PHASE 2 REMEDIAL ACTION COMMUNITY HEALTH AND SAFETY PLAN FOR 2011

Appendix F

to

Remedial Action Work Plan for Phase 2 Dredging and Facility Operations in 2011

HUDSON RIVER PCBs SUPERFUND SITE

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ABBREVIATIONS AND ACRONYMS

µg/L	micrograms per liter
µg/m^3	micrograms per cubic meter
BMP	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
CHST	Construction Health and Safety Technician
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_2S	hydrogen sulfide
HASP	Health and Safety Plan
HAZWOPER	40-hour Hazardous Waste Operations
JSA	job safety analysis
MGD	million gallons per day
mg/L	milligram per liter
MPA	mass per unit area

ABBREVIATIONS AND ACRONYMS (CONTINUED

NAAQS	National Ambient Air Quality Standards
ng/L	nanogram per liter
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_3	ozone
OPA	Oil Pollution Act
OSHA	Occupational Safety and Health Administration
OSHT	Occupational Safety and Health Technician
PA systems	public address systems
PCBs	polychlorinated biphenyls
PFD	Personal Floatation Device
RAM QAPP	Remedial Action Monitoring Quality Assurance Project Plan
PM_{10}	particulate matter smaller than 10 microns in diameter
$PM_{2.5}$	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
RM	river mile
ROD	Record of Decision
RQ	reportable quantity
SCBA	self-contained breathing apparatus
SO_2	sulfur dioxide
SPCC	Spill Prevention, Control & Countermeasure
SWPPP	Stormwater Pollution Prevention Plan

ABBREVIATIONS AND ACRONYMS (CONTINUED

TIP	Thompson Island Pool
TOC	total organic carbon
TSS	total suspended solids
USCG	United States Coast Guard
VHF	very high frequency
WQ	water quality

SECTION 1

INTRODUCTION

General Electric Company (GE) has developed this Phase 2 Remedial Action Community Health and Safety Plan for 2011 (2011 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 first year of Phase 2 of the Hudson River dredging project – 2011.

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 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. GE submitted an initial version of the RAWP for Phase 2 Dredging and Facility Operations in 2011 (2011 RAWP), along with several appendices, on February 15, 2011. That RAWP and its appendices have been revised to incorporate input from the selected contractors, information presented in subsequently submitted deliverables, and changes based on comments received from EPA and discussions with EPA regarding the initial version of the 2011 RAWP (see Parsons, 2011); and they were approved by EPA on April 26, 2011. In accordance with the SOW, this 2011 CHASP has been prepared as an appendix (Appendix F) to that revised 2011 RAWP. 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 this 2011 CHASP is to describe the community health and safety program that GE will implement in the 2011 season of Phase 2. It constitutes an update to the Phase 1 RA CHASP (Parsons, 2009) that was in place during Phase 1 of the dredging project, as revised to reflect the Phase 2 EPS and QoLPS issued by EPA and the various revised SOW attachments issued by EPA in December 2010, as well as the experience gained during the performance of Phase 1.

This 2011 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.
- 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 2011.

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 2011 CHASP has been prepared to be consistent with the Phase 2 CHASP Scope, with certain clarifications and modifications approved by EPA. During implementation of the 2011 construction season of Phase 2, revisions to this 2011 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 2011 season of Phase 2 to address the community health and safety issues described herein will be governed by this 2011 CHASP, as approved by EPA, and any EPA-approved revisions thereof.

In addition, this CHASP will be revised and updated, as needed, for each subsequent year of Phase 2, taking into account any further revisions of the performance standards or other requirements made during the course of Phase 2 through the adaptive management process described in Section 7 of the revised SOW. The updated CHASP for each such year will be submitted to EPA for review and approval pursuant to the revised SOW.

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;
- 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 will abide by the requirements of GE's world-class EHS program.

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;

- 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 Phase 2 Final Design Report for 2011 (2011 FDR; Arcadis, 2011), approved by EPA on April 26, 2011, which describes in detail GE's design for dredging, sediment processing, and related operations for the 2011 season of Phase 2;
- The 2011 RAWP as revised (Parsons, 2011, cited above), approved by EPA on April 26, 2011, which describes dredging, backfilling, habitat construction, processing facility operations, and rail yard operations to be conducted during the 2011 season;
- The Phase 2 Performance Standards Compliance Plan for 2011 (2011 PSCP; GE, 2011; Appendix D to the 2011 RAWP), which describes the actions to be taken by GE during the 2011 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 for 2011 (2011 RAM QAPP; Anchor QEA, 2011), which describes the environmental monitoring program to be implemented during the 2011 season, including many of the contingency monitoring plans mentioned in this 2011 CHASP;
- The Phase 2 Remedial Action Health and Safety Plan (2011 HASP), which describes the protection of workers during dredging, sediment processing, and related activities during the 2011 season. In contrast to this CHASP, which describes health and safety activities with the potential to affect the public, the 2011 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, and shoring, rigging, and lifting.

1.5 DOCUMENT ORGANIZATION

This 2011 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 2011 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 the 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 2011, 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 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 2011 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.

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 2011. 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 2011 FDR, including the detailed Specifications and Contract Drawings and other documents that will guide the Phase 2 work in 2011.

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.

2.2 SUMMARY OF PHASE 2 REMEDIAL ACTIVITIES IN 2011

As described below, and in greater detail in the 2011 FDR and 2011 RAWP, targeted sediments will be removed from the river using environmental dredging equipment, and then

transported by barge 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 designed to accomplish these tasks during the 2011 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.

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 2011 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

As shown on Figure 2-2a and 2-2b, dredging during the 2011 season is anticipated to be conducted in several areas in the Thompson Island Pool (TIP), designated as Certification Units (CUs) 9 through 16 and 19 through 30.

Dredging operations 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 prior to November 15, 2011. Approximately 350,000 cubic yards (cy) of sediment are targeted for removal from 20 dredge areas within the CUs identified above. Together, these 20 dredge areas cover approximately 100 acres of river bottom. To achieve the target removal volume, dredging operations 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 project interruptions, and as a contingency to increase productivity if necessary.

Dredging will be 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. Dredging will begin in the northern end of the TIP project area and work will generally proceed downstream from there.

Material dredged from the river will be placed directly onto hopper barges. 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 19 barges, moved by tug boats, will be needed to transport dredged sediment and debris from the river, through Lock 7 on the Champlain Canal, and up the canal to the unloading wharf at the processing facility. To maintain productivity targets, as many as 16 daily one-way barge trips through Lock 7 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. In-river monitoring activities will be staged from a work support marina located in the Town of Moreau on the west side of the river, south of Lock 7.

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. 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 are encountered within each dredge area. Backfill and capping materials will be transported via truck from their sources to the Moreau Barge Loading Area located in the Town of Moreau.

2.2.3 Operation of the Sediment Processing and Dewatering Facility

The dredged materials will be transported by hopper barge to the sediment processing facility in Fort Edward. This facility includes a waterfront barge unloading area (which includes a 150-foot-long unloading wharf, a 200-foot-long work/maintenance wharf, and barge staging areas), sediment dewatering and processing facilities, and a rail yard. Figure 2-3 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 is processed and staged is underlain by an impermeable liner and curbed to prevent run off. The storm water is 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 starts when dredged material arrives at the wharf in hopper barges.

At the wharf, water will be pumped from the barge to processing facility for treatment. Then the material will be unloaded from hopper barges using a bulk material unloading machine, and large debris such as rocks and tree limbs or other bulky materials will be sorted out. Coarse (free-draining) dredged material may be unloaded and moved by truck to the staging area 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 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.

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.

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

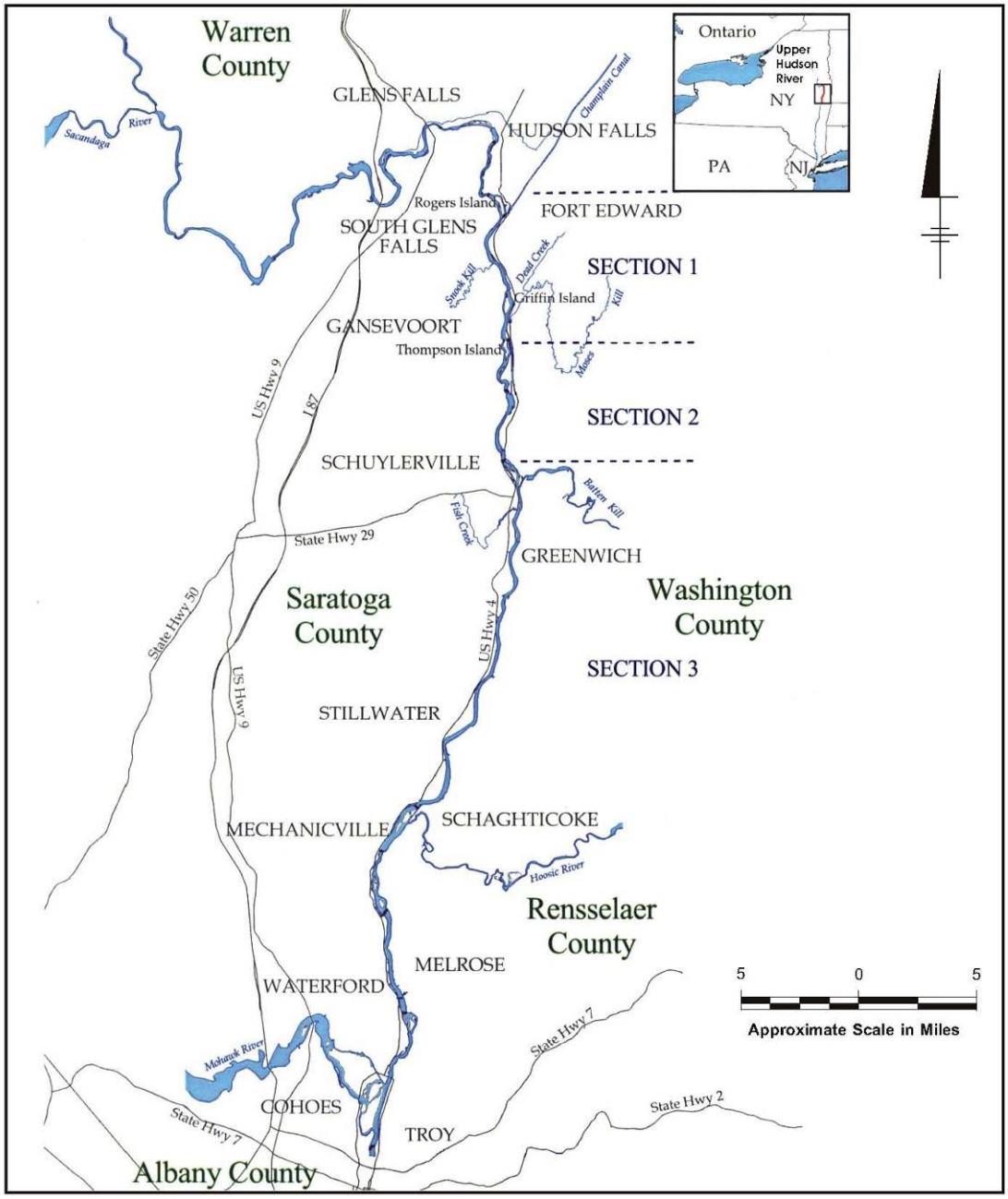
Dewatered sediments will be staged in stockpiles near the rail yard, and then will be loaded into rail cars. On average, one train of 81 loaded rail cars will depart the rail yard, and one train of 81 empty cars will arrive at the rail yard every 2 to 3 days during the 2011 season. The actual frequency of train movement will vary based on rail company scheduling, rate of sediment processing, and other factors.

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 49 Code of Federal Regulations (CFR) 171-174, 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 will be conducted in certain dredged areas. Through placement of appropriate substrate material during backfilling/capping and the planting of aquatic or wetland vegetation in areas that were vegetated prior to dredging, the goal of the program is to promote development of suitable habitat for aquatic organisms. Given the limited growing season in the upper Hudson River, habitat-specific planting in 2011 dredge areas will not occur until the next construction season after 2011 dredging activities are complete.



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

GENERAL ELECTRIC COMPANY
HUDSON RIVER PCBS SUPERFUND SITE
2011 COMMUNITY HEALTH AND SAFETY PLAN

UPPER HUDSON RIVER

ARCADIS

FIGURE **2-1**

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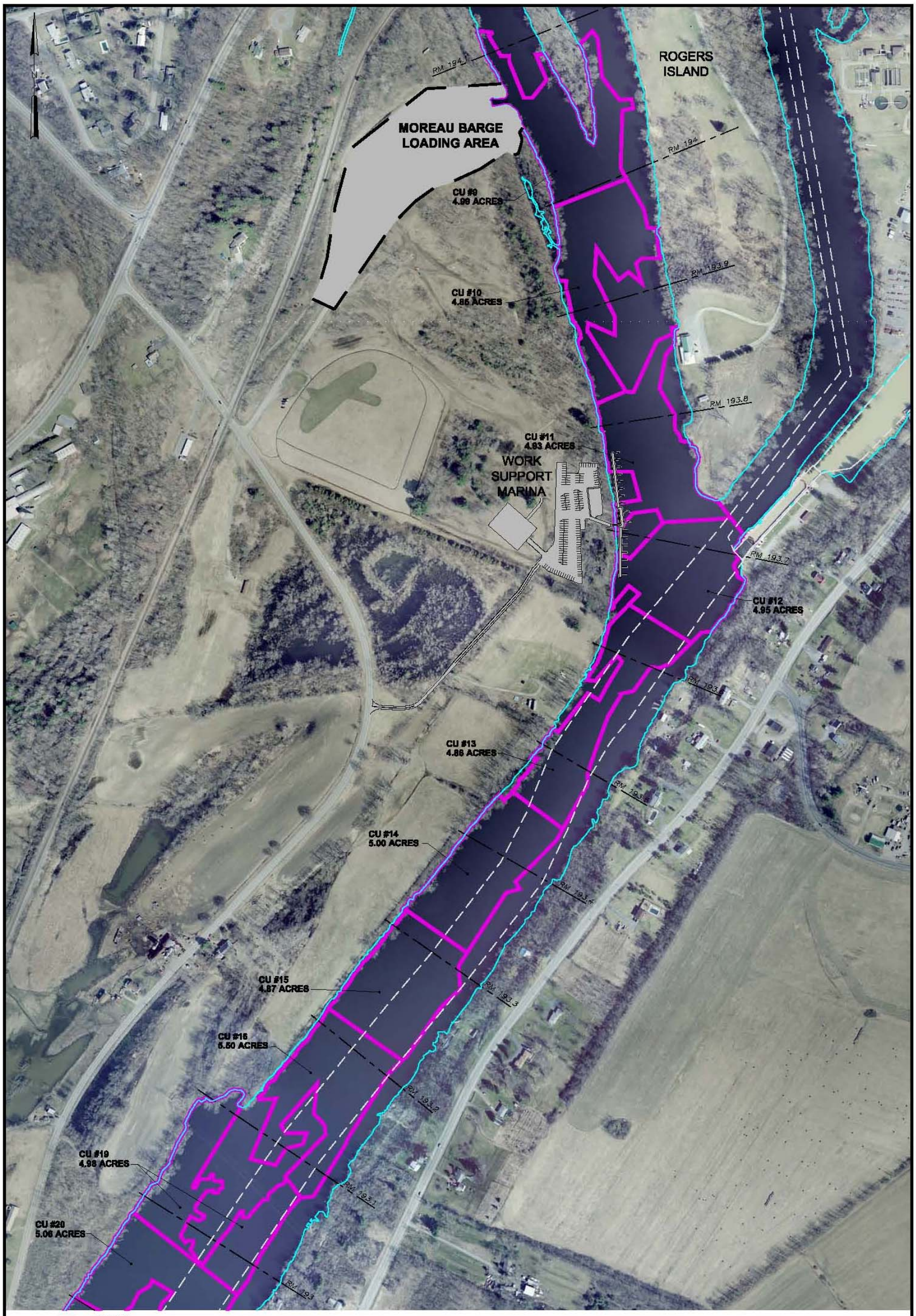
B0031087/2009/02800/CDR/31087N01.CDR


ROGERS ISLAND
MOREAU BARGE LOADING AREA
WORK SUPPORT MARINA
CU #9 4.99 ACRES
CU #10 4.86 ACRES
CU #11 4.93 ACRES
CU #12 4.95 ACRES
CU #13 4.86 ACRES
CU #14 5.00 ACRES
CU #15 4.87 ACRES
CU #16 5.50 ACRES
CU #19 4.98 ACRES
CU #20 5.06 ACRES
RM 194.1
RM 194
RM 193.9
RM 193.8
RM 193.7
RM 193.6
RM 193.5
RM 193.4
RM 193.3
RM 193.2
RM 193.1
RM 193
LEGEND
CU #
CU BORDER
SHORELINE (ELEVATION 119')
NAV CHANNEL
RM 192.1
RIVER LINE MILE MARKER
400 200 0 400
SCALE: 1" = 400'
PARSONS
COMMERCIALTECHNOLOGY GROUP
GE COMPANY - PARSONS PROJECT OFFICE
BUILDING 40-1, 381 BROADWAY
FORT EDWARD, NEW YORK 12828 (518) 746-6311
DRAWING TITLE
COMMUNITY HEALTH AND SAFETY PLAN
2011 PLANNED DREDGE AREAS
CERTIFICATION UNITS 9 THROUGH 16
HUDSON RIVER PCBs SUPERFUND SITE
DRAWN BY JHG
CHECKED BY MG
DATE 2/15/11
APPROVED BY MG
DRAWING NO. FIGURE 2-2A
SCALE AS SHOWN
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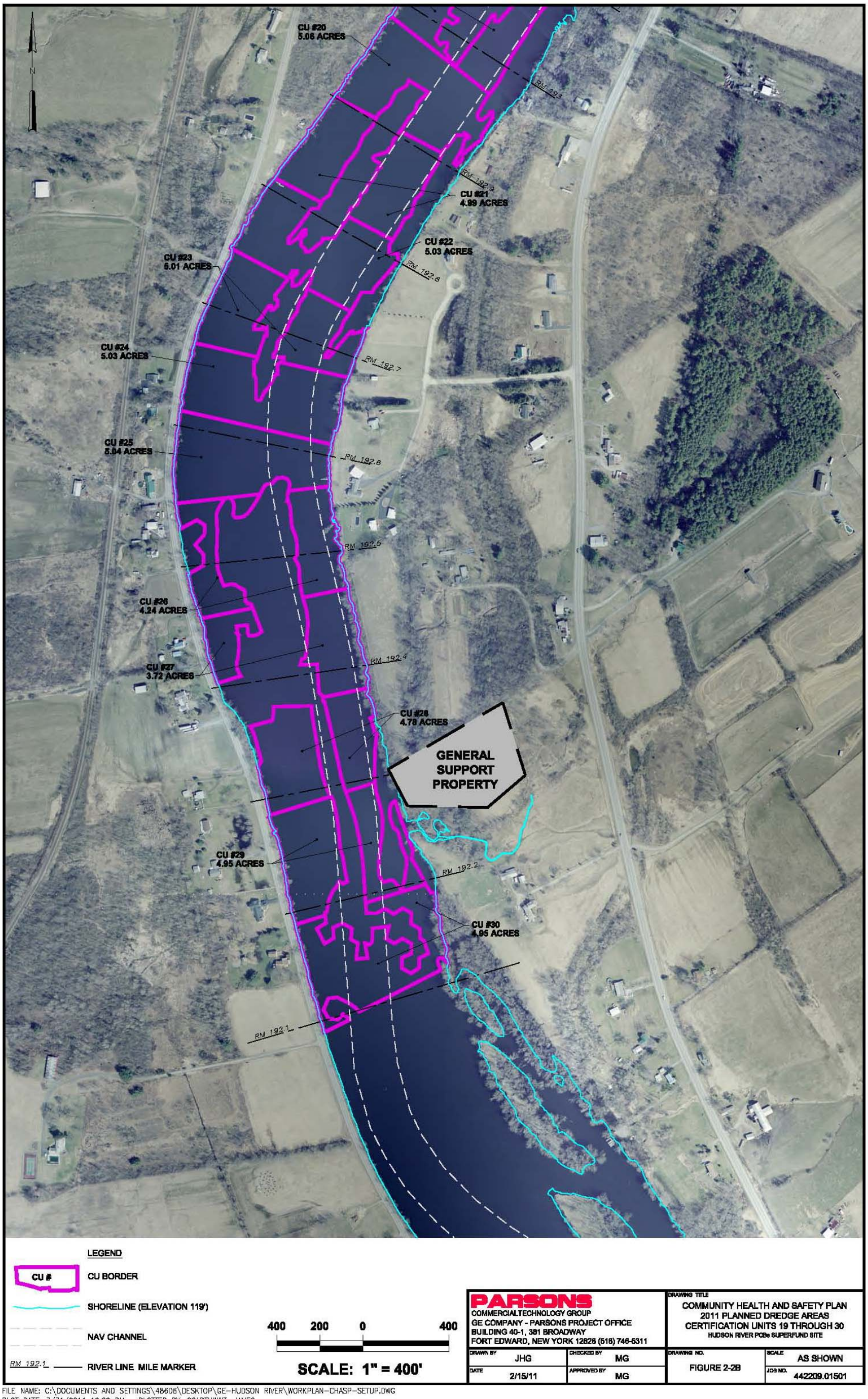
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RM 193
RM 192.9
CU #21
4.99 ACRES
CU #22
5.03 ACRES
RM 192.8
CU #23
5.01 ACRES
CU #24
5.03 ACRES
RM 192.7
CU #25
5.04 ACRES
RM 192.6
RM 192.5
CU #26
4.24 ACRES
RM 192.4
CU #27
3.72 ACRES
CU #28
4.78 ACRES
GENERAL
SUPPORT
PROPERTY
CU #29
4.95 ACRES
RM 192.2
CU #30
4.95 ACRES
RM 192.1
LEGEND
CU #
CU BORDER
SHORELINE (ELEVATION 119')
NAV CHANNEL
RM 192.1
RIVER LINE MILE MARKER
400 200 0 400
SCALE: 1" = 400'
PARSONS
COMMERCIALTECHNOLOGY GROUP
GE COMPANY - PARSONS PROJECT OFFICE
BUILDING 40-1, 381 BROADWAY
FORT EDWARD, NEW YORK 12828 (518) 746-5311
DRAWING TITLE
COMMUNITY HEALTH AND SAFETY PLAN
2011 PLANNED DREDGE AREAS
CERTIFICATION UNITS 19 THROUGH 30
HUDSON RIVER PCBs SUPERFUND SITE
DRAWN BY JHG
CHECKED BY MG
DATE 2/15/11
APPROVED BY MG
DRAWING NO. FIGURE 2-2B
SCALE AS SHOWN
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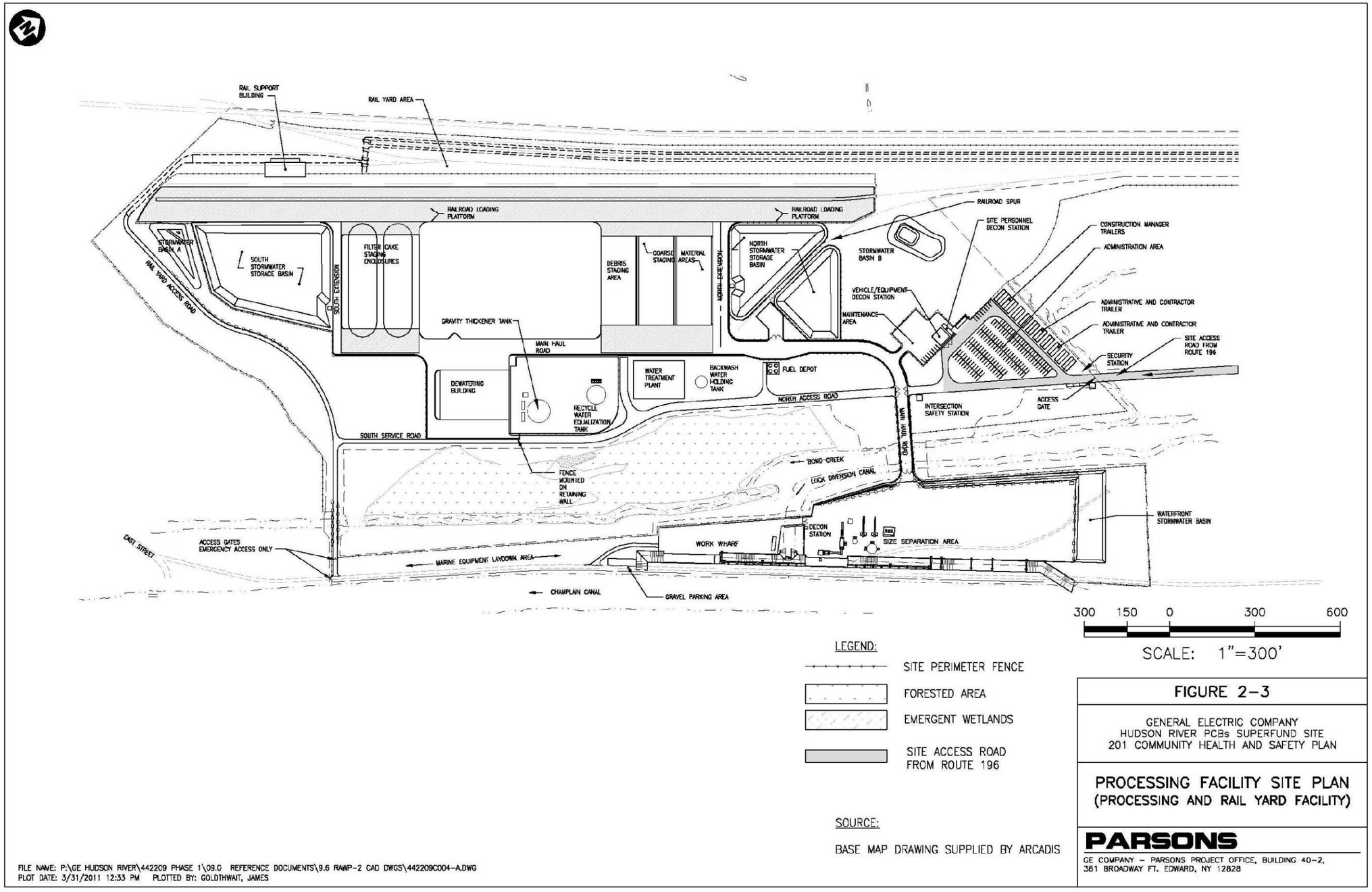
RAIL SUPPORT BUILDING
RAIL YARD AREA
RAILROAD LOADING PLATFORM
RAILROAD LOADING PLATFORM
RAILROAD SPUR
SITE PERSONNEL DECON STATION
CONSTRUCTION MANAGER TRAILERS
ADMINISTRATION AREA
STORMWATER BASIN A
SOUTH STORMWATER STORAGE BASIN
RAIL YARD ACCESS ROAD
SOUTH EXTENSION
FILTER CAKE STAGING ENCLOSURES
DEBRIS STAGING AREA
COARSE STAGING
MATERIAL AREAS
NORTH EXTENSION
NORTH STORMWATER STORAGE BASIN
STORMWATER BASIN B
VEHICLE/EQUIPMENT DECON STATION
MAINTENANCE AREA
ADMINISTRATIVE AND CONTRACTOR TRAILER
ADMINISTRATIVE AND CONTRACTOR TRAILER
SITE ACCESS ROAD FROM ROUTE 196
SECURITY STATION
ACCESS GATE
GRAVITY THICKENER TANK
MAIN HAUL ROAD
DEWATERING BUILDING
RECYCLE WATER EQUALIZATION TANK
WATER TREATMENT PLANT
BACKWASH WATER HOLDING TANK
FUEL DEPOT
NORTH ACCESS ROAD
INTERSECTION SAFETY STATION
MAIN HAUL ROAD
SOUTH SERVICE ROAD
FENCE MOUNTED ON RETAINING WALL
BOND CREEK
LOCK DIVERSION CANAL
WATERFRONT STORMWATER BASIN
DECON STATION
SIZE SEPARATION AREA
WORK WHARF
EAST STREET
ACCESS GATES EMERGENCY ACCESS ONLY
MARINE EQUIPMENT LAYDOWN AREA
CHAMPLAIN CANAL
GRAVEL PARKING AREA
300 150 0 300 600
SCALE: 1"=300'
LEGEND:
SITE PERIMETER FENCE
FORESTED AREA
EMERGENT WETLANDS
SITE ACCESS ROAD FROM ROUTE 196
SOURCE:
BASE MAP DRAWING SUPPLIED BY ARCADIS
FIGURE 2-3
GENERAL ELECTRIC COMPANY
HUDSON RIVER PCBs SUPERFUND SITE
201 COMMUNITY HEALTH AND SAFETY PLAN
PROCESSING FACILITY SITE PLAN
(PROCESSING AND RAIL YARD FACILITY)
PARSONS
GE COMPANY – PARSONS PROJECT OFFICE, BUILDING 40-2,
381 BROADWAY FT. EDWARD, NY 12828
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SECTION 3

PROJECT SCHEDULE AND OPERATIONS

This section briefly summarizes the 2011 project schedule, anticipated hours of operation, and expected total duration of the 2011 dredging season.

3.1 SUMMARY OF ACTIVITIES BY SEASON

Depending on weather and river flow conditions, the 2011 dredging season is expected to encompass approximately 28 weeks from mid-May through October. Backfilling, capping and shoreline restoration may continue through November. When work activities actually begin depends upon opening of the Canal System to commercial traffic, and mobilization of dredging equipment.

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. Upgrades of the trommel and barge cable systems are underway and will be tested prior to the beginning of dredging. Operations at the processing facility will continue after dredging ends in order to process all dredged sediment and load them onto rail cars.

Once all 2011 dredged sediments are processed, the sediment processing equipment will be shut down and secured for the winter season. 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. 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 are expected to be conducted 24 hours a day, 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.

3.3 DURATION OF ACTIVITIES

Following construction and testing of the sediment processing facility, dredging will begin in May in the west channel of Rogers Island and proceed downstream (see Figures 2-2a and 2-2b). As needed, additional dredging passes will begin soon after initial dredging. Project activities are expected to continue through November.

A schedule for dredging activities along the river and in each dredge area is provided in 2011 RAWP (Parsons, 2011). This plan includes a detailed Dredging Plan which describes the expected timing of dredging within each dredge area.

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, will be included in monthly progress reports and will be 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 first year of Phase 2 in 2011 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 2011 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 2011 PSCP (GE, 2011).

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.

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 ($\mu g/m^3$) and a standard of 0.11 $\mu g/m^3$, both as 24-hour average PCB concentrations; and
- For commercial/industrial areas, a concern level of 0.21 $\mu g/m^3$ and a standard of 0.26 $\mu g/m^3$, 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, but monitoring for in-river operations will be more focused on nearby receptors and mitigation measures will be required only if exceedances of a standard persist for three consecutive days, as discussed further below.

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) (PM_{10});
- Fine particulate matter (*i.e.*, < 2.5 micrometers in diameter) ($PM_{2.5}$);
- Carbon monoxide (CO);

- Sulfur dioxide (SO_2);
- Nitrogen dioxides (NO_x); and
- Ozone (O_3).

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 required GE, as part of the Phase 2 final design, to evaluate the need to revise the prior analysis to reflect any anticipated operational or equipment changes in Phase 2 that could affect these pollutants. If no such change is anticipated, or if any revised air quality analysis validates prior assumptions, no monitoring or further evaluations of the criteria pollutants are 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 2011 construction season to address air quality.

PCBs

As part of the final design for Phase 2 dredging and processing facility operations in 2011, GE identified areas targeted for dredging in 2011 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 2011 also identified the control measures and best management practices (BMPs) that will 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); and
- 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.

As also provided in the 2011 final design, an additional BMP to reduce PCB air emissions will be the prioritization for transport to the processing facility and for unloading at that facility

of 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).

Opacity

Based on the effectiveness of the Phase 1 design specifications related to opacity, the Phase 2 design for 2011 is 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

As required, GE has evaluated the need to revise the Phase 1 design analysis (which demonstrated compliance with the NAAQS) to reflect any anticipated operational or equipment changes in the 2011 season of Phase 2 that could affect these pollutants. That evaluation is presented in the 2011 FDR. It confirms that the equipment and operations in 2011 that could have an impact on criteria pollutant emission are not expected to be significantly different from those used in Phase 1, that the Phase 1 analysis demonstrating compliance with the NAAQS should likewise apply to the 2011 dredging and facility operations, and that there is no need for a more detailed revised NAAQS analysis for 2011. As a result, no provisions for monitoring, control, or contingency actions for criteria pollutants will be necessary during implementation of Phase 2 in 2011.

Dust Control

A dust control plan has been prepared and will be implemented to minimize generation of dust during 2011 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.

4.2.3 Air Quality Monitoring Summary

PCBs

Extensive monitoring of PCBs in ambient air will be conducted during 2011 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 Lock 7 will be sampled during dredging. A 24-hour sample will be collected daily 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 standard. Achievement of the concern level and standard 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

If monitoring (or modeling, if used to assess compliance at a given receptor) demonstrates that an applicable air quality concern level has been exceeded, 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, including examination of background PCB concentrations (sampling-event-specific as well as baseline) and site-specific meteorological data to help identify the source of the exceedance.
3. If necessary, implement BMPs and/or other mitigation measures, as determined by GE.
4. 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.

4.2.5 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 as 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. Investigate the cause of the complaint to verify that it is project-related.
2. 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.
3. 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).

4. If the monitoring and/or modeling does 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 parties agree, implement such measures.
5. 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. 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:

- Erecting wind screens around sediment processing operations;
- Covering material stockpiles or controlling the shape and placement of 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 biodegradable foam (if determined to be compatible with the treatment system) over exposed dredged sediment or processed material.

4.3 ODOR

4.3.1 Description of Odor Performance Standard

Based on the experience from Phase 1, odors are not expected to be significant concern during 2011 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_2S) released by decaying plants and other organic material found in the river sediments. PCBs are odorless.

The QoLPS for odor establishes a standard for H_2S to minimize unwanted odors from the project. The standard for H_2S odor, based on the NYSDEC ambient air standard, is 14 $\mu g/m^3$ or 0.01 parts per million (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_2S standard or "frequent, recurrent odor complaints related to project activities."

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. Hundreds 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 be employed in 2011:

- 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 practical 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 enclosure.
- 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_2S. In that event, monitoring for H_2S will be conducted at locations upwind and downwind of the suspected odor source. H_2S levels will be measured via direct readings using a hand-held H_2S 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_2S 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_2S. 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_2S is conducted (as described in Section 4.3.3) and demonstrates an exceedance of the H_2S 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 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_2S monitoring until issue is resolved.
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 conduct the H_2S monitoring described in Section 4.3.3; and if the monitoring shows an exceedance of the H_2S standard, GE will implement the steps defined in Section 4.3.4. If the monitoring does not show an exceedance of the H_2S 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 H2S, GE will take the following steps (multiple complaints regarding the same potential odor will be treated as one complaint):

1. Document the odor complaint and investigate the source of the odor in a timely manner to determine if it is project-related.
2. Notify EPA within 24 hours of receiving the complaint.
3. If 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.
4. If a project-related uncomfortable odor is identified, take mitigation measures as appropriate to reduce or eliminate the source of the odor.

5. 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.

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 Phase 1 experience controlling noise levels to within standard levels is not expected to be a significant problem during 2011 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:

- Short-Term Criteria (applicable to facility construction, dredging, work support marina activities, 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 must include noise attenuation modeling, and GE must conduct a study at the beginning of dredging or processing facility operations (as applicable) to validate the modeling analysis. For 2011, the changes at the

processing facility and the traffic associated with the dredging operations are not expected to cause an increase in noise impacts over those experienced during Phase 1, as shown in the 2011 FDR. Therefore, GE has not conducted an update to the prior noise modeling analysis and is not planning to conduct a general noise study at the beginning of 2011 dredging or facility operations. However, as discussed below, 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 in Phase 1 (or previously in 2011) and could result in increased noise levels compared to those in Phase 1 (or previously in 2011).

In addition, GE has included in the 2011 FDR specifications for its contractors to include routine noise control measures as part of their operations.

4.4.3 Noise Monitoring Summary

During 2011 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 in Phase 1 (or used previously in 2011) and could result in increased noise levels compared to those in Phase 1 (or previously in 2011). 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.
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. Investigate the cause of the noise in a timely manner to determine if it is project-related;
2. If the complaint 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.
3. 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).
4. If the monitoring does not show an exceedance of the applicable control level or standard, report the preliminary monitoring results to EPA, work with EPA to evaluate potential mitigation measures to address the complaint, and if EPA and GE agree, implement such measures.

5. 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 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 will be performed 24 hours per day, six days per week. This will require the

use of lighting to illuminate work areas and protect worker safety. Lighting will be needed on project vessels to ensure their safe passage during nighttime activities. Lighting will also be 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;
- 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 requires 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 2011, the operations are not expected to cause an increase in lighting impacts over those experienced during Phase 1. Therefore, the Phase 1 lighting analysis has not been updated. This will be confirmed by the routine contractor monitoring outlined below.

Based on Phase 1 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 2011. Specifications for such routine light control measures are included in the 2011 FDR.

4.5.3 Lighting Monitoring Summary

During 2011 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 in Phase 1 (or used previously in 2011) and could result in increased light levels compared those in Phase 1 (or previously in 2011). 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.

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. Investigate the cause of the complaint to verify that it is project-related.

2. 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.
3. If the monitoring shows an exceedance of the applicable standard, implement the applicable steps specified in Section 4.5.4.
4. If the monitoring does not show an exceedance of the applicable standard, report the preliminary monitoring results to EPA, work with EPA to evaluate potential mitigation measures to address the complaint, and if both EPA and GE agree, implement such measures.
5. 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.

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 practical.
2. Notify the NYSCC of in-river project activities and provide information to the NYSCC and/or United States Coast Guard (USCG) so as 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. The final design for 2011 includes the following requirements:

- 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 Lock 7 on the Champlain Canal will be coordinated with the NYSCC and will be reduced by staging and routing project support vessels (*i.e.*, vessels other than barges and associated tugs) from the Work Support Marina on West River Road in Moreau. Lock tenders at Lock 7 will be provided with final versions of this 2011 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.
- 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 after dredging operations begin. 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.

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. Investigate the cause of the complaint to verify that it is project-related.
2. If 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.
3. Notify the NYSCC of the complaint and consult with the NYSCC, if necessary, in the investigation.
4. 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 Section 4.6.4, including notification to EPA and the NYSCC, implementation of mitigation measures, and submission of a follow-up report.

5. If it is determined that the project is in compliance with all substantive federal and state navigation requirements and that GE has taken appropriate steps to minimize interference with river traffic, work with EPA, in coordination with the NYSCC, to evaluate potential measures to address the complaint, and if both EPA and GE 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 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-unidentified 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

As is discussed in Section 1.2, GE is committed to conducting business in a manner that is protective of the health and safety of its employees and the local communities in which it functions. Toward that end, this project has been designed with health and safety as its first and most fundamental goal. As a result of those diligent 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 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 thoroughly 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.

In addition to the thorough evaluation and assessment of potential hazards, GE has hired experienced companies that have strong safety program and a proven track records. 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.

Again, above all else, 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.
- 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.

Again, while the likelihood is quite low of any of the identified potential hazards occurring during this project in light of the extensive preventive measures incorporated into the project design, 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).
- *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.

Any sinking or capsized vessel will be handled according to the procedure for sinking/capsized vessels in Attachment 5. 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].

Preventive Measures

All refueling activities will comply with USCG regulations [33 CFR 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. Refueling of support vessels will generally take place at the work support marina in Moreau. 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 specifically 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 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.

Barges will be fitted with spill aprons to prevent sediments from accumulating on the sides of barges, and barges will be sprayed or washed, if needed, before being moved from the dredge area.

During initial startup of in-river activities, there will be a gradual increase in dredging rates over the first two weeks to enable the project team to closely monitor dredge performance, resuspension and overall operations. During this period, 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 officers specially trained to educate, observe and train project personnel on spills and releases will be on hand during operations. These safety officers 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.

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

Smoking will be prohibited on and within 10 feet of project vessels. 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 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 will increase significantly 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.

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 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 (*e.g.*, sheet pile walls). 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 5. 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 should 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 breaks away from its mooring or loses 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).

Response

During dredging and other in-river activities, one tug will be available downstream of Lock 7 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 or float lines near fixed project features (*e.g.*, sheet pile walls). Signage will be regularly checked for their 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 will be installed at marinas and will be 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 razor wire on 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 occurs 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.

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.

Additional preventive measures are described in Section 5.2.3.1.

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 begin.

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 Lock 7 Service

Project vessels and barges will travel through Lock 7 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.

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 will be maintained when approaching or exiting Lock 7.

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 to allow safe turning of barges as they approach Lock 7 from the north.

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 Lock 7 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 Lock 7.

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 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 5.3.2.4) will also prevent this type of hazard.

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 practical. 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.

Any sinking or capsized vessel will be handled according to the procedure for sinking/ capsized vessels in Attachment 5. 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. In 2011, 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 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.

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 that must 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 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.

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.

Prevention 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 also 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.

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.

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..

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 new 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 are 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 a work support marina in Moreau, 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.

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

A spill prevention control and countermeasure (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 will be designed with or be 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.

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 5.3.2.4, will also prevent incidents at the processing facility wharf area.

5.3.3.5 Storm Event Exceeds 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 will be 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 waste 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 2011, 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 at least two designated deputies so that there will always be someone in the Project Safety Manager role on duty and on site. 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).

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 the required 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 (JSAs) 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;
- 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 (JSAs) 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;

- 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 (JSAs) 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 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:

- 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 the required 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 and will be required to sign an acknowledgement of that fact. This documentation will be maintained by the Project Safety Manager.

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

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 full-day hands-on 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) will be fenced and gated. Security personnel will staff gates 24 hours a day, seven days a week, during work and non-work periods, to restrict access and minimize potential public trespass.

The work support marina is accessed from West River Road (County Road 29) in the Town of Moreau and is not available for use by the public. The Work Support Marina is fenced and gated on all non-water sides.

The Moreau Barge Loading Area accessed via Highway 197 west from Fort Edward. The area is gated and enclosed, with fencing on all non-water sides.

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.

6.4.2 In-river Activities

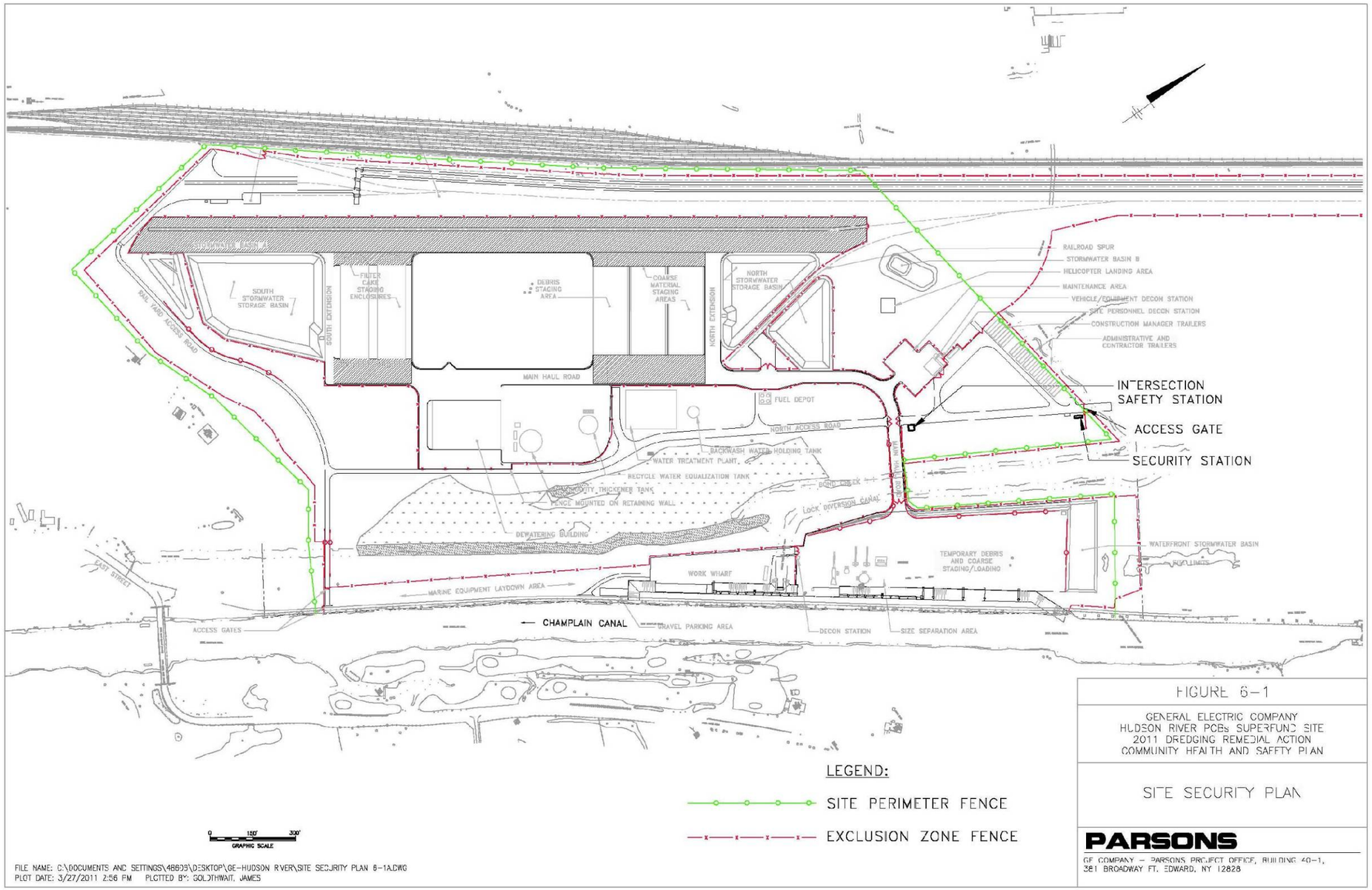
Before working on a marine vessel, all personnel will first complete a merchant mariner application for review and background check. As necessary, project personnel will occupy or otherwise secure marine vessels 24 hours a day, seven days a week, so security personnel will not be necessary on each vessel. When project personnel will not be present, marine vessels with cabins or areas will be locked or otherwise secured. Support vessels will dock at the work support marina when not in use. 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 the West River Road work support marina. To secure project vessels and equipment, chain link fencing and locking gates will be installed around portions of the work support marina. The area will be routinely patrolled.

Perimeter chain link fencing has been installed around the perimeter of Moreau Barge Loading Area and the General Support Property to restrict unauthorized access. Anyone wishing to access the site during normal business hours will be required to sign in and show proper identification. Both sites have access gates which are locked during non working hours.


SOUTH STORMWATER STORAGE BASIN
SOUTH EXTENSION
FILTER CAKE STAGING ENCLOSURES
DEBRIS STAGING AREA
COARSE MATERIAL STAGING AREAS
NORTH EXTENSION
NORTH STORMWATER STORAGE BASIN
RAILROAD SPUR
STORMWATER BASIN B
HELICOPTER LANDING AREA
MAINTENANCE AREA
VEHICLE/EQUIPMENT DECON STATION
SITE PERSONNEL DECON STATION
CONSTRUCTION MANAGER TRAILERS
ADMINISTRATIVE AND CONTRACTOR TRAILERS
RAIL YARD ACCESS ROAD
MAIN HAUL ROAD
FUEL DEPOT
NORTH ACCESS ROAD
BACKWASH WATER HOLDING TANK
WATER TREATMENT PLANT
RECYCLE WATER EQUALIZATION TANK
HIGH DENSITY THICKENER TANK
BOND CREEK
LOCK DIVERSION CANAL
DEWATERING BUILDING
INTERSECTION SAFETY STATION
ACCESS GATE
SECURITY STATION
WATERFRONT STORMWATER BASIN
TEMPORARY DEBRIS AND COARSE STAGING/LOADING
WORK WHARF
MARINE EQUIPMENT LAYDOWN AREA
EAST STREET
ACCESS GATES
CHAMPLAIN CANAL
GRAVEL PARKING AREA
DECON STATION
SIZE SEPARATION AREA
LEGEND:
SITE PERIMETER FENCE
EXCLUSION ZONE FENCE
0 150' 300'
GRAPHIC SCALE
FIGURE 6-1
GENERAL ELECTRIC COMPANY
HUDSON RIVER PCBs SUPERFUND SITE
2011 DREDGING REMEDIAL ACTION
COMMUNITY HEALTH AND SAFETY PLAN
SITE SECURITY PLAN
PARSONS
GE COMPANY – PARSONS PROJECT OFFICE, BUILDING 40-1,
381 BROADWAY FT. EDWARD, NY 12828
FILE NAME: C:\DOCUMENTS AND SETTINGS\48609\DESKTOP\GE-HUDSON RIVER\SITE SECURITY PLAN 6-1A.DWG
PLOT DATE: 3/27/2011 2:56 PM PLOTTED BY: GOLDTHWAIT, JAMES

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, that 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 7.3.2 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 Fort Edward Volunteer Fire Department, the Fort Edward Village Police Department, the Fort Edward Rescue Squad, the Gansevoort Fire Department, the Moreau Emergency Squad, the Saratoga County Office of Emergency Services, the South Glens Falls Fire Company and Dive Team, the South Glens Falls Police Department, the Washington County Department of Public Services, the Washington County Fire Coordinator, Washington County Public Safety, and the Washington County's 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.

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 Work Support Marina, the General Support Property, 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.

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. (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. 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 will develop SPCC plans that will provide more specificity regarding response actions. Separate SPCC plans 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) radios and cellular phones, to alert the project team, regulatory authorities and local responders of a spill.

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.

At the same time, 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 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 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 5.3.2.2)), 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 collection, containment and treatment systems could warrant immediate actions to protect human health and safety, assess the severity of the event, and take appropriate mitigation measures, if needed. The event would be evaluated to determine its causes and future prevention, and proper project authorities would 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.

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. Note that even if there is an exceedance at the near-field locations, the program is designed to still be protective of water quality at downstream far-field locations.

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 should 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 the material will be retrieved and processed as intended or the material will be diverted 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.

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 will 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 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. As requested by external emergency responders, an area of the sediment processing facility has been designated and marked as a helicopter landing zone to facilitate rapid transport via external agencies' helicopters.

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-feet 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. Land lines will be available at the sediment processing facility and the work support marina in Moreau during operations. 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.

Specifically, 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.

The work support marina on West River Road 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 3.

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 presented alphabetically. Emergency contact information is provided in Attachment 4. 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 Albany Med Flight

Albany Med Flight typically responds to emergencies when requested by Washington 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).

7.3.3.2 Fort Edward Police Department

The Fort Edward Police Department 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.

7.3.3.3 Fort Edward Rescue Squad

The Fort Edward Rescue Squad will respond to incidents at the sediment processing facility and may be a joint responder to incidents in the river. They are a first responder and will provide initial response to medical emergencies. They will also provide patient transport to Glens Falls Hospital (see Section 7.3.4.1).

7.3.3.4 Fort Edward Volunteer Fire Department

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

7.3.3.5 Gansevoort Fire Department

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

7.3.3.6 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 and water rescue.

7.3.3.7 Moreau Emergency Squad

The Moreau Emergency Squad will be the primary rescue squad to respond to the work support marina in Moreau. They may also provide joint response to incidents at the sediment processing facility. They will provide patient transport to Glens Falls Hospital (see Section 7.3.4.1).

7.3.3.8 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.

7.3.3.9 Saratoga County Office of Emergency Services

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

7.3.3.10 Saratoga County Sheriff

The Saratoga County Sheriff will provide land-based response to incidents in the river. They are a first responder and will provide initial response to medical emergencies.

7.3.3.11 South Glens Falls Fire Department

The South Glens Falls Fire Department will respond to incidents in the river. They are dispatched with the Fort Edward Fire Department on any man overboard incidents. They will provide fire-fighting assistance, water rescue and dive team operations. The dive team has mutual aid agreements with dive teams in Waterford and Corinth, both located in Saratoga County.

7.3.3.12 South Glens Falls Police Department

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

7.3.3.13 U.S. Coast Guard

The US 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.

7.3.3.14 Washington County Sheriff

The Washington County Sheriff will 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.

7.3.3.15 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.

7.3.4 Location of Area Medical Facilities

7.3.4.1 Glens Falls Hospital, 100 Park Street, Glens Falls

Glens Falls Hospital will provide treatment for all medical injuries and emergencies. Figure 7-1 depicts the route to the hospital from both the work support marina and the sediment processing facility.

Directions to the facility from the West River Road work support marina are as follows: travel north on West River Road; make a right at end onto Route 197; take a left 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: Follow southern Lock 8 access road to East Street; continue west on East Street until end; make left onto Route 4 South; make right at traffic light onto Route 197 and cross over the Hudson River; at traffic light, make right 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.

7.3.4.2 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.

7.3.4.3 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 work areas are as follows: Follow Route 197 west to end; make left onto Route 9 South; enter I-87 South, the Adirondack Northway at Exit 17; exit at Exit 15; make left at end of exit ramp onto Route 50 North; facility will be on the left, across the street from Target.

7.3.4.4 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.

7.3.4.5 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 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 - either controllable or uncontrollable; 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 5 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). 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 EPA's Team Leader, or, in the event of the unavailability of the Team Leader, the EPA Project Coordinator or 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 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 EPA's Team Leader or the Team Leader's 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, 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.

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, 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 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, a telephone call will be made to 911. First responders will respond to the work support marina or other designated location. Injured individuals who are in a condition to be transported will be transferred by project vessel or emergency response vessel to the work support marina or other designated location. If the injured individual(s) cannot be transported, first responders will be met and briefed by the Project Safety Manager. 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, 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 work support marina or other designated location. First responders will be met by the Project Safety Manager, 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 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 any fire at the sediment processing facility, a telephone call will be made to 911, regardless of whether the Project Safety Manager (or on-site designee) determines a need for external response. 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. Arriving units will respond to the work support marina or other designated location, will be met by the Project Safety Manager or his/her 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.

Directions to Glens Falls Hospital
Figure 7-1
Warren
Street
H
Maple Street
Adamsville Road
196
Burgoyne Avenue
Future Route
196 Access Road
Fort
Bluebird Road
4
9
McIntyre Street
Tow Path Road
Edward
East Road
Sediment Processing and
Dewatering Facility
Road
East Street
Argyle Road
197
197
Reynolds Road
West River Road
West River Road
Marine Staging Area
4

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 2011 RAM QAPP (Anchor QEA, 2011), and the control measures and response actions to be taken during 2011 to implement the Resuspension Performance Standard and the water quality requirements are described in the 2011 PSCP (GE, 2011). This section provides an overview of the water monitoring program for 2011, 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 at 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 within 300 meters of dredging activities. 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 2011 dredging season are 2 percent (at the Thompson Island far-field station) and 1 percent (as monitored at the Waterford station) of the Tri+ PCB mass removed during the dredging season. These criteria will be applied on a daily basis during the 2011 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. These criteria, as well as the procedures for determining whether they are attained, are described in greater detail in the 2011 PSCP (GE, 2011) and the 2011 RAM QAPP (Anchor QEA, 2011).

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. The application of this standard in terms of the response action required in the event of an exceedance varies depending on the monitoring station location and the number of days of exceedance, as described in detail in the 2011 PSCP and the 2011 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; 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 [µg/L]), total chromium (50 µg/L), total mercury (0.7 µg/L), and total lead (15 µg/L). In addition, the requirements incorporate a trigger level of 10 µg/L total lead for two far-field stations (Schuylerville and Waterford) to protect water supplies and the public.

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 (300 meters downstream of dredging operations), mid-field stations (at a single location between 2.5 miles and 1 mile downstream of dredging operations), and far-field stations (more than 1 mile downstream of active dredge areas). The 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/Mid-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 4 floating monitoring buoys approximately 300 meters downstream of the dredge, as well as at a background buoy upstream of the dredging operations. In addition, monitoring will be conducted at buoys located along a mid-field cross-channel transect at River Mile 191 (which will be approximately 2.5 to 1

mile downstream of dredging operations, depending on the location of those operations). The near-field and mid-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.). In addition, samples from the near-field monitoring stations will be analyzed daily for metals (lead and cadmium) for the first two weeks of 2011 dredging operations. If the data collected during those first two weeks show that the concentrations of metals are substantially below the applicable water quality standards, the frequency of metals monitoring will be reduced to weekly at the Thompson Island far-field monitoring station (described below) for the remainder of the dredging season. If sampling for metals shows exceedance of an applicable water quality standard, or if dead, dying, or distressed fish are observed, more intensive metals monitoring will be performed.

8.3.3 Far-field Monitoring

Far-field stations will be located more then one mile downstream of active dredge areas. 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);
- Thompson Island;
- Schuylerville (at Lock 5);
- Stillwater;
- Waterford;
- Mohawk River at Cohoes;
- Albany; and
- Poughkeepsie.

The Thompson Island station will serve as the closest downstream far-field station for the 2011 operations.

The Bakers Falls background station will be sampled at monthly intervals for PCBs, TSS, TOC, and general water quality parameters (e.g., turbidity, DO, pH, temperature). The Rogers Island station will be sampled weekly for PCBs, TSS, TOC, and general water quality parameters. At Thompson Island, Schuylerville, and Waterford, 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, TSS, and TOC (as well as general water quality parameters). The Stillwater station will be sampled weekly for PCBs, TSS, TOC and general water quality parameters. In addition, if, during the first two weeks of dredging, metals concentrations measured at the near-field stations are below standards, metals monitoring (for

lead and cadmium) will be conducted weekly at Thompson Island. If the PCB monitoring shows an exceedance of 500 ng/L at a far-field station, or if the metals monitoring show an exceedance of an applicable water quality standard, or if dead, dying, or distressed fish are observed, certain increased monitoring will be conducted, as described in the 2011 RAM QAPP.

Since it is expected that, during the 2011 dredging season, the Towns of Halfmoon and Waterford will obtain their water supplies from the City of Troy, rather than the Hudson River, special procedures have not been included in the 2011 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 2011 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. The Mohawk River station will be sampled for PCBs once every other month from May to November. This sampling frequency will be increased if the data show a significant increase in PCB levels in the Mohawk River.

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 Rogers Island, Thompson Island, Schuylerville, and Waterford; monthly at Bakers Falls, Albany, and Poughkeepsie; and once every other month at the Mohawk River station. Water sampling will also be conducted at the Thompson Island, Schuylerville, and Waterford automated far-field stations during high flow events.

8.4 SUMMARY OF CONTINGENCY ACTIONS FOR RESPONDING TO EXCEEDANCES OF CRITERIA

During the 2011 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 2011 FDR (Section 2.3.2.1). In addition, as described in the 2011 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.

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 Thompson Island or Schuylerville far-field station or 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).

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, 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 Thompson Island, Schuylerville, or Waterford station or an exceedance of 500 ng/L PCBs for five days out of any seven-day period at the Schuylerville monitoring 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 may 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 Thompson Island or Schuylerville monitoring station, 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 Schuylerville monitoring station 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 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 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 again in preparation for 2011 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. 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 were previously identified. Two municipal water supply intakes (the Towns of Waterford and Halfmoon) are located downstream of the 2011 dredging. In addition, EPA has 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.

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 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 significantly downstream of the 2011 dredge areas.

The Town of Halfmoon's municipal water intake is located in the Lock 1 channel on the river's western shore at RM 159. The closest upstream dredge area to this intake is located north of Griffin Island at RM 192, 33 river miles away.

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. The closest upstream dredge area to this intake is located north of Griffin Island at RM 192, 35 river miles away.

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, it 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 2011 dredging season. As a result, it is expected that those Towns will obtain their water from the City of Troy water supply throughout the 2011 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 2011 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, 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 Schuylerville, Stillwater, 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 uses groundwater from a well field near the Hudson River for its municipal water supply. Water from the well field services the Village of Stillwater and portions of the Town of Stillwater. PCBs have been detected in that groundwater at levels below the drinking water standard of 500 ng/L. EPA and the NYSDOH have concluded that Stillwater's aquifer is under the influence of the Hudson River, and that contingency measures are needed to protect Stillwater's water supply from increased PCB levels that may result from dredging operations. EPA installed and operated a granulated activated carbon (GAC) system as a contingency measure for Phase 1. The Phase 2 CHASP Scope requires GE to describe the steps GE will take to ensure that the GAC system is operated and maintained until an alternate water supply connection from the Saratoga County Water Authority to the Village of Stillwater has been constructed, and it has been approved for use by NYSDOH. The Phase 2 CHASP Scope further requires GE to describe the steps GE will take to ensure that the alternate water supply connection is put in place. To address these contingencies, GE will fund either Stillwater or the United States for the operation and maintenance of the existing GAC system for a period of up to three months after the waterline has been constructed and approved by NYSDOH. With respect to construction of the waterline, Stillwater has designed the new waterline and is proceeding with plans to construct it. GE will contribute towards the cost of the design and construction in an amount to be determined through discussions with EPA and/or Stillwater.

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 2011 PSCP.

9.3.2 Non-Municipal Water Intakes

Those intakes that are being used to provide river water in the home for drinking or other household use have been offered bottled water delivery service and/or bulk potable water delivery. 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 will coordinate with NYSDOH to inform 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 including through the project website (www.hudsondredgingdata.com).

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 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 will, at a minimum, 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 distributed electronically, mailed to the project mailing list, 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.

10.1.1.2 Project Web Site (www.hudsondredging .com)

Information about the status of the project will be available via the Internet on the project Web site. This Web site is the most comprehensive source of project-related information and 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 Listserv/Mailing List

An electronic listserv is the fastest way to get the most up-to-date information to a large number of interested parties. GE has established a listserv for this project. Recognizing that many individuals do not have access to or do not use the Internet, the project team also will mail communications to interested members of the public (see Section 10.1.1.6). The names and addresses on the project listserv 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)

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).

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 any Notices on the 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 provide 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 will be posted on the project Web site, and will be distributed via listserv, if appropriate, 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.

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)

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.

10.2.1.4 Mariner Complaint Form

Recreational boaters traveling through the Upper Hudson may not have access to a cellular phone or radio to register a complaint regarding river navigation. Mariners will be encouraged to communicate complaints by completing a Mariner Complaint Form, which will be made available at locks and area marinas. The complaint form will be developed in consultation with NYSCC.

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.

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 conduct an investigation to determine whether the subject of the complaint is project-related.

If 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_2S 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_2S, 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.

Reporting of Complaints

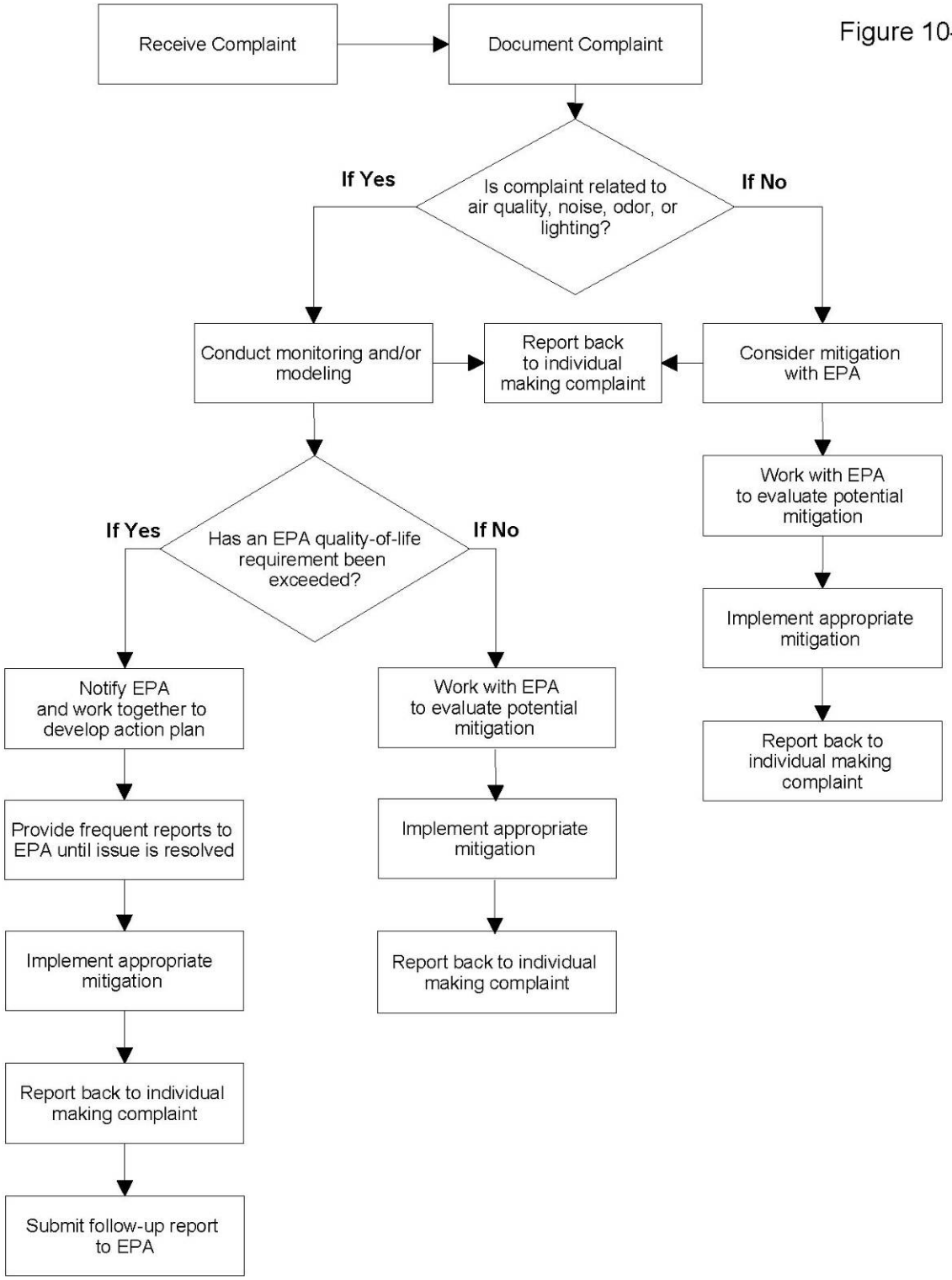
If a complaint is critical (i.e., the individual registering the complaint is claiming a severe impact), GE will inform the complainant within 24 hours, no matter when the initial complaint was received, of efforts to address the complaint. If the complaint is not critical (i.e., the individual registering 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 provide a verbal summary of complaints received, related communications and response actions, if any, to EPA at the weekly progress meeting. overall written summary of complaints received, related communications, and response actions, if any, will be provided to EPA on a monthly basis.

Process for Responding to Complaints

Figure 10-1



SECTION 11

REFERENCES

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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.

ATTACHMENTS

ATTACHMENT 1

CONSTRUCTION MANAGER CONTACT INFORMATION

Project Safety Personnel	Name/Contact	Telephone Numbers
Project Construction Manager	Larry Hartman	303-668-3170
Project Safety Manager	PD Frey	518-470-7067
Processing Facility Site Manager	Mark Murphy	518-232-0493
Processing Facility Safety Representative	Joe Montinieri, CSP	518-361-7597
River Operations Manager	Carl Jakob	518-705-3145
Dredging Safety Representative	Joe Gallivan	518-365-4520
Other Project Safety Representatives	Chris Boehm	518-528-3116
Contractor PM/Safety Representatives:	**K30 – Processing Facility Operations** Sid Archinal – Project Director John Waechter - PM James Bolden – SSO	 609-588-6305 518-378-3679 865-548-7870
	K40 – Dredging Operations Norm Bourque - PM Stu Chandler - SSO **K50-Habitat Construction** (Contractor TBD)	 617-584-0444 781-413-7510
	K60 – Rail Yard Operations (Contractor TBD) **Arcadis** J. Paul Doody, PE - PM Doug Weeks – SSO **Anchor QEA, LLC** Mark LaRue - PM Kevin Ballou – SSO	 315-671-9237 518-452-7826 x11 315-453-9009 518-792-3709

Notes

CSP, CIH = Certified Safety Professional, Certified Industrial Hygienist
TBD = To Be Determined
PM = Project Manager
SSO = Site Safety Officer
SSR = Site Safety Representative
CHST = Construction Health & Safety Technician

ATTACHMENT 2

PROJECT EMERGENCY EQUIPMENT

Equipment Description[1]	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[2]	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.

ATTACHMENT 3

EMERGENCY CONTACT INFORMATION

Emergency Contact	Contact Name	Emergency No.	Alternate No.
Canadian Pacific Railway Police Communication Ctr.	N/A	800-716-9132 Dial 1	518-383-7200 Press (1) for Railway Police
Ft. Edward Police Department	Chief of Police Walter Sandford	911	518-747-6365 Station 518-747-2782 Cell
Ft. Edward Rescue Squad	Tom Bover	911	518-747-6198 Squad 518-361-5361Cell
Ft. Edward Fire Department	Chief, Matt Hurlburt	911	518-747-8309 Station 518-796-6735 Cell 518-7796-6735 Home
Gansevoort Fire Department	Chief, Kurt Haas	911	518-792-4396 Squad 518-488-1265 Cell 518-683-5111 Home
Kingsbury Fire Department	Chief, James Brunnelle	911	518- 955-0377 -Cell 518-747-4990 Fire House
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	911 note: no emergency response	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 866-881-2809 Emergency
New York State Department of Health	Deanna Ripstein, Project Manager After-hours Duty Officer	N/A	518-402-7860 866-881-2809
New York State Department of Health (Glens Falls)	Kristine Wheeler	518-542-5782	518-793-3893
New York State Police	Troop “G” Headquarters	N/A	518-783-321Office 518-477-9333 Emergency Dispatch
New York State Police	Troop “T” Headquarters	N/A	518-436-2825 Local 518-433-4924 Dispatch 800-842-2233 Emergency Dispatch

ATTACHMENT 3
(continued)

EMERGENCY CONTACT INFORMATION

Emergency Contact	Contact Name	Emergency No.	Alternate No.
New York State Spill Response Program	Janet Crawford, Coordinator Spill Hotline 24 hour	N/A	800-457-7362
Poison Control Center	N/A	800-222-1222	N/A
Saratoga County HAZMAT	Mike Aufiero	911	518-885-2232 Office 518-885-5415 Home
Saratoga County Office of Emergency Services	Director Paul Lent	N/A	518-885-2232 Station
Saratoga County Sheriff	James Bowen, Sheriff	911	518-885-2450 518-885-6761 Dept
South Glen Falls Fire Company	Chief Peter Corlew	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
U.S. Coast Guard (Station Burlington, VT)	N/A	911	802-864-6791 Emergency 802-951-6792 Station
U.S. Environmental Protection Agency	Hudson Falls Field Office Director, David King	N/A	518-747-4389 Office 518-321-7239 Cell
U.S. Environmental Protection Agency	Hudson River Team Leader, Doug Garbarini	N/A	212-637-4288
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 Dispatch 518-796-1749 Cell 518-747-0472 Home
Washington County Sheriff	Undersheriff, Matthew Mabb	911	518-746-2475 Station 518-744-5139 Cell 518-747-0126 Home

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[2]
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.

2 = If the incipient stage fire is successfully extinguished, notify the Fire Department.

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