next. Personnel will be required to dress down and drum their used PPE in the decontamination area in accordance with the above seven step procedure.

A fixed decontamination trailer equipped with shower facilities will be located in the CRZ near the to the support zone. All personnel will be required to shower before leaving the site.

All materials generated during decontamination will be drummed for disposal in accordance with applicable local, state, and federal regulations.

8.2 EQUIPMENT DECONTAMINATION

Equipment which may have been contaminated during the course of remedial operations will be decontaminated prior to removal from the site. Generally, equipment decontamination will be performed as follows:

1. Conduct gross removal of solids at point of use (i.e., manually scrape off dirt/soil from tires, bucket, etc.).

2. Move to the temporary equipment decontamination pad in the CRZ for decontamination via pressure washing. The self-contained high pressure unit will be capable of heating wash waters to 180ºF and providing a nozzle pressure of 150 psi.

3. Perform complete detergent rinse (if necessary) using an environmentally-safe solvent (MSDSs will be provided for any materials brought on-site and will be maintained in the Contractor's field trailer).

4. Perform a final steam rinse.

The HSO will be responsible for inspecting decontaminated equipment before releasing it from the project site. The HSO will certify in writing that each piece of equipment utilized in the "dirty" area has been properly decontaminated prior to removal from the site.

SECTION 9.0
Site Standard Operating Procedures

Site personnel will observe the following Standard Operating Safety Procedures when working at the site.

1. Ensure that all safety equipment and protective clothing is kept clean and well maintained.
2. Ensure that all prescription eyeglasses in use on this project are safety glasses and are compatible with respirators. No contact lenses will be allowed on site.
3. Ensure that all disposable or reusable gloves worn on the site are approved by the HSO.
4. Change respirator filters during periods of prolonged respirator usage in contaminated areas, upon breakthrough. Respirator filters will always be changed daily.
5. Cover footwear used on site by rubber overboots or booties when entering or working in the Exclusion Zone area or CRZ. Boots or booties will be washed with water and detergents to remove dirt and contaminated sediment before leaving the Exclusion Zone or CRZ.
6. Decontaminate or dispose of all PPE used on site at the end of the work day. The HSO will be responsible for ensuring decontamination of PPE before reuse.
7. Individually assign all respirators and do not interchange them between workers without cleaning and sanitizing. Contractor, Subcontractor, and service personnel unable to pass a fit test as a result of facial hair or facial configuration will not enter or work in an area that requires respiratory protection.
8. Ensure that all project personnel have vision or corrected vision to at least 20/40 in one eye.
9. On-site personnel found to disregard any provision of this HASP may be barred from the project.
10. Do not reuse disposable outerwear such as coveralls, gloves, and boots. Used disposable outerwear will be removed upon leaving the hazardous work zone and will be placed inside disposable containers provided for that purpose. These containers will be stored at the site at the designated staging area and the Contractor will be responsible for proper disposal of these materials at the completion of the project.
11. Immediately replace protective coveralls that become torn or badly soiled.
12. Prohibit eating, drinking, chewing gum or tobacco, and smoking in the Exclusion Zone and CRZ.
13. All personnel will thoroughly cleanse their hands, face, and forearms and other exposed areas prior to eating, smoking, or drinking.
14. Workers who have worked in an Exclusion Zone will shower in the on-site decontamination trailer at the completion of the work day.
15. All personnel will wash their hands, face, and forearms before using toilet facilities.
16. Do not allow alcohol, firearms, or drugs (without prescriptions) on site at any time.
17. All personnel who are on medication should report it to the HSO who will make a determination whether or not the individual will be allowed to work and in what capacity. The HSO may require a letter from the individual's personal physician stating what limitations (if any) the medication may impose on the individual.

SECTION 10.0
Emergency Response & Contingency Plan

The following Emergency Response Plan (ERP) considers and recommends:

< Preventative Measures;
< Personnel training and regular safety meetings conducted to reduce the likelihood of accidents;
< Mitigative measures to limit the scope of any accident; and
< Contingency actions to respond to and remedy the effects of accidents.

10.1 PRE-PLANNING

All work will be coordinated with the owner, IEG, and other involved regulatory personnel. In addition, local police and fire departments, local hospital(s), and local ambulance services will be contacted by the HSO prior to initiation of site operations to inform them of scheduled remedial activities at the site. Arrangements for emergency communication will be made with these organizations prior to initiating on-site operations.

As discussed in Section 5.0 of this HASP, emergency response procedures will be covered as part of each site personnel's training. Training in site-specific emergency procedures will be provided by the site health and safety officer before work begins on-site. This training will include, but is not limited to, the following;

< Emergency chain-of-command;
< Communication methods and signals;
< Location of phones and emergency numbers;
< Use of emergency equipment;
< Evacuation and emergency procedures;
< Off-site support;
< Site-specific hazards;
< Decontamination procedures;
< Standard operating procedures; and
< Location and use of first aid equipment.

10.2 EMERGENCY CHAIN-OF-COMMAND

Personnel will immediately notify the HSO in the event of an emergency using available communications. The HSO will make a rapid assessment of the situation and take appropriate action which (depending upon emergency circumstances) can include notifying the Engineer of the situation; initiating engineering controls (i.e., dust suppression, ventilation, etc.); ordering the suspension of work; ordering evacuation of the work zone; implementing emergency altering and response procedures; requesting emergency medical treatment; and/or administering first aid.

10.3 COMMUNICATION METHODS AND SIGNALS

For emergency situations when two-way radio communication is not available or practical, oral, hand, and semaphore safety signals have been established to protect project personnel. These signals will be made available to personnel for all phases of operation before going on-site. This will ensure quick communication during adverse or emergency situations.

Examples of established signals and their meanings are provided below.

Signal	Indicates
Hand gripping throat	Out of air, can't breath

Wave hands over head from side-to-side	Attention: stand-by for next signal
Swing hand from direction of person receiving signal to directly overhead and through in a circle	Come here
Pointed finger on extended arm	Look in that direction
Grip partner's wrist or both hands around wrist	Leave the area immediately
Hands on top of head	Need assistance
Thumbs up	OK, I'm alright, I understand
Thumbs down	No, negative

Examples of audio signals include:

Signal	Indicates
Short blast of airhorn	Caution or look here
Four (4) blasts of airhorn	Leave the area

Each field team member will be assigned a buddy. Field personnel will watch for hazards or problems his/her buddy might encounter. Buddies will pre-arrange hand signals or other means of emergency signals for communication when respiratory protection or distance makes communication difficult. Communication between buddies must be maintained at all times. Visual contact must be maintained between buddies. Further, buddies must remain in close proximity to each other in order to assist in case of emergencies.

10.4 EVACUATION

Emergency escape routes will be designated by the HSO for use in situations where rapid egress from the Exclusion Zone is required. The locations of these routes will be posted in prominent location(s) on-site (i.e., personnel change trailer, office trailer, break trailer, etc.) and will be reviewed with site personnel during daily tool-box and weekly safety meetings.

An emergency evacuation alarm (i.e., air horn) will be kept on-site at all times. A series of regularly spaced, repeated blasts (four blasts) will be used to signify that all personnel should evacuate the work area. After exiting the work area, personnel will meet at an upwind location designated by the HSO. The emergency alarm will be sounded in the event of any serious problem or emergency on-site which requires the assistance of site personnel or the evacuation of work zone personnel.

In all situations when an on-site emergency results in evacuation of the Exclusion Zone, personnel will not be permitted to reenter until:

- The conditions resulting in the emergency have been corrected;
- The hazards have been reassessed;
- This HASP has been reviewed; and
- Site personnel have been briefed on any changes in the HASP.

10.5 EMERGENCY SERVICES/EMERGENCY VEHICLE ACCESS

Emergency telephone numbers (see Table 1) will be posted at each project site telephone. Directions to the local hospital (see Figure 1) also will be posted at the site.

In the event that emergency services vehicles (police, fire, ambulance) need access to a location which is

blocked by the working crew operations, those operations (equipment, materials, etc.) will be immediately moved to allow those vehicles access.

Emergency crews will be briefed as to site conditions and hazards by the HSO. All vehicles and personnel will be decontaminated prior to leaving the site.

10.6 WEATHER-RELATED HAZARD RESPONSE

Threats to site personnel can arise from natural causes (i.e., lightening, high winds, etc.). In the event that severe weather is imminent, the HSO will notify field team members. As the storm approaches, all work will cease, loose objects will be secured, and site personnel will take shelter at pre-arranged locations. After the severe weather event has passed, the HSO will inspect the work area for safety hazards prior to resuming work.

10.7 SPILL CONTROL & CONTINGENCY PLAN

A standard operating procedure for responding to spills associated with planned contract operations is included in Appendix B.

10.8 PERSONAL INJURIES

In the event of personal injuries the following procedures will be enacted.

1. ***Initial alarm and first aid.*** Upon observation of an injury, site employees will quickly get the attention of other nearby workers; immediately act to protect the injured person from a life-threatening situation; render appropriate first aid; and warn unsuspecting persons of the potential hazard.

2. ***Notify the HSO and the Project Engineer.*** Utilizing available personal radio communications or other rapid communication methods, the HSO and the Project Engineer will be notified of the situation, the identity of the injured person, the type of injury, and the project site location.

3. ***Ambulance and hospital services***. The HSO will immediately assess the situation and, if necessary, notify the designated off-site hospital of the emergency situation.

4. ***Follow-up***. The HSO will determine why the injury occurred, and will take appropriate steps to prevent a similar recurrence. Events associated with the injury will be recorded in the safety officer's logbook.

An Incident Report Form must be completed by the HSO and submitted to the Project Manager within 24 hours of the injury.

10.8.1 Personnel Injury in the Exclusion Zone

Upon notification of any injury in the Exclusion Zone, the designated emergency signal will be sounded. All site personnel will assemble at a pre-arranged location. A rescue team made up of the HSO and other personnel as needed who have received property training (see Section 4.0) will enter the Exclusion Zone (if required) to remove the injured person to the boundary of the Exclusion Zone. The HSO then will evaluate the nature of the injury. The affected person will be decontaminated as necessary to the extent possible prior to movement to the Support Zone. Appropriate first aid will be initiated (see Section 10.12), and the ambulance and designated medical facility (Table 1) will be contacted if required. No persons will reenter the Exclusion Zone until the cause of the injury or symptoms of the illness have been determined.

10.8.2 Personnel Injury in the Support Zone

Upon notification of an injury in the Support Zone, the HSO will assess the nature of the injury. If the cause of the injury or loss of the injured person does not affect the performance of site personnel,

operations may continue. The appropriate first aid will be initiated (see Section 10.12) and necessary follow-up as stated in above. If the injury increases the risk to others, the designated emergency signal will be sounded and all site personnel will move a prearranged location for further instructions. Activities on site will stop until the added risk is removed or minimized.

10.9 FIRE/EXPLOSION

The following contingency plan will be implemented in the event of a fire at the project site.

1. ***Initial Alarm.*** Upon observation of any on-site fire, personnel must immediately notify the HSO (or his designated on-site representative) and the Project Engineer. No attempt will be made to extinguish the fire prior to sounding the alarm.

2. ***Control and/or extinguish small fires which can be suppressed promptly with available on-site equipment.*** Without risking personal injury, an attempt will be made to control or extinguish small fire(s) utilizing ABC-type fire extinguishers. Water will not be used except on wood or paper fires.

3. ***Notify local fire company.*** The HSO and the Project Engineer (or their designated on-site representatives) will immediately assess the situation and, if deemed necessary, notify the local Fire Department of the location and type of fire or explosion. If required, the HSO and/or the Project Engineer (or their designated on-site representatives) will immediately order the site evacuated if a fire occurs which cannot be controlled with a portable fire extinguisher.

4. ***Follow-up.*** The HSO will determine why the fire or explosion occurred, and will take appropriate steps to prevent a similar recurrence. Events associated with the fire or explosion will be recorded in the safety officer's logbook.

An Incident Report must be completed by the HSO and submitted to Corporate Management and the Project Engineer within 24 hours of the fire/explosion.

10.10 PERSONAL PROTECTIVE EQUIPMENT FAILURE

If any site worker experiences a failure or alteration of protective equipment that affects the protection factor, that person and his/her buddy immediately will leave the Exclusion Zone and notify the HSO. Reentry will not be permitted until the equipment has been replaced or repaired, and the affected areas of the person’s body have been decontaminated if applicable.

10.11 OTHER EQUIPMENT FAILURE

If any on-site equipment other than PPE (see Section 10.10 above) fails to operate properly, the HSO will be notified. The HSO then will determine the effect of this failure on continuing operations on site. If the failure affects the safety of personnel or prevents the completion of the Work Plan tasks, all personnel will leave the Exclusion Zone until the situation is evaluated and all appropriate actions taken.

10.12 EMERGENCY EQUIPMENT & ON-SITE FIRST AID

Emergency and first aid equipment to be maintained on-site includes:

- The active work area will be provided with approved, portable emergency eye wash and shower units in accordance with ANSI Standard Z358.1 and minimum rating 2A-10 B:C type dry chemical fire extinguishers.

- At least one “industrial” first aid kit and stretcher will be provided and maintained fully stocked at an easily accessible, uncontaminated location to be determined on-site by the HSO. Additional first aid kits will be provided in the event active work areas are so isolated or separated as to make use of the one first aid station impractical.

< First aid/CPR kit locations will be specifically marked by the HSO and provided with adequate water and other supplies necessary to cleanse and decontaminate burns, wounds, or lesions. First aid stations will be supplied with a buffer solution for testing acid and caustic burns. NOTE: CPR should only be started if the worker is trained in CPR and the victim's heart has stopped beating.

< At least two (2) First Aid Technicians certified by the American Red Cross or other approved agency will be on-site at all times.

< 2A-10 B:C type dry chemical fire extinguishers will be provided at all site locations where flammable materials present a fire risk.

< A minimum of two self-contained breathing apparatus (SCBAs) or lower level of protection as site conditions allow will be maintained in contaminated work areas.

Agencies and medical facilities to be contacted in the event of an on-site emergency are identified in Table 1 of this HASP. The Emergency Response Notification Table also includes the route to the nearest hospital. The table (and corresponding map) will be posted in a prominent location(s) on-site.

If a site worker becomes injured or ill, Red Cross first aid procedures and the blood borne pathogens program provided in this HASP will be followed. First aid or other appropriate initial actions will be provided by the trained first aid responders closest to the incident. NOTE: When protective clothing has been grossly contaminated during an accident/injury, contaminants may be transferred to treatment personnel or the wearer and cause injuries. Unless severe medical problems have occurred simultaneously with splashes, protective clothing should be washed off as rapidly as possible and removed. If the worker is ambulatory or can be moved, he/she will be taken to the personnel decontamination station where decontamination procedures, additional first aid, or preparation for transport to the hospital will be accomplished. In the event that the victim could not be decontaminated, the rescue service provider must be notified of that situation.

If the injury to the worker is chemical in nature, the following first aid procedures are to be instituted:

< ***Eye Exposure:*** If contaminated solids or liquids get into the eyes, wash eyes immediately at the emergency eyewash station using large amounts of water and lifting the lower and upper lids occasionally. Wash for at least 15 minutes. Obtain medical attention.

< ***Skin Exposure:*** If contaminated solids or liquids get on the skin, promptly wash the contaminated skin using soap and water. Obtain medical attention immediately when exposed to concentrated solids or liquids.

< ***Respiratory Exposure:*** Move victim to fresh air at once and begin CPR. Phone 911 to obtain immediate medical attention.

< ***Ingestion Exposure:*** For swallowed contaminants, identify the item swallowed. Follow appropriate procedures and obtain medical attention as soon as possible.

NOTE: Any person transported to the hospital for treatment related to an exposure injury will take with them the appropriate information (see Table 2) about the chemical(s) to which he/she has been exposed. MSDSs for chemicals known or suspected to exist on-site will be maintained in the Contractor's field office by the HSO.

SECTION 11.0
Community Protection Plan

The following Community Protection Plan (CPP) has been developed to outline those steps to be implemented to protect the health and safety of surrounding human population and the environment.

11.1 AIR MONITORING

As part of its Air Monitoring Program (see Section 7.0) and if necessary, IEG will use real-time monitoring and documentation sampling to determine if off-site emissions, as a result of site work, poses a threat to the surrounding community. All readings will be recorded and be available for State (DEC & DOH) personnel to review. The NYSDOH's Generic Community Air Monitoring Plan is included as Appendix A.

11.2 VAPOR EMISSION RESPONSE

If the ambient air concentration of organic vapors exceeds 5 ppm above background in the work area activities will be halted and monitoring continued. If the organic vapor level decreases below 5 ppm above background, work activities may resume but more frequent intervals of monitoring, as directed by the HSO, will be conducted.

SECTION 12.0
Logs, Reports, & Record Keeping

The following health and safety reports will be prepared and submitted as needed and as indicated below.

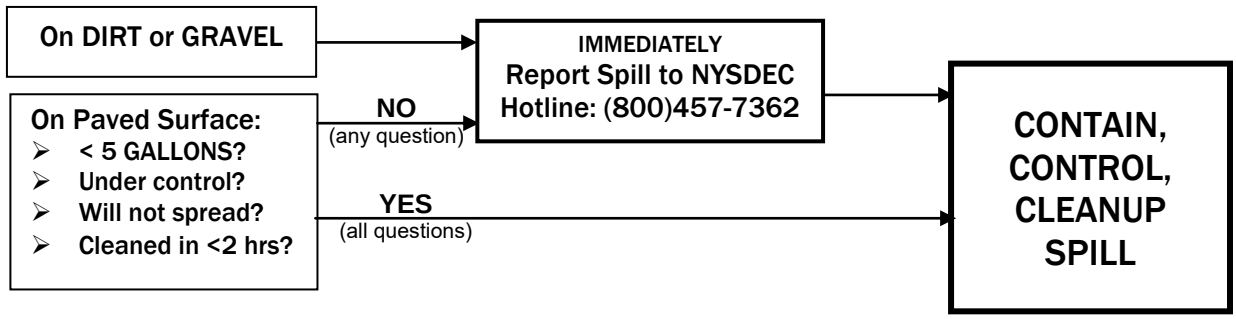
Daily Safety Report
Employee Meeting Record
Exclusion Zone Log
Site Log
Confined Space Entry Permit
Air Monitoring Report
Accident/Incident Report
Health & Safety Inspection Report
Spill Report
Equipment Decontamination Verification Form

APPENDIX H-1

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



APPENDIX H-2

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.

SMP
132 DINGENS ST. SITE

APPENDIX I
FIELD SAMPLING PLAN

APPENDIX I
132 DINGENS ST. BCP SITE
FIELD SAMPLING PLAN

1.0 INTRODUCTION

The 132 Dingens St. Site located in Buffalo, NY has been remediated to meet site specific remediation objectives. Contaminated soil from source areas of hot spot contamination were excavated and disposed off-site. The cover system for the final remedy at this site included soil cover (minimum 12"), asphalt pavement (4" blacktop over crushed stone), crushed stone cover (minimum 12") and concrete cover (minimum 4" concrete over crushed stone).

2.0 CONFIRMATORY SOIL SAMPLING

Parameters with site-specific PETLs include arsenic (PETL = 79 mg/Kg), lead (5,000 mg/Kg), mercury (5.7 mg/Kg), SVOCs (500 mg/Kg), and PCBs (1 mg/Kg). All post-excavation samples will be analyzed for these site-specific parameters. If a different type of waste material is encountered during excavations than previously observed/reported, the excavated waste material will be tested for all TCL organics and TAL metals.

Where necessary confirmatory soil samples will be collected at the bottom of the excavations and from the side walls in accordance with NYSDEC requirements to document remaining contamination in areas where intrusive work is performed during development. 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 soil samples may be collected using a 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 and in concurrence with the NYSDEC representative. Quality assurance and quality control (QA/QC) protocols for the post-excavation sampling and analyses are Appendix J. QA/QC requirements may include field duplicates and matrix spike/matrix spike duplicates (MS/MSD).

3.0 SOIL SAMPLING FOR LANDFILL PARAMETERS

All soil/fill excavated during development are anticipated to be disposed off-site at a solid waste landfill. Soil samples will be collected from the excavation stockpiles at a frequency and for analytical parameters stipulated by the off-site disposal facility for acceptance.

The soil samples will be composited to be representative of the incremental volumes/amount of material for disposal. The samples may be collected using a backhoe bucket and/or a trowel/shovel. All field sampling equipment will be rinsed with distilled water between samples. The soil samples will be analyzed for landfill parameters which typically do not require rigorous QA/QC (e.g. MS/MSD or field duplicates).

SMP
132 DINGENS ST. SITE

APPENDIX J
QUALITY ASSURANCE/ QUALITY CONTROL PLAN

APPENDIX J
132 DINGENS ST. BCP SITE
QUALITY ASSURANCE PROJECT PLAN

1.0 INTRODUCTION

The 132 Dingens St. Site located in Buffalo, NY has been remediated to meet site specific remediation objectives. Contaminated soil from source areas of hot spot contamination were excavated and disposed off-site. The cover system for the final remedy at this site included soil cover (minimum 12"), asphalt pavement (4" blacktop over crushed stone), crushed stone cover (minimum 12") and concrete cover (minimum 4" concrete over crushed stone.

Intrusive work during site development will entail the excavation of contaminated soil that will be disposed off-site. The excavated areas may require sampling and analysis for the parameters of concern at the site (SVOCs, PCBs, arsenic, lead and mercury). In addition clean off-site materials to be imported as backfill will require sampling and analysis for DER-10 parameters to be considered acceptable for this site as backfill. The off-site disposal facility will also require sampling and analysis of excavated materials for landfill parameters prior to acceptance.

2.0 DATA QUALITY OBJECTIVES

Data Quality Objectives (DQOs) define the quality of analytical data required to support the SI/IRM. parameters (semivolatile organics, heavy metals, pesticides, PCBs, cyanide and asbestos) are included for completeness. A NYSDOH ELAP certified analytical laboratory will be utilized for this project. Sample containers to be provided by the analytical laboratory will be certified clean.

The post-remediation DQOs for the site are as follows:

- Assess contaminant levels in soil being excavated;
- Assess acceptability of clean off-site material for use as backfill on-site; and
- Assess acceptability of excavated materials for off-site disposal at a solid-waste landfill

3.0 QA Objectives for Chemical Data Management

Analytical procedures for the media sampled and data deliverables (Category B deliverable) will meet the requirements for any confirmatory testing of soils remaining on-site. Category A deliverables will suffice for landfill parameters. Additional sample containers will be included at the required frequencies for site specific matrix spikes and matrix spike duplicates. The laboratory will cleanup matrix interferences to the extent practicable. Data usability summary reports (DUSRs) will be generated for Category B deliverable packages. The data quality indicators of precision, accuracy, representativeness, comparability, and completeness will be measured during chemical analysis by the analytical laboratory.

Precision: Precision is a measure of the reproducibility of analytical results. Precision may be affected by the natural variation of the matrix or contamination within that matrix, as well as by errors made in field and/or laboratory handling procedures. Precision will be evaluated using analyses of a laboratory matrix spike/matrix spike duplicate (for organics) and matrix duplicates

(for inorganics). Precision will be reported in terms of Relative Percent Difference (RPD) and compared against ASP limits for data acceptability. Precision will also be evaluated by collecting and analyzing field duplicate samples at the required frequency.

Accuracy: Accuracy measures the bias in the analytical measurement, and is the difference between the "observed" or "measured" and "true" values. Factors that can contribute to errors in accuracy include the sampling process, field contamination, preservation, sample handling, sample matrix, sample preparation and analytical techniques. Sampling bias will be evaluated using results from the analysis of equipment rinse blanks and trip blanks that will be collected for each sampling event. Equipment rinse blanks will be collected by passing distilled water over cleaned equipment used in soil sampling. Groundwater samples will be collected with dedicated, pre-cleaned bailers and therefore do not need rinse blanks. The objective of the laboratory is to equal or exceed the accuracy demonstrated for the applied analytical methods on samples of the same matrix. The percent recovery criterion is used to estimate accuracy based on recovery in the matrix spike/matrix spike duplicate and matrix spike blank samples. The spike and spike duplicate, which will give an indication of matrix effects that may be affecting target compounds is also a good gauge of method efficiency.

Representativeness: Representativeness expresses the degree to which sample data accurately and precisely represent the characteristics of a population of samples, a parameter variation at a sampling point, or environmental conditions. Representativeness is a qualitative parameter, dependent upon the proper design of the sampling program. Proper sampling procedures will be implemented with the goal of obtaining representative samples for the media of concern.

Completeness: Completeness is a measure of the amount of valid and therefore useable data obtained from the analytical measuring system compared to the amount that was expected to be obtained under normal conditions. Appropriate QA procedures are maintained by the analytical laboratory to ensure that valid data are obtained and project needs are met. A goal of 90% is required for completeness (or usability) of the analytical data. If this goal is not met, then NYSDEC and project personnel will determine whether the deviations might cause the data to be rejected.

Comparability: Comparability is a qualitative parameter expressing the confidence with which one data set can be compared with another. The objective is to produce data with the greatest possible degree of comparability. It is achieved using standard techniques to collect, preserve, store and analyze representative samples and reporting analytical results in relevant and appropriate units. Field documentation will be complete and will support the assessment of comparability. Comparability is limited by other parameters (e.g., precision, accuracy, representativeness, completeness) because only when precision and accuracy are known can data sets be compared with confidence. For data sets to be comparable, contract-required methods and procedures will be explicitly followed.

4.0 SAMPLING LOCATIONS, CUSTODY, HOLDING TIMES, & ANALYSIS

Sampling locations will be determined during site development. 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.

5.0 CALIBRATION PROCEDURES AND FREQUENCY

To obtain a high level of precision and accuracy during sample processing, laboratory instruments will be calibrated properly. Analytical support areas and laboratory instrument calibration procedures required to maintain the integrity of standards and reagents are discussed below.

Analytical Support Areas: Primary reference standards and secondary standard solutions will be obtained from National Institute of Standards and Technology (NIST), or other reliable commercial sources to verify the highest purity possible. The preparation and maintenance of standards and reagents will be accomplished according to the methods referenced. The laboratory will monitor the quality of the standards and reagents through well documented procedures.

Analytical balances will be calibrated and maintained in accordance with manufacturer's specifications. The laboratory will check the accuracy of the balances daily and properly document them in bound logbooks.

Refrigerator and freezer temperatures in the laboratory will be monitored and recorded daily to ensure that the quality of standards and reagents is not compromised and the integrity of the analytical samples is maintained. Appropriate acceptance ranges (2°C to 6°C for refrigerators) will be clearly posted on each unit in service.

The laboratory will maintain sufficient water supply for its analytical needs. The water will be analyte-free and of the highest quality to eliminate false-positives. Appropriate documentation of the quality of the water supply will be performed on a regular basis.

Laboratory Instruments: Instrument calibration is required to ensure that the analytical system is operating properly and at adequate sensitivity to meet established quantitation limits. Each instrument for analyses will be calibrated according to specified methods and with standards appropriate to the type of instrument and linear range established within the analytical method. The instrument calibration will be performed prior to the analysis of a batch of samples, and at periodic intervals (continuing calibration) to ensure that the calibration is maintained. Corrective action will be taken if the laboratory cannot meet the method required calibration requirements, and documented within the case narrative accompanying the analytical results.

6.0 INTERNAL QUALITY CONTROL CHECKS

Internal QC checks are required to determine if analytical operations at the laboratory are in control, and to determine the effect the sample matrix may have on analytical data being generated. Two types of internal QC checks are performed - batch QC and matrix-specific QCs. The type and frequency of QC samples will be according to the specified analytical method and project specific requirements. Acceptable criteria and target ranges for these QC samples are included with the analytical method reference.

QC results that vary from acceptable ranges will require appropriate corrective measures, potential application of qualifiers, and/or an assessment of the impact these corrective measures have on the established data quality objectives. Quality control samples including any project- specific QC will be analyzed as discussed below.

Method Blanks: A method blank is laboratory-distilled or deionized water that is carried through the entire analytical procedure. The method blank is used to determine the level of laboratory background contamination. Method blanks will be analyzed at a frequency of one per analytical

batch.

Matrix Spike Blank Samples: A matrix spike blank (MSB) sample is laboratory-distilled or deionized water that is spiked (fortified) with all the elements being analyzed for calculation of precision and accuracy to verify that the analysis that is being performed is in control. A MSB is performed for each matrix and organic parameter only.

Matrix Spike Samples: Samples will be designated for matrix spike (MS) and matrix spike duplicate (MSD) at a frequency of one each per 20 samples within a matrix. Aliquots of these samples will be spiked with known concentrations of specific compounds as specified by the methodology. The MS/MSDs will be subjected to the same analytical procedure as the corresponding environmental sample to assess both accuracy and precision of the method. The percent recovery and relative percent difference of the two spiked samples are calculated for evaluation.

Matrix Duplicates: Samples will be designated for matrix (or field) duplicate (MD) at the frequency of one each per 20 samples. Duplicate samples taken from the same location provide for the evaluation of precision in the field as well as the laboratory. Duplicate soil samples will be homogenized (except for volatile organic compounds) prior to filling sample containers in order to be most representative. It is noted that due to interferences, lack of homogeneity, and the nature of some soil samples, analytical results may not always be reproducible.

Rinse (Equipment) Blanks: Rinse blanks will be generated by passing distilled water or laboratory certified analyte-free water through and over cleaned sampling equipment. A rinse blank is used to indicate potential contamination from ambient air and from sample instruments used to collect and/or transfer samples. The rinse blank will be collected, transported and analyzed in the same manner as site samples. Rinse blanks will not be performed on samples (i.e., groundwater) where dedicated disposable equipment is used.

Trip Blanks: Trip blanks are required when collecting aqueous samples for volatile organics. They consist of a set of sample containers filled at the laboratory with laboratory certified, analyte-free water, and never to be opened in the field. These trip blanks will accompany sample containers provided by the laboratory into the field and back to the laboratory.

7.0 CALCULATION OF DATA QUALITY INDICATORS

Precision: Precision is evaluated using analyses of a field duplicate and/or a laboratory MS/MSD which not only exhibit sampling and analytical precision, but indicate analytical precision through the reproducibility of the analytical results. Precision will be determined through the use of MS/MSD (for organics) and matrix duplicates (for inorganics) analyses. RPD is used to evaluate precision by the following formula:

$$RPD = \frac{(X_1 - X_2)}{[(X_1 + X_2)/2]} \times 100\%$$

where:

X_1 = Measured value of sample or matrix spike

X_2 = Measured value of duplicate or matrix spike duplicate

Accuracy: Accuracy is the degree of difference between measured or calculated value and the value of an analytical parameter. Analytical accuracy is expressed as the percent recovery of a compound or element that has been added to the environmental sample at known concentrations

before analysis. Analytical accuracy may be accessed through the use of known and unknown QC samples and spiked samples. Accuracy will be determined from matrix spike, matrix spike duplicate, and matrix spike blank samples, and surrogate compounds added to organic fractions (i.e., volatiles, semivolatiles, PCB). Accuracy will be calculated as follows:

$$Accuracy\ (\%R) = \frac{(X_s - X_u)}{K} \times 100\%$$

where:

X_s - Measured value of the spike sample
X_u - Measured value of the unspiked sample
K - Known amount of spike in the sample

Completeness: Completeness is calculated on a per matrix basis for the project and is calculated as follows:

$$Completeness\ (\%C) = \frac{(X_v - X_n)}{N} \times 100\%$$

where:

X_v - Number of valid measurements
X_n - Number of invalid measurements
N - Number of valid measurements expected to be obtained

8.0 CORRECTIVE ACTIONS

Corrective actions will be taken to resolve problems and restore proper functioning of the analytical system when errors, deficiencies or out-of-control situations occur at the laboratory. Full documentation of the corrective action procedures undertaken to resolve the problems will be included in project records, and summarized in the case narrative.

Incoming Samples: Problems observed during sample receipt will be documented by the laboratory. The Project Manager will be contacted by the laboratory as appropriate for problem resolution. All corrective actions will be properly documented.

Sample Holding Times: If any sample extraction and/or analysis exceeds the method holding time requirement, the Project Manager will be notified for problem resolution. All corrective actions will be properly documented.

Instrument Calibration: Samples will not be analyzed until initial calibrations meet the method requirements. If initial/continuing calibration standards exceed method QC limits, recalibration will be performed and, if necessary, affected samples will be reanalyzed.

Reporting Limits: The laboratory will meet the method required detection limits listed in NYSDEC ASP. If difficulties arise in achieving these limits due to a particular sample matrix, the laboratory will notify project personnel for problem resolution. In order to achieve those detection limits, the laboratory will utilize appropriate cleanup procedures in an attempt to retain the project required detection limits. When a sample requires secondary dilution due to high levels of target analytes, the laboratory will document all initial analyses and secondary dilution results. Secondary dilutions are permitted only to bring target analytes within the linear range of calibration.

Method QC: Method-specified QC samples will meet the requirements of the analytical methods.

Failure of method-required QC may result in the possible qualification of affected data. If the laboratory cannot find any errors, the affected sample(s) will be reanalyzed and/or re-extracted/redigested and then reanalyzed within method-required holding times to verify the presence or absence of matrix effects.

Calculation Errors: Analytical results will be reviewed systematically for accuracy prior to submittal. The analytical laboratory will be required to reissue the analytical data report with the corrective actions appropriately documented in the case narrative in the event errors are found during data review.

9.0 DATA REDUCTION, VALIDATION, AND USABILITY

Data Reduction: Analytical data are first generated in raw form at the instrument. The raw data may then be compiled in a graphic or tabular format as specified in the method references. Identification of all analytes will be accomplished with an authentic standard of the analyte traceable to NIST or USEPA sources.

Data Validation: Analytical reports provided by the laboratory will receive a limited data review. The data validation will be limited to a review of all holding times, completeness of all required deliverables, review of all QC results (surrogates, spikes, duplicates), and a 10% check of all samples analyzed to ensure they were analyzed and quantified properly.

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. A complete analytical data validation is not anticipated. Data that do not meet NYSDEC ASP, 10/95 criteria will be qualified.