



**US Army Corps  
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**Final  
Site Safety and Health Plan Addendum No. 2  
for  
Monitoring Well Decommissioning  
at the Former Lake Ontario Ordnance Works  
Niagara County, New York**

**Addendum No. 2 to the Final Site Safety and Health Plan (USACE, 2009a) for  
the Phase IV Remedial Investigation**

March 2013

*Prepared for:*

U.S. Army Corps of Engineers  
Baltimore District

Contract W912DR-06-D-0002  
Delivery Order 0009

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Final  
Site Safety and Health Plan Addendum No. 2 for Monitoring Well Decommissioning  
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### COMPLETION OF SENIOR TECHNICAL REVIEW

This document has been produced within the framework of the ERT, Inc. (ERT) quality management systems. As such, a senior technical review, as defined in the Quality Control Plan (QCP) for this project, has been conducted. This included review of the overall design addressed within the document, proposed or utilized technologies and alternatives and their applications with respect to project objectives and framework of United States Army Corps of Engineers regulatory constraints under the current Defense Environmental Restoration Program - Formerly Used Defense Sites No. C02NY0025 project, within which this work has been completed.



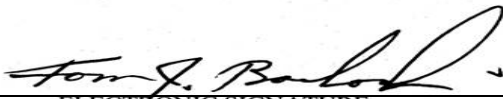
Michael W. Barsa; 301-323-1447  
Senior Technical Reviewer (ERT)

24 February 2013

Date

### COMPLETION OF INDEPENDENT TECHNICAL REVIEW

This document has been produced within the framework of ERT's total quality management system. As such, an independent technical review, appropriate to the level of risk and complexity inherent in the project as defined in the QCP for this project, has been conducted. This included review of assumptions (methods, procedures, and material used in analyses), alternatives evaluated; the appropriateness of data used and level of data obtained; and reasonableness of the results, including whether the product meets the project objectives. Comments and concerns resulting from review of the document have been addressed and corrected as necessary.



Thomas Bachovchin; 301-323-1442  
Independent Technical Reviewer (ERT)

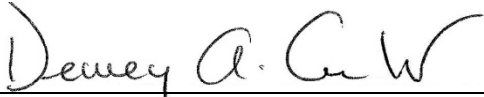
24 February 2013

Date

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### CERTIFICATION

By signing the APP, the ERT Program Certified Industrial Hygienist (CIH) certifies that all personnel designated within this plan have completed the required occupational safety and health courses and are qualified, by both training and experience, to serve as Occupational Safety and Health Administration Competent Persons for the Monitoring Well Decommissioning at the Former Lake Ontario Ordnance Works, Niagara County, New York.



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Dewey Cubit, CIH; 301-696-8501  
ABIH No. CP1254

26 February 2013

Date

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## LIST OF ACRONYMS AND ABBREVIATIONS

ANSI	American National Standards Institute
BZ	breathing zone
CFR	Code of Federal Regulations
CIH	Certified Industrial Hygienist
CRZ	contamination reduction zone
EM	Engineering Manual
ERT	ERT, Inc.
ES&H	employee safety and health
EZ	exclusion zone
ft	foot or feet
FTL	Field Team Leader
LOOW	Lake Ontario Ordnance Works
MSDS	Material Safety Data Sheet
MW	monitoring well
No.	number
NYSDEC	New York State Department of Environmental Conservation
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
PID	photoionization detector
PgM	Program Manager
PM	Project Manager
PPE	personal protective equipment
ppm	parts per million
QCP	Quality Control Plan
RI	Remedial Investigation
RSP	Radiation Safety Plan
SSHO	Site Safety and Health Officer
SSHP	Safety and Health Plan
SZ	support zone
USACE	U.S. Army Corps of Engineers
VOC	volatile organic compound

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## 1.0 INTRODUCTION

*This section has been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV Remedial Investigation (RI) activities is hereby replaced in its entirety by the following text.*

ERT, Inc. (ERT) has been contracted by the U.S. Army Corps of Engineers (USACE), Baltimore District (CENAB) to develop this Site-Specific Safety and Health Plan (SSHP) Addendum Number (No.) 2 for activities related to the monitoring well (MW) decommissioning at the Former Lake Ontario Ordnance Works (LOOW). This SSHP Addendum No. 2 establishes procedures to protect employees of ERT, subcontractors, USACE, and site visitors from potential safety and health hazards resulting from activities conducted during this project. This SSHP Addendum No. 2 is an addendum to the previously accepted Final SSHP (USACE, 2009a), although enough site-specific information has been included herein to minimize the need to refer to both documents during day to day field activities. This SSHP Addendum No. 2 has been developed in accordance with requirements set forth in:

- 29 Code of Federal Regulations (CFR) 1910.120 - the Occupational Safety and Health Administration (OSHA) Hazardous Waste Operations and Emergency Response Standard;
- 29 CFR 1926 - the OSHA Safety and Health Regulations for Construction;
- USACE Safety and Health Requirements Engineering Manual (EM) 385-1-1 (USACE, 2008),
- Contract information provided by USACE CELRB;
- The *Final SSHP* (USACE, 2009a)
- ERT's Corporate Health and Safety Program.

This SSHP Addendum No. 2 has been prepared in order to provide safe procedures and practices for personnel performing site work. All of the above mentioned documents have been incorporated into this SSHP Addendum No. 2, a copy of which will be available onsite for site workers. A crosswalk checklist of EM 385-1-1 requirements and their location within this plan is provided in **Appendix A**. This SSHP Addendum No. 2 will also be transmitted to all site workers and subcontractors.

Elevated radioactivity is not expected to be encountered during the activities; however, a Radiation Safety Plan (RSP) (USACE, 2009b) has previously been developed to outline procedures for providing radiological screening. The accepted RSP (USACE, 2009b) has been produced under a separate cover, but is incorporated by reference and will be maintained on site with this SSHP Addendum No. 2.

### 1.1 Site History

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

## 1.2 Project Description

*This section has been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities is hereby replaced in its entirety by the following text.*

The overall project objective for these decommissioning activities is the removal of 24 unnecessary or unmaintained/damaged MWs at the former LOOW. This MW decommissioning effort will remove any potential preferential pathway to groundwater, and minimize potential adverse environmental effects due to unprotected, neglected, and/or improperly abandoned MWs. Proper decommissioning will also prevent any unprotected and/or neglected MW from contributing to the unwanted mixing of groundwater and/or degradation of water quality within an aquifer. In addition, decommissioning removes MW construction materials to prevent interference with potential future construction and/or excavation activities that may occur at the site. Detailed procedures for MW decommissioning can be found in the *Preliminary Draft Groundwater Monitoring Well Decommissioning Work Plan* (USACE, 2012).

## 1.3 ERT Corporate Safety and Health Policy

*This section has been amended. The corresponding section in the Final Site SSHP (USACE, 2009a) for the Phase IV RI activities is hereby replaced in its entirety by the following text.*

ERT's Safety and Health Program specifies that all ERT personnel are responsible for their safety and the safety of those working with them. However, it is also stated that the ultimate employee safety and health (ES&H) responsibility begins with the President of ERT and this responsibility radiates outward to all management, administrative, operations, and field personnel. To achieve this philosophy, ERT empowers employees and subcontractors with stop work authority regarding known or potential ES&H issues. Additionally, all ERT personnel are held accountable for performing their assigned tasks in a manner that promotes continuous, active hazard evaluation and safe task performance.

## 1.4 Project Safety and Health Program

*This section has not been amended. The corresponding section in the Final Site SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*



## 2.0 ORGANIZATION OF PERSONNEL

<u>Role</u>	<u>Person</u>	<u>Contact Information</u>
Corporate Health and Safety Manager	Dewey Cubit	(301) 696-8501
Division Health and Safety Manager	Alison Harwood	(301) 323-1390
ERT Project Manager (PM)	Sean Carney	(301) 323-1444
ERT Deputy PM	Brian McCarthy	(301) 323-1406
ERT Field Team Leader (FTL)	Brian Kolodne	(301) 323-1390
ERT Site Safety and Health Officer (SSHO)	Michael Barsa	(301) 323-1447
USACE Project Manager	Mick Senus	(716) 879-4309
USACE Technical Manager	Jim Stachowski	(716) 879-4252

Training certifications/qualifications for key staff are included in **Appendix C**. All training certifications for field personnel will be up to date prior to the start of field activities.

### 2.1 Program Manager

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

### 2.2 Project Manager

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

### 2.3 Deputy Project Manager

*This section has been included in this addendum only and is not present in the original Final SSHP (USACE, 2009a) for the Phase IV RI activities.*

The Deputy PM will be responsible for assisting the PM with overall direction, implementation, and enforcement of health and safety requirements.

### 2.4 Field Team Leader

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

### 2.5 Site Safety and Health Officer

*This section has been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities is hereby replaced in its entirety by the following text.*

The SSHO will be onsite throughout the project and will be responsible for daily compliance with the site safety and healthy requirements. The SSHO will have the following responsibilities:

- Monitors compliance with the Final SSHP (USACE, 2009a) and addenda;
- Ensures all site activities are performed in a manner consistent with ERT's Corporate Health and Safety Program and the SSHP (USACE, 2009a) and addenda;
- Directs daily health and safety activities on site;

- In conjunction with the PM and DPM, ensure that all ERT's personnel and subcontractors designated to work at the project sites are qualified according to ERT's medical surveillance and project training requirements;
- Reports all incidents, accidents, and near misses to the FTL, PM, and USACE PM or Authorized Site Representative and completes or oversees completion of Accident/Incident Report forms (**Appendix D**);
- Maintains health and safety equipment onsite;
- Inspects ongoing activities, and report any health and safety deficiencies to the FTL and PM;
- Accompany or maintain communication with the work crew;
- Perform site monitoring to ensure that site personnel are adequately protected; and
- Conduct initial site-specific health and safety meeting and daily tailgate health and safety meetings for site personnel.

## **2.6 Environmental Field Technician**

*This section has been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities is hereby replaced in its entirety by the following text.*

ERT's FTL will be responsible for the direction and oversight of decommissioning activities at the former LOOW. In total, 24 groundwater MWs will be decommissioned in accordance with New York State Department of Environmental Conservation's (NYSDEC) guidance document, *CP-43: Groundwater Monitoring Well Decommissioning Policy* (NYSDEC, 2009) and as outlined in the Monitoring Well Decommissioning Work Plan (USACE, 2012) prepared by ERT.

## **2.7 Field Personnel**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

## **2.8 Subcontractors**

*This section has been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities is hereby replaced in its entirety by the following text.*

The drilling subcontractor to be utilized for MW decommissioning is Parratt Wolff, Inc. The subcontractor supervisor and staff will follow, at a minimum, the procedures and reporting requirements specified in this plan. If at any time, the FTL or SSHO feels the subcontractor is disregarding safe work practices, work will be stopped and the subcontractor supervisor will be notified immediately to implement corrective actions. If unsafe work practices continue by the subcontractor, to the SSHO will stop work, and the subcontractor will be requested to leave the site by the FTL. ERT's contract manager will also terminate their subcontract agreement if the subcontractor cannot resolve the issues to satisfaction of the ERT PM.

## **2.9 Visitors**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

### **3.0 REQUIRED TRAINING AND MEDICAL SURVEILLANCE**

#### **3.1 General Safety and Health Training**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

#### **3.2 Site-Specific Training**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

#### **3.3 Medical Surveillance**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

#### **3.4 First Aid/CPR**

*This section has been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities is hereby replaced in its entirety by the following text.*

Members of the ERT field team certified in First Aid and CPR are as follows:

- Brian Kolodne, FTL
- Michael Barsa, SSHO,
- Brian P. McCarthy, Deputy PM

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## 4.0 GENERAL SAFETY REQUIREMENTS

### 4.1 SSHP Acknowledgement

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

### 4.2 Onsite Coordination

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

### 4.3 General Safety Rules

*This section has been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities is hereby replaced in its entirety by the following text.*

The general safety rules listed below apply to ERT and subcontractor personnel present at the former LOOW.

- Under no circumstance will field activities be conducted unless a competent person is present and aware of the activity;
- Eating, drinking, and smoking are prohibited on site, except in designated areas;
- All municipal wastes will be collected in dedicated trash canisters and removed from the site at the end of each work day and disposed of at an appropriate facility;
- All onsite personnel must wear protective clothing appropriate for designated level of protection, further discussed in **Section 8.0**, and personnel shall wash hands before eating and at the completion of work activities;
- Adequate lavatory facilities and wash stations will be provided to site personnel, in accordance with applicable OSHA regulation;
- A first-aid kit that conforms with requirements outlined in the USACE Safety and Health Requirements EM 385-1-1 (USACE, 2008) will be maintained; and
- All accidents, injuries, or possible exposures will be reported to the SSHO immediately and an incident report form will be completed. A copy of the incident report form is included in **Appendix D** of the accepted Final SSHP (USACE, 2009a).

#### 4.3.1 Buddy System

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

#### 4.3.2 Disciplinary Procedure

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

#### 4.3.3 Alcohol and Drug Abuse Prevention

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

#### 4.4 Site Sanitation

*This section has been included in this addendum only and is not present in the original Final SSHP (USACE, 2009a) for the Phase IV RI activities.*

Potable water (i.e. commercially-available bottled water) will be available to allow field personnel to perform personal hygiene functions. Municipal trash will be kept in contractor grade garbage bags and removed from the site at the end of each work day.

## 5.0 ACTIVITY HAZARD ANALYSIS

*This section has been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities is hereby replaced in its entirety by the following text.*

The potential hazards associated with the project site include chemical, physical, and biological hazards. The potential for encountering chemical hazards will depend on the types and quantities of chemicals present and the type of work being performed. All personnel hours will be documented in the daily log book to track the number of man-hours and potential exposure. The potential for encountering physical and biological hazards will depend on the location and type of work being performed. The hazard assessment in this section is intended to communicate to site personnel the chemical, physical, and biological hazards and risks associated with site work. Activity Hazard Analyses are provided in **Appendix E** of this document.

### 5.1 Radiological Hazards

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

### 5.2 Asbestos Containing Material Hazards

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

### 5.3 Chemical Hazards

*This section has been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities is hereby replaced in its entirety by the following text.*

The general contaminants of concern at LOOW, as they pertain to MW decommissioning, are:

- Volatile Organic Compounds (VOCs)

The main routes of exposure for field personnel include:

- Inhalation of contaminant vapors;
- Inhalation of contaminated particulate matter;
- Ingestion of contaminated material; or
- Dermal absorption of contaminated material.

Due to the nature of the contaminants, local features, and type of site activities planned:

- There is a moderate to high potential for inhalation of contaminated particulate matter
- There is a low to moderate potential for ingestion of contaminated material; and
- There is a moderate potential for dermal contact with contaminated material.

Site personnel can reduce their exposure potential by:

- Using the proper personal protective equipment (PPE), which is discussed in **Section 8.0**;
- Avoid standing downwind of dust;
- Practicing contamination avoidance;
- Following proper decontamination procedures; and
- Observing good personal hygiene.

A complete list of potential chemicals of concern which may have been utilized during previous DoD activities at the former LOOW is provided in **Table 5-1** of the accepted Final SSHP (USACE, 2009a).

### **5.3.1 Volatile Organic Compounds**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

### **5.3.2 Trinitrotoluene**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

## **5.4 Physical and Biological Hazards**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

### **5.4.1 General Physical Hazards**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

### **5.4.2 Fire/Explosion Hazards**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

### **5.4.3 Noise Hazards**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

### **5.4.4 Electrical Hazards**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

### **5.4.5 Utilities**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

### **5.4.6 Weather Hazards**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*



#### **5.4.7 Cold Stress**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

#### **5.4.8 Heat Stress**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

#### **5.4.9 Material Handling/Moving/Lifting**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

#### **5.4.10 Brush Clearance**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

#### **5.4.11 Slips, Trips, Falls**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

### **5.5 Biological Hazards**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

#### **5.5.1 Poisonous Plants**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

#### **5.5.2 Insect Bites/Stings**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

#### **5.5.3 Animal Bites**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

#### **5.5.4 Bacteria**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

#### **5.5.5 Humans**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

### **5.6 Hazard Communication**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

## 5.7 CWM Emergency Response Procedures

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

## 6.0 SITE ACCESS

Site access will be coordinated with the USACE Technical Manager or Authorized Site Representative who will notify the current property owners and schedule access for ERT and its subcontractors to perform decommissioning activities.

### 6.1 Site Control

*This section has been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities is hereby replaced in its entirety by the following text.*

During well decommissioning, the following activities will be performed:

- Site reconnaissance;
- Mobilization and demobilization to/from the site;
- Brush clearing;
- Well decommissioning;
- Drum handling; and
- Decontamination procedures

#### **6.1.1 Activities Not Requiring Work Zones**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

#### **6.1.2 Activities Requiring Work Zones**

*This section has been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities is hereby replaced in its entirety by the following text.*

MW decommissioning will require the establishment of work zones.

The three separate work zones that will be established for each of these activities include:

- The exclusion zone (EZ) ;
- The contamination reduction zone (CRZ); and
- The support zone (SZ).

The EZ for MW decommissioning will consist of a radius equal to the height of the mast of the drill rig from MW locations. The EZ for non-essential personnel during brush clearance will consist of a 15-foot (ft) radius. Exclusion zones will also be verbally explained and maintained to site visitors or onlookers. Proper PPE will be worn when working in the EZ (**Section 8.0**). The radius of the EZ may be expanded or decreased based on site conditions and as deemed appropriate by the SSHO.

The CRZ shall be immediately adjacent to the EZ and shall have contractor bags for used disposable supplies. In the event that that personnel decontamination is necessary, the process will consist of removing and disposing of PPE or removal and bagging of soiled outer garments (e.g., coveralls), if worn. A portable eye wash station in compliance with EM-385-1-1 (USACE, 2008) will be available in the CRZ.

If elevated levels of contaminants are encountered, as discussed in **Section 8.3**, work will stop and the site will be evaluated. If protection is to be upgraded, the EZs and CRZs shall become more stringent and visually demarcated. The EZ will be located within 25 ft of MW decommissioning activities if respiratory protection is required. The CRZ will be expanded to include a non-phosphate detergent scrub station and potable water rinse station prior to removing and disposing of chemically protective coveralls, boot covers, and outer gloves.

The parking area for the site vehicles at each decommissioning location will serve as the SZ for that location. ERT site vehicles will contain emergency response equipment, including phone and first aid supplies. There will be no temporary construction buildings for this project; therefore the following items will not be required:

- Facilities;
- Fencing;
- Anchoring systems for temporary structure;
- Access routes to the temporary structure;
- Spacing requirements;
- Temporary power; and
- Temporary ramp, trestle, scaffold and platform approval.

## **7.0 SAFETY MEETINGS**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

### **7.1 Pre-Entry Briefing / Daily Safety Meeting**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

### **7.2 Daily Safety Meeting**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

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## **8.0 PERSONAL PROTECTIVE EQUIPMENT AND ENVIRONMENTAL MONITORING PROGRAM**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

### **8.1 General PPE Requirements**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

### **8.2 Initial Requirements/Upgrade or Downgrade of PPE Levels**

*This section has been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities is hereby replaced in its entirety by the following text.*

Based on evaluation of the potential safety and health hazards, the required initial PPE level is Level D. The following field activities will require Level D PPE:

- Site reconnaissance;
- Mobilization and demobilization to/from the site;
- Brush clearance
- Well decommissioning;
- Drum handling; and
- Decontamination procedures

Level D protection will be the minimum protection used for field operations. The following are the minimum requirements for Level D:

- Steel-toe, steel-shank safety shoes/boots;
- Hard hat that meets American National Standards Institute (ANSI) Standard Z80.1-1986 (for use during well decommissioning if overhead hazards exist);
- Leather work gloves (as appropriate);
- Safety glasses;
- Hearing protectors (when noise hazards are present or as required by SSHO);
- Poly-coated coveralls (when splash hazards are present or contact with heavily contaminated water is expected)

If an upgrade in PPE is required, Level C protection is the anticipated upgrade level of protection. The following are the requirements of Level C:

- Full-face or half-mask, air purifying respirators with organic cartridges (National Institute for Occupational Safety and Health approved);
- Hooded chemical-resistant clothing (overalls; two-piece chemical-splash suit; disposable chemical-resistant overalls);
- Safety glasses;

- Coveralls (optional as applicable);
- Gloves, outer, chemical-resistant;
- Gloves, inner, chemical-resistant;
- Boots (outer), chemical resistant and steel toe shank;
- Boot covers, outer, chemical resistant (disposable) (optional as applicable);
- Hard hat that meets ANSI Standard Z80-1-1986 (for use during monitoring well [MW] decommissioning if overhead hazards exist; and
- Escape mask (optional as applicable).

### **8.3 Real-Time Monitoring**

*This section has been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities is hereby replaced in its entirety by the following text.*

Photoionization detector (PID): Real-time monitoring for VOCs will be conducted using a PID. The PID will be used to monitor employee breathing zones during all MW decommissioning activities. Monitoring the employee's breathing zone will be conducted at least every 15 minutes until the SSO determines a more applicable schedule. VOCs will be monitored using a RAE Systems, Inc. MiniRAE 3000, or its equivalent, with a 10.6 electronvolt lamp. The MiniRAE 3000 has a detection limit of 0.1 parts per million (ppm) as isobutylene.

Calibration of Real-Time Monitoring Equipment: Monitoring and calibration protocols will be performed in accordance with the manufacturer's guidelines. Calibration will be performed, at a minimum, prior to each day's use. A copy of the PID's manual will be kept in the SZ. The PID will be calibrated using a 100 ppm isobutylene span gas concentration.

### **8.4 Action Levels**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

### **8.5 Inspection and Maintenance of Protective Equipment**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*



## 9.0 SPILL CONTAINMENT

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

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## 10.0 DECONTAMINATION

*This section has been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities is hereby replaced in its entirety by the following text.*

All personnel are required to maintain the appropriate level of PPE (Level D currently anticipated) at all times while onsite. Appropriate PPE will minimize potential exposure to site chemicals. Decontamination procedures shall be consistent with those described in 29 CFR 1910.120.

Dedicated disposable PPE, such as nitrile gloves will be used only once and properly disposed of in a dedicated receptacle. Dedicated disposable PPE will not be reused under any circumstance.

Most chemical hazards associated with the proposed MW decommissioning activities can be mitigated by the appropriate use of PPE and proper hygiene (regular bathing for at least 15-minutes for non-localized exposures). Prior to engaging in break activities such as drinking and eating, and upon completion of each work day, personnel should remove and discard all dedicated disposable PPE and properly wash all exposed areas, including hands and face, with warm potable water and mild soap. Reusable PPE (e.g. respirators) should be decontaminated as per the applicable manufacturer's requirements. Clothes should be laundered and/or machine washed prior to reuse.

In the events that minor cuts occur, affected areas should be cleaned with warm water and soap. Dry the area; apply disinfectant and proper first aid dressings. It may be necessary to use swabs in order to effectively clean impacts to the affected area.

In the event heavy localized chemical exposure occurs contact the appropriate emergency personnel immediately (**Appendix G** of the Final SSHP [USACE, 2009a]). Consult the provided Material Safety Data Sheet (MSDS) for other pertinent information related to the chemical of concern and potential exposure remedies (**Appendix F** of this SSHP Addendum No. 2 [USACE, 2009a]).

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## 11.0 EMERGENCY RESPONSE PLAN

### 11.1 Emergency Response Plan

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

### 11.2 Emergency Response Equipment

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

### 11.3 Communication

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

### 11.4 Pre-Planning

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

### 11.5 Emergency Incident Procedures

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

### 11.6 Emergency Notification Procedures

*This section has been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities is hereby replaced in its entirety by the following text.*

Emergency telephone numbers and directions to the nearest hospital are provided in **Table 11-1** (USACE, 2009a) and **Appendix G** of this SSHP Addendum No. 2, along with maps showing the routes to the nearest hospitals. Emergency telephone numbers and directions to the nearest hospital will also be placed in the back cover of the binder containing this SHHP Addendum No. 2. The field personnel will immediately stop work and report to the FTL under the following potential emergency situations:

- Medical emergency;
- Discovery of unanticipated hazards (e.g., drums, heavily contaminated materials, etc.);
- Overexposure of personnel to onsite contaminants;
- Cold/heat-related injury or heat stress;

Onsite emergencies may ultimately be handled by offsite emergency support personnel. Initial response and first-aid treatment, however, will be available through onsite personnel. In case of a hazardous materials emergency, the FTL will assume control and direction of the emergency response until arrival of off-site emergency personnel. The FTL will work with the SSHO to identify and evaluate hazards. Emergency responders and communications will be coordinated and controlled through the FTL.

In the event of an emergency, the information available at that time will be properly evaluated and the appropriate steps will be taken to implement the emergency response procedures. The

FTL (or SSHP if the FTL is part of the emergency) will assume command of the situation. He/she will call the appropriate emergency services, evacuate personnel to the pre-designated evacuation location, determined by the SSHP at daily safety meeting, as needed, and take other steps necessary to gain control over the emergency.

Provide the following information when reporting an emergency:

1. Name and location of person reporting;
2. Location of accident/incident;
3. Name and affiliation of injured party;
4. Description of injuries, fire, spill, or explosion;
5. Status of medical aid and/or other emergency control efforts;
6. Details of chemicals involved;
7. Summary of accident, including suspected cause and time it occurred; and
8. Temporary control measures taken to minimize further risk.

This information will not be released to parties other than those listed in this section and emergency response team members. After emergency response agencies have been notified and supplied appropriate response information, the ERT PM will be notified. The ERT PM will immediately notify the USACE PM and the Contracting Officer's Representative (COR) of all incidents, no matter how severe, as soon as possible, but no later than four hours.

<b>Table 11-1. Emergency Contact/Notification System</b>		
<b>Organization</b>	<b>Agency</b>	<b>Telephone</b>
Ambulance	Not applicable	911
Police	Not applicable	911
Fire	Not applicable	911
Hospital 1	Mount St Mary's Hospital	(716) 297-4800
Poison Control Center	New York Poison Control	(800) 222-1222
Regional NYSDEC	Region 9 Office	(716) 851-7220
<i>Legend:</i> NYSDEC = New York State Department of Environmental Conservation		

**11.7 Personnel Injury/Medical Emergency**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

**11.8 Fire/Explosion Emergencies**

*This section has not been amended. The corresponding section in the Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

## 12.0 REFERENCES

- NYSDEC, 2009. NYSDEC Guidance Policy, *CP-43: Groundwater Monitoring Well Decommissioning Policy*. November.
- USACE, 2008. USACE Engineering Manual 385-1-1, *Safety and Health Requirements*. September.
- USACE, 2009a. *Final Safety and Health Plan for Phase IV Remedial Investigation/Feasibility Studies at the Former Lake Ontario Ordnance Works, Niagara County, New York*. June. Prepared by ERT.
- USACE, 2009b. *Radiation Safety Plan Addendum for Phase IV Remedial Investigation/Feasibility Studies at the Former Lake Ontario Ordnance Works, Niagara County, New York*. January. Prepared by ERT.
- USACE, 2012. *Preliminary Draft Groundwater Monitoring Well Decommissioning Work Plan, Former Lake Ontario Ordnance Works Sites, Niagara County, New York*. December. Prepared by ERT.

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**APPENDIX A**  
**Checklist of EM 385-1-1 Requirements**  
**(REVISED)**

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## **APPENDIX B**

### **Site Entry and Exit Log**

*This appendix has not been amended. The Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

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**APPENDIX C**  
**SSHP Compliance, Review Record, and Training Records**  
**(REVISED)**

*This appendix has been amended. Appendix C for the Final SSHP (USACE, 2009a) is hereby replaced in its entirety by the following.*

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## **APPENDIX D**

# **Incident Reporting Form**

*This appendix has not been amended. The Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

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## **APPENDIX E**

### **Activity Hazard Analyses**

*This appendix has not been amended. The Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

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## **APPENDIX F**

### **MSDS Information**

*This appendix has not been amended. The Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

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## **APPENDIX G**

### **Emergency Contacts and Emergency Medical Care Locations**

*This appendix has not been amended. The Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

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## **APPENDIX H**

### **USACE Form 3394**

*This appendix has not been amended. The Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

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## **APPENDIX I**

### **ERT OSHA 300A Reporting Data**

*This appendix has not been amended. The Final SSHP (USACE, 2009a) for the Phase IV RI activities remains applicable.*

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