



**General Electric Company**  
Albany, New York

**Phase 2 Sediment Processing Facility  
Demobilization and Restoration Plan**

**Hudson River PCBs Superfund Site**

Revised September 2015



**Phase 2 Sediment Processing  
Facility Demobilization and  
Restoration Plan**

Hudson River PCBs  
Superfund Site

Prepared for:  
General Electric Company

Prepared by:  
ARCADIS of New York, Inc.  
855 Route 146  
Suite 210  
Clifton Park  
New York 12065  
Tel 518.250.7300  
Fax 518.250.7301

Our Ref.:  
B0031087.0003

Date:  
Revised September 2015

<b>Acronyms and Abbreviations</b>	<b>i</b>
<b>1. Introduction</b>	<b>3</b>
1.1 General	3
1.2 Consent Decree Requirements	4
1.3 Property Access Arrangements: Restoration Requirements	5
1.4 Future Property Use and Post-Restoration Conditions	6
1.5 Plan Overview	11
1.6 Plan Organization	11
<b>2. Background Information</b>	<b>13</b>
2.1 Facility Siting	13
2.2 Facility Location and Setting	13
2.3 Sediment Processing Facility Components	14
2.3.1 Waterfront/Barge Unloading Areas	17
2.3.2 Size Separation Area	17
2.3.3 Thickening/Dewatering Area	18
2.3.4 Material Staging Areas	18
2.3.5 Rail Yard Loading Platform (Track #7)	19
2.3.6 Rail Yard	19
2.3.7 Facility Roads	19
2.3.8 Flexible Membrane Liner	20
2.3.9 Stormwater Management System	20
2.3.10 Water Treatment Plant	21
2.3.11 Decontamination Area	21
2.3.12 Administrative Area	21
2.3.13 Utilities	21
2.3.14 Fuel Storage	22
2.4 Summary of Previous Sampling Activities	22

2.4.1	Baseline Sampling Program	23
2.4.2	Dynamite Investigation and Removal Activities	25
<b>3.</b>	<b>Demobilization Plan</b>	<b>27</b>
3.1	Overview of the Demobilization and Restoration Process	27
3.2	General Facility Decontamination/Disposition Approach	27
3.3	Facility Decontamination Criteria	29
3.4	General Decontamination Procedures	30
3.5	Decontamination and Removal of Equipment, Tanks, and Piping	32
3.6	Decontamination and Removal of Structures	34
3.7	Decontamination and Removal of Asphalt and Concrete Materials	35
3.8	Decontamination and Removal of Stormwater Drainage Piping and Structures	37
3.9	Decontamination and Removal of Stormwater Basins and Pump Stations	39
3.10	Decontamination and Abandonment of Stormwater Force Main Piping	40
3.11	Items Not in Contact with PCB-Containing Sediments	40
3.12	Subsurface Sub-base Layer and Sand Layer	41
3.13	Flexible Membrane Liner	42
3.14	Fuel Storage	42
<b>4.</b>	<b>Equipment and Material Disposition</b>	<b>43</b>
4.1	Material Handling and Processing	43
4.2	Material Characterization	43
4.3	Disposition Methods	44
4.4	Off-site Transport and Disposal of Waste Materials	46
<b>5.</b>	<b>Post-Decontamination Environmental Site Assessment</b>	<b>47</b>
<b>6.</b>	<b>Restoration</b>	<b>49</b>
<b>7.</b>	<b>Environmental Controls and Monitoring</b>	<b>51</b>
7.1	Erosion and Sedimentation Control	51
7.2	Dust Control	51

7.3	Spill Control	52
7.4	Quality of Life Standards	52
7.4.1	Air Quality – PCBs	52
7.4.2	Odor	52
7.4.3	Noise	53
7.4.4	Lighting	53
7.4.5	Navigation	53
<b>8.</b>	<b>Facility Demobilization and Restoration Schedule and Sequencing</b>	<b>55</b>
8.1	Schedule	55
8.2	Sequencing	56
<b>9.</b>	<b>References</b>	<b>67</b>

**Tables**

Table 3-1	Decontamination-Related Sampling Types and Frequencies
-----------	--

**Figures**

Figure 1-1	Facility Location Map
Figure 1-2	Sediment Processing Facility – Facility Plan
Figure 2-1	Facility Parcel Ownership – 2013 Aerial
Figure 2-2	Facility Parcel Ownership – 2006 Aerial
Figure 2-3	Sediment Processing Facility – Baseline Sampling Locations
Figure 3-1	Sediment Processing Facility – Proposed Asphalt/Concrete Pavement Sampling Plan
Figure 4-1	Sediment Processing Facility – Proposed Environmental Media Sampling Plan
Figure 8-1	Sediment Processing Facility – Conceptual Demobilization Sequence

**Appendices**

Appendix A	Phase 2 Sediment Processing Facility Demobilization and Restoration Field Sampling Plan
Appendix B	Facility O&M Plan, Table 5-1, Structures and Equipment Decontamination Procedures

**CD ROM (electronic files)**

**Acronyms and Abbreviations**

ARCADIS	ARCADIS of New York, Inc.
BBL	Blasland, Bouck & Lee, Inc.
bgs	below ground surface
C&D	construction and demolition
cm	centimeters
CPR	Canadian Pacific Railway
CUs	Certification Units
cy	cubic yards
E&E	Ecology and Environment, Inc.
EPA	United States Environmental Protection Agency
EP/L	Energy Park and Longe
Facility	Sediment Processing Facility
Facility O&M Plan	Phase 2 Facility Operations and Maintenance Plan
FML	flexible membrane liner
FSP	Field Sampling Plan
GE	General Electric Company
gpm	gallons per minute
HDPE	high-density polyethylene
kV	kilovolt(s)
mgd	million gallons per day
mg/kg	milligram(s) per kilogram
NCP	National Contingency Plan
NYCRR	New York Codes, Rules and Regulations
NYSCC	New York State Canal Corporation
NYSDEC	New York State Department of Environmental Conservation
NYSP	New York State Police Hazardous Devices Unit
PCB	polychlorinated biphenyl

Phase 2 RAM QAPP	Phase 2 Remedial Action Monitoring Quality Assurance Project Plan
PPE	personal protective equipment
ppm	parts per million
QoLPS	Quality of Life Performance Standards
RA CD	Remedial Action Consent Decree
RCRA	Resource Conservation and Recovery Act
ROD	Record of Decision
sf	square foot
SOW	Statement of Work for Remedial Action and Operations, Maintenance, and Monitoring
SPF Demobilization Plan	Phase 2 Sediment Processing Facility Demobilization and Restoration Plan
SVOC	semi-volatile organic compound
SWPPP	Stormwater Pollution Prevention Plan
TAGM	Technical and Administrative Guidance Memorandum
TCLP	Toxicity Characteristic Leaching Procedure
TGSCS	Technical Guidance for Screening Contaminated Sediments
TOC	total organic carbon
TOGS	Technical & Operational Guidance Series
TSCA	Toxic Substances Control Act
USACE	United States Army Corps of Engineers
VOC	volatile organic compound
WCC	WCC, LLC
WTP	water treatment plant
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
µg/100 cm <sup>2</sup>	micrograms per 100 square centimeters

## **1. Introduction**

### **1.1 General**

On behalf of General Electric Company (GE), ARCADIS of New York, Inc. (ARCADIS) has prepared this *Phase 2 Sediment Processing Facility Demobilization and Restoration Plan* (SPF Demobilization Plan) to describe plans for demobilization and restoration of the Sediment Processing Facility used to support the dredging remedy selected by the United States Environmental Protection Agency (EPA) to address polychlorinated biphenyls (PCBs) in sediments of the Hudson River (EPA 2002). This document constitutes a revised version of the SPF Demobilization Plan initially submitted to EPA on February 23, 2015, and reflects comments from and discussions with EPA regarding that initial version.

The Sediment Processing Facility (the Facility) is located on approximately 110 acres between the western shore of the Champlain Canal and the Canadian Pacific Railway (CPR) rail line on the north of the Village of Fort Edward, Washington County, New York (Figure 1-1). The Facility was constructed by GE to offload debris and sediment dredged from the Upper Hudson River, separate debris and coarse material from the dredged sediment, mechanically dewater the fine-grained sediment, and prepare and load the debris and dewatered sediment for shipment by rail to off-site disposal facilities. In addition, the Facility is used to collect and treat water decanted from dredged material transport barges, water produced during material separation and dewatering, and stormwater that contacts sediment handling areas. The Facility was used to process dredged debris and sediment during Phase 1 of the dredging remedy (conducted in 2009) and during the first four Phase 2 dredging seasons (conducted in 2011 through 2014), and will continue to be used in 2015 to process dredged debris and sediment during the fifth and final Phase 2 dredging season (referred to as Phase 2 Year 5). The Facility is shown on Figure 1-2.<sup>1</sup>

Demobilization and restoration of the Facility will commence in 2015 prior to the completion of the Phase 2 Year 5 dredging season as operations and corresponding productivity requirements ramp down, and will be completed after dredging has been completed in all of the Phase 2 Certification Units (CUs) and after all of the dredged sediment and debris have been processed and transported for off-site disposal. The demobilization and restoration activities will generally involve: Facility decontamination; post-decontamination sampling; removal, demobilization, and off-site disposition of equipment, structures, and materials;

---

<sup>1</sup> The main access road to the Facility, known as Lock 8 Way, was constructed from State Route 196 along the west side of the Champlain Canal to provide access to the Facility and Lock 8 of the canal. That road is shown on Figure 1-1.



post-decontamination environmental sampling; and property restoration. The activities to commence prior to the completion of Phase 2 Year 5 activities will include decontamination and removal of certain equipment and/or materials after they are no longer needed to support Facility operations (e.g., due to reduced Facility productivity needs, equipment redundancy, or completion of certain Facility operations), as discussed further in Section 8.

## **1.2 Consent Decree Requirements**

This SPF Demobilization Plan has been prepared pursuant to the Remedial Action Consent Decree (RA CD) for the site, which was approved by the U.S. District Court for the Northern District of New York in October 2005 (Civil Action No. 1:05-CV-1270; EPA/GE 2005) and modified in March 2009 and August 2011, and the Statement of Work for Remedial Action and Operations, Maintenance, and Monitoring (SOW), which is Appendix B to the RA CD and contains specific requirements for GE's Phase 2 Facility Demobilization and Restoration Plan.

Paragraph 36.e of the RA CD sets forth a number of requirements relating to demobilization and restoration of the properties used for the Sediment Processing Facility. Specifically, Paragraph 36.e(1) requires that such properties must be restored in accordance with the SOW, the Phase 2 Facility Demobilization and Restoration Plan (described in the SOW), and the National Contingency Plan (NCP). This restoration must include "removal of all hazardous substances, pollutants or contaminants, petroleum (including crude oil or any fraction thereof), natural gas, natural gas liquids, liquefied natural gas, and synthetic gas useable for fuel, that came to be located on such real property as a result of [GE's] use of such property for the Remedial Action." Paragraph 36.e(2) provides that, for such properties, GE must "consult with the municipalities in which such properties are located regarding the anticipated future use of those properties (such as redevelopment for commercial or recreational use) prior to restoring the properties." It provides further that, for properties owned by persons or entities other than GE (which include all of the properties used for the Facility), GE must "encourage the property owner to consult with the municipality regarding the anticipated future use of such properties" prior to restoration. This provision also states that EPA may consult with other stakeholders regarding anticipated future use and "may provide [GE], the local municipalities and the property owner with stakeholder recommendations."

Section 3.1.4 of the revised SOW, issued by EPA in December 2010 for Phase 2 of the dredging project (EPA 2010), requires that, for any year of Phase 2 in which demobilization and/or restoration activities are scheduled for the Facility, "a Phase 2 Facility Demobilization and Restoration Plan shall be included with the RA Work Plan for such year." The SOW requires that plan to address demobilization and restoration of the Facility and to include the following:

- “A detailed description of the steps to be taken for removal or demobilization (i.e., decontamination of equipment, cleanup of all contamination resulting from remedial operations, disposal of residual wastes, sampling of soils at the processing site(s), etc.) and a plan for restoring any properties on which project operations were conducted (e.g., removal of roads, railroad sidings, fences, signs, sumps, re-grading each property for drainage, topsoil and seed as applicable, disconnection of power, habitat restoration, etc.). The restoration of such properties shall be consistent with Paragraph 36.e of the Consent Decree. The Phase 2 Facility Demobilization and Restoration Plan shall include a decontamination plan specific to these activities.”
- “A preliminary schedule for removal, demobilization and site restoration indicating the duration of those activities.”
- “A Contingency Plan for obstacles or difficulties encountered during demobilization and site restoration.”

### **1.3 Property Access Arrangements: Restoration Requirements**

As discussed in Section 2.1, EPA selected the Energy Park/Longe/New York State Canal Corporation site in Fort Edward as the location for the Facility. As further described in detail in Section 2.2, that site includes parcels owned by WCC, LLC (WCC) (a real estate holding and development company), property along the Champlain Canal formerly owned by the New York State Canal Corporation (NYSCC) and now owned by EPA, and, for railroad tracks, property owned by CPR.

To facilitate access to and use of these properties, GE executed lease agreements with WCC and CPR in 2007. Access to the former NYSCC property along the Champlain Canal was provided by EPA after EPA acquired that land in 2008 through a Declaration of Taking under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and in accordance with the Declaration of Taking Act (40 U.S.C. §§ 3113-14).<sup>2</sup>

The lease agreement for use of the WCC property includes certain conditions related to the Facility demobilization and property restoration. That agreement requires that GE restore

---

<sup>2</sup> Lock 8 Way was also located largely on property owned by NYSCC, and that property was also covered by EPA's 2008 Declaration of Taking. In addition, the entrance of the main access road is located on properties owned by two private landowners, and GE executed easement agreements with those landowners in 2007. As discussed in Section 1.4 below, GE plans to leave Lock 8 Way in place, and thus that road is not specifically covered by this SPF Demobilization Plan.

the property to substantially the same condition that existed on the effective date of the agreement, including replanting indigenous trees and bushes (to the extent commercially reasonable) that existed prior to Facility construction, except as otherwise required by EPA or EPA-approved work plans and except that GE is not obligated to restore the grade of the land or remove any road foundations. The lease agreement also states that WCC may request GE to leave certain infrastructure improvements (excluding “salvageable” improvements) on the WCC property [or on the adjacent CPR or former NYSCC (now EPA) properties]. Under the lease agreement, GE is to comply with any such request provided that (i) doing so is not restricted by the RA CD or EPA-approved work plans, (ii) EPA approves leaving any requested items in place, (iii) consent to leaving such infrastructure improvements in place on adjacent land is provided by the owner of that land and all other necessary parties, (iv) the items are not impacted by hazardous materials, (v) the items can be left in place without risk of injury or property damage, and (vi) WCC releases GE from, and indemnifies GE for, any restoration obligations and any liabilities with respect to the improvements left in place. The lease agreement also requires that, prior to surrendering the property back to WCC, GE must obtain from an environmental engineering firm an environmental assessment of the impacted areas in accordance with an EPA-approved work plan, and that if that assessment discloses project-related contamination that was not present prior to the lease agreement, GE must remediate that contamination.

Similar to GE’s lease agreement with WCC, the lease agreement between GE and CPR contains provisions governing the process by which CPR may elect to retain structures, facilities, and other improvements on the property and provisions governing restoration of the property consistent with EPA-approved plans.

GE and EPA executed an agreement regarding the former NYSCC properties, dated August 15, 2007, which applies to the properties that EPA subsequently took from NYSCC by the 2008 Declaration of Taking. That agreement does not contain provisions pertaining to the demobilization or restoration of the properties.

#### **1.4 Future Property Use and Post-Restoration Conditions**

As discussed in Section 1.2 and Section 1.3, the RA CD and the lease agreements with WCC and CPR include requirements that involve consultation with the property owners and applicable municipalities to discuss anticipated future land use prior to restoring the properties. GE has communicated with EPA, the Town of Fort Edward, the Village of Fort Edward, and the applicable property owners (i.e., WCC and CPR) to initiate discussions regarding the proposed Facility demobilization and property restoration. Additionally, at the request of EPA, GE will communicate with EPA regarding NYSCC’s future plans for the property taken from it by EPA, based on EPA’s expressed intent to convey that property back to NYSCC.

The WCC property is currently zoned for industrial use, and in a meeting held on November 17, 2014, WCC and local towns reiterated that future use of the property is as an industrial park. GE sent a letter to WCC and the Town of Fort Edward on December 17, 2014 requesting input on any specific requests about infrastructure that they would prefer to see GE leave behind following demobilization.

On February 10, 2015, WCC provided a written request to GE to leave as much infrastructure in place as possible, consistent with the RA CD and SOW, following Facility demobilization. Decisions have not been finalized (as of the date of this plan) related to the specific Facility infrastructure components that will remain in place after property restoration. Such decisions will depend on further discussions among the parties, the results of sampling, and the ability of certain components to be decontaminated, among other factors. Discussions with CPR are underway and final agreements on decommissioning have not been completed. However, as an initial assumption for this plan, subject to change, the rail infrastructure on CPR property will be left behind. Also, it is assumed the majority of the permanent infrastructure on the EPA/NYSCC parcel will also remain. Based on the above, GE assumes the following general approach for the demobilization:<sup>3</sup>

- All sediment and water processing equipment, tanks, above-grade piping, and related concrete foundations/supports will be removed, except as specifically noted otherwise in this plan.
- The dewatering building, water treatment plant (WTP) building, and rail yard building structures and concrete floor slabs will remain in place; but interior, non-structural and processing-related items will be removed and drainage piping beneath the dewatering building will be grouted and abandoned in place.
- The filter cake staging enclosure structures will be removed, unless an alternate agreement to leave such structure(s) in place is reached with the property owner. The bin walls and foundations supporting the filter cake staging enclosures will be left in place.

---

<sup>3</sup> Section 2.3 provides a description of the Facility components. The demobilization assumptions listed assume that the items/materials can be adequately decontaminated. Items/materials (or portions thereof) that cannot be adequately decontaminated will be removed for off-site disposal. At a minimum, it is anticipated that the following items will remain in place after Facility demobilization and restoration: road foundations on the WCC property; the constructed canal embayment (including the associated revetment walls and rip-rap), the work wharf, gravel-covered laydown area, unloading platforms, wharf structures, and the potable water line on the EPA (formerly NYSCC) property; and railroad "Track #1" and associated signaling and control equipment on the CPR property.

- The coarse material staging area pavement, bin walls, and foundations will be left in place.
- Facility roads (the Main Haul Road, North Extension Road, South Extension Road, North Access Road, South Service Road, and Rail Yard Access Road) and all underlying utilities and stormwater conveyances and all supporting materials will remain in place. In addition, the culverts at Bond Creek and the Lock Diversion Canal will remain in place unless the property owners in the area agree that the culverts should be removed and so advise GE.<sup>4</sup>
- Asphalt and concrete and underlying utilities, stormwater conveyances, and other materials associated with the material staging areas and decontamination area on the WCC properties will remain in place.
- Asphalt pavement and underlying utilities, stormwater conveyances, and other materials surrounding the dewatering building and the concrete retaining wall associated with the North Access Road will remain in place.
- Asphalt pavement and underlying utilities, stormwater conveyances, and other materials in the dewatering/thickening area will remain in place if agreed upon with the property owner.
- Asphalt pavement and underlying materials in the size separation area will remain in place if agreed upon with the property owner.
- The concrete rail yard loading platform and Track #7 as well as all underlying utilities, stormwater conveyances, and other materials will remain in place.
- Concrete and polyethylene geocell materials as well as the underlying geotextile and flexible membrane liner (FML) materials associated with the stormwater retention basins will be removed, but the resulting earth basins will remain in place for potential future use to manage stormwater.
- The asphalt-lining in the drainage swale on the EPA (former NYSCC) property will be removed, but the swale will remain in place for potential future use to manage stormwater.

---

<sup>4</sup> GE understands that further discussion is needed between and with the property owners in the area to determine whether culverts and other infrastructure (e.g., electrical conduit, water supply piping) that span between different properties would remain in place and to determine who would be responsible for maintenance of such items.

- Concrete pits, trenches, pump stations, and underlying materials will remain in place and be filled to match surrounding grade. However, the concrete base of pits, trenches, and pump stations will be perforated to allow water drainage; and concrete associated with the hydrocyclone pump station, the recycle water wet well, and stormwater pump station wet wells will be removed to a depth of 2 feet below ground surface prior to filling.
- Above-grade portions of foundations and supports will be removed, except that the concrete pads for the gravity thickeners and water tanks will remain in place after protruding steel is cut off at grade. Below-grade portions of foundations and supports will remain in place.
- The stormwater basin pump stations, which are packaged systems, will be removed in their entirety, with the resulting void backfilled to grade as part of final grading of the future stormwater basin.
- Where impervious surfaces (i.e., concrete and asphalt) remain, the underlying subsurface materials, including the utilities and high-density polyethylene (HDPE) FML, will also remain in place.
- Where impervious surfaces are removed, the underlying FML (where present) will be removed, but sub-base stone and sand materials above the FML may remain on-site if sampling confirms that the materials are designated for unrestricted use (see Section 3.12).
- Stormwater drainage piping and structures will remain in place where located beneath impervious surfaces that remain in place and where otherwise needed for stormwater management purposes.
- Underground WTP discharge force main HDPE piping to the Champlain Canal will be grouted and abandoned in place, but the discharge structure at the canal will be removed.
- Underground double-walled HDPE stormwater force main piping between the stormwater basins and the WTP will be plugged and abandoned in place.
- Railroad Track #1, switches to the mainline, and associated signaling and control equipment on the CPR property will remain.
- Other railroad tracks and switches on the CPR and WCC properties will remain, except Track #7, which will only remain if it can be adequately decontaminated.
- The constructed canal embayment (including the associated revetment walls and rip-rap), the work wharf (including the concrete platform and asphalt pavement), concrete unloading platforms, wharf structures, and gravel-covered laydown area on the EPA

(former NYSCC) property will remain. The potable water lines at the wharf will also remain in place unless the property owners agree, and advise GE, that the culverts at Bond Creek and the Lock Diversion Channel should be removed.

- The 34.5-kilovolt (kV) pole-mounted transmission line (owned by National Grid), the receiving structure, and fenced 34.5-kV electrical substation will remain in place.
- Unit substations and electrical switchgear units will remain in place if an agreement to do so can be reached with the property owners.
- Underground electrical duct banks and structures will remain in place. Electrical conduit and communication lines will also remain in place if an agreement to do so can be reached with the property owners.
- Water supply piping, hydrants, and the meter pit and reduced pressure zone heated underground vault and enclosure near East Street will remain in place and be transferred to the property owner.
- Pole-mounted lights and foundations will remain in place if an agreement to do so can be reached with the property owners.
- Underground sanitary sewer tanks in the administration area and near the WTP building will remain in place if an agreement to do so can be reached with the property owners.
- Exterior fencing and gates on the WCC property and fencing around the 34.5-kV substation will remain in place. Other fencing and gates will remain in place if an agreement to do so can be reached with the property owners.
- The land on the properties will not be restored to original grade (consistent with the WCC Lease Agreement summarized in Section 1.3 and with GE's other use agreements), but grading will occur to fill low areas and to provide the necessary stormwater management.

This SPF Demobilization Plan does not specifically address the access road to Lock 8 (Lock 8 Way) (apart from a general description in Section 2.3.7). As noted above, GE constructed that access road between New York State Route 196 and Lock 8 largely on the EPA property formerly owned by NYSCC, as well as partly on properties leased from local private land owners. Unrestricted use of the access road will be needed throughout the completion of the project, including demobilization and restoration. It is expected that the access road will be transferred to a local municipal entity.

This plan has been prepared based on the foregoing assumptions. Modifications or amendments to this plan may be needed after decisions are finalized related to the



anticipated future land use and the Facility infrastructure components that will remain in place after property restoration.

### **1.5 Plan Overview**

This SPF Demobilization Plan has been prepared in accordance with the RA CD and the SOW. It includes the following:

- A description of how the various components of the Facility will be decontaminated (e.g., equipment, structures, and surfaces where PCB-contaminated sediment was staged or managed);
- A description of sampling to be conducted during the demobilization activities;
- A description of how wastes and other materials generated during Facility demobilization will be managed; and
- A description of the process to be followed to remove, demobilize, and restore the Facility.

### **1.6 Plan Organization**

The remainder of this document is organized as follows.

- Section 2 presents relevant background information related to demobilization of the Facility, including summaries of the Facility siting process, the Facility location and setting, the various components of the Facility, and previous sampling activities performed at the properties and the Facility.
- Section 3 presents a description of the process for decontaminating, sampling, and demobilizing the Facility.
- Section 4 presents a description of the anticipated disposition methods for equipment and materials removed from the Facility.
- Section 5 presents a description of environmental media sampling that will be implemented after termination of sediment processing activities and after completion of Facility decontamination.
- Section 6 presents a description of the process for restoring the properties after Facility decontamination and demobilization.





**Phase 2 Sediment  
Processing Facility  
Demobilization and  
Restoration Plan**

Hudson River PCBs  
Superfund Site

- Section 7 presents a description of environmental controls and monitoring to be performed during Facility demobilization and restoration.
- Section 8 presents a discussion of the anticipated schedule for Facility demobilization and restoration, including a conceptual description of the currently anticipated sequencing of activities.
- Section 9 provides a list of references cited in this plan.

Tables, figures, and appendices are attached to the end of this plan.

## **2. Background Information**

### **2.1 Facility Siting**

In February 2002, the EPA issued a Superfund Record of Decision (ROD) calling for the removal and disposal of PCB-containing sediments meeting certain criteria from the Upper Hudson River (EPA 2002). In the ROD, EPA stated that it would select a location(s) for the sediment processing/transfer facility(ies) to be used to implement the remedy. Prospective locations for a sediment processing/transfer facility were evaluated during the EPA siting process. In June 2005, EPA announced the final site selection for the proposed sediment processing/transfer facility. EPA selected the Energy Park/Longe/New York State Canal Corporation site in Fort Edward, New York, as the location for the sediment processing/transfer facility (Ecology and Environment, Inc. [E&E] 2004a).

### **2.2 Facility Location and Setting**

The properties selected by EPA for construction and operation of the Facility itself consist of three main parcels – the Energy Park and Longe parcels (EP/L parcels) and a parcel adjacent to the Champlain Canal between Lock 7 and Lock 8 (the former NYSCC parcel). The EP/L parcels are both owned by WCC. As noted above, the former NYSCC parcel was taken by EPA in 2008 under authority of CERCLA and in accordance with the Declaration of Taking Act. In addition, property owned by CPR was used to construct railroad tracks to connect the Facility to the CPR main rail line. Figure 2-1 shows the approximate locations of the EP/L, former NYSCC, and CPR property parcels overlain on a 2013 aerial photograph of the constructed Facility. Figure 2-2 shows these parcels overlain on a June 2006 aerial photograph depicting conditions prior to construction of the Facility.

The Facility's northern border includes vacant land that is also owned by WCC. The Facility is bordered on the west by the CPR rail line. The Facility's southern boundary is adjacent to residential areas. The Champlain Canal extends along the Facility's eastern boundary. Land east of the canal contains a golf course, private residences, and vacant or agricultural land.

A brief summary of the known historical uses of the EP/L, former NYSCC, and CPR properties is provided below.

- EP/L Parcels: The Energy Park parcel comprises approximately 51 acres, and the Longe parcel comprises approximately 28 acres. The parcels are zoned for industrial use. Prior to construction of the Facility, the parcels had relatively flat topography and were predominantly open land, with trees and brush in some areas. Based on aerial photographs, the EP/L parcels were used for agricultural purposes dating back to

approximately 1947 and remained agricultural until approximately the latter 1980s to early 1990s. According to WCC, sand was mined from the parcels from the early 1990s to approximately 2000. Beginning in 2000, thermally treated soil was used as fill material for the mining excavations. In addition, the parcels were leased in 2000 for use as a cornfield for livestock feed.

- Former NYSCC Parcel: The former NYSCC parcel covers approximately 25 acres and is located between Locks 7 and 8 on the western side of the Champlain Canal. It contains two creeks that run in a general north-south direction, parallel to each other and to the Champlain Canal. Bond Creek forms the northwest property boundary for the length of the parcel. The easternmost creek (referred to as the Lock Diversion Channel) is an overflow channel initiating above Lock 8 on the Champlain Canal. Prior to construction of the Facility, this parcel was predominantly forested, with some maintained areas covered in grass. Thick brush and trees existed on the western side of the parcel. A clearing was located in the northeast portion of the property.
- CPR Property: The CPR rail line parcel adjoins the Facility along its western edge and is owned by Delaware & Hudson Railway Corporation, a subsidiary of CPR. It comprises approximately 14 acres. A rail line extends through the entire length of the property and is actively used for both freight and passenger service.

Additional details regarding the topography and environmental settings for the EP/L and former NYSCC parcels are provided in the *Hudson River PCBs Superfund Site Facility Siting Report* (EPA 2004a) and the *Hudson River Superfund Site Facility Siting Data Summary Report, Site-Specific Field Investigations of the Final Candidate Sites Facility Siting Data Summary Report* (E&E 2004b).

### **2.3 Sediment Processing Facility Components**

The Facility was constructed between April 2007 and May 2009, and commissioned prior to the start of Phase 1 dredging operations in 2009. Several modifications and upgrades were made to the Facility after completion of Phase 1 to improve productivity, reliability, and redundancy to better support Phase 2 dredging operations.

In general, the Facility construction activities included:

- Clearing, grubbing, and grading of existing soils at the property, including stockpiling excess soil materials at the Facility (see Figure 1-2);

- Installation of more than 68,000 cubic yards (cy) of structural fill to establish necessary foundation and grades for sediment processing areas, Facility roads, the rail yard, and the stormwater collection system;
- Installation of more than 39 acres of HDPE FML beneath PCB handling areas;
- Installation of more than 11,000 feet of HDPE stormwater drainage piping;
- Installation of more than 34 acres of asphalt and concrete pavement for haul roads, material staging areas, parking, and work areas in the exclusion zone (i.e., the area where PCB-containing sediments have been processed, handled, and staged – see Figure 1-2);
- Construction of three concrete-lined stormwater basins to collect stormwater runoff from sediment handling areas;
- Installation of more than 4,000 feet of double-walled HDPE stormwater force main piping;
- Construction of more than 7 miles of railroad track and rail yard support features, including on-site repair tracks, two controlled switches to the main rail line, signals and controls tied to the main rail line, a rail support building, a rail scale, and inspection roads;
- Widening of the Champlain Canal by approximately 65 feet;
- Construction of an approximately 1,500-foot barge unloading area (the unloading wharf) and a work/maintenance wharf (the work wharf) along the Champlain Canal;
- Construction of an approximately 41,000-square-foot (sf), 40-foot-high building (the dewatering building) to house 12 custom-built plate-and-frame filter presses;
- Construction of an approximately 27,000-sf building to house a 2 million-gallons-per-day (mgd) WTP;
- Construction of two enclosures for the staging of dewatered filter cake (the filter cake staging enclosures);
- Construction of a 34.5-kV substation, 6 unit substations, and more than 6,000 feet of electric duct banks to provide power throughout the Facility;



## Phase 2 Sediment Processing Facility Demobilization and Restoration Plan

Hudson River PCBs Superfund Site

- Connection to the Village of Fort Edward water supply and installation of more than 14,000 feet of potable water supply piping;
- Installation of approximately 26,000 linear feet of fence and security gates;
- Installation of concrete foundations, footings, and pads to support processing equipment and tanks;
- Installation and commissioning of sediment processing equipment, tanks, pumps, piping, valves, and instrumentation to process and dewater the dredged sediments and debris; and
- Construction of administration and maintenance areas with parking, decontamination, and support facilities.

The Facility consists of the following major areas/components:

- Waterfront/barge unloading areas
- Size separation area
- Thickening/dewatering area
- Material staging areas
- Rail yard loading platform (Track #7)
- Rail yard
- Facility roads
- Flexible membrane liner
- Stormwater management system
- WTP
- Decontamination area
- Administration area
- Utilities

Figure 1-2 shows the major areas/components at the Facility.

Brief descriptions of the major Facility areas/components are provided below.

### **2.3.1 Waterfront/Barge Unloading Areas**

The approximately 1,500-foot-long waterfront area along the Champlain Canal consists of two unloading areas (the south and north unloading wharves) and a work wharf. The unloading wharves are used for mooring dredged material transport barges and unloading sediment from those barges. The work wharf is a support area located outside of the exclusion zone and south of the unloading wharves.

The Champlain Canal was widened by approximately 65 feet to facilitate construction of the waterfront area. A rip-rap revetment was constructed along the embankment at the limits of the widened canal. The wharf and steel walkway structures constructed along the waterfront are supported by concrete-filled, rock-socketed, steel pipe piles.

The surfaces of the unloading and work wharves include reinforced concrete slabs supported on steel decking with structural steel framing. Spill plates bridge the gap between the dredged material transport barges in the canal and the unloading wharves. Two Sennebogen unloaders with level-cut closed clamshell buckets are used to unload sediment and debris from the barges. A winch and fender system on the waterfront structure is used to move barges along the wharf.

South of the work wharf, also outside the exclusion zone, is a gravel-covered material laydown area that is used for staging project equipment and materials.

### **2.3.2 Size Separation Area**

The size separation area spans more than 6 acres along the waterfront adjacent to the unloading wharves. Two equipment plants in this area (a South Plant and a North Plant) are used to separate debris and coarse-grained dredged sediments from fine-grained sediments using screens and hydrocyclones. The remaining fine-grained sediments are mixed with water into a slurry that is pumped via an HDPE slurry force main to the thickening/dewatering area (see Section 2.3.3).

Major equipment at the size separation area includes: several material screens (a trommel screen, a vibratory dewatering intermediate screen, a triple-deck scalping screen, double-deck screens, sand wheel screens, and a log washer screen); hydrocyclones; tanks (two 180,000-gallon glass-lined process water tanks, a 25,000-gallon steel sediment slurry tank, and a 15,000-gallon steel hydrocyclone overflow tank); slurry pumps; water pumps; steel; HDPE; and PVC piping, and instrumentation. A hydrocyclone pump station is located in an approximately 12-foot deep concrete pit at the size separation area.

The size separation area is paved with asphalt and is underlain by an HDPE FML (see Section 2.3.8). Stormwater that falls on the size separation area is conveyed by surface flow to the west to an asphalt-lined drainage swale that discharges into the waterfront stormwater basin (see Section 2.3.9).

Concrete foundations, footings, and pads support the processing equipment and tanks. A concrete pipe trench is located west of the hydrocyclone pump station and carries piping used to convey water and slurry to and from the size separation area.

### **2.3.3 Thickening/Dewatering Area**

The sediment slurry produced in the size separation area is pumped through more than 5,000 feet of HDPE piping to the thickening/dewatering area. In the thickening/dewatering area, two approximately 75-foot-diameter gravity thickener tanks in conjunction with a polymer feed system are used to concentrate the sediment slurry. The concentrated sediment slurry is then pumped to 12 plate-and-frame filter presses located inside an approximately 41,000-sf building with a concrete floor slab and foundation (the dewatering building) where the slurry is dewatered to produce dry filter cake. The filter presses are elevated approximately 12 feet above grade by a steel structure to allow the filter cake to drop into 40-cubic yard roll-off containers positioned under each filter press.

Water removed from the sediment slurry by the filter presses is conveyed by underground piping to an approximately 15-foot-deep concrete wet well (the recycle water collection wet well) located north of the dewatering building. Water collected in the recycle water collection wet well is pumped to an approximately 750,000-gallon, glass-lined water storage tank located in the northern portion of the thickening/dewatering area.

The thickening/dewatering area is paved with asphalt and is underlain by an HDPE FML (see Section 2.3.8). Concrete foundations, footings, and pads support the processing equipment and tanks. A concrete retaining wall was also constructed between the dewatering area and the North Access Road to the east.

### **2.3.4 Material Staging Areas**

Material staging areas in the central portion of the Facility are used to stage debris and coarse-grained materials (in the coarse material staging area) and dewatered filter cake (in the filter cake staging enclosures). Overall, the material staging areas cover more than 11 acres of the Facility. The material staging areas are paved with asphalt and are underlain by an HDPE FML (see Section 2.3.8).

The coarse material staging area is used to stage debris and coarse-screened solids transported by dump trucks from the size separation area. Six approximately 300-foot long concrete retaining walls were constructed in the northern portion of the coarse material staging area to separate materials and provide the necessary staging volumes.

The filter cake staging area includes two steel and fabric enclosures for staging of dewatered filter cake (see Section 2.3.3). The filter cake enclosures are outfitted with vapor-phase granular-activated carbon units to remove PCBs that could be released from the staged filter cake.

### **2.3.5 Rail Yard Loading Platform (Track #7)**

Debris and dewatered sediment are loaded into gondola rail cars on an approximately 7.3-acre concrete loading platform (the rail yard loading platform) located within the exclusion zone at the Facility. Approximately 2,500 linear feet of railroad tracks (designated as Track #7) are located in the central portion of the rail yard loading platform. Pre-cast concrete panels with rubber seals along the rails fill the spaces between the steel rails above the railroad ties. Stormwater that falls on the loading platform is conveyed to catch basins that drain to the Facility drainage system and discharge into the north stormwater basin or south stormwater basin (see Section 2.3.9).

### **2.3.6 Rail Yard**

Rail cars waiting to be loaded, or sets of rail cars waiting for departure from the Facility, are kept outside of the exclusion zone on holding tracks in the rail yard. The rail yard consists of Yard Tracks #1, #2, #3, #5, #9, #10 and Spur #8. These tracks include more than 30,000 linear feet of steel rails, railroad ties, and ballast. Two switches controlled by CPR connect Track #1 to the adjacent CPR main rail line. A support building is located in the southeastern portion of the rail yard. In addition, a rail scale used to weigh loaded gondola rail cars is located along Track #3 approximately 2,300 feet north of the Facility.

### **2.3.7 Facility Roads**

Facility roads were constructed to provide access throughout the Facility. The Facility roads include the Main Haul Road, North Extension Road, South Extension Road, North Access Road, South Service Road, and Rail Yard Access Road (see Figure 1-2). Culverts were constructed beneath the roads where they cross over waterways.

Within the exclusion zone, the roads have either asphalt or concrete pavement over compacted sub-base and sand layers that are underlain by a HDPE FML (see



Section 2.3.8). Roads outside the exclusion zone are constructed of asphalt over compacted sub-base.

The slurry force main and water piping that extends between the size separation area and the thickening/dewatering area is located on the south side of the Main Haul Road. Pre-cast concrete barriers were placed adjacent to the force main and a steel cover was placed over the top of the force main for protection.

In addition, as previously noted, Lock 8 Way was constructed from State Route 196 along the west side of the Champlain Canal to provide access to NYS&CC's Lock 8 and the Facility. The construction of Lock 8 Way included modifications to the intersection of an existing roadway (Newton Drive), installation of a temporary flashing light at the intersection, installation of a culvert under the roadway connecting the landowner's fields for livestock to traverse, construction of a temporary bridge over the NYS&CC Feeder Canal, and installation of a temporary platform and retaining structure protecting an existing dive culvert (at approximately Station 86+00) where the road narrows to a single lane. Lock 8 Way was constructed with several temporary features intended to serve only the life of the project; these must be addressed as part of the transfer of the improvements to the local municipality (see Section 1.4).

### **2.3.8 Flexible Membrane Liner**

The majority of the exclusion zone at the Facility has a geosynthetic liner containment system installed under the asphalt and concrete pavement surfaces. The profile of the containment system from bottom to top consists of a sand bedding layer, a non-woven geotextile, an HDPE FML, a non-woven geotextile, a sand drainage layer, a woven geotextile, a sub-base aggregate layer, and pavement courses (i.e., asphalt or concrete). The pavement cross-section and liner are sloped so water that infiltrates through or along the edges of the pavement is directed toward a sand drainage layer and then to 4-inch-diameter underdrain collection pipes above the HDPE liner that drain to monitoring/pump-out standpipes located at low points of the liner system.

### **2.3.9 Stormwater Management System**

A stormwater collection system was constructed throughout the Facility to capture stormwater that may come into contact with dredged sediments (Type I stormwater) and convey it to one of three stormwater retention basins (the north stormwater basin, the south stormwater basin, and the waterfront stormwater basin). This stormwater collection system includes a network of catch basins, manholes, HDPE piping, asphalt-lined drainage swales, and three stormwater basins. The stormwater retention basins are lined with concrete and an underlying geosynthetic membrane composite (i.e., HDPE FML). The Type I stormwater

collected at the Facility is held in the three stormwater retention basins before being pumped to and treated in the Facility WTP.

Non-contact stormwater (Type II stormwater) from outside the exclusion zone is conveyed to separate, vegetated retention basins also outside the exclusion zone.

### **2.3.10 Water Treatment Plant**

Water removed from dredged material transport barges, water produced during material separation and dewatering, and Type I stormwater are pumped to the WTP building for treatment prior to discharge to the Champlain Canal. The WTP consists of three identical treatment trains, each with a design capacity of 500 gallons per minute (gpm) for a total treatment capacity of 1,500 gpm or 2.1 mgd. Each WTP treatment train consists of an inclined-plate clarifier, two multi-media filters, four water-phase granular activated carbon adsorbers, bag filters, pumps, piping, valves, and instrumentation. Treated effluent from the WTP is conveyed via approximately 1,800 feet of HDPE piping to the Champlain Canal where it is discharged.

### **2.3.11 Decontamination Area**

The decontamination area at the facility includes a personnel decontamination station, a vehicle/equipment decontamination station, and a vehicle/equipment maintenance/staging area. The decontamination area is paved with asphalt and is underlain by an HDPE FML (see Section 2.3.8). Stormwater and water used for decontamination drain to a catch basin and are conveyed to the Facility drainage system for subsequent treatment in the WTP.

### **2.3.12 Administrative Area**

An administration area is located outside of the exclusion zone at the Facility entrance in the northern portion of the Facility. The administration area includes multiple office trailers, a gravel parking area, a guard house, and a material staging area.

### **2.3.13 Utilities**

A network of utilities was constructed at the Facility to provide power, water, and communications for Facility operations. Utilities constructed at the Facility include:

- An overhead 34.5-kV pole-mounted transmission line (owned by National Grid);
- A fenced 34.5-kV electrical substation located south of the dewatering building and outside of the exclusion zone;

- A network of underground electrical duct banks and manholes to distribute electrical conduit and fiber optic communication lines throughout the Facility;
- Unit substations and electrical switchgear units to step down and control power in the different areas of the Facility;
- Potable water supply piping connecting the Facility to the Village of Fort Edward water supply;
- Hydrants connected to the potable water supply piping at various locations throughout the Facility;
- Pole-mounted lights to illuminate exterior work areas;
- Sanitary sewer tanks located in the administration area and near the WTP building; and
- Chain link fencing and gates to secure the Facility and the exclusion zone.

#### **2.3.14 Fuel Storage**

There are no natural gas or propane transmission lines or storage tanks at the Facility. Fuel storage (i.e., diesel and gasoline) at the Facility includes only temporary above-ground storage tanks that are located within secondary containment and were mobilized by the dredging contractor and the Facility operations contractor to support their work activities. It is expected that similar fuel storage arrangements will occur during the Facility demobilization and restoration operations. The fuel and the storage tanks will be removed and demobilized from the Facility by those contractors at the completion of their respective operations.

#### **2.4 Summary of Previous Sampling Activities**

Between 2003 and 2009, both EPA's and GE's consultants conducted baseline characterization sampling activities at the Facility to define existing environmental conditions prior to construction and sediment processing. In addition, under the direction of EPA and the United States Army Corps of Engineers (USACE), investigation and removal activities were conducted on the former NYSCC parcel in 2007 and 2008 after buried dynamite was encountered there during Facility construction. Summaries of these activities and results are presented below.

### **2.4.1 Baseline Sampling Program**

In 2004, E&E completed a siting assessment of the EP/L and former NYSCC parcels on behalf of the EPA, which included collection and analysis of soil, groundwater, sediment, and surface water samples (E&E 2004b). In 2005, Blasland, Bouck & Lee, Inc. (BBL, now ARCADIS), on behalf of GE, performed Phase 1 assessments and baseline characterization sampling to further define existing environmental conditions at the EP/L and former NYSCC parcels prior to construction of the Facility (BBL 2006a,b). The 2005 characterization sampling included collection and analysis of soil, groundwater, sediment, and surface water samples. In addition, ARCADIS, on behalf of GE, collected groundwater samples in April 2007 and groundwater and surface water samples in April 2009. The baseline sampling activities and results are presented in the following reports:

- *Hudson River Superfund Site Facility Siting Data Summary Report, Site-Specific Field Investigations of the Final Candidate Sites* (E&E 2004b)
- *New York State Canal Corporation Baseline Characterization Data Summary Report* (BBL 2006a)
- *Energy Park/Longe Baseline Characterization Data Summary Report* (BBL 2006c)
- *Hudson River Sediment Processing Facility, Fort Edward, New York, Groundwater and Surface Water Sampling Data Summary Report* (ARCADIS 2009)

Baseline characterization samples were collected over the course of four sampling events, and analyzed for PCBs, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), organochlorine pesticides, metals/inorganic constituents, oil and grease, and low-level mercury. In each baseline event sampling report, the analytical results for each sample media were compared to corresponding New York State Department of Environmental Conservation (NYSDEC) screening criteria.<sup>5</sup> A brief summary of the baseline sampling results is provided below.

---

<sup>5</sup> The NYSDEC criteria used for comparison in the baseline sampling summary reports included: (1) the soil cleanup objectives and eastern USA background ranges (background levels) presented NYSDEC *Technical and Administrative Guidance Memorandum (TAGM) 4046: Determination of Soil Cleanup Objectives (RSCOs) and Cleanup Levels* (TAGM 4046; NYSDEC 1994); (2) the NYSDEC Technical & Operational Guidance Series Section 1.1.1 – Ambient Water Quality Standards and Guidance Values (TOGS 1.1.1) for water class GA (for fresh groundwater) and water class D (for fresh surface water); and (3) the *Technical Guidance for Screening Contaminated Sediments*

- Soil: PCBs were detected in four soil samples at concentrations ranging from 0.049 milligrams per kilogram (mg/kg) (in a subsurface soil sample collected at 6 to 8 feet below ground surface [bgs]) to 1.7 mg/kg (in a subsurface soil sample collected at 1 to 2 feet bgs). According to the baseline data summary reports, no VOCs or organochlorine pesticides were detected in soil samples at concentrations exceeding NYSDEC TAGM 4046 criteria. Three SVOCs (benzo(a)pyrene, dibenz(a,h)-anthracene, and phenol) were detected in soil samples at concentrations exceeding NYSDEC TAGM 4046 criteria. Multiple metals/inorganic constituents (arsenic, beryllium, calcium, chromium, copper, iron, magnesium, mercury, nickel, vanadium, and zinc) were detected in soil samples at concentrations greater than their respective background levels.
- Sediment: Sediment samples collected from Bond Creek, the tributary to Bond Creek, and the Lock Diversion Canal during the baseline events included detection of PCBs at concentrations less than NYSDEC criteria, ranging from 0.028 mg/kg to 0.22 mg/kg. None of the sediment samples collected from the Champlain Canal contained detectable concentrations of PCBs. Multiple metals (cadmium, chromium, copper, iron, manganese, mercury, nickel, and zinc) were detected in sediment at concentrations exceeding their respective Lowest Effect Level screening values in the NYSDEC's Technical Guidance for Screening Contaminated Sediments (TGSCS). The baseline sampling reports stated that chronic toxicity guidance values were exceeded in sediment for the pesticides alpha-Chlordane and Endosulfan. Detections of VOCs and SVOCs were all below their respective NYSDEC sediment screening criteria.
- Groundwater: PCBs were not detected in any groundwater samples collected during the baseline sampling events. Organochlorine pesticides detected at concentrations exceeding their respective groundwater standards included dieldrin and endrin. One VOC (chloroform) and one SVOC (bis 2-chloroethyl ether) were detected at concentrations greater than respective groundwater standards. Multiple metals and other inorganic constituents (antimony, chromium, iron, magnesium, manganese, and sodium) were reported at concentrations exceeding their respective groundwater standards. Oil & grease detections were reported in two groundwater samples.
- Surface Water: According to the baseline event sampling reports, no PCBs, VOCs, SVOCs, or organochlorine pesticides were detected in surface water samples at

---

(TGSCS) (NYSDEC 1999). Note: In 2010, the NYSDEC replaced TAGM 4046 with soil cleanup objectives outlined in 6 NYCRR Part 375-6.4 and Commissioner Policy CP-51 Soil Cleanup Guidance.

concentrations exceeding respective NYSDEC standards. Iron was the only metal/inorganic constituent detected in surface water samples at concentrations greater than applicable standards.

#### **2.4.2 Dynamite Investigation and Removal Activities**

In August 2007, buried dynamite was encountered on the former NYSCC parcel during construction of the Facility. Subsequently, under the direction of EPA and USACE and in coordination with the New York State Police (NYSP) Hazardous Devices Unit, a dynamite investigation was conducted to clear this parcel so that Facility construction could resume and be completed. The dynamite investigation and findings are described in the *Dynamite Investigation After Action Report for AOC-1, AOC-2 and AOC-3* (Malcolm Pirnie, Inc. 2009).

As part of the investigation, excavation was performed using an excavator outfitted with a blast shield and hand tools to identify and remove dynamite and dynamite residue. Recovered dynamite and dynamite residue were then moved by hand to an adjacent area and transferred to the NYSP. Due to the quantity of dynamite recovered, the NYSP elected to destroy the dynamite by burning it on the former NYSCC parcel rather than transporting it to an off-site disposal location.

Following NYSP standard procedures, a burn pit was excavated and wooden pallets were placed in the pit. The recovered dynamite was placed on the pallets, saturated with diesel fuel, and ignited using emergency road flares. Diesel fuel that was not absorbed by the dynamite or consumed by the fire remained in the burn pit.

After the dynamite investigation and burning activities were completed, EPA collected soil samples from the burn pit. The soil sampling results indicated the presence of diesel contamination as well as the presence of chemical constituents related to propellants. Based on these results, EPA excavated contaminated soil from the burn pit for subsequent off-site disposal, and post-excavation soil samples were collected for laboratory analysis. In addition, water samples were collected from the burn pit after a sheen was noticed on the surface of water in the pit. The analytical results for this sampling confirmed the presence of diesel-contaminated groundwater. EPA reported the findings to the NYSDEC and a spill number was opened (Spill Number 0806259).

Follow-up excavation activities were performed by EPA to remove additional soil from the burn pit until a clay layer was encountered underlying the pit. In addition, approximately 11,000 gallons of contaminated groundwater were removed from the burn pit excavation for off-site treatment and disposal. Additional soil and groundwater samples were then collected for laboratory analysis. The soil analytical results from this sampling were less than the NYSDEC residential cleanup objectives listed in 6 New York Codes, Rules and



**Phase 2 Sediment  
Processing Facility  
Demobilization and  
Restoration Plan**

Hudson River PCBs  
Superfund Site

Regulations (NYCRR) Part 375-6, and the groundwater analytical results were less than the groundwater quality standards listed in 6 NYCRR Part 703.5.<sup>6</sup>

Following soil removal activities, EPA spread approximately 50 pounds of Regenesis Solutions' Advanced Oxygen Release Compound (ORC Advanced®) over the exposed surface of the excavated burn pit to enhance in-situ aerobic biodegradation. The burn pit was then backfilled to restore grade. Subsequently, NYSDEC closed the assigned spill number.

In December 2008, EPA notified GE that the dynamite investigation was formally closed.

---

<sup>6</sup> Note that nitrobenzene was non-detect with a detection limit of 5 micrograms per liter (µg/L), which exceeds the NYSDEC groundwater quality standard of 0.4 µg/L.

### **3. Demobilization Plan**

#### **3.1 Overview of the Demobilization and Restoration Process**

Demobilization and restoration of the Facility will include a multi-step process that will generally involve:

- Facility decontamination within the exclusion zone where PCB-containing sediments have been processed, handled, and staged;
- Treatment and/or disposal of decontamination residuals;
- Sampling to verify that the items designated for sale, reuse, or salvage/recycling have been properly decontaminated and to determine appropriate disposition requirements;
- Disassembly of equipment, tanks, piping, structures, utilities, and materials that will not remain at the properties;
- Sale, reuse, salvage/recycling, and off-site disposal of equipment and materials;
- Post-demobilization environmental sampling; and
- Property restoration.

The remainder of this section presents a description of the process for decontaminating, sampling, and demobilizing the Facility. Section 4 presents a description of the anticipated disposition methods for equipment and materials removed from the Facility. Section 5 presents a description of environmental media sampling that will be implemented after termination of sediment processing activities and after Facility decontamination. Section 6 presents a description of the process for restoring the properties after Facility decontamination and demobilization. Section 8 presents a conceptual description of the currently anticipated schedule and sequencing of activities.

#### **3.2 General Facility Decontamination/Disposition Approach**

Throughout the demobilization process, GE will evaluate and determine the appropriate methods for decontamination and sampling of items and materials at the Facility based on the ultimate intended disposition of the items/materials. In general, as discussed further in subsequent sections, the decontamination/sampling approach will be as follows:



- Items/materials within the exclusion zone that have come into contact with PCB-containing materials, process water, or stormwater and that will remain in place will be decontaminated and sampled.
- For items/materials within the exclusion zone that have come into contact with PCB-containing materials, process water, or stormwater and that will be removed, GE will, prior to decontamination, evaluate if the items/materials have potential value for reuse or salvage/recycling. Those items/materials that are determined to have potential value for reuse or salvage/recycling will be decontaminated and sampled; otherwise they will be designated for off-site disposal.
- For items/materials within the exclusion zone that have come into contact with PCB-containing materials, process water, or stormwater and that will be designated for off-site disposal, GE will evaluate whether decontamination and sampling is needed. These items/materials will be managed through any combination of the following options:
  - These items/materials may be disposed of at a facility regulated under the Toxic Substances Control Act (TSCA) without decontamination or sampling.
  - These items/materials may be sampled without being decontaminated to determine the appropriate disposal requirements.
  - These items/materials may be decontaminated and transported off-site for disposal without the need for post-decontamination sampling if prior sampling results for a representative number of similar items indicate that the decontamination is effective.<sup>7</sup> In this case, these decontaminated items will be removed for off-site disposal at a Resource Conservation and Recovery Act (RCRA) Subtitle D landfill.
- Items/materials within the exclusion zone that have not come into contact with PCB-containing materials, process water, or stormwater and that will remain in place (e.g., utilities, building roofs, underground foundations, waterfront structural steel, rip-rap revetment materials, etc.) will not require decontamination or sampling, except that

---

<sup>7</sup> The approach for not sampling decontaminated items that are subject to off-site disposal is based on the extensive amount of data generated from previous decontamination and sampling activities performed from 2012 through 2014 as part of the project. During this time, approximately 2,100 wipe samples were collected after washing of equipment and other items used in the exclusion zone during Facility operations. The analytical results for that sampling indicated that 97% of the samples were “non-detect” for PCBs and that 99.95% of the samples had results less than 10 micrograms per 100 square centimeters ( $\mu\text{g}/100\text{ cm}^2$ ). Only one wipe sample from the approximately 2,100 wipe samples collected had a PCB concentration greater than 10  $\mu\text{g}/100\text{ cm}^2$  after cleaning.

limited wipe sampling at a reduced frequency may be conducted for certain such items to confirm that they are not contaminated.

- Items/materials within the exclusion zone that have not come into contact with PCB-containing materials, process water, or stormwater and that will be removed will not require decontamination or sampling and will be designated for unrestricted use or designated for non-hazardous solid waste disposal, except that limited wipe sampling at a reduced frequency may be conducted for certain such items to confirm that they are not contaminated.
- With the exception of the WTP building, items/materials that are located outside the exclusion zone (which have not come into contact with PCBs) will not require decontamination or sampling and will be left in place or designated for unrestricted use or designated for non-hazardous solid waste disposal (as appropriate). Limited sampling will be performed on the interior and exterior surfaces of the WTP building.

Where sampling is performed, the sample results will be compared with the applicable criteria described in the remainder of Section 3 to determine if the item/material will remain in place, be designated for unrestricted use, or be subject to additional decontamination or disposal. Sample results will be reviewed with EPA and the applicable property owner to determine whether certain items will remain in place or be removed. GE may propose, for EPA review and approval, the beneficial use of any materials removed as part of the Facility demobilization, as described in subsequent sections of this plan. Items/materials that are removed from the Facility will be characterized and designated for disposition as described in Section 4.2.

### **3.3 Facility Decontamination Criteria**

Decontamination activities will be performed throughout the exclusion zone where PCB-containing sediments have been processed, handled, and staged. Equipment, vehicles, piping, tanks, structures, and other surfaces in the exclusion zone that have come into contact with PCB-containing materials, process water, or stormwater and that are not designated for off-site disposal at a TSCA facility will be decontaminated and/or sampled as outlined in Section 3.2. As also noted in Section 3.2, wipe sampling may also be conducted for certain items in the exclusion zone that have not come into contact with PCB-containing materials and are not designated for off-site TSCA disposal to confirm that they are not contaminated, but this sampling will be performed at a reduced frequency.

Decontamination activities will be conducted in general accordance with Table 5-1 from the *Phase 2 Facility Operations and Maintenance Plan for 2013* (2013 Facility O&M Plan; Parsons 2013), which was previously reviewed and approved by EPA and has been incorporated by reference into subsequent Facility O&M Plans, including the 2015 Facility

O&M Plan (Parsons 2015). This table (included as Appendix B to this plan) describes the anticipated decontamination and sampling protocols, PCB decontamination criteria, and disposition options for various materials and types of equipment and structures used at the Facility.

Residual PCB concentrations remaining following decontamination activities will be evaluated in consultation with EPA and the property owners. Protective clean up criteria will be developed that consider baseline environmental conditions and future property use.

A general description of the decontamination procedures to be implemented at the Facility is presented below, followed by descriptions of specific decontamination and removal approaches for certain Facility components.

### **3.4 General Decontamination Procedures**

In general, decontamination procedures will include the removal of gross sediments/solids (e.g., using shovels, brooms, and other tools and equipment as necessary) and a thorough water wash/flush (and scrubbing, if necessary) to remove visible sediments/solids. Decontamination will include pressure washing and water flushing. Depending on the item and the extent of sediment on the surface, hot water may be used for pressure washing. To the extent practicable, water used for decontamination will be obtained from water that has been treated using the WTP. However, it is expected that the Facility potable water supply and water from the Champlain Canal will also be used for flushing and pressure washing on an as-needed basis to supplement the water treated in the Facility WTP.

After cleaning, items will generally be sampled to verify that they have been properly decontaminated (or the items will be removed for off-site disposal without sampling), as required by the procedures described in Section 3.2. The post-decontamination sampling will include the collection of wipe samples and core samples. Table 3-1 describes the sampling methods and proposed sampling frequencies for the various items/materials. As outlined in Table 3-1, after decontamination, wipe sampling will be performed on equipment, structures, and other items that are intended for potential reuse or designated for salvage/recycling. However, as indicated in Section 3.2, decontaminated items that are not intended for potential reuse or salvage/recycling may be designated for off-site disposal without post-decontamination sampling (assuming that prior sampling results for a representative number of similar items indicate that the decontamination is effective). In that case, these decontaminated items will be transported for off-site disposal at a RCRA Subtitle D landfill. In general, painted and coated metal surfaces associated with equipment, structures, and other items have only incidentally been in contact with PCBs during Facility operations. As a result, verification that painted/coated metal surfaces have been

adequately decontaminated will be based on wipe sampling, and sampling of paint and other coatings on metal surfaces will not be performed.

The post-decontamination samples will be analyzed for PCBs in accordance with Method GEHR8082<sup>8</sup> following the procedures presented in the *Phase 2 Sediment Processing Facility Demobilization and Restoration Field Sampling Plan* [Demobilization FSP; ARCADIS 2015b] included as Appendix A to this report). Solid samples will also be analyzed for percent moisture and analytical reports will be reported on a dry-weight basis.

Post-decontamination sampling results will be compared with the PCB decontamination criteria in Appendix B or other applicable criteria for allowing material to be left in place or reused on-site, as described in subsequent sections of this plan, to determine appropriate disposition requirements. If post-decontamination sampling results indicate that PCB concentrations exceed those criteria, the items will be subject to additional decontamination or will be removed for off-site disposal. Additional decontamination, if implemented, will include re-cleaning with a power wash, surface scarification, or other appropriate removal methods. In that case, a subsequent round of sampling will be performed after additional decontamination efforts have been completed and the sample results will be compared with the applicable PCB decontamination criteria.

Disposable items and items to be removed that have contacted PCB materials and are designated for off-site disposal and that have not been subject to decontamination or sampling will be removed and staged for subsequent off-site disposal at a TSCA-regulated disposal facility. Alternatively, as indicated in Section 3.2, sampling may be performed on these items to determine whether the items can be disposed of at a non-TSCA facility.

Solids generated during the decontamination activities will be collected and dewatered or otherwise stabilized for off-site disposal. Wash water and decontamination fluids generated during the decontamination activities will be collected and conveyed to the Facility WTP and treated for discharge or reuse during decontamination.

---

<sup>8</sup> Method GEHR8082 analyses will be performed following the procedures in the *Phase 2 Remedial Action Monitoring Quality Assurance Project Plan* (Phase 2 RAM QAPP; Anchor QEA and ESI 2012), with the following exceptions: (a) Performance Evaluation samples will not be prepared and analyzed; instead, matrix spike/matrix spike duplicate samples spiked with only Aroclor 1242 will be prepared and analyzed at a frequency of five percent of each matrix (i.e., one for every 20 samples); and (b) laboratory control spike samples will consist of only Aroclor 1242 instead of a combination of Aroclor 1221 and Aroclor 1242.

To the extent possible, the existing stormwater management system (i.e., catch basins, drainage swales, piping, stormwater basins, and pump stations) will be used to collect, contain, and convey the wash waters. Vacuum trucks or other pumps will be used to collect wash water and solids during the cleaning of sumps, pits, trenches, catch basins, and manholes.

The existing vehicle/equipment decontamination station may be used to decontaminate smaller items and moveable equipment in accordance with the 2013 Facility O&M Plan. If vehicles are required to leave the exclusion zone during decontamination operations, the vehicle/equipment decontamination station will also be used to rinse tires and wheel wells with water. If a vehicle is observed to contain high levels of sediment/debris or PCB-containing materials, it will be thoroughly pressure- or steam-washed. Rinsate from the decontamination station will be collected in the stormwater drainage system, which is routed to the north stormwater basin prior to treatment in the Facility WTP.

During the decontamination and sampling process, each equipment item and appurtenance sampled will be tagged for documentation and tracking purposes. Equipment tags will reference a distinct tracking identification (ID) number generated for each item, the date when the item was decontaminated, the date when the item was sampled, and other equipment-specific information. The equipment tracking ID number will be recorded in the sampling field notes and sample tracking database to aid in analytical data review and tracking of the decontamination status.

Items that have been decontaminated will be marked and, if appropriate, relocated to a designated staging area pending subsequent disposition. The contractor performing the decontamination activities will be required to prepare and maintain documentation recording the decontamination for each item. This documentation will include descriptions of the decontamination activity, decontamination status, decontamination sampling activities, the results of any decontamination sampling, and the disposition requirements. Items will not be removed from the exclusion zone until the Construction Manager reviews the equipment decontamination documentation and certifies that all phases of the decontamination process have been completed for that item.

### **3.5 Decontamination and Removal of Equipment, Tanks, and Piping**

Equipment, tanks, piping, pumps, supports, and associated appurtenances within the exclusion zone that have come into contact with PCB-containing materials, process water, or stormwater will be decontaminated prior to demobilization, where required by the procedures outlined in Section 3.2.

In addition, prior to demobilization, moveable equipment (e.g., Sennebogen unloaders, trucks, skidsters, front-end loaders) within the exclusion zone will be decontaminated in

accordance with the 2013 Facility O&M Plan. The moveable equipment items will be decontaminated at the existing vehicle/equipment decontamination station or at another designated location. Decontamination of the moveable equipment will be performed through removal of gross sediments/solids (i.e., using shovels, brooms, and other tools and equipment as necessary) and a thorough water wash/flush, with scrubbing if necessary. After decontamination, the moveable equipment will be sampled as described below.

After Phase 2 dredging has been completed and after all dredged sediment and debris have been processed for the selected processing system components, water will be flushed through that portion of the processing system by recirculating the water for a minimum of 1 to 2 hours. After the flushing, tanks (i.e., sediment slurry tank, hydrocyclone overflow tank, backwash holding tank, gravity thickener tanks, and process/recycle water tanks) will be drained and residual sediments/solids will be removed with shovels, brooms and vacuum trucks before being washed.

The interior and exterior surfaces of equipment, tanks, piping, pumps, supports, and associated appurtenances will be decontaminated as described in Section 3.4 (i.e., through removal of gross sediments/solids using shovels, brooms, and other tools and equipment as necessary, and a thorough water wash/flush with scrubbing, if necessary), unless it is designated for disposal. Certain equipment items, piping, and pumps will need to be disassembled to allow access to wash and remove sediments/solids from the interior surfaces. Large stationary equipment (e.g., the trommel) and tanks will likely be washed and decontaminated in place after gross sediment/solids removal. Smaller equipment, piping, and appurtenances may be dismantled and transferred to a dedicated cleaning area for decontamination.

Following decontamination, moveable equipment, stationary equipment, tanks, pumps, and associated appurtenances that will be reused or designated for salvage/recycling will be sampled and the sampling results will be compared with the PCB decontamination criteria in Appendix B. Wipe samples will be collected from painted and non-painted surfaces following the procedures in the Demobilization FSP (Appendix A). Table 3-1 describes the proposed sample types and sampling frequencies.

Equipment, piping, tanks, and related appurtenances will be disconnected, disassembled, dismantled, and removed. Hydraulic oils, batteries, and other hazardous materials (as applicable) will be removed from equipment that is subject to disposal.

Decontaminated equipment, tanks, and related appurtenances designated for unrestricted use (see Appendix B) will be sold or otherwise transferred to others for reuse or will be reused by GE at another location. If options for sale or reuse are not available for such an item, the item will be transported to an off-site salvage/reclamation facility or disposed of at

a solid waste landfill. Items that cannot be decontaminated for unrestricted use (see Appendix B) will be transported to an appropriate off-site disposal facility.

Steel piping will be flushed or cleaned to remove visible solids and wipe tested. If wipe sampling results are less than 10 micrograms per 100 square centimeters ( $\mu\text{g}/100\text{ cm}^2$ ), the steel piping will be removed and transported to an off-site salvage/reclamation facility. If the post-decontamination sampling results indicate that PCB concentrations exceed the 10  $\mu\text{g}/100\text{ cm}^2$  criterion, the items will be subject to additional decontamination/sampling or will be removed for off-site disposal as described in Section 4.2.

After flushing to remove visible solids, HDPE piping will be removed and, if necessary, reduced in size (e.g., cut, shredded, crushed, or otherwise processed) to facilitate transport to an off-site disposal facility or a recycling facility. If the HDPE material is proposed for off-site recycling, sampling will be performed to verify that the material can be designated for unrestricted use. For HDPE materials destined for off-site disposal, sampling may be performed to determine the appropriate disposal facility. Sampling of the HDPE material will consist of either wipe sampling of whole pipe sections or bulk sample analysis of shredded material, depending on the selected method of size reduction.

### **3.6 Decontamination and Removal of Structures**

As described in Section 1.4, the plan assumes that the dewatering building and WTP building structures and concrete floor slabs will remain in place, but that interior, non-structural and processing related items will be removed. In addition, the plan assumes that the filter cake staging enclosure structures will be removed, unless an alternate agreement to leave the structures in place is reached with the property owner.

The dewatering building will be decontaminated and sampled as part of the demobilization process. The WTP building, which has not come into contact with PCB-containing sediment, will be cleaned, and limited sampling will be performed to verify that PCB concentrations are below the criteria listed in Appendix B. The rail yard support building, which is located outside of the exclusion area and has not come into contact with PCB-containing sediment, will not be subject to decontamination or sampling.

Structure surfaces identified for decontamination will be decontaminated as described in Section 3.4 (i.e., through removal of gross sediments/solids and a thorough water wash/flush with scrubbing, if necessary). The fabric membrane of the filter cake staging enclosures will not be subject to decontamination or sampling, but instead will be sent for off-site disposal, unless an alternate agreement to leave the structures in place is reached with the property owner.



Underground piping beneath the dewatering building will be flushed with water to remove visible solids, and the entire length of that underground piping will then be grouted with flowable fill and abandoned in place. In addition, after the WTP is taken out of service, the entire length of the underground WTP discharge HDPE piping to the Champlain Canal will be grouted with flowable fill and abandoned in place and the discharge structure at the canal will be removed followed by restoration of the bank.

Following decontamination, the interior and exterior surfaces of the dewatering building will be sampled and the results will be compared with the PCB decontamination criteria in Appendix B. Wipe samples will be collected from painted and non-painted metal surfaces. Core samples will be collected from the concrete floor slabs inside the dewatering building and from the concrete and asphalt pavement surface inside the filter cake staging enclosures. Table 3-1 describes the proposed sample types and sampling frequencies. The wipe samples and core samples will be collected following the procedures in the Demobilization FSP (Appendix A).

Salvageable items removed from the structures may be sent off site for reuse or recycling (as applicable). Non-salvageable items (e.g., insulation, drywall, filter cake enclosure fabric, etc.) and items that cannot be decontaminated will be removed and transported to an appropriate off-site disposal facility.

### **3.7 Decontamination and Removal of Asphalt and Concrete Materials**

Asphalt and concrete surfaces within the exclusion zone that have come into contact with PCB-containing materials, process water, or stormwater will be decontaminated and sampled as part of the demobilization process, as provided in Section 3.2. As described in Section 2.3, asphalt and concrete pavement were installed at the Facility for haul roads, material staging areas, parking, and work areas in the exclusion zone. In addition, sumps, pits, trenches, foundations, housekeeping pads, catch basins, and manholes at the Facility are constructed with concrete.

As described in Section 1.4, Facility roads (the Main Haul Road, North Extension Road, South Extension Road, North Access Road, South Service Road, and Rail Yard Access Road) and all underlying utilities, stormwater conveyance systems, and supporting materials will remain in place. The culverts along these roads will also remain in place unless the property owners agree that the culverts should be removed and so advise GE. In addition, asphalt and concrete pavement associated with the material staging areas, decontamination area, dewatering/thickening area, size separation area, and rail yard loading platform, as well as all underlying materials, will remain in place (provided that they can be adequately decontaminated). The pre-cast concrete panels along Track #7 will be removed. Concrete pits, trenches, pump stations, and underlying materials will be



decontaminated and remain in place and be filled to match surrounding grade; however, the concrete base of pits, trenches, and pump stations will be perforated to allow water drainage and the hydrocyclone pump station, the recycle water wet well, and stormwater pump station wet wells will be removed to a depth of 2 feet below ground surface prior to filling. Concrete bin walls will remain in place, provided that they can be decontaminated. Above-grade portions of foundations and supports in the size separation area and dewatering/thickening area will be removed, except that the concrete pads for the gravity thickeners and water tanks will remain in place after protruding steel is cut off at grade. The below-grade portions of foundations and supports in these areas will remain in place.

The asphalt and concrete surfaces in the exclusion zone will be decontaminated as described in Section 3.4 (i.e., through removal of gross sediments/solids and a thorough water wash/flush with scrubbing, if necessary). Following decontamination, asphalt and concrete surfaces will be sampled and the sampling results will be compared to the PCB decontamination criteria in Appendix B. Table 3-1 describes the proposed sample types and sampling frequencies. The sampling will include the collection of pulverized core samples from asphalt or concrete surfaces following the procedures in the Demobilization FSP (Appendix A). Figure 3-1 shows proposed core sample locations. If the sampling results indicate that PCB concentrations are greater than 1 mg/kg, additional sampling may be performed to further delineate the impacted area for subsequent decontamination or removal. As summarized in Table 3-1, core samples will also be collected from in-place concrete/asphalt foundations, pads, and below-grade structures and bulk composite samples will be collected from concrete and asphalt that is removed, crushed, and placed in staging piles (i.e., associated with above-grade foundations, pads, pavement, and other areas within the exclusion zone) (these sampling locations are not shown on Figure 3-1).

As part of the decontamination of the rail yard loading platform, the pre-cast concrete panels,<sup>9</sup> steel rails, and rubber seals along Track #7 will be decontaminated to remove any visible sediment. The pre-cast concrete panels will then be removed and the underlying ballast and railroad ties will be visually inspected to confirm that visible sediment is not present below the concrete panels. After decontamination, pulverized core samples will be collected from the pre-cast concrete panels and wipe samples will be collected from the steel rails along Track #7 as described in Table 3-1. If the sampling results indicate that the pre-cast concrete panels and steel rails can remain in place, the pre-cast concrete panels will be re-set along Track #7. If sampling results indicate that the pre-cast concrete panels, steel rails, ties, and/or underlying materials require removal, they will not be replaced.

---

<sup>9</sup> As described in Section 2.3.5, the pre-cast concrete panels have rubber seals along the rails to fill the spaces between the steel rails above the railroad ties.

Asphalt and concrete materials with PCB concentrations of 1 mg/kg or less will be removed or left in place depending on the agreement with the property owner (see Section 1.4 for assumptions regarding asphalt and concrete surfaces that will remain in place). At a minimum, concrete surfaces (and underlying geotextile and FML materials) associated with the stormwater retention basins and asphalt within lined drainage swales will be removed.

Removed asphalt and concrete materials with PCB concentrations of 1 mg/kg or less will be available for unrestricted use, and will be crushed, placed in staging piles, and designated for beneficial use as a substitute for conventional aggregate in accordance with 6 NYCRR Part 360-1.15(b). Beneficial use may include the use of the materials on-site as fill during property restoration requirements or transport of the materials off-site for beneficial use. If a market is not identified for the beneficial use of the removed asphalt/concrete material, the materials will be used for on-site fill or transported for disposal at a permitted off-site disposal facility.

If the core sampling results indicate that PCB concentrations are greater than 1 mg/kg but less than a criterion to be specified by EPA for allowing material to be left in place or reused on-site, the concrete/asphalt will be left in place or will be removed and crushed for use as on-site fill.

If the core sampling results indicate that PCB concentrations in a given area(s) are greater than 1 mg/kg *and* greater than the criterion to be specified by EPA for allowing material to be left in place or reused on-site, the concrete/asphalt will be removed and transported for off-site disposal, subject to additional decontamination (e.g., surface scarification or milling).

### **3.8 Decontamination and Removal of Stormwater Drainage Piping and Structures**

Stormwater HDPE drainage piping and associated catch basins and manholes in the exclusion zone will be cleaned of accumulated sediment and debris as part of the demobilization activities. As described in Section 8, the stormwater drainage system will be one of the last items decontaminated in each area of the site because it will need to be maintained to collect and convey stormwater runoff from areas that have not been decontaminated and it will be used to collect and convey decontamination wash water for treatment in the WTP.

A two-phase decontamination approach will be performed for the stormwater HDPE drainage piping and associated catch basins/manholes in the exclusion zone.

The initial decontamination phase will be performed to allow for dewatering of solids removed from the drainage structure before the sediment processing equipment is taken offline. The initial decontamination phase will consist of the gross removal of solids and

debris from the drainage structures and from the roadways and pavement areas surrounding the stormwater drainage structures, following by flushing of the stormwater drainage structures and piping with water. The stormwater HDPE drainage piping will be flushed using a pressurized water snake system, and the interior surfaces of catch basins/manholes will be flushed with water. Gross sediments/solids will be removed with shovels, brooms, pumps and vacuum trucks from sand traps in catch basins/manholes before being washed. Wash water will be collected and treated in the Facility WTP. Solids generated during flushing activities will be collected and dewatered using the Facility processing equipment or otherwise stabilized for off-site disposal.

A final decontamination phase will be performed after other areas in the vicinity have been decontaminated as described in the sequence presented in Section 8.2. The final decontamination phase will include additional water flushing of the stormwater drainage structures and piping as described above, as well as removing water from the underdrain system,<sup>10</sup> by pumping down at the monitoring points/pump-out standpipes. Wash water and water removed from the underdrain system will be collected and treated in the Facility WTP. Solids generated during flushing activities will be collected and dewatered or otherwise stabilized for off-site disposal.

After the final decontamination phase, wet-weather stormwater sampling will be performed to document whether PCBs are detected in the stormwater that drains through the system. Two wet-weather stormwater sampling events will be performed to verify the sampling results. During each sampling event, stormwater samples will be collected from each stormwater outfall pipe that discharges to the south and north stormwater basins and submitted for PCB analysis.

If the stormwater sampling results indicate that PCB concentrations are not detected above the substantive effluent limit for PCB discharges from the Facility<sup>11</sup> during both sampling events, the HDPE stormwater drainage piping and associated structures will be left in place (if agreed upon with the property owner – see Section 1.4 for assumptions regarding items

---

<sup>10</sup> The underdrain system, which consists of 4-inch-diameter perforated HDPE collection piping surrounded by filter stone wrapped with geotextile, is located along the edges of the sand layer. The underdrain collection piping drains to monitoring/pump-out standpipes located at the low points of the FML where collected water is pumped out periodically as part of the Facility operations.

<sup>11</sup> The substantive effluent limits for discharges from the Facility are set forth in Substantive Requirements of State Pollutant Discharge Elimination System Permit for Potential Discharges to Champlain Canal (land cut above Lock 7), as provided by EPA to GE on January 7, 2005, and as summarized in the Phase 2 Performance Standards Compliance Plan Scope (EPA 2010).

that will remain in place). In that case, the HDPE liner at low points beneath the piping may be perforated to minimize the perching of water above the liner system.

If the stormwater sampling results indicate that PCB concentrations are detected above the substantive effluent limit for PCB discharges from the Facility during either sampling event, an evaluation will be performed to assess alternatives for additional decontamination, sampling, and/or removal. If this evaluation determines that the drainage system cannot be adequately decontaminated, the drainage system structures and piping will be removed and will not be replaced.

If removed, HDPE materials will be reduced in size (e.g., cut, shredded, crushed, or otherwise processed) as necessary to facilitate transport to an off-site disposal facility or a recycling facility. If the HDPE materials are proposed for off-site recycling, sampling will be performed to verify that the materials can be designated for unrestricted use. For HDPE materials destined for off-site disposal, sampling may be performed to determine the appropriate disposal facility. Sampling of the HDPE materials will consist of either wipe sampling of whole pipe sections or bulk sample analysis of shredded material, depending on the selected method of size reduction.

### **3.9 Decontamination and Removal of Stormwater Basins and Pump Stations**

After the stormwater drainage structures and piping are decontaminated, gross sediments/solids will be removed from the concrete surfaces of the stormwater basins and the concrete surfaces will be thoroughly washed. After washing, the concrete and geo-cell lining in the stormwater basins will be removed and crushed or disposed of. The crushed concrete will be sampled following the procedures in the Demobilization FSP (Appendix A). Table 3-1 describes the proposed sample types and sampling frequencies.

After concrete and geo-cell material removal, the underlying geotextile and FML will be removed from the stormwater basins. Prior to removal of the underlying geotextile and FML, but after the stormwater force main piping is flushed as described in Section 3.10, the stormwater pump stations will also be removed and decontaminated.

Crushed concrete materials with PCB concentrations of 1 mg/kg or less will be available for unrestricted use, will be placed in staging piles, and designated for beneficial use as a substitute for conventional aggregate in accordance with 6 NYCRR Part 360-1.15(b). If a market is not identified for the beneficial use of the concrete material, the material will either be used as on-site fill or disposed of at a permitted off-site disposal facility. The geo-cell, geotextile, and FML materials removed will be transported to an off-site disposal facility.

Crushed concrete materials with PCB concentrations greater than 1 mg/kg but less than a criterion to be specified by EPA for allowing on-site reuse will be used (after further crushing if necessary) as on-site fill or, if that is not practicable, transported for off-site disposal at a RCRA Subtitle D landfill (or other appropriate facility).

Crushed concrete materials with PCB concentrations greater than 1 mg/kg *and* greater than the criterion to be specified by EPA for allowing on-site reuse will be transported to an appropriate off-site disposal facility.

After removal of the concrete, geo-cell, geotextile, and FML materials, the resulting earth basins will remain in place and may be used to manage stormwater in the future. As part of property restoration (described in Section 6), the basins may be modified to accommodate final restoration grading and drainage needs. This may include alteration of the existing drainage system and/or converting the stormwater basins to be vegetated infiltration basins. After the final restoration requirements are known (see Section 6), detailed stormwater basin construction plans will be developed, including final grading plans and design (as required) in accordance with the NYSDEC Stormwater Design Manual (NYSDEC 2015).

### **3.10 Decontamination and Abandonment of Stormwater Force Main Piping**

The stormwater force main HDPE double-walled piping between the basins and the WTP will be flushed with water before the stormwater pump stations are removed. After flushing, the underground double-walled HDPE piping will not be removed, but the ends of the piping will be grouted or otherwise plugged and abandoned in place.

### **3.11 Items Not in Contact with PCB-Containing Sediments**

Items that have not come into contact with PCB-containing materials, process water, or stormwater (e.g., items outside the exclusion zone, utilities, building roofs, seal water piping/pumps, underground foundations, waterfront structural steel, rip-rap revetment materials, railroad ballast, rails outside the exclusion zone, etc.) will be designated for unrestricted use and will not be subject to decontamination or sampling (except that, as noted in Section 3.2, limited wipe sampling may be conducted of certain such items within the exclusion zone to confirm that they are not contaminated).

These items will be removed or left in place depending on the agreement with the property owner (see Section 1.4 for assumptions regarding items that will remain in place). If removed, these items will be dismantled, disconnected, and sent off-site for re-use, salvage/recycling, or disposal.

### **3.12 Subsurface Sub-base Layer and Sand Layer**

As described in Section 2.3.8, sub-base stone and sand layers were installed under asphalt and concrete pavement surfaces and above the FML within the exclusion zone. In areas where substantial sections of overlying asphalt or concrete pavement are removed based on requests from the property owner and in areas where the full depth of overlying asphalt or concrete pavement is removed to address PCB concentrations, the underlying sub-base stone and sand layers will be sampled for PCBs. A representative number of subsurface samples will also be collected proximate to the drainage piping and structures. The proposed sampling of the sub-base stone and sand layers will include the collection of grab samples in accordance with the procedures described in the Demobilization FSP (Appendix A). Table 3-1 describes the proposed sample types and sampling frequencies. If necessitated by the sampling results, additional sampling may be performed in certain areas to further delineate the impacted material.

Sub-base stone and sand materials with PCB concentrations of 1 mg/kg or less will be removed or will be left in place depending on the agreement with the property owner (see Section 1.4 for assumptions regarding items/materials that will remain in place). At a minimum, road foundations (i.e., sub-base stone and sand layers with PCB concentrations less than 1 mg/kg as well as the underlying geotextiles and FML) on the WCC parcels will remain in place.

Removed sub-base stone and sand materials with PCB concentrations of 1 mg/kg or less will be considered available for unrestricted use, and will be placed in staging piles and designated for beneficial use as a substitute for conventional aggregate in accordance with 6 NYCRR Part 360-1.15(b). Beneficial reuse may include the use of the materials as fill at the Facility properties.

If the sampling results for a given area(s) indicate that PCB concentrations are greater than 1 mg/kg but less than a criterion to be specified by EPA for allowing material to be left in place or reused on-site, the material will be left in place or will be removed and used as on-site fill.

If the sampling results indicate that PCB concentrations in a given area(s) are greater than 1 mg/kg *and* greater than the criterion to be specified by EPA for allowing material to be left in place or reused on-site, the materials will be removed and transported to an appropriate off-site disposal facility.

### **3.13 Flexible Membrane Liner**

Where impervious surfaces (i.e., concrete and asphalt) remain, the associated geotextile and FML will also remain in place. Where impervious surfaces are removed, the geotextile and FML (where present) will be removed for off-site disposal, but sub-base stone and sand materials above the geotextile and FML may remain on-site if sampling confirms that the materials are suitable for unrestricted use (see Section 3.12).

### **3.14 Fuel Storage**

As described in Section 2.3.14, fuel storage at the Facility includes only fuel necessary to operate mobile equipment and vehicles (i.e., diesel, gasoline). The fuel is stored in temporary above-ground storage tanks that are located within secondary containment at the Facility. The fuel and associated storage containers were mobilized by the dredging contractor and the Facility operations contractor to support their work activities. It is expected that similar fuel storage arrangements will occur during the Facility demobilization and restoration operations. The fuel and the storage tanks will be removed and demobilized from the Facility by those contractors at the completion of their respective operations.

## **4. Equipment and Material Disposition**

### **4.1 Material Handling and Processing**

Removed equipment and materials will be segregated based on their decontamination status and final disposition destination. Staging areas will be established for the temporary placement of removed equipment and materials until final disposition. Separate staging areas may be established for the various disposition methods (i.e., beneficial use, sale/transfer, future use at another location, salvage/recycling, and off-site disposal). To the extent needed for final disposition, removed materials may also be separated based on type (i.e., equipment, metal, wood, geotextile, sand, aggregate, concrete, asphalt, plastic materials, and debris). Large stationary pieces of equipment, tanks, and structures will be left in place after decontamination until final disassembly, dismantlement, and removal from the Facility. The removed materials/items will be sized, as needed, for transport and/or to meet the requirements of the receiving party or facility.

### **4.2 Material Characterization**

Items/materials removed from the Facility will be characterized based on the results of applicable sampling performed as outlined in Table 3-1 and following the procedures in the Demobilization FSP (Appendix A). Additional characterization sampling/analysis may also be performed if warranted based on field conditions or the sample results and/or if required by the receiving facility(ies).

Removed items/materials outside the exclusion zone and other removed items/materials that have not come into contact with PCBs will be designated for unrestricted use or designated for non-hazardous solid waste disposal.

Removed items/materials from the exclusion zone that have come into contact with PCBs process water, or stormwater will be handled in accordance with the procedures described in Section 3.2. Specifically, such items/materials that have potential value for reuse or salvage/recycling will be decontaminated and sampled. Those items/materials that are not intended for potential reuse or salvage/recycling and are thus designated for off-site disposal may be: (1) disposed of at a TSCA-regulated disposal facility without decontamination or sampling; (2) sampled without prior decontamination to determine appropriate disposal requirements; or (3) decontaminated without subsequent sampling (assuming that prior sampling results for a representative number of similar items indicate that the decontamination is effective) and transported for off-site disposal at a RCRA Subtitle D landfill.



Removed asphalt and concrete materials with PCB concentrations less than 1 mg/kg will be available for unrestricted use, and designated for beneficial use as a substitute for conventional aggregate in accordance with 6 NYCRR Part 360-1.15(b). Sand and aggregate materials with PCB concentrations less than 1 mg/kg will also be available for unrestricted use and will be designated for beneficial use as a substitute for conventional aggregate, which may include use on-site.

Where decontaminated equipment and materials are subject to post-decontamination sampling, that sampling will be performed as outlined in Table 3-1 and using the procedures in the Demobilization FSP (Appendix A). Post-decontamination sampling results will be compared to the PCB decontamination criteria presented in Appendix B to determine appropriate disposition methods. Removed equipment and materials that contain PCB concentrations less than the applicable PCB decontamination criteria will be classified for unrestricted use (e.g., sale for reuse or salvage/recycling).

Removed bulk materials that have, after decontamination, PCB concentrations greater than 1 mg/kg but less than 50 mg/kg (for bulk materials) will be designated for disposal at a landfill permitted under Subtitle D of RCRA, or may be used as on-site fill as referenced in Section 3.

Materials that, after decontamination, contain PCBs at concentrations greater than 50 mg/kg and non-porous surfaces with PCB concentrations greater than 100  $\mu\text{g}/100\text{ cm}^2$  will be designated for off-site disposal at a TSCA-regulated disposal facility as TSCA-regulated PCB waste and hazardous waste in New York.<sup>12</sup> Non-porous surfaces that, after decontamination, contain PCB concentrations greater than 10  $\mu\text{g}/100\text{ cm}^2$  but less than 100  $\mu\text{g}/100\text{ cm}^2$  will be designated for off-site disposal at a landfill permitted under Subtitle D of RCRA.

Personal protective equipment (PPE) generated during the decommissioning activities will be designated for disposal at a landfill permitted under Subtitle D of RCRA.

### **4.3 Disposition Methods**

Disposition methods will primarily be based on decontamination/characterization sampling results and the potential for reuse (both on-site and off-site) or salvage/recycling. To the

---

<sup>12</sup> The hazardous waste designation would be based on NYSDEC's hazardous waste regulations, which dictate that materials containing PCBs at concentrations of 50 mg/kg or greater are considered state hazardous waste [6 NYCRR Part 371.4(e)].



## Phase 2 Sediment Processing Facility Demobilization and Restoration Plan

Hudson River PCBs  
Superfund Site

extent possible, items and materials removed from the Facility will be designated for reuse or salvage/recycling (after decontamination, as appropriate).

Equipment and materials removed from the Facility will be designated for beneficial use, sold or otherwise transferred for use by others, used by GE at another location, salvaged/recycled, or disposed of at an off-site facility(ies). The general disposition methods for items/materials removed from the Facility are outlined below.

- Items/materials outside the exclusion zone and items/materials that have not come into contact with PCB-containing materials, process water, or stormwater will be designated for unrestricted use. These items/materials, if removed from the Facility, will be sold or otherwise transferred to others for reuse or will be reused by GE at another location. If options for sale or reuse are not available, the removed items/materials will be transported to an off-site salvage/reclamation facility or a permitted off-site solid waste disposal facility.
- Removed materials that meet the requirements for beneficial use as a substitute for conventional aggregate in accordance with 6 NYCRR Part 360-1.15(b) (i.e., sand, stone aggregate, asphalt, and concrete) will be reused at the Facility as part of property restoration and/or will be made available for beneficial use at another location (to the extent a market is identified for such materials). If a market is not identified for the beneficial use of these materials, the materials will be disposed of at a permitted off-site solid waste disposal facility.
- Decontaminated items/materials removed from the Facility and designated for unrestricted use (see Appendix B) will be sold or otherwise transferred to others for reuse or reused by GE at another location. If options for sale or reuse are not available, the items/materials will be transported off-site for salvage/recycling/reclamation or disposal.
- Disposable items/materials and non-salvageable items that have come into contact with PCB-containing materials and are not or cannot be decontaminated and items/materials that, after decontamination, still exceed the PCB decontamination criteria in Appendix B will be transported to a permitted off-site disposal facility based on material characterization described in Section 4.2 (i.e., either to a TSCA-regulated disposal facility or a RCRA Subtitle D landfill, as appropriate).



#### **4.4 Off-site Transport and Disposal of Waste Materials**

Waste materials generated during the decontamination activities will be containerized, transported, and disposed of or treated in accordance with applicable regulations. Waste materials may be transported to the selected disposal facilities by rail or truck. While the Facility rail agreements remain in place, rail will be used for off-site transport of waste material when practicable. In addition, trucks will be used for the off-site transport of waste materials and for the off-site transport of items destined for reuse or salvage/recycling.

GE will provide EPA with information about the selected disposal facilities for review and approval after they are identified.

Bills of lading or non-hazardous waste manifest forms will be used for off-site shipments of non-hazardous wastes to identify the materials being transported and to serve as a chain of custody. Manifest forms for hazardous wastes (if any) will be completed in accordance with EPA's TSCA regulations and NYSDEC's hazardous waste management regulations.

## **5. Post-Decontamination Environmental Site Assessment**

After termination of sediment processing activities and after completion of decontamination activities and the removal and off-site transport of materials that, after decontamination, still exceed the PCB decontamination levels outlined in Appendix B, an environmental sampling program will be implemented at the Facility. Results of the post-decontamination environmental sampling program will be compared to data generated during baseline characterization sampling efforts prior to construction and operation of the Facility.

The post-decontamination environmental sampling program will include the collection and analysis of soil, groundwater, sediment, and surface water samples near baseline characterization sampling locations at and immediately adjacent to the Facility. The post-decontamination environmental sampling program will be conducted in accordance with the procedures presented in the Demobilization FSP (Appendix A).

As described in the Demobilization FSP, the proposed post-decontamination environmental sampling program is summarized below.

- Soil samples will be collected from 39 sampling locations across and immediately surrounding the exclusion zone. The proposed soil sampling locations are illustrated on Figure 4-1. The proposed sample locations were selected to enable characterization of soils beneath and immediately surrounding processing/handling areas at the Facility. The soil samples will be analyzed for PCBs. As described in the Demobilization FSP, soil samples collected from the former NYSCC parcel will also be analyzed for SVOCs (based on the potential for explosive or propellant residues – see Section 2.4.2). Soil samples collected at above-ground fuel storage locations at the Facility will be submitted for VOC and SVOC analysis. In addition, soil samples will also be submitted for VOC and SVOC analysis at other locations if field screening using a photoionization detector identifies above-background levels of volatile organic vapors in a particular sample.
- Groundwater samples will be collected from the 12 existing groundwater monitoring wells at the Facility which were installed in 2005 as part of the baseline characterization study. The locations of the existing groundwater monitoring wells are illustrated on Figure 4-1. The groundwater samples will be analyzed for PCBs, VOCs, SVOCs, pesticides, metals/inorganic constituents, and oil & grease.
- Sediment samples will be collected from 11 locations, including 3 locations in the Champlain Canal, 5 locations in Bond Creek, and 3 locations in the Lock Diversion Canal. The proposed sediment sampling locations are depicted on Figure 4-1. The sediment samples will be analyzed for PCBs and total organic carbon (TOC).



**Phase 2 Sediment  
Processing Facility  
Demobilization and  
Restoration Plan**

Hudson River PCBs  
Superfund Site

- Surface water samples will be collected at 4 locations from surface waters adjacent to the Facility, including Bond Creek and the Lock Diversion Channel. The proposed surface water sampling locations are depicted on Figure 4-1. The surface water samples will be analyzed for PCBs.

Details about the proposed environmental sampling program are presented in the Demobilization FSP (Appendix A).

The analytical results from the post-decontamination environmental sampling program will be compared to the analytical results from the sampling conducted prior to construction and operation of the Facility (see Section 2.4), as well as applicable NYSDEC standards and guidance values, to determine whether additional sampling or other actions are needed.

## **6. Restoration**

The properties where the Facility was constructed will be restored following completion of decontamination and demobilization activities, including any actions taken in response to the post-decontamination sampling described in Section 5.

As described in Section 1.4, it is anticipated that certain Facility components will remain at the properties after demobilization and restoration. However, as of the date of this plan, decisions have not been finalized related to what Facility infrastructure components will remain. Section 1.4 presents assumptions that were used in the development of this plan based on lease agreements with the property owners (see Section 1.3) and based on a preliminary verbal request by WCC to leave certain infrastructure improvements in place following Facility demobilization.<sup>13</sup>

After Facility decontamination and removal of constructed Facility components that will not remain at the properties, as well as after any actions taken in response to the post-decontamination sampling described in Section 5, the properties will be restored to their pre-construction conditions consistent with the CD and property use agreements. It is currently anticipated that restoration of the properties will include the following activities:

- The properties will be graded, if needed, to provide the necessary stormwater management. This grading may include filling low areas and areas where sub-grade structures (e.g., concrete slabs, foundations, below grade piping, vaults, pits, sumps, trenches) have been removed. However, the properties will not be restored to original grade (consistent with the WCC Lease Agreement summarized in Section 1.3 and with GE's other use agreements). Grading activities may include beneficial use of Facility construction material as aggregate fill or use of soils that were removed and stockpiled during original Facility construction (see Figure 1-2).
- Stormwater management features will be modified or installed to accommodate the final property restoration grading and drainage needs. Modifications may include filling of the stormwater basins, converting the stormwater basins to vegetated infiltration basins, removing culverts, or installing drainage features.

---

<sup>13</sup> Modifications or amendments to this plan may be needed after decisions are finalized related to the anticipated future land use and whether certain Facility infrastructure components will remain in place after property restoration.



**Phase 2 Sediment  
Processing Facility  
Demobilization and  
Restoration Plan**

Hudson River PCBs  
Superfund Site

- Topsoil, seed, mulch, and plantings will be placed in disturbed areas except where road foundations and other improvements will remain.
- Miscellaneous surface restoration, cleaning, and housekeeping will be performed.

After the final restoration requirements are known, GE will develop detailed construction plans for restoration. It is anticipated that these plans will include, but not necessarily be limited to:

- Final grading plans and determination of cut/fill requirements;
- Evaluation of existing stormwater management features and design of new stormwater management features (if required) in accordance with the NYSDEC Stormwater Design Manual (NYSDEC 2015); and
- Property-specific seeding and planting plans and specifications to define plant species, quantities, and locations, including a description of inspections to be performed to verify the establishment and viability of the grass or other plantings.

These restoration plans, including the property-specific planting plans, will be submitted to EPA for review and approval after final site conditions are determined.

## **7. Environmental Controls and Monitoring**

### **7.1 Erosion and Sedimentation Control**

Erosion and sedimentation controls will be installed in areas where soil may be disturbed to minimize the potential for erosion of exposed and/or disturbed soils and to minimize the potential for transport of suspended soil/sediment within surface water runoff. The erosion and sedimentation measures will be in accordance with the most current version of the *New York State Standards and Specifications for Erosion and Sediment Control* (NYSDEC 2005) and approved by the Construction Manager. The contractor(s) performing demobilization and restoration activities will prepare an Erosion and Sedimentation Plan that identifies the erosion and sedimentation measures to be implemented prior to initiating earth disturbance activities at the site. It is anticipated that best management practices for erosion and sedimentation control may include the use of silt fences, straw bales, and seeding/mulching stockpiled soils and disturbed soil areas.

The contractor(s) will also prepare a site-specific Stormwater Pollution Prevention Plan (SWPPP) that meets the substantive provisions of the latest New York State Pollution Discharge Elimination System General Permit for Stormwater Discharges for construction activities. The SWPPP will be submitted to the Construction Manager for review and approval prior to initiating earth disturbance activities.

### **7.2 Dust Control**

Preventative or mitigation measures will be implemented to prevent the generation of particulates in the form of dust during demobilization and restoration activities. These measures will include the following:

- Earth-moving activities will be conducted in such a manner as to minimize dust migration from the Facility.
- Dust mitigation measures will be implemented by the contractor(s) to prevent and control dust generation and migration during demobilization and restoration activities. Dust mitigation measures may include, but are not limited to, wetting using water spray.
- Haul roads at the Facility will be wetted, as needed, to minimize dust generation.
- Appropriate dust covers will be used on trucks hauling material off-site.



- The contractor(s) will be required to prevent and mitigate spills of material on Facility and access roads.

A site-specific Dust Prevention and Control Plan will be prepared by the contractor(s) detailing the methods to be employed to prevent and control dust generation and migration from the Facility during demobilization and restoration operations. The Construction Manager will stop work if a contractor's control of dust is inadequate for on-site wind conditions.

### **7.3 Spill Control**

Demobilization and restoration activities at the Facility pose a potential for accidental spills and discharges. Measures will be implemented during demobilization and restoration activities to protect soils, groundwater, and nearby surface water from contamination and to mitigate disturbance to the environment. A Spill Prevention, Control, and Countermeasure Plan will be prepared and followed during the project activities. In addition, a qualified spill response subcontractor will be on call to respond to any spills.

### **7.4 Quality of Life Standards**

This section provides a summary relating to implementation of the Quality of Life Performance Standards (QoLPS) (EPA 2004, E&E 2010) during Facility demobilization and restoration.

#### **7.4.1 Air Quality – PCBs**

Routine PCB air monitoring at the Facility under the QoLPS for air quality will cease after all dredged sediments have been transported off-site. If EPA so requests, PCB air monitoring may be conducted during certain Facility decontamination, dismantlement, and restoration activities that have the potential to generate significant dust (e.g., concrete milling/grinding, concrete/asphalt removal, soil excavation). The results of that initial PCB air monitoring will be reviewed with EPA and the frequency of future monitoring may be adjusted or monitoring may be discontinued based on prior monitoring results.

#### **7.4.2 Odor**

It is not anticipated that demobilization and restoration of the Facility will generate odors that will exceed the QoLPS for odor (applicable to hydrogen sulfide). However, during demobilization and restoration activities, GE will comply with the applicable provisions of the Phase 2 RAM QAPP (Anchor QEA and ESI 2012) regarding odor monitoring and reporting.

### **7.4.3 Noise**

During demobilization and restoration operations, noise will be monitored by the contractor at the initial startup of any operation or equipment different from that previously used in this project and that could result in increased noise levels. This monitoring will not be considered monitoring for compliance with the noise standard. However, if a sound level based on the contractor monitoring is above the numerical criteria established in the noise standard, additional monitoring will be conducted at a location closer to the nearest receptor(s) to assess attainment of those criteria; a noise level above those criteria will be considered an exceedance only if confirmed by follow-up monitoring. Noise monitoring will also be conducted, as appropriate, in response to noise complaints. The provisions of the Phase 2 RAM QAPP regarding noise monitoring and reporting will be followed.

If compliance noise monitoring (whether conducted as a follow-up to the contractor monitoring or in response to a complaint) shows an exceedance of an applicable noise standard, the contractor will be responsible for implementing engineering controls or other mitigation measures, as appropriate, to address such exceedance.

### **7.4.4 Lighting**

Although not currently anticipated, should demobilization and restoration operations be conducted at night, light will be monitored by the contractor at the initial startup of any operation or equipment different from that used previously in this project and that could result in increased light levels. This monitoring will not be considered monitoring for compliance with the lighting standard. However, if a light level based on contractor monitoring is determined to be above a lighting standard, additional monitoring will be conducted at a location closer to the nearest receptor(s) to assess attainment of the standard. A light level above the level of a standard will be considered an exceedance only if confirmed by follow-up monitoring. Light monitoring will also be conducted, as appropriate, in response to lighting complaints. The provisions of the Phase 2 RAM QAPP regarding light monitoring and reporting will be followed.

If compliance light monitoring (whether conducted as a follow-up to the contractor monitoring or in response to a complaint) shows an exceedance of an applicable lighting standard, the contractor will be responsible for implementing engineering controls or other mitigation measures, as appropriate, to address such exceedance.

### **7.4.5 Navigation**

It is possible that demobilization and restoration activities in the waterfront/wharf area will require some water-based work in the canal. Accordingly, the contractor(s) will be



**Phase 2 Sediment  
Processing Facility  
Demobilization and  
Restoration Plan**

Hudson River PCBs  
Superfund Site

responsible for complying with the requirements of the Navigation QoLPS. Measures will be implemented to maximize safety and productivity and to avoid unnecessary disruption of non-project-related navigation in the channel. Local Notices to Mariners provided to the NYSCC will present necessary details about water-based activities that may impact canal traffic. Lights will be used during low-visibility conditions and signage will be placed in the canal both north of Lock 8 and at Lock 7 to notify boaters of the work activity. Navigation monitoring will also be conducted within the Champlain Canal as necessary to comply with the requirements of the Navigation QoLPS.

## **8. Facility Demobilization and Restoration Schedule and Sequencing**

### **8.1 Schedule**

Facility demobilization will begin as production requirements allow for equipment to be taken out of service and will be completed after EPA has approved all Phase 2 Certification Unit Dredging Completion Forms (Form 1s) (which confirm that dredging has been completed in the subject CUs) and after all dredged sediment and debris have been processed and transported for off-site disposal.

It is anticipated that demobilization activities will begin in the second half of 2015 as production requirements begin to reduce and equipment is no longer required. Specifically, decontamination and removal of equipment and/or materials will commence in certain portions of the Facility as equipment or structures are no longer needed to support Facility operations. For example, demobilization efforts might proceed within the north size separation area and related equipment after sediment and debris unloading from the dredged material barges has been reduced to less than 2,500 cubic yards per day, which can be adequately handled by one unloading station and one size separation plant and related equipment. Many of the decontamination tasks to be implemented have been performed at the end of each of the prior dredging seasons to prepare the Facility for winterization and have also been conducted as needed to allow for the repair or replacement of equipment.

It is anticipated that demobilization activities will continue into 2016. The actual schedule and duration for demobilizing the Facility and restoring the Facility properties will depend on numerous factors including, but not limited to, the following:

- The timing of EPA approval of this SPF Demobilization Plan;
- The schedule for contractor identification and selection;
- The timing of completion of Phase 2 dredging, including EPA approval of Form 1s, and sediment processing and load-out operations;
- The extent of items/materials that will require removal from the Facility;
- The ability to identify sale and reuse opportunities for decontaminated equipment and materials designated for beneficial use;

- The rate of transporting decontaminated materials from the Facility for off-site disposition; and
- The extent of property restoration required.

## **8.2 Sequencing**

Proper sequencing of the demobilization/restoration work will be necessary to ensure that decontamination, sampling, characterization, removal, and restoration efforts are performed in an effective and efficient manner that minimizes potential cross-contamination. Critical considerations that affect the demobilization sequence include, but are not limited to, the need to adequately:

- Manage and treat stormwater that contacts areas that have not been decontaminated;
- Maintain use of the existing rail yard for off-site rail transport to the extent practicable based on the final disposition requirements;
- Manage and treat decontamination wash waters in a manner that minimizes potential for cross-contamination and allows for the efficient treatment and reuse of water during the demobilization process; and
- Maintain access to the various areas during the demobilization activities.

To address these issues, the rail yard, the existing stormwater management system, and WTP will remain in service while other areas of the Facility are decontaminated and will be some of the last items to be decontaminated. In addition, Facility roads and culverts will be maintained to the extent necessary to allow continued vehicle and equipment access and material transport to and from the various work areas.

To the extent practicable, materials characterized as TSCA-regulated PCB waste (considered hazardous waste in New York) and other materials that will be subject to off-site transport by rail (as described in Section 4.4) will be prioritized for decontamination, removal, and off-site transport.

It is anticipated that decontamination, sampling, characterization, removal, and disposition activities will occur concurrently in different areas of the Facility throughout the demobilization and restoration process. The actual demobilization sequence is subject to change and will be determined after final decisions related to whether certain Facility components will remain in place, as well as post-restoration conditions (see Section 1.4).



## Phase 2 Sediment Processing Facility Demobilization and Restoration Plan

Hudson River PCBs Superfund Site

In general, it is anticipated that Facility decontamination activities will commence in the unloading area and size separation area followed by decontamination of the waterfront stormwater basin, the Facility haul roads, the thickening/dewatering area, the dewatering building, and material staging areas. The rail yard loading platform, the stormwater drainage system, the north and south stormwater basins, and the WTP are expected to be the last items to be decontaminated. The approach will be to work within defined stormwater drainage areas of the Facility by cleaning and decontaminating areas from higher points to lower points and ultimately back to the drainage system discharge point into the applicable stormwater basin. After or as part of decontamination, items and materials within each area that will not remain at the properties will be disconnected, dismantled, and removed for appropriate disposition. In addition, after decontamination of the Facility is complete and following removal and off-site transport of materials that, after decontamination, still exceed the PCB decontamination levels outlined in Appendix B, the post-decontamination environmental sampling program described in Section 5 will be performed to assess soils, groundwater, surface water, and sediment at and adjacent to the Facility. Following decontamination and demobilization, the properties will be restored as described in Section 6.

A conceptual demobilization sequence has been prepared for planning purposes. This conceptual demobilization sequence was developed based on the anticipated schedule for completion of sediment processing/handling operations in each area of the Facility and to allow for the management/treatment of stormwater, maximum use of the existing rail yard for off-site rail transport, management/treatment/re-use of decontamination wash waters, minimization of the potential for cross-contamination, and maintenance of access to the Facility during the demobilization activities. Decontamination, sampling, characterization, removal, and disposition activities will occur concurrently in different areas of the Facility as the work progresses in each area. The actual demobilization sequence may be adjusted based on conditions encountered during the demobilization activities, sample results, final decisions regarding the disposition of items and site restoration, or other factors. The demobilization schedule and sequence will be reviewed with EPA as the work progresses.

The currently anticipated conceptual demobilization sequence is presented below and is depicted generally on Figure 8-1 for each area of the Facility. The numerical sequence listed below and shown on Figure 8-1 will be used to identify the areas and general steps of the demobilization process. Demobilization activities may not be performed in the numerical sequence listed and multiple steps may be performed concurrently, provided that there is not a potential for cross-contamination.

**1. Material Staging Area Bins 1, 2, and 3**

- a. Decontamination and pressure washing of material staging area Bins 1, 2, and 3 after removing sediment/debris from these areas (to allow for use of these areas to support equipment decontamination and decontaminated equipment staging operations)

**2. North Unloading Wharf/Size Separation Area**

- a. Water flushing of process piping
- b. In-place gross decontamination of equipment and tanks and surrounding pavement areas
- c. Initial pressure washing of pavement areas
- d. Decontamination, disconnection, and removal of piping, pumps, minor equipment, electrical items, meters, and related appurtenances
- e. Removal of major equipment and placement on washed pavement in the vicinity
- f. Decontamination of major equipment and tanks
- g. Post-decontamination sampling of equipment and tanks
- h. Additional decontamination of equipment and tanks (if required based on sample results)
- i. Relocation of decontaminated items to Bin 1 (except for the process water tank and other large stationary items that will remain in place until final removal)
- j. Pressure washing of pavement, the unloading wharf platform, and concrete pads/foundations
- k. Post-decontamination sampling of pavement and concrete
- l. Removal/scarification of concrete/pavement/sub-base materials (if required based on sample results)
- m. Removal of above-grade foundations, housekeeping pads, and supports

**3. Champlain Canal – Sediment Sampling**

- a. Sediment sampling within the Champlain Canal adjacent to the unloading wharves (see Figure 4-1)
- b. Removal and processing of sediment (if required based on sample results)

**4. South Unloading Wharf/Size Separation Area and Force Main Piping**

- a. In-place gross decontamination of equipment and tanks and surrounding pavement areas
- b. Initial pressure washing of pavement areas
- c. Water flushing of process piping

- d. Water flushing of slurry force main piping and recycle water piping between the size separation area and the thickening/dewatering area
- e. Decontamination, disconnection, and removal of piping, pumps, minor equipment, electrical items, meters, and related appurtenances
- f. Removal of slurry force main piping and recycle water piping to the thickening/dewatering area
- g. Removal of major equipment and placement on washed pavement in the vicinity (except for the trommel, which will be decontaminated in place)
- h. Decontamination of major equipment and tanks
- i. Post-decontamination sampling of equipment and tanks
- j. Additional decontamination of equipment and tanks (if required based on sample results)
- k. Relocation of decontaminated items to Bin 1 (except for the trommel, slurry tank, process water tank, and other large stationary items that will remain in place until final removal)
- l. Pressure washing of pavement, the unloading wharf platform, the hydrocyclone pump station pit, the slurry force main encasement, and concrete pads/foundations
- m. Post-decontamination sampling of pavement and concrete
- n. Removal/scarification of concrete/pavement/sub-base materials (if required based on sample results)
- o. Removal of above-grade foundations, housekeeping pads, and supports
- p. In-place abandonment of the hydrocyclone pump station and slurry force main encasement

#### **5. Main Haul Road – North Section**

- a. Gross decontamination of pavement and the slurry force main trench
- b. Pressure washing of pavement and the slurry force main trench
- c. Post-decontamination sampling of pavement
- d. Removal of pavement/sub-base materials (if required based on sample results)
- e. In-place abandonment of the slurry force main utility trench

#### **6. Waterfront Drainage Swales, Stormwater Basin, and Stormwater Piping**

- a. Gross decontamination of drainage swales, the stormwater basin, and the stormwater pump station
- b. Pressure washing of the drainage swale pavement, stormwater basin, and the stormwater pump station
- c. Water flushing of stormwater force main piping



- d. Decontamination, disconnection, and removal of the stormwater water pump station
- e. Abandonment of the stormwater water pump station pit and stormwater force main piping
- f. Removal of asphalt pavement from the drainage swales and removal of concrete/geo-cell and underlying liner materials from the stormwater basin
- g. Sampling of removed asphalt pavement and concrete materials to determine disposition requirements
- h. Restoration of stormwater management features

**7. Initial Cleaning of Exclusion Zone Roads and Initial Flushing of Stormwater Drainage Structures/Piping**

- a. Gross decontamination of exclusion zone roadways and pavement areas surrounding stormwater drainage structures
- b. Removal of gross solids from stormwater drainage structures and piping
- c. Initial hydro-flushing of stormwater drainage structures and piping

**8. Thickening/Dewatering Area and Dewatering Building**

- a. Gross decontamination of equipment, tanks, dewatering building concrete floor/trenches, and surrounding pavement areas
- b. Removal of filter press plate clothes
- c. Removal of roll-off containers and associated carriage assemblies, drive mechanisms, and related appurtenances
- d. Water flushing of filter presses and process piping and washing of plates using the existing plate washing systems
- e. Disconnection and removal of piping, pumps, minor equipment, electrical items, meters, and related appurtenances and relocation to Bin 3 for decontamination (the gravity thickeners, recycle water equalization tank, filter presses, and filter press supports will be decontaminated in place and remain there until final removal)
- f. Removal of the gravity thickener covers, rake arms, and internal components and relocation to Bin 3
- g. Decontamination of equipment/items moved to Bin 3
- h. Decontamination of the gravity thickener tanks
- i. Decontamination of the recycle water equalization tank
- j. Decontamination of the filter presses and supports
- k. Post-decontamination sampling of equipment, tanks, and filter press supports

- l. Additional decontamination of equipment, tanks, and supports (if required based on sample results)
- m. Pressure washing of pavement, concrete, and trenches
- n. Water flushing of subgrade drain lines beneath the dewatering building
- o. Removal of solids and pressure washing of the recycle water wet well
- p. Post-decontamination sampling of pavement and concrete
- q. Removal/scarification of concrete/pavement/sub-base materials (if required based on sample results)
- r. Final removal of equipment from the dewatering building
- s. Pressure washing of interior surfaces of the dewatering building
- t. Post-decontamination wipe sampling of the dewatering building
- u. Additional decontamination of the dewatering building (if required based on sample results)
- v. Abandonment of the recycle water wet well and subgrade drain lines beneath the dewatering building

#### **9. Filter Cake Staging Enclosures**

- a. Removal and off-site disposal of filtration and granular activated carbon media associated with the filter cake enclosure air handling systems
- b. Gross decontamination of equipment, pavement within the filter cake enclosures, and surrounding pavement areas
- c. Disconnection and removal of air handling equipment, electrical items, and related appurtenances and relocation to Bin 3 for decontamination
- d. Decontamination of equipment moved to Bin 3 and post-decontamination sampling
- e. Additional decontamination of equipment (if required based on sample results)
- f. Pressure washing of pavement, concrete, and the interior hard surfaces of the filter cake enclosures
- g. Post-decontamination sampling of pavement and concrete
- h. Post-decontamination wipe sampling of the filter cake staging enclosures
- i. Removal/scarification of concrete/pavement/sub-base materials (if required based on sample results)
- j. Additional decontamination the filter cake staging enclosures (if required based on sample results)
- k. Removal of the filter cake staging enclosure fabric cover

- I. Removal of the filter cake staging doors and enclosure structure <sup>14</sup>

#### **10. Rail Yard Loading Platform – South Portion**

- a. Gross decontamination of the southern portion of the rail yard loading platform and surrounding pavement
- b. Pressure washing of concrete, pavement, pre-cast concrete panels, rubber seals, and steel rails
- c. Post-decontamination sampling of concrete and pavement
- d. Post-decontamination sampling of pre-cast concrete panels and wipe sampling of the steel rails
- e. Visual inspection of ballast stone and railroad ties beneath the pre-cast concrete panels and removal of any visible sediment
- f. Removal/scarification of concrete/pavement/sub-base materials (if required based on sample results)
- g. Additional decontamination of steel rails (if required based on sample results)
- h. Removal of pre-cast concrete panels, steel rails, rail ties, ballast, and sub-base materials (if required based on sample results) <sup>15</sup>

#### **11. Material Staging Area – South Section**

- a. Gross decontamination of pavement and concrete
- b. Washing and removal of pre-cast concrete barriers
- c. Pressure washing of concrete and pavement
- d. Post-decontamination sampling of concrete and pavement
- e. Removal/scarification of concrete/pavement/sub-base materials (if required based on sample results)

#### **12. Stormwater Drainage Structures/Piping – South Section**

- a. Removal of solids from stormwater drainage structures and piping
- b. Pumping of water from the drainage piping underdrain system
- c. Hydro-flushing of stormwater drainage structures and piping
- d. Collection of subsurface samples proximate to drainage piping and structures

---

<sup>14</sup> Unless an agreement is reached with the property owner to leave the structures in place.

<sup>15</sup> If railroad tracks, ties, and/or rails are removed, they will not be replaced.

- e. Collection of two rounds of wet weather flow samples from the stormwater drainage discharge piping at the south stormwater basin
- f. Evaluation of alternatives for additional decontamination, sampling, and/or removal if the wet weather flow sample results exceed the criteria listed in Section 3.8 <sup>16</sup>

### **13. South Stormwater Basin and Stormwater Force Main Piping**

- a. Gross decontamination of the stormwater basin and the stormwater pump station
- b. Pressure washing of the stormwater basin and the stormwater pump station
- c. Water flushing of stormwater force main piping
- d. Decontamination, disconnection, and removal of the stormwater water pump station
- e. Abandonment of the stormwater water pump station pit and stormwater force main piping
- f. Removal of concrete/geo-cell and underlying liner materials from the stormwater basin
- g. Sampling of removed concrete materials to determine disposition requirements
- h. Restoration of stormwater management features <sup>17</sup>

### **14. Material Staging Area – North Section**

- a. Gross decontamination of pavement and concrete
- b. Pressure washing of concrete and pavement
- c. Post-decontamination sampling of concrete and pavement
- d. Removal/scarification of concrete/pavement/sub-base materials (if required based on sample results)

### **15. Rail Yard Loading Platform – North Portion**

- a. Gross decontamination of the remaining portions of the rail yard loading platform and surrounding pavement
- b. Pressure washing of concrete, pavement, pre-cast concrete panels, rubber seals, and steel rails

---

<sup>16</sup> If this evaluation determines that the drainage system cannot be adequately decontaminated, the drainage system structures and piping will be removed and will not be replaced.

<sup>17</sup> Design of stormwater management features will be performed after final restoration conditions are determined.

- c. Post-decontamination sampling of concrete and pavement
- d. Post-decontamination sampling of pre-cast concrete panels and wipe sampling of the steel rails
- i. Visual inspection of ballast stone and railroad ties beneath the pre-cast concrete panels and removal of any visible sediment
- e. Removal/scarification of concrete/pavement/sub-base materials (if required based on sample results)
- f. Additional decontamination of steel rails (if required based on sample results)
- g. Removal of pre-cast concrete panels, steel rails, rail ties, ballast, and sub-base materials (if required based on sample results) <sup>18</sup>

#### **16. Vehicle/Equipment Maintenance Area/Decontamination Station**

- a. Decontamination and pressure washing of maintenance area/decontamination station pavement
- b. Post-decontamination sampling of concrete and pavement
- c. Removal/scarification of concrete/pavement/sub-base materials (if required based on sample results)

#### **17. Stormwater Drainage Structures/Piping – North Section**

- a. Removal of solids from stormwater drainage structures and piping
- b. Pumping of water from the piping underdrain system
- c. Hydro-flushing of stormwater drainage structures and piping
- d. Collection of subsurface samples proximate to drainage piping and structures
- e. Collection of two rounds of wet weather flow samples from the stormwater drainage discharge piping at the north stormwater basin
- f. Evaluation of alternatives for additional decontamination, sampling, and/or removal if the wet weather flow sample results exceed the criteria listed in Section 3.8 <sup>19</sup>

#### **18. North Stormwater Basin and Stormwater Force Main Piping**

- a. Gross decontamination of the stormwater basin and the stormwater pump station
- b. Pressure washing of the stormwater basin and the stormwater pump station

---

<sup>18</sup> If railroad tracks, ties, and/or rails are removed, they will not be replaced.

<sup>19</sup> If this evaluation determines that the drainage system cannot be adequately decontaminated, the drainage system structures and piping will be removed and will not be replaced.

- c. Water flushing of stormwater force main piping
- d. Decontamination, disconnection, and removal of the stormwater water pump station
- e. Abandonment of the stormwater water pump station pit and stormwater force main piping
- f. Removal of concrete/geo-cell and underlying liner materials from the stormwater basin
- g. Sampling of removed concrete materials to determine disposition requirements
- h. Restoration of stormwater management features <sup>20</sup>

#### **19. Water Treatment Plant**

- a. Removal and off-site disposal of WTP filtration and granular activated carbon media
- b. Disconnection and removal of WTP piping, pumps, minor equipment, electrical items, meters, and related appurtenances and relocation to temporary decontamination pad for decontamination (large equipment will be decontaminated in place and remain there until final removal)
- c. Decontamination of equipment moved to the temporary decontamination pad
- d. Decontamination of large equipment in-place
- e. Post-decontamination wipe sampling of equipment
- f. Additional decontamination of equipment (if required based on sample results)
- g. Final removal of equipment from the WTP building
- h. Pressure washing of interior surfaces of the WTP building, if required based on wipe sampling results
- i. Limited wipe sampling of the WTP building
- j. Additional decontamination of the WTP building (if required based on sample results)
- k. Removal of the WTP discharge structure at the Champlain Canal and restoration of surfaces
- l. Grouting and in-place abandonment of the underground WTP discharge HDPE piping to the Champlain Canal.

---

<sup>20</sup> Design of stormwater management features will be performed after final restoration conditions are determined.



**20. Environmental Media Sampling**

- a. Environmental media sampling of surface and subsurface soils, groundwater, surface water, and sediment
- b. Implementation of remedial actions if required based on the environmental media sample results

**21. General Demobilization/Restoration** <sup>21</sup>

- a. Removal of other infrastructure and Facility components as applicable to meet final restoration conditions (e.g., utilities, fencing, Facility roads, culverts, concrete/asphalt, gravel)
- b. Removal of administrative and support areas and facilities
- c. Final grading and construction of stormwater management features, as needed
- d. Final grading and placement of topsoil to establish final lines and grades
- e. Final seeding/planting and restoration of surfaces

---

<sup>21</sup> The schedule and sequence for completing general demobilization/restoration activities will be determined after final restoration conditions are determined.

## **9. References**

Anchor QEA and ESI. 2012. Phase 2 Remedial Action Monitoring Quality Assurance Project Plan (Phase 2 RAM QAPP). May.

ARCADIS. 2009. Hudson River Sediment Processing Facility, Fort Edward, New York, Groundwater and Surface Water Sampling Data Summary Report. Prepared for General Electric Company, Fort Edward, New York. July 27.

ARCADIS. 2015b. Phase 2 Sediment Processing Facility Demobilization and Restoration Field Sampling Plan (Demobilization FSP), Hudson River PCBs Superfund Site. Prepared for General Electric Company, Albany, New York. February. (Appendix A to the SPF Demobilization Plan)

BBL. 2006a. New York State Canal Corporation Baseline Characterization Data Summary Report. Prepared for General Electric Company, Albany, New York. September.

BBL. 2006c. Energy Park/Longe Baseline Characterization Data Summary Report. Prepared for General Electric Company, Albany, New York. October.

E&E. 2004a. Hudson River PCBs Superfund Site, Facility Siting Report. Prepared for United States Environmental Protection Agency and United States Army Corps of Engineers. December.

E&E. 2004b. Hudson River Superfund Site Facility Siting Data Summary Report, Site-Specific Field Investigations of the Final Candidate Sites (Facility Siting Data Summary Report). Prepared for EPA Region 2 and USACE Kansas City District. April.

E&E. 2010. Changes to Quality of Life Performance Standards at the Hudson River PCBs Superfund Site for Implementation of Phase 2 of the Remedial Action. Technical Memorandum to the EPA. 6 pp. December 11.

EPA. 2002. Hudson River PCBs Site, New York. Record of Decision (ROD).

EPA. 2004. Hudson River PCBs Superfund Site Quality of Life Performance Standards. May.

EPA. 2010. Revised Statement of Work for Remedial Action and Operations, Maintenance, and Monitoring (SOW Appendix B to RA CD), including attachments. December.





**Phase 2 Sediment  
Processing Facility  
Demobilization and  
Restoration Plan**

Hudson River PCBs  
Superfund Site

EPA/GE. 2005. Consent Decree in United States v. General Electric Company, Civil Action No. 05-cv-1270, lodged in United States District Court for the Northern District of New York. (RA CD). October 6.

Malcolm Pirnie, Inc. 2009. Dynamite Investigation After Action Report for AOC-1, AOC-2 and AOC-3, Hudson River PCBs Superfund Site, Fort Edward, New York. Prepared for United States Army Corps of Engineers, Kansas City District. September.

NYSDEC. 1994. Technical and Administrative Guidance Memorandum (TAGM) 4046 Recommended Soil Cleanup Objectives (RSCOs).

NYSDEC. 1998. Technical & Operational Guidance Series (TOGS) 1.1.1. Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

NYSDEC, 1999. Technical Guidance for Screening Contaminated Sediments.

NYSDEC. 2005. New York State Standards and Specifications for Erosion and Sediment Control. August.

NYSDEC. 2015. New York State Stormwater Management Design Manual. January.

Parsons. 2013. Phase 2 Facility Operations and Maintenance Plan for 2013 (2013 Facility O&M Plan). Hudson River PCBs Superfund Site. Prepared for General Electric Company, Albany, NY.

Parsons. 2015. Phase 2 Facility Operations and Maintenance Plan for 2015 (2015 Facility O&M Plan). Hudson River PCBs Superfund Site. Prepared for General Electric Company, Albany, NY.



**Tables**

**Table 3-1  
Decontamination-Related Sampling Types and Frequencies<sup>1,2</sup>**

**Phase 2 Sediment Processing Facility Demobilization and Restoration Plan  
General Electric Company – Hudson River PCBs Superfund Site**

Item	Item Description	Sampling Method <sup>3</sup>	Sampling Frequency <sup>16</sup>
<b>Equipment, Pumps, and Appurtenances</b>			
Major processing equipment	Trommel screen, intermediate vibratory dewatering screen, triple-deck scalping screen, double-deck fine/mid screens, sand wheel screens, log washer, hydrocyclones, conveyors, filter presses, container handling system, air handling system blowers, vapor-phase GAC vessels, WTP clarifiers, WTP multi-media filters, WTP GAC vessels, WTP bag filter units	Wipe sampling	1 wipe sample per 300 square feet of surface area <sup>4</sup>
Unloading buckets	Clamshell unloading buckets	Wipe sampling	3 samples per bucket
Roll-off containers	Roll-off containers	Wipe sampling	1 wipe sample per 300 square feet of surface area <sup>4</sup>
Pumps	Slurry pumps, process/storm water pumps, etc.	Wipe sampling	2 wipe samples per pump
Other appurtenances	Motors, mixers, drives, gears, valves, meters, etc.	Wipe sampling	1 wipe sample for 25% of items <sup>5</sup>
Movable equipment	Sennebogen unloaders, front-end loaders, trucks, skid steers, etc.	Wipe sampling	1 wipe sample per 300 square feet of surface area <sup>4</sup> * Minimum of 3 wipe samples per item
Steel rails	Rail yard loading platform (Track #7)	Wipe sampling	1 wipe sample per 150 feet of steel rail
<b>Tanks</b>			
Sediment slurry tank	Size separation area	Wipe sampling (interior surfaces)	5 wipe samples per tank
Intermediate screen underflow tank	Size separation area	Wipe sampling (interior surfaces)	5 wipe samples per tank
Hydrocyclone underflow tanks	Size separation area	Wipe sampling (interior surfaces)	5 wipe samples per tank
Hydrocyclone overflow tanks	Size separation area	Wipe sampling (interior surfaces)	5 wipe samples per tank
Process water tanks	Size separation area	Wipe sampling (interior surfaces)	5 wipe samples per tank
Gravity thickeners	Thickening/dewatering area	Wipe sampling (interior surfaces)	12 wipe samples per tank
North gravity thickener flocculation tank	Thickening/dewatering area	Wipe sampling (interior surfaces)	5 wipe samples per tank
North gravity thickener overflow tank	Thickening/dewatering area	Wipe sampling (interior surfaces)	5 wipe samples per tank
Recycle water equalization tank	Thickening/dewatering area	Wipe sampling (interior surfaces)	10 wipe samples per tank
WTP 4 <sup>th</sup> treatment train holding tank	Thickening/dewatering area	Wipe sampling (interior surfaces)	5 wipe samples per tank
WTP equalization tanks	Thickening/dewatering area	Wipe sampling (interior surfaces)	5 wipe samples per tank
WTP backwash holding tank	Thickening/dewatering area	Wipe sampling (interior surfaces)	5 wipe samples per tank
Frac tanks	Various locations	Wipe sampling (interior surfaces)	5 wipe samples per tank

**Table 3-1  
Decontamination-Related Sampling Types and Frequencies<sup>1,2</sup>**

**Phase 2 Sediment Processing Facility Demobilization and Restoration Plan  
General Electric Company – Hudson River PCBs Superfund Site**

Item	Item Description	Sampling Method <sup>3</sup>	Sampling Frequency <sup>16</sup>
<b>Piping</b>			
Steel piping	Slurry and water piping throughout the Facility	Wipe sampling (interior surfaces)	2 wipe samples per 150 linear feet for steel piping <sup>6</sup>
HDPE piping	HDPE piping removed and destined for off-site recycling	Wipe sampling (interior surfaces) or bulk material sampling (of shredded materials)	2 samples per 150 linear feet of whole piping or 1 composite sample per 100 cubic yards of shredded material <sup>7</sup>
<b>Equipment Structure Steel Supports</b>			
Steel equipment structural supports	North size separation equipment, filter press stands	Wipe sampling	1 wipe sample per 300 square feet of surface area <sup>8</sup>
Splash/spill plates/pans	Unloading wharf steel splash/spill plates/pans	Wipe sampling	1 wipe sample per 300 square feet of surface area <sup>8</sup>
<b>Structures</b>			
Dewatering (filter press) building	Metal structural members, metal siding (interior and exterior), and appurtenances (i.e., doors, overhead doors, overhead door lift mechanisms)	Wipe sampling	24 wipe samples from structural steel members/bracing <sup>9</sup> 24 wipe samples from interior metal siding <sup>9</sup> 24 wipe samples from inside appurtenances <sup>9</sup> 8 wipe samples from exterior metal siding <sup>9</sup>
Filter cake staging enclosures	Metal structural members and appurtenances (i.e., doors, overhead doors, overhead door lift mechanisms)	Wipe sampling	10 wipe samples per building from structural steel members/bracing <sup>9</sup> 6 wipe samples per building from inside appurtenances <sup>9</sup>
Water Treatment Plant (WTP) Building	Metal structural members and metal siding (interior and exterior)	Wipe sampling	4 wipe samples from structural steel members/bracing <sup>9</sup> 4 wipe samples from interior metal siding <sup>9</sup> 4 wipe samples from exterior metal siding <sup>9</sup>

**Table 3-1  
Decontamination-Related Sampling Types and Frequencies<sup>1,2</sup>**

**Phase 2 Sediment Processing Facility Demobilization and Restoration Plan  
General Electric Company – Hudson River PCBs Superfund Site**

Item	Item Description	Sampling Method <sup>3</sup>	Sampling Frequency <sup>16</sup>
<b>Concrete/Asphalt Surfaces and Underlying Construction Materials (Items Planned to Remain In-Place)</b>			
Concrete/asphalt pavement	Size separation area, material staging areas, exclusion area roads, rail yard loading platform, thickening/dewatering area, dewatering building concrete floor slab	Pulverized concrete core sampling <sup>10</sup>	1 core sample per 150-foot grid within the exclusion zone at the locations shown on Figure 3-1
Track #7 pre-cast concrete panels	Pre-cast concrete panels along Track #7	Pulverized concrete core sampling <sup>10</sup>	1 core sample per 150 feet of Track #7
Sub-base sand layer below concrete and asphalt	Areas where the overlying asphalt or concrete pavements have been removed	Bulk material sampling <sup>12</sup>	1 core sample per 150-foot grid where overlying asphalt or concrete pavements have been removed <sup>13</sup>
Sub-base gravel/stone below concrete and asphalt	Areas where the overlying asphalt or concrete pavements have been removed	Bulk material sampling <sup>12</sup>	1 core sample per 150-foot grid where overlying asphalt or concrete pavements have been removed <sup>13</sup>
Sub-base materials proximate to drainage structures and piping	Areas adjacent to drainage structures and piping	Bulk material sampling <sup>12</sup>	Locations to be determined in the field <sup>14</sup>
Concrete hydrocyclone overflow pump station	Size separation area	Pulverized concrete core sampling <sup>10</sup>	4 core samples from pump station concrete floor and walls
Concrete slurry force main encasement	Size separation area	Pulverized concrete core sampling <sup>10</sup>	3 core samples from floor
Concrete recycle water wet well	Thickening/dewatering area	Pulverized concrete core sampling <sup>10</sup>	4 core samples from wet well concrete walls and floor
Concrete filter cake staging enclosure bin walls	Material staging area	Pulverized concrete core sampling <sup>10</sup>	2 core samples along each wall
Concrete material staging area bin walls	Material staging area	Pulverized concrete core sampling <sup>10</sup>	2 core samples along each wall
<b>Concrete/Asphalt Surfaces (Items Planned for Removal)</b>			
Concrete lining from stormwater basins	North stormwater basin, south stormwater basin, waterfront stormwater basin	Composite sampling from crushed concrete staging piles <sup>11</sup>	1 composite sample per 500 cubic yards of crushed concrete
Crushed concrete/asphalt	Crushed concrete/asphalt from various areas of the Facility (i.e., foundations, pads, pavement, and/or other areas)	Composite sampling from crushed concrete/asphalt staging piles <sup>11</sup>	1 composite sample per 500 cubic yards of crushed concrete/asphalt

**Table 3-1  
Decontamination-Related Sampling Types and Frequencies <sup>1,2</sup>**

**Phase 2 Sediment Processing Facility Demobilization and Restoration Plan  
General Electric Company – Hudson River PCBs Superfund Site**

Item	Item Description	Sampling Method <sup>3</sup>	Sampling Frequency <sup>16</sup>
<b>Stormwater Drainage Structures/Piping</b>			
Stormwater Drainage System	HDPE stormwater discharge piping to the south and south stormwater basins	Wet-weather stormwater flow sampling <sup>15</sup>	Two wet weather flow sampling events  For each sampling event, one water sample will be collected from each stormwater outfall pipe that discharges to the stormwater basins.

Notes:

1. Decontamination and verification sampling activities will be performed where PCB-containing sediments have been processed, handled, and staged. Decontamination and sampling will not be required for surfaces that have not been exposed to PCB-containing materials. Throughout the demobilization processing, evaluations will be performed to determine the need and appropriate methods for decontamination and sampling based on the ultimate intended disposition of the items/materials. See Section 3.2 of this *Phase 2 Sediment Processing Facility Demobilization and Restoration Plan* (SPF Demobilization Plan).
2. Post-decontamination verification sampling may not be performed on items designated for off-site disposal as described in Section 3.2 of this SPF Demobilization Plan. If required, waste characterization sampling will be performed for disposal purposes.
3. When sampling a particular component, the sampling will focus on locations showing potential evidence of impacts (e.g., visible staining or residue) (if any) and locations where the greatest potential exposure to PCB-containing materials occurred (i.e., interior or exterior surfaces used for processing/handling PCB-containing sediment or where PCB-containing sediment accumulated during processing operations). In addition, additional waste characterization sampling will be performed if required for disposal purposes. Post-decontamination samples will be submitted for PCB analysis only.
4. Equipment items that are intended for potential reuse or salvage/recycling will be sampled based on the estimated surface area of the item. For sampling purposes, equipment surface areas (and the number of samples to be collected) will be estimated based on a "hypothetical box" with sufficient size to contain the item. For oddly shaped pieces, multiple "hypothetical boxes" may be used to estimate equipment surface area. The equipment surface areas will be estimated by summing the surface areas for all six sides of each "hypothetical box" used to "contain" the item. The total number of samples (inclusive of samples from exterior surfaces and interior surfaces, where applicable) to be collected from each item will then be determined based on the sampling frequency described above.
5. If designated for reuse or potential salvage/recycling, the sampling approach for small equipment items and appurtenances (e.g., motors, mixers, valves, drives, meters, sensors) will consist of sampling a representative number of items instead of sampling each individual item.
6. Steel piping, if designated for potential salvage/recycling, will be sampled on the interior surfaces of the piping for each 150 linear feet of piping. Sampling may also be performed to determine appropriate disposal methods.
7. HDPE piping will be sampled if designated for potential recycling. For pipe sections that remain whole, wipe sampling will be performed from interior pipe surfaces. For pipe sections that are shredded, bulk material composite samples will be collected for each approximately 100 cubic yards of shredded material. Sampling may also be performed to determine appropriate disposal methods.
8. Steel structural supports that were in contact with PCB-containing materials, process water, or stormwater (e.g., filter press stands, size separation equipment supports) will be sampled based on the estimated surface area of the item. For sampling purposes, surface areas (and the number of samples to be collected) will be estimated based on a "hypothetical box" with sufficient size to contain the item. The surface areas will be estimated by summing the surface areas for all six sides of each "hypothetical box" used to "contain" the item. The total number of samples (inclusive of samples from exterior surfaces and interior surfaces, where applicable) to be collected from each item will then be determined based on the sampling frequency described above.

**Table 3-1  
Decontamination-Related Sampling Types and Frequencies <sup>1,2</sup>**

**Phase 2 Sediment Processing Facility Demobilization and Restoration Plan  
General Electric Company – Hudson River PCBs Superfund Site**

9. Samples locations for the dewatering building, filter cake staging enclosures, and water treatment plant building will be determined in the field based on pre-sampling reconnaissance. Sampling of appurtenances in the dewatering building, filter cake staging enclosures, and water treatment plant building will only be performed on items that will remain in place or items planned for salvage/recycling. Additional sampling may be required depending on the sampling results.
10. The pulverized concrete and asphalt core samples will be collected to a depth of 7½ cm (or other depth agreed to by GE and EPA) from the upper concrete or asphalt surface in accordance with the SOPs in Attachment B of the SPF Demobilization FSP.
11. The concrete/geocell lining removed from the stormwater basins and concrete/asphalt removed from foundations, pads, pavement, and other areas will be crushed and placed in staging piles. Composite samples will be collected from the crushed concrete/asphalt at a frequency of 1 sample per 500 cubic yards. Fifteen discrete samples will be collected from each 500 cubic yard lot and composited into a single sample.
12. The bulk material samples (for sub-base materials) will be collected using a hand auger in accordance with the SOPs in Attachment C of the SPF Demobilization FSP.
13. The underlying sub-base stone and sand layers will be sampled only in areas where substantial sections of overlying asphalt or concrete pavements have been removed based on requests from the property owner and in areas where the full depth of overlying asphalt or concrete pavements has been removed to address PCB concentrations.
14. A representative number of subsurface samples will be collected proximate to underground drainage piping and structures. These subsurface sample locations will be determined in the field based on discussions with EPA.
15. After the final decontamination phase, wet-weather stormwater sampling will be performed to document whether PCBs are detected in the stormwater that drains through the system. Two wet-weather stormwater sampling events will be performed to verify the sampling results. During each sampling event, stormwater samples will be collected from each stormwater outfall pipe that discharges to the south and north stormwater basins and submitted for PCB analysis.
16. Additional sampling may be needed if conditions warrant or based on the results of prior sampling.

cm: centimeters

EPA: United States Environmental Protection Agency

FSP: Field Sampling Plan

GAC: granular activated carbon

PCBs: polychlorinated biphenyls

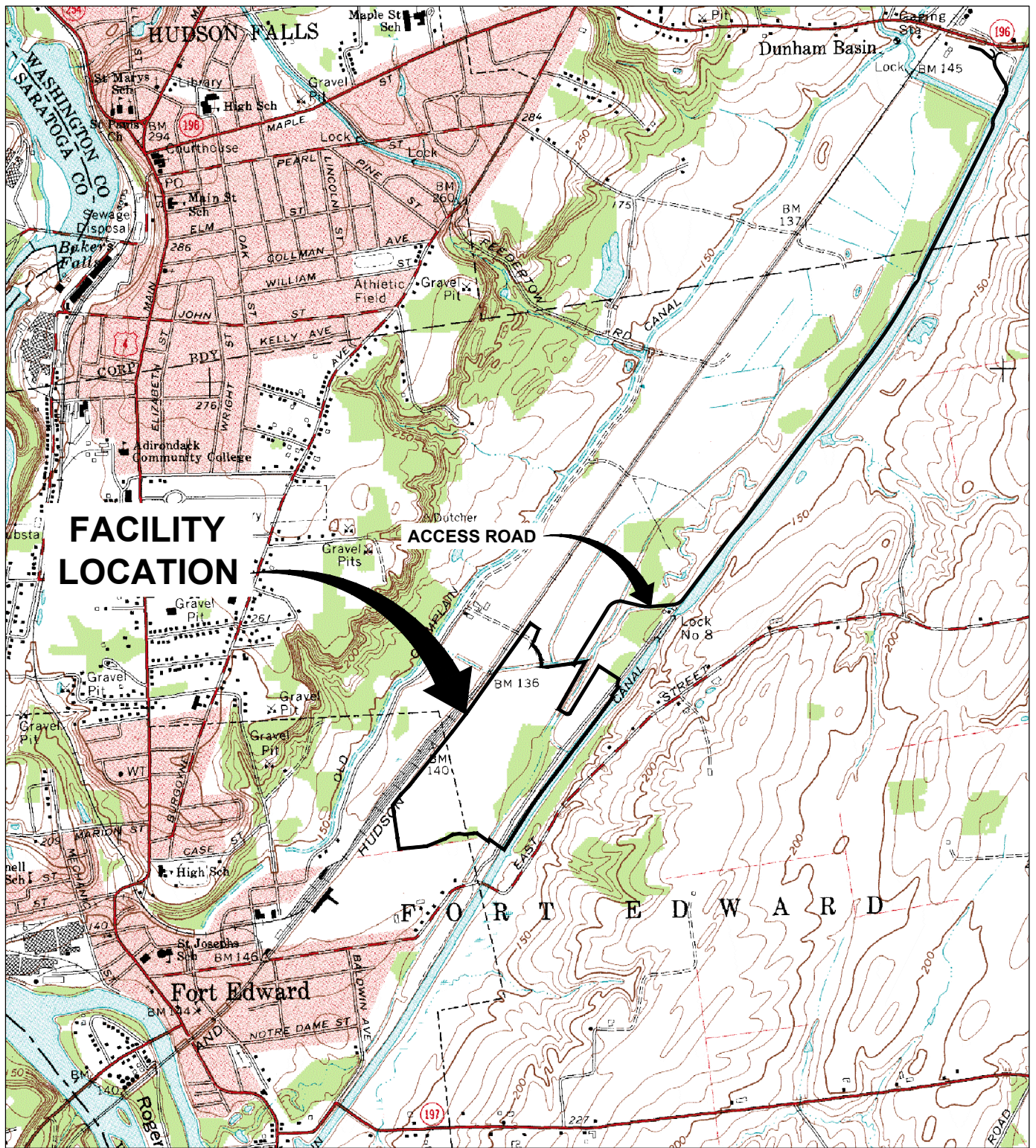
WTP: water treatment plant



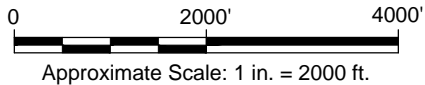
**Figures**



CITY: SYRACUSE, NY DIV: GROUP: INDIVIDUAL: DBLD: L. POSENAUER PM: C. GUEST TM: (ON) LVR: (ON) ON: OFF: REF: V: NIEN: CAD: STRACUSE: ACT: IN: B000: 1356: 0000: 0000: 04: SP: PH: ZDR: 3: 1356: 00: 01: 08: AM: ACAD: DVER: 18: IS: (LMS: TECH) PAGE: SETUP: --- PLOT: STYLE: TABLE: PLT: FULL: C: TB PLOTTED: 2/19/2015 11:08: AM BY: POSENAUER, LISA



REFERENCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD., HUDSON FALLS, NY, 1966.



NEW YORK

GENERAL ELECTRIC  
HUDSON RIVER PCBs SUPERFUND SITE  
**PHASE 2 SEDIMENT PROCESSING FACILITY  
DEMobilIZATION AND RESTORATION PLAN**

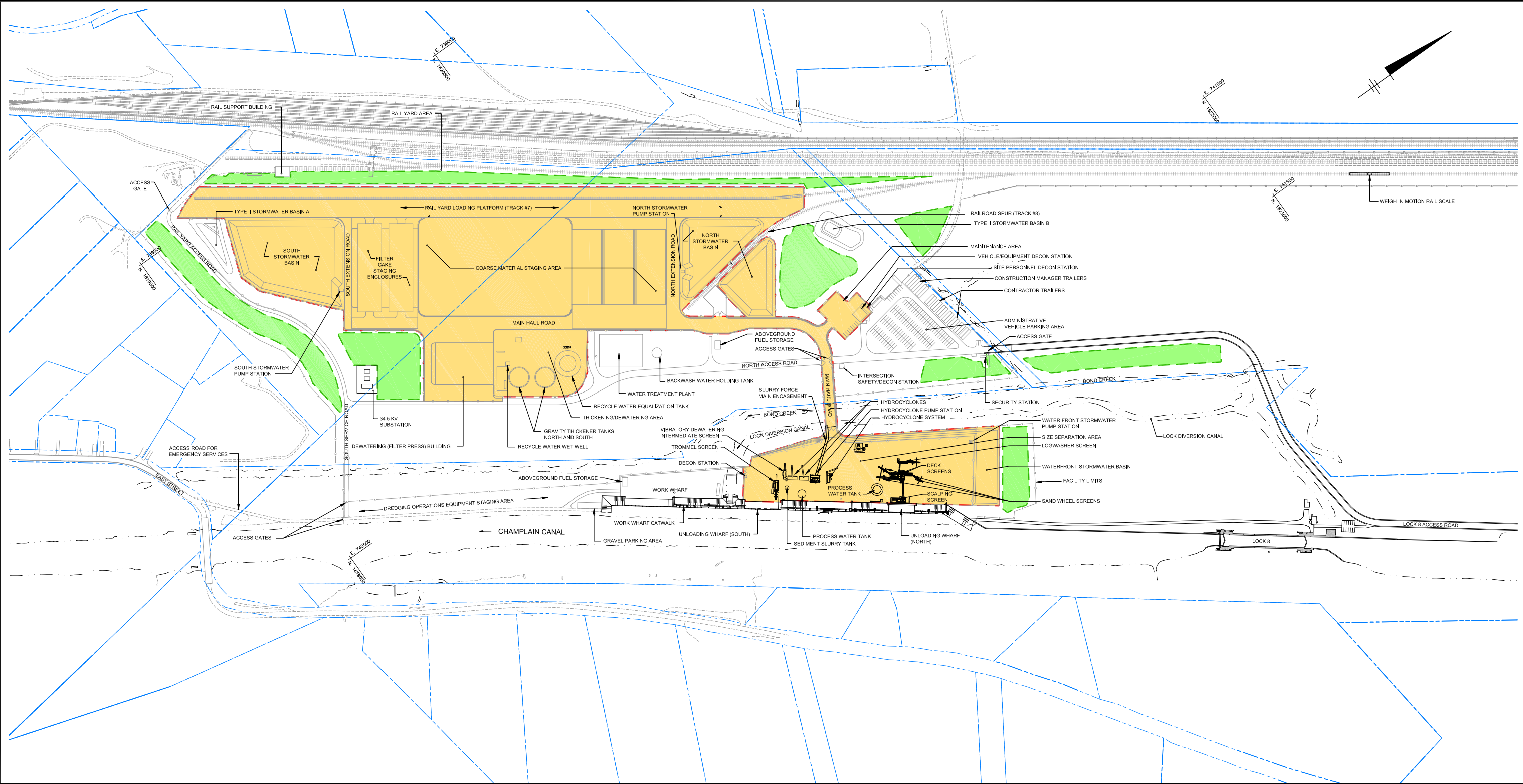
**FACILITY LOCATION MAP**



FIGURE  
**1-1**



CITY: SYRACUSE, NY D:\GROUP: EBC-CHMDV DBUILD: LPOSENAUER PM: C.GUEST LYRON: OFF=REF\* PLOTTED: 9/8/2015 2:38 PM BY: POSENAUER, LISA  
 VAENVCAD\SYRACUSE\ACT\T\B0031356\0000\00004\SPF\_P\2DRV31356B02.dwg LAYOUT: 1-2 SAVED: 9/8/2015 2:28 PM PAGESETUP: --- PLOTSTYLETABLE: --- PLOTSETUP: ---



**LEGEND:**

- APPROXIMATE EXTENT OF EXCLUSION ZONE
- APPROXIMATE EXCESS SOIL STAGING LOCATION
- PARCEL BOUNDARIES

**NOTES:**

1. PARCEL BOUNDARIES OBTAINED FROM WASHINGTON COUNTY IN JANUARY 2015.
2. EXCESS SOILS REMOVED DURING CONSTRUCTION OF THE FACILITY WERE STOCKPILED AT THE APPROXIMATE LOCATIONS SHOWN.

GENERAL ELECTRIC  
 HUDSON RIVER PCBs SUPERFUND SITE  
**PHASE 2 SEDIMENT PROCESSING FACILITY  
 DEMOBILIZATION AND RESTORATION PLAN**

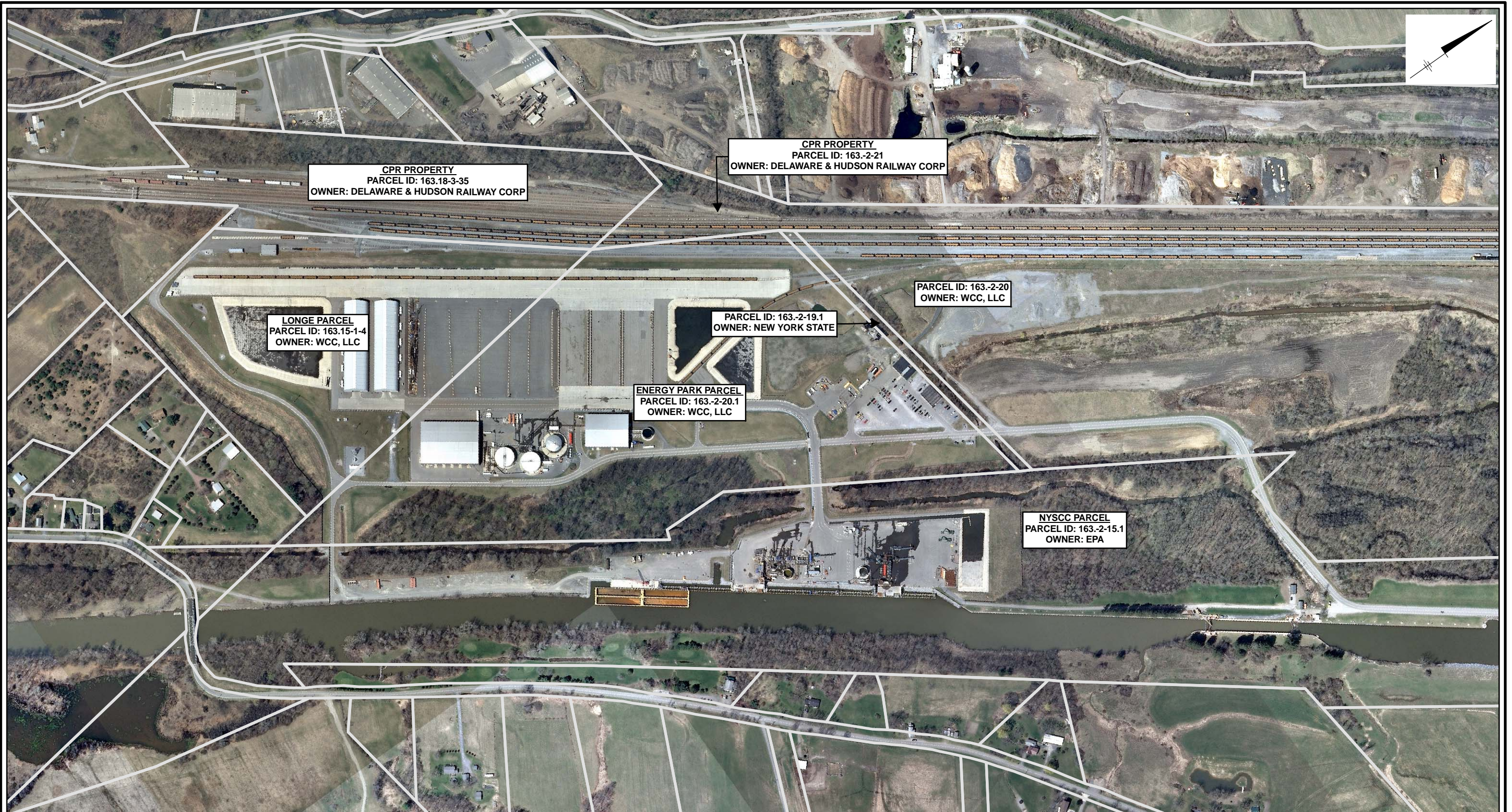
**SEDIMENT PROCESSING FACILITY -  
 FACILITY PLAN**



FIGURE  
**1-2**

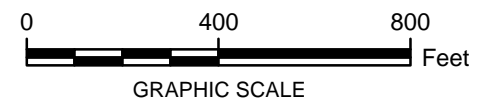
XREFS:  
 XGN-PL01  
 XGN-EX03  
 XGN-EX01  
 31356B00





**LEGEND:**  
 [Line symbol] PARCEL BOUNDARY

- NOTES:**
1. PARCEL BOUNDARIES OBTAINED FROM WASHINGTON COUNTY IN JANUARY 2015.
  2. AERIAL PHOTOGRAPH TAKEN IN 2013 AND WAS OBTAINED FROM NYS CLEARINGHOUSE.
  3. THE NYSCC PARCEL ALONG THE CHAMPLAIN CANAL WAS ACQUIRED BY EPA IN 2008 UNDER AUTHORITY OF THE CERCLA AND IN ACCORDANCE WITH THE DECLARATION OF TAKING ACT.
  4. CERCLA: COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT  
 CPR: CANADIAN PACIFIC RAILWAY  
 EPA: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
 NYSCC: NEW YORK STATE CANAL CORPORATION



GENERAL ELECTRIC COMPANY  
 HUDSON RIVER PCBs SUPERFUND SITE  
**PHASE 2 SEDIMENT PROCESSING FACILITY  
 DEMOBILIZATION AND RESTORATION PLAN**

**FACILITY PARCEL OWNERSHIP -  
 2013 AERIAL**



FIGURE  
**2-1**

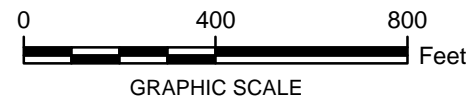


City: SYR Div/Group: SWG Created By: K.I.VES Last Saved By: kives  
R:\GE\_GIS\GE\_HudsonRiver\Phase2\_FDR\SedimentProcessing\FacilityDemobilization\mxd\FacilityParcelOwnership\_2006aerial\_1to400\_v2.mxd 9/8/2015 10:24:08 AM



**LEGEND:**  
[Symbol] PARCEL BOUNDARY

**NOTES:**  
1. PARCEL BOUNDARIES OBTAINED FROM WASHINGTON COUNTY IN JANUARY 2015.  
2. AERIAL PHOTOGRAPH TAKEN IN JUNE 2006 AND WAS OBTAINED FROM GOOGLE EARTH PRO.  
3. THE NYSCC PARCEL ALONG THE CHAMPLAIN CANAL WAS ACQUIRED BY EPA IN 2008 UNDER AUTHORITY OF THE CERCLA AND IN ACCORDANCE WITH THE DECLARATION OF TAKING ACT.  
4. CERCLA: COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT  
CPR: CANADIAN PACIFIC RAILWAY  
EPA: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
NYSCC: NEW YORK STATE CANAL CORPORATION

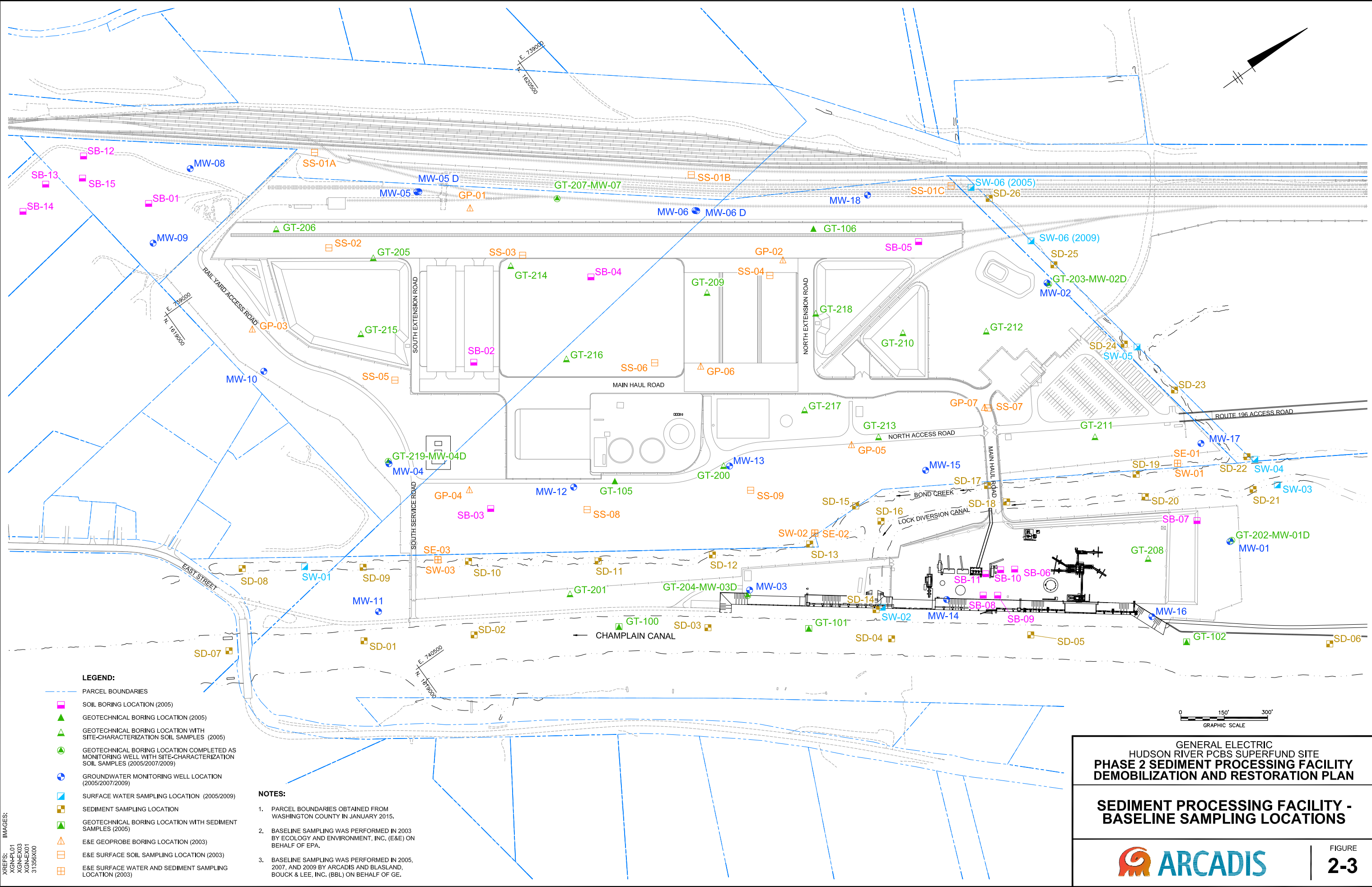


GENERAL ELECTRIC COMPANY  
HUDSON RIVER PCBs SUPERFUND SITE  
**PHASE 2 SEDIMENT PROCESSING FACILITY  
DEMOLITION AND RESTORATION PLAN**  
**FACILITY PARCEL OWNERSHIP -  
2006 AERIAL**

**FIGURE  
2-2**



CITY: SYRACUSE, NY DN\GROUP: EBC-MD\BY: LPOSENAUER, LISA DBUILD: LPOSENAUER, LISA PM: C.GUEST LYRONS=OFF=REF  
 VAENVCAD\SYRACUSE\ACT\T\B0031356\0000\00004\SPF\_P\PH2DRV31356\G03.dwg LAYOUT: 2-3 SAVERD: 9/8/2015 2:37 PM PAGES: 23 PLOTSTYLETABLE: --- PLOT SETUP: --- PLOTTED: 9/8/2015 2:38 PM BY: POSENAUER, LISA



**LEGEND:**

- PARCEL BOUNDARIES
- SOIL BORING LOCATION (2005)
- ▲ GEOTECHNICAL BORING LOCATION (2005)
- ▲ GEOTECHNICAL BORING LOCATION WITH SITE-CHARACTERIZATION SOIL SAMPLES (2005)
- ▲ GEOTECHNICAL BORING LOCATION COMPLETED AS MONITORING WELL WITH SITE-CHARACTERIZATION SOIL SAMPLES (2005/2007/2009)
- GROUNDWATER MONITORING WELL LOCATION (2005/2007/2009)
- SURFACE WATER SAMPLING LOCATION (2005/2009)
- SEDIMENT SAMPLING LOCATION
- ▲ GEOTECHNICAL BORING LOCATION WITH SEDIMENT SAMPLES (2005)
- ▲ E&E GEOPROBE BORING LOCATION (2003)
- E&E SURFACE SOIL SAMPLING LOCATION (2003)
- E&E SURFACE WATER AND SEDIMENT SAMPLING LOCATION (2003)

**NOTES:**

1. PARCEL BOUNDARIES OBTAINED FROM WASHINGTON COUNTY IN JANUARY 2015.
2. BASELINE SAMPLING WAS PERFORMED IN 2003 BY ECOLOGY AND ENVIRONMENT, INC. (E&E) ON BEHALF OF EPA.
3. BASELINE SAMPLING WAS PERFORMED IN 2005, 2007, AND 2009 BY ARCADIS AND BLASLAND, BOUCK & LEE, INC. (BBL) ON BEHALF OF GE.

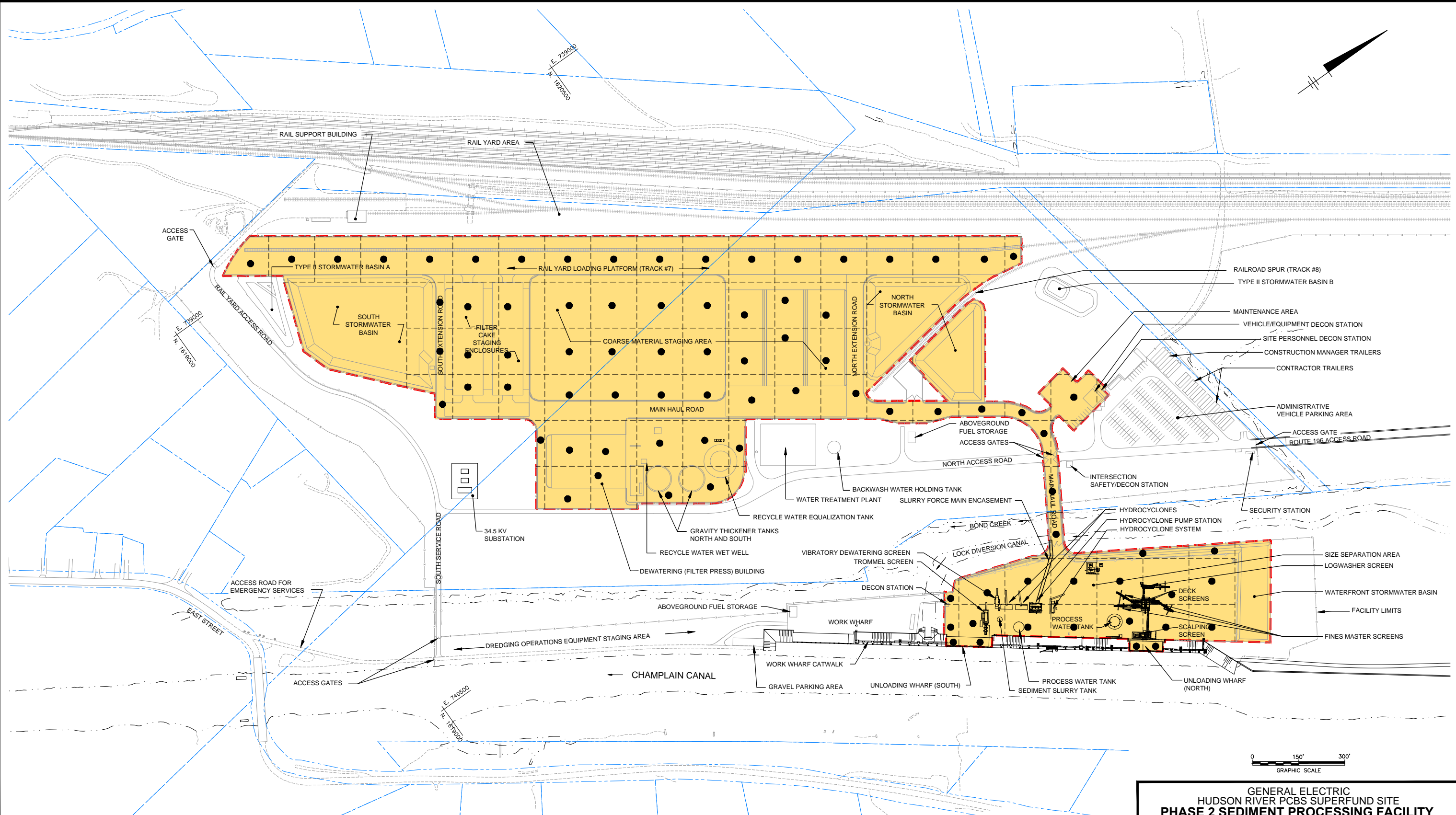
GENERAL ELECTRIC  
 HUDSON RIVER PCBs SUPERFUND SITE  
**PHASE 2 SEDIMENT PROCESSING FACILITY  
 DEMOBILIZATION AND RESTORATION PLAN**

**SEDIMENT PROCESSING FACILITY -  
 BASELINE SAMPLING LOCATIONS**

**ARCADIS**

FIGURE  
**2-3**

CITY: SYRACUSE, NY DIV: GROUP: EBC-IMDV DB: LISA, L. POSENAUER PM: C. GUEST LYN: ON: OFF: REF: PLOTTED: 9/11/2016 8:58 AM BY: POSENAUER, LISA  
 V:\ENVCAD\SYRACUSE\ACT\M\B0031356\0000000000\ASPP\_P\H2DRP\31356P\03.dwg LAYOUT: 3-1 SAVED: 9/10/2015 4:23 PM PAGESETUP: PLOTSTYLETABLE: PAGESETUP: 3-1



- LEGEND:**
- APPROXIMATE EXTENT OF EXCLUSION ZONE
  - PARCEL BOUNDARIES
  - 150-FOOT SAMPLING GRID
  - PROPOSED POST-DECONTAMINATION ASPHALT/CONCRETE PAVEMENT SAMPLING LOCATION

- NOTES:**
1. THIS FIGURE SHOWS ONLY THE PROPOSED POST-DECONTAMINATION ASPHALT/CONCRETE PAVEMENT SAMPLING LOCATIONS. POST-DECONTAMINATION SAMPLING LOCATIONS FOR CONCRETE WALLS, PITS, TRENCHES, PADS, AND FOUNDATIONS ARE NOT SHOWN ON THIS FIGURE.
  2. LOCATIONS ARE APPROXIMATE AND MAY BE ADJUSTED IN THE FIELD.

GENERAL ELECTRIC  
 HUDSON RIVER PCBs SUPERFUND SITE  
**PHASE 2 SEDIMENT PROCESSING FACILITY  
 DEMOBILIZATION AND RESTORATION PLAN**

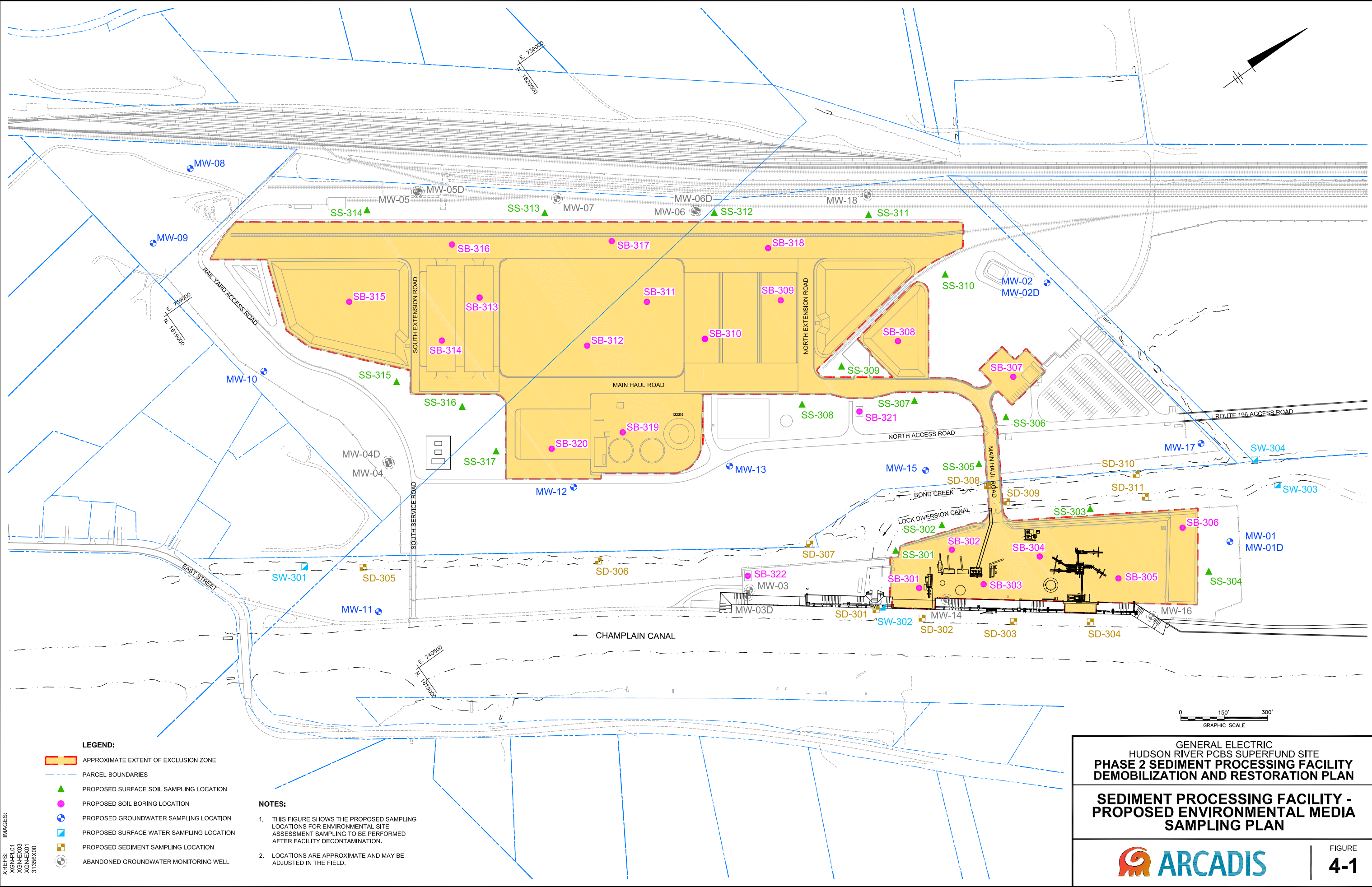
**SEDIMENT PROCESSING FACILITY -  
 PROPOSED ASPHALT/CONCRETE  
 PAVEMENT SAMPLING PLAN**

**ARCADIS**

FIGURE  
**3-1**



CITY: SYRACUSE, NY DN\GROUP: EBC-MD\Y DBUILD: LPOSENAUER PM: C.GUEST LYRON=OFF=REF  
 VAENV\CAD\SYRACUSE\ACT\N0031356\0000\00004\SPF\_P12DRV31356P04.dwg LAYOUT: 4-1 SAVED: 9/8/2015 2:50 PM PAGESETUP: --- PLOTSTYLETABLE: --- PLOTTED: 9/8/2015 2:50 PM BY: POSENAUER, LISA



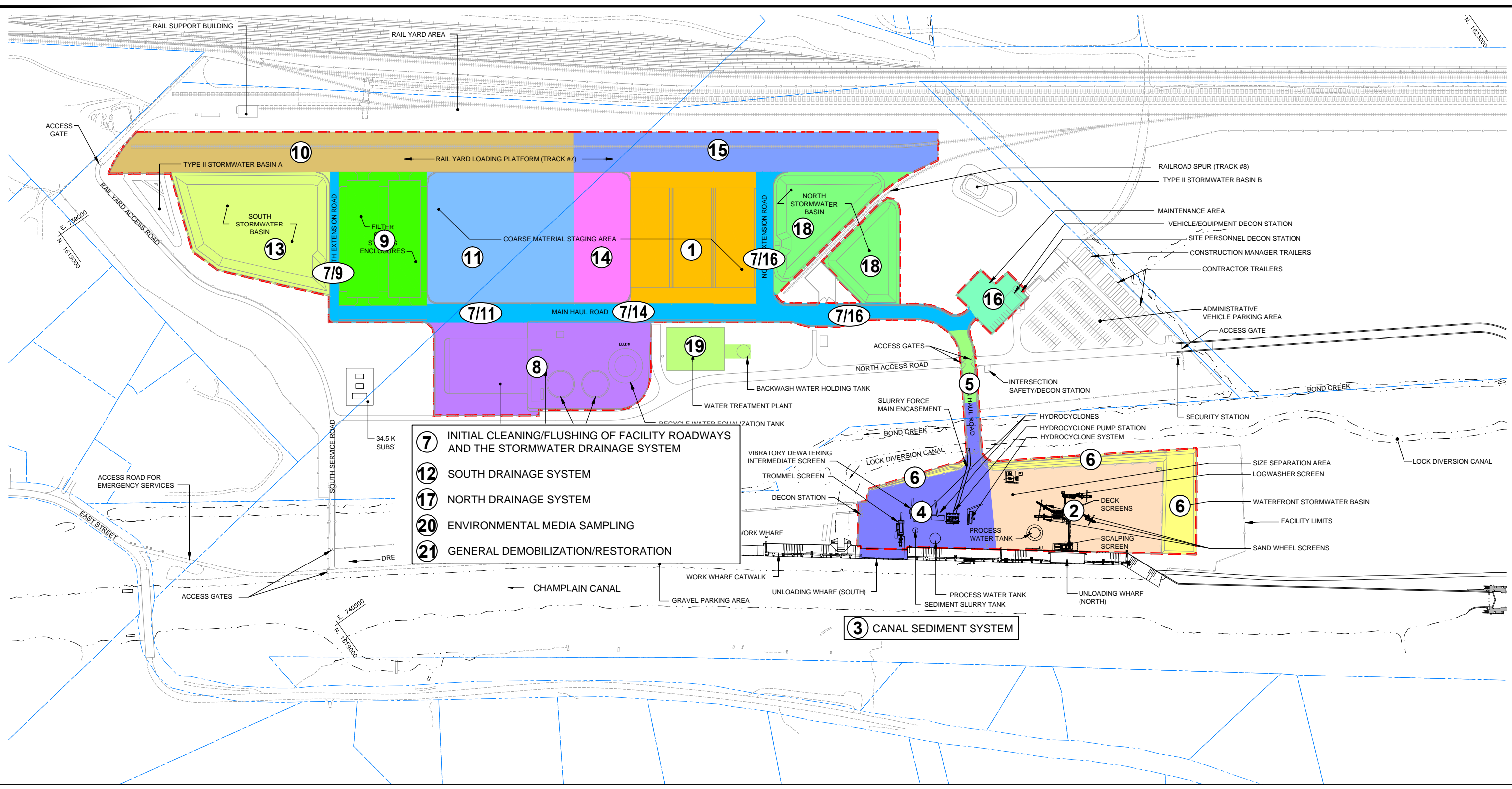
- LEGEND:**
- APPROXIMATE EXTENT OF EXCLUSION ZONE
  - PARCEL BOUNDARIES
  - ▲ PROPOSED SURFACE SOIL SAMPLING LOCATION
  - PROPOSED SOIL BORING LOCATION
  - PROPOSED GROUNDWATER SAMPLING LOCATION
  - PROPOSED SURFACE WATER SAMPLING LOCATION
  - PROPOSED SEDIMENT SAMPLING LOCATION
  - ABANDONED GROUNDWATER MONITORING WELL

- NOTES:**
1. THIS FIGURE SHOWS THE PROPOSED SAMPLING LOCATIONS FOR ENVIRONMENTAL SITE ASSESSMENT SAMPLING TO BE PERFORMED AFTER FACILITY DECONTAMINATION.
  2. LOCATIONS ARE APPROXIMATE AND MAY BE ADJUSTED IN THE FIELD.

GENERAL ELECTRIC  
 HUDSON RIVER PCBs SUPERFUND SITE  
**PHASE 2 SEDIMENT PROCESSING FACILITY  
 DEMOBILIZATION AND RESTORATION PLAN**

**SEDIMENT PROCESSING FACILITY -  
 PROPOSED ENVIRONMENTAL MEDIA  
 SAMPLING PLAN**

CITY: SYRACUSE, NY DIV: GROUP EBC-IMDV DB: LD: L POSENAUER PM: C GUEST LYNON: OFF: REF: PLOTTED: 9/11/2015 10:08 AM BY: POSENAUER, LISA  
 V:\ENVCAD\SYRACUSE\ACTIVE\IMB0031356\0000000000\ASPP\_P\H2DRP31356G08.dwg LAYOUT: 8-1 SAVED: 9/11/2015 10:08 AM PAGES: 8-1  
 XREFS: IMAGES: XGN: PLOT XGN: EXG XGN: EXOT 31356G00



- |    |   |
|----|---|
| 7  | INITIAL CLEANING/FLUSHING OF FACILITY ROADWAYS AND THE STORMWATER DRAINAGE SYSTEM |
| 12 | SOUTH DRAINAGE SYSTEM   |
| 17 | NORTH DRAINAGE SYSTEM   |
| 20 | ENVIRONMENTAL MEDIA SAMPLING  |
| 21 | GENERAL DEMOBILIZATION/RESTORATION  |

**3** CANAL SEDIMENT SYSTEM

- LEGEND:**
- PARCEL BOUNDARIES
  - APPROXIMATE OF CONCEPTUAL DEMOBILIZATION SEQUENCE BY AREA

- NOTES:**
1. PARCEL BOUNDARIES OBTAINED FROM WASHINGTON COUNTY IN JANUARY 2015.
  2. THE CONCEPTUAL DEMOBILIZATION SEQUENCE SHOWN ON THIS FIGURE IS PROVIDED FOR GENERAL REFERENCE PURPOSES ONLY. SEE SECTION 8.2 OF THE PHASE 2 SEDIMENT PROCESSING FACILITY DEMOBILIZATION AND RESTORATION PLAN FOR ADDITIONAL DETAIL REGARDING THE ANTICIPATED DEMOBILIZATION SEQUENCE. THE ACTUAL DEMOBILIZATION SEQUENCE WILL BE SUBJECT TO CHANGE AND WILL BE DETERMINED BASED ON CONDITIONS ENCOUNTERED DURING THE DEMOBILIZATION ACTIVITIES, SAMPLE RESULTS, FINAL DECISIONS REGARDING THE DISPOSITION OF ITEMS AND FINAL RESTORATION, AND/OR OTHER FACTORS. THE DEMOBILIZATION SCHEDULE AND SEQUENCE WILL BE REVIEWED WITH EPA AS THE WORK PROGRESSES.
  3. DECONTAMINATION, SAMPLING, CHARACTERIZATION, REMOVAL, AND DISPOSITION ACTIVITIES WILL OCCUR CONCURRENTLY IN DIFFERENT AREAS OF THE FACILITY AS THE WORK PROGRESSES IN EACH AREA. THE NUMERICAL SEQUENCE SHOWN ON THIS FIGURE IS INTENDED TO IDENTIFY THE GENERAL STEPS OF THE DEMOBILIZATION PROCESS. DEMOBILIZATION ACTIVITIES MAY NOT BE PERFORMED IN THE NUMERICAL SEQUENCE SHOWN AND MULTIPLE STEPS MAY BE PERFORMED CONCURRENTLY, PROVIDED THAT THERE IS NOT A POTENTIAL FOR CROSS-CONTAMINATION.

GENERAL ELECTRIC  
 HUDSON RIVER PCBs SUPERFUND SITE  
**PHASE 2 SEDIMENT PROCESSING FACILITY  
 DEMOBILIZATION AND RESTORATION PLAN**  
**SEDIMENT PROCESSING FACILITY -  
 CONCEPTUAL DEMOBILIZATION  
 SEQUENCE**

**ARCADIS**

FIGURE  
**8-1**