Site Management Plan

Port of Albany 700 Smith Boulevard Albany, New York

NYSDEC Site No. 401080(P)

CHA Project Number: 28952.1201.31000

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LIST OF ACRONYMS & ABBREVIATIONS

APDC Albany Port District Commission

bgs Below Ground Surface

CAMP Community Air Monitoring Plan CFR Code of Federal Regulations

CHA Clough Harbour & Associates LLP

cis-1,2-DCE cis-1,2-Dichloroethene
CNS Central Nervous System

CY Cubic Yards

DER Division of Environmental Remediation

1,1-DCE 1,1-Dichloroethene

DOL United States Department of Labor

EC Engineering Control

EPA United States Environmental Protection Agency

ESC Erosion and Sediment Control

EWP Excavation Work Plan FPS Feet per Second

HASP Health & Safety Plan IC Institutional Control

mg/m³ Milligrams per Cubic Meter

SDS Safety Data Sheet
MTBE Methyl Tert Butyl Ether
NRC National Response Center

NYCRR New York Code, Rules & Regulations

NYS New York State

NYSDEC New York State Department of Environmental Conservation

NYSDOH New York State Department of Health

NYSDOT New York State Department of Transportation
OSHA Occupational Safety & Health Administration

PAH Polyaromatic Hydrocarbon PCBs Polychlorinated Biphenyls

PM Particulate Matter

PPE Personal Protective Equipment

PPB Parts Per Billion
PPM Parts Per Million

RAP Reclaimed Asphalt Pavement

RI Remedial Investigation SCO Soil Cleanup Objective SMP Site Management Plan

SO Safety Officer

SVOC Semivolatile Organic Compound

TAL Target Analyte List

TOGs Technical and Operational Guidance Series

TSCA Toxic Substances Control Act



 $\begin{array}{ll} \mu g/m^3 & \quad \mbox{Micrograms per Cubic Meter} \\ \mu m & \quad \mbox{Micrometers or microns} \end{array}$

USDA United States Department of Agriculture
USDOT United States Department of Transportation

VOC Volatile Organic Compound

1.0 INTRODUCTION & DESCRIPTION OF REMEDIAL PROGRAM

1.1 INTRODUCTION

CHA Consulting, Inc. (CHA) has prepared this Site Management Plan (SMP) to address the management of soil impacted with polychlorinated biphenyls (PCBs) in exceedance of applicable Toxic Substance Control Act (TSCA) regulations that will remain in place on an approximate 12.14-acre portion of a 14.5-acre parcel located at 700 Smith Boulevard in the Port of Albany, City of Albany, New York (the Site) following implementation of the PCB Risk-Based Cleanup and Disposal Application (CHA, March 2020), hereafter referred to as "Application". The Site was formerly in the NYSDEC Spills Program and is now being classified as a potential New York State Superfund Site (Site No. 401080P). An Order on Consent (Order) was executed as between the APDC and DEC on May 5, 2020 regarding 700 Smith Boulevard (CO 4-20200424-56). In accordance with the Order, the requirements of the Risk-Based Cleanup and Disposal Application are integrated in the Order by reference.

1.1.1 SMP Organization

This SMP has been divided into seven (7) major sections, including:

Section 1: Summarizes the purpose of the SMP, provides the Site background, and

summarizes the investigations completed at the Site

Section 2: Summarizes the proposed remedial actions to be completed

Section 3: Engineering and Institutional Control Plan

Section 4: Site Monitoring Plan (including Site-Wide Inspection requirements)

Section 5: Provides requirements for inspections of the Site and reporting &

certification requirements

Section 6: Excavation Work Plan (for all intrusive Site activities)

Section 7: Health and Safety Plan Requirements (minimum requirements)

1.1.2 General

The Site is owned by the Albany Port District Commission (APDC) and is a portion of the greater APDC property which makes up the Port of Albany and is currently zoned for industrial use. A Site location map is provided as Figure 1, and the boundaries of this Site are provided on Figure 2. 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 A.

After completion of the remedial work described in the Revised PCB Risk-Based Cleanup and Disposal Application, some contamination will be left in the subsurface at this Site, which is hereafter referred to as 'remaining contamination." This SMP has been prepared to manage remaining contamination at the Site until the Deed Restriction is extinguished in accordance with state and federal law and addresses the means for implementing the required Institutional Controls (ICs) and Engineering Controls (ECs). Reports associated with the Site can be viewed by contacting the NYSDEC and the EPA Region 2 Administrator.

1.1.3 Purpose

The Site contains contamination which will be left after completion of the remedial action. ECs will be incorporated into the Site remedy to control exposure to remaining contamination during the use of the Site for the protection of public health and the environment. A Deed Restriction, to be completed in accordance with New York State law, granted to the EPA Region 2 Administrator, and recorded with the Albany County Clerk, will include an Environmental Easement document that will require compliance with this SMP and all ECs and ICs placed on the Site. The ICs place restrictions on Site use, and mandate operation, maintenance, monitoring and reporting measures for all ECs and ICs. This SMP was prepared to specify the methods necessary for compliance with all ECs and ICs required by the Environmental Easement for contamination that remains at the Site.

This SMP provides a detailed description of all procedures required to manage remaining contamination at the Site after completion of the Remedial Action, including: (1) maintenance and management of all ECs/ICs and (2) performance of periodic inspections, certification of results, and submittal of Annual Monitoring Reports.

To address these needs, this SMP includes five plans: (1) Description of Remedial Activities, (2) an EC/IC Control Plan for implementation and management of EC/ICs upon development of the Site; (3) a Site Monitoring Plan for monitoring of the Site capping and fencing; (4) required inspections, reporting and certifications, and (5) an Excavation Work Plan (EWP).

This SMP also includes a description of Annual Monitoring Reports for the periodic submittal of data, information, recommendations, and certifications to EPA.

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;
- Failure to comply with this SMP is a violation of applicable TSCA regulations pursuant to 40 CFR 761.61, and thereby subject to applicable penalties.

1.1.4 Revisions

Revisions to this plan will be proposed in writing to the EPA Region 2 Administrator and NYSDEC Project Manager. Any approved revisions to this SMP must be denoted on the cover page of the plan. In accordance with the Environmental Easement for the Site, the EPA and NYSDEC will be provided copies of the approved and revised SMP document for its files.

Proposed changes to the allowable Site uses in the Environmental Easement should only be considered under extraordinary circumstances due to the fact that the cleanup levels achieved at the Site were specific to the proposed use of the Site, and therefore, may limit other types of uses, particularly lighter type uses, such as residential use. However, any such changes would require the explicit, written authorization by the EPA as well as significant modifications to both this SMP and the Environmental Easement for the Site, at a minimum.

1.2 SITE BACKGROUND

1.2.1 Site Location & Description

The Site is located in the Port of Albany, City of Albany, Albany County, New York and is identified as Tax Map Parcel No.87.10-4-1 on the City of Albany Tax Map. The property totals approximately 14.5 acres of industrial land (see Figure 2); however, only approximately 12.14 of these acres are subject to the remedial actions proposed in the Application. The Deed Restriction, Environmental Easement and compliance with this SMP, however will pertain to the entire 14.5 acre parcel.

The Site is bounded by industrial land also owned by APDC, including a scrapyard (Ben Weitsman of Albany) to the north, Capital Scrap Metal Company and Albany Port Railroad Corp. to the south, Westway Feed Products to the east, and railroad tracks to the west (see Figure 2 – Site Plan). The boundaries of the Site are more fully described in Appendix A – Environmental Easement. The owner of the Site parcel at the time of issuance of this SMP is APDC.

1.2.2 Site History

The Site has been owned by the ADPC since approximately 1925, with no prior industrial usage. Prior to ownership by ADPC, the area surrounding the subject Site was mostly agricultural with commercial development to the north and south of the subject Site. Sometime after 1937 the Site was used by Atlantic Steel Corporation and as a rail yard until 1951. Subsequently, the Site was used for metal recycling operations since at least 1964. Two existing one-story structures located on the east side of the Site were built in the early 1950s. During this time period, the Port of Albany to the north and south of the Site continued to transition from agricultural land to industrial/commercial properties.

On or about 2013, metal recycling operations ceased and the most recent tenant of the property, Sims Metal Management, screened the surficial soils to remove metal, plastic, wood, and other debris. The Site is currently vacant with the exception of a few remaining buildings and structures, including the scale house/office building, maintenance/storage building, which are located on the eastern portion of the Site, rail siding in the central area of the Site and exiting through the eastern property boundary, and an emergency generator located in the south area of the Site.

1.2.3 Geologic Conditions

The United States Department of Agriculture (USDA) Soil Survey for Albany County indicates that the soils of the subject Site are classified as Urban Land. The Urban Land designation is assigned to areas where 85 percent or greater of the surfaces are covered by impervious materials. Previous subsurface investigations at the Site have indicated that the first several feet of soil consists of brown sand mixed with variable amounts of organics and fill debris, followed by brown to gray fine to coarse sand to silt to a depth of 13 feet or greater. Bedrock geologic maps compiled by the New York State Geological Survey indicate that the unconsolidated deposits are underlain by bedrock of the Snake Hill Shale, which consists of silty micaceous shale with occasional interbeds of siltstones, mudstones, and fine-grained sandstones.

Based on previous investigations, groundwater is estimated to exist between six (6) to 16 feet below ground surface (bgs), and the apparent direction of shallow groundwater flow is generally to the southeast towards the Hudson River. As inferred from regional topography, surface water likely flows in an east/southeasterly direction toward the Hudson River, with storm water runoff directed in a southeasterly direction to storm drains along bordering streets.

1.3 SUMMARY OF REMEDIAL INVESTIGATION FINDINGS

Site Characterization activities have been performed to characterize the nature and extent of contamination at the Site. The results of the Site Characterization activities are described in detail in the following reports and transmittals:

- Supplemental Phase II Investigation Report (CHA, April 2015)
- Supplemental Groundwater Analytical Data Transmittal (CHA, May 2015)
- Supplemental Groundwater Analytical Data Transmittal (CHA, June 2015)
- Progress Report and Work Plan Addendum (Sterling Environmental Engineering, September 2015)
- Additional Site Characterization Report (CHA, February 2019)

1.3.1 Nature & Extent of Contamination

Soil

Based on analytical results to-date, PCB contamination at concentrations of 1.0 parts per million (ppm) or greater is present throughout the majority of the Site in surficial (i.e., 0-1 feet bgs) and subsurface soils to a maximum depth of five (5) feet bgs, although the majority of concentrations are situated at three (3) feet or less. PCB detections in soils range from 0.07 ppm to 2,170 ppm, although most concentrations are less than 25 ppm. A total of eleven localized hot spot areas (having total PCBs > 25 ppm) have been identified near soil borings SS-11, GP-15, GP-26, GP-32, GP-45, GP-46, GP-79, GP-81, GP-90, GP-91, and GP-100.

Secondary contaminants of concern in soil include the following metals: arsenic, lead, and mercury, and polyaromatic hydrocarbons (PAHs) which extend to depths of five (5) feet bgs (metals) and four (4) feet bgs (PAHs) but are primarily located in soil at a depth of 0 - 1 feet bgs, and thus will be removed and/or covered as part of the proposed PCB remediation. Volatile organic compounds (VOCs) were not detected above Title 6 of the New York Codes, Rules and Regulations (NYCRR), Part 375 - Soil Cleanup Objectives (SCO) – Restricted Industrial Use in soil.

Groundwater

Groundwater has not been significantly impacted by Site conditions. VOCs detected in groundwater include methyl tert butyl ether (MTBE), cis-1,2-dichloroethene (cis-1,2-DCE), 1,1-dichloroethene



(1,1-DCE) and vinyl chloride. The concentrations are relatively low-level, are isolated, and may be attributable to off-site sources, as such compounds have either not been detected in Site soils to-date or were detected at low-level concentrations well below the NYCRR Industrial SCOs. Semi-volatile organic compounds (SVOCs) have not been detected above the NYSDEC Division of Water Technical and Operational Guidance Series (1.1.1): Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations (TOGS) in Site groundwater. Although total metals were detected in exceedance in groundwater, the results of the dissolved metals analysis have indicated that only iron, magnesium, manganese, nickel and sodium were detected above NYSDEC TOGS Standards.

There were no detected concentrations of dissolved PCBs in the 11 on-site monitoring wells when last sampled in 2015. The conclusion, at that time with the concurrence of the NYSDEC Spills Project Manager, was and still is that there are no PCB impacts to groundwater and that no further action is required regarding groundwater at the Site. Furthermore, the Site and properties in the vicinity currently utilize public water. There is no current or anticipated future use of groundwater at the site for potable or non-potable uses.

2.0 REMEDIAL ACTIVITIES

2.1 REMEDIAL ACTION OBJECTIVES

The proposed remedial approach will include the excavation and off-Site disposal of PCB impacted soils with concentrations greater than 25 ppm and the placement of a cap of 12 inches of RAP on the entire site with the exception of the areas currently improved with buildings or currently paved. This remediation is detailed in the Revised Risk-Based Cleanup and Disposal Application (CHA, March 2020) which has been submitted for approval by EPA. The following sections provide a general overview of the proposed remediation.

2.2 EXCAVATION AND OFFSITE DISPOSAL

The proposed remedial activities will include excavation and off-Site disposal of PCB impacted soils with concentrations greater than 25 ppm. Proposed areas of excavation were developed based on the concentrations of PCBs observed during Site characterization activities. Eleven hot spots were identified, including SS-11, GP-15, GP-26, GP-32, GP-45, GP-46, GP-79, GP-81, GP-90, GP-91, and GP-100, as shown on Figure 3. Anticipated excavation dimensions and volumes are summarized as follows:

Hot Spot	Dimensions (ft)	Depth (ft)	Total Volume (CY) PCBs > 25 ppm, < 50 ppm	Total Volume (CY) PCBs > 50 ppm
SS-11	15 x 15	2	0	20
GP-15	7.5 x 7.5	4	10	0
GP-26	See Figure 3a	2	40	30
GP-32	15 x 15	4	0	35
GP-45	15 x 15	2	0	20
GP-46	7.5 x 7.5	2	5	0
GP-79	10 x 15	2	0	15
GP-81	10 x 10	2	10	0
GP-90	10 x 15	4	25	0
GP-91	10 x 10	4	15	0
GP-100	10 x 15	2	15	0
		TOTAL:	120	120

ft = feet

CY = cubic yards



Lateral excavation dimensions for SS-11, GP-15, GP-32 GP-45, GP-46, GP-79, GP-81, GP-90, GP-91, and GP-100 are depicted on Figure 3. Lateral excavation dimensions for GP-26 are depicted on Figure 3a.

Following removal, PCB-impacted soils with concentrations greater than 25 ppm but less than 50 ppm will be removed and transported off-Site to a licensed disposal facility in accordance with 40 CFR 761.61(a)(5)(i)(B)(2)(ii), and impacted soils classified as hazardous waste (greater than 50 ppm), will be disposed of at a hazardous waste landfill in accordance with 40 CFR 761.61(a)(5)(i)(B)(2)(iii). Disposal facilities will be identified prior to the implementation of the remedial work. Verification samples will be collected following excavation activities in each of the hot spot excavation areas. Excavated areas will be backfilled and/or graded to the surrounding elevation. At the fence line, property boundaries, and paved areas impacted soil will be cut and graded back to allow for the cap to match the elevation of the surrounding grade. A cap of 12 inches of RAP will then be placed over the soil that remains following the excavation and grading work. Backfill and cap material will consist of clean fill or RAP. Documentation will be obtained confirming the clean fill material that is not clean gravel, rock or stone, or is recycled concrete or brick consistent with 6 NYCRR Part 360. Backfill imported to the Site will be subject to chemical testing in accordance with the table below or will be subject to the allowable exemptions for specified beneficial use materials per 6 NYCRR Part 360 – 1.15(b), if such materials are approved by the Owner. The RAP to be used for the cap will be compliant with the NYSDEC approved BUD. Any other soils imported will meet the chemical testing requirements.

2.3 REMAINING CONTAMINATION

Table 1 summarizes the results of PCBs and Table 2 summarizes the results of metals and PAHs which will remain in Site soils after completion of remedial activities. In summary, the following constituents will remain in Site-wide soils at concentrations exceeding applicable criteria at the indicated concentration ranges and depths:

Compound	Applicable Criteria (ppm)	Site Concentration Range Exceeding Criteria (ppm)	Depth Range (ft bgs)
Total PCBs	11	1 - 25	0 - 5
Benzo(a)pyrene	1^2	1 - 3.87	0 - 4
Dibenzo(a,h)anthracene	1 ²	1 - 1.77	0 - 1
Arsenic	16^2	16 - 65.2	0 - 5
Lead	$3,900^2$	3,900 - 4,800	0 - 3
Mercury	5.7 ²	5.7 - 42	0 - 3

Ft = feet



In addition, the following constituents are known to be present in groundwater at concentrations exceeding applicable criteria at the indicated concentration ranges (highest historic concentration shown):

Compound*	NYSDEC TOGs Standard	Site Concentration Range
	(ug/L)	(ug/L)
1,1-Dicloroethene	5	ND – 15
cis-1,2-Dichloroethene	5	ND – 15.3
Methyl Tert Butyl Ether	10	ND – 52.5
Vinyl Chloride	2	ND – 31
Iron (Dissolved)	300	ND – 2,600
Magnesium (Dissolved)	35,000	2,100 – 107,000
Manganese (Dissolved)	300	16 – 4,900
Nickel (Dissolved)	100	ND - 760
Sodium (Dissolved)	20,000	7,700 - 289,000

ND = Non-detect

The Site is currently secured by a six (6) foot tall chain link fence affixed with barbed wire, although there are currently areas where the fence either is not present or is compromised. Such areas will be secured in the near future. Access is restricted through a locked gate located on the eastern property line, thereby limiting vehicular and pedestrian traffic to the Site.

¹TSCA High-Occupancy Cleanup Level

² NYCRR Industrial SCO

^{*}For non-VOC compounds, only dissolved concentrations of constituents are shown. Refer to Section 1.3.1 regarding discussions of total PCBs as well as total metals detected historically in groundwater.

3.0 ENGINEERING & INSTITUTIONAL CONTROL PLAN

3.1 INTRODUCTION

The goal of the remedial program is to redevelop the Site or portions of the Site to high-occupancy industrial usage. Pursuant to 40 CFR 761.3, a high occupancy area means "any area where PCB remediation waste has been disposed of on-Site and where occupancy for any individual not wearing dermal and respiratory protection for a calendar year is: 840 hours or more (an average of 16.8 hours or more per week) for non-porous surfaces and 335 hours or more (an average of 6.7 hours or more per week) for bulk PCB remediation waste. Examples could include a residence, school, day care center, sleeping quarters, a single or multiple occupancy 40 hours per week work station, a school class room, a cafeteria in an industrial facility, a control room, and a work station at an assembly line." Pursuant to 40 CFR 761.61(a)(4)(i)(A), the cleanup level for bulk PCB remediation waste in high occupancy areas is ≤ 1 ppm.

Because soils will remain on-Site which contain PCBs at concentrations > 1 ppm and ≤ 25 ppm, the implementation of ECs/ICs are required in any high-occupancy area to be protective of human health and the environment.

3.1.1 General

This EC/IC Plan describes the procedures for the implementation and management of all EC/ICs at the Site. The EC/IC Plan is one component of the SMP and is subject to revision by the EPA.

3.1.2 Purpose

This plan provides:

- A description of all EC/ICs on the Site;
- The basic implementation and intended role of each EC/IC;
- A description of the key components of the ICs that will be set forth in the Environmental Easement;
- A description of the features to be evaluated during each required inspection and periodic review;

- A description of plans and procedures to be followed for implementation of EC/ICs, such as the implementation of the EWP 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 EC/ICs required by the Site remedy, as determined by the EPA.

3.2 ENGINEERING CONTROLS

ECs to be implemented include placement of a protective cap consisting of a 12" layer of RAP and fencing to control exposure to remaining contamination left in place. This activity is outlined in the Revised Risk-Based Cleanup and Disposal Application.

3.2.1 Engineering Control Systems

3.2.1.1 Site Protective Capping (High-Occupancy Areas)

Exposure to remaining PCB-impacted soil/fill within portions of the Site which are deemed high-occupancy usage will be prevented by placement of protective capping. At this time the areas to receive a cap are identified as all unpaved areas and unimproved areas (areas without buildings) of the 12.14 acre Site. Per the Application, the cap will consist of 12 inches of RAP which satisfies the requirements of 6NYCRR Part 360.12(d) for a Beneficial Use Determination. A cap must have of sufficient strength to maintain its effectiveness and integrity during the use of the cap surface which is exposed to the environment. A cap shall not be contaminated at a level ≥ 1 ppm PCB per AroclorTM (or equivalent) or per congener. Repairs shall begin within 72 hours of discovery for any breaches which would impair the integrity of the cap."

In the future if the current cap is changed, altered or replaced in areas deemed to be high-occupancy, it shall be comprised of one or more of the following:

- **Asphalt Cap**: Six (6) inches of asphalt (or similar material) (Detail #1 on Figure 4);
- Concrete/Building Cap: Six (6) inches of concrete (Detail #2 on Figure 4);
- **Soil Cap:** Ten (10) inches of clean, compacted soil with high clay and/or silt content and meeting the parameters listed in 40 CFR 761.75(b)(1)(ii) through 40 CFR 761.75(b)(1)(v) (Detail #3 on Figure 4); or,
- **Reclaimed Asphalt Pavement (RAP) Cap**: Twelve (12) inches of compacted RAP (Detail #4 on Figure 4).

3.2.2 Fencing (Low-Occupancy Areas)

In addition to protective capping, any areas of the Site which will become low-occupancy and which will not be improved with one of the above caps will be surrounded by chain-link fencing to restrict individual access of these areas to less than 6.7 hours per week. The installation of fencing is more than what is required to control risk in low occupancy areas but will serve as an important visual and physical control to delineate low and high occupancy areas, which will be clear to all on Site. It is anticipated that future Site development will consist of minimal low occupancy areas and will likely be limited to areas such as stormwater retention ponds or other such areas that would not be occupied regularly.

3.2.3 Criteria for Removal of Capping System

The protective capping system and fencing are permanent controls and the quality and integrity of these systems will be inspected at defined, regular intervals in perpetuity, until such time that the EPA and/or NYSDEC agrees in writing that inspection of the ECs is no longer required and/or if soils have been removed to ≤ 1.0 ppm PCBs at the site or a portion of the site and appropriate environmental easement and deed restriction changes have been made and approved by EPA.

3.3 INSTITUTIONAL CONTROLS

A series of ICs is required to: (1) implement, maintain and monitor EC systems; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and, (3) limit the use and development of the Site to restricted high-occupancy and/or low-occupancy industrial uses only.

3.3.1 Environmental Easement/Deed Restriction

Adherence to all ECs on the Site will be guaranteed 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 and the Deed Restriction with the prior approval of EPA and NYSDEC. These ICs are:

- The property may only be used for industrial use provided that the long-term ECs/ICs included in this SMP are employed;
- Low-occupancy areas (if applicable) shall maintain appropriate ECs (i.e., fencing) and ICs. Individuals are not permitted to occupy these areas for greater than 6.7 hours per week unless appropriate dermal and respiratory protection are worn.

- High-occupancy areas (i.e., areas of the Site occupied by an individual greater than 6.7 hours per week) shall maintain appropriate ECs (i.e., protective capping) and ICs.
- All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with this SMP, including any excavation on Site;
- Compliance with the Environmental Easement and this SMP by the Grantor and the Grantor's successors and assigns;
- All ECs must be operated and maintained as specified in this SMP;
- All ECs on the Controlled Property must be inspected at a frequency and in a manner defined in this SMP:
- Soil and other environmental or public health monitoring must be performed as defined in this SMP; and,
- Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in this SMP;
- Access to the Site must be provided to agents, employees, or other representatives of the EPA and NYSDEC with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement.

ICs identified in the Environmental Easement/Deed Restriction may not be discontinued without an amendment to or extinguishment of the Environmental Easement.

3.3.2 Excavation Work Plan

The proposed site remedy allows for high-occupancy industrial usage, provided that ECs/ICs are implemented. Any future intrusive work that will penetrate the protective capping, or encounter or disturb the PCB impacted soils that remain, including any modifications or repairs to the existing cover system will be performed in compliance with Section 6.0, Excavation Work Plan (EWP). Any work conducted pursuant to the EWP must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) prepared for the Site. HASP requirements are summarized in Section 7.0 of this SMP and shall be prepared in current compliance with DER-10, and 29 CFR 1910, 29 CFR 1926, and all other applicable Federal, State and local regulations. Based on future changes to State and federal health and safety requirements, and specific methods employed by future contractors, a HASP and CAMP will be prepared and submitted with the notification provided in the EWP. Any intrusive construction work will be performed in compliance with the EWP, HASP and CAMP, and will be included in the periodic inspection and certification reports submitted under the Site Management Reporting Plan (Section 5.0).

The Site owner and associated parties preparing the remedial documents submitted to the EPA and/or NYSDEC, and parties performing this work, are completely responsible for the safe performance of all intrusive work, the structural integrity of excavations, proper disposal of excavation de-water, control of runoff from open excavations into remaining contamination, and for structures that may be affected by excavations (such as building foundations and bridge footings). Site development activities shall not interfere with, or otherwise impair or compromise, the ECs described in this SMP.

3.4 INSPECTIONS & NOTIFICATIONS

3.4.1 Inspections

Inspections of all remedial components installed at the Site will be conducted at the frequency specified in the SMP Monitoring Plan schedule. A comprehensive Site-wide inspection will be conducted annually, regardless of the frequency of the Annual Monitoring 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;
- Achievement of remedial performance criteria;
- Sampling and analysis of appropriate media during monitoring events;
- If Site records are complete and up to date; and
- Changes, or needed changes, to the remedial or monitoring system.

Inspections will be conducted in accordance with the procedures set forth in the Site Monitoring Plan (Section 4.0). The reporting requirements are outlined in the Annual Monitoring Reporting section of this plan (Section 5.0).

If an emergency, such as a natural disaster or an unforeseen failure of an EC occurs, an inspection of the Site will be conducted within 5 days of the event to verify the effectiveness of the EC/ICs implemented at the Site. Repairs shall begin within 72 hours of discovery for any breaches or damage which would impair the integrity of the ECs, pursuant to 40 CFR 761.61(a)(7).

3.5 CONTINGENCY PLAN

Emergencies may include injury to personnel, fire or explosion, environmental release, or serious weather conditions.

3.5.1 Emergency Telephone Numbers

In the event of an environmentally related situation or unplanned occurrence requiring assistance, the Owner or Owner's representative(s) should contact the appropriate party from the contact list below. For emergencies, appropriate emergency response personnel should be contacted. Prompt contact should also be made to CHA. These emergency contact lists must be maintained in an easily accessible location at the Site.

Table 3. Emergency Contact Numbers

Contact	Phone Number
Medical, Fire, and Police:	911
One Call Center:	(800) 272-4480; 811
	(3-day notice required for utility markout)
Poison Control Center:	(800) 222-1222
National Response Center (for Pollution Toxic	(800) 424-8802
Chemical Oil Spills):	
NYSDEC Spills Hotline	(800) 457-7362
CHA, Seth Fowler:	(518) 453-4547
APDC, Patrick Jordan:	(518) 463-8763
EPA, Dr. James Haklar:	(212) 637-3037

3.5.2 Map and Directions to Nearest Health Facility

Site Location: 700 Smith Blvd, Albany, NY

Nearest Hospital Name: Albany Medical Center Hospital Hospital Location: 43 New Scotland Avenue, Albany, NY

Hospital Telephone: (518) 262-1200

Directions to the Hospital:

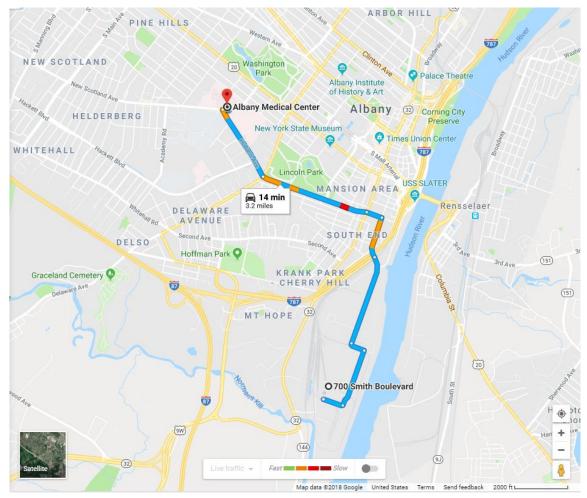
- 1. Head north on Smith Blvd.
- 2. Turn left onto Boat Street
- 3. Continue onto Church Street
- 4. Continue onto Green St/Vine St
- 5. Turn left onto Rensselaer St



- 6. Continue onto Morton Ave
- 7. Continue onto Holland Ave
- 8. Turn right onto New Scotland Ave
- 9. Turn left into Albany Medical Center

Total Distance: 3.2 miles

Total Estimated Time: 14 minutes



3.5.3 Response Procedures

As appropriate, the fire department and other emergency response groups will be notified immediately by telephone of the emergency. The emergency telephone number list is found at the beginning of this Contingency Plan (Table 3). The list will also be posted prominently at the Site and made readily available to all personnel at all times.

3.5.3.1 Spill Response Procedures

- 1. Immediately upon evidence that a spill or release has occurred, facility personnel shall call the APDC Emergency Contact (Table 3) and inform them of the pertinent facts related to the spill event (i.e., location, source of spill, immediate threats).
- 2. Secure the spill Site.
- 3. Check for immediate threats or people in danger.
- 4. Evaluate exposures to response personnel, the public, and the environment.
- 5. Call environmental services contractor, as necessary, for assistance with spill containment and cleanup.
- 6. Begin to contain the spill using spill containment equipment. All cleanup personnel will utilize appropriate personal protective equipment (PPE), such as gloves, boots, coveralls, eye protection, etc. in accordance with the HASP.
- 7. Barricade the point of release and the point at which the discharge exits the building (if applicable) with oil absorbent materials.
- 8. Prevent the flow into storm drains or other points of concern using oil absorbent booms and other materials to the extent possible.
- 9. Call Emergency Response (Fire Department) for assistance if necessary or if the surrounding community is affected.
- 10. Call the State Spill Hotline at (800) 457-7362 for spills or releases that exceed Federal or State reportable quantities, within two hours of discovery of the spill.
- 11. Call the National Response Center (NRC) at (800) 424-8802 if the spill has reached navigable water or adjoining shorelines.

In some situations, an accidental discharge can be discovered without knowing the source of the spill. An example of this would be someone reporting an oil sheen on a surface water body. In these cases, the following spill alert procedures will be implemented:

- 1. Call APDC and inform them of the pertinent facts related to the spill event (i.e., location, extent, immediate threats).
- 2. Contain the spill as much as possible. For example, if an oil discharge is discovered on a surface water body, use an oil absorbent boom to surround the affected area to the extent practical.
- 3. Trace the spill either upstream or up-gradient to locate the source. Look for culverts which may be conveying the oil or chemical, areas of sloped ground from which there may be a seep of oil or evidence of chemical staining, or storm sewer catch basins, grates, or pipes that may have evidence of oil or chemicals present.

- 4. If the release cannot be traced back to a definite source, a systematic check of all potential on-site sources should be performed (see items 5 through 8 below), while some response team members stay at the Site of the detected spill to begin cleanup and continue containment.
- 5. Begin checking vehicles or maintenance equipment closest to where the spill was detected. Examine the area for staining, odors, or corrosion.
- 6. Check parking areas that have storm drainage that discharges to the affected area.
- 7. If the source of the release is found, implement the spill response procedures outlined above.
- 8. If cause of the release is not found and the discharge is continuing, response and containment should continue, and the fire department should be contacted. Appropriate authorities should also be contacted (state and NRC).

3.5.3.2 Methods of Disposal of Recovered Materials

Materials recovered from spill response measures will be appropriately containerized and labeled as to contents, including the date and nature of the contamination. APDC or designated representatives will make a hazardous waste evaluation of the containerized waste in accordance with the requirements of 6 NYCRR Part 371. In the event that the material is determined to be a regulated hazardous waste, it will be managed and disposed of in accordance with the appropriate requirements of 6 NYCRR Part 374 and 376, including manifesting of the hazardous waste. If the material is being disposed of by APDC, the facility will need to apply to EPA to create an ID number. Any waste generated under a different potential future owner will require application to the EPA for another ID number.

In the event that the recovered material is determined to be non-hazardous, it will be managed and transported in accordance with the requirements of 6 NYCRR Part 364. Only appropriately trained and/or certified vendors and/or contractors will be utilized to perform cleanup and disposal services. APDC will retain a spill response contactor to perform such services.

3.5.3.3 Spill Incident Reporting

All spills will be reported to the NYSDEC Spill Hotline at (800) 457-7362 unless they meet all of the following criteria:

• The spill amount does not exceed a reportable quantity;

For spills of petroleum products only:

- The spill is a petroleum product and known to be less than 5 gallons;
- The spill is contained and under control;
- The spill has not and will not reach the State's waterways or land; and
- The spill is cleaned up within 2 hours of discovery.

When reporting a spill, the following information should be documented and provided to the NYSDEC for each reportable spill:

- The facility address and phone number;
- Date and time of the discharge;
- Type of material discharged;
- Estimated total quantity of material discharged;
- Source and/or cause of the discharge;
- A description of all affected media;
- Any damages or injuries caused by the discharge;
- Actions being used to stop, remove, and mitigate the effects of the discharge;
- Whether an evacuation may be needed; and
- The names of the individuals and/or organizations who have also been contacted.

3.5.3.4 Evacuation Procedures

It is not always necessary to evacuate the Site during an emergency. However, if there is a catastrophic failure of the Site engineering controls, a significant release that poses a threat to human health, or a significant weather event that poses a threat to the Site, evacuation may become necessary. It is important that occupants on the Site are prepared and plan for such evacuations in advance.

Evacuation from the Site

In the event that it becomes necessary to evacuate the Site, the following procedures will be utilized:

- 1. Stay calm.
- 2. Safely stop work.

- 3. Gather personal belongings only if it is safe to do so (Reminder: take prescription medications with you if at all possible, as it may be hours before you are allowed back in the Site).
- 4. Evacuate persons with disabilities first if possible. Always ask someone with a disability how you can assist BEFORE attempting any rescue technique or giving assistance.
- 5. Proceed to the designated gathering point, which is the main gate at Smith Blvd., and report to the appropriate roll taker. All persons should remain at the gathering point until released. Call 911 if emergency responders have not already been contacted.
- 6. Wait for instructions from emergency responders.
- 7. Do not re-enter the Site until emergency responders indicate it is safe to do so.

In the event it is necessary to evacuate the Site, emergency responders (e.g. police or fire departments) will coordinate such evacuations and determine when it is safe to return to the Site. If an evacuation is ordered, all persons on the Site should heed all safety personnel instructions relative to evacuation routes from the Site and/or follow the general flow of traffic.

3.5.3.5 Contingency Plan Amendments

APDC will notify the EPA of any amendments or changes to the Contingency Plan a minimum of 60-days prior to implementing the proposed changes. The procedures noted in this SMP are general in nature given that the Site was vacant at the time the SMP was prepared. However, as the Site is developed, more detailed plans, particularly evacuation plans, will be prepared.

4.0 SITE MONITORING PLAN

4.1 INTRODUCTION

4.1.1 General

The Site Monitoring Plan describes the measures for evaluating the performance and effectiveness of the protective cover system and fencing. This SMP may only be revised with the approval of EPA.

4.1.2 Purpose & Schedule

This Site Monitoring Plan describes the methods to be used for:

- Evaluating Site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment; and
- Preparing the necessary reports for the various monitoring activities.

To adequately address these issues, this Site Monitoring Plan provides information on:

- Reporting requirements; and
- Site-wide inspection and periodic certification.

Monitoring of the performance of the remedy will be conducted on an annual basis until a time at which based on prior monitoring results a relaxation in that frequency is warranted, at which time such a request will be made to EPA for approval prior to any change in the monitoring schedule. The monitoring program is summarized in Table 4 below and outlined in detail in Sections 4.2 and 4.3 below.

Table 4. Schedule of Monitoring/Inspection Reports

Monitoring Program	Frequency ¹	Analysis
Site Protective Capping, Fencing,	Annually	Visual Inspection
and Site Wide Inspection		

Note: 1. The frequency of events will be conducted as specified until otherwise approved by EPA.

4.2 SITE-WIDE INSPECTION

Site-wide inspections will be performed on a regular schedule at a minimum of once a year. Sitewide inspections will also be performed after all severe weather conditions that may affect ECs or monitoring devices. During these inspections, an inspection form will be completed (Appendix B). 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;
- Confirm that Site records are up to date.

As part of the site-wide inspection, ECs, including site protective capping and Site fencing, will be inspected to evaluate the condition and the performance of the remedy. This will include a visual inspection to identify deficiencies associated with the ECs. An inspection checklist, as included in Appendix B, will be completed during each of the annual inspections, and submitted to the EPA. If at any time, the protective capping is damaged, it will be repaired in accordance with the capping specifications outline in Section 3.2, and fencing should be repaired appropriately to its original usable condition. Repairs which require the removal of impacted soils with PCBs concentrations greater than 1.0 ppm must comply with the EWP as outlined in Section 6.0.

The following list provides a summary of the types of damage that are most typical for RAP or soil capping systems and the recommended repair procedures.

- 1. **Shallow depressions** (less than 12 inches): In areas where shallow depressions are discovered in the capping system, the capping system may be repaired by placing additional soil/RAP in the area of the depression, grading to maintain positive drainage, and compacting the material prior to re-establishing the finished surface.
- 2. **Deep depressions and/or sink holes:** Deep depressions may be attributable to subsurface erosion and scouring which will need to be investigated prior to making repairs to reduce the likelihood of future reoccurrence. Following the requirements of the EWP (Section 6.0), the area should be excavated to explore for the cause of the depression. All imported materials will be RAP or clean fill and tested in accordance with the EWP (Section 6.0) prior to use.
- 3. **Eroded areas of the soil cover, scour or ruts:** Areas where erosion of the capping is observed will be repaired by replacing the eroded soil and compacting it prior to re-establishing the vegetative cover. Drainage paths should be rerouted to prevent future erosion problems, and appropriate erosion and sedimentation controls (ESCs) should be

temporarily installed (e.g. silt fence, rock check dams, etc.) until vegetative cover has been reestablished.

- 4. **Bare spots:** Bare spots on the top of the soil capping system will be repaired by re-working soil capping, re-seeding, fertilizing and mulching.
- 5. Vector activity: The annual Site-wide inspection will identify the presence of any live vectors, dead vectors, animal tracks, droppings, feeding areas, or dens. If the visual observations determine that there is a presence of burrowing vectors on-site, a professional exterminator will be contacted to develop and implement a plan to control the vector population.
- 6. **Overgrowth of vegetation:** The lawn/grass areas of the soil capping shall be mowed periodically to prevent establishment of "woody" vegetation that may potentially damage the soil capping system.

Damaged soil capping should be repaired with the specified materials indicated in Section 3.2. Maintenance requirements for each protective capping type are described below:

- 1. **Buildings/Asphalt/Concrete/RAP** Owner or Owner's contractor will maintain buildings and asphalt in good condition, repairing any damage or exposed subsurface soils. The cause of the damage will also be identified so future damage can be avoided.
- 2. Landscaped/Green Space Areas- Owner or Owner's contractors will maintain landscaped or green space areas. Damaged or eroded protective capping soils will be repaired and replaced as necessary, in accordance with the EWP. The cause of all damage will be assessed as to avoid future erosion or damage.

Damaged fencing should be repaired to its original usable condition. Common problems or deficiencies which may occur with the fencing include storm damage, corrosion, frost heaving, animals (e.g. deer), vegetation growth, and damage due to trespassing. The area around the fence shall be mowed and clear and prevent establishment of "woody" vegetation that could damage the fencing.



4.3 MONITORING REPORTING REQUIREMENTS

Forms and any other information generated during regular inspections will be kept on file at the ADPC offices. All forms, and other relevant reporting formats used during the monitoring/inspection events, will be (1) subject to approval by EPA and (2) submitted at the time of the Annual Monitoring Report, as specified in the Reporting Plan of this SMP.

All monitoring results will be reported to EPA on an annual basis in the Annual Monitoring Report and will include, at a minimum:

- Date of event;
- Personnel conducting the visual inspection;
- Description of the activities performed;
- Copies of all field forms completed (e.g., inspection forms); and
- Any observations, conclusions, or recommendations.

Data will be reported in hard copy and/or digital format as determined by EPA. Maintenance reports and any other information generated during regular operations at the Site will be kept on-file on-Site. All reports, forms, and other relevant information generated will be available upon request to the EPA and submitted as part of the Annual Monitoring Report, as specified in Section 5.0 of this SMP.

5.0 INSPECTIONS, REPORTING & CERTIFICATIONS

5.1 SITE INSPECTIONS

5.1.1 Inspection Frequency

Inspections will be conducted at the frequency specified in the schedules provided in Section 4.0 (Site Monitoring Plan) of this SMP. As previously described, a Site-wide inspection of ECs will be conducted annually. Inspections of ECs will also be conducted after a severe condition has taken place, such as an erosion or flooding event that may affect the ECs. The table below describes the inspection schedule for the Site.

Table 5. Inspection Schedule

Monitoring Program	Frequency ¹
Site Protective Capping, Fencing, and Site Wide Inspection	Annually

Note: 1. The frequency of events will be conducted as specified until otherwise approved by EPA.

5.1.2 Inspection Forms

Inspections and monitoring events will be recorded on the appropriate site management forms provided in Appendix B. These forms are subject to EPA revision. Applicable inspection forms and other records, including all media sampling data and system maintenance reports, generated for the Site during the reporting period will be provided in electronic format in the Annual Monitoring Report.

5.1.3 Evaluation of Records and Reporting

The results of the inspection and Site monitoring data will be evaluated as part of the EC/IC certification to confirm that the:

- EC/ICs are in place, are performing properly, and remain effective;
- The Site Monitoring Plan is being implemented;
- The Site remedy continues to be protective of public health and the environment.

5.2 CERTIFICATION OF ENGINEERING & INSTITUTIONAL CONTROLS

After the last inspection of the reporting period, an annual monitoring report will be prepared that will include the following certification:

For each EC or IC 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 ECs/ICs required by the remedial program was performed under my direction;
- The IC and/or EC employed at this Site is unchanged from the date the control was put in place, or last approved by the EPA;
- 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;
- Access to the Site will continue to be provided to the EPA and/or NYSDEC 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 EC 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.

The signed certification will be included in the Annual Monitoring Report described below.

5.3 ANNUAL MONITORING REPORT

Annual Monitoring Report will be submitted to the EPA every year, beginning with the end of the first full calendar year following the completion of the Site protective capping installation. The report will be submitted within 45 days of the end of each certification period. Media sampling results will also be incorporated into the Annual Monitoring Report. 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;
- Applicable inspection forms and other records generated for the Site during the reporting period in electronic format; and
- A Site evaluation, which includes the following:
 - The compliance of the remedy with the requirements of the Risk-Based Cleanup and Disposal Work Plan (CHA, February 2019);
 - Recommendations regarding any necessary changes to the Monitoring Plan; and
 - The overall performance and effectiveness of the remedy.

The Annual Monitoring Report will be submitted in electronic format to the EPA Region 2 Administrator.

5.4 CORRECTIVE MEASURES 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 IC or EC, a corrective measures plan will be submitted to the EPA and 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 plan until it is approved by the EPA and NYSDEC.

6.0 EXCAVATION WORK PLAN

As previously indicated, the Site contains contamination left after the completion of the remedial action. This Excavation Work Plan (EWP) will be implemented for all intrusive activities (as defined in Section 3.3.1) at the Site. Specifically, all activities that involve intrusive activities beneath the protective capping, or that will encounter or disturb the PCB impacted soils that remain, including any modifications or repairs to the existing site protective capping, will necessitate the implementation of this EWP as well as the preparation of a HASP.

6.1 NOTIFICATION

At least 60 days prior to the start of any activity that is anticipated to encounter remaining contamination, the Site owner or their representative will notify the EPA and NYSDEC. Currently, this notification will be made to:

Chief, Corrective Action Section
Hazardous Waste Programs Branch
Land, Chemicals and Redevelopment Division
United States Environmental Protection Agency Region 2
290 Broadway
New York, NY 10007-1866
(212) 637-3030

electronic copy)
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, Albany, N.Y. 12233
john.grathwol@dec.ny.gov

John Grathwol, DEC Project Manager (1 hard copy (unbound for work plans) & 1

These notifications will include:

 A detailed description of the work to be performed, including the location and areal extent, plans for Site re-grading, intrusive elements or utilities to be installed below the Site protective cap, estimated volumes of contaminated soil to be excavated and any work that may impact an EC;

- A summary of environmental conditions anticipated 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 HASP, in electronic format, in accordance with Section 7.0, Health and Safety Plan Requirements;
- Identification of disposal facilities for potential waste streams; and
- Identification of sources of any anticipated backfill, along with all required chemical testing results.

6.2 SOIL SCREENING METHODS

It is anticipated that following hot spot area excavations, the residual concentrations of PCBs on-Site will be less than 25 ppm. Visual, olfactory and instrument-based soil screening will be performed during all remedial and development excavations into known or potentially contaminated material (remaining contamination). This screening will be performed regardless of when the invasive work is done and will include all excavation and invasive work below the Site protective cap performed during development, such as excavations for foundations and utility work.

Soils will be segregated based on previous environmental data and visual, olfactory and instrument-based soil screening results into material that requires off-Site disposal, material that requires further testing, and material that can be returned to the subsurface. Should free product (e.g., oil) be encountered it will be containerized immediately. Material encountered that exhibits staining or odors will be sampled in-situ and analyzed for PCBs. Work in this area will not continue until the PCB concentrations are determined. Though not anticipated, if material containing PCBs at concentrations exceeding 25 ppm is encountered it will be disposed of off-Site in accordance with local, State and Federal regulations and the underlying/surrounding soil will also be sampled for PCBs.

6.3 STOCKPILE METHODS

If temporary stockpiling of Site soils is determined to be necessary, all excavated materials beneath the Site protective cap will be required to be stockpiled on a temporary containment pad. The temporary containment pad will be of sufficient size to store a minimum of 110 percent of the maximum amount of soil that will be stockpiled prior to re-use or off-Site disposal. At a minimum, any soil containment pads will include the following:

- A sufficiently large area with accessibility for trucks and construction equipment. The area shall be relatively flat and away from drainage inlets;
- A 20-mil thick polyethylene sheeting liner with a minimum of two-foot wide overlaps between successive rows;
- A minimum of a one-foot high soil berm shall be constructed around the perimeter of each
 pad to control runoff/run-on to and from the stockpiles. Gravel/stone ramps with gentler
 slopes will be constructed at locations of ingress and egress for each pad;
- Soil stockpiles that will remain in place for more than one (1) week will also be continuously
 encircled with silt fence;
- Hay bales and other erosion and sediment controls will be installed as needed near catch basins and other discharge points;
- Stockpiles will be kept covered at all times with appropriately anchored 10-mil polyethylene sheeting. Stockpiles will be routinely inspected, and damaged tarp covers will be promptly replaced;
- Stockpiles shall be maintained at a maximum height of 15 feet above surrounding surface subgrade elevation with a maximum slope of 1.5:1 to maintain stability. However, the appropriate slope may vary by material and the contractor performing stockpiling activities will be responsible for determining the safe allowable slopes for each material stockpiled on Site in accordance with all applicable regulations; and,
- Material will be stockpiled for no more than 180 days.

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 NYSDEC.

6.4 MATERIAL EXCAVATION & LOAD OUT



The Owner's engineer or Contractor's engineer will oversee all invasive work and the excavation and load-out of all excavated material. If both an engineering consultant and a contractor consultant are part of the excavation work team, the roles of each party will be identified to the EPA as part of the notification process.

The owner of the property and its contractors are solely 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. 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 NYS Department of Transportation (NYSDOT) requirements (and all other applicable transportation requirements). A truck wash will be operated on-Site if the trucks come in contact with contaminated soils at the Site. All outbound trucks which come into contact with remaining contamination will be decontaminated at the truck wash before leaving the Site until the activities performed under this section are complete. Locations where vehicles enter or exit the Site shall be inspected daily for evidence of off-Site soil tracking. Truck wash water will be collected and disposed of off-Site in accordance with Section 6.8.

The Owner and/or Contractor's engineer is responsible for coordinating 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.

6.5 MATERIAL 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.

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.

Truck transport routes are as follows: All trucks shall utilize Smith Boulevard to enter and exit the Site. Upon exiting the Site, trucks shall proceed to Church Street and then enter Green Street for access to Interstate 787. All trucks loaded with Site materials will exit the vicinity of the Site using only this approved truck route. This is the most appropriate route and takes into account: (a) limiting transport through residential areas; (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.

Trucks will be prohibited from stopping and idling in the directly 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 development activities.

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

6.6 MATERIAL DISPOSAL OFF-SITE

All soil/fill/solid waste 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 6 NYCRR Part 360) and Federal regulations. Impacted soils will be removed and transported off-site to a licensed disposal facility in accordance with 40 CFR 761.61(a)(5)(i)(B)(2)(ii). If disposal of soil/fill 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 EPA. Unregulated off-Site management of materials from this Site will not occur without formal EPA approval.

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, etc.). Actual disposal quantities and associated documentation will be reported to the EPA in the Annual Monitoring Report. This documentation will include: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

6.7 MATERIAL RE-USE ON-SITE

Following remedial activities identified in the PCB Risk-Based Cleanup and Disposal Application, "reuse on-Site" means reuse on-Site of material that originates from the Site, contains less than 25 ppm PCBs and which does not leave the Site during the excavation. The Owner's engineer or Contractor's engineer will check that procedures defined for material reuse in this SMP are followed and that unacceptable material, including organic matter (including, but not limited to, vegetation, wood, roots, and stumps), does not remain on-site. Unacceptable material will be disposed of off-Site in accordance with local, State and Federal regulations based upon the concentration of PCBs in the area where the organic matter originated. PCB-impacted soil that is acceptable for reuse on-site (i.e. less than 25 ppm PCBs) must be placed below the Site protective cap and the cap restored.

6.8 FLUIDS MANAGEMENT

Liquids to be removed from the Site, including excavation dewatering and truck wash water, 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 but will be managed off-Site. Pre-treatment may be used in lieu of off-Site disposal if appropriate permits from the local sewer authority are obtained and is accepted by the Owner. The concentrations of PCBs in the liquid to be disposed of at the local sewer authority will be no more than 3 parts per billion (ppb) in accordance with CFR 761.79(b)(1)(ii). Liquids which are pending off-site disposal of which have not yet been treated prior to discharging to the local sewer authority will be temporarily held in appropriate containers (e.g., 55-gallon drums) in accordance with local, State, and Federal regulations.

6.9 SITE PROTECTIVE CAPPING RESTORATION

After the completion of soil removal and any other invasive activities, the Site protective cap will be restored in a manner that complies with the Engineering Control Systems defined in Section 3.2.1. If the type of cap system changes from that which exists prior to the excavation or intrusive activities (i.e., RAP replaced by asphalt), a figure showing the modified surface will be included in the subsequent Annual Monitoring Report and in any updates to the SMP.

6.10 BACKFILL FROM OFF-SITE SOURCES

All materials proposed for import onto the Site will be approved by the Owner's engineer and will be in compliance with provisions in this SMP prior to receipt at the Site. Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the Site.

Backfill and cap material will consist of clean fill, determined as follows, or RAP. Documentation will be obtained confirming the clean fill material that is not clean gravel, rock or stone, or is recycled concrete or brick consistent with 6 NYCRR Part 360. Backfill imported to the Site will be subject to chemical testing in accordance with the following table or will be subject to the allowable exemptions for specified beneficial use materials per 6 NYCRR Part 360 – 1.15(b), if such materials are approved by the Owner. The RAP to be used for the cap will be compliant with the NYSDEC approved BUD, any other soils imported will meet the chemical testing requirements. Any other soils imported will meet the chemical testing requirements. Please note that at the request of EPA, this table has been modified from NYSDEC regulations to require that PCBs be analyzed from discrete intervals rather than from composite samples.

Table 6. Sampling Frequency Requirements for Imported Soils

	VOCs & PCBs	SVOCs, Inorganics & Pesticides				
Soil Quantity (cubic yards)	Discrete Samples	Composite	Discrete Samples/Composite			
0-50	1	1	3-5 discrete samples from			
50-100	2	1	different locations in the fill			
100-200	3	1	being provided will comprise			
200-300	4	1	a composite sample for			
300-400	4	2	analysis			
400-500	5	2				
500-800	6	2				
800-1,000	7	2				
1,000	Add an additional 2 VC each additional 1,000 C		ples and 1 composite sample for			

The analytical results for imported soil must meet the "industrial use" values provided in Appendix 5 of DER-10, Allowable Constituent Levels for Imported Fill or Soil. As such, imported material will not contain PCB concentrations exceeding 1 ppm.

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. 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.



Bills of lading should be provided to the Site Owner or Owner's representative to document that the fill was delivered from an approved source. The bills of lading will be included with Annual Monitoring Reports.

6.11 STORMWATER POLLUTION PREVENTION

Prior to beginning any intrusive activities, appropriate ESCs will be installed. This section is intended to provide general guidelines for installing and maintaining ESCs; however, the appropriate ESCs need to be selected on a case-by-case basis given the location of the activity, the size on the disturbance, the proximity of the activity to discharge points, etc. All erosion and sediment controls should be designed and installed in accordance with the NYSDEC's <u>Standards and Specifications for Erosion and Sediment Control</u>, dated August 2005 or later.

Proven soil conservation practices will be incorporated in future work plans involving intrusive activities to mitigate soil erosion, off-Site sediment migration, and water pollution from erosion. These practices may combine both vegetative and structural measures. Some measures will be permanent in nature and become part of the completed project (design features such as drainage channels and grading). Other measures will be temporary and serve only during the construction stage. The Contractor will remove temporary measures at the completion of construction and stabilization of the Site. The selection of ESC measures will be based on several general principles, including:

- The minimization of erosion through project design (maximum slopes, phased construction, etc.).
- The incorporation of temporary and permanent erosion control measures.
- The removal of sediment from sediment-laden storm water before it leaves the Site.

The use of appropriate temporary erosion control measures such as silt fencing and/or hay bales will be required around all soil/fill stockpiles and un-vegetated soil surfaces during construction activities. These methods are described below. Stockpiles shall be graded and compacted as necessary to provide positive surface water runoff and dust control. Stockpiles of soil/fill will be placed a minimum of twenty feet from the Site boundaries and as far away from discharge points as practical.

6.12 TEMPORARY EROSION CONTROL MEASURES

Prior to any intrusive activity, temporary ESC measures shall be installed and maintained until such time that permanent ESC measures are installed and effective. Additional sediment control measures may also be necessary. Structural measures, such as those described below, will be designed and installed to provide the required ESC:

- Silt fencing
- Straw bales
- Temporary vegetation/mulching

Re-grading and cover activities may result in sheet flow to various areas of the Site, and therefore, silt fencing will be used as the primary sediment control measure for disturbed areas. Prior to extensive clearing, grading, excavation, and placement of cover/capping soils, silt fences will be installed along all construction perimeter areas to prevent sedimentation in low areas and drainage areas. The location and orientation of silt fencing will be determined based upon the planned intrusive activities, drainage pathways, etc. Breaks and overlaps in the silt fencing may be required to allow construction vehicles access to the construction areas but will be minimized. Intermediate silt fencing will be used upslope of perimeter areas where phased construction activities are occurring. This measure will effectively lower sheet flow velocities and reduce sediment loads to perimeter fencing. In addition, silt fencing around soil stockpiles will be required. The perimeter silt fences will remain in place until construction activities in the area are completed and vegetative cover or other erosion control measures are adequately established.

Straw bales will be used to intercept sediment-laden runoff from storm water channels as needed during various phases of intrusive activities. Additional straw bale dikes may be necessary in some areas during some phases of construction. Use of straw bales will be limited to swales and/or diversion ditches where the anticipated flow velocity will not be greater than five (5) feet per second (FPS). Where flows may eventually exceed five (5) FPS along a swale or diversion ditch, an intermediate straw bale barrier will be installed up-gradient of the final bale barrier. The intermediate bale barrier will effectively reduce flow velocities and sediment load to the final barrier. Straw bale barriers will remain in place until construction activities contributing sediment to the barrier are complete and vegetative cover or other erosion control measures are adequately established.

In areas where activities will not resume for a period in excess of two weeks, the disturbed areas will be seeded with a quick germinating variety of grass or covered with a layer of straw mulch. The temporary cover will act to stabilize the soil and reduce erosion. As construction progresses, areas containing temporary vegetation or straw mulch can be covered without removal of the temporary vegetation or mulch.

The following minimal checks will be made throughout the duration of intrusive activities to ensure the continued performance of the ESCs:

- 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. All necessary repairs shall be made immediately;
- Accumulated sediments will be removed as required to keep the barrier and hay bale check functional. Accumulated sediment will be removed when fifty (50) percent of the storage capacity of the straw bale barrier has been reached in order to maintain performance of the barrier and prevent overtopping or failure of the straw bale barrier;
- All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials. Accumulated sediment on the up-gradient side of the silt fence will be removed whenever fifty (50) percent of the storage capacity of the fence has been reached in order to maintain performance of the fence and reduce the likelihood of a structural failure of the fence:
- Removed sediment and sediment laden straw bales will be stockpiled, dewatered and disposed of off-Site in accordance with 40 CFR 761.61(a)(5)(i)(B)(2)(ii);
- Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering;
- ESC 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; and,
- Silt fencing or hay bales will be installed around the entire perimeter of the construction area.

6.13 PERMANENT EROSION CONTROL MEASURES



Permanent erosion control measures and facilities will be incorporated into the Site as part of all future intrusive activities as appropriate. Permanent ESCs and facilities will be installed as early as possible during construction phases. Preventing erosion and scour of the site protective capping (e.g., soil cover) system will be a critical component of all future intrusive activities.

Final site protective capping system requirements are detailed in Section 3.2.1.1.

6.14 COMMUNITY AIR MONITORING PLAN

Air monitoring will be performed at the Site during all intrusive activities conducted below Site protective capping and within any uncapped Site "low-occupancy" areas in accordance with the New York State Department of Health (NYSDOH) *Generic CAMP*, and Appendix 1A and 1B of DER-10. All air monitoring will be conducted on a real-time basis using both hand-held field instruments and perimeter air monitoring stations. All air monitoring readings will be recorded in a logbook and/or recorded by data loggers and made available for review by the EPA. The CAMP developed for the Site consists of two primary components, fugitive dust control plan and vapor control plan. Air monitoring will be conducted both upwind and downwind of the intrusive activities and will be compared to assess if the activities are causing potential airborne migration of particulates and/or gases.

The CAMP is not intended for use in establishing action levels for worker respiratory protection that are otherwise described in Site-specific HASPs prepared for the intrusive Site activities. 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 releases as a direct result of the proposed work activities. Reliance on the CAMP should not preclude simple, common-sense measures to keep dust and odors at a minimum around the work areas, and supplements to the CAMP may be required depending on the nature of the planned intrusive activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP will assist in preventing the intrusive activities from spreading contamination off-Site through the air. Actions necessary to respond to exceedances of the action levels will be included in the EWP.

Particulate air monitoring will be performed during excavation activities to evaluate fugitive dust generated by excavating. An air monitoring program will be prepared to provide for real-time air monitoring of particulates at the downwind perimeter of each designated work area during the remedial excavation. The particulate monitoring will use visual assessment as well as real-time



monitoring equipment capable of measuring particulate matter less than ten (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. Sampling stations will be situated upwind and downwind of the largest dust producing activity occurring at the Site at the boundary of the work zone. The sampling locations will be periodically adjusted to account for observed changes in wind direction. Instruments will be calibrated in accordance with HASP and the instrument manufacturer's recommendations.

Each set of equipment will be equipped with audible alarms to indicate exceedance(s) of action levels indicated in the NYSDOH Generic Community Air Monitoring Plan CAMP. The downwind action level is 100 micrograms per cubic meter (ug/m3) greater than background (as measured from the upwind station) and measured over a 15-minute average. If particulate levels are detected in excess of this value or if fugitive dust is observed leaving the Site, dust suppression techniques will then be implemented to reduce the generation of fugitive dust and corrective action taken to protect Site personnel and reduce the potential for contaminant migration. Work may resume under the condition that dust suppression and other measures are undertaken and particulate levels do not exceed 150 ug/m3 (15-minute average) above the upwind level and provided no visible dust is observed leaving the Site.

Air monitoring of particulate concentrations will be documented using an air monitoring field form. This form will be completed on a daily basis and records of this form will be available for regulatory agency review upon request. Response actions to observed exceedances of action levels will be documented using a field form that will be available for regulatory agency review upon request.

6.15 ODOR CONTROL PLAN

The odor control plan will be implemented as warranted to control emissions of nuisance odors off-Site and on-Site. 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. EPA 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 Owner's engineer and/or Contractor and Contractor's engineer, and any measures that are implemented will be discussed in the Annual Monitoring Report.

All necessary means will be employed to prevent on- and off-Site nuisances. At a minimum, the following specific odor control measures will be used on a routine basis:

1. Limiting the area of open excavations and size of soil stockpiles.

- 2. Reducing the speed of excavation activities.
- 3. Shrouding open excavations with tarps and other covers.
- 4. Considering weather factors when planning daily activities.
- 5. Using foams to cover exposed odorous soils.
- 6. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include:
 - a. Direct load-out of soils to trucks for off-Site disposal.
 - b. Use of chemical odorants via spray or misting systems.
 - c. Use of staff to monitor odors in surrounding neighborhoods.

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.

6.16 DUST CONTROL PLAN

Dust emissions may occur at the project Site during intrusive activities, including but not limited to, excavation activities. Therefore, fugitive dust control measures will be implemented during intrusive excavation activities conducted below the Site protective cap. A dust suppression plan that addresses dust management during invasive on-Site work may include the items listed below:

- Dust suppression 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. Fire hoses and/or garden hoses equipped with
 sprayers will be utilized for smaller type projects. All water utilized for dust control must be
 potable water from municipal water systems. The use of groundwater from the Site will not
 be permitted;
- 2. Clearing and grubbing of larger sites will be done in stages to limit the size of the area of exposed, un-vegetated soils vulnerable to dust production;
- 3. Gravel will be used on access roadways to provide a clean and dust-free road surface;
- 4. On-Site roads will be limited in total area to minimize the area required for water truck sprinkling;
- 5. Traffic speeds, particularly for construction traffic, will be reduced; and,



6. Stockpiles and excavations will be covered with tarps and polyethylene sheets, as previously described, to reduce the potential for dust generation.

Appendix 1B – Fugitive Dust Suppression and Particulate Monitoring as provided in the NYSDEC's DER-10 provides guidance for monitoring particulate matter at impacted Sites and suppressing fugitive dust that will be implemented for intrusive activities performed at this Site.

7.0 HEALTH & SAFETY PLAN REQUIREMENTS

All individuals performing intrusive activities at the Site that will penetrate the Site protective capping, or encounter or disturb the PCB impacted soils that remain in soils, including any modifications or repairs to the existing Site protective capping will be required to prepare and implement a Site-specific and activity-specific HASP. The activities that may require a HASP include, but are not limited to: redevelopment, improvement, maintenance, monitoring, or other intrusive activities on the Site. The HASP must be prepared by a qualified person in accordance with the most recently adopted and applicable general industry (29 CFR 1910) and construction (29 CFR 1926) standard of the federal Occupational Safety and Health Administration (OSHA), U.S. Department of Labor (DOL), as well as any other federal, state or local applicable statutes and regulations.

Because it is not feasible to prepare a HASP that is inclusive of all possible activities that may occur on the Site, a separate HASP will be prepared for each project or activity. The persons performing the annual Site wide inspection and monitoring activities will be responsible for preparing a HASP to cover such activities.

Contractors performing work at the Site will be responsible for preparing their own task-specific HASP. While much of the information contained in this SMP may be sufficient, the need for additional hazard analyses is expected to change based upon the type of work to be performed (e.g. hot work permits, confined space entry, etc.) and the equipment (e.g. heavy machinery, ladders, scaffolding, etc.) that is to be used. Additionally, some of the emergency contact info may change, Safety Data Sheets (SDSs) may need to be added, etc. The contractors' HASP must be submitted to the Site Owner and/or the Site representative prior to the commencement of intrusive activities for review.

This section provides only the minimum requirements for a HASP, but should not be construed as the HASP, as it is not activity specific, nor hazard specific. The Contractor will not be permitted to commence with construction/intrusive activities until the HASP has been received by the EPA and Site Owner's representative.

Acceptance of the Plan does not waive any responsibility of the Contractor to ensure that the HASP is adequate to comply with all regulations or compliance by personnel. Neither the Site owner, nor the EPA, assume, in any manner, the control or responsibility of the Contractor to provide safe working conditions of the contractor's employees or subcontractors in requiring the Contractor to

follow general safety requirements. The contractors shall maintain the following items on the Site, at a minimum, when conducting intrusive Site activities:

- A copy of the HASP
- First aid kit
- Fire extinguisher(s)
- Personal protective equipment (PPE)
- Air monitoring equipment and calibration equipment
- Spill containment equipment and cleanup materials

7.1 COMPLIANCE

Disregard for the provisions of the HASP by the remedial Contractor and/or his subcontractors or employees shall be deemed just and sufficient to cause for stoppage of work by the Owner and/or EPA. Furthermore, compliance with the minimum requirements in this document does not relieve the Contractor from the responsibility for implementing proper health and safety procedures during unanticipated conditions throughout the duration of the work at the Site covered by this SMP.

All on-Site workers must comply with the requirements of the HASP. The Contractor's HASP must comply with all applicable federal (including 29 CFR 1910.120 and 29 CRF 1926) and state regulations protecting human health and the environment from the hazards posed by activities during intrusive Site activities.

7.2 **RESPONSIBILITIES**

The Contractor shall:

- 1. Be responsible and liable for the health and safety of all on-Site personnel and off-Site community impacted by the Site redevelopment activities;
- 2. Ensure all OSHA health and safety requirements are met (29 CFR 1910 General Industry Safety and Health Standards and 29 CFR 1926 Construction Industry Safety and Health Standards) and be responsible for compliance with all federal and state regulations;
- 3. Ensure that all project personnel have been trained in accordance with 29 CFR 1910.120;
- 4. Perform all work in a safe and environmentally acceptable manner. The Contractor will provide for the safety of all project personnel and make all reasonable efforts to protect

- the environment and community during the remedial activities. Barricades, warning lights, roped-off areas, and proper signs shall be furnished in sufficient amounts and locations to safeguard the project personnel and public at all times;
- 5. Employ a Safety Officer (SO) who shall be assigned full-time responsibility for all tasks herein described under this HASP and be on-Site during all remedial activities. In the event the SO cannot meet his or her responsibilities, the Contractor shall be responsible for obtaining the services of an "alternate" SO meeting the minimum requirements and qualifications. No work will proceed on this project in the absence of an approved SO;
- 6. Ensure that all project personnel have obtained the required physical examination prior to and at the termination of work covered by the contract;
- 7. Be responsible for the pre-job indoctrination of all project personnel with regard to the HASP and other safety requirements to be observed during work, including but not limited to (a) potential hazards, (b) personal hygiene principles, (c) personal protection equipment, (d) respiratory protection equipment usage and fit testing, and (e) emergency procedures dealing with fire and medical situations;
- 8. Be responsible for the implementation of this HASP and the Emergency Contingency and Response Plan;
- 9. Provide and ensure that all project personnel are properly clothed and equipped and that all equipment is kept clean and properly maintained in accordance with the manufacturer's recommendations or replaced as necessary;
- 10. Will perform all Site redevelopment work in a safe and environmentally acceptable manner. The Contractor will provide for the safety of all project personnel and the community for the duration of the redevelopment activities;
- 11. Have sole and complete responsibility for safety conditions for the project, including safety of all persons (including employees);
- 12. Maintain a chronological log of all persons entering the project Site. It will include organization, date, and time of entry and exit. Each person must sign in and out;
- 13. Maintain and keep available safety records, up-to-date copies of all pertinent safety rules and regulations, material safety data sheets, the Contractor's Site-specific HASP, and the emergency response plan;
- 14. Hold safety meetings, including routine on-Site safety meetings; and,

15. Stop work whenever a work procedure or a condition at the work Site is deemed unsafe by the SO.

7.3 ELEMENTS OF A HEALTH AND SAFETY PLAN

A Site-specific HASP will be prepared in accordance with OSHA regulations and 29 CFR 1910.120. The HASP will contain the following elements at a minimum:

- All items identified in OSHA regulations 29 CFR 1910.120(b)(4);
- Organization and responsibilities of the project/health and safety team along with emergency phone numbers;
- Characterization of the chemical, biological, and physical hazards present at the Site;
- Identification and evaluation of all Site hazards/risks associated with each task to be completed;
- A description of the medical monitoring program for on-Site personnel;
- A summary of the real-time air-monitoring program or CAMP to be conducted during intrusive activities. The CAMP is intended to provide a measure of protection for the downwind community rather than for use in establishing action levels for worker respiratory protection. The CAMP requires that particulate levels are visually monitored within the exclusion zone, and if dust levels are observed to be increasing, to conduct real-time monitoring at the upwind and downwind perimeters of the Exclusion Zone. The CAMP should establish a downwind action level and discuss the measures to be employed (e.g., dust suppression) if an exceedance of the action level is observed;
- Site control measures;
- Instructions on the selection and use of PPE and action levels for upgrading or downgrading PPE.
- Proper delineation of work zones;
- Decontamination procedures for both equipment and on-Site personnel;
- An accident prevention and contingency plan; and,
- Other applicable procedures relative to Hazard Communication (Right-to-Know)
 Program, first aid procedures, cold/heat stress, confined space entry, hot work permits,
 lockout/tagout, spill containment program, etc. and material safety data sheets for all
 chemicals brought onto the project Site.

7.4 POTENTIAL SITE HAZARDS

7.4.1 Physical Hazards

Physical hazards such as the following may be encountered on Site:

- Slip/Trip/Fall (e.g. from animal burrows, debris, steep topography, ice, etc.)
- Ultraviolet rays
- Lifting strains (e.g., equipment)
- Heavy machinery and vehicles (e.g. excavator)
- Flying debris (e.g. debris from excavation equipment)
- Noise (e.g. elevated noise levels associated with excavation equipment)
- Heat/cold stress

7.4.2 Biological Hazards

Biological hazards such as the following may be encountered on Site:

- Poisonous plants poison ivy, poison oak, poison sumac
- Insects/animals deer ticks, mosquitoes, rabid animals, snakes, turkeys, stray animals

7.4.3 Chemical Hazards

Based upon past environmental investigations completed at the Site, Site personnel may be exposed to the following chemical hazards during intrusive activities.

Table 7. Possible Chemical Hazard Exposures

Chemical	Target Organ
Arsenic	Liver, kidneys, skin, lungs, lymphatic system
Benzo(a)pyrene	Skin, respiratory system, bladder, kidneys
Dibenzo(a,h)anthracene	Skin, respiratory system, bladder, kidneys
1,1-Dicloroethene	Eyes, skin, respiratory system, central nervous system (CNS), liver,
	kidneys
Iron	Eyes, skin, respiratory system, liver, GI tract
Lead	Eyes, gastrointestinal (GI) tract, CNS, kidneys, blood, gingival tissue
PCBs	Skin, eyes, liver, reproductive system
Magnesium	Eyes, respiratory system
Manganese	Respiratory system, CNS, blood, kidneys
Methyl Tert Butyl Ether	Liver, CNS, kidneys
Mercury	Eyes, skin, respiratory system, CNS, kidneys



Chemical	Target Organ
Sodium	Eyes, CNS, cardiovascular system, GI tract
Vinyl Chloride	Liver, CNS, blood, respiratory system, lymphatic system

The potential exposure mechanism that can transport particulates from the areas of the inspection and monitoring to other areas of the Site as well as beyond the boundaries of the Site are:

- Soil from intrusive activities projected by air currents; and
- Contact with the soil and/or groundwater.



					Sample Depths						
Location or Sample ID	Sampled By	Date	Validated?	0-1'	1-2'	2-3'	3-4'	4-5'	5-7'	7-10'	Sample/Drilling Comments
SS-1	Plumley	8/12/2014	No	15.46 a							
SS-2	Plumley	8/12/2014	No	15.16							
SS-3	Plumley	8/12/2014	No	11.01							
SS-4	Plumley	8/12/2014	No	11.43 a							
SS-5	Plumley	8/12/2014	No	9.7 a							
SS-6	Plumley	8/12/2014	No	6.84	-				-		
SS-7	Plumley	8/12/2014	No	11.78	-				-		
SS-8	Plumley	8/12/2014	No	2.914 a							
SS-9	Plumley	8/12/2014	No	10.77 a							
SS-10	Plumley	8/12/2014	No	1.15 a							
SS-11	Plumley	8/12/2014	No	Excavate	e to 2 ft						
SS-11	CHA	10/16/2018	Yes	Excavate	e to 2 ft	3.49 J		0.0357 U			
11N	Sterling	6/17/2015	No	4.48							
11E	Sterling	6/17/2015	No	4.55							
11EDup	Sterling	6/17/2015	No	4.5							
11W	Sterling	6/17/2015	No	4.58							
SS-12	Plumley	8/12/2014	No	7.76 a							
B-1	Plumley	8/12/2014	No		8.14				0.039	U	
B-2	Plumley	8/12/2014	No				5.11				
B-3	Plumley	8/12/2014	No			1.078					
B-4	Plumley	8/12/2014	No			0.942 a					
B-5	Plumley	8/12/2014	No			0.040 U			0.041	U	
B-6	Plumley	8/12/2014	No			5.64					
B-7	Plumley	8/12/2014	No						0.042	U	
B-8	Plumley	8/12/2014	No		2.301						
B-9	Plumley	8/12/2014	No			1.11 a					
B-10	Plumley	8/12/2014	No			1.917			0.041		
B-11	Plumley	8/12/2014	No						0.037	U	
S-1	Plumley	8/12/2014	No				17.61* a				*Sample obtained from 3.5'
DB-1	Plumley	8/12/2014	No	0.469 a							
GP-1	СНА	12/2/2014	Yes	7.9		0.27 U					
GP-2	СНА	12/2/2014	Yes	18.2 J		0.21 U					
GP-3	СНА	12/2/2014	Yes	20.2		0.21 U					
GP-4	СНА	12/2/2014	Yes	3.08			0.27* U				*Sample obtained from 2'8"-3'7"
GP-5	СНА	12/2/2014	Yes	6.23 J		0.22 U					1
GP-6	CHA	12/2/2014	Yes	13.5 J		0.25 U					
GP-7	СНА	12/2/2014	Yes	14.5		0.24 U					
GP-8	СНА	12/2/2014	Yes	17 J		0.21 U					
GP-9	CHA	12/2/2014	Yes	21.2		0.24 U					
GP-10	CHA	12/2/2014	Yes	18.3 J		0.28 U					
GP-11	СНА	12/2/2014	Yes	17.6 J		0.36 J		2.9 J			
GP-12	СНА	12/2/2014	Yes	14		3.71 J		0.28 U			
GP-13	СНА	12/2/2014	Yes	18.3 J		0.24 U					
GP-14	CHA	12/2/2014	Yes	7.23 J		0.23 U					
GP-15	CHA	12/3/2014	Yes		Excavate	to 4 ft		9.8	0.26 U		
15W	Sterling	6/17/2015	No			3.48					
15N	Sterling	6/17/2015	No			10.4					
15E	Sterling	6/17/2015	No			13.6					
GP-16	CHA	12/3/2014	Yes	8.7		0.7 J		0.25 U			
GP-17	СНА	12/3/2014	Yes	9.4 J				4.8 R			+
O1 1/	C11/1	12/3/2017	1 03	7. T J		<u> </u>	<u>-</u>	7.0 1	<u> </u>		

					7						
Location or Sample ID	Sampled By	Date	Validated?	0-1'	1-2'	2-3'	ample Depths 3-4'	4-5'	5-7'	7-10'	Sample/Drilling Comments
GP-18	СНА	12/3/2014	Yes	7.8 J		5.9 J		0.23 U			
GP-19	CHA	12/3/2014	Yes	22.5 J				3.6	0.23 U		
GP-20	CHA	12/3/2014	Yes	8.4		1.15 J		2.52			
GP-21	CHA	12/3/2014	Yes	11.2 J		0.24 U					
GP-22	CHA	12/3/2014	Yes	10.4 J		0.19 U					
GP-23	CHA	12/3/2014	Yes	21.5 J		0.22 U					
GP-24	CHA	12/3/2014	Yes	17.4		10.8 J		0.23 U			
GP-25	CHA	12/3/2014	Yes	5.7		11.8 J		0.069 J			
GP-26	CHA	12/3/2014	Yes	Excavate	e to 2 ft	0.23 U					
26N	Sterling	6/17/2015	No	14.4							
26E-2	Sterling	7/9/2015	No	10.6							
26W-2	CHA	10/17/2018	Yes			0.0136 J		0.00725 J			
SS-100	Sterling	9/15/2015	No	9.22							
SS-100 Dup	Sterling	9/15/2015	No	6.7							
SS-101	Sterling	9/15/2015	No	4.28							
SS-102	Sterling	9/15/2015	No	3.83			 -				
SS-103	Sterling	9/15/2015	No	6.56			 -				
SS-104	Sterling	9/15/2015	No	4.19							
SS-105	Sterling	9/15/2015	No	4.8							
SS-106	Sterling	9/15/2015	No	6.04							
SS-107	Sterling	9/15/2015	No	4.75							
SS-108	Sterling	9/15/2015	No	4.33							
SS-109	Sterling	9/16/2015	No	12.7							
SS-110	Sterling	9/16/2015	No	9.23							
SS-124	Sterling	9/16/2015	No	21.6							
SS-123	Sterling	9/16/2015	No	8.2							
SS-122	Sterling	9/16/2015	No	11.8							
GP-27	СНА	12/3/2014	Yes	8 J		6.9 J		0.4 J			
GP-28	СНА	12/3/2014	Yes	18 J				0.72 J	0.26 U		
GP-29	СНА	12/3/2014	Yes	15.7 J		10.6 J		0.27 U			
GP-30	CHA	12/3/2014	Yes	16 J		0.23 U					
GP-31	СНА	12/3/2014	Yes	3.2 J		24 J		19			
GP-32	CHA	12/4/2014	Yes		Excavate	to 4 ft		13.5	0.29 U		
32W	Sterling	6/17/2015	No			4.9					
32E	Sterling	6/17/2015	No			0.835					
32N	Sterling	6/17/2015	No			4.56					
GP-33	СНА	12/4/2014	Yes	10.2 J		15.3 J		20.5 J			
GP-34	СНА	12/4/2014	Yes	11 J		0.3 U					
GP-35	СНА	12/4/2014	Yes	9.59				8.1			
GP-36	СНА	12/4/2014	Yes	3.4		0.21 U					
GP-37	СНА	12/4/2014	Yes	9.6 J		0.2 U					
GP-38	СНА	12/4/2014	Yes	24 J		0.27 J		0.74			
GP-39	СНА	12/4/2014	Yes	25*		0.21 U					*Collected from 7" - 18"
GP-40	СНА	12/4/2014	Yes	6.4 J				0.25 U	0.2 U		
GP-41	СНА	12/4/2014	Yes	12.6 J		0.2 U					
GP-42	СНА	12/4/2014	Yes	6.1 J		1.12 J		0.16 JN	0.25 U		
GP-43	СНА	12/4/2014	Yes	12.2 J		2.5 J		3.51			

				Sample Depths							
Location or Sample ID	Sampled By	Date	Validated?	0-1'	1-2'	2-3'	3-4'	4-5'	5-7'	7-10'	Sample/Drilling Comments
GP-44	СНА	12/4/2014	Yes	23 J		0.26 U					
GP-45	СНА	12/4/2014	Yes	Excavate	e to 2 ft	0.56 J		3.58			
5S	Sterling	6/17/2015	No	23.3							
5N	Sterling	6/17/2015	No	4.7							
5W	Sterling	6/17/2015	No	7.76							
3P-46	СНА	12/5/2014	Yes	Excavate	e to 2 ft	0.23 U					
6W	Sterling	6/17/2015	No	14.8							
6S	Sterling	6/17/2015	No	5.24							
6E	Sterling	6/17/2015	No	3.38							
P-47	CHA	12/5/2014	Yes	13.9 J		4.6		0.26 U			
P-48	СНА	12/5/2014	Yes	6.4 J		0.22 U					
P-49	СНА	12/5/2014	Yes	2.21		0.23 U					
P-50	CHA	12/5/2014	Yes	15.8		4.9		0.27 U			
P-51	CHA	12/5/2014	Yes	3.92		1.41		0.27 U			
P-52	CHA	12/5/2014	Yes	20.7		1.44		0.22 U		 	
P-53	CHA	12/5/2014	Yes	10.1 J		23.7		0.24 U			
P-54	CHA	12/5/2014	Yes	12		0.25 U					
P-55	CHA	12/5/2014	Yes	7.5		0.22 U					
P-56	CHA	12/5/2014	Yes	3.5		0.22 U					
P-57	CHA	12/5/2014	Yes	13.6		2.23		0.25 U			
	СНА			3.85		0.21 U					
P-58		12/5/2014	Yes					0.25 II			
P-59	CHA	12/5/2014	Yes	12.5		0.175 J		0.25 U			
P-60	CHA	12/5/2014	Yes	5.6		0.24 U		0.10 II			
P-61	CHA	12/5/2014	Yes	7.0		5.6		0.19 U			
P-61	CHA	10/19/2018	Yes	7		6.2 J		0.0408 U			D 1 CD (1 0 1
UP-04	CHA	10/19/2018	Yes	8.5							Parent sample GP-61_0-1
UP-05	CHA	10/19/2018	Yes			9.6 J					Parent sample GP-61_2-3
P-62	CHA	10/19/2018	Yes	3.9		0.0207 J		0.0107 J			
P-63	CHA	10/16/2018	Yes	0.0538		0.0428 U		0.0382 U			
P-64	CHA	10/16/2018	Yes	0.0334 U		0.0418 U		NA			
P-65	СНА	10/16/2018	Yes	4.57		0.119 J		0.0408 U			
P-66	СНА	10/16/2018	Yes	10.1		7.11		0.00444 JR			
P-67	СНА	10/19/2018	Yes	4.74		10.5		6.33			
P-68	СНА	10/19/2018	Yes	5.8		0.447	0.04 U				Refusal @ 4 ft, no sample 4 5 ft
P-69	CHA	10/18/2018	Yes	5.26		0.619		0.0404 U			
P-70	СНА	10/18/2018	Yes	4.43		0.0344 U		0.0405 U			
P-71	СНА	10/18/2018	Yes	0.168		0.0389 U		0.0384 U			
P-72	СНА	10/18/2018	Yes	0.0347 U		0.0338 U		NA			
P-73	СНА	10/18/2018	Yes	13.1		0.0114 J		0.039 U			
P-74	СНА	10/18/2018	Yes	3.58		7.14	0.0384 U				Refusal @ 4 ft, no sample 4-5 ft
P-75	СНА	10/19/2018	Yes	3.08 J		4.18		0.0362 U			
UP-03	СНА	10/19/2018	Yes	6.47 J							Parent sample GP-75_0-1
P-76	СНА	10/19/2018	Yes	4.3 J		9.72		0.0351 U			
P-77	CHA	10/19/2018	Yes	7.1		4.53 J		0.263			
UP-06	CHA	10/19/2018	Yes	7.17							Parent sample GP-77_0-1
UP-07	CHA	10/19/2018	Yes			7.29 J					Parent sample GP-77_2-3
	CHA	10/19/2018	Yes	4.17		0.0242 J		0.0362 U			1

				Sample Depths							7
Location or Sample ID	Sampled By	Date	Validated?	0-1'	1-2'	2-3'	3-4'	4-5'	5-7'	7-10'	Sample/Drilling Comments
GP-79	СНА	10/16/2018	Yes	Excavate	e to 2 ft	0.159		0.0145 J			
GP-79_E5	СНА	11/26/2018	Yes	14.8		NA		NA			
GP-79_N5 (RE)	СНА	11/26/2018	Yes	0.0154 J							Re-analysis of GP-79_N5_0-1
DUP-09 (RE)	СНА	11/26/2018	Yes	5.92 J							
GP-79_N10	СНА	11/26/2018	Yes	0.116 J		NA		NA			
GP-79_W5	СНА	11/26/2018	Yes	14.3		NA		NA			
DUP-10	СНА	11/26/2018	Yes	22.3 J		NA		NA			Parent sample GP-79_W5_0-1
GP-79_S5	СНА	11/26/2018	Yes		e to 2 ft	0.0184 J		NA			
GP-79_S10	CHA	11/26/2018	Yes	7.91		0.0207 J		NA			
GP-80	СНА	10/16/2018	Yes	1.55		0.0203 J		0.005 J			
GP-81	СНА	10/16/2018	Yes	Excavate	e to 2 ft	0.00421 J		0.0339 U			
GP-81_E5	СНА	11/27/2018	Yes	2.19		NA		NA			
GP-81_N5	СНА	11/27/2018	Yes	0.627 J		NA		NA			
DUP-11	СНА	11/27/2018	Yes	1.0 J		NA		NA			Parent sample GP-81_N5_0-1
GP-81_W5	СНА	11/27/2018	Yes	4.83		NA		NA			
GP-81_S5	CHA	11/27/2018	Yes	2.06		NA		NA			
GP-82	CHA	10/17/2018	Yes	3.79		5.64		0.0338 U			
GP-83	СНА	10/17/2018	Yes	3.99 J		0.0644 J		0.0372 U			
GP-84	СНА	10/17/2018	Yes	3.88 J		0.00681 J		0.0344 U			
GP-85	СНА	10/18/2018	Yes	1.47		5.04		0.0337 U			
GP-86	СНА	10/18/2018	Yes	11.5		20.5		0.0388 U			
GP-87	CHA	10/18/2018	Yes	11		0.121		0.0398 U			
GP-88	СНА	10/18/2018	Yes	21.7		0.128		0.0386 U			
GP-89	CHA	10/18/2018	Yes	8.9		13.7		10.1			
GP-90	CHA	10/18/2018	Yes		Excavate	to 4 ft		0.133 J			
GP-90_E5	CHA	11/28/2018	Yes		Excavate	to 4 ft		NA			
GP-90_E10	CHA	11/28/2018	Yes	6.52		NA	-	NA			
GP-90_N5	CHA	11/28/2018	Yes	4.41	-	1.07	-	NA			
GP-90_W5	CHA	11/28/2018	Yes	7.05		3.56		NA			
GP-90_S5	CHA	11/28/2018	Yes	8.4		4.6		NA			
GP-91	СНА	10/17/2018			Excavate	to 4 ft		0.0308 J			
GP-91_E5	CHA	11/28/2018	Yes	2.53		0.0138 J		NA			
GP-91_N5	CHA	11/27/2018	Yes	7.7		1.45 J	0.775	NA			
GP-91_W5	СНА	11/27/2018	Yes	8.15		5.06		NA			
GP-91_S5	CHA	11/28/2018	Yes	5.3		1.7		NA			
GP-92	СНА	10/17/2018	Yes	2.08 J		0.0346 U		0.0363 U			
GP-93	CHA	10/17/2018	Yes	11.4 J		0.0451		0.037 U			
GP-94	СНА	10/16/2018	Yes	18.9 J		0.0205 J		0.0163 J			
GP-95	СНА	10/16/2018	Yes	13.7		19.7		0.0375 U			
GP-96	CHA	10/16/2018	Yes	3.54		1.13		0.0385 U			
GP-97	CHA	10/19/2018	Yes	0.0884		0.0345 U					Hand auger. Refusal @ 3 ft, no sample 4-5 ft
DUP-01	СНА	10/19/2018	Yes	0.0884							Parent sample GP-97_0-1
DUP-02	СНА	10/19/2018	Yes			0.0332 U					Parent sample GP-97_2-3
GP-98	СНА	10/19/2018	Yes	0.109		0.0346 U		0.0333 U			
GP-99	СНА	10/19/2018	Yes	2.96		1.88		0.394			
DUP-08	СНА	10/19/2018	Yes	4.15							Parent sample GP-99_0-1
GP-100	СНА	10/19/2018	Yes	Excavate	e to 2 ft	0.607		0.0346 U			

						S	ample Depths				
Location or Sample ID	Sampled By	Date	Validated?	0-1'	1-2'	2-3'	3-4'	4-5'	5-7'	7-10'	Sample/Drilling Comments
GP-100_E5	СНА	11/29/2018	Yes	13.1		NA		NA			
GP-100_N5	СНА	11/29/2018	Yes	8.71		NA		NA			
GP-100_W5	СНА	11/29/2018	Yes	Excavate	e to 2 ft	7.47		NA			Insufficient recovery to collect 4-5 ft sample
GP-100_W10	СНА	11/29/2018	Yes	2.04 J		NA		NA			Refusal @ 2 ft. No 2 - 3' or 4 -5' sample
GP-100_S5	СНА	11/29/2018	Yes	10.2	NA						Terminated at 2 ft due to utilities
GP-101	CHA	10/16/2018	Yes	1.43		8.26		0.0325 U			
GP-102	СНА	10/16/2018	Yes	1.13		3.96 J		0.293			
GP-103	CHA	10/18/2018	Yes	5.3		9.09		0.0384 U			
GP-104	CHA	10/17/2018	Yes	2.15		0.2		0.00635 J			
GP-105	CHA	10/17/2018	Yes	18.9	23.3						Refusal @ 2 ft, no samples 2-3 ft and 4-5 ft
GP-106	СНА	10/17/2018	Yes	1.49		13.5		0.0538 J			
GP-107	СНА	10/17/2018	Yes	6.66		0.0393 U		0.0403 U			
GP-108	СНА	10/17/2018	Yes	2.7	5.43						Refusal @ 2 ft, no samples 2-3 ft and 4-5 ft
GP-109	СНА	10/17/2018	Yes	3.99		0.0297 J		0.0394 U			
GP-110	СНА	10/18/2018	Yes	3.96		6.74		0.0065 J			
GP-111	СНА	10/17/2018	Yes	0.0137 J		0.0336 U		0.00525 J			

Notes:

All results are in parts per million (ppm = mg/kg).

"--" Denotes no sample taken at the indicated depth interval.

NA: Sample collected, but not analyzed

U: Sample analyzed for but not detected at the specified concentration.

a: Estimated value due to the presence of other Aroclor pattern.

J: Estimated value. Refer to the corresponding Category B Report and/or DUSR for further details.

N: Tentative identification. Analyte is considered present. Special methods may be needed to confirm its presence of absense during future sampling events.

R: Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information is necessary to confirm the result.

5.6 Gray highlighted values exceed the TSCA High-Occupany Cleanup Level of 1.0 ppm Total PCBs.

Sample Depths

Lead		•	_	,	Sampic	Deptils		
Dibenzo(a,h)anthracene	-	Analyte	0-1'	1-2'	2-3'	3-4'	4-5'	5-7'
Dibenzo(a,h)anthracene		Benzo(a)pyrene	1.96					
Assertic			1.1 U					
Lead	SS-1							
Mercury								
Benzofahvrene 1.77								
Dibenzo(a h)anthracene								
Arsenic 18.0 b								
Lead 2030	SS-2							
Mercury S.S. S.S.	55 2							
SS-3 Benzofalbyrene 3.87								
Dibenzo(a,h)anthracene				Î			ī	
Arsenic 20,9 b								
Lead 1480 b	99.2							
Mercury	55-3							
Benzo(a)prene								
Dibenzo(a,h)anthracene								
Arsenic								
Lead								
Mercury 6.3	SS-5	Arsenic	11.4 b					
Benzo(a)hyrene								
Dibenzo(a,h)anthracene		Mercury	6.3					
Dibenzo(a,h)anthracene		Benzo(a)pyrene	1.69					
Arsenic			0.55 U					
Lead	SS-7							
Mercury A2								
Benzo(a)pyrene 2.6 U				1				
Dibenzo(a,h)anthracene								
Arsenic								
Cead 1180 b	SS_12							
Mercury 6	55-12							
Renzo(a)pyrene					1			
Dibenzo(a,h)anthracene		Mercurv						
Arsenic 19.6 b								
Lead	C 1							
Mercury	S-1							
Benzo(a)nyrene								
Dibenzo(a,h)anthracene						4.3		
Arsenic								
Lead 1860 9.9			_					
Mercury 5.4 0.025	GP-3	Arsenic	17.1		3.9			
Benzo(a)pyrene		Lead	1860					
Dibenzo(a,h)anthracene		Mercury			0.025			
Dibenzo(a,h)anthracene		Benzo(a)pyrene	NA		NA			
GP-23 Arsenic 21.5 4.4			NA					
Lead	GP-23		21.5		4.4			
Mercury 6,2			1470		40.7			
GP-28 Benzo(a)pyrene NA NA NA GP-28 Arsenic 16.4 NA NA Lead 1220 46.4 27.8 Mercury 6.5 0.19 H 0.18 H Benzo(a)pyrene NA NA GP-30 Arsenic 16.6 NA GP-30 Arsenic 16.6 2.4 Mercury 2.9 0.015 J Benzo(a)pyrene NA NA NA GP-31 Arsenic 8.8 NA NA Lead 448 4050 3880 Mercury 1.1 10.4								
GP-28 Dibenzo(a,h)anthracene			-					
GP-28 Arsenic 16.4 3.4 6.9 Lead 1220 46.4 27.8 Mercury 6.5 0.19 H 0.18 H Benzo(a)pyrene NA NA Dibenzo(a,h)anthracene NA NA Mercury 2.9 0.015 J Benzo(a)pyrene NA NA NA GP-31 Arsenic 8.8 NA NA Lead 448 4050 3880 Mercury 1.1 10.4 1.7 H				1				
Lead 1220 46.4 27.8 Mercury 6.5 0.19 H 0.18 H Benzo(a)pyrene NA NA Dibenzo(a,h)anthracene NA NA Lead 744 7.7 Mercury 2.9 0.015 J Benzo(a)pyrene NA NA NA Dibenzo(a,h)anthracene NA NA NA GP-31 Arsenic 8.8 31.4 29.8 Lead 448 4050 3880 Mercury 1.1 10.4 1.7 H	GP-28		_					
Mercury 6.5 0.19 H 0.18 H Benzo(a)pyrene NA NA Dibenzo(a,h)anthracene NA NA Lead 744 7.7 Mercury 2.9 0.015 J Benzo(a)pyrene NA NA NA Dibenzo(a,h)anthracene NA NA NA GP-31 Arsenic 8.8 31.4 29.8 Lead 448 4050 3880 Mercury 1.1 10.4 1.7 H	G1 -20							
Benzo(a)pyrene NA NA				 				
GP-30 Dibenzo(a,h)anthracene								
GP-30 Arsenic 16.6 2.4 Lead 744 7.7 Mercury 2.9 0.015 J Benzo(a)pyrene NA NA NA Dibenzo(a,h)anthracene NA NA NA GP-31 Arsenic 8.8 31.4 29.8 Lead 448 4050 3880 Mercury 1.1 10.4 1.7 H				1				
Lead 744 7.7	CD 20			1				
Mercury 2.9 0.015 J NA	GP-30							
Benzo(a)pyrene								
GP-31 Dibenzo(a,h)anthracene NA NA NA NA CATALLEA SATALLEA S								
GP-31 Dibenzo(a,h)anthracene NA NA NA NA CATALLEA SATALLEA S		Benzo(a)pyrene					NA	
GP-31 Arsenic 8.8 31.4 29.8 Lead 448 4050 3880 Mercury 1.1 10.4 1.7 H			NA		NA		NA	
Lead 448 4050 3880 Mercury 1.1 10.4 1.7 H	GP-31		8.8		31.4		29.8	
Mercury 1.1 10.4 1.7 H								

Sample Depths

				Sample			
Location / Sample ID	Analyte	0-1'	1-2'	2-3'	3-4'	4-5'	5-7'
	Dibenzo(a,h)anthracene	NA		NA		NA	
GP-33	Arsenic	15.6		10.1		10.7	
	Lead	1610		642		650	
	Mercury	3.2		2.4		1.7 H	
	Benzo(a)pyrene	NA		NA			
	Dibenzo(a,h)anthracene	NA		NA			
GP-34	Arsenic	18.9		5.8			
	Lead	2300		113			
	Mercury	2		0.29			
	Benzo(a)pyrene	NA		NA			
	Dibenzo(a,h)anthracene	NA		NA			
GP-37	Arsenic	17.8		3.6			
	Lead	4400		10.1			
	Mercury	25.5		0.03			
	Benzo(a)pyrene	NA		NA		NA	
	Dibenzo(a,h)anthracene	NA		NA		NA	
GP-38	Arsenic	14.5		65.2		3.6	
	Lead	4800		213		44	
	Mercury	4.8		0.084		0.13 H	
	Benzo(a)pyrene	NA				NA	NA
	Dibenzo(a,h)anthracene	NA				NA	NA
GP-40	Arsenic	19.1				4.3	2.5
	Lead	1320				17.4	5.8
	Mercury	5.2				0.039 H	0.02 UH
	Benzo(a)pyrene	NA		NA		NA	
	Dibenzo(a,h)anthracene	NA		NA			
GP-41	Arsenic	20.4		2.4			
	Lead	1410		6.2			
	Mercury	3.3		0.023 U			
	Benzo(a)pyrene	NA		NA		NA	
	Dibenzo(a,h)anthracene	NA		NA		NA	
GP-43	Arsenic	15.5		3.5		3.5	
	Lead	967		105		88.2	
	Mercury	2.9		0.086		0.27 H	
	Benzo(a)pyrene	NA		NA		NA	
	Dibenzo(a,h)anthracene	NA		NA		NA	
GP-47	Arsenic	15.7		8.2		7.7	
	Lead	1320		4530		14.6	
	Mercury	2.5		0.33		0.044 H	
	Benzo(a)pyrene	NA		NA		NA	
	Dibenzo(a,h)anthracene	NA		NA		NA	
GP-51	Arsenic	19.9		12.4		9.7	
	Lead	372		70.8		21	
	Mercury	1.3		0.089		0.032 H	
	Benzo(a)pyrene	NA		NA		NA	
	Dibenzo(a,h)anthracene	NA		NA		NA	
GP-52	Arsenic	17.1		9.7		2.2 J	
-	Lead	1930		74.9		9.7	
	Mercury	4.3		0.31		0.037 H	

Notes:

All results are in parts per million (ppm = mg/kg).

NA - Sample not analyzed for the indicated parameter.

30.3 Yellow highlighted and bold values exceed the 6 NYCRR Part 375 Restricted Industrial Soil Cleanup Objectives.

[&]quot;--" denotes no sample taken at the indicated depth interval.

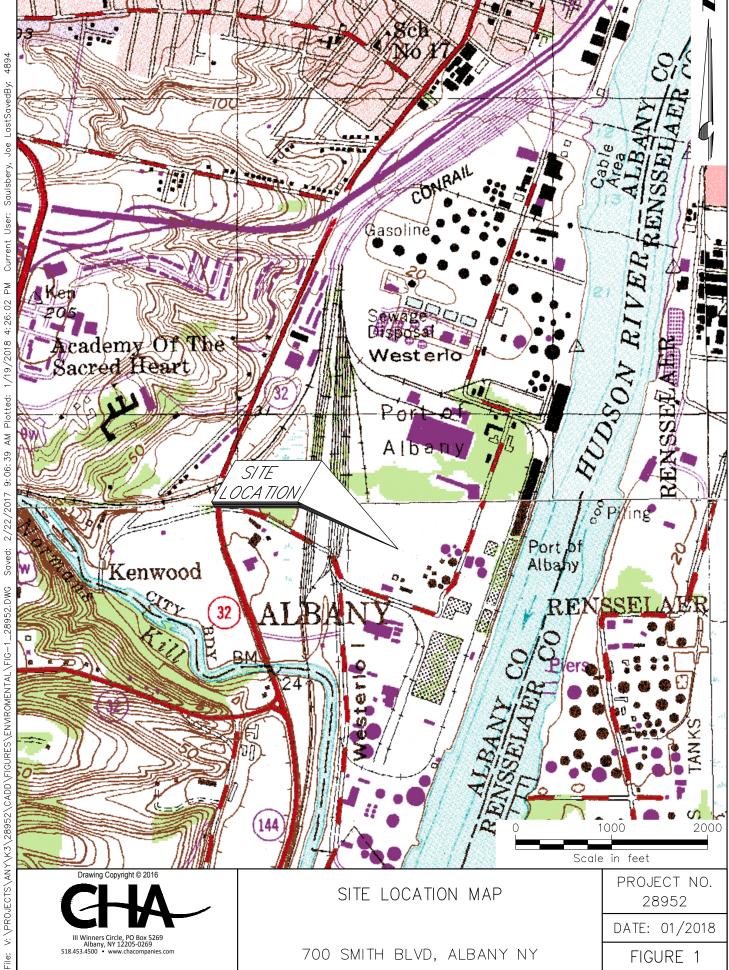
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

U - Sample analyzed for but not detected at the specified concentration.

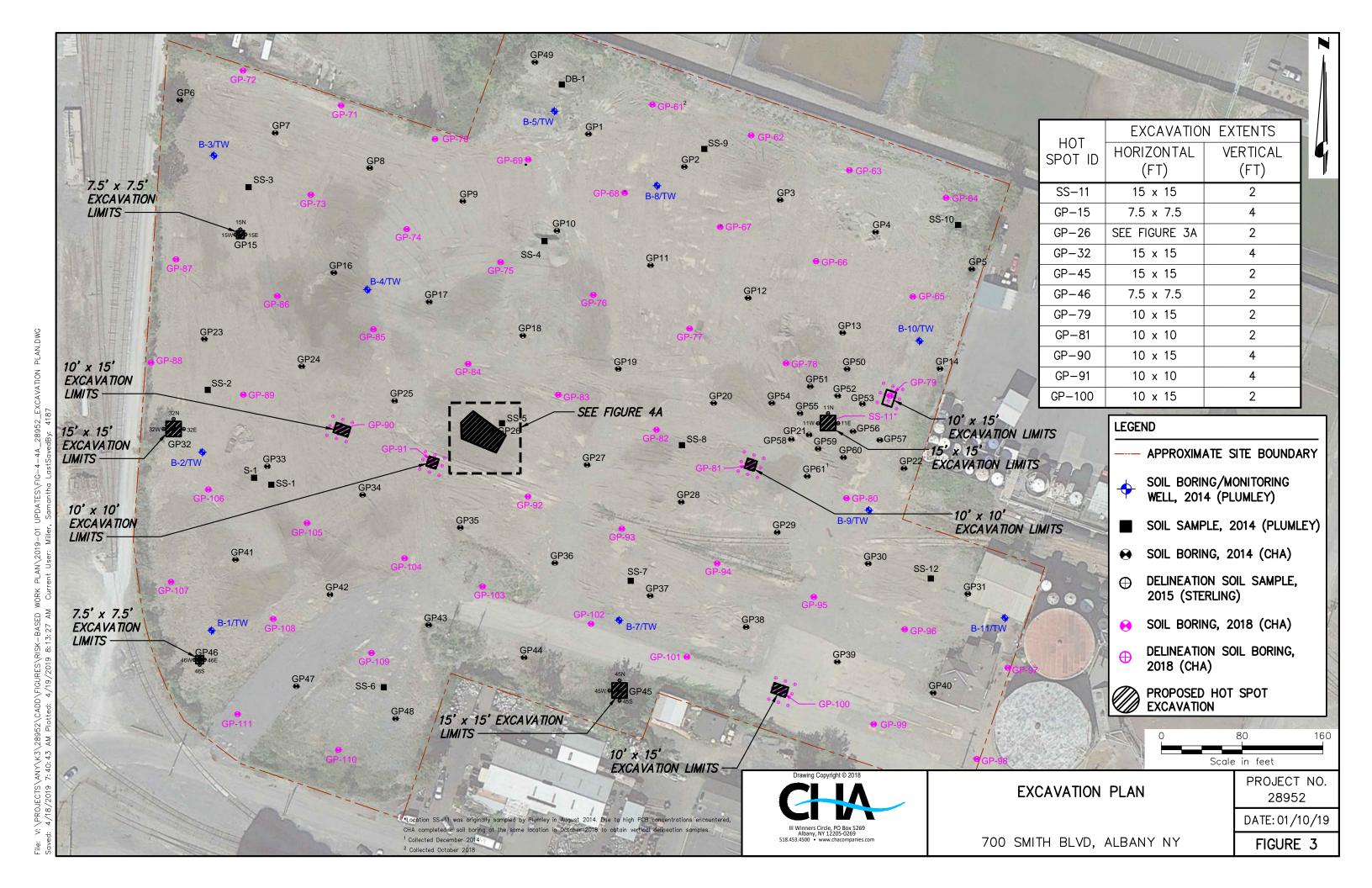
H - Sample was prepped or analyzed beyond the specified holding time.

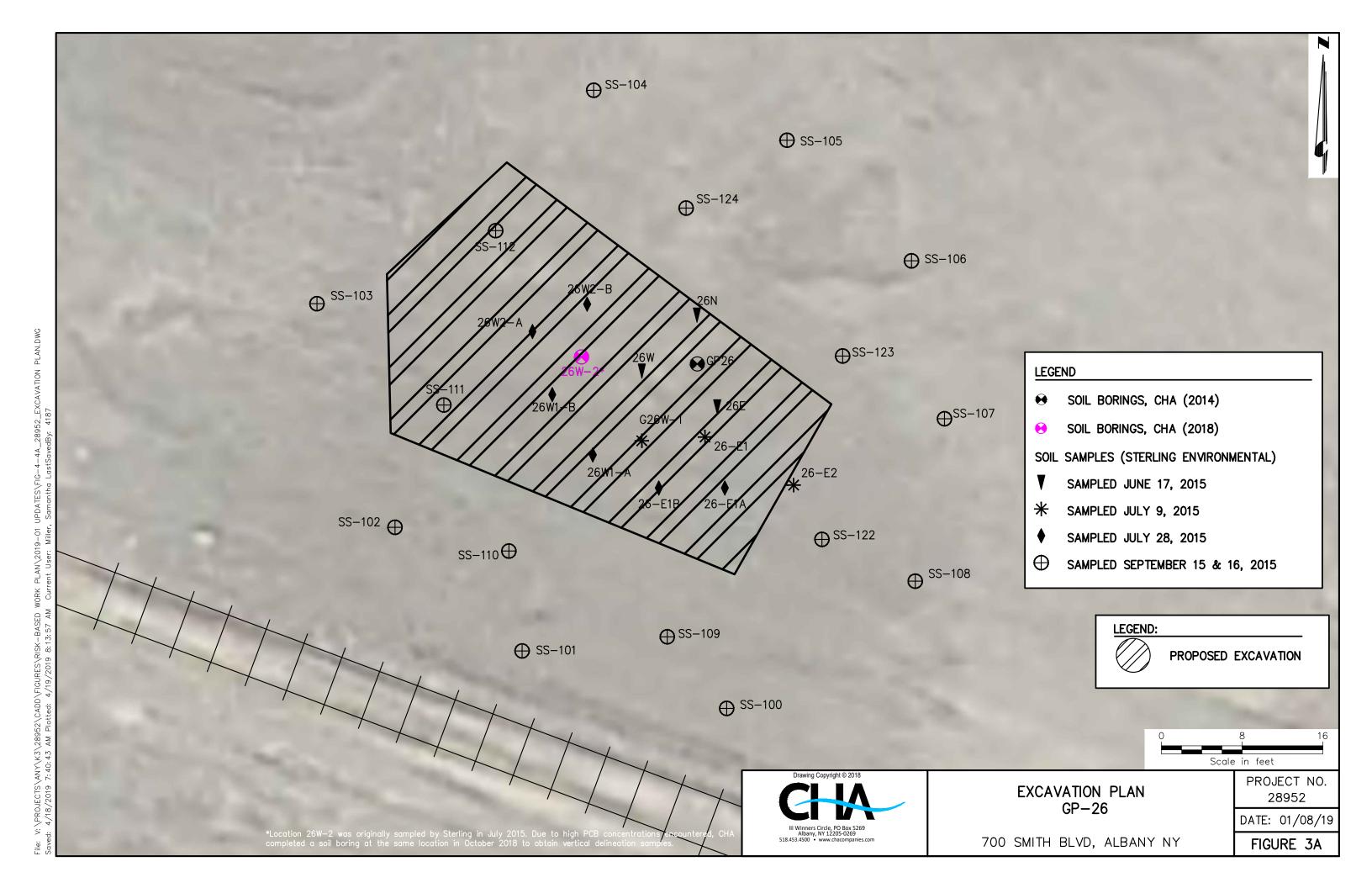
b - Elevated RL due to dilution required for high interfering element.

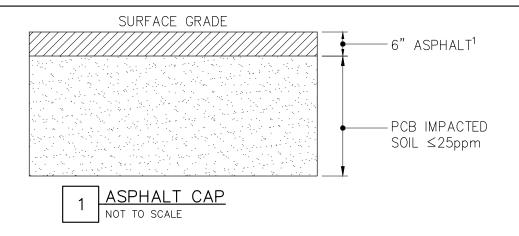


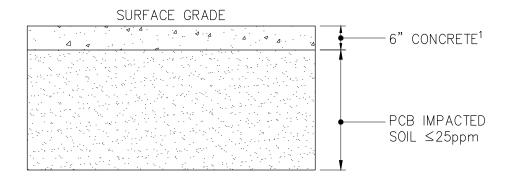




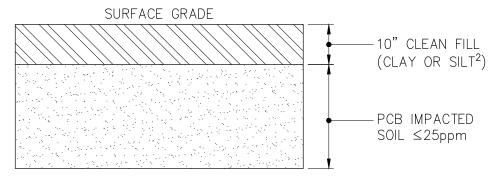








2 CONCRETE/BUILDING CAP



- ¹ MINIMUM THICKNESS 6 INCHES, NOT INCLUDING ANY NECESSARY SUBBASE/COMPACTED FILL FOR SUPPORT BENEATH (NOT SHOWN IN DETAIL)
- ² MUST MEET THE FOLLOWING REQUIREMENTS IN ACCORDANCE WITH 40 CFR 761.75(b)(1)(ii-v)
- 1. PERMEABILITY $\leq 1X10^{-7}$ CM/SEC;
- 2. PERCENT SOIL PASSING No. 200 SIEVE > 30;
- 3. LIQUID LIMIT > 30; AND
- 4. PLASTICITY INDEX > 15





PROTECTIVE CAPPING DETAIL

28952

700 SMITH BLVD. ALBANY NY

DATE: 02/11/19

PROJECT NO.

FIGURE 4

APPENDIX A

Environmental Easement (To be Included in Final SMP)

APPENDIX B

Site Wide/Covering/Fencing Checklist



SITE-WIDE / CAPPING / FENCING **ANNUAL INSPECTION CHECKLIST**

CHA		Report N Page 1 Date:	lo. of 2	Time:		
				1		
Site Name: Port of Albany – 700 Smith Blv	d.			Project No.		
Address: 700 Smith Blvd, Albany, NY				Weather:		
Inspector(s):						
Type of Inspection: ☐ Routine ☐ Post S		Temp.: Hi	Low			
	CESSI	BILITY IN	ISPECTI			
ITEM/CONDITION	YES	NO	N/A	COMMENTS		
Site accessible and passable.	RECO	RDS INSF	PECTION	<u> </u>		
ITEM/CONDITION	YES	NO	N/A	COMMENTS		
Site Records are up to date with latest						
revisions or changes to SMP INSTITUTIO	NAI C	CONTROL	INSPE	CTION		
ITEM/CONDITION	YES	NO	N/A	COMMENTS		
The Site continues to be utilized for industrial uses only.						
Low-occupancy areas (if applicable) continue to be occupied by individuals < 6.7 hours per week OR appropriate dermal and respiratory protection is worn.						
		INSPECT	TION			
ITEM/CONDITION	YES	NO	NA	COMMENTS		
Is a gate present at the entrance?						
Is the gate locked and secured?						
Evidence of damaged fencing?						
SOIL C	AP SY	STEM IN	SPECTIO	ON		
ITEM/CONDITION	YES	NO	NA	COMMENTS		
Evidence of erosion of cover soils?						
Evidence of cracks or depressions in cover soils?						
Evidence of exposed or damaged subgrade soils?						
ASHPALT/CONG	RETE	CAP SY	STEM IN	SPECTION		
ITEM/CONDITION	YES	NO	NA	COMMENTS		
Evidence of damaged asphalt or concrete?						
Evidence of pitting, rutting, cracks or depressions in asphalt or concrete cover?						

DRAINA	GE SYS	STEM INS	PECTION	ON
ITEM/CONDITION	YES	NO	NA	COMMENTS
Evidence of erosion in drainage structures?				
Presence of siltation in drainage structures?				
Evidence of settlement in drainage structures?				
Evidence of restrictions of water flow in drainage ditches and structures?				
	CTOR	INSPECT	ION	
ITEM/CONDITION	YES	NO	NA	COMMENTS
Were any vectors observed?				
Evidence of vector activity (tracks, droppings, dens, etc.)				
Evidence of damage due to vector activity?				
VEGETATIV	/E INSP	ECTION	(if appli	cable)
ITEM/CONDITION	TRUE	FALSE	N/A	COMMENTS
Vegetation is well established over greenspace areas.				
There is no evidence of stressed vegetation.				
There is no evidence of bare or thin vegetative cover.				
There is no evidence of overgrowth or areas that need to be mowed.				
There is no evidence of recent areas of excavation or disturbed areas.				
ADDITIONAL NOTES & OBSERVA	TIONS			
Signature:	Tir	ne Charge	d:	Mileage Charged:

