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**PHASE 2 REMEDIAL ACTION COMMUNITY  
HEALTH AND SAFETY PLAN FOR 2015**

**Appendix F**

**to**

**Remedial Action Work Plan for Phase 2 Dredging and  
Facility Operations in 2015**

**HUDSON RIVER PCBs SUPERFUND SITE**

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- ATTACHMENT 2 PROJECT EMERGENCY EQUIPMENT**
- ATTACHMENT 3 EMERGENCY CONTACT INFORMATION**
- ATTACHMENT 4 EMERGENCY PROCEDURES**

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## ABBREVIATIONS AND ACRONYMS

BMPs	Best management practices
CD	Consent Decree
CENP	Community Education and Notification Program
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CHASP	Community Health and Safety Plan
CIH	Certified Industrial Hygienist
CMP	Complaint Management Program
CO	Carbon Monoxide
CPR	cardiopulmonary resuscitation
CSP	certified safety professional
CU	Certification Units
CWA	Clean Water Act
cy	cubic yards
dBA	A-weighted decibels
DO	dissolved oxygen
EHS	environmental health and safety
EMR	experience modification rate
EPA	(United States) Environmental Protection Agency
EPS	Engineering Performance Standards
FDR	Final Design Report
GAC	Granulated activated carbon
GE	General Electric Company
H <sub>2</sub> S	hydrogen sulfide
HASP	Health and Safety Plan
HAZWOPER	40-hour Hazardous Waste Operations
MGD	million gallons per day
mg/L	milligram per liter
MPA	mass per unit area
µg/L	micrograms per liter
µg/m <sup>3</sup>	micrograms per cubic meter
NAAQS	National Ambient Air Quality Standards

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## ABBREVIATIONS AND ACRONYMS (CONTINUED)

NFPA	National Fire Prevention Association
ng/L	nanogram per liter
NO <sub>x</sub>	nitrogen dioxides
NYCRR	Official Compilation of NY State Codes, Rules and Regulations
NYSCC	New York State Canal Corporation
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOT	New York State Department of Transportation
O <sub>3</sub>	ozone
OPA	Oil Pollution Act
OSHA	Occupational Safety and Health Administration
OSHT	Occupational Safety and Health Technician
PCBs	polychlorinated biphenyls
RAM QAPP	Remedial Action Monitoring Quality Assurance Project Plan
PM <sub>10</sub>	particulate matter smaller than 10 microns in diameter
PM <sub>2.5</sub>	particulate matter smaller than 2.5 microns in diameter
PPE	personal protective equipment
ppm	parts per million
PSCP	Performance Standards Compliance Plan
QoLPS	Quality of Life Performance Standards
RA	Remedial action
RAM	Remedial Action Monitoring
RAWP	Remedial Action Work Plan
RBLA	Rensselaer Barge Loading Area
RM	river mile
ROD	Record of Decision
RQ	reportable quantity
SBLA	Saratoga Barge Loading Area
SCBA	self-contained breathing apparatus
SO <sub>2</sub>	sulfur dioxide
SOW	statement of work
SPCC	Spill Prevention, Control & Countermeasure

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### ABBREVIATIONS AND ACRONYMS (CONTINUED)

SWPPP	Stormwater Pollution Prevention Plan
TIP	Thompson Island Pool
TOC	total organic carbon
TSS	total suspended solids
UHF	ultra high frequency
USCG	United States Coast Guard
VHF	very high frequency
VTS	vessel traffic service
WQ	water quality

# 2015 Community Health and Safety Plan

## SECTION 1

### INTRODUCTION

General Electric Company (GE) has developed this Phase 2 Remedial Action Community Health and Safety Plan for 2015 (2015 CHASP) to address potential community health and safety issues for the public in the vicinity of the activities to be conducted by GE during the fifth year of Phase 2 of the Hudson River dredging project – 2015.

#### 1.1 BACKGROUND

On November 2, 2006, the United States District Court for the Northern District of New York approved a Consent Decree (CD) executed by GE and the United States of America in October 2005 relating to the performance of the Remedial Action (RA) selected by the U.S. Environmental Protection Agency (EPA) to address polychlorinated biphenyls (PCBs) in the sediments of the Upper Hudson River. As described in EPA's February 2002 Record of Decision (ROD) for this site (EPA, 2002), the RA involves the dredging, processing, and off-site transport and disposal of PCB-containing sediments from the Upper Hudson River. The ROD and the CD provided that this project would be conducted in two phases – Phase 1, consisting of the first year of dredging, and Phase 2, consisting of the remainder of the project. The CD included, as Appendix B, a Statement of Work for Remedial Action and Operations, Maintenance and Monitoring (SOW), which, in turn, included a number of attachments specifying requirements for various aspects of Phase 1 of the RA. In addition, EPA established Engineering Performance Standards (EPS) and Quality of Life Performance Standards (QoLPS) for Phase 1. The CD provided that, following the completion of Phase 1 and a scientific peer review regarding the EPS for Phase 2, EPA would issue a decision as to the scope and performance standards for Phase 2, as well as any changes to the SOW, and GE would then notify EPA whether GE would perform Phase 2 under the CD.

Phase 1 of the RA was implemented in 2009, and the peer review on the EPS was conducted in 2010. In December 2010, in accordance with the CD, EPA issued revised EPS for Phase 2 (EPA, 2010a), modifications to the QoLPS for Phase 2 (EPA, 2010b), and revised versions of the SOW and its attachments for Phase 2 (EPA, 2010c). One of those SOW attachments was a Phase 2 Remedial Action Community Health and Safety Program Scope (Phase 2 CHASP Scope), which specifies the requirements for GE's community health and safety program for Phase 2, to be set forth in a Phase 2 Community Health and Safety Plan (CHASP). GE thereafter notified EPA that it would perform Phase 2 of the RA under the CD.

The revised SOW requires GE to submit a number of work plans for implementation of Phase 2 of the RA. Among other things, it requires GE to submit a Remedial Action Work Plan (RAWP) for Phase 2 Dredging and Facility Operations for each construction year of Phase 2, and

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it requires that that work plan include a Phase 2 CHASP that describes the community health and safety program for the subject year of Phase 2.

In the spring of 2011 through 2014, GE submitted RAWPs, including CHASPs, for the prior years of Phase 2 dredging, known as Phase 2 Year 1, Phase 2 Year 2, Phase 2 Year 3, and Phase 2 Year 4, respectively. GE conducted Phase 2 Year 1 dredging and associated activities in 2011, Phase 2 Year 2 dredging and associated activities in 2012, Phase 2 Year 3 dredging and associated activities in 2013, and Phase 2 Year 4 dredging and associated activities in 2014.

GE has now submitted a RAWP for Phase 2 Dredging and Facility Operations in 2015 (2015 RAWP; Parsons, 2015a). That RAWP covers the dredging and related activities in the remaining Phase 2 dredge areas in the river, with two exceptions: (1) dredging in Certification Unit (CU) 60 near the Thomson Island Dam, which is covered by a separate RAWP for CU 60 (CU 60 RAWP; Parsons, 2015b); and (2) dredging in the remaining portions of the non-navigable reach of the river, known as the Landlocked Area or Reach 7 (where dredging was not completed in 2014), which is covered by separate RAWP submitted in 2014 for that area (Reach 7 RAWP; Parsons, 2014b) and Addendum No. 1 to the Reach 7 RAWP (Parsons, 2015c). The 2015 RAWP also describes the habitat construction activities to be performed in 2015 in areas dredged in 2014.

It is anticipated that dredging and placement of backfill or cap material, as required, in all of the remaining Phase 2 dredge areas will be completed in 2015.

This 2015 CHASP is submitted as Appendix F to the 2015 RAWP, but also applies to 2015 dredging in CU 60 and in the Landlocked Area. As required by the Phase 2 CHASP Scope, this appendix has been prepared as a “stand-alone” document that presents relevant information affecting community health and safety, including, where appropriate, a summary of information from other documents in abbreviated form for completeness and readability.

### 1.2 PURPOSE OF PLAN

The purpose of the 2015 CHASP is to describe the community health and safety program that GE will implement in the 2015 season of Phase 2. This constitutes an update to the 2014 CHASP (Parsons, 2014c) that applied during Phase 2 Year 4 of the dredging project.

This 2015 CHASP describes potential hazards and impacts to members of the local community, and the steps that GE and its contractors will take to prevent and respond to them. Generally, GE followed this basic approach when developing this document:

- First, identify and evaluate potential hazards and community impacts which, absent preventive measures, could realistically occur during work activities.
- Second, evaluate “preventive measures” that could be put in place before the project begins and during activities to reduce the potential for hazards and impacts to occur.

## 2015 Community Health and Safety Plan

- Third, develop response actions and procedures that could be taken in the event hazards or community impacts occur. Given the preventive measures already implemented, the likelihood of such hazards occurring during the project is low.
- Finally, identify some “mitigation” or additional preventive measures that could be implemented in the event an incident, injury or severe impact occurs. It should be noted, however, that the identification of mitigation measures is not an exhaustive list. If an incident does occur, GE will evaluate its cause to develop specific mitigation measures to prevent a recurrence.

This CHASP also sets forth a Community Education and Notification Plan (CENP) for providing the public with timely and accurate information about project work activities and schedule, and a Complaint Management Program (CMP) for the public to register project-related complaints.

The focus of this document is on those potential hazards or impacts that may affect the public. Separate project Health and Safety Plans (HASPs) that address worker safety have been, or will be, developed by the contractors retained by GE to perform work activities during 2015.

This CHASP addresses impacts potentially resulting from the activities of GE and its contractors in the vicinity of the project area. Potential hazards relating to the off-site transport and disposal of dredged material, the movement of trains near the project area, and the delivery of raw materials and equipment prior to arrival at the project areas are the responsibility of the transporters or disposal facilities and are not addressed in this CHASP.

This 2015 CHASP has been prepared to be consistent with the Phase 2 CHASP Scope, with certain clarifications and modifications approved by EPA. During the 2015 construction season of Phase 2, revisions to this 2015 CHASP may become necessary due to the identification of additional hazards or activities, design changes, adaptive management changes made pursuant to Section 7 of the revised SOW, or other reasons. Any such revisions will be submitted to EPA for review and approval. Any actions taken by GE during the 2015 season of Phase 2 to address the community health and safety issues described herein will be governed by this 2015 CHASP, as approved by EPA, and any EPA-approved revisions thereof.

### 1.3 GE ENVIRONMENTAL HEALTH AND SAFETY POLICY

GE strives to provide a safe and healthy working environment in all the communities in which it does business. GE’s environmental health and safety (EHS) programs combine clear leadership by management; the participation of all employees, contractors and functions; and the use of appropriate technology to ensure the health and safety of its employees and the public.

At the heart of GE’s EHS policy are the following goals, which GE pursues relentlessly every day:

- 100% compliance everywhere GE operates or sells products;
- Eliminate hazards and provide a safe workplace;
- Be good neighbors in the communities where GE employees live and work;



## 2015 Community Health and Safety Plan

- Minimize the use and release of hazardous materials; and
- Assess all new activities and products for EHS impacts.

In addition to these policy goals, GE also sets common global standards for EHS in areas such as industrial hygiene, ergonomics, personal protective equipment (PPE), process safety, chemical storage and handling, spill prevention and waste management.

In order to accomplish these goals and standards, GE insists that every employee and contractor become a part of the EHS team. GE employs more than 1,000 EHS professionals to develop and drive EHS processes and metrics into the Company's operating system. EHS performance is measured and valued every day across GE - it is embedded in everything the Company does.

GE requires that each of its facilities and sites identifies and controls potential hazards in order to protect the public, its employees and the environment. Reviews are conducted regularly, deficiencies, if any, are identified, issues are tracked to closure, improvements are made to prevent potential hazards, and mitigation measures are implemented as a result of these reviews. The end result enhances injury prevention, increases operations knowledge, improves communications and helps assure compliance with required EHS standards.

GE hires hundreds of contractors to perform a variety of activities for the Company. Before any contractor is hired, that contractor's health and safety programs are reviewed and evaluated for consistency with GE's internal programs. In addition, written procedures and documented training requirements are developed for all personnel who will be engaged in high-risk operations, and contractor orientations are held to discuss potential site hazards and health and safety performance expectations. A GE EHS representative is assigned to oversee contractor work and verify that EHS performance expectations are met.

Regarding emergency preparedness, each GE facility or site is required to develop a written program that includes emergency evacuation and incident response plans for a variety of potential emergencies that may take place at the facility. These plans are communicated to all individuals who enter the site. These plans are also provided to off-site emergency response agencies who may respond to on-site incidents.

And each year, in partnership with local emergency response agencies, GE facilities are required to conduct emergency drills. Once the drills are complete, the facility is required to develop corrective actions identified from any opportunities for improvement that may have been identified from the drill. These corrective actions must be tracked to closure.

Performance of the Phase 2 dredging project abides by the requirements of GE's world-class EHS program.

# 2015 Community Health and Safety Plan

## 1.4 SUMMARY OF RELATED DOCUMENTS

This CHASP has been developed to facilitate the public's understanding of potential health and safety issues that may impact the community during remedial activities. As noted above, it is meant to be a stand-alone document that, where appropriate, presents information from other documents in abbreviated form for completeness and readability. Those documents include the following:

- The CD signed by the United States and GE and entered by the court on November 2, 2006, as modified on March 20, 2009 and August 15, 2011;
- The EPS issued by EPA for Phase 2 (EPA, 2010a);
- The QoLPS issued by EPA for Phase 2 (EPA, 2004, as modified by EPA, 2010b, and the attachments to the revised SOW issued by EPA for Phase 2);
- The Water Quality (WQ) Requirements issued by EPA for releases of constituents not subject to the EPS and for discharges from GE's sediment processing facility (EPA, 2005, 2006, as modified by the Phase 2 EPS and certain attachments to the December 2010 revised SOW);
- The Final Design Reports (FDRs) and design addenda and supplements applicable to anticipated dredging, sediment processing, and related operations for the 2015 season of Phase 2 (see ARCADIS, 2013; 2014a, b; 2015);
- The 2015 RAWP (Parsons, 2015a, cited above), which describes upcoming dredging, backfilling/capping, habitat construction, and associated activities for 2015 other than those in CU 60 and the Landlocked Area;
- The CU 60 RAWP (Parsons, 2015b), which describes GE's modified plans for dredging in CU 60 near the Thompson Island Dam;
- The separate Reach 7 RAWP for the Landlocked Area (Parsons, 2014b), which describes the specific dredging, material handling, backfilling/capping, and other activities to be performed in the Landlocked Area, and Addendum No. 1 to that RAWP (Parsons, 2015c), which describes modifications for the 2015 season;
- The Phase 2 Performance Standards Compliance Plan for 2015 (2015 PSCP; GE, 2015; Appendix D to the 2015 RAWP), which incorporates the 2014 PSCP with a number of specified changes and thereby describes the actions to be taken by GE during the 2015 season to address the EPS, QoLPS, and WQ Requirements established by EPA for Phase 2, including contingency actions to be taken in the event of an exceedance of the numerical criteria in those standards and requirements;
- The Phase 2 Remedial Action Monitoring Quality Assurance Project Plan (Phase 2 RAM QAPP; Anchor QEA, 2012), which describes the environmental monitoring program to be implemented during the remainder of Phase 2, including the 2015 season, as modified by a number of Corrective Action Memoranda (CAMs);

## 2015 Community Health and Safety Plan

- The Phase 2 Remedial Action Health and Safety Plan for 2015 (2015 HASP; Parsons 2015d), which describes the protection of workers during dredging, sediment processing, and related activities during the 2015 season. In contrast to this 2015 CHASP, which describes health and safety activities that have the potential to affect the public, the 2015 HASP applies to project workers and activities that do not have the potential to affect the general public. It addresses worker safety training, hazard communication, personal protective equipment, and specific construction practices such as trenching, shoring, rigging, and lifting.

### 1.5 DOCUMENT ORGANIZATION

This 2015 CHASP includes the following sections:

**Section 1 – Introduction:** This section presents general information about the report and a summary of related reports.

**Section 2 – Project Summary:** This section presents background information related to the Phase 2 activities to be conducted during the 2015 season.

**Section 3 – Project Schedule and Operations:** This section describes the schedule for work activities, including hours of operation, for this season.

**Section 4 - Actions to Address Quality-of-Life Performance Standards:** This section provides a description of EPA's QoLPS as applicable to Phase 2, a summary of design analyses performed to evaluate the project's ability to achieve those standards, a description of preventive measures included in the design to address those impacts, a summary of the monitoring that GE will conduct under each standard, and a description of the actions that GE will take if monitoring demonstrates corrective action is needed or if a Quality of Life complaint is received.

**Section 5 – Assessment and Management of Potential Hazards:** This section identifies potential hazards associated with activities to be performed in 2015, which are described by type of activity (e.g., dredging operations and associated in-river activities, operation of the sediment processing facility and associated rail yard). Prevention and mitigation measures are also identified, as appropriate, for each potential hazard.

**Section 6 – Site Safety Personnel Responsibilities:** This section discusses the roles, qualifications and responsibilities of the project Health and Safety teams and lists contact information for the project Health and Safety team. This section also describes the controls that will be established to ensure security and limited access at the processing facility and in-river work areas.

**Section 7 – Release Reporting and Response, and Emergency Response Plan:** This section describes reporting procedures and responses to spills and releases of dredged materials or other potentially hazardous substances, such as fuel. Next, it describes the procedures for

## 2015 Community Health and Safety Plan

responding to an emergency incident in the project area, and describes the roles of external emergency response organizations. It also provides an emergency contact list.

**Section 8 – Actions to Address Resuspension Performance Standard and Other In-river Water Quality Requirements:** This section summarizes the monitoring that will be conducted in 2015 to address the Phase 2 Resuspension Performance Standard and describes contingency actions that may be implemented if environmental monitoring demonstrates the need for responsive action.

**Section 9 – Protection of Water Supplies:** This section identifies public and private water users in the vicinity of work activities, and describes the process for notifying water users of potential impacts related to resuspension of PCBs should environmental monitoring demonstrate a need for corrective action.

**Section 10 – Community Education and Notification Program and Complaint Management Program:** This section describes the process for informing the public of project activities, status and schedule, including notifications to mariners to ensure their safety in the vicinity of work areas. This section also details how the public can request project information or register complaints.

**Section 11 – References:** This section provides full bibliographic references to key documents cited in the body of the report.

# 2015 Community Health and Safety Plan

## SECTION 2

### PROJECT SUMMARY

This section describes the physical location and setting of the project area and the Phase 2 sediment removal and processing activities to be conducted in 2015. It also summarizes each of the major program elements involved in river-based activities such as dredging, backfilling/capping, and habitat replacement and reconstruction, as well as land-based activities such as operations at the sediment processing facility and the loading of rail cars for transport and disposal of materials. This summary is based on the details of the project that are provided in the pertinent RAWPs and FDRs covering 2015 activities.

#### 2.1 PROJECT SETTING

The Hudson River is located in eastern New York State and flows approximately 300 miles in a generally southerly direction from its source, Lake Tear-of-the-Clouds in the Adirondack Mountains, to the Battery, located in New York City at the tip of Manhattan Island. For the purpose of sediment remediation, EPA divided the Upper Hudson River (i.e., the section of river upstream of the Federal Dam at Troy, New York) into three sections as described below and illustrated on Figure 2-1.

- **River Section 1:** Former location of Fort Edward Dam to Thompson Island Dam (from river mile [RM] 194.8 to RM 188.5; approximately 6.3 river miles);
- **River Section 2:** Thompson Island Dam to Northumberland Dam (from RM 188.5 to RM 183.4; approximately 5.1 river miles); and
- **River Section 3:** Northumberland Dam to the Federal Dam at Troy (from RM 183.4 to RM 153.9; approximately 29.5 river miles).

On February 1, 2002, EPA issued the Superfund ROD for the Hudson River PCBs Superfund Site which called for, among other things, the removal and disposal of PCB-contaminated sediments from the Upper Hudson River that meet certain mass per unit area (MPA) and surface concentration or characteristic criteria (EPA, 2002). The ROD called for the removal of targeted sediments by dredging, which would be done in two distinct phases. Phase 1 constituted the first year of dredging and sediment processing and was performed in 2009 (with some of the material dredged during that year transported off-site for disposal in 2010). Phase 2 is a much larger multi-year effort that is intended to remove the remainder of the sediments that meet the removal criteria described in the ROD. Phase 2 began in 2011, continued in 2012, 2013, and 2014, and will resume in 2015.

#### 2.2 SUMMARY OF PHASE 2 REMEDIAL ACTIVITIES IN 2015

As described below, and in greater detail in the 2015 RAWP, targeted sediments will be removed from the river using environmental dredging equipment, and then transported by barge

## 2015 Community Health and Safety Plan

to a land-based sediment processing facility, which was constructed in 2007-2009 at a property located between the Champlain Canal and Towpath Road in the Town and Village of Fort Edward. At the processing facility, sediments will be dewatered and stabilized for safe transport, and then loaded into rail cars for transport out of the Hudson River Valley for ultimate disposal in licensed landfills. In general, areas that have been dredged will be backfilled or capped with one foot or more of clean material, which will facilitate habitat replacement in those areas. Shorelines affected by the project will be restored to a stable condition, as well. The major project elements that will be conducted during the 2015 construction season are further described below, and include:

- Dredging operations on the river and transport of dredged sediments by barge to the processing facility;
- Backfilling/capping operations in the river after dredging;
- Operation of the sediment processing facility;
- Rail transport of processed sediment off-site for final disposal; and
- Habitat replacement and reconstruction activities for certain areas dredged in 2014.<sup>1</sup>

These major elements of the project form the basis for analysis, prevention, and control of potential health and safety issues that could occur during the project. Based on this categorization of activities, Section 5 of this CHASP identifies the preventive measures, management and mitigation of several potential hazards that could affect the community during the 2015 season. In addition, Section 4 of this CHASP discusses the mitigation and management of potential quality of life impacts of the project (air quality, odor, noise, lighting, and navigation).

### **2.2.1 Dredging Operations, Transport of Dredged Sediments to the Processing Facility, and In-River Monitoring Activities**

The areas that remain to be dredged in the Upper Hudson River consist of several designated CUs – namely, CU 60 in River Section 1; portions of CUs 64 and 65 (in which dredging was initiated but not completed in 2014) and all of CU 66 in the Landlocked Area in River Section 2; and CUs 94 through 96, and a portion of CU 99 (in which dredging was initiated but not completed in 2014) in River Section 3. Figures 2-2A through 2-2C provide an overview of these dredging areas.

Dredging and related operations in 2015 are planned to begin in early to mid-May after opening of the locks on the river and when river flow permits safe operations, and they are expected to be completed in early November 2015. (The project schedule is discussed further in Section 3.) Dredging operations are expected to occur 24 hours a day (except in certain locations where work will be limited to daylight hours under the applicable RAWP), six days a week. The

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<sup>1</sup> Habitat replacement/reconstruction for areas dredged in 2015 will be performed in subsequent years.

## 2015 Community Health and Safety Plan

seventh day will be reserved for maintenance, make-up time for unplanned project interruptions, and as a contingency to increase productivity if necessary.

Dredging will be generally conducted from dredge barges using excavator-mounted, hydraulically closing clamshell buckets. It is currently estimated that up to 4 dredges may be operating at any one time. However, in 2015, certain sub-areas will be dredged using a modified approach, involving dredging from land or through a combined land- and water-based approach, due to access and/or safety restrictions. Specifically, such a modified approach will be implemented in: (1) the eastern sub-unit in CU 60 (referred to as CU 60-2) due to its very close proximity to the Thompson Island Dam and the associated safety risks of working in the river so close to the dam; and (2) sub-units of CU 95 east of Quack Island (referred to as CUs 95-2 and 95-3) due to restrictions on access via water caused by rock outcroppings that create shallow water depths. This modified approach will involve the construction, at each of these locations, of a dedicated access road, a material staging area, and a transload station. At CUs 60-2 and 95-2, dredging will be conducted using a long-reach excavator that will be positioned on land, including on the access road and certain “finger piers” to be built out into the dredge area, and will dredge the target sediments to the extent of its practicable reach. The dredged sediment and debris will then be loaded into trucks and transferred to a transload station for loading into hopper barges in the river. At CU 95-3, dredging will be performed by an excavator that is delivered to the area via the access road and then mounted on a floating platform.

Material dredged from the river will be placed onto hopper barges, either directly or at a transload station (in CUs 60 and 95). If there is limited accessibility to the area being dredged, dredged material may be placed into a shallow draft hopper barge and then transferred into a regular hopper barge. A fleet of up to 22 barges, moved by tug boats, will be needed to transport dredged sediment and debris from the river, through the Champlain Canal locks, and up the canal to the unloading wharf at the processing facility. To maintain productivity targets, as many as 20 daily one-way barge trips through some individual locks may be necessary during peak days of dredging.

Throughout the project, extensive monitoring will be conducted to assess compliance with EPA’s performance standards and water quality requirements. This will include monitoring of PCB levels in water and river sediments. Monitoring of air quality, odor (if necessary), noise, and lighting will also be conducted as appropriate.

### 2.2.2 Backfilling and Capping Operations

After dredging is completed in an area, clean soil, sand, gravel, or stone will be spread over most dredged areas to stabilize the sediment bed, provide suitable substrate for habitat reconstruction, or to further isolate remaining sediments in place. (In the areas where dredging will be conducted by a land-based excavator, placement of these materials will be performed in the same way.) Several specific types of backfill and capping configurations are planned, based on what type of river bottom, PCB levels in residual sediments, and water flow characteristics

## 2015 Community Health and Safety Plan

are encountered within each dredge area. Backfill and capping materials will be transported via truck from their sources to the Saratoga Barge Loading Area (SBLA) or the Rensselaer Barge Loading Area (RBLA), where they will be loaded onto boats for transfer to the river areas where they will be placed.

### 2.2.3 Operation of the Sediment Processing and Dewatering Facility

For the dredging operations covered by the 2015 RAWP, the dredged materials will be transported by hopper barge to the sediment processing facility in Fort Edward. This facility includes a waterfront barge unloading wharf (which includes a 150-foot-long unloading area, a second 110-foot-long unloading area, a 200-foot-long work/maintenance wharf, and barge staging areas), sediment dewatering and processing facilities, and a rail yard. Figure 2-4 shows the layout of the processing facility. The processing facility is secured within a 7-foot-high perimeter fence, and access is controlled through gates staffed with security personnel. The areas where dredged material will be processed and staged are underlain by an impermeable liner and curbed to prevent run-off. The storm water will be contained and treated. The system will also treat all process water used or generated on the property.

The primary purpose of the sediment processing and dewatering facility is to effectively separate river water from sediment solids so that the dewatered sediments can be efficiently and safely transported off-site. This dewatering process will start when dredged material arrives at the wharf in hopper barges.

At the wharf, water will be pumped from the barges to the water treatment plant for treatment. Then the sediments will be unloaded from hopper barges using two bulk material unloading machines, and large debris such as rocks and tree limbs or other bulky materials will be sorted out. Coarse (free-draining) dredged material will be unloaded and moved by truck to the staging areas near the rail yard. The remaining sediment will be processed through screening equipment to further sort the material by particle size into coarse sand and gravel, and fine silty material.

Coarse sediment from the screening equipment will be transported to stockpile areas near the rail yard where it will be loaded into rail cars for shipment off-site. The fine sediments and water will be mixed with flocculants and coagulants to further enhance dewatering while being pumped to thickening equipment, then sent through large filter presses for additional water removal. Once dewatered, the “filter cake” material will be moved in a roll-off container to enclosed structures near the rail yard for loading onto rail cars.

Water collected during the dewatering process will be treated. Storm water from any area in contact with sediment material will be collected in lined surface impoundments for treatment. The on-site water treatment plant is designed to treat approximately two million gallons per day (MGD). Once treated, water will be discharged to the Champlain Canal, with monitoring to verify compliance with established water quality requirements.



## **2015 Community Health and Safety Plan**

As with dredging, operations at the processing facility are expected to occur 24 hours a day, six days a week. The seventh day will be reserved for maintenance, make-up time for unplanned interruptions, and as a contingency to increase productivity if necessary.

Dewatered sediments will be staged in stockpiles near the rail yard while awaiting loading into rail cars for off-site transport. For 2015, the volume of dewatered sediments that will be staged at the processing facility at any given time will not exceed 130,000 cy (unless necessitated by delays attributable to disposal facility(ies) or rail carriers or as otherwise approved by EPA), the height of the temporary sediment stockpiles will not exceed 30 feet, and processed material will not be staged at the unloading wharf.

### **2.2.4 Rail Transport of Processed Sediment for Off-Site Final Disposal**

Dewatered sediments will be loaded from the stockpiles into rail cars. It is anticipated that dedicated unit trains containing up to 93 rail cars will generally be used in 2015 for transport of the processed sediments. On average, one unit train of loaded rail cars will depart the rail yard, and one train of empty cars will arrive at the rail yard, every 2 to 3 days during the 2015 season. The actual frequency of train movement will vary based on rail company scheduling, rate of sediment processing, and other factors.

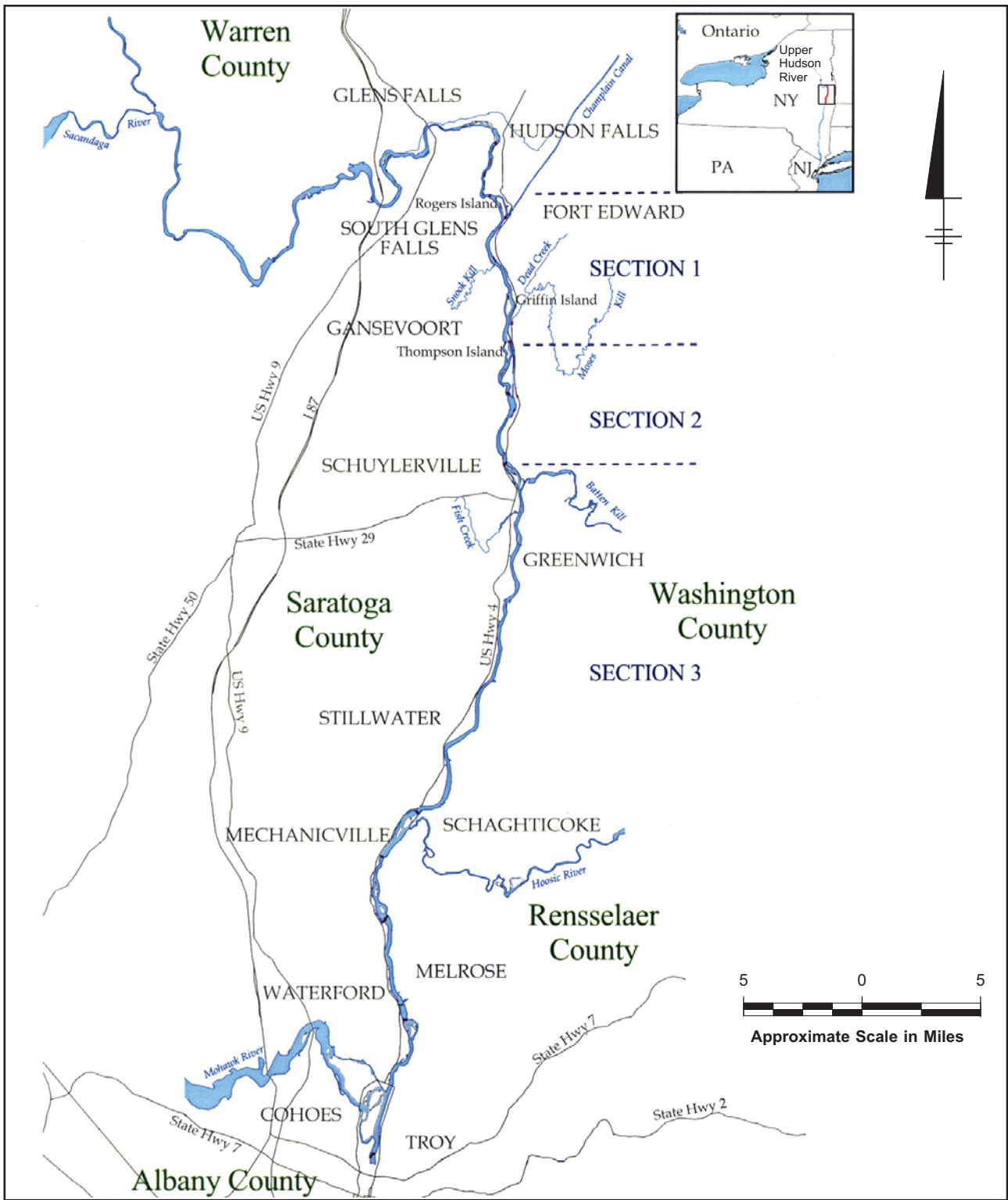
For purposes of off-site transport and disposal, the dredged and processed sediments will be segregated into those that contain (or are assumed to contain) PCBs at concentrations of 50 parts per million (ppm) or greater and those that have been shown to contain PCBs at concentrations below 50 ppm, and these two categories of sediments will be transported to and disposed of at separate permitted disposal facilities.

Before being loaded at the processing facility, each rail car will be fitted with a water-tight liner system, to meet applicable regulatory requirements. Once a train is loaded, it will travel from the processing facility to a licensed disposal facility outside the Hudson River Valley.

Interstate rail shipment is governed by the U.S. Department of Transportation regulations in 49 Code of Federal Regulations (CFR) Parts 171-174 and 178. These regulations govern the types of material that can be accepted for shipment, how the shippers are to be licensed, how the materials are to be packaged, labeled, handled, and transported, how the vehicles used for transporting the material are to be maintained, and how the shipper must deal with leaks, spills, and other incidents.

### **2.2.5 Habitat Construction**

Habitat construction in 2015 will be conducted in certain areas that were dredged in 2014. This will include the planting of aquatic or wetland vegetation in areas that were vegetated prior to dredging, to promote development of suitable habitat for aquatic organisms. Given the limited growing season in the Upper Hudson River, habitat-specific planting in 2015 dredge areas will not occur until the next or subsequent construction seasons.



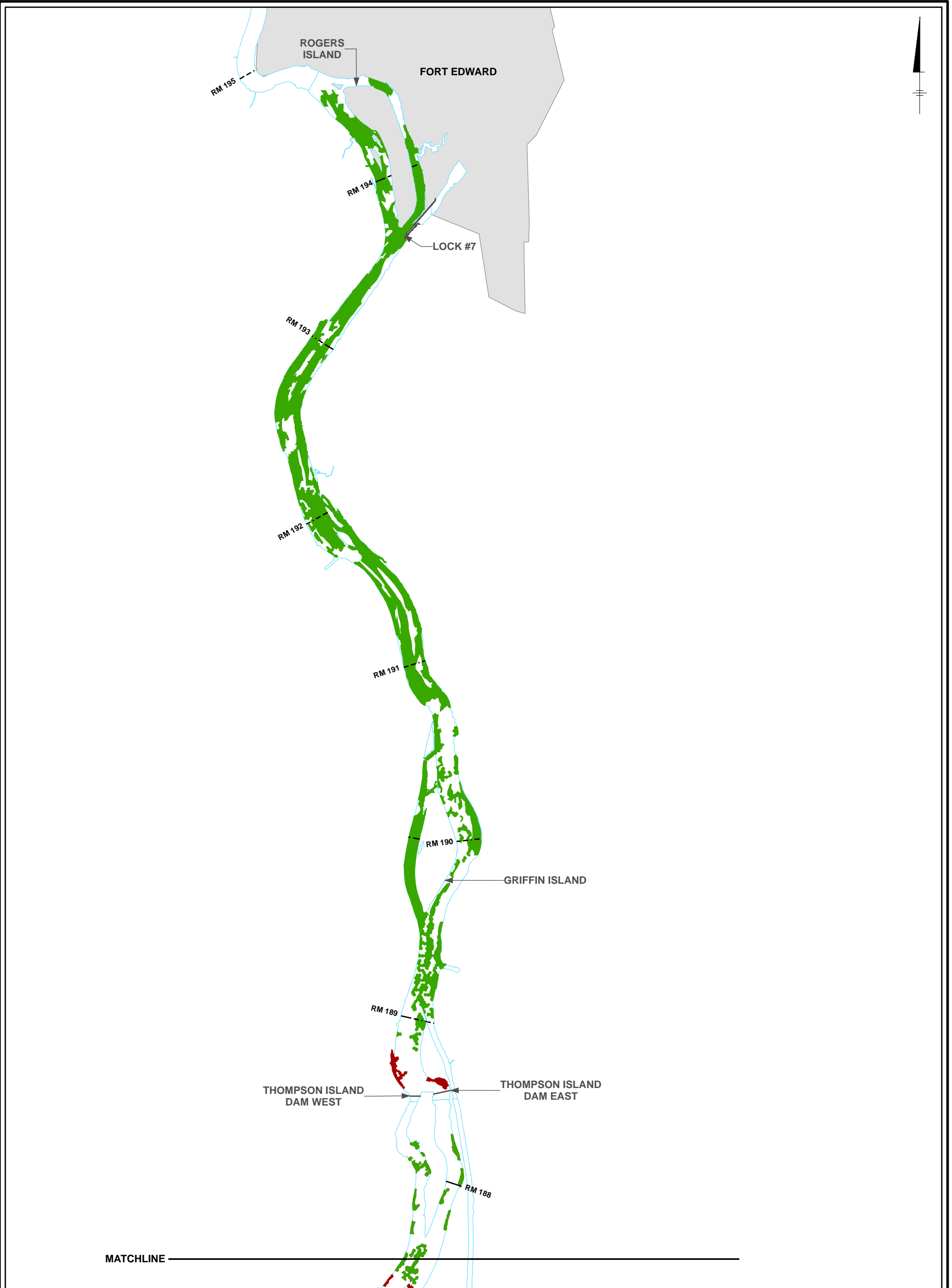
**NOTES:**

1. All locations are approximate.
2. Adapted from EPA Feasibility Study (December 2000).

GENERAL ELECTRIC COMPANY  
 HUDSON RIVER PCBs SUPERFUND SITE  
**2015 COMMUNITY HEALTH AND SAFETY PLAN**

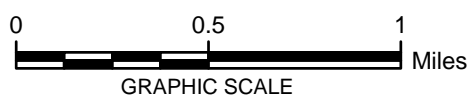
**UPPER HUDSON RIVER**

	FIGURE <b>2-1</b>
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- LEGEND:**
- DAM/LOCK
  - - - RIVER MILE MARKER
  - COMPLETED DREDGE AREA
  - REMAINING DREDGE AREA
  - INCORPORATED AREA
  - SHORELINE

**NOTE:**  
 1. BASE MAPPING PROVIDED BY QEA, LLC.

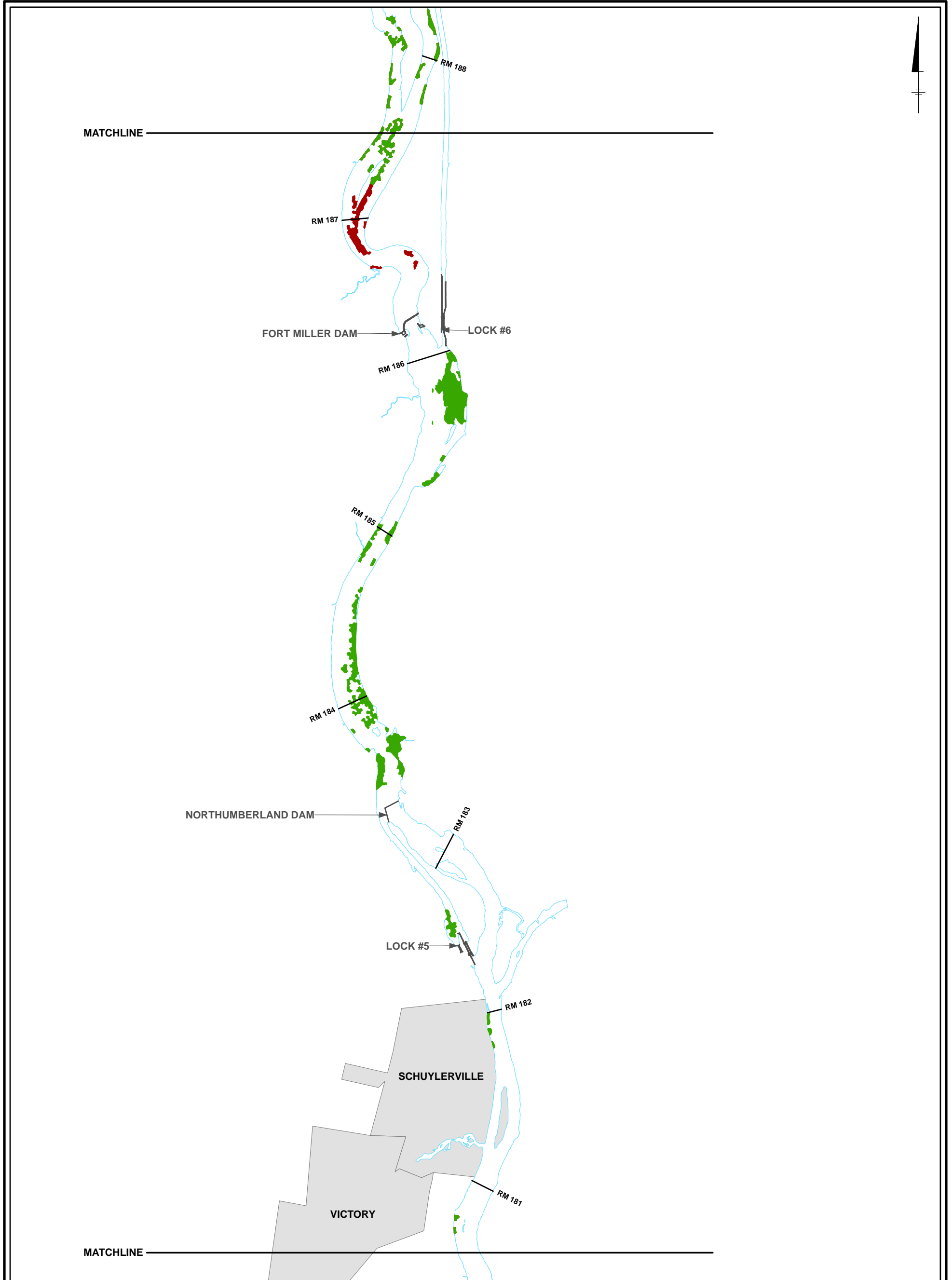


GENERAL ELECTRIC COMPANY  
 HUDSON RIVER PCBs SUPERFUND SITE  
**2015 REMEDIAL ACTION HEALTH AND SAFETY PLAN**

**DREDGE AREAS**



FIGURE  
**2-2a**

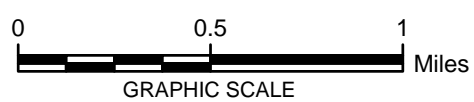


**LEGEND:**

- RIVER MILE MARKER
- DAM/LOCK
- COMPLETED DREDGE AREA
- REMAINING DREDGE AREA
- INCORPORATED AREA
- SHORELINE

**NOTE:**

1. BASE MAPPING PROVIDED BY QEA, LLC.

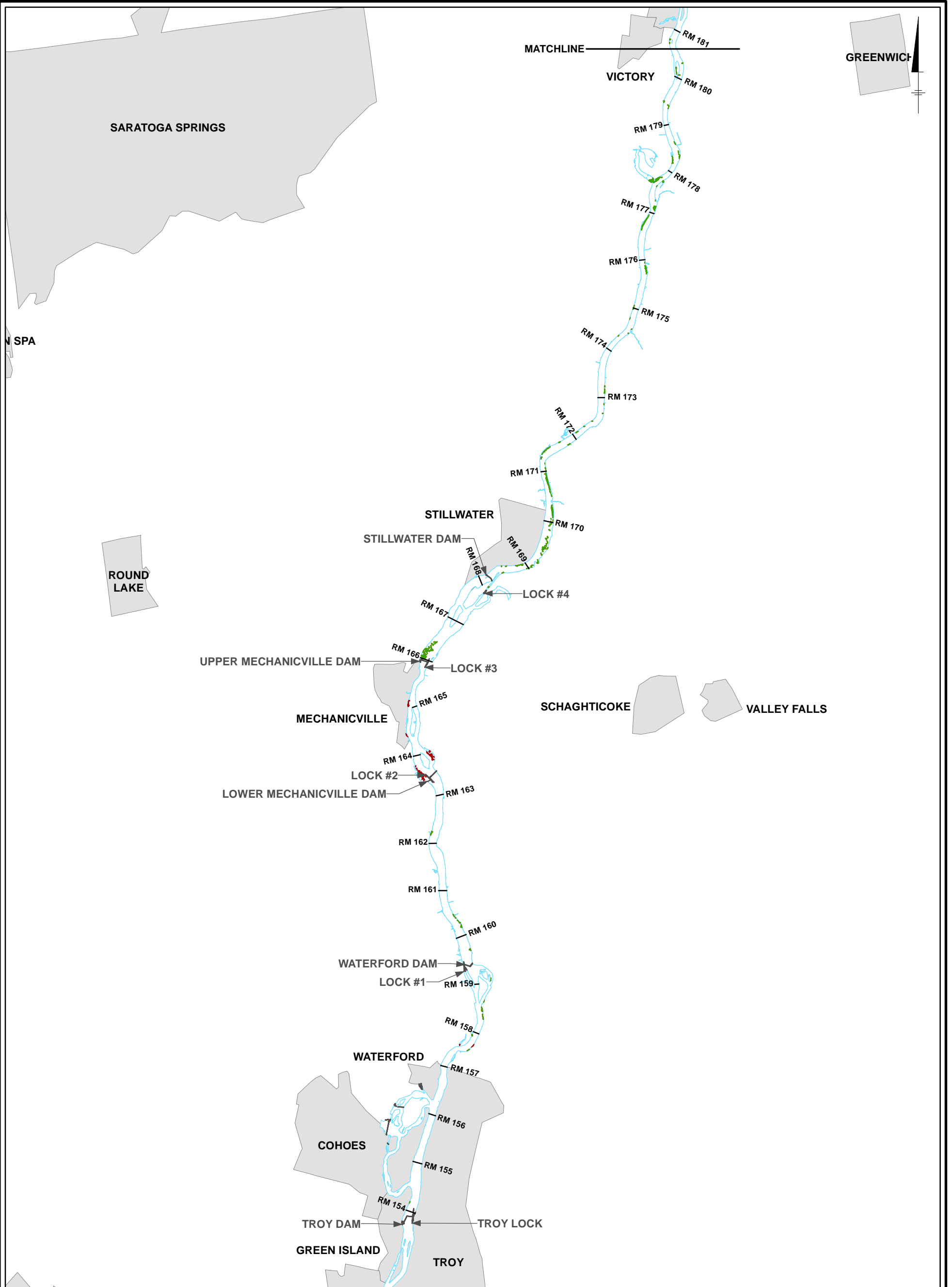


GENERAL ELECTRIC COMPANY  
 HUDSON RIVER PCBs SUPERFUND SITE  
**2015 REMEDIAL ACTION HEALTH AND SAFETY PLAN**

**DREDGE AREAS**

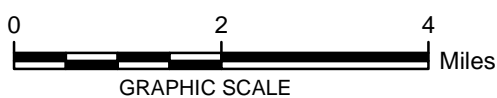


FIGURE  
**2-2b**



- LEGEND:**
- RIVER MILE MARKER
  - DAM/LOCK
  - COMPLETED DREDGE AREA
  - REMAINING DREDGE AREA
  - INCORPORATED AREA
  - SHORELINE

**NOTE:**  
 1. BASE MAPPING PROVIDED BY QEA, LLC.

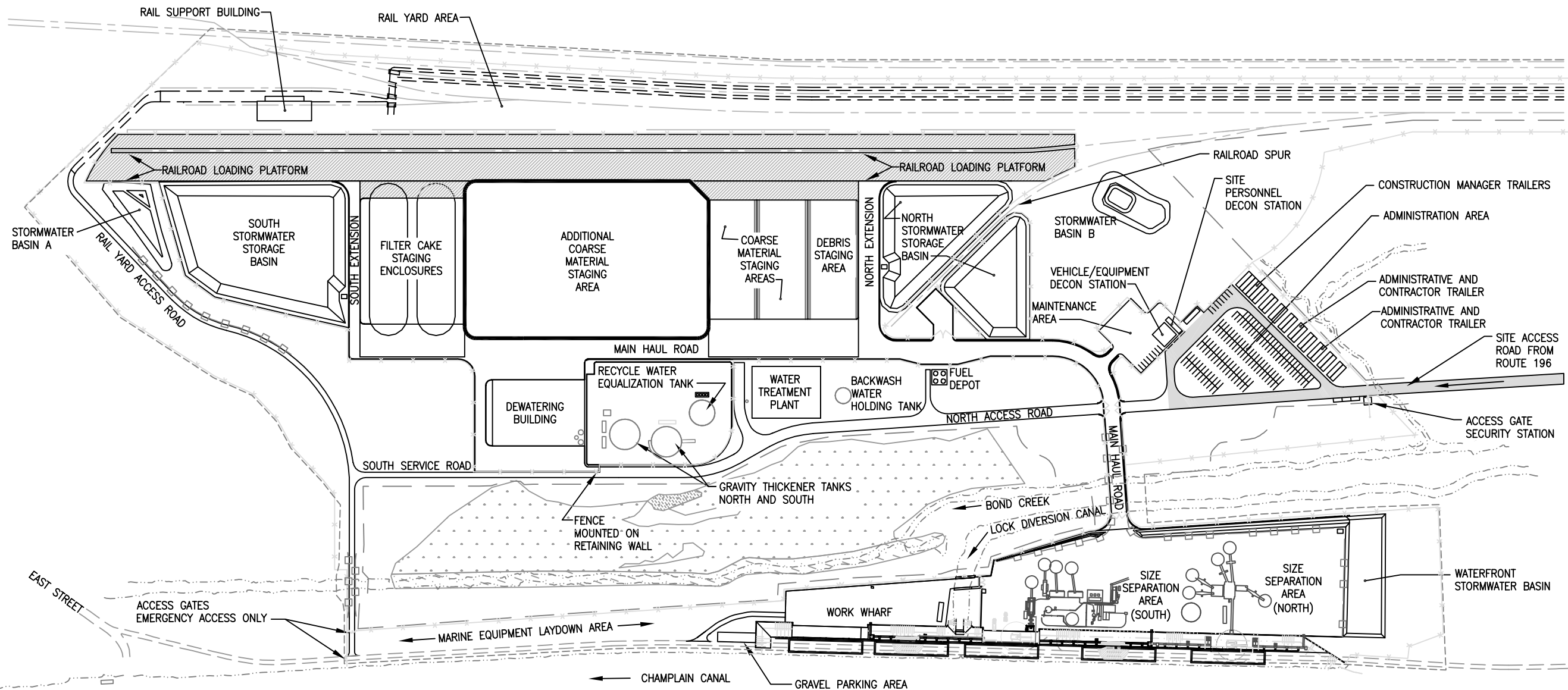


GENERAL ELECTRIC COMPANY  
 HUDSON RIVER PCBs SUPERFUND SITE  
**2015 REMEDIAL ACTION HEALTH AND SAFETY PLAN**

**DREDGE AREAS**






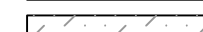
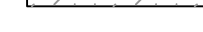

FIGURE  
**2-2c**

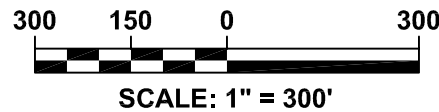


**SOURCE:**

BASE MAP INFORMATION SUPPLIED BY ARCADIS AND SHAW.

**LEGEND:**

-  GUIDE RAIL
-  SITE PERIMETER FENCE
-  FORESTED AREA
-  EMERGENT WETLANDS
-  SITE ACCESS ROAD FROM ROUTE 196
-  RAILROAD LOADING PLATFORM



**FIGURE 2-3**

GENERAL ELECTRIC COMPANY  
HUDSON RIVER PCBs SUPERFUND SITE  
COMMUNITY HEALTH & SAFETY PLAN

PROCESSING FACILITY SITE PLAN  
(PROCESSING & RAIL YARD FACILITY)

**PARSONS**

GE COMPANY - PARSONS PROJECT OFFICE, BUILDING  
40-2, 381 BROADWAY FT. EDWARD, NY 12828

## SECTION 3

### PROJECT SCHEDULE AND OPERATIONS

This section briefly summarizes the 2015 project schedule, anticipated hours of operation, and expected total duration of the 2015 dredging season.

#### 3.1 SUMMARY OF ACTIVITIES BY SEASON

Depending on weather and river flow conditions, the 2015 dredging season is expected to encompass up to 28 weeks from early May through late November. When work activities actually begin depends upon opening of the Canal System to commercial traffic, and mobilization of dredging equipment. Dredging operations in 2015 will be conducted in CUs 60, 64-66, 94-96, and 99.

Operations at the sediment processing facility will begin before dredging starts to allow for mobilization, training of personnel, delivery of supplies, preparation and testing of equipment and procedures, and review of safety measures. Operations at the processing facility will be conducted throughout the period of dredging and will continue after dredging ends in order to process all dredged sediments and load them onto rail cars.

The construction schedule for dredging and facility operations in 2015 is presented as Figure 4-1 of the 2015 RAWP.

Once all 2015 dredged sediments have been processed, the sediment processing equipment will be shut down and secured. The storm water collection and water treatment systems will operate year-round to continue capturing and treating storm water runoff that may collect on the property until such time as they are demobilized. Site security measures will also be maintained year-round.

#### 3.2 HOURS OF CONSTRUCTION AND OPERATION

Once dredging begins, in-river work activities and processing and dewatering operations at the processing facility will be conducted 24 hours a day (except where limited to daylight hours under the applicable RAWP), six days a week. The seventh day of each week will be reserved for maintenance and make-up time for unplanned project interruptions.

Loading of rail cars in the rail yard is expected to occur primarily during daylight hours, but the movement of trains to and from the rail yard may occur at any time based on schedules independently controlled by Canadian Pacific Railway.

## **2015 Community Health and Safety Plan**

### **3.3 DURATION OF ACTIVITIES**

Dredging operations are expected to begin in May and continue through late November. A schedule for anticipated 2015 dredging activities is provided in the 2015 RAWP (Parsons, 2015a).

### **3.4 SCHEDULE CHANGES AND NOTIFICATIONS**

Updates to the schedule of work activities and other project information will be regularly provided to EPA, New York State Department of Environmental Conservation (NYSDEC), local elected officials and the public (as described in Section 10.1). This information will be posted on a project Web site, included in monthly progress reports and distributed, as appropriate, electronically. Significant changes to the schedule (e.g., temporary work stoppages) will be communicated promptly to EPA, NYSDEC, New York State Canal Corporation (NYSCC), the New York State Department of Health (NYSDOH), other appropriate regulatory agencies and local elected officials.



## SECTION 4

### ACTIONS TO ADDRESS QUALITY OF LIFE PERFORMANCE STANDARDS

#### 4.1 BACKGROUND

In May 2004, EPA issued the initial Hudson River QoLPS that address air quality, odor, noise, lighting, and river navigation (EPA, 2004). Those standards were applied during Phase 1 of the project. In December 2010, EPA made a number of modifications to those standards, as set forth in a memorandum titled Quality of Life Performance Standards – Phase 2 Changes (EPA, 2010b) and some of the other revised attachments to the revised SOW (EPA, 2010c), including the Phase 2 RA CHASP, the Remedial Action Monitoring Scope for Phase 2 (Phase 2 RAM Scope), and the Phase 2 Performance Standards Compliance Plan Scope (Phase 2 PSCP Scope). (These standards, as so modified, are collectively cited as Hudson Phase 2 QoLPS.)

GE has developed the engineering design for implementation of this project in the fifth year of Phase 2 in 2015 with the objective of achieving the Phase 2 QoLPS. This section describes the Phase 2 QoLPS, summarizes the actions that GE will take during the 2015 season to satisfy those standards, the actions to be taken if the numerical values in those standards are exceeded, and the actions to be taken to address complaints from the local community related to these quality-of-life issues. Additional information on these matters is provided in the 2015 PSCP (GE, 2015), which incorporates the 2014 PSCP with a few modifications.

GE's overall approach to addressing the QoLPS is:

- First, design the project to attain the applicable standards through engineering controls, operational features, and mitigation or contingency measures (where necessary), to the extent feasible.
- Second, conduct monitoring during the project, as necessary and in response to complaints regarding quality-of-life issues, to assess whether the project is meeting the applicable standards.
- Third, if the monitoring shows an exceedance of a standard, investigate the cause to determine whether the exceedance is project-related.
- Fourth, if the exceedance of the standard is project-related, consider all appropriate and reasonable engineering controls or mitigation measures, implement whatever controls or measures are decided upon, and conduct appropriate monitoring.
- Fifth, based on the nature and cause of the exceedance, make functional or operational provisions as appropriate to prevent the exceedance from recurring.
- Sixth, provide the necessary reports to EPA and any complainants.

These steps are described below for each of the QoLPS.

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## 4.2 AIR QUALITY

### 4.2.1 Description of Air Quality Performance Standard

Various project work activities such as sediment handling and processing could result in emissions into the air. The QoLPS for air quality includes numerical standards for PCBs in ambient air and for opacity (the reduction of visibility from air emissions), and requires an analysis of achievement of the National Ambient Air Quality Standards (NAAQS) for several other air pollutants.

#### *PCBs*

The QoLPS for air quality includes standards and “concern levels” (at 80% of the standard levels) for total PCB concentrations in the air during the remedial action. There are separate concern levels and standards for residential and commercial/industrial areas. They are:

- For residential areas, a concern level of 0.08 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) and a standard of 0.11  $\mu\text{g}/\text{m}^3$ , both as 24-hour average PCB concentrations; and
- For commercial/industrial areas, a concern level of 0.21  $\mu\text{g}/\text{m}^3$  and a standard of 0.26  $\mu\text{g}/\text{m}^3$ , both as 24-hour average PCB concentrations.

The points of compliance for attaining these standards and concern levels are the locations of residential or commercial/industrial receptors. During Phase 2 of the RA, these standards and concern levels will remain in effect. Monitoring for in-river operations will focus on nearby receptors, and mitigation measures will be required only if exceedances of a standard persist for three consecutive days, as discussed further below. In addition, in 2015, in accordance with a prior request by EPA, exceedances of a concern level will not be formally reported, but will be discussed with EPA during daily meetings to assess the potential need for changes in operations or other responses.

#### *Opacity*

Opacity issues may result from vessel, vehicular, or equipment emissions. The air quality standard for opacity, based on New York State Codes, Rules and Regulations [6 NYCRR § 211.3], is that opacity during project operations must be less than 20% as a 6-minute average, except that there can be one continuous 6-minute period per hour of not more than 57% opacity.

This standard will not apply to the line-haul locomotive engines used by the rail carriers, which are subject to EPA’s national standards governing opacity [40 CFR Part 92]. However, it will apply to the switcher engine used to operate the rail yard.

#### *NAAQS*

Under the Federal Clean Air Act, EPA has promulgated NAAQS for several pollutants (known as “criteria pollutants”) to protect public health and welfare. These include:

- Respirable particulate matter (i.e., < 10 micrometers in diameter) ( $\text{PM}_{10}$ );

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- Fine particulate matter (i.e., < 2.5 micrometers in diameter) (PM<sub>2.5</sub>);
- Carbon monoxide (CO);
- Sulfur dioxide (SO<sub>2</sub>);
- Nitrogen dioxides (NO<sub>x</sub>); and
- Ozone (O<sub>3</sub>).

An air quality modeling analysis conducted during the design of Phase 1 demonstrated that the emissions of criteria pollutants from in-river activities and processing facility operations during Phase 1 were not predicted to cause exceedances of the NAAQS. The Phase 2 PSCP Scope and Phase 2 CHASP Scope require GE, as part of the Phase 2 final design, to evaluate whether any operational or equipment changes are anticipated in Phase 2 that could affect these pollutants. If no such change is anticipated, no further evaluation of the criteria pollutants and no monitoring for such pollutants is required during Phase 2.

### 4.2.2 Design Analyses

This section describes the Phase 2 design analyses conducted for airborne PCBs, opacity, and criteria pollutants and the routine control measures to be implemented during the 2015 construction season to address air quality.

#### *PCBs*

As part of the final design for Phase 2 dredging and processing facility operations in the CUs subject to dredging in 2015, GE has identified areas targeted for dredging that have the potential to emit PCBs to the air at levels close to or exceeding the PCB air quality standards, using the following criteria:

- Areas with an average total PCB concentration in the sediments of greater than 150 mg/kg over a one-acre area;
- Areas with low water velocities (i.e., near the shore or in backwater areas); and
- Areas within 1,000 feet of a receptor.

The final design for these CUs also provides that certain control measures and best management practices (BMPs) may be implemented in these identified areas. These include the following:

- Fully covering sediments contained in a barge with water;
- Alternatively, for sediments from areas with average total PCB concentrations greater than 150 mg/kg over a one-acre area, fully covering those sediments in a barge with sediments from areas with lower PCB concentrations (i.e., less than 150 mg/kg);
- Retaining 5 feet of freeboard on the barge (i.e., distance between the sediment/water level in the barge and the top of barge coaming), or else using a wind screen; and

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- If sediments from such an identified area are transported to an on-river barge-mounted dewatering system, covering the majority of the dewatered sediments contained in the barge with at least 6 inches of water prior to transport to the processing facility for unloading.

In addition, in accordance with the final design, barges containing sediments with high PCB concentrations (i.e., sediments from areas with average total PCB concentrations greater than 150 mg/kg over a one-acre area) will be prioritized for transport to the processing facility and for unloading at that facility. Barges containing sediments from these areas will not be staged without a water cover for extended periods of time prior to unloading.

### *Opacity*

Based on the effectiveness of the Phase 1 design specifications related to opacity, the 2015 activities are expected to meet the numerical QoLPS for opacity. As required by the design, contractors will maintain and operate vessels and vehicles properly to prevent opacity problems, and routine maintenance of diesel engines, generators and other equipment will be required throughout the project.

### *NAAQS*

In the final designs for 2011, 2012, and 2013, GE evaluated whether any anticipated operational or equipment changes for those seasons which could affect the emissions of criteria pollutants required revision of the Phase 1 NAAQS design analysis. Those evaluations confirmed that a revised analysis was not necessary to reflect such changes, and EPA approved that conclusion. For example, the 2012 evaluation demonstrated that predicted emissions for that year were below the Phase 1 design emissions estimates and thus did not require a revised NAAQS analysis; and the 2013 evaluation concluded that 2013 operations would not involve design changes that would significantly increase emissions of these pollutants. The 2014 final design indicated that dredging and facility operations in 2014 were expected to be similar to those in 2012 and 2013, with no operational or equipment changes that could significantly affect emissions of criteria pollutants, and that thus a revised NAAQS analysis was not necessary for 2014. The same is true for 2015: dredging and facility operations in 2015 are expected to be similar to those in 2012-2014, with no operational or equipment changes that could significantly affect emissions of criteria pollutants. As a result, a revised NAAQS analysis was not necessary for 2015; and no provisions for monitoring, control, or contingency actions for criteria pollutants will be necessary during implementation of Phase 2 in 2015.

### *Dust Control*

A dust control plan has been prepared and will be implemented to minimize generation of dust during 2015 dredging and processing facility operations. This plan includes the wetting down with water of sediment staging piles and haul roads, as needed, and use of covers on trucks hauling fine or dusty material.

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### 4.2.3 Air Quality Monitoring Summary

#### *PCBs*

Extensive monitoring of PCBs in ambient air will be conducted during 2015 work activities to assess and verify attainment of the QoLPS for PCBs in air. This monitoring will use samplers operating continuously for 24 hours a day, and will be conducted at locations along the dredging corridor, at unloading areas, and around the sediment processing facility, as follows:

- Representative stations within the dredging corridor and at various locks based on operations will be sampled during dredging. Daily (24-hour average) samples will be collected regularly at each station during dredging and will be analyzed for PCBs.
- Five permanent monitoring stations have been established around the perimeter of the sediment processing facility and in the wharf unloading area. These stations will be sampled continuously during processing facility operations. A 24-hour sample will be collected daily at each station during operations, and two or more of those samples will be analyzed each day for PCBs based on meteorological data and operational activities.
- A permanent monitoring station has been established to collect background data at a location upwind of all project activities. This station will be sampled during dredging and processing facility operations. A 24-hour sample will be collected daily and will be analyzed for PCBs.

Under routine monitoring conditions, analytical results of air quality samples will be reported by the laboratory within 72 hours of receipt by the laboratory. These results will be compared with EPA's QoLPS. Achievement of the criteria in the QoLPS will be assessed at receptors (residential or commercial/industrial, as applicable), either via monitoring at the receptor locations or by conservative modeling (with EPA approval) using the monitoring data from locations closer to the source to predict ambient air levels at the receptor locations.

#### *Opacity*

Opacity will be monitored via visual observations made and recorded by a certified visual observer using EPA Method 9 at the point of emission. Such monitoring will be conducted in the event of observations by GE or EPA project staff or others indicating a potential opacity issue, or in response to complaints, or as otherwise directed by the Construction Manager for particular pieces of equipment that may have opacity problems.

### 4.2.4 Actions in Event of Exceedance of PCB Air Quality Concern Level

As noted above, in accordance with a prior request from EPA, exceedances of an air quality concern level will not require formal notification or reporting to EPA. Any such exceedances will be discussed with EPA at the daily meetings to assess whether any changes in dredging or processing facility operations or other responses may be warranted.

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### **4.2.5 Actions in Event of Exceedance of PCB Air Quality Standard**

If monitoring (or modeling, if used to assess compliance at a receptor) demonstrates an exceedance of an applicable air quality standard, GE will take the following steps:

1. Promptly notify EPA, but no later than 24 hours after receipt of the analytical results or otherwise becoming aware of the exceedance (whichever comes first).
2. Investigate the cause of the exceedance.
3. Implement the following increased monitoring and related steps:
  - Establish additional monitoring stations if needed to evaluate the cause of the exceedance;
  - Examine background PCB concentrations (sampling-event-specific as well as baseline) and site-specific meteorological data to help identify the source of the exceedance;
  - Reduce turnaround time for analyzing air samples from 72 hours to 48 hours from receipt of the sample at the laboratory, if considered appropriate by GE and EPA or if so directed by EPA;
  - Continue such monitoring as appropriate; and
  - Begin work with EPA to develop an action plan for the implementation of mitigation measures in the event that the exceedances persist for three consecutive days.
4. If the exceedances of the standard have continued for three consecutive days, GE will complete the action plan for the implementation of mitigation measures, recommend mitigation measures to EPA, and implement the measures approved or directed by EPA.
5. Provide a weekly report to EPA describing the exceedance, the activities being conducted in the vicinity of the monitor, any mitigation measures already in place, and any additional corrective actions taken.

### **4.2.6 Actions in Event of Exceedance of Opacity Standard**

If the opacity standard is exceeded, GE will notify EPA, NYSDEC, and NYSDOH and will take appropriate contingency measures (e.g., repair or, if necessary, upgrading of the equipment). A written report will be submitted to EPA identifying reasons for the exceedance and any mitigation measures taken to prevent future exceedances.

### **4.2.7 Actions in Event of Air Quality Complaint**

If a complaint (as defined in Section 10.2.2.3) relating to air quality is recorded, GE will take the following steps:

1. Notify EPA a complaint has been lodged.

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2. Investigate the cause of the complaint to verify that it is project-related.
3. If the complaint is project-related, conduct monitoring and/or modeling, as necessary, to determine whether the applicable concern level or standard has been exceeded in the area referred to in the complaint.
4. If the monitoring and/or modeling shows an exceedance of the applicable concern level or standard, implement the steps specified in Sections 4.2.4, 4.2.5, or 4.2.6 (as applicable).
5. If the monitoring and/or modeling do not show an exceedance of the applicable concern level or standard, report the preliminary monitoring results to EPA, work with EPA to evaluate potential mitigation measures to address the complaint, and if both GE and EPA agree, implement such measures.
6. Notify the person registering the complaint of the steps taken to resolve the complaint (as specified in Section 10.2.2.3), and provide a verbal report on the complaint and response actions (if any) to EPA at the weekly project meeting to follow with a written monthly summary of complaints to EPA.

### 4.2.8 Potential Mitigation Measures

In the event the steps described above indicate the need for additional mitigation measures, GE will implement such measures, as appropriate. Selection of specific actions will be determined on a case-by-case basis. For exceedances within the dredging corridor, the evaluation of potential mitigation measures will take into account the expected duration of dredging (and thus potential exposure) at the location(s) in question. In addition to the BMPs listed in Section 4.2.2, GE may consider the following, or other, as-yet-unidentified measures, depending on the specific cause of the exceedance and the expected duration of exposure:

- Prohibiting use of “bucket flaps” on dredge buckets in air emission BMP areas;
- If sediments from an area other than an air emission BMP area are transported to an on-river barge-mounted dewatering system, covering the dewatered sediments contained in the barge with at least 6 inches of water prior to transport to the processing facility for unloading or to another dredge area for loading to be completed;<sup>2</sup>
- Limit use of mini-hopper barges where practicable;
- Evaluating the number of barges from air emission BMP areas that can be staged at the processing facility unloading wharf at any given time;
- If an exceedance of the applicable air quality standard occurs while sediments from an air emission BMP area are being directly off-loaded from a barge, considering

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<sup>2</sup> This measure is already listed as a routine BMP for sediments from air emission BMP areas, as provided in Section 4.2.2.

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transport of those sediments to a filter cake staging enclosure, rather than a coarse material staging area, for staging;

- Erecting wind screens around sediment processing operations;
- Covering material stockpiles that will be staged for an extended period of time before off-site shipment or controlling the shape and placement of the piles;
- Minimizing staging time for sediments containing PCBs;
- Using larger excavation equipment to adjust the surface area/volume ratio during material handling;
- Covering tanks or PCB-containing truck beds that prove to be a significant source of PCB emissions;
- Moving transloading operations further away from receptors;
- Modifying operations to limit emissions; and/or
- Spraying a chemical spray-on cover product (e.g., ConCover) or biodegradable foam (if determined to be compatible with the treatment system) over material stockpiles that will be staged for an extended time before off-site shipment.

### 4.3 ODOR

#### 4.3.1 Description of Odor Performance Standard

Based on the experience from Phase 1 and Phase 2 to date, odors are not expected to be a significant concern during 2015 operations. However, odors may be generated by dredged sediments that contain decaying organic matter. Odors are difficult to measure because they vary depending on the concentration of the pollutant and the sensitivity of the person exposed to the odor. One of the most reliable indicators of odor emissions is a smell detected by the human nose.

The most likely odor during dredging and sediment processing activities would come from hydrogen sulfide (H<sub>2</sub>S) released by decaying plants and other organic material found in the river sediments.

The QoLPS for odor establishes a standard for H<sub>2</sub>S to minimize unwanted odors from the project. The standard for H<sub>2</sub>S odor, based on the NYSDEC ambient air standard, is 14 µg/m<sup>3</sup> or 0.01 ppm as a one-hour average.

In addition, the QoLPS for odor specifies a “concern level” consisting of the presence of uncomfortable project-related odors identified by project workers or an odor complaint from the public, and an “exceedance level” consisting of an exceedance of the numerical H<sub>2</sub>S standard or “frequent, recurrent odor complaints related to project activities.”



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### 4.3.2 Design Analyses

It is not anticipated that dredged sediments will generate odors that will reach the concern or exceedance levels in the QoLPS. Thousands of sediment cores previously collected from the Hudson River for physical and chemical analyses and other studies generally did not present offensive odors. Nevertheless, to minimize odors and prevent complaints, the following routine control measures will continue to be employed in 2015:

- Debris from dredging operations, which is more likely than other types of dredged material to contain wood, vegetation, biota and other types of organic material, will be separated from the other dredged material at the waterfront area of the processing facility. If an offensive odor is detected from this debris, it will be moved as quickly as practicable to the debris staging area in the center of the processing facility site.
- Filter cake solids will be covered using roll-off box covers if uncomfortable odors are encountered during filter cake drops prior to transportation to the filter cake storage enclosures.
- Air handling systems at the two filter cake staging enclosures will be operated and maintained while material is stored.

### 4.3.3 Odor Monitoring Summary

Odor monitoring will be conducted if an odor complaint is received or workers detect an uncomfortable project-related odor, and the odor is identified as H<sub>2</sub>S. In that event, monitoring for H<sub>2</sub>S will be conducted at locations upwind and downwind of the suspected odor source. H<sub>2</sub>S levels will be measured via direct readings using a hand-held H<sub>2</sub>S meter or via collection of air samples in a Tedlar bag, using a low-flow pump, followed by measurement using a hand-held meter. In the latter case, the H<sub>2</sub>S meter can be brought to the sample or the sample can be transported in the Tedlar bag to the meter for direct measurement of H<sub>2</sub>S. These devices will be available at the processing facility, at barge unloading areas, and at shoreline locations, so pumps and bags can be readily deployed to the site of the odor in the event of a complaint.

### 4.3.4 Actions in Event of Exceedance of Hydrogen Sulfide Standard

If monitoring for H<sub>2</sub>S is conducted (as described in Section 4.3.3) and demonstrates an exceedance of the H<sub>2</sub>S numerical standard, GE will take the following steps:

1. Promptly notify EPA, but no later than 24 hours after receipt of the analytical data or otherwise becoming aware of the exceedance (whichever comes first).
2. Investigate the cause of the odor, to the extent possible, and evaluate the project activities in the vicinity of the complaint to determine if the source of the odor is project-related.
3. If the source of odor is project-related, work with EPA to develop an action plan and, upon EPA approval, implement mitigation measures.
4. If appropriate, continue regular H<sub>2</sub>S monitoring until issue is resolved.

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5. Include a report on the exceedance, including any mitigation measures taken, in the next weekly progress report to EPA.

### 4.3.5 Actions in Event of Odor Complaint

If a complaint (as defined in Section 10.2.2.3) relating to odor is received and the odor is identified as potentially hydrogen sulfide, GE will notify EPA and conduct the H<sub>2</sub>S monitoring described in Section 4.3.3; and if the monitoring shows an exceedance of the H<sub>2</sub>S standard, GE will implement the steps defined in Section 4.3.4. If the monitoring does not show an exceedance of the H<sub>2</sub>S standard, GE will report the preliminary monitoring results to EPA, work with EPA to evaluate potential mitigation measures to address the complaint, and if both GE and EPA agree, implement such measures. In addition, in either case, GE will notify the person who registered the complaint of the steps taken to resolve the complaint (as specified in Section 10.2.2.3), and will provide a verbal report on the complaint and response actions (if any) to EPA at the weekly team meeting and in the monthly reporting of complaints to EPA.

If an odor complaint is received and the odor is not identified as H<sub>2</sub>S, GE will take the following steps (multiple complaints regarding the same potential odor will be treated as one complaint):

1. Notify EPA a complaint has been lodged and investigate the source of the odor in a timely manner to determine if it is project-related.
2. If the odor is project-related, investigate the odor to determine if it is “uncomfortable,” rather than simply discernible. (For this purpose, an “uncomfortable” odor is defined, in accordance with New York State Law [6 NYCRR §211.2], as an odor which “unreasonably interfere[s] with the comfortable enjoyment of life or property.”) As part of this investigation:
  - Further discuss the nature and intensity of the odor with the person registering the complaint; and
  - If necessary, obtain an objective assessment of odor intensity.
3. If a project-related uncomfortable odor is identified, take mitigation measures as appropriate to reduce or eliminate the source of the odor.
4. Notify the person registering the complaint of measures taken to reduce or eliminate the source of the odor (as specified in Section 10.2.2.3), provide a verbal report on the complaint and response actions (if any) to EPA at the weekly project meeting and in the monthly reporting of complaints to EPA.

As noted above, the QoLPS for odor defines the “exceedance level” to include “frequent, recurrent odor complaints.” For this purpose, “frequent, recurrent complaints” will be defined on a case-by-case basis. However, the occurrence of such complaints will trigger the same responses described above.

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### 4.3.6 Potential Mitigation Measures

In the event the steps described above indicate the need for additional mitigation measures, GE will implement such measures, as appropriate. Selection of specific actions will be determined on a case-by-case basis. GE may consider the following, or other, as-yet-unidentified measures, depending on the specific cause of the odor:

- Adjusting handling procedures for, or moisture content of, dredged sediments;
- Adding water to barges to increase the depth of water covering dredged sediment during transport;
- After prompt transfer of debris with an offensive odor to the debris stockpile area near the rail yard (as discussed above), covering the debris or loading it directly into a rail car for transport off-site;
- Using tarps or covers at the processing facility to prevent odors from escaping from dredged sediments;
- Applying a foam agent (if determined to be compatible with the treatment system) to cover materials or a chemical agent that will neutralize the odor; and/or
- Relocating piles of dredged material to the filter cake staging enclosure or other areas as appropriate.

## 4.4 NOISE

### 4.4.1 Description of Noise Performance Standard

Based on the experience from Phase 1 and Phase 2 to date, controlling noise levels to within standard levels is not expected to be a significant problem during 2015 operations. However, many of the activities associated with the project have the potential to produce noise. EPA established its QoLPS for noise to limit the effects of project noise on the community.

EPA categorized project activities that have the potential to generate noise as either short-term or long-term. Short-term activities include dredging and backfilling/capping, because these activities are believed to occur in proximity to certain receptors for relatively short periods of time. These short-term activities could vary from several weeks to several months in a particular area. Long-term activities are expected to continue for the duration of the project and include equipment operations at the sediment processing facility and rail transfer of processed materials.

In developing its QoLPS for noise, EPA considered the effects of daytime and nighttime dredging and dewatering activities near residential areas. For example, a lower residential noise standard has been developed for nighttime hours, from 10 p.m. to 7 a.m. This lower standard also applies to mixed commercial and residential areas.

The numerical noise criteria set forth in the QoLPS are expressed in decibels using the A-weighted scale (dBA). They are as follows:

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- Short-Term Criteria (applicable to facility construction, dredging, barge loading, and backfilling/capping activities):
  - *Residential Control Level* (maximum hourly average)  
Daytime = 75 dBA
  - *Residential Standard* (maximum hourly average)  
Daytime = 80 dBA  
Nighttime (10:00 pm – 7:00 am) = 65 dBA
  - *Commercial/Industrial Standard* (maximum hourly average)  
Daytime and nighttime = 80 dBA
- Long-Term Criteria (applicable to sediment processing facility and rail yard operations):
  - *Residential Standard* (24-hour average)  
Daytime and nighttime = 65 dBA
  - *Commercial/Industrial Standard* (maximum hourly average)  
Daytime and nighttime = 72 dBA

The QoLPS for noise defines the “concern level” as an exceedance of the residential control level, or an exceedance of an applicable noise standard that can be easily and immediately mitigated, or receipt of a project-related noise complaint. It defines the “exceedance level” as an exceedance of an applicable noise standard that cannot be easily and immediately mitigated or as “frequent, recurrent noise complaints related to project activities.”

### 4.4.2 Design Analyses

The Phase 2 CHASP Scope and Phase 2 RAM Scope require that the Phase 2 design include an updated evaluation of noise intensity generated by equipment, processes, and traffic associated with site operations based on Phase 1 noise measurements. They provide that, if Phase 2 will include equipment changes or changes to the processing facility that could result in increased noise levels over those experienced in Phase 1, this evaluation would include noise attenuation modeling, and GE would conduct a study at the beginning of dredging or processing facility operations (as applicable) to validate the modeling analysis. Given certain additional equipment installed at the processing facility in early 2012, GE conducted a one-month noise monitoring survey in June 2012 at locations around the processing facility. That survey showed that the installation of the new equipment at the processing facility did not result in a significant increase in noise levels compared to those in 2011.

For 2015, GE has determined that the noise levels from both processing facility operations and dredging operations covered by the 2015 RAWP are not expected to be significantly different from those in Phase 1 or in prior years of Phase 2. As a result, there is no need for an additional noise monitoring survey in 2015. However, as discussed below, noise monitoring will

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be conducted by the relevant contractor at the initial start-up of any operation or use of equipment that is different from that used previously in the project and could result in increased noise levels.

In addition, GE has included in the final design for 2015 a reference to the required routine noise control measures that contractors must include as part of their operations.

### **4.4.3 Noise Monitoring Summary**

During 2015 dredging and facility operations, noise monitoring will be conducted by the relevant contractor at the initial start-up of any operation or use of equipment that is different from that used previously in the project and could result in increased noise levels. This contractor monitoring will not be considered monitoring for compliance with the Noise Standard. However, if this monitoring shows a sound level above the criteria 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 the criteria in the Noise Standard will be considered an exceedance of those criteria only if confirmed by that follow-up monitoring. In addition, if a noise complaint is received from the public and is verified as project-related, noise monitoring will be conducted at the site of the complaint as necessary and permitted by the complainant or property owner to determine whether the daytime residential noise control level or a noise standard has been exceeded.

All noise monitoring will be conducted with hand-held sound meters. The compliance point for attainment of the noise standards will be at the receptor. However, monitored noise levels closer to the source that meet the noise standards will be considered to show attainment.

### **4.4.4 Actions in Case of Exceedance of Residential Control Level**

If monitoring demonstrates that the daytime noise control level for residential areas has been exceeded at a residence, GE will take the following steps:

1. Investigate the cause of the increased noise to verify that it is project-related.
2. If noise increase is project-related, implement additional monitoring, as needed, to evaluate the cause of the noise increase.
3. Continue such additional monitoring until it confirms that the issue is resolved.
4. Consider additional mitigation measures (see Section 4.4.7) to prevent or minimize future exceedances and, if appropriate, implement such measures.
5. Provide a follow-up report to EPA describing the exceedance and any actions taken to address the exceedance in the next weekly progress report.

### **4.4.5 Actions in Event of Exceedance of Noise Standard**

If monitoring demonstrates an exceedance of an applicable noise standard at a receptor location, GE will take the following steps:

1. Promptly notify EPA, but no later than 24 hours after discovery of the exceedance.

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2. Investigate the cause of the exceedance to verify that it is project-related.
3. If the noise increase is project-related, implement additional monitoring, as needed, to evaluate the cause of the noise increase and assess the potential impact of non-project-related noise on receptors.
4. Work with EPA to develop and implement an appropriate action plan for implementation of mitigation measures.
5. Continue additional monitoring until the standard is achieved.
6. Provide a follow-up report to EPA, including an analysis of the cause of the exceedance and a description of mitigation measures taken, in the next weekly progress report.

Although, as noted above, the QoLPS for noise distinguishes between exceedances of a standard that are easily and immediately mitigated (“concern level”) and those that are not (“exceedance level”), the same actions described above will be taken in either case. The difficulties and time necessary to mitigate exceedances will affect the response actions to be taken.

### 4.4.6 Actions in Event of Noise Complaint

If a complaint (as defined in Section 10.2.2.3) relating to noise is recorded, GE will take the following steps:

1. Notify EPA that a complaint has been lodged;
2. Investigate the cause of the noise in a timely manner to determine if it is project-related;
3. If the cause of the noise is project-related, conduct monitoring to determine whether the applicable control level or standard has been exceeded in the area referred to in the complaint.
4. If the monitoring shows an exceedance of the applicable control level or standard, implement the steps specified in Sections 4.4.4 or 4.4.5 (as applicable).
5. If the monitoring does not show an exceedance of the applicable control level or standard, GE will report the preliminary monitoring results to EPA, work with EPA to evaluate potential mitigation measures to address the complaint, and if both GE and EPA agree, implement such measures.
6. Notify the person registering the complaint of the steps taken to resolve the complaint (as specified in Section 10.2.2.3), and provide a verbal report on the complaint and response actions (if any) to EPA at the weekly project meeting and in the monthly reporting of complaints to EPA.

As noted above, the QoLPS for noise defines the “exceedance level” to include “frequent, recurrent noise complaints.” For this purpose, “frequent, recurrent complaints” will be defined

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on a case-by-case basis. However, the occurrence of such complaints will trigger the same responses described above.

### 4.4.7 Potential Mitigation Measures

In the event the steps described above indicate the need for additional mitigation measures, GE will implement such measures, as appropriate. Specific actions will be selected on a case-by-case basis, and will only be used to the extent that they do not impede safe operations. GE may consider the following, or other, as-yet-unidentified measures, depending on the specific cause of the noise:

- Using shrouds or noise-dampening devices on equipment;
- Using alternative equipment at certain times of the day or night;
- Repairing or replacing stationary pieces of equipment found to be operating outside of their parameters;
- Placing small portable barriers around the noise sources or between the noise sources and receptors, where practicable, to block or reduce sound propagation;
- Installing noise-deadening construction materials to line roll-off boxes and debris staging areas and to quiet stationary/mobile equipment;
- Reducing the speed at which material-handling equipment is operated;
- Retrofitting equipment with quieter backup alarms;
- Installation or replacement of noise mufflers on engines if compatible with manufacturers' recommendations;
- Using distance and natural or artificial features to attenuate noise;
- Placing operating restrictions on equipment, as appropriate; and/or
- Making operational adjustments, including sequencing of pertinent operations, use of specific travel routes, and modification of normal backup locations.

## 4.5 LIGHTING

### 4.5.1 Description of Lighting Performance Standard

To meet EPA's standard for the rate of project activities, in-river activities and processing facility operations are performed 24 hours per day, six days per week. This requires the use of lighting to illuminate work areas and protect worker safety. Lighting is needed on project vessels to ensure their safe passage during nighttime activities. Lighting also is needed at the processing facility and support properties.

Lighting is measured in footcandles using a brightness meter. The QoLPS for lighting establishes the following numerical standards for lighting, which vary depending on the type of area affected:

- For rural and suburban residential areas: 0.2 footcandle;

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- For urban residential areas: 0.5 footcandle; and
- For commercial/industrial areas: 1 footcandle.

The QoLPS for lighting defines the “concern level” as an exceedance of an applicable numerical standard that can be easily and immediately mitigated or receipt of a project-related lighting complaint. It defines the “exceedance level” as an exceedance of an applicable numerical lighting standard that cannot be easily and immediately mitigated or as “frequent, recurrent complaints related to project activities.”

### 4.5.2 Design Analyses

The Phase 2 CHASP required that the Phase 2 design include an updated evaluation, based on Phase 1 light measurements, of light intensity generated by illumination of active dredge areas, processing areas, loading and staging areas, administration areas, and other work areas on and near the river, considering any equipment changes anticipated for Phase 2 that could affect lighting levels. For 2015, dredging operations and processing facility operations are not expected to cause an increase in lighting impacts over those experienced during prior dredging seasons. In addition, as discussed below, light monitoring will be conducted by the pertinent contractor at the initial start-up of any operation or use of equipment that is different from that used previously in the project and could result in increased light levels.

Based on prior performance, routine lighting control measures have been incorporated into the design of the processing facility, and will be implemented by the processing facility and rail yard operations contractors in 2015. Specifications for such routine light control measures are included in the final design for 2015.

### 4.5.3 Lighting Monitoring Summary

During 2015 dredging and facility operations, light monitoring will be conducted by the relevant contractor at the initial start-up of any operation that is different from that used previously in the project and could result in increased light levels. This contractor monitoring will not be considered monitoring for compliance with the Lighting Standard. However, if this monitoring shows a light level 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 a lighting standard will be considered an exceedance of the standard only if confirmed by that follow-up monitoring. In addition, if a lighting complaint is received from the public and is verified as project-related, light monitoring will be conducted at the site of the complaint as necessary and permitted by the complainant or property owner to determine whether the applicable lighting standard has been exceeded.

The compliance point for attainment of the lighting standards will be at the receptor. However, monitored light levels closer to the source that meet the lighting standards will be considered to show attainment.



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### 4.5.4 Actions in Event of Exceedance of Lighting Standard

If light levels exceed an applicable standard at a receptor location and the exceedance can be easily and immediately mitigated, GE will take the following steps:

1. Notify EPA within 24 hours after discovery of the exceedance.
2. Investigate the cause of the lighting exceedance to verify that it is project-related.
3. If the exceedance is project-related, implement increased monitoring, as needed.
4. Implement mitigation measures, as appropriate.
5. Re-evaluate light levels at the receptor to confirm the standard is achieved.
6. Submit a follow-up report to EPA, including a description of actions taken to resolve the exceedance, in the next weekly progress report.

If light levels exceed an applicable standard but the exceedance cannot be easily and immediately mitigated, GE will take the following steps:

1. Promptly notify EPA, but no later than 24 hours after discovery of the exceedance.
2. Investigate the cause of the lighting exceedance to verify that it is project-related.
3. If the exceedance is project-related, implement regular light monitoring in the affected area.
4. Work with EPA to develop and implement an action plan for appropriate mitigation measures.
5. Continue the regular monitoring until the standard is achieved.
6. Provide a follow-up report to EPA, including a description of the cause of the lighting exceedance and mitigation measures implemented (if any) in the next weekly progress report.

In addition, in the event of a deviation from the lighting requirements applicable to lighting on vessels, GE will follow the procedures for deviations from navigation requirements, as described in Section 4.6.

### 4.5.5 Actions in Event of Lighting Complaint

If a complaint (as defined in Section 10.2.2.3) relating to lighting is recorded, GE will take the following steps:

1. Notify EPA that a complaint has been lodged.
2. Investigate the cause of the complaint to verify that it is project-related.
3. If the complaint is project-related, conduct monitoring, as necessary, to determine whether the applicable standard has been exceeded in the area referred to in the complaint.
4. If the monitoring shows an exceedance of the applicable standard, implement the applicable steps specified in Section 4.5.4.

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5. If the monitoring does not show an exceedance of the applicable standard, GE will report the preliminary monitoring results to EPA, work with EPA to evaluate potential mitigation measures to address the complaint, and if both GE and EPA agree, implement such measures.
6. Notify the person registering the complaint of the steps taken to resolve the complaint (as specified in Section 10.2.2.3), and provide a verbal report on the complaint and response actions (if any) to EPA at the weekly project meeting and in the monthly reporting of complaints to EPA.

As noted above, the QoLPS for lighting defines the “exceedance level” to include “frequent, recurrent lighting complaints.” For this purpose, “frequent, recurrent complaints” will be defined on a case-by-case basis. However, the occurrence of such complaints will trigger the same responses described above.

### 4.5.6 Potential Mitigation Measures

In the event the steps described above indicate the need for additional mitigation measures, GE will implement such measures, as appropriate. Specific actions will be selected on a case-by-case basis, and will only be used to the extent that they do not impede safe operations. GE may consider the following, or other, as-yet-unidentified measures, depending on the specific cause of the lighting issue:

- For dredging operations:
  - Repositioning of light plants, or installation of buffers, barriers or screens;
  - Repositioning of material barges to block light from the work platforms; and/or
  - Re-sequencing of the work.
- For processing facility operations:
  - Installation of screens on the edge of heavily traveled roads within the facility to block errant lights;
  - Repositioning of lights; and/or
  - Installation of shields or barriers as needed between specific light sources and receptors.

## 4.6 NAVIGATION

### 4.6.1 Description of Navigation Performance Standard

The river will be used by public, commercial, and project vessels during work activities. EPA developed the QoLPS for navigation, in consultation with the NYSCC, to manage project and non-project vessel movement on the river.

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The QoLPS for navigation requires that project vessels comply with the applicable provisions of federal and state navigation laws, rules, and regulations. In addition, GE is required to comply with the following:

1. Restrict access to work areas and provide safe access around them in the navigational channel, to the extent practicable.
2. Notify the NYSCC of in-river project activities and provide information to the NYSCC and/or United States Coast Guard (USCG) to allow them to issue Notices to Mariners.
3. Provide the public with a schedule of anticipated project activities.
4. Schedule project river traffic so that non-project traffic is not unnecessarily hindered while at the same time allowing efficient performance of the project. (Note that project vessels will be considered commercial vessels for purposes of navigation.)
5. Coordinate lock usage with the NYSCC and its lock operators.
6. Establish temporary aids to navigation, such as lighting and signs, to maintain safe and efficient vessel movement.

The QoLPS for navigation defines the “concern level” as a deviation from the above requirements that can be easily and immediately mitigated or receipt of a project-related navigation complaint. It defines the “exceedance level” as a situation where “remedial activities unnecessarily hinder overall non-project vessel movement and create project-related navigation impacts,” or as “frequent, recurrent complaints indicating project activities are unnecessarily hindering overall non-project-related vessel movement.”

### 4.6.2 Design Analyses

To meet the QoLPS for navigation, this project has been designed to maximize safety and productivity and to avoid unnecessary disruption of non-project navigation while allowing efficient performance of the project. As in prior years, the following requirements will be implemented in 2015:

- All project vessels will be verified as structurally sound and seaworthy by an independent third-party marine surveyor. They must be operated by properly trained and experienced pilots and crews, and be compliant with all applicable federal and state navigation laws, rules, and regulations.
- All project vessels will be tracked via radio dispatch to schedule and control traffic in a way that minimizes interference with non-project vessels while optimizing productivity.
- Use of the locks on the Champlain Canal will be coordinated with the NYSCC. The NYSCC will be provided with final versions of this 2015 CHASP and the project RA HASP before in-river activities begin and will also be provided with any subsequent updates or amendments to those documents.

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- Reduction in the use of locks will be achieved by the use of a number of larger barges and tugs during the 2015 season, as was done during the 2014 season, primarily for the long-haul of sediment to the processing facility.
- Use of “land cut” sections on the Champlain Canal will be coordinated within the project’s marine traffic management system and with the NYS Canal Corporation to minimize interference with non-project vessels.
- To the extent practicable and consistent with meeting other goals and performance standards, project vessels will not be tied or anchored in navigable channels. If situations arise where this condition is necessary, project vessels will not be positioned in a manner that prevents or obstructs passage of other vessels.
- Non-project access to active work areas will be restricted in coordination with the NYSCC. Mariner notification will be used (as described in Section 10.1), and buffer zones and temporary aids (e.g., lighting, signage, etc.) will be established to allow safe passage of non-project traffic around active work areas.
- The NYSCC and USCG will be provided with verbal and written routine notices regarding project schedules to allow those agencies to issue Notices to Mariners regarding anticipated access restrictions, project vessel scheduling, lock scheduling, contingencies or other information.
- The public will be provided with a schedule of anticipated project activities that may affect navigation. This will be accomplished through communications with lock operators during lock usage; broadcasting on appropriate marine frequencies during in-river activities; posting notices at locks, marinas, and public boat launches; distributing notices to interested commercial and recreational user groups; and/or posting information about in-river activities on the project Web site (see Section 10.1).
- If closure of any portion of the navigation channel is required during dredging or related operations, EPA and NYSCC will be consulted.

### 4.6.3 Navigation Monitoring Summary

Marine traffic will be routinely monitored during dredging operations. This routine monitoring will involve the recording in daily logs of information about river navigation activities in the vicinity of in-river project operations, along with any resulting navigation issues. A monthly navigation report will be submitted by GE to EPA and NYSCC, summarizing (in tabular format) navigation activities for the previous month, including daily records, as well as a log of navigation compliance and follow up actions. It will also identify any in-river project activities not previously identified that may significantly affect navigation by commercial and non-project vessels.

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### **4.6.4 Actions in Event of Deviation from Navigation Requirements**

If in-river operations deviate from the applicable federal and state navigation regulations listed in the QoLPS for navigation or from the design plans relating to navigation and such deviation can be easily and immediately mitigated, GE will take the following steps:

1. Promptly notify EPA and the NYSCC, but no later than 24 hours after discovery of the deviation. If notifications to other entities are required by federal and state regulations, those notifications will be the responsibility of GE.
2. Implement mitigation measures, as appropriate.
3. Submit a follow-up report to EPA and the NYSCC, including a summary of the navigation issues and mitigation actions taken, in the next weekly progress report.

If on-river operations deviate from the applicable federal and state navigation regulations listed in the QoLPS for navigation or from the design plans relating to navigation and such deviation cannot be easily and immediately mitigated, GE will take the following steps:

1. Notify EPA and the NYSCC immediately. If notifications to other entities are required by federal and state regulations, those notifications will be the responsibility of GE.
2. Identify the cause of the deviation.
3. In coordination with EPA and the NYSCC, develop and implement an action plan for mitigation measures.
4. Submit a follow-up report to EPA and the NYSCC, including a description of the cause(s) of the navigation problem(s) and mitigation actions taken, in the next weekly progress report.

### **4.6.5 Actions in Event of Navigation Complaint**

If a navigation complaint (as defined in Section 10.2.2.3) is recorded, GE will take the following steps:

1. Notify EPA that a complaint has been lodged.
2. Investigate the cause of the complaint to verify that it is project-related.
3. If the cause of the complaint is project-related, conduct an investigation to determine whether the project is in compliance with all substantive federal and state navigation requirements and whether project activities have interfered with other river traffic.
4. Notify the NYSCC of the complaint and consult with the NYSCC, if necessary, in the investigation.
5. If it is determined that the project is not in compliance with all substantive federal and state navigation requirements or that GE has not taken appropriate steps to minimize interference with river traffic, implement the applicable steps specified in

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Section 4.6.4, including notification to EPA and the NYSCC, implementation of mitigation measures, and submission of a follow-up report.

6. If it is determined that the project is in compliance with substantive federal and state navigation requirements and the GE has taken appropriate steps to minimize interference with river traffic, work with EPA, in coordination with NYSCC, to evaluate potential measures to address the complaint, and if both EPA and GE agree, implement such measures.
7. Notify the person registering the complaint of the steps taken to resolve the complaint (as specified in Section 10.2.2.3), and provide a verbal report on the complaint and response actions (if any) to EPA at the weekly project meeting and in the monthly reporting of complaints to EPA.

As noted above, the QoLPS for navigation defines the “exceedance level” to include “frequent, recurrent complaints indicating project activities are unnecessarily hindering overall non-project vessel movement.” Such complaints will be defined on a case-by-case basis and will be handled in the same manner described above.

### 4.6.6 Potential Mitigation Measures

In the event that mitigation measures are required to address a deviation from applicable federal or state navigation regulations, the mitigation measures will consist of taking the necessary steps to comply with those regulations.

In the event the steps described above indicate the need for additional mitigation measures, GE will implement such measures, as appropriate. Selection of specific actions will be determined on a case-by-case basis. GE may consider the following, or other, as-yet-undefined measures, depending on the specific circumstances:

- Spacing in-river vessels to minimize channel encroachment;
- Repairing or replacing aids to navigation; and/or
- Revising the schedule for work in dredge areas and/or times of project vessel and equipment movement in the river to reduce impacts on non-project navigation, including performing certain activities during off-peak hours, if practical.

### 4.6.7 Contingency Plans for Navigation Incidents

Section 7.0 discusses contingency plans and emergency response plans for dealing with navigation incidents.

## SECTION 5

### ASSESSMENT AND MANAGEMENT OF POTENTIAL HAZARDS

#### 5.1 DESCRIPTION OF EVALUATION

This project has been designed with health and safety as its first and most fundamental goal. As a result of those design efforts and all of the protective measures that have been incorporated into that design, risks of project-related potential hazards to the community are quite low. This is borne out by the experience gained during Phase 1 and Phase 2 Years 1 through 4 of the dredging project. In addition, many of the project activities are routine construction activities that would occur in many commercial construction projects.

To ensure that the design incorporates comprehensive health and safety preventive measures, GE has evaluated and assessed potential project-related hazards that could occur during the project. This section describes that evaluation, the preventive measures that have been incorporated into the project design, the proposed responses if such a hazard occurs despite implementation of preventive measures, and potential mitigation measures to consider in an attempt to prevent an incident from recurring.

During the contractor selection process, GE evaluated a number of safety performance metrics of those contractors interested in working on the project (e.g., the qualifications and certification of their safety personnel; their experience modification rate (EMR) (a comparison of the actual losses charged to a contractor during the experience period, with the losses which would be expected for an average contractor); their preventable and unpreventable vehicle incident record; results of recent inspections by the federal Occupational Safety and Health Administration (OSHA); their history of safety violations, if any; their safety program and safety statistics; their history of worker compensation claims; and, for trucking companies, their commercial driver logs and practices.

GE's goal during the course of this evaluation was to identify preventive measures and/or design modifications that could be implemented prior to project implementation to minimize the chance for potential hazards to occur in the first instance. This evaluation was conducted in four major steps:

- First, potential hazards (assuming no preventive measures are in place) were identified and evaluated based on the likelihood that they would occur and the potential that they would impact the local community should they occur.
- Second, "preventive measures" were identified which could reduce, if not eliminate, the potential that an identified hazard could occur. An example of a preventive measure is installation of a chain link fence around the processing facility to prevent trespassers from accessing the property.

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- Third, a review of response actions was conducted to ensure equipment and/or resources needed to appropriately respond to an incident were obtained prior to project implementation. For example, if a fuel spill occurred, the contractor may choose to use booms and absorbent “napkins” to contain the spilled material. Therefore, booms and absorbent “napkins” would have to be obtained prior to the start of the project and stored in convenient places so they would be available should a spill happen. For most incidents, response actions and procedures are described fully in Section 7. However, some response actions are provided below if they are unique to a particular type of hazard.
- Finally, “mitigation measures” – or additional preventive measures – were identified where possible to stop incidents from recurring. For example, if a trespasser accesses the processing facility, project personnel would consider mitigation measures based upon the unique circumstances of the incident. If the trespasser climbed over the perimeter fence, GE may increase security patrols. If the trespasser cut a hole through the fence in the middle of the night, GE may add more lights in the area. If the trespasser was quickly spotted and apprehended by site security before accessing the property, no mitigation measure might be needed. Some mitigation measures are provided below for certain types of hazards. For other hazards, mitigation measures depend on the unique circumstances of the event so an evaluation of such measures at this time is premature. Those mitigation measures that are included here should be viewed as suggestive and not exhaustive.

Potential hazards described in this section have been divided into two categories based on the underlying work activities: (1) those that could occur during dredging and associated in-river activities; and, (2) those that could occur during operation of the processing facility and associated rail yard.

GE evaluated and prioritized, within each work activity category, potential hazards, based on the likelihood that, without preventive measures, the potential hazard could occur and its potential severity (the degree of impact to the community should the potential hazard occur). Thus, while potential hazards have been grouped into significant, moderate and low potential hazard classifications, considering the preventive measures already incorporated into the project, none of these potential hazards are likely to occur.

Potential hazards (for each category listed above) were divided into three groups (prior to considering preventive measures):

- *Significant potential hazards* – These consist of hazards that are both reasonably likely to occur and have the potential to cause a significant impact to the public prior to putting preventive measures in place. Only one potential hazard was deemed significant: the occurrence of fog during in-river operations (Section 5.3.1).



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- *Moderate potential hazards* – These consist of hazards that are either fairly likely to occur (prior to putting preventive measures in place) but not likely to cause a significant impact to the public, or are less likely to occur but have the potential to cause a significant impact to the public if they did occur.
- *Low potential hazards* – These consist of hazards that have a relatively low probability of occurring and do not seem likely to cause a significant impact to the public if they did occur.

Once potential hazards were evaluated, specific preventive and mitigation measures were identified to address them.

### 5.2 POTENTIAL HAZARDS DURING DREDGING AND OTHER IN-RIVER ACTIVITIES

Activities related to dredging and other in-river work are described in Sections 2.2.1 and 2.2.2. The performance of these activities may present potential hazards to the community, including: navigation hazards caused by fog; in-river boating incidents; increased turbulence affecting non-project vessels; spills and releases of fuel or other materials into the river; fires; damage to known or undetected underwater structures; safety risk to trespassers on unattended project vessels or work areas; and safety risk to shoreline structures if the shoreline becomes unstable.

#### 5.2.1 Significant Potential Hazards During Dredging and Other In-river Activities

This includes only navigation and safety hazards caused by fog.

##### 5.2.1.1 Navigation and Safety Hazards Increased by Fog

Fog often occurs on the river, particularly in the morning hours. Fog increases the possibility for incidents between vessels or between a vessel and in-river equipment. Also, trespass by the public in project areas or unattended project vessels could increase under the cover of fog, increasing the potential for a safety hazard to the trespasser.

#### Preventive Measures

Because of reduced visibility and concern for personal safety, most recreational boaters will not be on the river during foggy conditions. However, to prevent incidents from occurring in foggy conditions, operations on moving project vessels will be slowed or halted, as necessary, to ensure the safety of the public and project personnel. Activities on stationary equipment and staged vessels may also be halted or slowed, depending on the intensity of the fog and the specific work activity.

Should vessels continue to move in the water when fog is present, they will be equipped with signaling devices (*e.g.*, lighting) and possibly automatic identification systems to assist their safe passage. In addition, project personnel will communicate as needed with NYSCC personnel to track non-project vessels.

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Any sinking or capsized vessel will be handled according to the procedure for sinking/capsized vessels in Attachment 4. All project vessels will have USCG-mandated safety devices on board and will render rescue assistance as appropriate.

### 5.2.2 Moderate Potential Hazards During Dredging and Other In-river Activities

These include: spills and releases during refueling activities; spills and releases of dredged material; a fire; boating incidents; and, injury to trespassers on project vessels or at associated work areas.

#### 5.2.2.1 Spills and Releases During Refueling Activities

The dredges, tug boats, and support vessels used to perform dredging and related in-river activities will require regular refueling from fuel barges. During refueling activities, which are similar to refueling activities of non-project vessels, spills, or releases of fuel may occur. These releases may be relatively minor (*i.e.*, a few drops) to significant. Under the terms of the Clean Water Act (CWA), releases of oil or hazardous substances in the navigable waters of the United States are regulated and must be reported and mitigated if the quantities exceed “reportable quantities” [33 CFR 153.203].

##### Preventive Measures

All refueling activities will comply with USCG regulations [33 CFR Part 156 (oil & hazardous material transfer operations)] for on-water fuel distribution and storage.

To maximize safety and efficiency, refueling barges will be used to refuel dredges at or near the location where the dredges are operating. Although some support vessels may carry limited quantities of fuel for infrequent refueling while on the river, that fuel will be in special containers manufactured specifically for this use.

Other potential preventive measures are described above in Section 5.2.3.1.

##### Potential Mitigation Measures

These are described in Section 5.2.3.1.

#### 5.2.2.2 Spills and Releases of Sediment Containing PCBs

It is possible that a spill or release of dredged sediments occurs during transport of dredged sediments to the processing facility or offloading of loaded barges at the processing facility wharf.

##### Preventive Measures

The barges used on this project have been designed to safely contain and transport river sediments without leaking, tipping or spilling. The barges are low, broad, nearly flat-bottomed vessels made of thick steel plates and are built to handle heavy loads and remain very stable in a wide variety of marine conditions (e.g., wind, waves, and wakes). For example, to prevent

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leakage, only continuous “mono-hulled” barges will be used; split-hulled scows will not be permitted even if the bottom seam has been welded shut.

All barges will be water-tight, sound, and of appropriate dimension for use within the upper Hudson River and Champlain Canal, including safe passage through the locks. In addition, all barges will be certified as seaworthy by an independent third-party marine surveyor prior to being mobilized to the project site.

The process of loading barges has been designed to prevent overfilling or tipping. Barges will be loaded in a systematic and controlled manner. They will be securely anchored and moored to the dredge platform during loading, which adds to their stability. Barges will be secured or controlled at all times; they will be anchored, lashed to a tugboat or other control vessel, and/or moored to shore or secure dockage.

To prevent sediments from accumulating on the sides of barges, they will be washed, if needed, before being moved from the dredge area.

During initial startup of in-river activities in 2015, project personnel will identify problems, if any, with equipment or operational procedures that could cause spills of dredged material. If problems are identified, GE will evaluate additional preventive measures.

At the processing facility wharf, barges will be securely moored during unloading to enhance their stability and prevent tipping. A spill apron specifically designed for barge off-loading at the processing facility will extend from the unloading wharf to overlap with the side of the barge. This apron will catch any sediment or water that may fall from the unloading crane or excavator as the sediments are removed from the barge and moved onto the wharf. Any material that lands on this spill apron will drain back into the barge or into the on-site water collection and treatment system at the wharf.

Project safety representatives specially trained to educate, observe, and train project personnel on spills and releases will be on hand during operations. These safety representatives will review and observe procedures and equipment operations to help prevent spills or releases of dredged sediment.

Care has also been taken during project design to evaluate uncontrollable factors that could cause spills (e.g., tornadoes, floods, and incidents). These factors were evaluated and appropriate safety measures have been incorporated to prevent spills during dredging and other in-river activities. Further, if severe weather strikes, operations may be temporarily reduced or halted until the storm passes. Project personnel will monitor weather alerts and a system for notifying project personnel of impending severe weather has been developed.

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### **Potential Mitigation Measures**

These may include: additional training for project personnel to review and reinforce procedures; consideration of new or different barge equipment and/or unloading equipment at the wharf; or a re-evaluation of barge loading and wharf unloading procedures.

#### **5.2.2.3 Fire or Explosion on Vessel**

It is possible that a fire could start on a project vessel and spread onto the water, potentially impacting the community. The potential for an explosion on a project vessel, however, is unlikely because dredged sediments contain insignificant levels of volatile compounds and the sediments will be wet. Additionally, larger vessels operate on diesel fuel, which is not explosive under normal operating conditions.

### **Preventive Measures**

A “hot work” permit will be required when activities require a spark-emitting tool or welding to occur. Open containers of flammable or explosive materials will not be transported on project vessels.

Per USCG regulations, all project vessels will have approved type portable fire extinguishers and/or approved type semi portable fire extinguishers [33 CFR Part 145 (fire-fighting equipment)] to suppress a fire. The operator/skipper of each project vessel must complete a USCG boating safety training course prior to conducting work on the river. Each operator/skipper must demonstrate proficiency in the following subject areas: proper operation of a boat; boat and safety equipment inspections; content and frequency of equipment safety inspections; and proper use of on-board safety equipment, including fire extinguishers.

A Fire Prevention Plan, incorporating the elements set out above, will be developed by the contractor hired to perform the in-river work. This Plan will be routinely discussed at project safety meetings.

### **Potential Mitigation Measures**

If fires or explosions on project vessels occur, GE will re-evaluate current preventive measures, particularly project fire-fighting capability. GE will work with the USCG and local emergency responders to ensure that the proper fire prevention controls are in place on all project vessels.

#### **5.2.2.4 Incident Involving Moving Non-project Vessel and Moving Project Vessel**

River traffic in the upper Hudson may increase during the Phase 2 project. Curiosity seekers may specifically travel to close proximity of in-river work activities to watch, potentially becoming less attentive to the operation of their vessels. Additionally, collisions may occur as a result of operator fatigue, operator distraction, operator impairment, avoidance of another non-project or project vessel, loss of control, or other conditions.

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### Preventive Measures

All project vessels will travel at safe speeds to allow non-project vessels adequate time to see and react to them.

In an effort to encourage non-project boaters to avoid work areas, and thereby decrease the number of vessels near work activities, recreational boaters will be notified of work activities and will be provided with a schedule for upcoming work areas via the CENP described in Section 10.1. These notices will include recommendations that recreational river users avoid project work areas. Non-project vessels will be warned to maintain a safe passing distance from project vessels or activities. The safe passing distances will vary with the situation, including the activity being performed and the width of the river in the area of the activity.

To encourage non-project vessels that approach work areas despite mariner advisories to keep a safe distance, work areas will be clearly marked by, for example, signage and demarcation or float lines near fixed project features (if any). Any floating signage or other demarcation buoys or lines will comply with USCG regulations, including lighting.

During nighttime operations, all project vessels and equipment will be well lit to improve non-project vessels' visibility. This lighting will be checked regularly for proper operation and compliance with EPA's lighting performance standard.

Project personnel will be in contact with lock operators as necessary to receive information on lock usage and canal traffic.

Trained and experienced vessel operators will be used, an important aspect in the prevention of all incidents. Standard USCG and NYSCC rules for navigation will be followed to prevent vessel mishaps.

Any sinking or capsized vessel will be handled according to the procedure for sinking/capsized vessels in Attachment 4. All project vessels will have USCG-mandated safety devices on board and will render rescue assistance as appropriate.

#### **5.2.2.5 Runaway Project Vessel**

Barges will be securely anchored or held in position by a tugboat during loading. They will also be anchored at the processing facility wharf. However, it is possible that a barge or other project vessel may break away from its mooring or lose power when moving, presenting a potential hazard to other boaters.

### Preventive Measures

Properly maintained equipment and thorough procedures for securing vessels will reduce the potential for runaway vessels. In addition, notifying recreational boaters and posting work advisories at marinas could reduce the number of recreational boaters in work areas, thereby reducing the danger posed by a runaway project vessel. Mariners will be advised of project activities as described in the CENP (see Section 10.1).

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### Response

During dredging and other in-river activities, one tug will be available downstream of or at the dredge areas to assist in capturing a runaway vessel, which will reduce the potential for incidents or damage.

#### **5.2.2.6 Injury to Public on Project Vessels or Equipment**

Trespass into project work areas may occur by curious individuals, or unintentionally by those who fail to notice work area postings and/or signage. This can pose a safety risk to the trespasser.

### Preventive Measures

Work areas will be clearly marked by, for example, signage and demarcation near fixed project features (if any). Signage will be regularly checked for its visibility and relevance to current work areas. In addition, stationary project vessels and equipment will be well lit and lighting will be checked regularly for proper operation.

Fencing has been installed at marinas and is posted with appropriate warning signage. Vessel cabins and storage areas will be locked as needed and security patrols will be conducted, as further described in Section 6.4. Project safety briefings will be held regularly and will include instructing project personnel to be alert for the potential presence of trespassers.

### Response

Should trespasser(s) be discovered on project equipment or in work areas, security and local authorities will be notified. The project team will provide amplified verbal warnings or other alerts. Work activities will be halted as necessary to prevent injury, until the trespass situation is corrected.

### Potential Mitigation Measures

If trespassing occurs, GE may consider: installation of security fencing; adding additional lights to illuminate work areas; increased security patrols; or increased signage and buoys.

#### **5.2.3 Low Potential Hazards During Dredging or Other In-river Activities**

These include: spills and releases due to equipment failure; damage of structures above or below water; sinking project vessels; turbulence caused by project vessels; breach of a dredged sediment transport pipeline; trespass in work areas; floating project debris; instability of the shoreline; and hazards to the public on-shore during near-shore activities.

##### **5.2.3.1 Spills and Releases Due to Equipment Failure or Damaged Vessel**

It is possible that a spill or release of a petroleum product may occur because of a failure in equipment (e.g., broken fuel line, ruptured hydraulic line) or because of damage to a project vessel as a result of an incident. Such a spill or release could impact the community.

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### Preventive Measures

Prior to mobilizing equipment to work areas, the contractors will be required to provide GE with independent third-party inspection reports demonstrating that each vessel is seaworthy and is fully functional. During work activities, the dredging contractor will have an independent, third-party marine surveyor conduct monthly marine safety inspections on each project vessel to check the integrity of equipment components most likely to fail and cause a spill or release (e.g., hydraulic lines, fuel lines). In addition, hydraulic systems for marine equipment will be required to use a biodegradable oil as hydraulic fluid.

### Potential Mitigation Measures

Should spills or releases of fuel occur because of equipment failure, GE may consider: purchase of new or different equipment; a modification in equipment maintenance procedures; or a re-evaluation and potential modification of refueling activities.

#### **5.2.3.2 Damage to Bridge or Other Above-Ground Structure by Project Vessel**

A project vessel may interfere with a known or unknown above-ground structure, such as a bridge abutment, pier, dock, sheet pile wall, dam, or overhead cable. This may occur as a result of operator fatigue, operator distraction, avoidance of a non-project or project vessel, loss of control, or other conditions.

### Preventive Measures

An identification of physical structures in and near project work areas was conducted during the design stage. Locations of these identified structures have been included in the project design and will be communicated to the dredge operators performing in-river activities. These locations will be verified in the field before work activities begins.

During work activities, the presence of above-ground structures, including any setback requirements, will be discussed at project meetings. Any “near miss” incidents will be reported and discussed, so potential incidents can be avoided in the future.

Trained and experienced vessel operators will be used, an important aspect in the prevention of all incidents. Standard USCG and NYSCC rules for navigation will be followed to prevent vessel mishaps. To maintain their focus on work activities, project operators will not use cell phones when operating vessels or other equipment.

#### **5.2.3.3 Loss of Canal Lock Service**

Project vessels and barges will travel through multiple locks to and from the processing facility several times each day. During any of these lock passages, an incident (e.g., a vessel collision or sinking) could occur that could damage the lock and/or result in the lost use of the lock for a period of time.

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### **Preventive Measures**

The project team will comply with all applicable NYSCC regulations and will comply with directions or instructions given by the lock operator. Safe vessel speed and procedures will also be maintained when approaching or exiting locks.

To facilitate orderly passage of barges through Lock 7, mooring posts have been installed just south of the lock where barges can be safely staged and sequenced. Also, a turning dolphin has been installed near Lock 7.

### **Response**

If a project vessel damages the lock, the contractor, in cooperation with GE and the NYSCC, will remove the vessel, assess damage, and take steps to ensure the lock is repaired as necessary.

### **Potential Mitigation Measures**

If a lock becomes inoperable, GE will evaluate the cause of the losses of service with the NYSCC. Possible mitigation measures may include: NYSCC upgrades to lock infrastructure; modifications to locking procedures; or reduction in number of vessel trips through the lock.

#### **5.2.3.4 Damage to Underwater Structures by Project Vessels or Work Activities**

The potential exists that an underwater structure is damaged during dredging or in-river activities.

### **Preventive Measures**

The same preventive measures described for above-ground physical structures (described in Section 5.3.3.2) will be employed to protect underwater structures during in-river work activities.

### **Response**

If work activities result in damage to an underwater structure, the contractor will notify GE, and GE will notify the appropriate authorities. The contractor, in cooperation with GE and the appropriate authorities, will assess damage and take steps to ensure that the structure is repaired as necessary.

#### **5.2.3.5 Incident Involving Public and Stationary Project Vessel or Equipment**

Swimmers, anglers, and boaters use river areas where work activities will be performed. The potential exists for these river users to strike stationary project equipment (e.g., a vessel, buoy, float line, stationary environmental monitoring units, etc.).

### **Preventive Measures**

Preventive measures implemented to prevent incidents involving moving non-project and project vessels (as described in Section 5.2.2.4) will also prevent this type of hazard.



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### 5.2.3.6 Potential Public Hazards Resulting from Sunken Project Vessel

It is possible that a project vessel could sink as a result of a collision or other serious mishap or malfunction. A sunken vessel presents a number of potential hazards, including potential hazards to navigation, the resuspension of dredged sediment (if the vessel is a loaded sediment barge), or the potential for leaking fluids. Project efforts to recover the sunken vessel could temporarily block river navigation, thereby impacting the community.

#### **Preventive Measures**

Prior to mobilizing equipment to work areas, the contractors will be required to provide GE with independent third-party marine inspection reports demonstrating that each vessel is seaworthy and is fully functional. During work activities, the dredging contractor will conduct monthly marine safety inspections on each project vessel to ensure the integrity of the equipment. Routine maintenance will be performed regularly to ensure the safe operation of all project vessels and equipment.

Trained and experienced vessel operators will be used, an important aspect in the prevention of accidental sinking. Standard USCG and NYSCC rules for navigation will be followed to prevent vessel mishaps that could lead to sinking.

#### **Response**

The location of the sunken vessel will be marked as a warning to boaters. The sunken vessel will be recovered or removed as soon as practicable. The urgency with which the sunken vessel is recovered will depend on a number of factors, such as whether it is blocking the navigation channel or whether it is leaking fluids. Emergencies relative to the sinking of a project vessel will be handled according to the emergency procedures described in Section 7.3. Spills or releases of dredged sediment will be handled according to the procedures described in Section 7.2.

### 5.2.3.7 Turbulence Caused by Project Vessels

Vessel wakes or prop wash from project vessels may pose hazards to recreational boaters. Waves could capsize or swamp vessels such as canoes, kayaks, or small skiffs, if recreational boaters venture too close to project vessels.

#### **Preventive Measures**

Mariners will be notified of project activities (including work schedule, areas where work will be performed; and recommended distances to maintain from project vessels and equipment) according to the CENP in Section 10.1. In addition, if the project team notices encroachment by the public, they will sound warning horns and/or provide amplified voice warnings. Project vessels will reduce speed if the project team notices encroachment by the public.

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Any sinking or capsized vessel will be handled according to the procedure for sinking/capsized vessels in Attachment 4. All project vessels will have USCG-mandated safety devices on board and will render rescue assistance as appropriate.

### **Potential Mitigation Measures**

If project personnel observe a wake impacting a recreational vessel, a “near miss” report will be generated, which will evaluate the cause of the incident and consider additional methods for preventing such incidents from recurring. Mitigation measures may include: reducing project vessel speed; creation of a no wake zone; or halting activities when recreational vessels encroach upon project work areas.

#### **5.2.3.8 Potential Breach of Dredged Material Transport Pipeline**

In dredge areas with shallow water conditions (e.g., near shoreline), the contractor may elect to pump dredged sediment to a barge moored in deeper water. These sediments would be placed into a hopper located on the dredge platform and pumped to the barge. An accidental break of the transport line could cause dredged sediment to be discharged into the river. For dredging of the CUs in 2015, pumping of dredged sediment is not planned.

### **Preventive Measures**

If this type of system is used, a visual inspection of sediment transport line construction (e.g., pipe, pumps, floats and connections) will be conducted before the system is used to ensure its integrity. The contractor will conduct a hydrostatic test of pipelines with river water, prior to the introduction of dredged sediment, to reveal weaknesses. If weaknesses are identified, a further evaluation of the system will be conducted and equipment modifications will be implemented, as appropriate. Pipelines longer than 2,500 feet will not be permitted.

All pipelines and connections will be inspected daily. Pipeline inspection reports will include the length of pipe used for pumping sediment from the point of dredging to the barges and the results of pipeline and connection integrity inspections.

Buoys or other visible markings will clearly mark in-river slurry lines to prevent collision by project or non-project vessels. These markings will be checked regularly to ensure they continue to be visible and are located appropriately.

### **Mitigation**

The dredging contractor’s Spill Prevention, Control & Countermeasure (SPCC) plan will include locations where pipelines may be used to transport sediment due to shallow water conditions and/or the inability of barges to access work areas. Any sediment discharged into the river will be dealt with according to the procedures described in Sections 7.2 and 7.2.3.1.

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### 5.2.3.9 Floating Project Debris

Dredging or debris removal activities could dislodge woody debris adjacent to the river bank or other debris (e.g., limbs from tree-trimming activities) that may float downstream, presenting a potential hazard to other river users.

#### **Preventive Measures**

Hand-held equipment will be used to trim or remove vegetation or debris along shorelines where needed to allow room for safe operation of dredges and other project equipment. Vegetation and debris will be collected by the contractor and disposed of properly. The contractor will regularly report these activities in debris-removal progress reports, based on a Debris Removal and Vegetation Trimming Plan to be prepared and submitted by the contractor.

#### **Response**

If in-river project-related debris is observed in or near work areas, it will be retrieved by the contractor, to the extent possible.

#### **Potential Mitigation Measures**

In locations where floating debris may cause impacts to non-project river users, the contractors performing shoreline vegetation and debris removal activities may consider locating project personnel immediately downstream of work activities so floating debris can be promptly captured.

### 5.2.3.10 Shoreline Instability

It is possible that shoreline soils may slough into the river during or following dredging activities, resulting in a potential risk to the public and/or shoreline structures.

#### **Preventive Measures**

Dredging activities near the shoreline have been specifically designed in consultation with EPA to provide for the stability of the shoreline during and after dredging activities. Essentially, the maximum dredge cut at the shoreline is two feet, or the depth of contamination if less than two feet. The dredge will then move away from the shoreline to create a stable slope that will be no steeper than 3:1, unless the existing slope is steeper.

Before leaving shoreline areas, the project team will check shoreline slopes and re-construct them if needed to maintain stability.

#### **Response**

The contractor will repair project-related shoreline areas that slough into the river during or after dredging activities.

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### **Potential Mitigation Measures**

If shoreline areas slough into the river during dredging or other in-river activities, GE and EPA may re-evaluate existing shoreline stability requirements and modify them, as appropriate.

#### **5.2.3.11 Injury to Public During Shoreline Dredging or Debris Removal Activities**

Curious individuals standing on-shore watching project activities may get too close, presenting a potential risk of injury to themselves. Removal of tree limbs in areas of thick vegetative cover may also present a risk to individuals who venture too close.

### **Preventive Measures**

Prior to dredging or debris removal activities near the shoreline, the project team will attempt to communicate with shoreline property owners to update them on work activities and warn them to keep their distance. If necessary, the project team will ask for permission to post caution tape on-land to warn potential onlookers of work areas.

Notifications of work activities and schedule will be posted on the project Web site and included in Notices to Mariners and communication to other interested parties, as described in Section 10.1. Information will be provided to shoreline property owners in an attempt to reduce the potential for injury. The project team will provide sound alerts or amplified verbal warnings to individuals who appear to be venturing too close to work areas, to ask them to move away before an injury occurs.

## **5.3 POTENTIAL HAZARDS DURING OPERATION OF PROCESSING FACILITY AND ASSOCIATED RAIL YARD**

Activities related to operation of the processing facility and associated rail yard are described in Section 2.2.3. Potential hazards that have been identified with these activities include: fire or explosion at the facility; injury to trespassers into the facility; vehicular, boat or train incidents; spills and releases of compounds used at the site; and failure of the on-site water containment system.

### **5.3.1 Significant Potential Hazards During Operation of Processing Facility and Rail Yard**

None have been identified.

### **5.3.2 Moderate Potential Hazards During Operation of Processing Facility and Rail Yard**

These include: fire or explosion at the facility; injury to trespassers into facility; and certain types of incidents involving vehicles and/or trains.

#### **5.3.2.1 Fire or Explosion at Processing Facility**

A fire or explosion that occurs at the processing facility site has the potential to spread off-site. In addition, during a fire or explosion, emissions may impact the community.

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### **Preventive Measures**

Preventive measures that have been implemented to prevent a fire from occurring during construction of the processing facility will also prevent fires from occurring during facility operations.

Chemicals (e.g., polymers) used for sediment dewatering and stabilization at the processing facility are non-flammable under normal operating conditions and will be stored in appropriate containers.

Per applicable regulations, all work areas will have approved type portable fire extinguishers to prevent a fire from spreading off-site. Fire hydrants are present at the processing facility to provide ready access to the fire-fighting water supply.

A “hot work” permit will be required when activities require a spark-emitting tool or welding to occur. Hot work permits control the use of fire, welding, sparks, etc., by informing management that a potential fire-generating activity has been proposed. These permits also require that fire extinguishers are present and a fire watch associated with the work be established.

Storage areas will be routinely inspected and maintained. The Uniform Fire Code and National Fire Prevention Association (NFPA) standards will be followed when storing fuels and compounds that are flammable, ignitable or reactive.

### **5.3.2.2 Injury to Public Trespassing in Processing Facility**

Non-project individuals accessing the processing facility may injure themselves, particularly if trespassing occurs at night.

### **Preventive Measures**

A 7-foot-high chain link fence was installed around the perimeter and certain interior portions of the processing facility to minimize public trespass. Entry points are staffed by a security guard and anyone wishing to access the site will be required to sign in and show proper identification.

### **Response**

Should a trespasser be discovered on-site, security and local authorities will be notified.

### **Potential Mitigation Measures**

Should trespassers access the processing site property, potential mitigation measures may include: increased security presence; coordination with local authorities to prevent trespassing and apprehend trespassers; and installation of additional video cameras and/or lighting.

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### 5.3.3 Low Potential Hazards During Operations of Processing Facility and Rail Yard

These include: certain train, boat or vehicular incidents; derailment of a train in the rail yard; dust generation; and a spill or release of compounds used at the site.

#### 5.3.3.1 Project Train Derailment in Rail Yard Affecting Off-site Areas

Derailment of a project train in the facility rail yard could result in a release of processed material to off-site areas.

##### Preventive Measures

Before being loaded at the processing facility, each rail car will be fitted with a water-tight liner system to meet applicable regulatory requirements. During loading, project personnel will check that processed material is evenly distributed within the rail car to prevent tipping. In addition, rail cars will be weighed to ensure the weight capacity is not exceeded.

#### 5.3.3.2 Incident Involving Project Vehicle and Non-Project Vehicle

The potential exists for an incident involving a non-project vehicle and a project vehicle, most likely on an off-site roadway near the processing facility.

##### Preventive Measures

Processed material will be transported from the processing facility via rail. Backfill and capping materials that will be used in the river will be transported to dredge areas via barge or tug. Both of these measures will significantly reduce project vehicular traffic near the processing facility.

To minimize the number of project trucks and vehicles accessing the processing facility from narrow village streets, a two-mile access road connecting the existing truck route on Route 196 to the northern perimeter of the site has been constructed. A flashing traffic signal has been installed at the access road intersection with Route 196. All project traffic is required to use this entrance to the site.

To further reduce the likelihood of traffic incidents near the processing facility, project personnel working on in-river activities will be staged at the General Support Property, the South TIP Crew Change Area in Fort Edward, the SBLA in Northumberland, or the RBLA in Schaghticoke, thereby reducing the need for large numbers of individuals to access the processing facility each day.

##### Potential Mitigation Measures

Should a vehicular incident occur involving project traffic, GE will evaluate implementation of additional temporary traffic control measures, such as new traffic signals, traffic signs, or a reduction of the speed limit in certain areas.

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### **5.3.3.3 Spill or Release of Fuel or Other Non-PCB Materials**

Spills or releases of potential or known hazardous materials (e.g., diesel fuel, antifreeze, or hydraulic oil) at the processing facility during operations may migrate off-site, causing an impact to the community.

#### **Preventive Measures**

An SPCC plan has been developed for operation of the processing facility, which is described in Section 7.2.2.

To the extent possible, fueling of vehicles and equipment will be conducted either at the contractor's designated staging area or in the vicinity of the work performed by the equipment. Maintenance will be performed primarily in the staging area but may also be performed where the equipment is parked, if performed between shifts. These areas are designed with or within a secondary containment system to capture storm water runoff, spills, or releases.

Project personnel will be trained in proper liquid waste generating activities and liquid waste storage and disposal procedures. Regular meetings will be held with project personnel to discuss and reinforce disposal procedures.

In addition, stored fuel will be covered or enclosed and project personnel will be trained in proper fueling procedures. Project personnel will not leave fueling operations unattended and will follow applicable federal and state regulations. Fuel will be delivered by truck as needed or stored in above-ground fuel storage tanks with secondary containment features to prevent spills.

Vehicles and equipment will be checked for leaks each day they are used. As needed, repairs will be made or leaking vehicles or equipment will be removed from the site.

Absorbent spill clean-up materials and spill kits will be available in fueling areas and on fueling trucks, and project personnel will dispose of materials properly after use.

#### **Potential Mitigation Measures**

Should spills or releases of fuel or other material occur, GE may consider: additional training for project personnel to review and reinforce procedures; purchase of new or different equipment; or a re-evaluation and potential modification of the secondary containment system.

### **5.3.3.4 Incident Involving Non-Project Vessel and Project Vessel at Processing Facility**

The potential exists for a vessel operated by a member of the public to make contact with a project barge, tugboat or support vessel in the wharf area of the processing facility.

#### **Preventive Measures**

To minimize obstruction of navigation within the Champlain Canal, the canal has been widened near the processing facility wharf so that it does not encroach upon the existing navigation channel.

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Preventive measures that will be implemented to prevent incidents in the river during dredging between moving project and non-project vessels, as described in Section 5.2.2.4, will also prevent incidents at the processing facility wharf area.

### 5.3.3.5 Storm Event Exceeding the Capacity of the On-Site Containment System

It is possible that a significant storm may exceed the capacity of the on-site storm water and drainage collection and treatment system, resulting in the potential for PCB-containing water to leave the site.

#### **Preventive Measures**

The on-site storm water and drainage containment system has been designed to withstand a 100-year, 24-hour-duration storm event. This meets the requirements of NYSDEC's Storm Water Pollution Prevention Plan (SWPPP) design standards.

Based on applicable NYSDEC requirements and the site-specific SWPPP that the contractor will prepare for the storm water collection and water treatment systems, several preventive measures will be implemented to maintain the full capacity and functioning of the storm water collection system and treatment works. For example, the on-site containment system and water treatment facility will be inspected and maintained on a regular basis; disturbed areas and areas used for storage of materials are examined for evidence of, or the potential for, pollutants entering the drainage system and addressed, as appropriate; erosion and sediment controls will be properly maintained; and sediment traps and ponds will be emptied whenever necessary.

#### **Response**

In the very unlikely event that a 100-year storm event causes the capacity of the processing facility storm water retention and treatment capacity to be approached or reached, the processing of dredged sediments will cease and all systems will be diverted to storage, conveyance and treatment of storm water. If necessary, if the storm water storage capacity is at risk of being exceeded, portable power will be brought in to operate the water treatment plant. In accordance with Paragraph 59 of the CD, EPA will be notified in the event of any occurrence which causes or threatens to cause a release of waste material at or from the work area.



## SECTION 6

### SITE SAFETY PERSONNEL RESPONSIBILITIES

#### 6.1 DISCUSSION OF PROJECT HEALTH AND SAFETY PERSONNEL ROLES

The purpose of this section is to define the roles, responsibilities, qualifications and contact information for the key project health and safety personnel – Project Safety Manager; Facility Construction Safety Representative; Dredging Safety Representative; Processing Facility Safety Representative; Sub-contractor Safety Representatives; and other Safety Representatives. Clearly defining these roles and responsibilities will help establish clear lines of communication and ensure a well-coordinated response to incidents involving local emergency responders. This section also describes the Site Security Plan for the processing facility.

As requested by external emergency response organizations, a contact card with project safety personnel contact information will be prepared and distributed to emergency response agencies before work activities begin. Should project safety personnel change during implementation of the Phase 2 project in 2015, EPA will be notified, and the information will be posted at EPA's Hudson River field office. In addition, GE will develop an updated contact card and distribute it to the external emergency response organizations. This information will also be placed in all site office trailers, at major work locations, on each project vessel and in each project vehicle.

#### 6.2 PROJECT SAFETY PERSONNEL

##### 6.2.1 Project Safety Manager

The Project Safety Manager has overall responsibility for the safe operation of all aspects of project implementation. If an emergency requires response from an external emergency response organization, the Project Safety Manager or his/her designee will be the liaison with emergency responders, providing necessary information regarding the incident and coordinating on-site resources. Because the remedial activities will take place 24 hours a day, the Project Safety Manager will have a designated deputy. Either the Project Safety Manager or the Deputy Safety Manager will be on duty or on call at all times. The Project Safety Manager or his/her designee will be accessible by radio, cell phone, and pager whenever on duty.

The Project Safety Manager will be a Certified Industrial Hygienist (CIH) or a Board Certified Safety Professional (CSP), and will have completed OSHA's HAZWOPER Training (29 CFR 1910.120), additional 8-hour HAZWOPER Supervisor Training, and be current in the 8-hour annual refresher course. In addition, the Project Safety Manager will have current training in first aid and cardiopulmonary resuscitation (CPR).

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The responsibilities of the Project Safety Manager include:

- Ensuring proper implementation of procedures specified in this CHASP and in the project HASP;
- Maintaining and revising as necessary this CHASP and the project HASP;
- Ensuring that all project personnel have appropriate training certifications and medical clearance;
- Serving as Emergency Response Liaison and Incident Commander (the individual in charge of response to a particular incident), until first responders arrive at the incident scene;
- Suspending work activities in an emergency or if unsafe work conditions exist;
- Issuing authorization, in conjunction with the Project Manager, to proceed with work activities after issuance of a stop-work action;
- Ensuring drug and alcohol testing for all new personnel; and
- Informing appropriate authorities and response agencies in the event of a spill, as described in Section 7.0 of this CHASP.

### 6.2.2 Dredging Safety Representative

The Dredging Safety Representative will be responsible for ensuring community and worker health and safety during dredging operations. The Dredging Safety Representative will have completed OSHA 40-hour HAZWOPER Training [29 CFR 1910.120], additional 8-hour HAZWOPER Supervisor Training and be current in the 8-hour annual refresher course. The Dredging Safety Representative will be a CSP, CIH, or Occupational Safety and Health Technician (OSHT), will have current training in first aid and CPR, and will be respirator fit test certified.

The responsibilities of the Dredging Safety Representative include the following, as they relate to dredging operations:

- Implementing this CHASP and the project HASP;
- Developing safety protocols and procedures for all field work;
- Ensuring proper calibration and use of monitoring instruments in accordance with applicable manufacturers' instructions;
- Performing and documenting periodic audits of compliance with health and safety procedures;
- Regularly inventorying, inspecting and maintaining all health and safety equipment and materials;
- Initiating emergency response plan procedures, as necessary;
- Ensuring adherence to all decontamination procedures;

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- Providing safety orientation training to field workers;
- Suspending work activities in an emergency or if unsafe work conditions exist;
- Follow-up and conducting investigations on all incidents and/or near-miss incidents;
- Ensuring PPE is available for and used by project personnel and local first responders;
- Upgrading or downgrading the levels of PPE based on observations and air monitoring data;
- Regularly reviewing and observing procedures and equipment operations to ensure spills or releases do not occur; and
- Observing project personnel for signs and symptoms of chemical exposure, heat/cold stress, etc.

### 6.2.3 Processing Facility Safety Representative

The Processing Facility Safety Representative will be responsible for ensuring community and worker health and safety during operation of the sediment processing facility. This representative will be a HAZWOPER supervisor, will be current in the 8-hour refresher course, will be up-to-date in the 10-hour OSHA construction course, will be a CSP, CIH, or OSHT, and will have current training in first aid and CPR. This representative will be respirator fit test certified, a forklift trainer, and a confined space supervisor.

The responsibilities of the Processing Facility Safety Representative include the following, as they relate to operation of the sediment processing facility:

- Implementing this CHASP and the HASP;
- Developing safety protocols and procedures for all field work;
- Ensuring proper calibration and use of monitoring instruments in accordance with applicable manufacturers' instructions;
- Performing and documenting periodic audits of compliance with health and safety procedures;
- Regularly inventorying, inspecting, and maintaining all health and safety equipment and materials;
- Initiating emergency response plan procedures, as necessary;
- Ensuring adherence to all decontamination procedures;
- Providing safety orientation training to field workers;
- Suspending work activities in an emergency or if unsafe work conditions exist;
- Follow-up and conducting investigations on all incidents and/or near-miss incidents;
- Ensuring PPE is available for and used by project personnel and local first responders;
- Upgrading or downgrading the levels of PPE based on observations and air monitoring data;

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- Regularly reviewing and observing procedures and equipment operations to ensure spills or releases do not occur; and
- Observing project personnel for signs and symptoms of chemical exposure, heat/cold stress, etc.

### **6.2.4 Other Safety Representatives**

Safety representatives with training, capabilities, and experience at least equal to the project safety representative dedicated to a particular work area (e.g., dredging or facility operations) will be stationed at additional work areas, as needed.

The responsibilities of these additional safety representatives include the following, as they relate to the particular work areas to which they are assigned:

- Implementing this CHASP and the HASP;
- Developing safety protocols and procedures for all field work;
- Performing and documenting periodic audits of compliance with health and safety procedures;
- Regularly inventorying, inspecting and maintaining all health and safety equipment and materials;
- Initiating emergency response plan procedures, as necessary;
- Providing safety orientation training to field workers;
- Suspending work activities in an emergency or if unsafe work conditions exist;
- Follow-up and conducting investigations on all incidents and/or near-miss incidents; and
- Ensuring that PPE is available for and used by project personnel and local first responders.

### **6.2.5 Contractor and Subcontractor Safety Representative**

Project operations contractors and subcontractors with more than 25 employees will be required to have one dedicated safety representative for every 25 employees, whose training, capabilities, and experience will be at least equal to the project safety representatives dedicated to a particular work area (e.g., dredging or facility operations).

### **6.2.6 Site Safety Supervisors**

Site Safety Supervisors will be responsible for all on-site health and safety activities that relate to their task, and will have the authority to suspend such activities in the event of an emergency. The Site Safety Supervisor will be the primary point of contact for all field personnel and visitors observing field activities, and will have direct responsibility for the implementation and administration of the HASP. Specifically, the Site Safety Supervisor will be responsible for:

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- Enforcing all health and safety rules and regulations within the scope of the HASP;
- Conducting daily health and safety briefings;
- Conducting and documenting health and safety audits;
- Coordinating with the Project Safety Manager and other safety representatives on matters pertaining to project health and safety;
- Evaluating field activities to detect and correct unsafe acts and conditions;
- Educating employees regarding applicable work practices, procedures, rules, and regulations;
- Educating employees on applicable emergency contingency plans; and
- Reporting all incidents and injuries to the Project Manager, Project Safety Manager and other appropriate safety representatives.

Site Safety Supervisors involved with the processing facility or dredging operations will have completed OSHA 40-hour HAZWOPER Training [29 CFR 1910.120], additional 8-hour HAZWOPER Supervisor Training and be current in the 8-hour annual refresher course. In addition, all Site Safety Supervisors will have current training in first aid and CPR.

### 6.2.7 Processing Facility and Dredging Personnel

All contractor and subcontractor personnel involved with the processing facility or dredging operations will be required to provide proof of OSHA 40-hour HAZWOPER Training [29 CFR 1910.120] and current refresher, and a written statement of medical clearance to wear a respirator. All personnel will be made aware of the provisions of this CHASP and the project HASP.

All processing facility and dredging personnel will be required to have a medical evaluation certifying their physical fitness for hazardous waste site operations [29 CFR 1910.120(f)]. At a minimum, this evaluation will comply with OSHA's Respiratory Protection Standard [29 CFR 1910.134].

All project personnel will be required to attend daily health and safety and project coordination meetings to be eligible to work on the site that day. At this meeting, personnel will sign in with the Site Safety Supervisor (or designee), who will verify the status of employee credentials and distribute daily sign-in sheets.

### 6.2.8 Additional Training Requirements

All site workers must attend a Project Orientation session covering site hazards, procedures, fire extinguisher use, and the contents of the approved project CHASP and RA HASP prior to starting work or entering the site.

All site workers will receive training on the effects and consequences of controlled substance use on personal health, safety, and work environment. A pre-work test for controlled

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substances will be required for Contractor employees prior to starting work. All site workers will be subject to random unannounced controlled substance and alcohol testing.

Workers that drive any type of vehicle on or off the site for any purpose related to the project (other than driving to and from work) will complete a defensive driving course.

At least two employees current in first aid/CPR will be assigned to each team carrying out a specific field task and will be on the site during operations. These individuals will be trained in the precautions and protective equipment necessary to protect against exposure to blood-borne pathogens.

The operator/skipper of each project vessel must complete a USCG boating safety training course prior to conducting work on the river. Each operator/skipper must demonstrate proficiency in the following subject areas: proper operation of a boat; boat and safety equipment inspections; content and frequency of equipment safety inspections; proper use of on-board safety equipment, including fire extinguisher, radio or cellular phone, flares, horn, etc.; proper procedures on the completion and filing of a float plan; appropriate boating “rules-of-the-road” emergency procedures in the event of capsizing or being thrown overboard; and different types of personal floatation devices (PFDs) and their proper inspection and use.

### **6.3 CONTACT INFORMATION FOR PROJECT HEALTH AND SAFETY PERSONNEL**

Contact information for project safety personnel is presented in Attachment 1. This information will be updated, as necessary. All updates will be provided to EPA, NYSDEC, NYSDOH, and external emergency response organizations. In addition, a contact card with project team contact information will be prepared and distributed to external emergency response agencies before work activities begin.

### **6.4 SITE SECURITY PLAN**

#### **6.4.1 Facility Activities**

Facility activity areas (e.g., processing areas, the barge unloading area, and the rail yard) are fenced and gated. Security personnel staff gates 24 hours a day, seven days a week, during work and non-work periods during the dredging season, to restrict access and minimize potential public trespass. Figure 6-1 shows the site security plan.

The General Support Property is located on the east shore of the Hudson River approximately 3 miles south of Fort Edward and is accessed via Route 4. The property is gated and locked.

The South TIP Crew Change Property is located on the east shore of the Hudson River in the land cut north of Lock 6.

The SBLA is accessed from Route 4N in the Town of Northumberland. The area is gated and enclosed, with fencing on all non-water sides.

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The RBLA is accessed from River Road in the Town of Schaghticoke. The area is gated and enclosed, with fencing on all non-water sides.

### **6.4.2 In-River Activities**

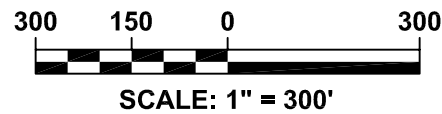
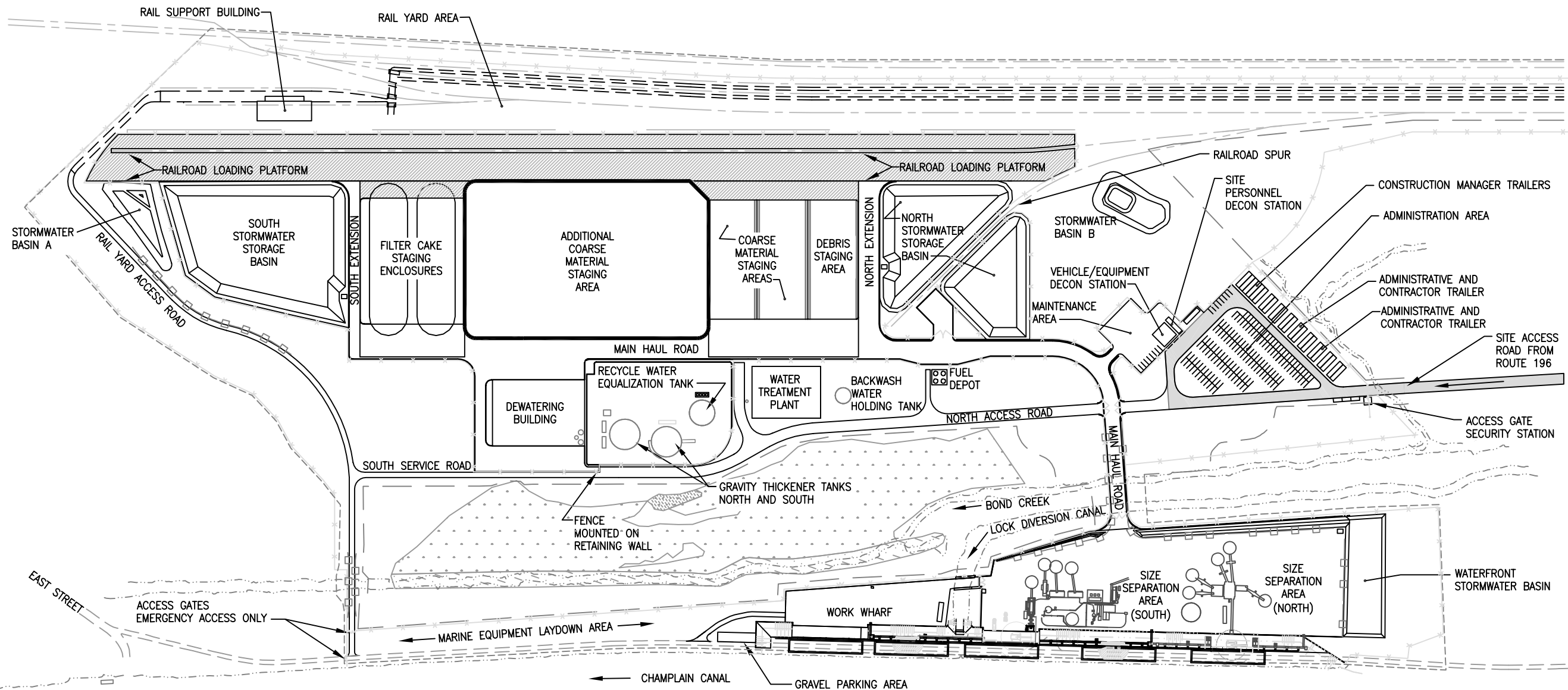
Before working on a marine vessel, all captains will first complete a merchant mariner application for review and background check. As necessary, project personnel will occupy or otherwise secure marine vessels 24 hours a day, seven days a week, so security personnel will not be necessary on each vessel. When project personnel are not present, marine vessels with cabins or areas will be locked or otherwise secured. Warning signs on and around each barge performing dredging activities will alert the public to avoid work areas. Air horns or other appropriate means will warn non-project vessels approaching an active dredge area to keep away. If a non-project vessel continues to approach a dredge area, project personnel will contact the appropriate authorities for assistance.

### **6.4.3 Access Control**







Several thousand feet of perimeter and exclusion zone chain link fencing have been installed around the perimeter and interior portions of the processing facility to restrict unauthorized access. Entry points will be staffed by a security guard and anyone wishing to access the site will be required to sign in and show proper identification. A detailed security plan has been prepared. However, to maintain security, it will not be distributed to the public.

As discussed in previous sections, all dredging-related project support boats and associated equipment will be staged at various locations along the river depending on where dredging is occurring.

Locking gates have been installed at the SBLA, RBLA, and the General Support Property to restrict unauthorized access. Anyone wishing to access these sites during normal business hours will be required to sign in and show proper identification. Each of these sites has access gates that are locked during nonworking hours.



**LEGEND:**

-  GUIDE RAIL
-  SITE PERIMETER FENCE
-  FORESTED AREA
-  EMERGENT WETLANDS
-  SITE ACCESS ROAD FROM ROUTE 196
-  RAILROAD LOADING PLATFORM

**FIGURE 6-1**

GENERAL ELECTRIC COMPANY  
HUDSON RIVER PCBs SUPERFUND SITE  
2015 REMEDIAL ACTION  
COMMUNITY HEALTH & SAFETY PLAN

**SITE SECURITY PLAN**

**PARSONS**

GE COMPANY - PARSONS PROJECT OFFICE, BUILDING  
40-2, 381 BROADWAY FT. EDWARD, NY 12828



## SECTION 7

### RELEASE REPORTING AND RESPONSE, AND EMERGENCY RESPONSE

#### 7.1 OVERVIEW

This section addresses two related areas: reporting and responding to spills and releases, and responding to emergency incidents. Section 7.2 discusses reporting and responding to releases. Release reporting occurs when there is a spill or some other release of potentially hazardous substances that exceeds a threshold amount set by federal or state law. This would include a release to the river (e.g., a spill of dredged sediment or fuel oil from a project vessel) or a spill on land at the sediment processing facility.

Reporting of a release does not necessarily mean an emergency situation has arisen, only that a release greater than an established threshold has occurred.

Section 7.3 describes responses to emergency situations (e.g., a fire, boating incident or other incident that may present a hazard to the community). As discussed in Section 5.0, GE's focus throughout the planning of this project has been on prevention, which is, identifying measures that could be implemented before project implementation to prevent incidents from occurring during work activities. Nonetheless, given the magnitude and duration of this project, it is important to have the right people, equipment and procedures in place to respond to an incident.

Section 7.3.3 primarily addresses those types of incidents that would require response by external emergency response organizations – police, fire, ambulance, etc. To develop the procedures discussed in this section, GE coordinated with local elected officials, the public and with members of local emergency organizations, including representatives of the David Nevins Fire Company, the Easton Fire Department, the Easton Greenwich Rescue Squad, the Fort Edward Volunteer Fire Department, the Fort Edward Village Police Department, the Fort Edward Rescue Squad, the Gansevoort Fire Department, the General Schuyler Emergency Squad, the Greenwich Fire Department, the Kingsbury Fire Department, the Middle Falls Fire Department, the Moreau Emergency Squad, the Quaker Springs Fire Department, Saratoga County HAZMAT, the Saratoga County Office of Emergency Services, the Saratoga County Sheriff's Department, the South Glens Falls Fire Company and Dive Team, the South Glens Falls Police Department, the Schuylerville Fire Department, the Washington County Department of Public Services, the Washington County Fire Coordinator, Washington County Public Safety, and the Washington County Sheriff's Department. Of course, no two incidents are quite the same and it is not possible to design a one-size-fits-all response in advance. Rather, this section discusses the basic plans and procedures that, in the event of an emergency, will be adapted to fit the circumstances.

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As previously stated, specific work activities and procedures will be further refined in work plans prepared by the contractors hired to perform the project. GE will continue to meet with emergency responders and local elected officials throughout project planning and implementation to further develop emergency response protocols. Specific planning steps are further discussed in Section 7.3.1.

Section 7.3.2 describes some of the safety equipment that will be available in work areas to respond to emergencies. A full assessment of health and safety resources available to the project has been evaluated. This evaluation will continue, in coordination with local emergency response organizations. GE is committed to obtaining resources that are necessary to ensure community health and safety. Contact information contained in Section 7 will be checked and updated periodically.

### **7.2 RELEASE REPORTING AND RESPONSE**

#### **7.2.1 Reporting of Spills or Releases**

This section applies only to spills and releases within river work areas, at the General Support Property, the South TIP Crew Change Location, the SBLA Area, the RBLA, and outside the exclusion zone at the sediment processing facility. Reporting of spills and releases in these areas is GE's responsibility. Reporting and responding to off-site incidents involving a release from loaded rail cars are addressed by separate regulatory programs and are not addressed here.

Spills may occur during an incident involving a loaded barge, truck, or rail car (see Section 5.0). Federal and state laws and regulations define when a spill or release must be reported. Pursuant to its authority under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), EPA has developed a list of hazardous substances that, if released to the environment in an amount greater than a defined "reportable quantity," or "RQ," must be reported. For example, in the case of PCBs, the person in charge of a facility must immediately report upon learning that one pound or more of PCBs has been released to the environment within a 24-hour period.

Under its authority granted by the CWA, EPA has developed a similar list of reportable quantities of hazardous substances in the event of a release of hazardous substances to the navigable waters. As with the CERCLA list, these require reporting if an amount exceeding an RQ is spilled into the water. In addition, the Oil Pollution Act (OPA) requires notification if a sheen of oil is visible on the water.

Under state law, NYSDEC has developed its own list of hazardous substances that, if released to the environment, must be reported. That law [6 NYCRR Parts 595, 597] requires the reporting of releases above a defined RQ (in the case of PCBs, one pound or more) to NYSDEC immediately, but within two hours after the discharge. State law also requires reporting of releases involving less than the RQ if the release may result in fire, explosion, exceedance of air and water quality standards, or injury to the public.

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In addition, Section 17-1743 of the NYSDEC Law requires that a person who stores more than 1,100 gallons of any liquid (including petroleum) must immediately report any release of the liquid to land or waters.

Finally, New York's Navigation Law requires any person responsible for causing a discharge of oil or other petroleum to land or water to notify NYSDEC immediately, but within two hours after the discharge, unless: (1) the spill is less than five gallons; (2) the spill is contained; (3) the spill has not and will not reach the water or any land; and (4) the spill is cleaned up within two hours of discovery.

If the release or spill requires reporting under CERCLA, the CWA or the OPA, a call will be placed to the USCG-operated National Response Center.<sup>3</sup> (The National Response Center is the sole national point of contact for reporting all oil, chemical, radiological, biological, and environmental discharges into the environment anywhere in the United States and its territories.) Also, if a release or spill requires reporting to NYSDEC under the provisions summarized above, a call will be placed to the NYSDEC Spill Hotline and to external emergency response agencies, as appropriate. If a release occurs and is reportable under CERCLA, GE is also required by the CD to verbally notify EPA's Team Leader for the project, or, in the event that the Team Leader is not available, either the EPA Project Coordinator or the Alternate EPA Project Coordinator, within 24 hours of obtaining knowledge of the event. GE is also required to provide oral notification to the NYSDEC Project Manager, or, in the event of the unavailability of the NYSDEC Project Manager, to the Chief of NYSDEC's Hudson River Unit and to the NYSDOH Bureau of Environmental Exposure Investigation. If it is determined by GE that a spill has the potential to impact navigation of the Champlain Canal, GE will also provide verbal notification to the NYSCC / NY Thruway dispatcher.

### 7.2.2 Summary of Spill Response

In the event of a spill or release, response actions will be the responsibility of the contractors GE has hired to perform the work. These contractors have developed or will develop SPCC plans that provide more specificity regarding response actions. Separate SPCC plans have been or will be prepared by the dredging contractor (for in-river activities) and the processing facility contractor (for incidents there). For the purposes of this CHASP, a general response approach has been summarized below.

#### 7.2.2.1 Spill Response for In-River Activities

Project vessels will be required to have USCG safety equipment including, as appropriate, ship-to-shore very-high-frequency (VHF) or ultra high frequency (UHF) radios and cellular phones, to alert the project team, regulatory authorities and local responders of a spill.

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<sup>3</sup> EPA has agreed that during dredging operations, a separate notification does not need to be made every time an observation is made of a sheen that is associated with sediment removal.

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The responders' first priority will be to assess the safety, rescue or medical needs of the public and/or workers immediately affected by the spill, if any. Emergency situations will be handled according to procedures in Section 7.3.

Second, the apparent scale and severity of the spill will be evaluated so that appropriate response actions can be taken. As needed, calls to project supervisors, safety officers, and EPA will be promptly made through normal chain-of-command structures, to summon the contractor's spill response team or other support personnel. In all cases, the location and time of the spill, the vessels and people involved, and other important details will be conveyed to assist response actions and reporting.

Third, the spill will be contained and controlled. If the spill appears incidental (e.g., brief duration and of limited spatial extent), containment may not be necessary or feasible. If the spill is of a larger magnitude (larger quantity, longer duration or spatial extent), contingency measures will be implemented per the appropriate SPCC plan, once developed. These measures will include actions to contain and control the spill to the extent possible (e.g., safe, feasible, consistent with other project requirements), thereby stopping the spill, securing and stabilizing the immediate area, and taking steps to minimize the spread of the spill. If appropriate, standard procedures for moving damaged equipment into the lock in an effort to contain the spill will be followed. Special consideration will be given to large spills that occur in portions of the river or canal that are known to be relatively free of PCBs or that have already been dredged and backfilled/capped in accordance with EPA's performance standard for residual sediments.

Fourth, the spill will be cleaned up or mitigated. A pre-planned course of action for the recovery of any spilled PCBs will be implemented. As needed, appropriate, and feasible after a spill, the project team will promptly undertake one or more of the following actions:

- No immediate direct action – this may be appropriate for smaller spills that would not be expected to cause significant or detectable effects, or if the spill occurs in portions of the river that are targeted for dredging but have not yet been remediated.
- Continue source control and containment and increase monitoring – this may be appropriate for spills that are brief and quickly contained or that are not migrating; spill material sampling or additional monitoring will help determine effects of the spill (if any) and what next steps may be warranted to clean up or further mitigate the spill.
- Isolate spill under clean backfill/capping material – this may be appropriate for small or limited spills in portions of the river where sediments have already been dredged but not backfilled. The backfill/capping material could isolate the spill and mitigate transport and potential exposure to the water column and biota.
- Remove spill during residuals dredging program – this may be appropriate for larger spills in portions of the river where inventory dredging has already occurred. If sampling/monitoring of the spill area indicates unacceptable levels of PCB

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concentrations, then the material will be targeted and removed during residuals dredging.

- Remove spill immediately – this may be appropriate for larger spills that have the potential to cause exceedances of applicable water quality criteria at near- or far-field water monitoring stations, or for larger/longer spills that impact sediments outside the dredge areas or previously dredged and capped sediments in the river or Champlain Canal. If warranted by the severity of the spill, immediate action will be taken to remove the spill in order to prevent or stop exceedances and/or preserve the integrity of a remediated or non-dredged area.
- Remove spill during demobilization – this may be appropriate for incidental spills that unavoidably recur but because of their limited scale or location in active work areas, do not necessitate a response until after all work is completed at the site. For example, if a very small amount of material is infrequently but unavoidably lost during unloading at the processing facility wharf (even though systems are in place to prevent such losses (see Section 5.2.2.2)), it may be most prudent to monitor the situation and then remediate the area after all active handling of PCB-containing sediments is complete and the processing facility is being decommissioned or restructured for some future land use.

### 7.2.2.2 Spill Response at the Processing Facility

The built-in collection, containment, and treatment system installed at the processing facility is designed to effectively address dredged and processed materials. Nonetheless, a significant incident or spill of material outside of the facility exclusion zone and the collection, containment, and treatment systems could warrant immediate actions to protect human health and safety. In such a case, GE will assess the severity of the event and take appropriate mitigation measures if needed. In addition, the event will be evaluated to determine its causes and future prevention, and proper project authorities will be notified of the event.

Generally, on-site spills from a project truck will be picked up and placed back in the truck, while spills during the process of loading rail cars will be picked up and placed into the rail car.

### 7.2.3 Monitoring with Respect to Spills

The comprehensive monitoring program that will be implemented to measure PCB resuspension during dredging will also monitor the potential effects of an in-water spill of PCB-containing material, should one occur.

#### 7.2.3.1 Water Column Monitoring

The water column monitoring program, including both routine and contingency monitoring, is described in Section 8.3.

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If a PCB spill were to occur in the river, it would not warrant response unless one or more of the water quality criteria were exceeded. If the spill was sufficiently large (e.g., in the unlikely event of a major barge incident), control and mitigation actions would immediately be taken.

More frequent and robust sampling will be conducted if certain criteria established in EPA's Resuspension Standard or other water quality requirements are exceeded at near-field or far-field stations. This may lead to more informed and aggressive response actions, including (in certain cases discussed in Section 8.4) reductions or complete stoppage of dredging activities until causes for the exceedances can be identified and, if project-related, corrected or otherwise mitigated.

### **7.2.3.2 Processing Facility Discharge Monitoring**

If a PCB spill occurs at the processing facility, materials will be securely contained and treated within the facility's water collection and treatment system before water is discharged to the Champlain Canal. Nevertheless, monitoring of the treated water discharge from the water treatment facility will be conducted. The potential effects of any on-site spill will be mitigated (either through retrieval of the material and processed of that material as intended or through diversion of the material to the treatment facility). Therefore, spills are not expected to impact the quality of treated water being discharged into the canal. This conclusion will be confirmed by the required monitoring.

### **7.2.3.3 First-Hand Observation and Oversight Monitoring**

A small fleet of support vessels will be used continuously in a variety of ways, including to prevent or address spills and other incidents in the river. Regulatory agency representatives, project supervisors, safety officers, monitoring/sampling teams, and other support workers will, among other duties, be well positioned to make direct visual observations of operations. From their up-close vantage point, these personnel will be able to help identify and prevent conditions that could lead to a spill, or in the event of a spill, be on the scene to assess the situation and take appropriate action. Similarly, a variety of oversight and support personnel will be engaged at the wharf, processing facility, and rail yard to make direct observations and assist in taking action in the event of an incident or spill.

### **7.2.4 Documentation and Follow-up**

As a way to document the spill, summarize the response actions taken, and record the after-the-fact engineering evaluation (if applicable) and proposed means of preventing recurrence, a written Spill Response Report will be prepared. Based on the findings and recommendations within that report, potential follow-up steps to prevent recurrence of the spill will be discussed, agreed upon, approved, and implemented as needed. This could include increasing the number of monitoring locations or frequency of monitoring, adjusting operational conditions or procedures, or implementing reasonable engineering solutions. Any follow-up or corrective actions that are taken would have to be feasible, cost-effective, and compatible with compliance under other performance standards.

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As required by the CD, within 14 days of the onset of a spill or release reported under Paragraph 41, GE will provide to EPA and NYSDEC a written report that describes the events that occurred and the measures taken, and to be taken, in response. Within 30 days of the conclusion of the event, GE will also submit a report detailing the actions taken to respond to the incident.

### **7.3 EMERGENCY RESPONSE**

#### **7.3.1 Development of Emergency Response Plan**

This section discusses the plans and procedures for responding to emergencies that may affect local communities. This emergency response plan was developed based on the identification and evaluation of the potential for hazards to the community to occur during work activities (see Section 5.0).

As stated earlier, these plans were developed in coordination with local emergency responders and elected officials. Based on these discussions, responsibilities were assigned to project personnel and external emergency response organizations. In addition, equipment needs and project resources were discussed (see Section 7.3.2).

To ensure the safety of the public, as well as emergency responders and project personnel, additional planning during annual project planning and implementation is critical. These activities include: additional meetings with local emergency response groups to discuss procedures and tactics; selection of medical emergency receiving and extraction points; logistics; review of dive team operations; and other planning.

Finally, periodic drills will be conducted involving project personnel and external emergency responders. Specific drill requirements and scheduling will be identified in the pre-planning process, and drills will be held at least annually. Drills will consist of a simulated fire, medical and water-based response, as well as a table-top drill. Drills will include training in project-specific PPE for local emergency responders. A formal critique and discussion will be conducted for each of the drills.

Before work activities begin, project health and safety personnel will be certified and trained as described in Section 6.0 of this CHASP. All safety equipment will be obtained and distributed throughout work areas. External emergency response agencies will be provided with copies of this CHASP and the project HASP and will be given the opportunity to inspect health and safety equipment, as requested. External agencies will also be notified when project work activities are scheduled to begin.

#### **7.3.2 Emergency Equipment**

An important component of this emergency response plan is to ensure that appropriate emergency equipment is on hand and available for immediate response. This includes vessels and vehicles to get to and remove injured persons from work areas. To respond to project

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emergencies, project support boats and vehicles will be used as needed to transport emergency personnel to incident locations, as well as to transport injured individuals to emergency responders. A project vehicle will be available for transport from limited access areas to medical receiving and extraction areas.

A variety of essential equipment will be available on barges, support boats, other vessels and vehicles, and will be available at the sediment processing facility. First-aid kits and oxygen kits will be available for basic life support treatment. An Automatic External Defibrillator will be available for advanced life support treatment. Blankets and other first-aid supplies (e.g., hot packs) will be available should an individual be retrieved from the water. Backboards and stretchers will be available for transport. Eye washes and safety showers will be available for exposure of skin or eyes to sediment or chemicals.

The contractors selected by GE to perform this work will be responsible for all confined space entry rescue. In the event a confined space entry rescue is required (e.g., on a project vessel or at the processing facility), the project Incident Commander will notify external emergency responders, regardless of whether assistance from external organizations is needed. To respond to the incident, self-contained breathing apparatus (SCBA) and tripod and extraction equipment will be available. To assist in the rescue of an individual who has fallen while wearing a harness, an aerial lift will be available. Project vessels and life rings with 100-foot of rope will be available to retrieve individuals who have fallen into the water. Project facilities, vehicles and vessels will be equipped with spill response kits and supplies to contain and clean-up releases to land and water.

For internal project communications, two-way radios or cellular phones will be used. External emergency response agencies will be provided with radio frequencies used by project personnel. Air horns/bull horns will be available at fixed locations to sound an evacuation alarm. In addition, vessels will be equipped with flares, as required by vessel safety regulations.

The following equipment for safety and emergency response will be maintained on project vessels:

- USCG safety equipment, which includes:
  - Fire extinguisher;
  - Paddles;
  - Personal floatation devices;
  - Visual distress signals (flares); and,
  - Sound producing device (air horn).
- Navigational lighting; and
- Ship-to-shore radio.



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The SBLA and the RBLA will be equipped with the following emergency response equipment:

- Fire extinguisher;
- Eye wash station;
- First-aid kit;
- Phone (hard-wired); and
- Extra copies of the project HASP and this CHASP.

The sediment processing facility will be equipped with the emergency response equipment listed in Attachment 2.

### 7.3.3 Roles of External Emergency Response Organizations

External emergency response organizations are defined as existing, non-project, community, state and other emergency response organizations. Depending on the type of incident, their location and their unique capabilities, the roles and responsibilities of external emergency response organizations are defined below. Organizations are listed alphabetically. Emergency contact information is provided in Attachment 3. The Project Safety Manager will be responsible for periodically reviewing and updating the contact information in Attachment 4 to ensure that the information is current.

#### 7.3.3.1 Ahearn Rescue Squad

The Ahearn Rescue Squad in Mechanicville may respond to incidents in the river. They are a first responder and can provide initial response to medical emergencies.

#### 7.3.3.2 Albany Med Flight

Albany Med Flight typically responds to emergencies when requested by county emergency services dispatch. Albany Med Flight will respond to incidents at the sediment processing facility and in the river, based on evaluations performed at the scene by first responders. They will provide rapid patient transport to a designated medical facility (see Section 7.3.4).

#### 7.3.3.3 Arvin Hart Fire Company of the Stillwater Fire District

The Arvin Hart Fire Department may respond to incidents in the river. They are a first responder and can provide fire-fighting assistance.

#### 7.3.3.4 Cohoes Fire Department

The Cohoes Fire Department may respond to incidents in the river. They are a first responder and can provide fire-fighting assistance.

#### 7.3.3.5 Cohoes Police Department

The Cohoes Police Department may respond to incidents in the river. They are a first responder and can provide initial response to medical emergencies.

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### **7.3.3.6 David Nevins Fire Department (Victory Mills)**

The David Nevins Fire Department in Victory Mills may be a joint responder to incidents in the river. They are a first responder and can provide fire-fighting assistance.

### **7.3.3.7 Easton Volunteer Fire Department**

The Easton Volunteer Fire Department may respond to incidents in the river. They are a first responder and can provide fire-fighting assistance.

### **7.3.3.8 Easton/Greenwich Rescue Squad**

The Easton/Greenwich Rescue Squad may respond to incidents in the river. They are a first responder and can provide initial response to medical emergencies.

### **7.3.3.9 Fort Edward Police Department**

The Fort Edward Police Department will respond to incidents at the sediment processing facility and may respond to incidents in the river. They are a first responder and can provide initial response to medical emergencies.

### **7.3.3.10 Fort Edward Rescue Squad**

The Fort Edward Rescue Squad will respond to incidents at the sediment processing facility and may respond to incidents in the river. They are a first responder and can provide initial response to medical emergencies.

### **7.3.3.11 Fort Edward Volunteer Fire Department**

The Fort Edward Volunteer Fire Department will respond to incidents at the sediment processing facility and may respond to incidents in the river. They are a first responder and can provide fire-fighting assistance and water rescue.

### **7.3.3.12 Gansevoort Fire Department**

The Gansevoort Fire Department may respond to incidents in the river. They are a first responder and can provide fire-fighting assistance and water rescue.

### **7.3.3.13 General Schuyler EMS**

The General Schuyler EMS may respond to incidents in the river. They are a first responder and can provide initial response to medical emergencies.

### **7.3.3.14 Greenwich Fire Department**

The Greenwich Fire Department may respond to incidents in the river. They are a first responder and can provide fire-fighting assistance.

### **7.3.3.15 Hemstreet Park Fire Department**

The Hemstreet Park Fire Department in Mechanicville may respond to incidents in the river. They are a first responder and can provide fire-fighting assistance.

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### **7.3.3.16 Hillcrest Volunteer Fire Department**

The Hillcrest Volunteer Fire Department in Mechanicville may respond to incidents in the river. They are a first responder and can provide fire-fighting assistance.

### **7.3.3.17 Hoosic Valley Volunteer Fire Company #1**

The Hoosic Valley Volunteer Fire Company #1 in Schaghticoke may respond to incidents in the river. They are a first responder and can provide fire-fighting assistance.

### **7.3.3.18 Kingsbury Fire Department**

The Kingsbury Fire Department may respond to incidents at the sediment processing facility. They are a first responder and can provide fire-fighting assistance.

### **7.3.3.19 Mechanicville Fire Department**

The Mechanicville Fire Department may respond to incidents in the river. They are a first responder and can provide fire-fighting assistance and water rescue.

### **7.3.3.20 Mechanicville Police Department**

The Mechanicville Police Department is a joint responder to incidents in the river. They are a first responder and will provide initial response to medical emergencies.

### **7.3.3.21 Melrose Fire Department**

The Melrose Fire Department may respond to incidents in the river. They are a first responder and can provide fire-fighting assistance.

### **7.3.3.22 Middle Falls Fire Department**

The Middle Falls Fire Department may respond to incidents in the river. They are a first responder and can provide fire-fighting assistance.

### **7.3.3.23 Moreau Emergency Squad**

The Moreau Emergency Squad may respond to incidents in the river and at the sediment processing facility. They are a first responder and can provide initial response to medical emergencies.

### **7.3.3.24 New York State Police**

The New York State Police will respond to incidents at the sediment processing facility and in the river. They are a first responder and will provide initial response to medical emergencies and security.

### **7.3.3.25 Northside Fire District/F.B. Peck Hose Company**

The Northside Fire District may respond to incidents in the river. They are a first responder and can provide fire-fighting assistance.

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### **7.3.3.26 Quaker Springs Fire Department**

The Quaker Springs Fire Department may respond to incidents in the river. They are a first responder and can provide fire-fighting assistance and water rescue.

### **7.3.3.27 Rensselaer County Public Safety Department**

The Rensselaer County Public Safety Department can provide scene management and security.

### **7.3.3.28 Rensselaer County Sheriff**

The Rensselaer County Sheriff can provide land-based response to incidents in the river. They are a first responder for incidents in Rensselaer County and are able to provide law enforcement and scene security.

### **7.3.3.29 Saratoga County Office of Emergency Services**

The Saratoga County Office of Emergency Services can provide scene management and a mobile communications van.

### **7.3.3.30 Saratoga County Sheriff**

The Saratoga County Sheriff can provide land-based response to incidents in the river. They are a first responder for incidents in Saratoga County and are able to provide law enforcement and scene security.

### **7.3.3.31 Schuyler Hose Company**

The Schuyler Hose Company may respond to incidents in the river. They are a first responder and can provide fire-fighting assistance and water rescue.

### **7.3.3.32 Schuylerville Fire Department**

The Schuylerville Fire Department may respond to incidents in the river. They are a first responder and can provide fire-fighting assistance and water rescue.

### **7.3.3.33 South Glens Falls Fire Department**

The South Glens Falls Fire Department may respond to incidents in the river. They are a first responder and can provide fire-fighting assistance, water rescue and dive team operations.

### **7.3.3.34 South Glens Falls Police Department**

The South Glens Falls Police Department may respond to incidents in the river. They are a first responder and can provide initial response to medical emergencies.

### **7.3.3.35 Stillwater Fire Department**

The Stillwater Fire Department may respond to incidents in the river. They are a first responder and can provide fire-fighting assistance and water rescue.

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### **7.3.3.36 Stillwater Police Department**

The Stillwater Police Department may respond to incidents in the river. They are a first responder and can provide initial response to medical emergencies.

### **7.3.3.37 Stillwater Rescue Squad**

The Stillwater Rescue Squad may respond to incidents in the river. They are a first responder and can provide initial response to medical emergencies.

### **7.3.3.38 Tri-State Emergency Team in Waterford**

The Tri-State Emergency Team may respond to incidents in the river. They are a first responder and can provide water rescue and initial response to medical emergencies.

### **7.3.3.39 Troy Fire Department**

The Troy Fire Department may respond to incidents in the river. They are a first responder and can provide fire-fighting assistance and water rescue.

### **7.3.3.40 Troy Police Department**

The Troy Police Department may respond to incidents in the river. They are a first responder and can provide initial response to medical emergencies.

### **7.3.3.41 U.S. Coast Guard**

The U.S. Coast Guard First District, Sector Northern New England, Station Burlington is responsible for the upper Hudson above the Troy lock. They are typically notified of on-water emergencies by local dispatch; but due to their distance from the site, local dispatch would first notify the local community emergency response agency.

The Coast Guard Auxiliary Division 15 conducts vessel safety inspections for the upper Hudson River.

### **7.3.3.42 Washington County Department of Public Safety**

The Washington County Department of Public Safety is the dispatch center for Washington County and receives 911 calls. They have a mobile command post and house the county Hazmat Team.

### **7.3.3.43 Washington County Sheriff**

The Washington County Sheriff may respond to incidents at the sediment processing facility and in the river. They are a first responder for incidents in Washington County and are able to provide law enforcement and scene security.

### **7.3.3.44 Waterford Fire Department**

The Waterford Fire Department may respond to incidents in the river. They are a first responder and can provide fire-fighting assistance, water rescue, and dive team operations.

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### **7.3.3.45 Waterford Police Department**

The Waterford Police Department may respond to incidents in the river. They are a first responder and can provide initial response to medical emergencies.

### **7.3.3.46 Waterford Rescue Squad**

The Waterford Rescue Squad may respond to incidents in the river. They are a first responder and can provide initial response to medical emergencies.

## **7.3.4 Location of Area Medical Facilities**

### **7.3.4.1 Glens Falls Hospital, 100 Park Street, Glens Falls**

Glens Falls Hospital can provide treatment for all medical injuries and emergencies. Figure 7A depicts the location of the hospital.

Directions to Glens Falls Hospital from the Route 4 Support Property or the South TIP Crew Change Area are as follows: travel north on US-Route 4; make left onto Route 197 in the Village of Fort Edward; take a right at first traffic light onto Fort Edward Road; continue straight traveling through South Glens Falls; cross back over the Hudson River; at the traffic circle at the top of the hill in downtown Glens Falls, travel three-quarters of the way around the circle making a left on Hudson Avenue; go two blocks; emergency room is on the left.

Directions to Glens Falls Hospital from the sediment processing facility are as follows: from the access road turn left onto Route 196; turn right on Main Street (Route 4); bear left to follow Route 4 North; continue on Park Place; bear right on River Street (Route 254); continue to follow Route 254 as it becomes Low Warren Street, then Warren Street (Route-32); bear left on Hudson Avenue; turn left on School Street; turn right on Park Street; arrive at hospital; emergency room is on the left.

### **7.3.4.2 Saratoga Hospital, 211 Church Street, Saratoga Springs**

Saratoga Hospital can provide treatment for all medical injuries and emergencies. Figure 7B depicts the location of the hospital.

Directions to the facility from the SBLA are as follows: Travel south on US-4/RT-32; at first traffic light, make right onto Spring Street/RT-29; follow RT-29 for 10 miles; hospital emergency room will be on right.

### **7.3.4.3 St. Mary's Hospital, 1300 Massachusetts Ave., Troy**

St. Mary's Hospital can provide treatment for all medical injuries and emergencies. Figure 7C depicts the location of the hospital.

Directions to the facility from the RBLA are as follows: Take River Road, State Route 40 South and Oakwood Avenue to Park Boulevard in Troy; take Lindenwood Ct to Massachusetts Avenue.

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### **7.3.4.4 Moreau Family Health, 1448 Route 9, Fort Edward**

Moreau Family Health will provide treatment for minor medical injuries that do not involve exposure to PCB-containing sediments. Directions to the facility from work areas are as follows: Follow Route 197 west to end; make right onto Route 9 North; facility is on right.

### **7.3.4.5 Fort Edward – Kingsbury Health Center, 48 East Street, Fort Edward**

Fort Edward – Kingsbury Health Center will provide treatment for minor medical injuries that do not involve exposure to PCB-containing sediments. Directions to the facility from work areas are as follows: Follow Route 197 east to end; make left onto Route 4 North; at next traffic light, make right onto East Street; facility is on right.

### **7.3.4.6 The Medical Center at Wilton, 135 North Road, Gansevoort**

The Medical Center at Wilton will provide treatment for minor medical injuries that do not involve exposure to PCB-containing sediments. Directions to the facility from work areas are as follows: Follow Peters Road to Schuylerville Road/RT-32; turn left on RT-50; make right onto Ballard Road; cross over I-87 Northway; facility will be on the right.

### **7.3.4.7 Wilton Medical Arts, 3040 Route 50N, Wilton**

The Wilton Medical Arts facility will provide treatment for minor medical injuries that do not involve exposure to PCB-containing sediments. Directions to the facility from the SBLA are as follows: Travel south on US-4/RT-32; at first traffic light, make right onto Spring Street/RT-29; follow for 9 miles; make right onto RT-29/Weibel Avenue; turn right onto NY-50N; facility will be on the left, across the street from Target.

### **7.3.4.8 Schuylerville Family Health, 200 Broad Street, Schuylerville**

The Schuylerville Family Health facility will provide treatment for minor medical injuries that do not involve exposure to PCB-containing sediments. Directions to the facility from the SBLA are as follows: Follow US-4 south into the Village of Schuylerville; facility is on left.

### **7.3.4.9 Albany Medical Hospital/St. Peter’s Hospital**

Albany Medical Hospital or St. Peter’s Hospital will provide treatment for patients transported by Albany Med Flight.

### **7.3.4.10 Westchester Medical Center, Valhalla**

Patients with burn injuries may be transported via helicopter to the Westchester Medical Center in Valhalla, New York. A decision to transport a patient to the burn unit here will be made by local first responders and Albany Med Flight personnel.

## **7.3.5 General Approach For Project Emergencies**

In the event of an incident, project personnel will immediately notify 911 so that the proper emergency personnel can respond. Following the 911 call, a project-specific “Priority” will be issued to project personnel over the two-way radio. These priorities were developed based on

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the expected capabilities of project personnel and external responders. The priorities are as follows:

- **Priority 1** — Call “911”; external response required. These include the following types of incidents:
  - traumas (either with or without exposure) - *e.g.*, fractures, open wounds, falls from elevation;
  - life-threatening incidents (either with or without exposure) - *e.g.*, injured individual is unconscious, severely bleeding, not breathing or has chest pains;
  - chemical releases - *e.g.*, a visible plume or exposure causing eye or throat irritation;
  - fires - that cannot be immediately extinguished by site personnel; and
  - sinking or capsized boats.
- **Priority 2** - Internal response with first aid supplies to provide basic life support, including minor medical injuries (*e.g.*, abrasions, lacerations, eye irritations, etc.).
- **Priority 3** - Internal response with spill supplies, including liquid spills within a containment system or to the ground or water.
- **Priority 4** - Internal response with support boat/marine vessel.
- **Priority 5** - Call Canadian Pacific Railway. Off-site incidents involving rail cars will be the responsibility of the rail carrier, working with local emergency responders.

Refer to Attachment 4 for further description on emergency procedures.

The same personnel that called the Priority will notify the Project Safety Manager, the appropriate area Safety Representative (*i.e.*, facility construction, dredging or facility operations), and other project safety personnel. All will respond to the scene accordingly.

If needed, air horns strategically located throughout the processing facility and on each project vessel will initiate the evacuation signal - one long blast.

The Project Safety Manager or designee will act as the incident commander for project emergencies that are handled internally. Trained on-site personnel will use fire extinguishers for small fires, and first aid/CPR-trained personnel will provide treatment for non-life threatening injuries.

In the event of an emergency requiring external emergency response, the first responding agency’s lead officer will become the incident commander when he/she arrives on-site. The Project Safety Manager will serve as liaison to the external incident commander, as appropriate.

Appropriate emergency response measures will immediately be taken by project personnel to assist those who have been injured and to protect others from unsafe conditions. These measures may include contacting the relevant authorities (depending on the nature of the emergency) and/or health care facilities (see emergency contact numbers listed in Attachment 4).



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It may also involve moving individuals to a secure location, as appropriate. On-site basic first-aid to an injury or illness will be provided by trained project personnel. External emergency responders will be responsible for providing advanced medical and life support services.

If an incident involves a fire that cannot be controlled with an extinguisher, the work area and/or vessel will be evacuated immediately. The Project Safety Manager (or on-site designee) will promptly contact external fire department personnel whenever there is a fire, regardless of its intensity.

### **7.3.6 Additional Reporting and Response Relating to Emergencies**

In addition to notifications to first responders, GE will notify EPA, NYSDEC, and/or NYSDOH of any incident that may present an immediate threat to public health or welfare or the environment, by immediately (upon obtaining knowledge of the incident) notifying the EPA Project Coordinator or, if he is unavailable, the Alternate EPA Project Coordinator, and also notifying the NYSDEC Project Manager, or, in the event of the unavailability of the NYSDEC Project Manager, the Chief of NYSDEC's Hudson River Unit, and/or the NYSDOH Bureau of Environmental Exposure Investigation.

In the event that such an emergency occurs in the Champlain Canal, GE will also provide verbal notification to the NYSCC / NY Thruway dispatcher.

GE will also immediately take all appropriate action to prevent, abate, or minimize the release or threat of a release, in consultation with the EPA Project Coordinator or his designee and in accordance with all applicable provisions of the Project HASP, the Contingency Plans, and other applicable plans or documents. GE will satisfy these requirements by implementing the emergency plans described in this section of the CHASP, in consultation with the identified EPA personnel.

### **7.3.7 Responses to Specific Emergencies**

#### **7.3.7.1 Medical Emergency at Sediment Processing Facility**

In the event of a medical emergency at the sediment processing facility, a telephone call will be made to 911. The arriving unit will report to a designated entry location. The lead officer will be met by the Project Safety Manager (or on-site designee), will be given a project two-way radio and briefed, or will immediately receive the injured individual(s) for evaluation and/or transport. In the event the injured individual(s) cannot be moved, emergency personnel will be escorted to the incident location.

Emergency personnel will be provided with any site-specific PPE beyond their own response gear. Training on the use of such site-specific PPE will be provided as necessary. Response personnel will have access to on-site emergency response equipment, as needed. If the injured individual(s) cannot be decontaminated due to the possibility of causing further injury, the necessary PPE and supplies will be provided to protect emergency response personnel or equipment.

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Emergency vehicles entering exclusion zone work areas will be washed down before exiting the site, as are other project vehicles, unless the circumstances of the emergency make this unadvisable.

### **7.3.7.2 In-River Emergency at Processing Facility (Wharf Area)**

In the event of an in-river emergency at the processing facility wharf, a telephone call will be made to 911. First responders will respond to a designated location at the sediment processing facility, will be met by the Project Safety Manager (or on-site designee), provided a project two-way radio, and briefed, if needed. Based on the incident, the incident commander will deploy appropriate water rescue resources with assistance from project personnel. Injured individual(s) who are in a condition to be transported will be transferred by project vessel or emergency response vessel to the designated location. If the injured individual(s) cannot be transported, first responders will be brought, or directed, to the scene. Project personnel will assist external responders with operational support (e.g., stopping dock work and barge movement) and by providing assistance (e.g., boats, vehicles, PPE) as needed. If the injured individual(s) cannot be decontaminated due to the possibility of causing further injury, the necessary PPE and supplies will be provided to protect emergency response personnel or equipment.

### **7.3.7.3 Medical Emergency in Dredge Area**

In the event of a medical emergency in the river where dredging is taking place, the affected vessel will notify Vessel Traffic Service (VTS), which will then make the telephone call to 911. VTS will then advise the emergency responders of the best location at which to start response efforts. First responders will respond to the SBLA, RBLA, or other designated location as determined by VTS. Injured individuals who are in a condition to be transported will be transferred by project vessel or emergency response vessel to the SBLA, RBLA, or other designated location. If the injured individual(s) cannot be transported, first responders will be met and briefed by the Project Safety Manager (or on-site designee). They will be given a project two-way radio. They will then be directed to the scene, if using their own vessel. Response personnel will have access to project emergency equipment, including vessels, and may be given the option of commandeering or boarding a project vessel for transport as needed. If the injured individual(s) cannot be decontaminated due to the possibility of causing further injury, the necessary PPE and supplies will be provided to protect emergency response personnel or equipment.

### **7.3.7.4 Water Emergency Involving Man Overboard**

In the event of an in-river emergency involving a man overboard, a telephone call will be made to 911. First responders will respond to the General Support Property, SBLA, RBLA, or other designated location. First responders will be met by the Project Safety Manager (or on-site designee), briefed, and provided a project two-way radio, or will immediately receive the injured individual(s) for evaluation and/or transport. Project support vessels, project personnel, and/or

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equipment will be made available to external emergency responders, as will any land-based logistics and/or support equipment. If the injured individual(s) cannot be decontaminated due to the possibility of causing further injury, the necessary PPE and supplies will be provided to protect emergency response personnel or equipment.

### **7.3.7.5 Fire at the Processing Facility**

In the event of a fire at the sediment processing facility that cannot be quickly extinguished by site personnel, a telephone call will be made to 911. The arriving unit will report to the designated entry location, will be met by the Project Safety Manager, briefed, and provided a project two-way radio. Project personnel will provide the lead officer with facility-specific information and logistical support, as needed. If entrance to exclusion zone work areas is required, the necessary PPE and supplies will be provided to protect emergency response personnel or equipment. Emergency vehicles entering exclusion zone work areas will be washed down before exiting the site, as are other project vehicles, unless the circumstances of the fire make this unadvisable.

### **7.3.7.6 Fire on Project Vessel**

In the event of a fire on a project vessel, the project team will provide in-river fire-fighting response. A telephone call will be made to 911 via VTS. Arriving units will respond to the General Support Property, SBLA, RBLA, or other designated location, will be met by the Project Safety Manager (or on-site designee), briefed, and provided a project two-way radio. Based on the incident, the incident commander will deploy appropriate water rescue resources. Project personnel will assist external responders with operational support (e.g., stopping dock work and barge movement) and by providing assistance (e.g., boats, vehicles, PPE) as needed.

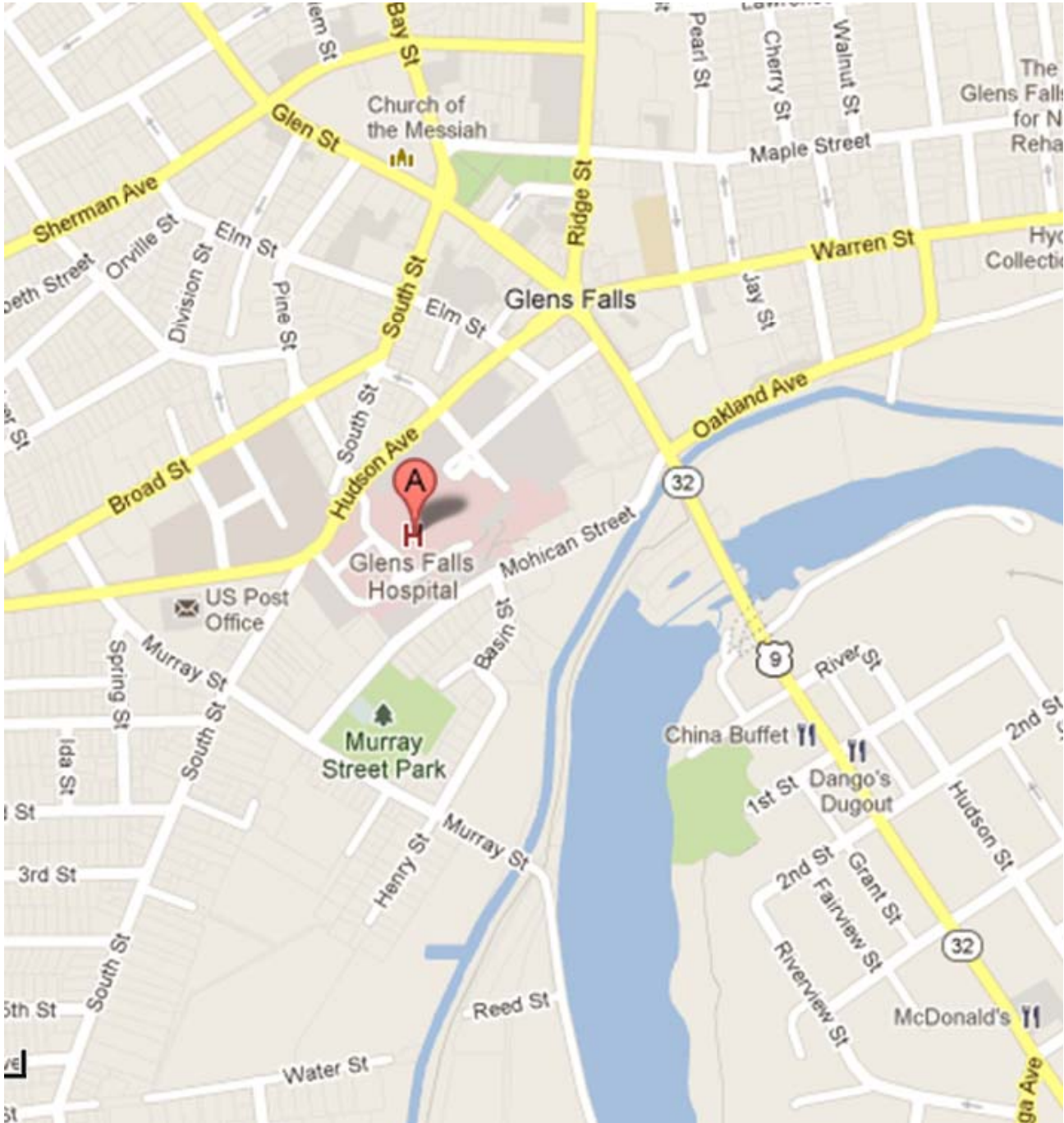
### **7.3.8 Worker Education and Monitoring**

All project personnel will be trained on procedures for handling emergency situations or hazardous conditions during the project. The training requirements for specific site personnel are given in Section 6.2 and are further defined in the project HASP.

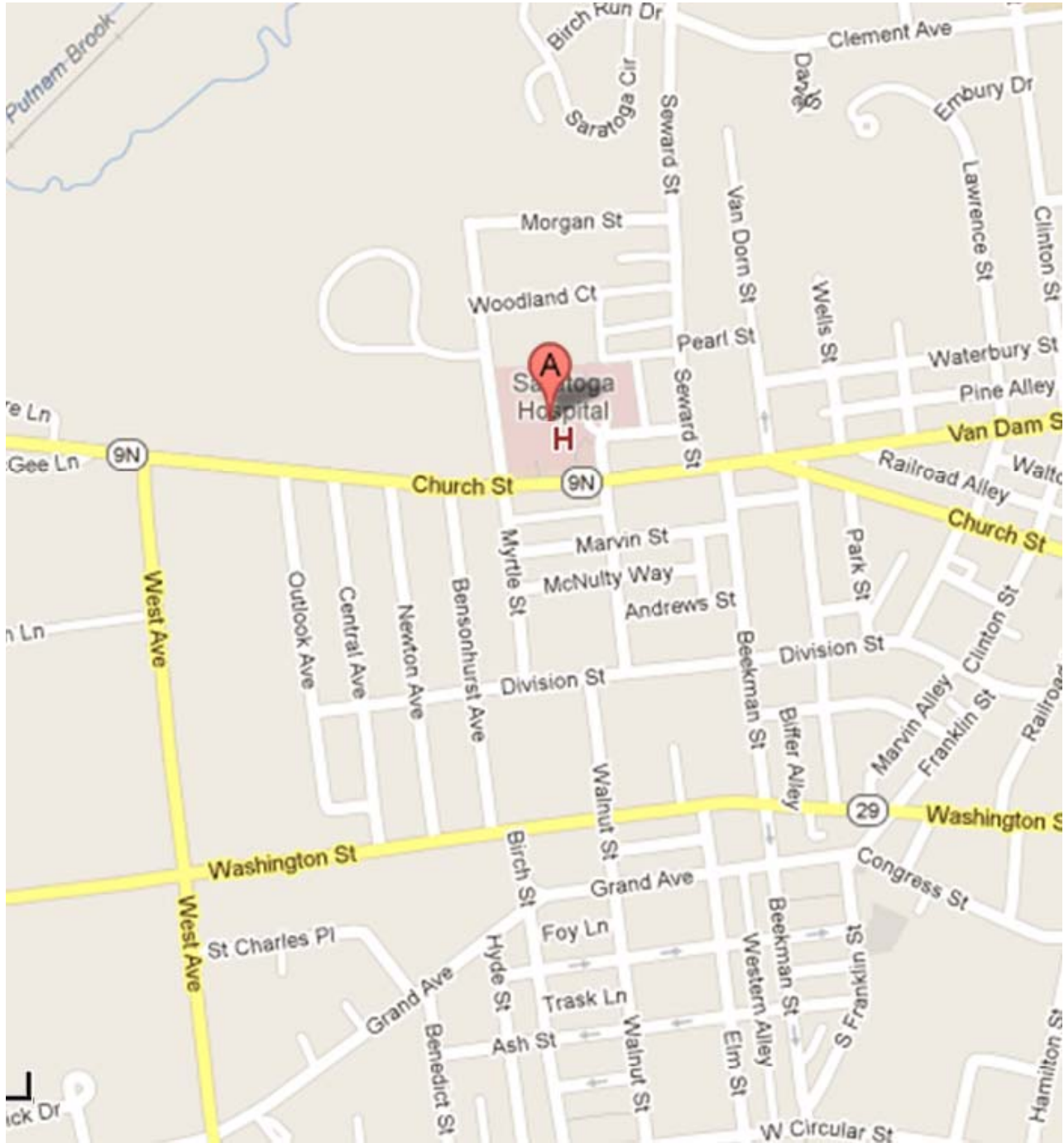
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**FIGURE 7A  
DIRECTIONS TO GLENS FALLS HOSPITAL**

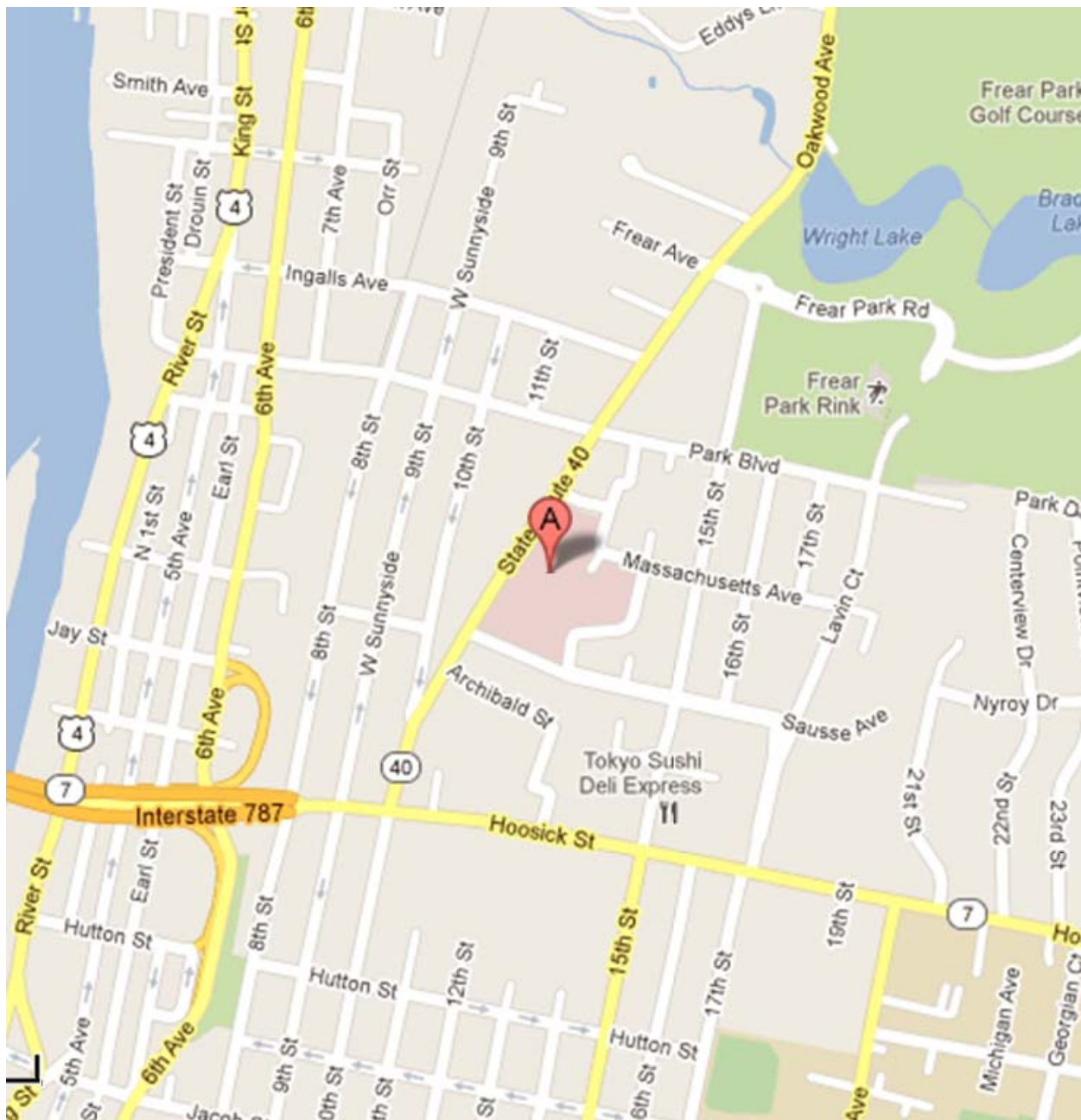
**100 PARK STREET  
GLENS FALLS, NY  
(518) 926-1000**



**FIGURE 7B**  
**DIRECTIONS TO SARATOGA HOSPITAL**  
**211 CHURCH STREET**  
**SARATOGA SPRINGS, NY**  
**(518) 580-2450**



**FIGURE 7C**  
**DIRECTIONS TO ST. MARY'S HOSPITAL**  
**1300 MASSACHUSETTS AVE.**  
**TROY, NY**  
**(518) 268-5000**



### SECTION 8

#### **ACTIONS TO ADDRESS RESUSPENSION PERFORMANCE STANDARD AND OTHER IN-RIVER WATER QUALITY REQUIREMENTS**

The Phase 2 Resuspension Performance Standard and other water quality requirements issued by EPA contain detailed measures designed to control the releases of PCBs and other compounds to the river during dredging. Extensive monitoring of river water will be conducted during dredging to monitor water quality. The water quality monitoring program is described in detail in the Phase 2 RAM QAPP (Anchor QEA, 2012), and the control measures and response actions to be taken during 2015 to implement the Resuspension Performance Standard and the water quality requirements are described in the 2015 PSCP (GE, 2015). This section provides an overview of the water monitoring program for 2015, as well as the response actions to be taken if monitoring indicates the need for such actions.

##### **8.1 RESUSPENSION PERFORMANCE STANDARD OVERVIEW**

The Phase 2 Resuspension Standard, issued as part of the Hudson Phase 2 EPS (EPA, 2010a), has three components:

The first is an Advisory Level for total suspended solids (TSS) concentrations at near-field monitoring stations (located downstream of but relatively near the dredging activities – typically, approximately 300 meters from the further downstream dredging operation). This level is a daily average TSS concentration of 100 milligrams per liter (mg/L) above upstream conditions.

The second component is a Control Level applicable to the net loads (i.e., loads above baseline) of PCBs with three or more chlorine atoms (Tri+ PCBs) at far-field stations (located more than one mile downstream of dredging activities). The Control Level criteria for net Tri+ PCB loads consist of a seasonal or cumulative net load that will be tracked via daily percent release criteria. The cumulative net load criteria for the 2015 dredging season are 2 percent (as monitored at the Lock 5 far-field station in Schuylerville when dredging is being performed in River Section 1 or 2) and 1 percent (as monitored at the Waterford station) of the Tri+ PCB mass removed during the dredging season. These criteria will be applied during the 2015 dredging season through application of daily percent release criteria, which vary from 1 to 3 percent of the daily Tri+ PCB mass removed, depending on the monitoring station location and river flow rate. Attainment of these criteria will be determined based on 7-day averages calculated weekly. These criteria, as well as the procedures for determining whether they are attained, are described in greater detail in the 2015 PSCP and the Phase 2 RAM QAPP.

The third component is a Control Level for water column PCB concentrations. This Control Level is a total PCB concentration of 500 nanograms per liter (ng/L) – the same threshold as the federal drinking water standard – at the far-field monitoring stations. The application of this standard in terms of the response action required in the event of an exceedance varies depending

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on the monitoring station location and the number of days of exceedance, as described in detail in the 2015 PSCP and the Phase 2 RAM QAPP.

### 8.2 WATER QUALITY REQUIREMENTS OVERVIEW

In addition to the Resuspension Performance Standard for PCBs, other water quality requirements have been established for near- and far-field water monitoring stations. These were initially issued by EPA in 2005 (EPA, 2005), with a supplement in 2006 (EPA, 2006), and were slightly modified in Section 6 of the Hudson Phase 2 EPS (EPA, 2010a) and in the Phase 2 RAM Scope and Phase 2 PSCP Scope. At near-field stations, standards have been set for dissolved metals (cadmium, lead, chromium, and mercury), pH, and dissolved oxygen (DO) as follows:

- numerical standards for dissolved metals based on water hardness;
- pH not less than 6.5 or more than 8.5;<sup>4</sup> and
- DO for non-trout waters:
  - minimum daily average not less than 5.0 mg/L
  - not less than 4.0 mg/L at any time.

Standards at far-field stations have been established for total cadmium (5 micrograms per liter [ $\mu\text{g/L}$ ]), total chromium (50  $\mu\text{g/L}$ ), total mercury (0.7  $\mu\text{g/L}$ ), and total lead (15  $\mu\text{g/L}$ ). In addition, the requirements incorporate a trigger level of 10  $\mu\text{g/L}$  total lead for two far-field stations (Lock 5 and Waterford) to protect water supplies and the public.

Monitoring conducted during Phase 1 and Phase 2 Years 1 through 4 indicated that dredging operations did not significantly increase the concentrations of the above-listed metals in the river. Based on this experience and discussions with EPA, metals monitoring in 2015 will be conducted only if dead, dying, or distressed fish are observed. However, other water quality parameters such as pH, DO, temperature, conductivity, and turbidity will be monitored routinely.

In addition to the above, the water quality requirements have been established for discharges of PCBs and other chemicals from the sediment processing facility. In the event of an exceedance of the discharge limitations, an engineering evaluation will be performed and an Engineering Evaluation Report submitted to EPA and NYSDEC. Corrective actions may include additional testing, repairs to equipment, modifications to operations, or, if necessary, temporary cessation of operations.

### 8.3 SUMMARY OF MONITORING PROGRAM (ROUTINE AND CONTINGENCY)

#### 8.3.1 General

Water will be sampled at near-field stations (downstream of and relatively near dredging operations) and far-field stations (more than 1 mile downstream of active dredge areas). The

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<sup>4</sup> For 2014, this standard will be applied to the average pH value over a 4-hour period (during which measurements will be recorded at 15-minute intervals).



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sampling data from these stations will be compared to the applicable criteria specified in the Resuspension Performance Standard and to the other water quality requirements to assess the need for additional action.

### 8.3.2 Near-Field Monitoring

Near-field monitoring locations are associated with individual remedial operations and move as the dredging operation moves. Generally, for each dredging operation, water monitoring will be conducted at a near-field cross-channel transect consisting of up to four floating monitoring buoys downstream of the dredge, as well as at a background buoy upstream of the dredging operations. The near-field monitoring will be conducted daily during all in-river operations, including debris removal, dredging, capping, backfilling, etc. Water samples from these monitoring stations will be routinely analyzed for PCBs, TSS, and total organic carbon (TOC), as well as general water quality parameters (such as DO, pH, temperature, etc.). Further, as noted above, monitoring for metals will be conducted if dead, dying, or distressed fish are observed.

### 8.3.3 Far-field Monitoring

Far-field stations (except for background stations) will be located more than one mile downstream of active dredge areas in 2015 (depending on where the dredging is occurring). These stations will be located at:

- Bakers Falls (background station);
- Rogers Island (also used as a background station to calculate PCB loading originating upstream of dredging);
- Lock 5 (in Schuylerville);
- Waterford;
- Albany; and
- Poughkeepsie.

The Bakers Falls and Rogers Island background stations will be sampled at monthly intervals for PCBs, TSS, and general water quality parameters (e.g., turbidity, DO, pH, temperature). At the Lock 5 station, when used to assess attainment of the applicable criteria, and at the Waterford station, continuous monitoring for water quality parameters will be conducted and daily composite samples will be collected from automated samplers at each station for analysis of PCBs and TSS (as well as general water quality parameters).<sup>5</sup>

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<sup>5</sup> When dredging is being performed in River Section 3 in areas that are less than one mile upstream of the Waterford monitoring station (i.e., in the southern portion of CU 99), the Waterford station will serve as the near-field location and far-field monitoring will be conducted at water quality monitoring buoys located at River Mile 156.4.

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Since it is expected that, during the 2015 dredging season, the Towns of Halfmoon and Waterford will continue to obtain their water supplies from the City of Troy, rather than the Hudson River, special procedures have not been included in the 2015 water quality monitoring program to ensure that those Towns are notified before water containing PCB concentrations over 500 ng/L reach those locations. However, in the event that the public water supplies of either of those Towns use Hudson River water during 2015 dredging, special far-field water sampling procedures will be implemented during such period(s), taking into account the time of water travel, so that, to the maximum extent practicable, results showing total PCB concentrations exceeding 500 ng/L are received before the parcels of water containing such concentrations reach the water supply intakes of the Town(s). This contingency is discussed further in Section 9.3.1 below.

The Lower Hudson River stations (Albany and Poughkeepsie) will be sampled monthly for PCBs, TSS, TOC, and water quality parameters. If the data demonstrate the need for enhanced monitoring, sampling frequency will increase to weekly. Further, if the data from those stations indicate a need for monitoring in the Mohawk River to evaluate contributions from that river, such monitoring will be conducted.

When dredging moves to within one mile of the Waterford far-field station (i.e., in the southern portion of CU 99) the far-field compliance location will move south from the Waterford far-field station to a buoy transect located at river mile 156.4. In addition, the Albany far-field sampling frequency will be increased to weekly.

### 8.3.4 Off-Season Water Column Monitoring

During the year when in-river activities have ceased, water column sampling will be conducted weekly at Thompson Island Lock 5 and Waterford, and monthly at Bakers Falls, Rogers Island, Albany, and Poughkeepsie. Water sampling will also be conducted at the Lock 5 and Waterford automated far-field stations during high flow events.

## 8.4 SUMMARY OF CONTINGENCY ACTIONS FOR RESPONDING TO EXCEEDANCES OF CRITERIA

During the 2015 dredging, the dredging contractor will employ numerous best management practices (BMPs) in an effort to minimize the resuspension of sediments and to meet the Resuspension Performance Standard criteria. These practices are described in the applicable design reports for 2015. In addition, as described in the PSCP, if the monitoring data show exceedances of the criteria in the Resuspension Performance Standard or other water quality requirements, GE will take certain response actions. This section summarizes those response actions.

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### **8.4.1 Exceedances of Resuspension Standard Criteria**

#### **8.4.1.1 Exceedance of TSS Advisory Level**

In the event that the monitoring shows an exceedance of the Advisory Level for TSS concentrations, GE will discuss with EPA whether an evaluation should be conducted to assess the need for operational changes or other response actions. Such an evaluation, if warranted, may include one or more of the following action:

- Closer visual observations of dredging operations, including associated tug and other support vessel movements;
- Discussions with project personnel;
- Review of operations records; and/or
- Additional monitoring and/or sampling.

Following this evaluation (if conducted), GE will further discuss with EPA whether operational changes or other response actions are warranted to address the TSS exceedance. In the event that, based on such discussions, it is determined that operational changes or other response actions are warranted, GE will implement such actions upon EPA approval.

#### **8.4.1.2 Exceedance of Control Level for Tri+ PCB Loads**

If monitoring shows an exceedance of the applicable numerical Tri+ PCB percent release criteria (Control Level) for 14 or more consecutive days at the Lock 5 station (when that station is being used for application of those criteria) or for 21 or more consecutive days at the Waterford station, EPA may require GE to conduct an evaluation of the dredging operations to assess the cause of the exceedance. If investigative measures are warranted to determine the cause of the exceedance, GE will propose such investigative measures to EPA. Investigative measures will depend on specific project circumstances and may include those listed in Section 8.4.1.1.

If the Control Level is exceeded as described above, EPA may require GE to evaluate potential engineering solutions to address the exceedance and to propose the implementation of an engineering solution, which may include slowdown of dredging operations. However, EPA may determine in some cases that no engineering solution is necessary to address the Control Level exceedance. The possible engineering solutions to be considered include the following:

- Adjusting the sequence/schedule of dredging, including dredging areas with a low potential for resuspending sediments (i.e., areas with low PCB concentrations and/or low velocity) at the same time as dredging in areas with high resuspension potential;
- Use of smaller equipment (i.e., equipment with shallower draft and less powerful engines);
- Implementation of contingent oil sheen control measures as needed;
- Restricting river flow in particular areas where practical; and
- Reducing the sediment removal rate (i.e., a slowdown of dredging operations).

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If an engineering evaluation is required by EPA, an Engineering Evaluation Report will be prepared and submitted to EPA that will contain, as appropriate, the results of the engineering evaluation, the proposed engineering solution, and a proposed schedule for implementing the solution.

### **8.4.1.3 Exceedance of Control Level for Total PCB Concentrations**

If monitoring shows an initial occurrence of a total PCB concentration equal to or above 500 ng/L at a far-field station, GE will promptly notify EPA, but no later than 24 hours after receipt of the data. If subsequent sampling confirms an exceedance of that level, GE will again promptly notify EPA, but no later than 24 hours after data receipt.

If the monitoring data show a confirmed exceedance of 500 ng/L PCBs at the Lock 5 station (when that station is being used for application of that criterion) or at the Waterford station, EPA may require GE to conduct an evaluation of the dredging operations to assess the cause of the exceedance. If investigative measures are warranted to determine the cause of the exceedance, GE will propose such investigative measures to EPA. Investigative measures will depend on specific project circumstances and may include those listed in Section 8.4.1.1.

In addition, in the case of such an exceedance of 500 ng/L PCBs, EPA may require GE to evaluate potential engineering solutions to address the exceedance and to propose the implementation of an engineering solution. If the exceedance involves a confirmed exceedance of 500 ng/L TPCBs at the Lock 5 station (when that station is being used for application of the criterion), the engineering solutions to be considered include those listed in Section 8.4.1.2 (excluding a slowdown of dredging operations) and other BMPs that do not require GE to slow down or shut down the dredging operations. If the exceedance involves PCB concentrations exceeding 500 ng/L at the Lock 5 station (when being used for compliance) for five days out of any seven-day period or involves a confirmed exceedance of 500 ng/L TPCBs at the Waterford station, the engineering solutions to be considered include those listed in Section 8.4.1.2 (including a slowdown of dredging operations) and, as a last resort, a temporary shutdown of dredging operations.

If an engineering evaluation is required by EPA, an Engineering Evaluation Report will be prepared and submitted to EPA that will contain, as appropriate, the results of the engineering evaluation, the proposed engineering solution, and a proposed schedule for implementing the solution. In the event that EPA requires a slowdown or shutdown of dredging operations, normal operations will not resume until the total PCB concentration at the monitoring station in question is below 500 ng/L for two consecutive days, unless EPA allows otherwise.

### **8.4.2 Exceedances of Other Water Quality Requirements**

If monitoring conducted shows an exceedance of any of the in-river standards specified in the water quality requirements for non-PCB constituents, GE will provide prompt notification to EPA and NYSDEC (and NYSDOH for a far-field exceedance) no later than three hours (for a near-field exceedance) or 24 hours (for a far-field exceedance) after receipt of the data. An

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investigation will be conducted as to the cause of the exceedance, using methods such as those listed in Section 8.4.1.1. GE will then propose an appropriate response to EPA for approval. Such response may include one or more of the actions listed in Section 8.4.1.2. An Engineering Evaluation Report will be prepared and submitted to EPA that will contain the results of the engineering evaluation, the proposed solution, and a proposed schedule for implementing the solution.

## SECTION 9

### PROTECTION OF WATER SUPPLIES

#### 9.1 SUMMARY

During the planning for Phase 1 and Phase 2 Years 1 through 4, and again in preparation for 2015 dredging, a multi-pronged investigation was conducted by EPA and GE to identify private and public water intakes that withdraw water from the Hudson River downstream of dredging. The ultimate objective of this program is to ensure that water users in the area will be notified, as appropriate, if EPA's Resuspension Performance Standard or other water quality requirements, as described in Section 8, are not achieved, or will have other measures in place to protect their water supplies.

For public water supplies, EPA has identified contingency measures for the Town of Halfmoon and Town of Waterford water supplies, as well as for the Village and Town of Stillwater and Village of Green Island. These measures are described below.

For private water supplies, EPA initiated an investigation program by mailing a survey to owners of properties along the shoreline in Washington, Saratoga, and Rensselaer counties to request information about shoreline infrastructure and historical water usage. Concurrently, GE undertook a comprehensive data collection effort during which NYSCC and NYSDOT records were collected and reviewed to identify additional shoreline infrastructure in the project area. A literature review of engineering records and detailed drawings also was conducted from sources such as NYSCC, local towns, villages, NYSDEC and NYSDOT. GE conducted a review of shoreline parcels during a subsequent existing conditions survey to field verify document research results and potentially identify additional intakes. Finally, direct outreach was made via phone and/or mail to shoreline property owners in an attempt to identify additional Hudson River water users and confirm research and observations.

#### 9.2 KNOWN WATER INTAKES

The results of the survey and outreach efforts have identified a number of Hudson River water users. The types of water use on private property include: use as a source of drinking water (with treatment); indoor household purposes other than as a source of drinking water; irrigating yards and gardens; agricultural uses (crops, watering livestock); and filling swimming pools. In addition to these private water intakes, a few commercial water intakes have been identified. Two municipal water supply intakes (the Towns of Waterford and Halfmoon) are located downstream of the 2015 dredging within the Upper Hudson River. In addition, EPA identified wells within the Village of Stillwater well field that may be influenced by upper river water, even though that Village does not draw water directly from intakes in the river. A list of the private, commercial and municipal water intakes identified in the river from Fort Edward to Troy is maintained by GE and periodically reviewed with EPA.

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### **9.3 METHODS TO ADDRESS SPECIFIC TYPES OF WATER INTAKES**

#### **9.3.1 Public Water Supplies**

In the vicinity of the project area, the only communities with water intakes that could draw water directly from the upper Hudson River as a source for municipally provided water are the Towns of Halfmoon and Waterford, both located in Saratoga County. Both communities are located downstream of the majority of 2015 dredge areas. A small amount of additional dredging is planned in portions of CU 99 which are located downstream of the Halfmoon and Waterford intakes.

The Town of Halfmoon's municipal water intake is located in the Lock 1 channel on the river's western shore at RM 159. Halfmoon's treatment facility, brought online in 2003, serves approximately 3,500 properties in the Town of Halfmoon. The system's average daily consumption is 1.5 MGD, with a peak usage of 3.0 MGD. The facility's capacity was increased to 7.0 MGD under an expansion project in 2007.

The Town of Waterford's municipal water intake is located on the river's western shore at RM 157. Waterford's treatment facility serves approximately 17,000 people, and the system's average daily consumption is 1.7 MGD, with a peak usage of 3.0 MGD.

Both Halfmoon and Waterford water treatment plants treat and monitor their water supplies according to federal and state water quality regulations. As reported by plant personnel at each facility, when drawing Hudson water, that water is periodically sampled at intakes and outlets for a wide variety of parameters, including minerals, metals, turbidity (cloudiness), pH, organic chemicals, pesticides, PCBs, and microbial pathogens.

The contingency selected by EPA for the Towns of Waterford and Halfmoon is an alternative water supply connection to the water supply of the City of Troy, New York. Prior to the start of Phase 1 dredging, EPA (with federal and GE funding) constructed the water supply lines and associated facilities to convey water from the City of Troy to those Towns' water supply systems, and EPA (again with contributions from GE) will pay the Towns' increased costs of purchasing water from Troy during the 2015 dredging season if certain criteria established by EPA are triggered. The Towns obtained their water from the City of Troy water supply throughout the 2011, 2012, 2013, and 2014 dredging seasons, and it is expected that they will continue to receive water from Troy throughout the 2015 dredging season.

In the unlikely event that either of these Towns is unable to obtain water supplies from the City of Troy and reverts to using Hudson River water for any period of time during 2015 dredging, procedures will be instituted during such period for conducting sampling over a shorter time frame (e.g., 12-hour samples) at the far-field stations in the Upper Hudson where appropriate based on estimated time of travel given river flow rates, so that, to the maximum extent practicable, results showing total PCB concentrations exceeding 500 ng/L from such stations would be received before the parcels of water containing such concentrations reach the water supply intakes of the Town(s). In such cases, GE will notify EPA, NYSDEC, NYSDOH,

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and the downstream water supplier(s) (i.e., Halfmoon and/or Waterford) of those results as soon as practical after the results are received, but no later than three hours after receipt of such results. Further, during any period when either Town is using Hudson River water for its water supply, EPA may require GE to temporarily slow down or shut down dredging operations based on a single exceedance (or multiple exceedances) of 500 ng/L at the Lock 5 or Waterford far-field station. Unless EPA allows otherwise, the slowdown or shutdown would continue until total PCB concentrations return below a level of 500 ng/L for two consecutive days or until both Halfmoon and Waterford are once again obtaining water from Troy.

In addition to these municipal water intakes that draw water directly from the Hudson River, the Village of Stillwater previously used groundwater from a well field near the Hudson River for its municipal water supply. Water from the well field serviced the Village of Stillwater and portions of the Town of Stillwater. PCBs were detected in that groundwater at levels below the drinking water standard of 500 ng/L. EPA and the NYSDOH concluded that Stillwater's aquifer is under the influence of the Hudson River, and that contingency measures were needed to protect Stillwater's water supply from increased PCB levels that might result from dredging operations. EPA installed and operated a granulated activated carbon (GAC) system as a contingency measure for Phase 1. The GAC system operated continuously following installation, including during non-dredging periods, until an alternate water supply connection from the Saratoga County Water Authority to the Village of Stillwater could be constructed and put into operation. That water supply connection became operational in the spring of 2012 and will remain operational throughout the 2015 dredging season.<sup>6</sup>

Raw and finished water has also been tested in the water supplies of other municipalities that draw water from the Hudson River or from well fields located near the river, including Schuylerville, Green Island, Rhinebeck, Port Ewen, and Poughkeepsie. EPA has determined that for public water suppliers other than the Towns of Waterford and Halfmoon and the Village of Stillwater, the only contingency measures to be implemented by GE are those described in Sections 2.4, 2.5, 3.3 and 3.4 of the 2015 PSCP.

### 9.3.2 Non-Municipal Water Intakes

The households with intakes that are being used to provide river water in the home for drinking or other household use will be offered bottled water delivery service and/or bulk potable water delivery, as was done during project river activities in 2009, 2011, 2012, 2013, and 2014. No commercial agricultural users were identified using river water for watering livestock. For households where river water is reportedly being used for various outdoor activities (e.g., filling a swimming pool, watering lawns or gardens) or commercial agricultural users where river water is being used for crop irrigation, GE will inform these water users when project activities upstream of their intakes are scheduled to begin, and it will coordinate with NYSDOH to inform

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<sup>6</sup> GE is continuing to discuss with EPA issues concerning the cost of the design and construction of this system.



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these property owners of NYSDOH's recommendations regarding this reported use during implementation of the dredging project. River monitoring data will be made available to these users through EPA's monitoring data website ([www.hudsondredgingdata.com](http://www.hudsondredgingdata.com)).

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## SECTION 10

### COMMUNITY EDUCATION AND NOTIFICATION PROGRAM AND COMPLAINT MANAGEMENT PROGRAM

#### 10.1 COMMUNITY EDUCATION AND NOTIFICATION PROGRAM

The goals of the Community Education and Notification Program (CENP) are to (1) provide timely and understandable project information to the public; (2) make project information easily accessible by the public; and (3) quickly disseminate information about project emergencies to the public so they can avoid needless interaction with emergency responders. Elected officials, local residents, and the public participated in the development of the CENP.

Non-emergency project information will be disseminated to the interested public via the CENP. This includes information on where and when dredging is occurring, in-river traffic patterns for loaded barges, safety and security information for non-project vessels, and monitoring results for QoLPS parameters. This information will be made available to the public in a timely manner. Information will be updated frequently to reflect current conditions.

The following activities will be undertaken by GE and its contractors and are in addition to the activities that may be conducted by New York State or EPA.

##### 10.1.1 Methods of Disseminating Information

A number of communication methods will be used to provide project information to the public.

###### 10.1.1.1 Progress Reports

Progress reports on the Hudson dredging project will be issued periodically during dredging activities and processing of dredged sediments at the processing facility. These progress reports may contain the following:

- Prior work activities;
- Future work activities;
- Upcoming project-related meetings, if any;
- Estimates of monthly production statistics (e.g., number of cubic yards of sediment removed); gallons of water treated at processing facility; quantity of processed dredged material shipped for off-site disposal, etc.); and
- A summary of the results of the monitoring program addressing EPA's Performance Standards.

Progress Reports will be developed in a template format to facilitate public use. They will be mailed to the project mailing list, will be made available to the public at EPA's Hudson River Field Office and at lock stations in the vicinity of project activities, and will be posted on a project Web site.

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### **10.1.1.2 Project Web Site ([www.hudsondredging.com](http://www.hudsondredging.com))**

Information about the status of the project will be available via the Internet on the project Web site. This Web site provides access to key technical documents, Progress Reports, project updates, and the project schedule.

The Web site will provide references to additional sources of specific information for the project. Information will be posted about upcoming public meetings, EPA events, and announcements related to the project. In addition, answers will be provided to Frequently Asked Questions, and contact information for key project personnel, as well as EPA representatives, will be provided.

The Web site will be updated and enhanced regularly so that the public can easily access accurate and timely information.

Links will be provided for the public to ask questions of the project team, report a problem, or register a complaint (see Section 10.2.1). Links will also be provided to important project information posted on other sites.

Access to the project Web site will be available through personal computers, as well as computers at libraries throughout the local area.

### **10.1.1.3 Toll-Free Hotline (518-792-4087 and 1-888-596-3655)**

A toll-free hotline has been established to provide the public with access to project information and enable the public to ask questions or register complaints whenever project activities are being conducted. This toll-free number will be activated and staffed when project activities are being performed. The availability of the hotline will be reiterated in all project announcements, Progress Reports, and emails and will be clearly presented on the project Web site.

### **10.1.1.4 Mailing List**

Recognizing that some individuals do not have access to or do not use the Internet, the project team will also mail communications to interested members of the public. The names and addresses on the project mailing list will not be available to the public, nor will it be used to disseminate non-project information.

### **10.1.1.5 Email ([info@hudsondredging.com](mailto:info@hudsondredging.com))**

Email provides an opportunity for quick and direct communication. The public will be able to communicate with the Hudson project team via email. A link to this email address will be provided on the project Web site. The project team will respond to emails communicating questions or seeking project information. Emails reporting an emergency or complaint will be managed as part of the CMP (see Section 10.2).

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### **10.1.1.6 Public Meetings**

As requested by EPA, the project team will participate in project-related public meetings, including meetings of EPA's Community Advisory Group, to explain project activities. Copies of any Progress Reports, project updates, notifications or Notices to Mariners will be distributed at public meetings, as appropriate.

### **10.1.1.7 Notices to Mariners**

Public awareness of the activities in the river will promote public safety and ensure that project activities proceed efficiently and without interruption. Notices will be placed at locks, marinas, and public boat launch sites, and distributed to interested commercial and recreational user groups. Notices will also be broadcast on appropriate marine frequencies during in-river activities.

Notices will alert boaters of construction activities, and advise them to maintain a safe distance and a no-wake zone in the areas of construction. An anticipated schedule of upcoming work activities will be provided before project activities begin and during in-river work. Modifications to the schedule will be announced as well.

GE will work with the NYSCC, USCG and others (e.g., New York State Tourism Office, media outlets and Web sites dedicated to mariners' interests and/or NYSCC issues) in advising boaters of project activities. GE will encourage the NYSCC and USCG to post any Notices to Mariners about project activities that GE issues on their Web sites and GE will post a link to NYSCC's Notice to Mariners on its project Web site.

### **10.1.1.8 Notice to Shoreline Property Owners**

Prior to the commencement of in-river work activities in a particular area, GE will attempt to contact nearby shoreline property owners to explain project activities and provides a schedule of and estimated duration for anticipated work activities in the vicinity of that location.

### **10.1.1.9 Designated Community Liaison**

GE will designate a community liaison who will assist the public in receiving project information. This community liaison will be available during work activities to answer questions or address concerns. This project representative will coordinate public outreach activities with EPA's Community Involvement Coordinator and will also attend project-related meetings, as requested by EPA, to inform the public of project activities.

### **10.1.2 Community Notification of Emergency Situations**

In the event of a project emergency requiring a call to 911 or a local emergency response station, information may be posted on the project Web site to keep the public adequately informed. Notification to public water suppliers and private water users will be handled separately according to the procedures in Section 9.3.

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### **10.2 COMPLAINT MANAGEMENT PROGRAM**

A CMP has been developed to manage all project-related complaints, including those associated with air quality, odor, noise, lighting, navigation, and water quality. The goals of the CMP are to (1) enable the public to register project-related complaints during work activities, and (2) provide complainants with timely and accurate notification of efforts to address the subject of their complaints.

The CMP will be activated and fully operational during work (i.e., dredging and processing facility operations).

#### **10.2.1 Methods for Registering a Complaint**

A number of communications tools may be used by the public to register complaints.

##### **10.2.1.1 Toll-free Hotline (518-792-4087 and 1-888-596-3655)**

The same toll-free hotline established to provide the public with project information will be used to support the CMP. This toll-free number will be activated and continuously staffed during project activities. The availability of the hotline will be reiterated in all project announcements, Progress Reports, and emails and will be clearly presented on the project Web site.

##### **10.2.1.2 Email ([info@hudsondredging.com](mailto:info@hudsondredging.com))**

The public will be able to register complaints via email. A link to this email address will be provided on the project Web site.

##### **10.2.1.3 Mail (P.O. Box 285, Fort Edward, NY 12828)**

Although not the most timely method for registering complaints, the public will be provided with a mailing address for the project team. This mailing address will be provided on the project Web site and will be reiterated in all project announcements, Progress Reports, and emails.

#### **10.2.2 Types of Complaint Communications**

The public is encouraged to use the toll-free project telephone line for a number of reasons, including to request information and/or ask questions, and to register complaints.

##### **10.2.2.1 Inquiries and Requests for Information**

An inquiry is a public request for project information where corrective action is not requested. When inquiries are received by phone, email or mail, the communication will be documented in a log noting the time received, subject of the inquiry, the name of the individual submitting the inquiry, and any follow up required (e.g., if any agencies need to be involved).

It is expected that most phone inquiries will be fully addressed during the initial communication (i.e., question will be answered or requested information will be sent to individual making request). Mail and email inquiries will be answered within 24 hours of initial receipt. No regulatory notification or follow-up will be required for inquiries.

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### 10.2.2.2 Emergencies

The public may report an emergency via the project telephone line, but are encouraged to first call 911. Regardless of the time of day an emergency communication is received, or whether the emergency is in fact project-related, the caller will be asked to immediately call 911. A call will then be placed to personnel at the processing facility or on project vessels, as appropriate, to inform the project team of the reported emergency. If the emergency is project-related, GE will implement the emergency response plan, as described in Section 7 of this document.

### 10.2.2.3 Complaints

A complaint is a communication requesting that corrective action be taken regarding some aspect of the project, including those associated with a quality-of-life issue (i.e., air quality, odor, noise, lighting, or navigation) or relating to water quality.

#### *Management of Complaints*

Complaints will be recorded in a log noting the time the complaint was received, the subject of the complaint, the name of the person registering the complaint, and complainant's contact information.

Once a complaint is received, the project team will notify EPA that a complaint has been lodged and conduct an investigation to determine whether the subject of the complaint is project-related.

If the subject of the complaint is project-related and EPA has established numerical standards or control levels for the particular subject of the complaint (i.e., PCB concentrations in air, opacity, H<sub>2</sub>S concentrations in air, noise, lighting, navigation, surface water concentrations of constituents addressed by the Resuspension Performance Standard or other water quality requirements), GE will conduct monitoring and take the other actions specified for such complaints in Section 4.2.7, 4.3.5, 4.4.6, 4.5.5, or 4.6.5, or (where there is an exceedance of a criterion in the Resuspension Standard or other water quality requirements) in Section 8.4. A flow diagram describing the process for responding to complaints is presented as Figure 10-1.

If the complaint is project-related but pertains to a subject for which EPA has not established numerical standards, the following actions will be taken:

- If the complaint relates to an odor that is not identified as H<sub>2</sub>S, the actions specified for such complaints in Section 4.3.5 will be followed.
- If the complaint relates to water quality impacts not addressed by the Resuspension Performance Standard or water quality requirements, or to other matters, GE will evaluate the complaint and the need for and type of mitigation measures, coordinate with EPA as appropriate, and if both EPA and GE agree that mitigation measures are warranted, implement such measures.

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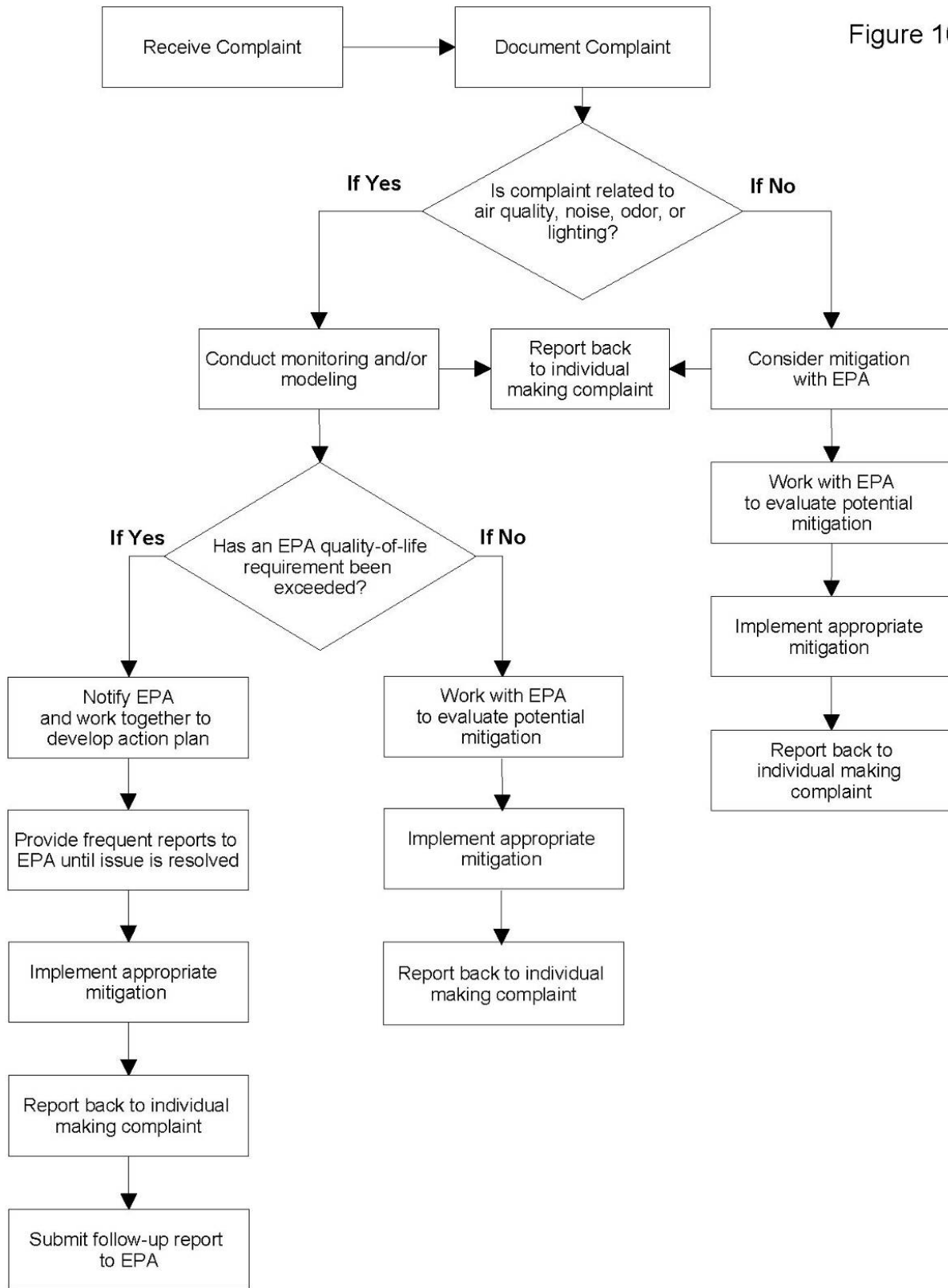
### *Reporting of Complaints*

If a complaint is critical (i.e., the individual registering the complaint is claiming a severe impact), GE will inform the complainant within 24 hours, no matter when the initial complaint was received, of efforts to address the complaint. If the complaint is not critical (i.e., the individual registering the complaint is not claiming a severe impact), GE will inform the complainant within 48 hours (or 72 hours if complaint is received over the weekend) of efforts to address the complaint.

Once GE has completed an investigation into the complaint – i.e., the complaint has been evaluated, monitoring and/or modeling (if necessary) has been conducted, mitigation measures have been implemented (if warranted), etc. – GE will communicate with the complainant to report the conclusions of the investigation and any actions taken.

GE will notify EPA when a complaint is received. A verbal summary of complaints received, related communications and response actions, if any, will be provided by GE to EPA at the weekly progress meeting. A written summary of complaints received, related communications, and response actions, if any, will be provided to EPA in the monthly progress reports on work at the site.

# Process for Responding to Complaints





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## SECTION 11

### REFERENCES

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- ARCADIS. 2014b. *Phase 2 Final Design Report for Reach 7(the Landlocked Area), Hudson River PCBs Superfund Site*. Revised June.
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- United States Environmental Protection Agency. 2006. September 14, 2006 letter from EPA to GE regarding Substantive Requirements for Type II Storm Water Discharges to Bond Creek.
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- United States Environmental Protection Agency. 2010b. Technical Memorandum: *Quality of Life Performance Standards – Phase 2 Changes*. Submitted to EPA by Ecology and Environment, Inc. December 13.
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- United States Environmental Protection Agency and General Electric Company. 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 on October 6, 2005 and entered by court on November 2, 2006.

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## ATTACHMENTS

# 2015 Community Health and Safety Plan

## ATTACHMENT 1

### CONSTRUCTION MANAGER CONTACT INFORMATION

Project Personnel	Name/Contact	Telephone Numbers
Project Construction Manager	Aric Barto	518-476-5298 (office) 210-241-4379 (cell)
Project Safety Manager	Lisa Rygiel	518-695-3832 (office) 518-470-7067 (cell)
Processing Facility Site Manager	Everett Jones	518-858-1834
Dredging Operations Safety Representative	Joe Montinieri	518-361-7597
River Operations Manager	Carl Jakob	518-705-3145
Processing Safety Representative	Rob Giordano	518-361-7904
Contractor PM/Safety Representatives:	<b>K30 –Processing Facility Operations</b> Sid Archinal – Project Director John Waechter - PM	609-760-6919 518-378-3679
	Erik Creagh - SSO	803-542-2331 (cell) 518-746-2605 (office)
	<b>K42A– Dredging Operations</b> Frank Belesimo PM Paul DiFrenna	504-259-5390 781-382-5577
	<b>K60 - Rail Yard Operations</b> Steve Fisk PM Ken Saville SSO	518-469-4145 724-584-8671
	<b>Arcadis</b> Charles Guest, PE – PM Doug Weeks – SSO	518-250-7377 518-250-7378
	<b>Anchor QEA, LLC</b> Mark LaRue – PM Kevin Ballou – SSO	315-453-9009 518-792-3709

Notes

CSP = Certified Safety Professional

PM = Project Manager

SSO = Site Safety Officer

# 2015 Community Health and Safety Plan

## ATTACHMENT 2

### PROJECT EMERGENCY EQUIPMENT

Equipment Description <sup>1</sup>	Category	Location
First aid kit	Basic life support	Office trailers, vehicles, marine vessels
Oxygen kit	Basic life support	Office trailers
Automatic External Defibrillator	Advanced life support	Office trailers
SCBA	Confined space entry rescue	Office trailers
Eyewash and safety shower	Basic life support	Process areas
Tripod and extraction equipment	Confined space entry rescue	Storage trailer
Two-way radios	Communication	All site safety personnel, project managers, key line supervisors
Project Vehicle	Transportation of injured personnel from limited access areas	Work area
Life ring and 100-ft rope	Fall into water rescue	Wharf, marine vessels, support marina, others as appropriate
Flare gun and flares	Emergency Communications	Marine vessels
Aerial lift	Fall from elevation	Work area
Air horns/Bull horns	Evacuation signal/Vessel warnings	Various work locations, marine vessels, project vehicles
Support boat <sup>2</sup>	Capsized or sinking vessel	Wharf/Dredging operations
Backboard/basket	Basic life support transport injured personnel	Storage trailer
Blankets	Basic life support	Storage trailer
Fire extinguishers	Firefighting	Various work locations, office trailers, marine vessels, project vehicles
Helicopter landing area	Advanced life support	NW corner of processing facility
Oil/multi-purpose absorbent materials	Spill response	Storage trailer, vessels, project vehicles
Polybags	Spill response	Storage trailer
Brooms	Spill response	Storage trailer
Shovels	Spill response	Storage trailer
Drums	Spill response	Storage trailer
Transfer pumps	Spill response	Storage trailer
Floating/containment booms	Spill response	Storage trailer
Washing supplies (soap, brushes)	Decontamination	Decontamination stations

**Footnotes:** 1 = all equipment will be inspected as required and according to the project HASP.

2 = each support boat will additionally meet the requirements of the USCG regarding emergency supplies (*i.e.* fire extinguisher, first aid, paddles, flares, navigational lighting, horn, etc.) and flotation devices, as per the vessel classification.

# 2015 Community Health and Safety Plan

## ATTACHMENT 3

### EMERGENCY CONTACT INFORMATION

<b>Emergency Contact</b>	<b>Contact Name</b>	<b>Emergency No.</b>	<b>Alternate No.</b>
John H. Ahearn Jr. Rescue Squad	N/A	911	518-664-8119 Squad
Arvin Hart Fire Department	Chief Jamie Herrick	911	518-664-6711 Station
Canadian Pacific Railway Police Communication Ctr.	N/A	800-716-9132 Dial 1	518-383-7200 Press (1) for Railway Police
Cohoes Fire Department	Chief Joseph Fahd	911	518-237-1241 Office/Station 518-237-1472 Direct
Cohoes Police Department	Chief William Heslin, Sr.	911	518-237-5333 Station
David Nevins Fire Company	Chief Larry Wolcott	911	518-695-6623 Station
Easton Volunteer Fire Department	N/A	911	518-692-7049 Station
Easton/Greenwich Rescue Squad	N/A	911	518-507-6507 Station
Ft. Edward Police Department	Chief of Police Justin Derway	911	518-747-6365 Station
Ft. Edward Rescue Squad	Captain Matt Benson	911	518-747-6198 Squad
Ft. Edward Fire Department	Chief Matt Hurlburt	911	518-747-5127 Station 518-796-6735 Cell 518-747-0873 Home
Gansevoort Fire Department	Chief Kurt Haas	911	518-792-4396 Squad 518-683-5111 Cell
General Schuyler EMS	N/A	911	518-871-1819 Station
Greenwich Fire Department	Chief Dean Watkins	911	518-692-9002 Station 518-692-9809 Home
Halfmoon Fire Department	Chief Jeremy Connors	911	518-371-7571 ext. 21 Station
Hemstreet Park Fire Department	Chief Bryan Lawless	911	518-664-1681 Station
Hillcrest Fire Department	Chief Jim Hopeck	911	518-664-3434 Station 518-496-5454 Cell 518-664-8405 Home

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Emergency Contact	Contact Name	Emergency No.	Alternate No.
Hoosic Valley Volunteer Fire Company #1	N/A	911	518-753-4664 Station
Kingsbury Volunteer Hose Company 1	Chief James Brunnelle	911	518- 955-0377 Cell 518-747-4990 Fire House
Mechanicville Fire Department	Chief Jeff Alonzo	911	518-664-6121 Station
Mechanicville Police Department	Chief Joseph Waldron	911	518-664-7383 Station
Melrose Fire Department	Chief Dominic Pasinella	911	518-235-9860 Station
Middle Falls Fire Department	N/A	911	518-692-2830 Station
Moreau Emergency Squad	Chief Andre Delvaux	911	518-793-3011 Station 518-791-2306 Cell
National Response Center and Terrorist Hotline	N/A	800-424-8802	N/A
New York State Canal Corporation	Canal Corporation/Thruway Dispatcher	N/A	518-436-2822 or 800-635-8556 This would be the only emergency phone.
New York State Department of Environmental Conservation	Hudson River Project Manager, Kevin Farrar	N/A	518-402-9778 Office 518-810-6838 Cell
New York State Department of Environmental Conservation	William Daigle, Hudson River Unit, Division of Environmental Remediation	N/A	518-402-9770
New York State Department of Health (Glens Falls)	Anita Gabalski, Director	N/A	518-793-3893
New York State Department of Health (Albany)	Bridget Boyd, Project Manager	N/A	518-402-7860 866-881-2809 After hours
New York State Police	Troop "G" Headquarters	N/A	518-783-3211 Office 518-477-9333 Emergency Dispatch

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Emergency Contact	Contact Name	Emergency No.	Alternate No.
New York State Police	Troop "T" Headquarters	N/A	518-436-2825 Local 518-433-4924 Dispatch 800-842-2233 Emergency Dispatch
New York State Spill Response Program	Janet Crawford, Coordinator Spill Hotline 24 hour	N/A	800-457-7362
Northside Fire District/FB Peck Hose Company	Chief Dan Sheffer	911	518-235-4609 Station
Poison Control Center	N/A	800-222-1222	N/A
Quaker Springs Fire Department	Chief Don Ormsby Jr.	911	518-584-3349 Station
Rensselaer County Department of Public Safety	Director Kelly Paslow	N/A	518-266-7676 Office
Rensselaer County Sheriff	Sheriff Jack Mahar	911	518-266-1900 Station
Saratoga County HAZMAT	Mike Aufiero	911	518-885-2232 Office 518-885-5415 Home
Saratoga County Office of Emergency Services	Ed Tremblay, Fire Coordinator	N/A	518-885-2232 Station 518-885-6761 Dispatch
Saratoga County Sheriff	Sheriff Michael Zurlo	911	518-885-2450 24-hour 518-885-6761 Dept
Schuylerville Fire Department (Schuyler Hose Company)	Chief Brian Myers	911	518-695-3298 Station 518-695-6821 Emergency only
South Glen Falls Fire Company	Chief Keith Dickinson	911	518-792-1674 Station 1 518-798-4020 Station 2 518-361-2656 Cell
South Glens Falls Police	Chief Kevin Judd	911	518-792-6336 Station 518-792-4173 Dispatch
Stillwater Fire Department	Chief Tony Conti	911	518-664-3617 Station
Stillwater Police Department	Chief Dennis Latham	911	518-664-4611 ext. 214 Station
Stillwater Rescue Squad	N/A	911	518-664-8012 Station
Tri-State Emergency Team	Chief Ed Kelly	911	518-237-6744 Station



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<b>Emergency Contact</b>	<b>Contact Name</b>	<b>Emergency No.</b>	<b>Alternate No.</b>
Troy Fire Department	Chief Thomas O. Garrett	911	518-270-4471 Station
Troy Police Department	Chief John Tedesco Asst. Chief Van Bramer	911	518-270-4421 Station 518-270-4780
U.S. Coast Guard (Station Burlington, VT)	N/A	911	802-864-6791 Emergency 802-951-6792 Station
U.S. Environmental Protection Agency	Field Office Director, Gary Klawinski	N/A	518-747-4389 Office 518-514-8571 Cell
Warren County Sheriff	Nathan “Bud” York, Sheriff	911	518-743-2500 Office
Washington County Department of Public Safety	Director, William Cook	911	518-747-7520 Office 518-796-1749 Cell
Washington County Department of Public Safety	Deputy Director of Emergency Management, Jonathan Pease	911	518-747-7520 Office 518-338-8567 Cell
Washington County Sheriff	Sheriff Jeff Murphy	911	518-746-2475 Station
Waterford Fire Department	Chief Jason Rocque	911	518-664-6414 Station
Waterford Fire Department	Chief Don Baldwin	911	518-237-3660 Station 518-852-2273 Dept. 518-235-8282 Village
Waterford Rescue Squad	N/A	911	518-237-2473 Squad

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## ATTACHMENT 4

### EMERGENCY PROCEDURES

Category of Incident	Criteria	Response Procedure
Minor medical injury	Abrasions, lacerations, eye irritation, etc.	Initiate a “Priority 2” with two-way radio
Trauma (without exposure)	Fractures, open wounds, fall from elevation	Initiate a “Priority 1” with two-way radio
Trauma (with exposure)	Fractures, open wounds, fall from elevation	Initiate a “Priority 1” with two-way radio and decontaminate injured individual (if applicable)
Life threatening (without exposure)	Unconscious, severe bleeding, not breathing, chest pains	Initiate a “Priority 1” with two-way radio
Life threatening (with exposure)	Unconscious, severe bleeding, not breathing, chest pains	Initiate a “Priority 1” with two-way radio and decontaminate injured individual (if applicable)
Chemical release	Visible plume or exposure causing eye or throat irritation	Activate evacuation signal and initiate a “Priority 1” with two-way radio
Fire	Incipient stage (controllable)	Use fire extinguisher and initiate a “Priority 1” with two-way radio if fire cannot be immediately extinguished
Fire	Uncontrollable	Activate evacuation signal and initiate a “Priority 1” with two-way radio
Liquid spill	< 5 gallons (w/in containment)	Initiate a “Priority 3” with two-way radio
Liquid spill	> 5 gallons (w/in containment)	Initiate a “Priority 3” with two-way radio and contact regulatory agencies
Liquid spill	Any amount to the ground or water	Initiate a “Priority 3” with two-way radio and contact regulatory agencies
Rail car derailment	Rail car remains upright	Initiate a “Priority 1” and “Priority 5” with two-way radio
Rail car derailment	Rail car overturns	Initiate a “Priority 1” and “Priority 5” with two-way radio and contact regulatory agencies
Sinking/capsized vessel	Vessel sinking or capsized	Initiate a “Priority 1” with two-way radio

#### Footnotes:

1 = If the injured individual cannot be decontaminated due to the possibility of causing further injury, then the necessary PPE and supplies will be provided to emergency response personnel to protect them and their equipment.

#### Definitions:

Priority 1 = call “911”, external response required

Priority 2 = internal response with first aid supplies to provide basic life support

Priority 3 = internal response with spill supplies

Priority 4 = internal response with support boat/marine vessel

Priority 5 = call Canadian Pacific Railway

Evacuation signal = one long blast with air horn