



## **PHASE II SITE-SPECIFIC SAFETY & HEALTH PLAN**

### **Non-Time Critical Removal Action Causeway Phase II**

*Building Demolition & Causeway Preparation*

**Stratford Army Engine Plant - Stratford, Connecticut**

Contract No. DAAD05-97-D-7004  
Delivery Order No. 0187

**OCTOBER 2001**

**Prepared by**

**ROY F. WESTON, INC.**  
148 Eastern Boulevard  
Glastonbury, Connecticut 06033

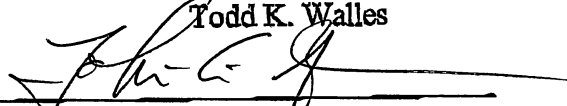
**Site Specific Health and Safety Plan  
Approval/Signoff Form  
Stratford Army Engine Plant  
Non-Time Critical Removal Action (NCRA)  
Phase II Causeway  
Stratford, Connecticut**

**SITE HEALTH AND SAFETY PLAN APPROVALS**

By their specific signature, the undersigned certify that this site specific HASP is approved for Phase II activities at the Stratford Army Engine Plant in Stratford, Connecticut.

Signature, Name, Title

WESTON - Regional Operations Manager  
Todd K. Wallis



Date

10/08/01

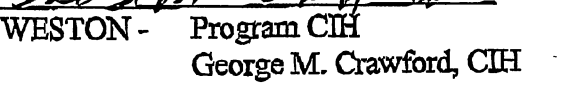
WESTON - Project Manager  
John-Eric Andersson



Date

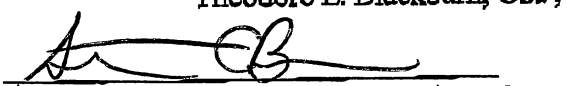
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WESTON - Program CIH  
George M. Crawford, CIH



Date

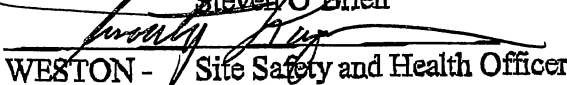
WESTON - Program Safety Manager  
Theodore L. Blackburn, CSP, CET



Date

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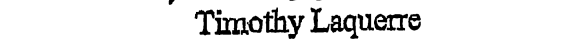
WESTON - Construction Superintendent  
Steven O'Brien



Date

10/18/01

WESTON - Site Safety and Health Officer  
Timothy Laquerre



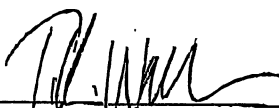
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Signature, Name, Title

  
WESTON - Regional Operations Manager  
Todd K. Walles

10/18/01  
Date

WESTON - Project Manager  
John-Eric Andersson

\_\_\_\_\_  
Date

WESTON - Program CIH  
George M. Crawford, CIH

\_\_\_\_\_  
Date

WESTON - Program Safety Manager  
Theodore L. Blackburn, CSP, CET

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WESTON - Construction Superintendent  
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WESTON - Site Safety and Health Officer  
Timothy Laquerre

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*[Faint signature and text, possibly a stamp or bleed-through]*

WESTON - Project Manager  
John-Eric Andersson

Date

WESTON - Program CIH  
George M. Crawford, CIH

Date

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WESTON - Program Safety Manager  
Theodore L. Blackburn, CSP, CET

10-19-01  
Date

WESTON - Construction Superintendent  
Steven O'Brien

Date

WESTON - Site Safety and Health Officer  
Timothy Laquerre

Date

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## LIST OF ACRONYMS

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AHA	Activity Hazard Analyses	RSM	Radiation Safety Manager
ANSI	American National Standards Institute	RSRs	Remediation Standard Regulations
APR	air-purifying respirator	SAEP	Stratford Army Engine Plant
AWQC	Ambient Water Quality Criteria	SAR	supplied-air respirator
BEST	Base Environmental Support	SCBA	Self-Contained Breathing Apparatus
BRAC	Base Realignment and Closure Act	SHSC	Site Health & Safety Coordinator
BZ	Breathing Zone	SSHASP	Site-Specific Health and Safety Plan
CENAE	U.S. Army Corps of Engineers, New England District	SSHSP	Site Safety and Health Plan
CGI	combustible gas indicator	SVOCs	semi-volatile organic compounds
CHMM	certified hazardous materials manager	VOCs	volatile organic compounds
CIH	Certified Industrial Hygienist	WESTON	Roy F. Weston, Inc.
COC	Contaminants of Concern		
CPR	cardiopulmonary resuscitation		
CTDEP	Connecticut Department of Environmental Protection		
dB	decibels		
DSHE	Directorate of Safety, Health and Environment		
ERCP	Emergency Response Contingency Plan		
FID	flame ionization detector		
FLDs	Field Operating Procedures		
ft <sup>2</sup>	square feet		
GFCI	ground fault circuit interrupter		
Harding	Harding ESE		
HWAC	Hazardous Waste Action Coalition		
IDLH	immediately dangerous to life or health		
LEP	Licensed Environmental Professional		
mg/kg	milligrams per kilogram		
mg/m <sup>3</sup>	milligrams per cubic meter		
MSDS	Material Safety Data Sheet		
msl	mean sea level		
NCRA	Non-Time Critical Removal Action		
NRC	Nuclear Regulatory Commission		
O <sub>2</sub>	oxygen		
OSHA	Occupational Safety and Health Administration		
PCBs	polychlorinated biphenyls		
PID	photoionization detector		
PMP	Project Management Professional		
PNOC	Particulates Not Otherwise Classified		
PPE	personal protective equipment		
QA	quality assurance		
QC	Quality Control		
RPT	Radiological Protection Technician		

# 1. INTRODUCTION

## 1.1 PROJECT DESCRIPTION

This Site-Specific Health and Safety Plan (SSHASP) was prepared by Roy F. Weston, Inc.® (WESTON) for the implementation of a Non-Time Critical Removal Action (NCRA) at the Causeway area (Causeway), Stratford Army Engine Plant (SAEP), Stratford, Connecticut. This project is being completed as part of the requirements under the Base Realignment and Closure Act (BRAC).

The work to be conducted under this plan will sequentially follow the Phase I Causeway activities, which are nearly completed. The purpose of this second phase of work (“Phase II”) is to install a permanent cover system over the Causeway area that will be protective of human health and the environment. The Phase II work activities will be completed in accordance with the 100% Design Documents (Harding ESE, August 2001). The overall work breakdown structure for Phase II Causeway activities includes the following: mobilization and set up of support facilities, heave monitoring, excavation and site preparation as part of the lower cover system installation, removal of oversized debris (if encountered), grading and establishment of design elevations, installation of the lower and upper cover systems, placement of a rip rap transition in between the cover systems, vegetative support layer placement, topographic survey completion, demobilization, and implementation of Environmental Land Use Restriction(s) or ELURs.

Specific tasks that are referenced and summarized in detail within the SSHASP include a description of the site, site background, personnel, contaminant characterization, field activities, site preparation, site work, confirmatory sampling, action levels and instrumentation, air monitoring, personal protective equipment (PPE) selection and hazard analysis.

An Emergency Response Contingency Plan (ERCP), located in Appendix A, describes actions that will be taken by WESTON site personnel in the event of an emergency.

The Site Specific Hazard Communications Program/Checklist, located in Appendix B, will be utilized in conjunction with the WESTON Written Hazard Communications Program to ensure an understanding of and compliance with the Hazard Communication Standard.

## 1.2 SITE DESCRIPTION AND BACKGROUND

The SAEP is located at 550 Main Street in Stratford, Fairfield County, Connecticut (see Figure 1-1). The SAEP occupies approximately 124 acres, with an estimated 76 acres of improved land housing 49 buildings, five paved parking lots, paved roadways and grounds, and an estimated 10 acres along the Housatonic river where fill was placed, including the Causeway. Between the early 1900s through 1998 the property was used for the manufacturing and testing of military and commercial engines. Other historical operations included the manufacturing and assembly of missile components, and industrial processes such as milling, fabricating, and plating.

The Causeway was originally built during the 1930’s to allow for seaplane access to the property, and was expanded in the 1950s and 1960s. The source of the fill used to construct the Causeway is currently unknown; however, previous investigations of the Causeway indicate that the fill material contains soil, cobbles, and



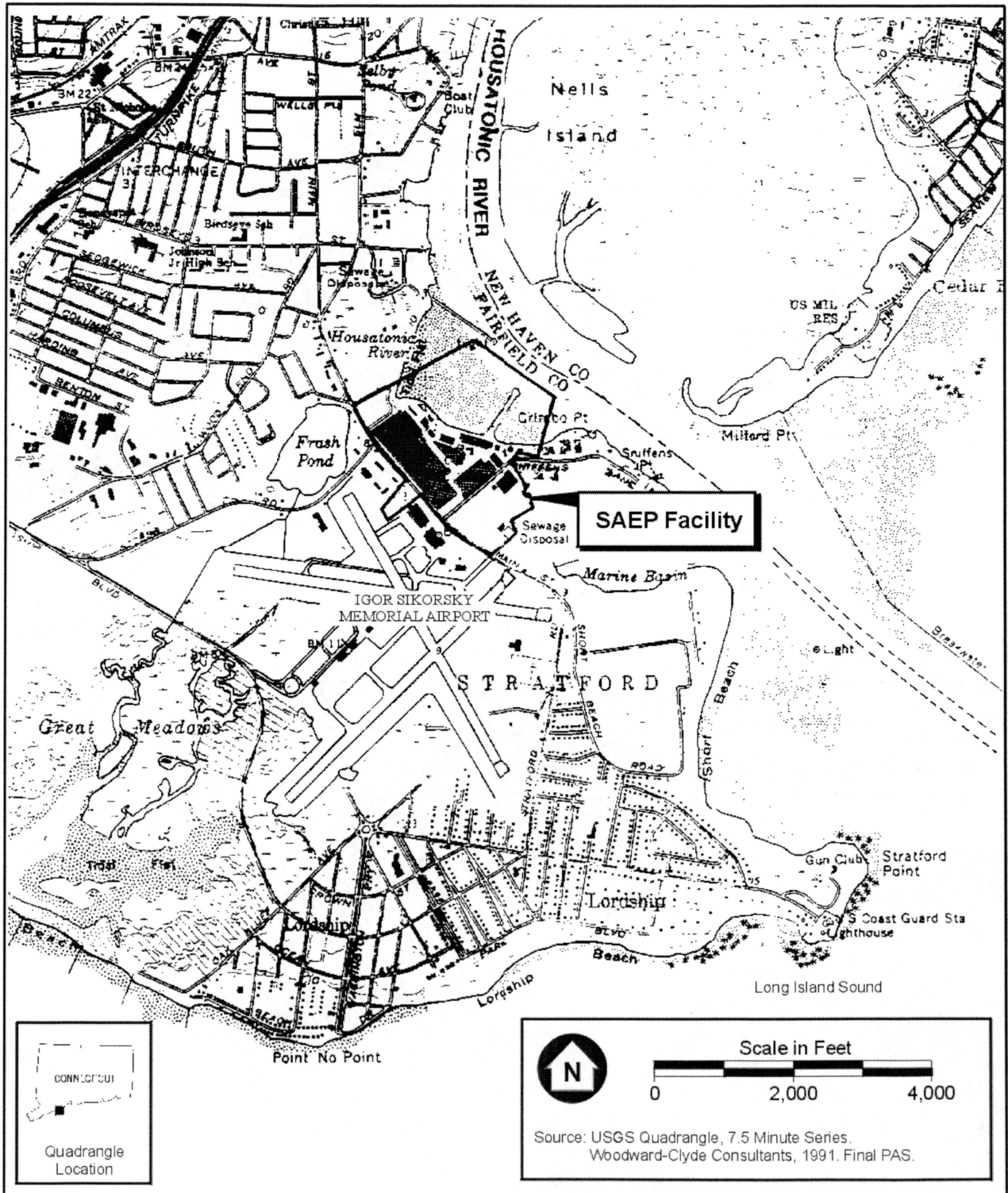
construction debris (concrete, brick, asphalt, wood, glass, cinders, ash, and rebar). Prior to beginning Phase I Causeway activities, scattered piles of oversized debris (primarily concrete and asphalt) were present and have since been removed from the site.

Additional material of unknown origin was reportedly deposited on the northern edge of the Causeway during the 1950s and 1960s. Harding ESE (Harding) advanced several soil borings along the Causeway and has collected soil and groundwater sample data. Contaminants of concern identified by Harding included volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and metals. Between April 2000 and May 2001, Foster Wheeler and Harding generated several investigation and engineering reports detailing site contaminants, past uses, and future plans for the Causeway portion of the site. The NCRA Basis of Design (Harding) dated May 2001 identifies six locations on the Causeway requiring soil removal due to concentrations of VOCs, SVOCs, vanadium, or zinc in excess of the Connecticut Remediation Standard Regulations (RSRs) Pollution Mobility Criteria, ten times the Groundwater Protection Criteria, or ten times the federal Ambient Water Quality Criteria (AWQC).

During the manufacture, testing, and development of high performance military engines, certain engine components were used that contained radioactive components, primarily thorium. While conducting these activities, the site was licensed by the Nuclear Regulatory Commission (NRC). According to Harding, low-level radioactive contamination was discovered during the geotechnical investigation work on the Causeway; however, the affected area was remediated by Honeywell in March 2000, and the NRC licensing has since been terminated.

Two dirt access roads extend along the length of the Causeway. WESTON has an existing temporary construction office and equipment laydown area established in Building No. 4 at the SAEP. The site is a secure facility with defined protocols for security clearances and access.

Figure 1-1  
Site Location Map



## 2. PERSONNEL

### 2.1 STAFFING AND RESPONSIBILITIES

All operations and personnel having the potential for exposure to site hazards are subject to the requirements of this SSHASP and the Site Safety and Health Plan (SSHP). Health and Safety roles and responsibilities for site personnel are described in the Site Safety and Health Plan. An organizational chart naming WESTON staff responsible for control and execution of this project is presented as Figure 2-1. A discussion of the roles and responsibilities of the key WESTON personnel is provided in the subsections that follow.

#### 2.1.1 Key Project Team Members

##### **ANTHONY RICCIO, Program Manager**

Mr. Riccio has more than 25 years of engineering and construction experience. He has worked extensively with the USACE, New England and New York Districts. Mr. Riccio will be an advocate for SAEP, and routinely solicit feedback on WESTON's performance. He will assist in reviewing deliverables, participating in site inspections and meetings, and conduct quality assurance (QA) reviews.

##### **TODD K. WALLEES, Regional Operations Manager**

Mr. Walles is a certified Project Management Professional (PMP), and has more than 16 years of experience at WESTON. Mr. Walles has the authority to direct resources, address contractual matters, and negotiate on behalf of WESTON. Mr. Walles will provide leadership and direction to ensure that project activities are conducted in a manner that is consistent with U.S. Army Corps of Engineers, New England District (CENAE) and SAEP objectives.

##### **JOHN-ERIC ANDERSSON, Project Manager**

Mr. Andersson is an experienced environmental professional in the areas of environmental compliance and remediation project management. In the role of Project Manager, Mr. Andersson will be responsible for the technical and operations management of safety, quality, schedule, resources, and costs. Mr. Andersson is qualified to act as an Alternate Site Health & Safety Coordinator (SHSC), as necessary.

##### **STEVEN O'BRIEN, Construction Superintendent**

Mr. O'Brien has more than 15 years of experience supervising the construction of environmental projects. On the SAEP Causeway project, Mr. O'Brien will supervise construction and direct on-site WESTON resources and subcontractors. His responsibilities will include managing the daily execution of work, recording of work progress, and coordination with CENAE, SAEP, Harding and other project representatives. Mr. O'Brien is qualified to act as an Alternate SHSC, as necessary. In addition, Mr. O'Brien is trained in cardiopulmonary resuscitation (CPR) and will be available in the field in case immediate help is needed.

##### **ANDREW HARRIS, Construction Quality Control**

Mr. Harris is experienced in performing remedial actions and in the preparation of technical specifications for demolition projects. He will be the Quality Control (QC) lead during implementation of Phase II. Prior to

mobilization, he will lead the preparation of project plans, permit reviews and procurement packages. He will also assist with project management, record keeping, and technical reports.

**TIMOTHY LAQUERRE, Site Health & Safety Coordinator**

Mr. Laquerre is an experienced safety and construction manager, with more than 12 years of experience. During Phase II, Mr. Laquerre will perform safety briefings, subcontractor oversight, safety inspections and record keeping, and task-specific supervision of the construction crew. In addition, Mr. Laquerre is trained in CPR and will be available in the field in case immediate help is needed.

**2.1.2 Project Support Specialists**

**JOSEPH WASIUK, P.E., Senior Construction/QC Manager**

Mr. Wasiuk has over 25 years of experience in environmental engineering and construction. On the SAEP Causeway project, he will assist the Project Team, as needed, to ensure the schedule and quality of WESTON's work. Mr. Wasiuk will conduct quality assurance reviews, participate in meetings, and inspect and review work in progress. In addition, Mr. Wasiuk will work closely with Mr. Andy Harris to ensure proper implementation of the QC program.

**DAVID COSTOLNICK, P.G., LEP, Technical Director**

Mr. Costolnick has more than 17 years of experience in the assessment, investigation, and remediation of hazardous waste sites. Mr. Costolnick is a Licensed Environmental Professional (LEP) in the State of Connecticut, a certified hazardous materials manager (CHMM) and has practical experience evaluating contaminated sites versus the Connecticut RSRs. Mr. Costolnick will review environmental data and consult with the team on an as-needed basis.

**GEORGE M. CRAWFORD, JR., CIH, Safety Manager**

Mr. Crawford has more than 30 years of experience in health, safety, industrial hygiene, hazardous materials response, and occupational health management. Mr. Crawford is the program-level Certified Industrial Hygienist (CIH) for all of WESTON's assignments under the Directorate of Safety, Health and Environment (DSHE) Base Environmental Support (BEST) contract and current CENAE contracts.

For the SAEP Causeway project, Mr. Crawford is the Health and Safety Director and Certified Industrial Hygienist. He will review and approve the SSHASP and assist with changes and amendments to the SSHP and other environmental compliance assurance reviews.

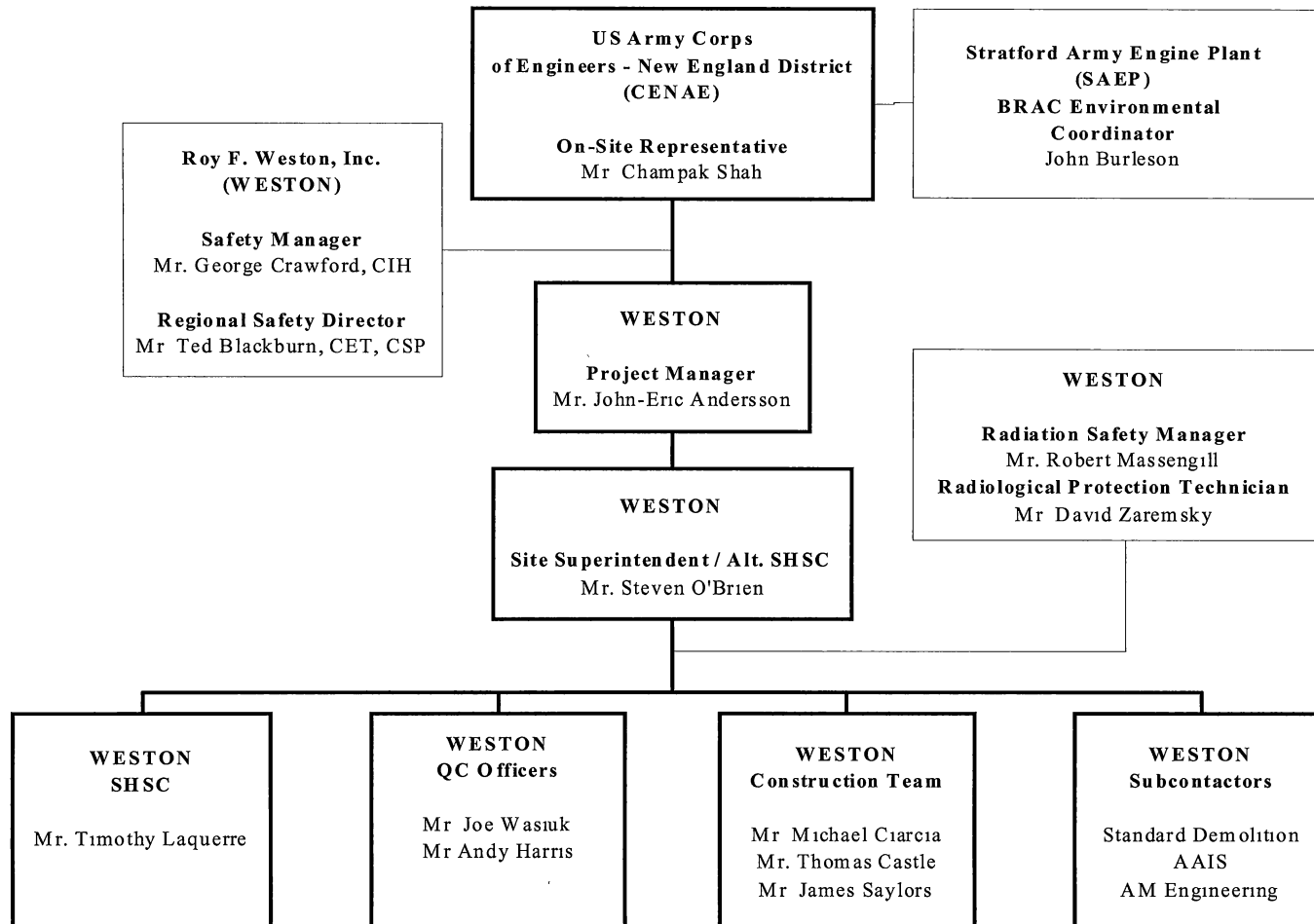
**ROBERT MASSENGILL, Radiation Safety Manager**

Mr. Massengill will be the Radiation Safety Manager (RSM) for the duration of the work on the Causeway. The RSM is responsible for establishing and maintaining radiation safety programs on projects that involve radiological hazards.

**DAVID ZAREMSKY, Radiological Protection Technician**

Mr. Zaremsky will be the Radiological Protection Technician (RPT) for the duration of the work on the Causeway. The RPT is responsible for implementing and documenting compliance with radiation safety programs. In addition, Mr. Zaremsky is trained in CPR.

Figure 2-1 Health & Safety Organizational Chart



### **3. CONTAMINANT CHARACTERIZATION**

According to the May 2001 Harding NCRA Basis of Design, six locations on the Causeway contain contaminants of concern that exceed Connecticut Department of Environmental Protection (CTDEP) RSRs. Previous consultants identified these areas during subsurface investigations as part of the design for the Causeway cover system. Low-level radiological contamination was identified during sampling on the Causeway and the affected areas were excavated in March 2000. Table 3-1 presents contaminant concentrations detected in soil borings and test pits on the Causeway.

**Table 3-1**  
**Contaminants of Concern**

Contaminant	Concentration	Contaminant	Concentration
<b>VOCs</b>		<b>SVOCs continued</b>	
Cis, 1-2 DCE	120 mg/kg	Fluorene	250 mg/kg (J)
Methylene Chloride	3.3 mg/kg (J)	Hexachlorobenzene	1.4 mg/kg
Tetrachloroethene	81 mg/kg	Indeno(1,2,3-cd)Pyrene	350 mg/kg
Trichloroethylene	8.8 mg/kg	Napthalene	97 mg/kg (J)
Vinyl Chloride	24 mg/kg	Phenanthrene	2,400 mg/kg
		Pyrene	1,800 mg/kg (J)
<b>SVOCs</b>			
2-Methylnaphthalene	45 mg/kg	<b>PCB</b>	
Acenaphthene	190 mg/kg	Aroclor-1016	1.2 mg/kg (J)
Anthracene	520 mg/kg (J)	Aroclor-1260	2.2 mg/kg
Benzo(a)Anthracene	1,200 mg/kg (J)		
Benzo(a)Pyrene	880 mg/kg (J)	<b>Inorganics</b>	
Benzo(b)Fluoranthene	940 mg/kg (J)	Arsenic	34.5 mg/kg
Benzo(k)Fluoranthene	880 mg/kg (J)	Beryllium	13.1 mg/kg
Carbazol	310 mg/kg	Cadmium	94.7 mg/kg
Chrysene	2,700 mg/kg	Lead	1,510 mg/kg (J)
Dibenz(a,h)Anthracene	8.1 mg/kg	Thallium	8.3 mg/kg
Fluoranthene	2,700 mg/kg	Vanadium	2,640 mg/kg
		Zinc	41.4 mg/kg (J)
		<b>Radioactive Material (Causeway only)</b>	

**Notes:**

mg/kg = milligram per kilogram (parts per million).

J = Approximate concentration.

Action Levels for Particulate-based contaminants will follow WESTON's Particulates Not Otherwise Classified (PNOC) Action Level of 2.5 mg/m3.

*Crystalline silica exposure has been evaluated utilizing 23% SiO<sub>2</sub> (in concrete). The OSHA PEL (total Dust) would compute to 1.2 mg/m<sup>3</sup> while the (respirable fraction) would be 0.4 mg/m<sup>3</sup>. WESTON will control exposures with engineering controls.*

*Action Levels for Particulate based contaminants are determined by use of the accepted Hazardous Waste Action Coalition (HWAC) calculations.*

## 4. FIELD ACTIVITIES

The activities to be conducted during the Phase II activities will be consistent with the design documents entitled "-Non-Time Critical Removal Action, 100% Design" (NCRA 100% Design), prepared by Harding ESE (August 2001). The field activities to be conducted consist of the following tasks: site preparation and maintenance; the construction of the upper and lower cover systems; and site restoration.

WESTON will mobilize all necessary personnel, equipment, materials and subcontractors in order to implement specific tasks as outlined in this SSHASP. WESTON will designate work areas or zones at each work area as suggested in *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities*, NIOSH/OSHA/USCG/EPA, dated October 1985. All personnel performing operations on-site shall be required to use the appropriate level of protection required by the Action Levels in Section 5 and the potential hazards on the Activity Hazard Analysis Sheets.

Various tasks that may be performed at site areas are indicated in Table 4-1 as follows:

**Table 4-1**  
**Project Tasks**

<b>Task/Subtask</b>	<b>Activity</b>
<b>1/00</b>	<b>Site Preparation and Maintenance</b>
1/01	Mobilization
1/02	Erosion and Sediment Controls
1/03	Heave Monitoring
1/04	Marine Mattress Fabrication
<b>2/00</b>	<b>Lower Cover System Construction</b>
<b>3/00</b>	<b>Installation of Upper Cover System</b>
<b>4/00</b>	<b>Restoration</b>
4/01	As-Built Survey
4/02	Final Inspection and Acceptance

### 4.1 SITE PREPARATION & MAINTENANCE

The site preparation tasks will include the set up of support/decon facilities and the mattress fabrication area, heave monitoring, maintenance and adjustment of erosion controls, preparation of the marine mattresses, and related tasks.

WESTON's full-time construction crew will include; a Construction Superintendent, a Foreman/heavy equipment operator, a Site Safety Coordinator/QC Inspector, a Field Support Coordinator, and 3 to 4 heavy equipment operators/laborers. The on-site team will be assisted, as needed, by the Project Manager, and Construction QC Manager and other home-office support personnel. WESTON will retain specialty subcontractors, as needed, to



supplement our team. The planned subcontract services include the following; a licensed land survey firm, a marine mattress fabrication company and a rigging/trucking company.

The primary heavy equipment that will routinely be used on the Causeway will include; two tracked excavators (CAT 330 or equal), a tracked loader (CAT 953 or equal), a dozer (CAT D5 or equal), and a tri-axle dump truck. The equipment will arrive and be maintained in good working condition at the site. WESTON will review the heavy equipment inspection checklists each day and document adjustments. Routine maintenance and fueling of the equipment will be done near the Causeway gate without removing the equipment from the Causeway. Heavy equipment will be staged during off-hours adjacent to the Causeway gate.

#### **4.1.1 Mobilization**

The mobilization tasks will include the following:

- Ordering and delivery of equipment, supplies and other resources required at the site.
- A walk-over review of work locations between WESTON, its' subcontractors and the government representatives including photographic documentation, if needed, as to the existing conditions. Notes will be recorded as to the existing condition and location(s) of features and damaged areas in the daily inspection reports and on the design drawings.
- Updating of WESTON's existing safety program including conducting safety briefings and orientation for new staff, verification of safety training certifications and medical monitoring reports, procurement and storage of personal protective equipment (PPE) and decontamination supplies. Safety preparations will also include performance of a walk-over review of exclusion zones, contaminant reduction zones and support zones by the Site Health and Safety Coordinator (SHSC) and the Construction Superintendent.

Preparation of the equipment washing pad(s) near the Causeway gate, if needed, to spray-clean vehicles and thereby avoid tracking soil along haul routes to the debris and waste stockpile areas.

#### **4.1.2 Erosion & Sediment Controls**

WESTON will inspect the existing erosion controls including the silt fencing, hay bales and shoreline protection established during Phase I Causeway, and maintain the functional use during the Phase II Causeway construction period. Modifications to the erosion and sediment control measure may be required during installation of the cover system. Any changes will be temporary and replaced after completion of the task(s).

#### **4.1.3 Heave Monitoring**

WESTON will continue to survey the northing and easting positions of the heave platforms and stationary heave poles at least one week prior to the start of Phase II construction. All platforms and stationary poles will be monitored at least twice a week during active construction.

WESTON will install temporary heave poles added during finalization of the 100% design documents. The temporary poles will be placed at 50-foot intervals parallel to the contact between the fill and tidal sediments. The poles will be placed up to 100 feet from the edge of the Causeway during site preparation. The temporary poles will be monitored for a minimum of 24-hours before the initiation of work until 24 hours after the completion of work in a particular area. Temporary heave poles will not be removed until 24-hours following the completion of work in any area within 100 feet of the pole.

Intensive monitoring of individual platforms, stationary poles and temporary poles will be performed three times a day (prior to the start of work, at mid-day and toward the end of the work day). WESTON will review the monitoring to assess both trends and variances at the monitoring locations. Reporting will be done on a weekly basis and will continue during active construction only (not during the temporary winter shutdown), and for an additional two additional weeks following the completion of all work.

#### **4.1.4 Marine Mattress Fabrication**

The delivery and fabrication of polymeric marine mattresses will be at the “South Parking Lot” along Sniffens Lane, which is located southeast of the SAEP main property. The existing south parking lot is designated on the design drawings as “alternate area for contractor storage and parking”. This location was previously reviewed with SAEP personnel and agreed to be suitable for use in fabricating and staging the marine mattresses. The existing lot is secured with chain-link fencing and a locking chain gate will be used when occupied for the project to avoid unauthorized access and/or vandalism. The existing parking lot lighting may be used to extend the working hours for the mattress fabrication operations.

WESTON’s subcontractor will mobilize equipment and materials to this location and begin set up and installation of the mattress fabrication apparatus. A pre-construction walk-over inspection will be completed to review the existing condition of the asphalt pavement and discuss security and other SAEP requirements. We currently plan to mobilize and set up 2 metal-frame mattress filling apparatus at this location. In addition, there will be stockpiles of Rock Fill, unfilled and completely fabricated marine mattresses, heavy equipment and other supplies.

The mattress filling and fabrication operation is a critical path activity. The schedule requires that a suitable quantity of at least 40 completely fabricated marine mattresses be prepared and ready for transportation to the Causeway work area no later than November 5<sup>th</sup>. This operation is planned to begin on or about October 29<sup>th</sup> and continue into December until cold weather requires temporary shutdown of the fabrication activities. The marine mattress manufacturer has advised WESTON that handling and lifting of completely fabricated marine mattresses cannot occur when temperatures drop below 20°F. Accordingly, WESTON and our subcontractor are prepared to work a minimum of 10 hours per shift and 6 days per week to fabricate as many mattresses as possible before inclement weather requires shutdown of this activity.

The Marine Mattresses will arrive partially assembled to the site. The field assembly requires braiding two seams using the manufacturer's poly blend cord. The long seam located on the bottom of the mattress will be assembled first. The mattress will then be placed in a filling apparatus with the existing open seam exposed. Selected Rock Fill, D<sub>50</sub> of 3-inches with stone size ranging from 2 to 6-inches, will be placed in the mattress to the halfway point. The fill will then be tamped, using hand tools to compact the material into the baffles of the mattress. Once the fill has been tamped, the mattress is then filled to the top of the exposed seam. The rock fill is tamped and additional rock fill is added to any voids inside the baffles. The exposed long seam is braided closed. The filling apparatus will be opened by workers allowing the filled mattress to lie flat on the ground. Mattresses have material that extends beyond the ends, allowing a loop to be formed using a bodkin bar produced by the manufacturer. A spreader bar is then placed inside the loop for lifting the mattress to its destination.

The equipment to be used for mattress fabrication will include the metal-frame apparatus (2), a front-end loader, chains/spreader bars or other hoisting equipment, and a crane or excavator to lift and stage the completed mattresses. The marine mattresses are being purchased directly by WESTON from manufacturer’s representative

and delivered to the Sniffen's Lane work area. The first shipment of mattresses is expected on-site the week of October 22<sup>nd</sup>.

## 4.2 LOWER COVER SYSTEM CONSTRUCTION

Excavation and preparation for installation of the Lower Cover System will begin at the end of the Causeway near the former seaplane access ramp. The work will be carefully scheduled and performed primarily at low tide(s). The initial excavation(s) will be completed at the northeast end of the Causeway. WESTON is scheduled to begin construction of the "Rock Fill Toe" in late October and early November. This excavation extends approximately 600-feet around the outer-most end of the Causeway. The excavation is a continuous trench, approximately 2-feet in depth, and 4 to 5-feet in width. After visual observation of the soil characteristics, the Engineer will determine if the excavated soil is "satisfactory material" (in accordance with the specifications). If so, the soil will be spread on top of the Causeway to dry. If the soil is determined to be "unsatisfactory material", then the soil will be hauled to a temporary staging area for profiling and off-site disposal. A geo-composite grid will be placed at the bottom of the excavation and Rock Fill will be backfilled in the open excavation, then the geo-grid composite will be wrapped over the end and top of the Rock Fill at least 3-feet prior to placement of the marine mattresses.

Preparation of the Causeway side-slopes will include excavation and grading to establish the design elevations prior to placement of a woven geotextile and marine mattresses. Approximately one foot of soil may be excavated from the lower side-slopes, if necessary to achieve the planned grades. At some locations, it may be necessary to fill in lower depressions using gravel backfill in order to achieve the design grades. Excavated soil that meets the classification of satisfactory material will be placed at the top of the Causeway and spread to dry. The excavation area will be limited each day to the approximate footprint where marine mattresses can be installed. The grading plan specifies that the side-slopes will be graded to a maximum 3H:1V slope between elevation 4.1 and up to elevation 7-feet mean sea level (msl). Above 7-feet msl, the grade will be set to a minimum 2% to 5% slope up to a maximum elevation of 9.5-feet msl.

If encountered during excavation along the side-slopes, oversized debris will be removed, staged and washed at the Causeway. Samples of the debris will be collected, if necessary, for waste profiling. The debris temporarily staged, and then transported to an off-site recycling or disposal facility. The haul roadway will be maintained for truck traffic. The oversized debris will be spray-washed, if necessary to remove soil. Water application will be done away from the haul route to minimize muddy conditions and tracking soil from the Causeway. The trucks will be spray-cleaned at the Causeway gate, when necessary, to remove soil residuals from the tires.

A woven geotextile will be installed on the prepared subgrade prior to the placement of the filled polymetric mattresses. The completed mattresses will be periodically transported to the Causeway work area using a truck and crane. The delivery sequence will be carefully planned so that extra completed mattresses are staged on the Causeway for easy access during installation. The crane will off-load the mattresses near the excavation area. The excavator will be used to lift and place the mattresses. The installed mattresses will be tied in an end-to-end configuration only as stated in a recent request for information from WESTON and by the design engineer.

The Rock Fill specified for installation at the top-of-slope will be installed prior to placement of the final row of mattresses in the active work area. This will require careful sequencing to overlap of the underlying geotextiles between the Upper and lower Cover Systems. Only a portion of the Rip Rap Transition will be installed after placement of the marine mattresses along the top of the slope to protect the mattresses during construction. The balance of the Rip Rap Transition will be completed after installation of the Upper Cover System.

### 4.3 INSTALLATION OF UPPER COVER SYSTEM

Satisfactory material placed on top of the Causeway will be graded and compacted to meet design elevations. A sand bedding will be installed over the prepared subgrade to form a smooth dense layer to support the interlocking concrete blocks. The material will be placed in one layer with a minimum thickness of 4-inches and a nominal thickness of 6-inches. The surface area will be prepared by proof rolling with a static roller. Nuclear density test will be performed using the backscatter methods. Materials will be placed at a minimum of 92% of Standard Proctor (ASTM D-698) and be within +/-3% of optimum moisture content.

A woven geotextile will be placed over the compacted sand layer. The Tri-Lock interlocking concrete blocks will be installed on top of the woven geotextile. WESTON will install approximately 55,000 square feet (ft<sup>2</sup>) of 4-inch thick, interlocking concrete blocks. The blocks will be installed by hand and configured to incorporate penetrations or other features that may be added for final restoration (by the Town's design consultant) and as a contract modification.

Finalization of the Upper Cover System will include placement of the Rip Rap Transition that integrates the Lower and Upper Cover Systems. This transition area will be finished after installation of the Tri-lock block and gravel within the local work area.

Periodic quality assurance/quality control (QA/QC) testing of the material will be performed to assure the consistency of materials used during the placement methods. Analytical testing, and non-destructive and destructive testing will be performed on the materials delivered to the site as part of QA/QC testing requirements specified in the specifications.

### 4.4 RESTORATION

A vegetative growth layer consisting of 6 to 8-inches of sandy loam will be placed over the compacted gravel. The loam will have sufficient moisture retention and nutrient characteristics to support vegetative growth.

Specified grass species will be spread in the vegetative layer. Erosion control matting will be installed to protect the seeded area during precipitation and extreme high tidal events in order to re-establish vegetative growth.

#### 4.4.1 As-Built Survey

WESTON will prepare a final survey of the completed Causeway work location including details for surface features, final contours and other requirements as specified.

#### 4.4.2 Final Inspection and Acceptance

A post-construction inspection and walk-over will be performed by WESTON and the government representatives on or about the finalization of restoration and demobilization tasks.

## 5. ACTION LEVELS AND INSTRUMENTATION

Action levels are dependent on the nature and type of contamination and may be activity specific. Monitoring equipment and action levels are presented in Table 5-1. Air monitoring will be conducted during intrusive activities including excavation, hauling of contaminated soils to the soil staging area and soil stockpile management activities to evaluate potential chemical hazards, to determine effectiveness of control measures, and to evaluate the PPE requirements. Air sampling will be used to quantify the presence of airborne hazards. Particulate (dust) monitoring will continue as necessary during excavation activities to verify worker exposure and/or offsite migration. Real-time air monitoring will be performed in previously identified contaminated areas during intrusive activities. The CIH and Site Manager will assist in determining criteria or necessity for additional personnel air sampling.

Based upon the concentrations outlined, it is not expected that action levels will be exceeded for the above-listed contaminants; however, real-time air sampling outlined in the following will be used to assure worker safety. Engineering controls in the form of dust suppression and/or ventilation will provide initial and additional protection.

Potential for exposure to crystalline silica exists when performing activities with potential silica dust generation (e.g. concrete demolition cutting or drilling). During these activities action levels as indicated in Table 5-1 will be followed. Note that any activity conducted as indicated above must utilize appropriate dust control actions (e.g., wetting) in order to limit or eliminate potential exposure. Chemical data sheets for silica are included as Appendix C of this SSHASP.

### 5.1 PARTICULATE-BASED CONTAMINANTS

Where chemical contaminants normally in a solid state are part of a matrix or substrate to be remediated, and data on contaminants is in mass per mass units [milligrams per kilogram (mg/kg)], action levels will be developed using the HWAC model.

Respiratory protection for particulate-based contaminants will be initiated at 2.5 milligrams per cubic meter ( $\text{mg}/\text{m}^3$ ) based upon WESTON's action level for PNO, respirable fraction. Engineering controls will be utilized to limit exposure for dust generation to less than the PNO action level. Dust produced from cutting or crushing of concrete will include crystalline silica. Assume  $\text{SiO}_2$  will be at 23% in the concrete. Action levels for dust will be set accordingly. See previous data.

Table 5-1

Air Monitoring Instruments and Action Levels

Hazard	Instrument	Action Level
Explosive Atmosphere (Not anticipated this task effort)	CGI as required	<p>&lt;10% LEL: Continue investigation.</p> <p>&gt;10% and &lt;20% LEL (ambient air): Continue work with caution, continue monitoring.</p> <p>&gt;10% LEL (confined space): Stop work and evacuate site until levels &lt;10% are measured.</p> <p>&gt;20% LEL (ambient air): Stop work and evacuate site until levels &lt;20% are measured.</p>
Oxygen Content (Not anticipated this task effort)	O <sub>2</sub> meter as required (included with CGI instrument)	<p>&lt;19.5%: Stop work and evacuate site until levels are &gt;19.5% and &lt;25% (ambient air) or &gt;19.5% and &lt;23.5% (confined space) are measured.</p> <p>19.5% to 25% (ambient air) or 19.5% to 23.5% (confined space): Acceptable levels for O<sub>2</sub>.</p> <p>&gt;25% (ambient air) or &gt;23.5% (confined space): Fire hazard potential, stop work and consult CIH and CENAE.</p>
Organic vapors	PID/FID	<p>Worker protection</p> <p>0- 5 units: Level D, provided vinyl chloride is less than 0.5 ppm.</p> <p>5- 25 units: Level C provided vinyl chloride is less than 0.5 ppm.</p> <p>&gt;25 units : Level B</p> <p>Perimeter:</p> <p>&gt; 5 units above background or discernable odor is noted: Halt work temporarily until levels subside and take actions to keep level low such as increase foaming.</p> <p>&gt; 25 units: Stop work.</p>
Crystalline Silica (as respirable fraction in total)	Personal DataRam	<p>0-0.4 mg/m<sup>3</sup>: Level D with dust masks.</p> <p>0.4 mg/m<sup>3</sup> or greater: Level C.</p>
Particulates (when applicable all phases)	Personal DataRam	>2.5 mg/m <sup>3</sup> : Upgrade PPE to Level C.
Radiation (not anticipated this task effort.)	Micro/R	<p>&lt;3 to 5 times background: Continue monitoring and work activities.</p> <p>&gt;3 to 5 times background, &lt;1 mrem/hr: Continue work with caution, consult with a health physicist.</p> <p>&gt;1 mrem/hr: Evacuate site, consult with a health physicist before continuing work.</p>

## 5.2 ORGANIC OR VOLATILE CONTAMINANTS

A flame ionization detector (FID) or photoionization detector (PID) will be utilized during intrusive and waste handling activities to monitor the concentrations of volatile organics. Monitoring and action levels will be in accordance with Table 5-1. Compliance with monitoring and rescue provisions of 29 CFR1926.651(g) will be implemented in the event workers are required to enter any excavation greater than 4 feet deep where inadequate natural ventilation may be a factor (i.e., trench vs. open excavation). A combustible gas indicator (CGI), an FID, and oxygen (O<sub>2</sub>) meter will be used as necessary for the intrusive activities.

## 5.3 IONIZING RADIATION

Previous analysis of soil samples collected from the Causeway identified the presence of low-level radiological contamination. The affected soil was remediated in March 2000, and the NRC license for the facility was subsequently terminated. Due to the potential presence of low-level radiological hazards, WESTON developed and implemented a Radiation Dosimetry Plan to monitor potential exposure to those personnel involved with invasive Phase I activities (soil excavations on the Causeway surface).

Monitoring data collected during Phase I implementation indicated no readings above established action levels. Invasive activity in Phase II are limited, consisting of the excavation of approximately one (1) foot of material from the Causeway side slopes below elevation 4.1 feet msl. These materials consist primarily of marine sediments with the balance composed of Causeway debris and soil. Therefore, WESTON will continue the use of the Micro-R meter for real-time monitoring of baseline radiation levels during Phase II excavation activity, according to the action level presented in Table 5-1. In addition, the use of dosimetry badges to monitor cumulative personnel exposure will continue. The dosimetry badges will be issued only to those personnel who will routinely work at ground level in close proximity to active excavations (excluding heavy equipment operators, truck drivers, and supervisory personnel entering the work areas on a periodic basis).

## 5.4 AIR MONITORING

Air monitoring will be conducted on this project to ensure personnel safety and minimize offsite migration of contaminants. Potential Contaminants of Concern (COC) at the SAEP have been identified as VOCs, SVOCs, PCBs, and inorganics, as indicated on Table 3-1. Air monitoring will document exposure to airborne contamination generated during site activities. Action levels and instrumentation necessary for the air monitoring are specified in Table 5-1.

### 5.4.1 Personal Air Monitoring

Air monitoring will also be conducted to identify potential exposure levels or immediately dangerous to life or health (IDLH) conditions. The measurements obtained by these instruments are intended to indicate when the use of respirators are required, validate the use of air-purifying respirators, determine when or if supplied air respirators are required and to alert personnel of potentially explosive conditions.

Monitoring frequency will be escalated or reduced based on the results of previous monitoring/sampling and/or other signs of potential exposures (odors, etc.). Monitoring in the Breathing Zone (BZ) will be conducted as a basis for worker exposure potential. If monitored levels warrant upgrading or downgrading the level of PPE, WESTON will document the results and their justification for upgrade or downgrade. It is anticipated that the

majority of activities conducted during excavation activities, slab excavation, hauling of contaminated soils to the soil staging area and soil stockpile management will be conducted in Modified Level D PPE with potential upgrades to Level C PPE.



## 6. PPE SELECTION

All personnel performing operations on-site shall be required to use the appropriate level of protection as specified in Section 5 of this SSHASP. This SSHASP makes provisions for use of Levels D, Modified D, C, and B as required for the hazards associated with a given task, operation, or expected contaminant level. It is expected that field activities consisting of site preparation, construction/installation of the upper and lower cover systems, and restoration will be conducted in Level D or Modified Level D.

### 6.1 LEVEL D PPE

Level D PPE will be worn during site mobilization/demobilization, site preparation, construction, and restoration activities. Level D PPE consists of the following:

- Work clothes, e.g. coveralls (cotton)
- Work gloves - leather or cotton as necessary for physical hazards
- Boots, American National Standards Institute (ANSI) approved
- Safety glasses
- Hard hat

### 6.2 MODIFIED LEVEL D PPE

Modified Level D PPE will be worn when conducting activities with known or potential contact with minimally contaminated materials. Modified Level D PPE consists of the following:

- Chemical resistant coveralls (Tyvek if dry matrix, saranex or equivalent if wet matrix)
- Chemical resistant overboots or chemical boot covers
- Gloves - nitrile or latex inner; nitrile outer
- Eye protection - safety glasses or goggles
- Hard hat

### 6.3 LEVEL C PPE

Level C will be worn when applicable action levels have been met. Level C PPE consists of:

- Chemical resistant coveralls (Tyvek if dry matrix, saranex or equivalent if wet matrix).
- Chemical resistant overboots or chemical boot covers.
- Fullface air-purifying respirator (APR) with HEPA OV/AG filter (NIOSH/MSHA approved e.g., MSA GME-P100 or equivalent). Note that half-face APRs may be authorized for specific tasks.
- Gloves -nitrile or latex inner; and nitrile outer.
- Hard hat (as necessary).
- Safety Boots – ANSI.

### 6.4 LEVEL B PPE

Level B PPE will be worn during site activities according to site-specific action levels or where specified in this SSHASP. A minimum of three people will be present for any activity performed in Level B. Level B PPE consists of:

- Chemical resistant coveralls (Tyvek if dry matrix, saranex or equivalent if wet matrix).
- Chemical resistant overboots or chemical boot covers.

- NIOSH-approved Supplied-air respirator (SAR) or Self-Contained Breathing Apparatus (SCBA) with safety glasses.
- Gloves - nitrile or latex inner; and nitrile outer.
- Hard hat (as necessary).
- Safety Boots – ANSI.

## **7. DECONTAMINATION AND WASTE MANAGEMENT**

All equipment utilized within controlled zones of the site will be decontaminated prior to leaving the site. All Equipment will undergo dry-decon (broom cleaning). PPE will be collected in trash bags, and will be disposed of as non-hazardous waste. Hand washing facilities will be available at each work site. All sampling equipment will be disposable.

A separate Environmental Compliance and Waste Management Plan will be submitted for government approval.

## **8. MEDICAL SURVEILLANCE AND TRAINING**

No unique medical surveillance or training requirements are anticipated for most workers on this project. See Sections 5 and 6 of the SSHP for specific requirements.

## 9. HAZARD ANALYSIS

### 9.1 TASK OVERVIEW

Hazard analysis is an ongoing process from SSHP preparation through the implementation and completion of the project. Task-specific Activity Hazard Analyses (AHA) and task hazard overviews are presented in this section. Additional information can be found in the WESTON Field Operating Procedures (FLDs) that are contained in WESTON's Safety Officer Field Manual. The manual will be maintained on-site.

Inspection requirements are identified in the FLDs referenced in the Activity Hazard Analysis tables in this Section and in Section 12 (General Site Safety Procedures) and Section 15 (Logs, Reports, Audits, Inspections, and Record Keeping) of the SSHP. Training requirements are described in Section 5 of the SSHP and as necessary, in Section 8 of this SSHASP. Health and safety equipment to be used, such as monitoring instruments and PPE, is specified in Sections 5 and 6 of this SSHASP as well as Sections 8, 9, and 14 of the SSHP. Additional field equipment is specified in the TWP.

### 9.2 PHYSICAL HAZARDS

In addition to the physical hazards outlined in the Activity Hazard Analysis Sheets, special physical hazards that have the potential to affect worker and public safety are addressed below. Also refer to Section 12 of the SSHP.

#### 9.2.1 Excavations

Excavations will be barricaded or marked (barricade tape and/or traffic cones or equivalent) during active excavation activities and utility relocation activities. In the event excavations must remain open prior to backfill, those excavations will be fenced or barricaded. Compliance with OSHA, 29 CFR 1926 Subpart P, and USACE EM 385-1-1, Section 25, will be maintained. Excavation operation requirements are described in Subsection 12.5 of the SSHP.

#### 9.2.2 Heavy Equipment Operation

Before any machinery or mechanized equipment is placed in use, it will be inspected, tested, and certified to be in safe operating condition in strict accordance with manufacturer's directions and applicable Occupational Safety and Health Administration (OSHA) regulations. WESTON will designate competent persons to be responsible for the inspection of all machinery and equipment daily to make sure it is in safe operating condition. Inspections will be made at the beginning of each shift during which the equipment is to be used to determine that safety equipment and operating systems are in proper working condition. Any machinery or equipment found to be unsafe will be sidelined and its use prohibited until unsafe conditions have been corrected. Only qualified personnel will operate machinery and mechanized equipment. Equipment deficiencies observed on any item that affect their safe operation will be corrected before continuing operation. Refer to Subsection 2.4.22, Heavy Equipment Operation - FLD 22, of the WESTON Safety Officer Field Manual for proper heavy equipment operation. General heavy equipment operation requirements are described in Subsection 12.2.1 of the SSHP.

### **9.2.3 Noise**

Noise is an occupational hazard that can cause temporary or permanent hearing loss, stress, and other physical problems. Effects of noise depend on loudness, frequency, exposure duration, age and health. OSHA regulations pertaining to noise in the workplace are outlined in 29 CFR 1910.95. In summary, workers may not be exposed to noise levels in excess of 85 decibels (dB) over an eight-hour period. When performing tasks where excessive noise levels are anticipated hearing protection will be made available to workers.

### **9.2.4 Clearing and Grubbing Procedures**

Where necessary the requirements of FLD 47 will be followed for any clearing, grubbing or logging operations.

## **9.3 BIOLOGICAL AND CHEMICAL HAZARDS**

Sources of biological hazards may include wild animals, poisonous plants, snakes, bird droppings, rats, mice, and bats. All animals encountered during work are to be avoided. Any animals found during indoor work will be reported to appropriate site personnel. Additional information can be found in Section 12 of the SSHP and within FLD 43.

Personal protection from exposure to chemical contaminants present at this site will be accomplished through strict monitoring and enforcement of Health and Safety Action Levels presented in Section 5. For chemical hazards brought on-site (i.e., diesel fuel, adhesives, etc.), WESTON personnel will comply with the storage, handling and use requirements stated on the Material Safety Data Sheet (MSDS) for each chemical. An MSDS for each site contaminant will be provided in a binder located on the project site.

### **9.3.1 Soil Sampling**

Soil sampling and analysis is not planned for Phase II activities.

## **9.4 HAZARD ANALYSIS TABLES**

The following tables present a summary of the hazards and corresponding safety precautions related to various project activities.

**ACTIVITY 1: SITE PREPARATION AND MAINTENANCE**

Site preparation and maintenance includes mobilization/demobilization, erosion and sediment controls, heave monitoring, and marine mattress fabrication.

- Mobilization and demobilization activity includes the transportation of personnel, equipment, materials, and supplies to and from the work location.
- Erosion and sediment control will include the inspection and maintenance of the silt fencing, hay bales, and shoreline protection established during Phase I Causeway.
- Heave monitoring includes the surveying and monitoring of the heave poles and platforms during the construction period.
- Marine mattress fabrication involves the delivery and fabrication of polymeric marine mattresses at the “South Parking Lot” at the SAEP.

<b>CHEMICAL HAZARDS</b>	
<b>Identification</b> .....	<b>Hazard Control</b> .....
For non-intrusive activities the risk level of exposure to site contaminants is low. For intrusive activities (shallow excavation & decon area maintenance), risk level is moderate.	Modified Level D PPE is anticipated to be worn during intrusive activities and Level D PPE is anticipated to be worn during non-intrusive activities. Upgrades will be performed according to action levels in Table 2. Engineering Controls will be used for dust suppression. Air monitoring will be performed in accordance with Section 5.
<b>PHYSICAL HAZARDS</b>	
<b>Identification</b> .....	<b>Hazard Control</b> .....
Slip, trips, falls, tools, terrain or vegetation; uneven walking surfaces. Weather hazards, such as wind, lightning, and poor visibility.	The work area will be visually inspected. Slip, trip, and fall hazards will be either removed or marked and barricaded. Sufficient illumination will be maintained. Site personnel will conduct walkover in groups of two as a minimum. Site personnel will refer to and follow WESTON FLDs 02-Inclement weather and 39-Illumination. Also, see FLD 11 and 12.
Housekeeping	Materials will be stored to prevent intrusion into the work areas. Work areas will be kept organized. See FLD12
Strains and sprains from manually lifting and moving.	Use proper lifting techniques such as keeping straight back, lifting with legs; avoid twisting back; use mechanical equipment or get help from others. See FLD 10.
Grubbing and vegetation removal. Chain saws and chippers.	Qualified persons will operate chain saws and chippers. Chain saw operators will wear chaps. Chippers will be inspected before use, operators will be refreshed in operation by the vendor, all guards will be in place per EM 385-1-1. Persons cutting trees will be appropriately trained and experienced. Trees to be cut will be checked by experienced persons prior to cutting to identify increased hazard situations. Experienced persons, if required, will do tree climbing. Climbing gear will be inspected and will conform to EM 385-1-131.B.1. Retreat routes from trees to be cut will be planned before cutting begins, and no one will be permitted within 2 tree lengths of trees being cut. See FLD 47.
Hands or fingers caught between objects; abrasions and lacerations	Personnel will be made aware of the hazard and asked to coordinate carefully the handling and placement of heavy objects. Materials and objects being handled will be inspected for rough or sharp edges, and appropriate precautions will be taken to avoid contact. Personnel will wear work gloves and avoid placing hands between objects.
Moving mechanical parts from heavy equipment operations.	Personnel will be made aware of the hazard and will coordinate carefully during equipment handling operations. Guards will be kept in place during operation. Maintain safe distance from moving mechanical parts. Always use appropriate PPE. See FLD 22.

*continued on next page*

**ACTIVITY 1: SITE PREPARATION AND MAINTENANCE (continued)**

**PHYSICAL HAZARDS**

<i>Identification</i> .....	<i>Hazard Control</i> .....
Hand tools, manual and power.	Tools will be inspected prior to use. Damaged tools will be tagged out of service until a qualified person can perform repair. Use tools properly and for their intended purpose. A ground fault circuit interrupter (GFCI) will protect all power circuits used for hand tools. See FLD 38.
Traffic	Site entrance and work areas will be clearly marked and appropriate signs displayed. Work areas will be clearly barricaded and appropriate signs displayed. Traffic will be rerouted as necessary. Persons working near roadways or directing traffic will wear high visibility vests. See FLD 20.
Inclement weather, Heat/Cold stress	Workers will be briefed and cognizant of heat and cold stress symptoms. Fluids will be available to workers. See FLD 05 and 06. Work rest periods will be established according to ACGIH and NIOSH guidelines.

**BIOLOGICAL HAZARDS**

<i>Identification</i> .....	<i>Hazard Control</i> .....
Poisonous plants, insects, snakes.	Review recognition of poisonous plants, insects, or snakes typical of this area. Use appropriate measures as required. Adhere to WESTON Bloodborne Pathogens Exposure Control Plan—First Aid Procedures and FLD43.

**RADIOLOGICAL HAZARDS**

<i>Identification</i> .....	<i>Hazard Control</i> .....
Based on site history and previous investigations, the potential for sources of ionizing radiation exist on-site	Real time radiation monitoring will be conducted during intrusive activities. Personnel will comply with the requirements of the site-specific radiation dosimetry program detailed in this SSHP.
Potential sun burn/sun poisoning hazard on bright, sunny days.	Use sunblock as appropriate. Avoid direct exposure to sun for long periods of time.



**ACTIVITY 2: LOWER COVER SYSTEM CONSTRUCTION**

This activity includes excavation and transportation of potentially contaminated material at the Causeway. A geo-composite grid will be placed at the bottom of the excavation and Rock Fill will be backfilled in the open excavation, then the geo-grid composite will be wrapped over the end and top of the Rock Fill at least 3 feet prior to placement of the marine mattresses. The grading plan specifies that the side-slopes will be graded to a maximum 3H:1V slope between elevation 4.1 and up to elevation 7 feet msl. Above 7 feet msl, the grade will be set to a minimum 2% to 5% slope up to a maximum elevation of 9.5 feet msl.

**CHEMICAL HAZARDS**

<i>Identification</i> .....	<i>Hazard Control</i> .....
Potential for contacting contaminated materials is high during excavation and low during backfill and installation of the cover system.	Modified Level D PPE is anticipated to be worn during excavation and Level D will be worn during backfill. Upgrades will be performed according to action levels in Table 5-2. Engineering controls will be used for dust suppression. Air monitoring will be performed in accordance with Section 5 of the SSHASP.

**PHYSICAL HAZARDS**

<i>Identification</i> .....	<i>Hazard Control</i> .....
Slip, trips, falls, tools, terrain or vegetation; uneven walking surfaces, use of heavy equipment. Weather hazards, such as wind, lightning; and poor visibility.	The work area will be visually inspected. Slip, trip, and fall hazards will be either removed or marked and barricaded. Sufficient illumination will be maintained. Site personnel will conduct walkover in groups of two as a minimum. Site personnel will refer to and follow WESTON FLDs 02-Incident weather and 39-Illumination. Also, see FLD 11 and 12.
Housekeeping	Materials will be stored to prevent intrusion into the work areas. Work areas will be kept organized. See FLD12
Strains and sprains from manually lifting and moving.	Use proper lifting techniques such as keeping straight back, lifting with legs; avoid twisting back; use mechanical equipment or get help from others. See FLD 10.
Hands or fingers caught between objects; abrasions and lacerations.	Personnel will be made aware of the hazard and asked to coordinate carefully the handling and placement of heavy objects. Materials and objects being handled will be inspected for rough or sharp edges, and appropriate precautions will be taken to avoid contact. Personnel will wear work gloves and avoid placing hands between objects.
Working on Steep Slopes (stockpile).	Personnel should maintain a high level of terrain awareness and physical conditioning due to increased body stress/exertion. See FLD 11 for additional information.
Excavation	Personnel will remain away from the edges of the excavation and equipment. Excavation equipment and stockpiles will not be placed closer than 2 feet from any excavation edge. Compliance with 29 CFR Subpart D and EM 385-1-1 Section 25 will be maintained. See FLD 28. Use dust suppression as necessary. A demolition plan will be prepared by subcontractors for demolition activities.
Moving mechanical parts from heavy equipment operations.	Personnel will be made aware of the hazard and will coordinate carefully during equipment handling operations. Guards will be kept in place during operation. Maintain safe distance from moving mechanical parts. Always use appropriate PPE. See FLD 22.
Construction Material Handling.	Materials must be stacked and stored to prevent sliding or collapsing.

*continued on next page*

**ACTIVITY 2: LOWER COVER SYSTEM CONSTRUCTION (continued)**

Loading.	Drivers must remain in vehicle cab during loading and unloading of hazardous materials unless over protection is inadequate (at which point the driver will remain a safe distance from the loading operations).
Noise during the operation of heavy equipment.	Personnel shall wear hearing protection as necessary. See FLD 01.
Inclement weather, wind, heat/cold stress	Workers will be briefed and cognizant of heat and cold stress symptoms. Fluids will be available to workers. See FLD 05 and 06. Work rest periods will be established according to ACGIH and NIOSH guidelines. Outdoor work will be suspended during inclement weather with lightning or high winds, see FLD 02.
Striking and being struck by operating equipment, loads, falling objects, and pinch points.	Workers will stay out of the swing area of all equipment and from under loads. No personnel will ride on the equipment unless seats are provided. See FLD 20, 22A, 23, and 24. In the event rebar is encountered personnel will be apprised of issues to include: maintenance of safety zone around mechanical demolition operations, knowledge of tool safety and use, potential for limited stress during removal operations, knowledge of physical hazards including sharp edges, weight, and kinetic energy.
Traffic	Site entrance and work areas will be clearly marked and appropriate signs displayed. Work areas will be clearly barricaded and appropriate signs displayed. Traffic will be rerouted as necessary. Persons working near roadways or directing traffic will wear high visibility vests. See FLD 20.

**BIOLOGICAL HAZARDS**  
*Identification*..... *Hazard Control*.....

Poisonous plants, insects, snakes.	Review recognition of poisonous plants, insects, or snakes typical of this area. Use appropriate measures as required. Adhere to WESTON Bloodborne Pathogens Exposure Control Plan—First Aid Procedures and FLD43.
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**RADIOLOGICAL HAZARDS**  
*Identification*..... *Hazard Control*.....

Based on site history and previous investigations, the potential for sources of ionizing radiation exist on-site	Real time radiation monitoring will be conducted during intrusive activities. Personnel will comply with the requirements of the site-specific radiation dosimetry program detailed in this SSHP.
Potential sun burn/sun poisoning hazard on bright, sunny days.	Use sunblock as appropriate. Avoid direct exposure to sun for long periods of time.

**ACTIVITY 3: INSTALLATION OF UPPER COVER SYSTEM**

This activity includes the grading and compaction of material on top of the Causeway. A sand bedding will be installed over the prepared subgrade to form a smooth dense layer to support the interlocking concrete blocks. A woven geotextile will be placed over the compacted sand layer, and Tri-Lock interlocking concrete blocks will be installed on top of the woven geotextile. Finalization of the Upper Cover System will include placement of the Rip Rap Transition that integrates the Lower and Upper Cover Systems. This transition area will be finished after installation of the Tri-lock block and gravel within the local work area.

**CHEMICAL HAZARDS**

<i>Identification</i> .....	<i>Hazard Control</i> .....
Potential for contacting contaminated materials is high during excavation and low during backfill and installation of the cover system.	Modified Level D PPE is anticipated to be worn during excavation and Level D will be worn during backfill. Upgrades will be performed according to action levels in Table 5-2. Engineering controls will be used for dust suppression. Air monitoring will be performed in accordance with Section 5 of the SSHASP.

**PHYSICAL HAZARDS**

<i>Identification</i> .....	<i>Hazard Control</i> .....
Slip, trips, falls, tools, terrain or vegetation; uneven walking surfaces, use of heavy equipment. Weather hazards, such as wind, lightning; and poor visibility.	The work area will be visually inspected. Slip, trip, and fall hazards will be either removed or marked and barricaded. Sufficient illumination will be maintained. Site personnel will conduct walkover in groups of two as a minimum. Site personnel will refer to and follow WESTON FLDs 02-Inclement weather and 39-Illumination. Also, see FLD 11 and 12.
Housekeeping	Materials will be stored to prevent intrusion into the work areas. Work areas will be kept organized. See FLD12
Strains and sprains from manually lifting and moving.	Use proper lifting techniques such as keeping straight back, lifting with legs; avoid twisting back; use mechanical equipment or get help from others. See FLD 10.
Excavation	Personnel will remain away from the heavy equipment. Compliance with 29 CFR Subpart D and EM 385-1-1 Section 25 will be maintained.
Hands or fingers caught between objects; abrasions and lacerations.	Personnel will be made aware of the hazard and asked to coordinate carefully the handling and placement of heavy objects. Materials and objects being handled will be inspected for rough or sharp edges, and appropriate precautions will be taken to avoid contact. Personnel will wear work gloves and avoid placing hands between objects.
Moving mechanical parts from heavy equipment operations.	Personnel will be made aware of the hazard and will coordinate carefully during operations. Guards will be kept in place during operation. Maintain safe distance. Always use appropriate PPE. See FLD 22.
Inclement weather, wind, heat/cold stress	Workers will be briefed and cognizant of heat and cold stress symptoms. Fluids will be available to workers. See FLD 05 and 06. Work rest periods will be established according to ACGIH and NIOSH guidelines. Outdoor work will be suspended during inclement weather with lightning or high winds, see FLD 02.

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<b>ACTIVITY 3: INSTALLATION OF UPPER COVER SYSTEM (continued)</b>	
Moving mechanical parts from heavy equipment operations.	Personnel will be made aware of the hazard and will coordinate carefully during operations. Guards will be kept in place during operation. Maintain safe distance. Always use appropriate PPE. See FLD 22.
Inclement weather, wind, heat/cold stress	Workers will be briefed and cognizant of heat and cold stress symptoms. Fluids will be available to workers. See FLD 05 and 06. Work rest periods will be established according to ACGIH and NIOSH guidelines. Outdoor work will be suspended during inclement weather with lightning or high winds, see FLD 02.
Striking and being struck by operating equipment, loads, falling objects, and pinch points.	Workers will stay out of the swing area of all equipment and from under loads. No personnel will ride on the equipment unless seats are provided. See FLD 20, 22A, 23, and 24. Workers exposed to traffic hazards will wear traffic/reflector vests.
<b>BIOLOGICAL HAZARDS</b>	
<i>Identification</i> .....	<i>Hazard Control</i> .....
Poisonous plants, insects, snakes.	Review recognition of poisonous plants, insects, or snakes typical of this area. Use appropriate measures as required. Adhere to WESTON Bloodborne Pathogens Exposure Control Plan—First Aid Procedures and FLD43.
<b>RADIOLOGICAL HAZARDS</b>	
<i>Identification</i> .....	<i>Hazard Control</i> .....
Based on site history and previous investigations, the potential for sources of ionizing radiation exist on-site	Real time radiation monitoring will be conducted during intrusive activities. Personnel will comply with the requirements of the site-specific radiation dosimetry program detailed in this SSHP.
Potential sun burn/sun poisoning hazard on bright, sunny days.	Use sunblock as appropriate. Avoid direct exposure to sun for long periods of time.

**ACTIVITY 4: SITE RESTORATION**

This activity will include the emplacement of a vegetative growth layer over the compacted gravel, plus an as-built survey of the completed Causeway and a post-construction walkover of the area.

**CHEMICAL HAZARDS**

*Identification*.....

For non-intrusive activities the risk level of exposure to site contaminants is low.

*Hazard Control*.....

Modified Level D PPE is anticipated to be worn during intrusive activities and Level D PPE is anticipated to be worn during non-intrusive activities. Upgrades will be performed according to action levels in Table 2. Engineering Controls will be used for dust suppression. Air monitoring will be performed in accordance with Section 5.

**PHYSICAL HAZARDS**

*Identification*.....

Slip, trips, falls, tools, terrain or vegetation; uneven walking surfaces.  
Weather hazards, such as wind, lightning, and poor visibility.

*Hazard Control*.....

The work area will be visually inspected. Slip, trip, and fall hazards will be either removed or marked and barricaded. Sufficient illumination will be maintained. Site personnel will conduct walkover in groups of two as a minimum. Site personnel will refer to and follow WESTON FLDs 02-Inclement weather and 39-Illumination. Also, see FLD 11 and 12.

Housekeeping

Materials will be stored to prevent intrusion into the work areas. Work areas will be kept organized. See FLD12

Inclement weather, wind, heat/cold stress

Workers will be briefed and cognizant of heat and cold stress symptoms. Fluids will be available to workers. See FLD 05 and 06. Work rest periods will be established according to ACGIH and NIOSH guidelines. Outdoor work will be suspended during inclement weather with high wind or lightning, see FLD 02.

Traffic

Work areas will be clearly barricaded and appropriate signs displayed. Traffic will be rerouted as necessary.

**BIOLOGICAL HAZARDS**

*Identification*.....

Poisonous plants, insects, snakes.

*Hazard Control*.....

Review recognition of poisonous plants, insects, or snakes typical of this area. Use appropriate measures as required. Adhere to WESTON Bloodborne Pathogens Exposure Control Plan—First Aid Procedures and FLD43.

**RADIOLOGICAL HAZARDS**

*Identification*.....

Potential sun burn/sun poisoning hazard on bright, sunny days.

*Hazard Control*.....

Use sunblock as appropriate. Avoid direct exposure to sun for long periods of time.

## **1. INTRODUCTION**

This Emergency Response and Contingency Plan (ERCP) has been prepared by Roy F. Weston, Inc. (WESTON®) to describe actions that will be taken by WESTON site personnel in the event of an emergency situation.

The purpose of this plan is to:

- Anticipate events to ensure proper planning and preparation.
- Act as a guide in the event of an emergency situation.
- Minimize hazards to human health and the environment from anticipated emergency events.
- Familiarize response personnel with equipment and procedures.

This plan is determined to comply (where necessary) with the requirements of OSHA [including emergency action planning, Process Safety Management (PSM) and HazWoper], Department of Transportation (DOT) (reporting and response actions), and Environmental Protection Agency (EPA) [including Spill Prevention, Containment, Countermeasure (SPCC), Resource Conservation and Recovery Act (RCRA) and Risk Management Plan (RMP)].

## **2. PRE-EMERGENCY PLANNING**

In order to handle emergencies properly and effectively, planning and training is essential. Pre-emergency planning procedures must be in place to immediately respond to emergency situations. Site personnel must be knowledgeable of their roles and responsibilities and act within their abilities and training. WESTON will prohibit its employees from responding to emergency situations that would require them to be exposed to hazards beyond their degree of training. As necessary (by regulation) and prior to site activities, the Site Safety and Health Officer (SSHO) or project staff will communicate with outside response agencies (e.g., fire, police, ambulance, and medical) to coordinate response efforts. Contacts with each response agency will be informed of any changing site conditions that may affect emergency response. Copies of this ERCP will be made available to any agency [e.g., police, fire, hospital, State Emergency Response Commission (SERC), and Local Emergency Planning Commission (LEPC)] required to hold a copy. Should any of these listed agencies choose not to receive a copy or refuse to assist in the event of an emergency those names and contacts will be documented in Attachment 4. A complete list of emergency contacts can be found in Attachment 1.

### 3. ROLES AND RESPONSIBILITIES

The Site Health and Safety Coordinator (SHSC) aka Site Safety and Health Officer (SSHO) will be the primary Emergency Response Coordinator (ERC) or Incident Commander (IC) as termed through Uniform Incident Command. The SHSC or designated alternate will contact the appropriate personnel or authorities as determined by the type and nature of incident. Attachment 1 lists emergency contacts and serves as documentation of this site-specific chain-of-command. Attachment 3 includes checklists for use during emergency incidents.

This chain-of-command is established to minimize confusion and to leave no doubt as to whom has decision-making authority in the event of an emergency situation.

#### 3.1 ERC ROLE

ERC responsibilities during emergency situations are as follows:

- Evaluate emergency situation and special needs.
- Direct all emergency efforts, including evacuation of personnel and assignment of personnel to response roles.
- Notify and interact with emergency response agencies.
- Oversee medical and decontamination procedures.
- Serve as the point of contact for local fire department(s) and/or hazardous material team(s).

ERC responsibilities after the emergency phase is complete includes:

- Supervise cleanup efforts; ensure proper recovery, disposal and accounting of any hazardous material/waste.
- Ensure all emergency equipment and supplies are cleaned and/or made available for future use.
- Document incident, advise management, and initiate debriefing.

The ERC will delegate, as necessary, specific roles and duties outlined above.

#### 3.2 ALTERNATE ERC'S ROLE

- The Site Manager is the primary backup to the ERC.
- Additional personnel may be trained as alternate ERC's based upon site complexity and/or size.

#### 3.3 SITE MANAGER ROLE

- Alternate ERC.
- Initial Media Contact.

#### 3.4 PROGRAM OR OPERATIONS SAFETY MANAGER ROLE

- Provide technical assistance and lead post-event investigations.



### **3.5 REGIONAL SAFETY OFFICER ROLE**

- Receive reports from the ERC.
- Provide information to appropriate management and track reports.
- Workers compensation liaison.
- Focal point for medical return to work.
- Incident investigation as necessary.

### **3.6 PROJECT MANAGER ROLE**

- Assure funding as necessary for emergency operations.
- Report and interact with regulatory agencies and client as necessary.
- Media Contact \* (note that all media contacts will be governed by applicable contract provisions. WESTON's Marketing Department will be consulted in the event of a media contract or as necessary).

### **3.7 EMERGENCY RESPONSE TEAMS**

Based upon the size and complexity of the site or task activities, Emergency Response Teams (ERTs) will either be jointly comprised of all personnel on-site, cross-trained to actions necessary (e.g., spills, confined space rescue, high-angle rescue), comprised of named individuals, local response agencies or a combination of the above. Attachments 1 and 4 indicate roles and responsibilities for this site.

## 4. EMERGENCY RECOGNITION, PREVENTION AND TRAINING

All WESTON personnel will be instructed on a daily basis to be constantly alert for potentially hazardous situations or conditions. Immediate recognition with necessary corrective actions of potential hazardous conditions can avert an emergency. Emergency response discussions will be incorporated into regular safety meetings and will include such topics as:

- Tasks to be performed.
- Hazards that may be encountered, along with their effects and how to recognize symptoms.
- Emergency procedures, including evacuation.

Training required to be given (initially and periodically) to all site workers includes the following:

- Site topography, site layout and prevailing weather conditions.
- Procedures for reporting incidents.
- Roles and procedures in the event response may include local, state or federal responders.
- Alarm systems and all applicable aspects of this ERCP.

### 4.1 IF SITE IS REGULATED UNDER 29 CFR 1910.120 (HAZWOPER)

In addition to the above requirements, all WESTON site personnel shall have a minimum of the following safety training:

- 40-hour Hazardous Waste Operations (HAZWOPER).
- 8-hour Annual Refresher Course.
- Site-specific Training.
- At least (1) member of the WESTON team shall have First Aid/CPR training.\*
- At least (1) member (SSHO) shall have 8-hour Site Health and Safety Coordinator Training.

### 4.2 IF SITE IS NON-HAZWOPER

In addition to the above requirements, all WESTON personnel shall have a minimum of the following safety training:

- Hazard Communication Training
- Site Specific Training.
- At least one person shall have First Aid/CPR training.\*

\* Note: If work is for Corps of Engineers, minimum number of trained personnel is two (2).

## **5. COMMUNICATION**

Daily environmental health and safety briefings will be used to remind personnel of their roles, responsibilities, and emergency procedures. A record of the safety briefings will be completed and maintained on-site.

Emergency communications will be voice, audible horn/alarm or 2-way radio. See Attachment 2 for site-specific requirements. Telephone capability will be a requirement for all sites; the location of either a site telephone or the nearest off-site phone is listed in Attachment E. Emergency telephone numbers will be kept in the WESTON site vehicle and/or site office. Personnel will be instructed to immediately contact the SHSC or Site Manager if an emergency situation arises.

A backup emergency notification system will also be used during all site activities (e.g., air horns located at each work location). In the case of an emergency the signal for personnel to evacuate the area will be a series of long blasts. The assembly/gathering point for individual work locations will be provided during the daily safety briefing. After a head count has been taken further evacuation may be required based on wind direction and weather conditions. Five short blasts of the air horn will signal all clear, workers may then return to designated work areas.

Each type of communication will be tested to insure that site personnel can identify the signals above background noise, as well as to check for system efficacy and accuracy. In the event that air horns prove to be inefficient, alternative methods (e.g., 2-Way Radios) will be implemented and tested to prove efficient use.

In the event of an emergency requiring outside assistance the ERC or designated alternate will contact outside help using the nearest telephone or other pre-established means.

## **6. SUPPORT AREAS, EVACUATION PROCEDURES AND PERSONNEL ACCOUNTING**

The primary support area for all work at the site will be determined before commencement of work at the site.

Evacuation routes and assembly areas will be determined. Means of accounting for site personnel and visitors will be based upon site size and complexity (typical methods include sign-in logs). In the event of an evacuation these logs will be brought to the assembly area in order to verify safe evacuation by all.

Alternate routes and assembly areas will be determined and utilized based upon wind speed and direction as well as emergency requirements. See Attachment 5 for site map, location and information.

## 7. EMERGENCY PROCEDURES

### 7.1 GENERAL

During an emergency, the following actions will be taken, with some actions conducted concurrently. No one will attempt an emergency response/rescue until the situation has been assessed and the appropriate response outlined by the ERC or local responders.

It will be determined prior to work initiation, whether any tasks on site are critical operations requiring one or more persons to shut down sensitive equipment in a time-critical manner. If it is determined that critical operations are evident, specific procedures will be outlined in Attachment 4.

Certain sites (e.g., UXO, CSM) or clients (e.g., DOE, DOD) may have specific criteria and actions to be followed in the event of an emergency situation. If so, these procedures will be outlined in Attachment 4.

General guidelines for rescue/response may include the following:

- **Assessment:** Assess the type and extent of the emergency, then determine and verify existing and potential hazards to site personnel and the off-site population. Determine, based on the type and extent of the emergency, the following:
  - Whether and how to respond
  - The extent of any injuries and/or damage
  - The need for evacuation of site personnel and off-site population
  - The resources needed for evacuation and response
- **Evacuate:**
  - Move site personnel to a safe distance upwind of the incident.
  - Monitor the incident for significant changes. The hazards may diminish, permitting personnel to re-enter the site, or hazards may increase and require public evacuation.

*Note: Should site personnel or visitors be handicapped to the point of needing assistance during an evacuation, the ERC will ensure that appropriate numbers of site workers are trained to provide any needed assistance.*

*Note: Work sites with potential hazards that could involve adverse community risk, and require evacuation of the local community must be discussed and coordinated with the client and local fire and police agencies before fieldwork begins.*

- **Enforcing the buddy system:** Allow no one (including rescuers) to enter a contaminated area or hazardous area without a partner or without appropriate communications means and proper PPE. At the time of the incident, one person will be designated to record the names, time of entry, and time of exit for all personnel entering the EZ. At all times, personnel in the EZ should be in line-of-sight or communications contact with the ERC or his designee.
- **Survey casualties:**
  - Locate all victims and assess their condition.
  - Determine resources needed for stabilization and transport.
- **Request aid:** Contact the required off-site/on-site personnel or agencies (such as the ambulance, fire department, police, etc). Ensure that previous communications and understanding or response actions to be conducted by the off-site resources have been accomplished. In certain cases (e.g., confined

space rescue) the off-site responder(s) must be brought to the site before work is initiated so that an evaluation of and training on the confined spaces is accomplished.

- Allocate resources: Allocate appropriately qualified on-site personnel and equipment to the rescue and initiate incident response operations.
- Remove or assist victims from the area, using appropriate equipment and procedures.
- Control measures, including containment: Assist in bringing the hazardous situation under complete or temporary controls and use measures to prevent any escalation of the emergency.
- Decontaminate: Use established procedures to decontaminate personnel in the decontamination area. If the emergency makes this area unsafe, establish a new decontamination area at an appropriate distance. Decontaminate victims before or after stabilization as their medical condition indicates. Decontamination may be delayed if the injuries suffered by the victim pose an immediate threat to the victim's life or health. Instead, the victim should be placed on a tarp, sheet of plastic or non-absorbent backboard to allow handling of the victim without the threat of contaminating support personnel until the victim is stabilized.
- Stabilize: Administer any medical procedures that are necessary before the victim can be moved. Stabilize or permanently remediate the hazardous condition. Address the cause of the emergency and anything that was damaged or endangered by the emergency (e.g., drums, and tanks).
- Transport: No one will be transported without being decontaminated or protected from contaminating others. Measures will be taken to minimize chemical contamination of the transport vehicle, ambulance, and hospital personnel.
- Casualty Logging: Record the names(s) of the victim(s), the time, the destination, and their condition upon transport.
- Casualty tracking: Record the disposition, condition, and location of the casualties.
- Media Reporting: Media contacts should be named (see Attachment A) and utilized whenever contact with reporters is necessary. The Site Manager will be the immediate media contact. The PM is listed as the media contact for most sites.

## 7.2 SECURITY ISSUES

Both routine and emergency response actions dictate the need for prevention of unauthorized access and for the protection of vital records and equipment. Site size, location, political or social environment, and equipment needs are criteria necessary to evaluate whether security (private or public) is needed.

- Local Police Departments should be notified of site activities conducted, personnel on site, site hazards and risks, and regulatory issues before work begins. Notifications will assist in coordination of efforts should police present be required.

In the event of unauthorized access, personnel should avoid confrontation (verbal or physical). Attempts must be made to explain site hazards, and Corporate and client expectations for a safe worksite. Continued presence by unauthorized persons will require a team member to notify the local police force. Site activities may need to be halted in the event unauthorized persons create an adverse risk to themselves, to WESTON personnel or to subcontractor personnel.

### 7.3 SEVERE WEATHER/NATURAL DISASTERS

In the event of adverse weather conditions occurring on-site such as lightning, high winds, tornado, hurricane or extreme heat the SHSC will instruct the workers to discontinue or modify field operations. These natural phenomena complicate work activities and add or increase risk to all site personnel. The following actions should be evaluated or taken in the event of severe weather:

- Stop work
- Secure all loose materials, toolboxes, plywood, and trashcans. etc.
- Bring all workers to safe areas indoors when lightning or severe weather is in the immediate area.
- Verify that all buildings and trailer doors are locked and windows closed.
- Shut down and disconnect all non-critical electrical equipment to protect the equipment from electrical surges and abrupt power loss.

### 7.4 INJURY OR ILLNESS

In the event of injury or illness, site personnel will take the following action:

- Evaluate the scene for safe entry.
- Notify SHSC and Site Manager.
- Assess the type and extent of injury.
- Provide initial First Aid to injured person.
- Decontaminate the injured personnel, if or as necessary.
- If required and injury or illness not potentially life-threatening, transport to local medical facility.
- If injury or illness potentially life-threatening notify emergency medical services of need for transportation.
- Notify Regional Safety Officer and Project Manager.

### 7.5 EXTRICATION

In the event a person becomes trapped and requires extrication site personnel will take the following action:

- Notify SHSC and Site Manager.
- Evaluate the scene for safe entry.
- Contact the local Fire Department or Rescue Service.
- Provide first aid as necessary.
- Notify Regional Safety Officer and Project Manager.

### 7.6 CHEMICAL EXPOSURE

In the event of chemical exposure site personnel will take the following action:

- Evaluate the scene for safe entry.

- Notify SHSC and Site Manager.
- Provide assistance with emergency shower, eyewash, or other initial First Aid, as required.
- Decontaminate exposed personnel.
- Notify emergency medical services of need for transportation as necessary.
- Notify Regional Safety Officer (RSO) and Project Manager (PM).

## 7.7 SMALL FIRE

A small fire is defined as a fire that can be extinguished with a 4A:20BC type fire extinguisher or incipient stage fires, which can safely be extinguished with material readily at hand. In the event of a small fire, site personnel will take the following actions:

- Evacuate all unnecessary personal from the area, if possible, to an upwind location.
- Notify SHSC and Site Manager.
- Attempt to extinguish fire using portable fire extinguishers or by smothering from an upwind location
- Request emergency response assistance as appropriate.
- Notify the RSO and Project Manager.

## 7.8 LARGE FIRE

In the event of a large fire, or a small fire, which cannot be extinguished, the following actions will be taken:

- Sound alarm.
- Evacuate all unnecessary personnel from the area, if possible, to an upwind location.
- Notify local fire department; request other emergency response services (police, ambulance, and hospital) as needed.
- Notify Site Manager and RSO and other appropriate personnel or agencies.

## 7.9 EXPLOSION

In the event of an explosion, all nonessential personnel will evacuate the site. Required support equipment, services, and personnel will be requested. Response will follow steps identified under the Chemical Exposure section. Notification action as indicated in the Large Fires section will be followed.

## 7.10 SMALL SPILL

In the event of a small spill, appropriate actions will be taken to prevent the spill from reaching groundwater, surface water or drains.

Actions include:

- Verification of spilled material, volume and hazards.
- Determine appropriate response procedures including PPE (see MSDS or Chemical Data Sheet).



- Assess quantity and size of the spill to determine the level of response to contain and clean it up.
- Confine or contain spill with booms, pads, or berm.
- Neutralize spill with appropriate agents (if safe/possible).
- Notify Regional Safety Officer and Site Manager.
- WESTON will collect spilled material including absorbent material and place in appropriate containers. All hazardous material shall be disposed of in accordance with all applicable hazardous waste regulations and client requirements.

WESTON will keep all records related to the spill of hazardous waste for a period of at least three years after the spill has been cleaned up or such longer period of time as required in any unresolved enforcement action.

*Note: MSDS's for materials onsite with potential to spill (e.g., gasoline, diesel, acids, solvents) will be provided as Attachment 4 to this emergency response plan or the location of MSDS's will be documented in Attachment 4. Procedures and requirements for spill response will follow criteria outlined in the MSDS.*

### **7.11 LARGE SPILL**

A volume equal to or greater than State or Federal reportable quantity (RQ) and/or those beyond the capabilities and resources of on-site personnel defines large spills. Appropriate remedial actions will be conducted according to State and Federal Regulations.

General procedures as follows:

- Verification of spilled material, volume and hazards.
- As safe to do so, confine the spill to the smallest area possible using booms, pads, berms or any other effective material.
- Assess type and extent of damages and injuries to personnel; take appropriate first aid steps if necessary.
- Notify Regional Safety Officer and Site Manager.
- In the event the additional emergency clean-up assistance is needed, WESTON will request assistance from off-site response contractors.
- WESTON will collect all hazardous waste including contaminated booms and absorbent material. All hazardous clean-up residues shall be disposed of in accordance with all applicable hazardous waste regulations.
- All emergency equipment will be decontaminated prior to being put back into service. Expendable or damaged supplies will be immediately replaced.

WESTON will keep all records related to the spill of hazardous waste for a period of at least three years after the spill has been cleaned up or such longer period of time as required in any unresolved enforcement action.

In the event of a spill or a release requiring agency reporting, the Project Manager will notify the client and appropriate regulatory agencies (see Attachments 1 and 4).

## **8. CRITIQUES AND CORRECTIVE ACTIONS**

Post emergency response activities include documentation, investigation and appropriate corrective actions to avoid future problems. The Program Safety Manager (PSM), operations safety staff, the RSO or the SHSC will lead the post-incident critique to assure worker knowledge of actions taken and proposals for changes as necessary. The SHSC and the RSO are responsible for documenting incident reports and providing communication to management. The PSM and/or operations safety staff is responsible for providing direction and assistance. Corrective actions necessary based upon appropriate review and investigation of the incident are required prior to assumption of work. In the event corrective actions cannot be made on an immediate basis, documented plans and schedules will be formulated.

**ATTACHMENT 1**

**EMERGENCY CONTACTS**

*A copy of this form is to be posted near the site telephone and available in all site vehicles.*

<b>EMERGENCY CONTACTS AND PHONE NUMBERS</b>	
<b>SERVICE</b>	<b>TELEPHONE NUMBER</b>
Ambulance Service	911
Police 2-way radios for on-site security	911 (Stratford Police)
Fire	911
Hospital: Bridgeport Hospital 267 Grant Street, Bridgeport	(203) 384-3000
WESTON Medical Emergency (CONTINUUM)	(800) 229-3674
WESTON Emergency (GCT Office)	(860) 368-3200
WESTON Emergency (24 hour) (West Chester)	(610) 701-3000
WESTON Program or Operations Safety Manager: Todd Walles	(860) 368-3211
Client or Media Contact: John Burlson	(203) 385-4316
WESTON Regional Safety Officer: Ted Blackburn (pager)	Redacted - Privacy Act
Spill Response Contractor(s) Franklin Environmental	(203) 630-2472
National Response Center	800-424-8802
Federal Regulatory Agency: EPA Superfund Hotline	800-424-9346
State Regulatory Agency: CT DEP Oil and Chemical Spills	(860) 424-3338
SHSC/ERC (Tim Laquerre, GCT, ) Home phone #	Redacted - Privacy Act
Construction Superintendent (Steve O'Brien, GCT) Home Phone #	Redacted - Privacy Act
Alternate ERC(s) (Mike Ciarcia, GCT) Home Phone #	Redacted - Privacy Act
Project Manager: John-Eric Andersson	(860) 368-3209
WESTON Risk Management	(610) 701-3046
WESTON Risk Management	Fax (610) 701-3656

## ATTACHMENT 2

# EMERGENCY RESPONSE EQUIPMENT

### 1. Equipment Listing

*WESTON will maintain the following emergency response equipment on-site in the event of an emergency. Unless otherwise noted below, and as indicated in Appendix E (site map) emergency equipment will be stored in the site vehicle. Minimal equipment (specify type or classification and quantity) will be listed below. Should additional equipment be necessary and/or equipment determined no longer necessary additions or deletions to the following lists will be made.*

- **Communications Equipment and Alarms**

*Two-way radios and cell phones will be on site*

- **Fire Control Equipment**

*Two 10lb ABC Fire Extinguishers will be on site*

- **Spill Control Equipment**

*None anticipated. Erosion control measures (including haybales) will be on site.*

- **Personal Protective Equipment**

*Tyvek suits, hardhats, safety glasses, steel toed boots, bootcovers, hearing protection and nitrile gloves will be on site.*

- **Emergency Decontamination Equipment**

*Subcontractor to provide decon equipment.*

- **First Aid Equipment**

*One medkit per each WESTON field vehicle*

- **Rescue Equipment**

*None anticipated for this phase*

### 2. Equipment Testing

It is the responsibility of the Emergency Coordinator to periodically test communications and fire control equipment and to ensure that all spill response/control, personal protective equipment; first aid supplies and rescue equipment is available and usable.

### 3. Maintenance of Equipment

Fire extinguishers are to be inspected monthly with annual testing by an outside firm. First aid supplies are to be inspected weekly on construction sites and monthly otherwise. The wearer will inspect personal protective equipment prior to donning.

## ATTACHMENT 3

### FORMS

*(i.e., Incident Report, Investigation Report, Client Report Form)*

**Indicate forms to be used:**

- Forms are attached
- Forms will be provided in SSHO file

**Minimum forms required on-site include:**

- Notice of Incident (NOI)
- Incident Report Log (e.g., OSHA 200 Log)
- Incident Investigation Form
- Corps of Engineers Accident Report Form 3394 (if CoE Site)
- Spill Report Form (see attachment D)
- ERC Incident Checklists
- General
- HazMat
- Fire
- Safety and Research
- Incident Termination
- Safety Observation/Suggestion Form
- Investigators Interview Preparation Form
- Incident Observation Form
- Other

## **EMERGENCY RESPONSE COORDINATOR INCIDENT CHECKLIST**

### **Nature of Incident**

- Hazardous Material Release
- Medical
- Fire
- Technical Rescue
- Other

### **Checklist**

- Date and Time
- Command Established
- Command Post Location
- ERC (name)
- Safety and Research Support Officer (name)
- Decontamination Officer (name)
- Entry Team (names)
- Extent of Incident Identified
- Site Secured
- Evacuation Determined/Initiated
- Decontamination Setup (where necessary)
- Personnel Accounted For
- Emergency Response Teams Activated
  - Internal
  - External
- Medical Treatment Determined/Provided
- Control and Containment Determined/Initiated
- Release from Emergency Condition (date/time)
- Cleanup and Return to Normal Condition (date/time)
- Critique and Follow-up (date/time)

## **EMERGENCY RESPONSE COORDINATOR HAZMAT INCIDENT CHECKLIST**

### **Situation**

- Spill
- Air
- Land
- Water
- Contained Within Structure
- Fire
- Leak
- Reaction
- Chemical(s) Involved
- Amount and Concentrations Estimated
- Container Types

- Ensure Personnel Accounted For
- Ensure Appropriate Medical Treatment as necessary
- Ensure Proper Equipment/PPE where necessary
- Ensure Decontamination Established where necessary
- Ensure Objectives for Entry Established
- Ensure Briefing Prior to Entry
- Ensure Debriefing of Entry Team
- Emergency Response Coordinator
- Fire Incident Checklist

### **Location:**

### **Involving**

- Fixed Location
- Transportation
- Piping
- Other
- Monitoring and Readings from Entry Team

### **Type of Fire:**

- Building/Structure
- Vehicle
- Other

### **Extent of Fire:**

### **Notifications**

- Fire Department
- HazMat Response
- Police
- USCG
- State
- Local
- National Response Center
- Client
- Weston
- Other

### **Building and Location Information:**

- Type of Construction
- Sprinkler System
- Age of Structure
- Occupancy
- Contents
- Hazardous Materials

### **Key Steps:**

- Identify Chemical(s), Hazards and Risk
- Determine Objectives (evacuation, external response or internal control)
- Establish Command Structure
- Establish Control Zones
- Ensure Response Teams Activated

### **Shut-Offs and Utilities:**

- Gas
- Electric
- Steam
- Pits/Sumps
- Shafts/Elevators

### **Water Supply (type and location)**

**SAFETY AND RESEARCH OFFICER  
HAZMAT INCIDENT RESPONSE CHECKLIST  
AND RISK ASSESSMENT GUIDE**

**Establish Control Zones**

**Research:**

- Chemical(s) Identified
- Chemical Data Sheets Available
- Chemical Hazards Determined
- Major Hazards
- Physical
- Flammable
- Toxic
- Corrosive
- Reactive
- Specific Medical Treatment(s)

**Amount of Chemical(s) Released or Potential for Release:**

**Container Types and Volumes:**

**Containers Stressed:**

- Fire
- Reaction
- Corrosion
- Other

**Exposures**

- Workers
- Public
- Environmental

**Protective Clothing and Equipment Required:**

**Decontamination Established:**

**Objectives Identified and Briefing Conducted**

**Entry Team Established (names/roles)**

**Level of Protection Established**

**Entry Controlled and Timed**



## **EMERGENCY RESPONSE COORDINATOR TERMINATION CHECKLIST**

**Type Incident, Incident Number and Date:**

**On-Site Debriefing:**

- Personnel Exposures/Health Effects
- Equipment Needs/Restocking Requirements
- Operations Review
- Need for Crisis Intervention Services
- Identify Contact Person for any Additional Concerns

**Forms and Reports Initiated**

**Location of Forms and Reports**

**Date and Time for Debrief and Critique**

**Assignments for Follow-up**

**Investigation for Cause Initiated**

**Regulatory Criteria (notifications/reports) Complete**

## **SPILL REPORT FORM**

*This form is to be used to report to regulatory agencies and others in the event of a release or spill. Use this form to assist in the initial report phase of an incident. Have the following information available (to the extent possible) before the call. Do not wait for information that would put you at risk of not reporting in a timely manner and in accordance with applicable regulations.*

**Name, Address, Telephone Number of Person Reporting.**

**The identity (chemical name), location and nature of the release, including its source, quantity and duration.**

**Whether the release is to air, ground, or water.**

**Whether any injuries or property damage.**

**What are the weather conditions?**

**What types of corrective actions are underway (e.g., containment, evacuation, etc.)?**

**ATTACHMENT 4**

**SITE-SPECIFIC SPILLS or RESPONSE ACTIONS**

1. **Specific procedures are required of the ERC in the event of an emergency situation, these actions include:**
  - Activate or ensure activation of alarm systems, notify appropriate local or state response agencies.
  - Identify the character, exact source, amount and areal extent of any released material.
  - Assess possible direct and indirect hazards to human health or the environment that may result from the release, fire or explosion.
  - Determine if evacuation of local areas is required, and immediately notify either the government official designated as the on-scene coordinator or the National Response Center.
  - Ensure that fires, explosions, and releases do not occur, recur, or spread to other parts of the site or facility.
  - Monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment if facility operations cease.
  - Provide treatment, storage and disposal of any material that results from a release, fire, or explosion immediately after an emergency.
  - Ensure that no waste incompatible with the released material is processed until cleanup procedures are completed and all emergency equipment listed in this plan is cleaned and fit for its intended use.
  
2. **Evaluate the chemicals or contaminants on your site to determine whether any of the following regulatory spill reports are applicable. Fill out the necessary information in the planning phase to assure prompt and reliable reporting in the event of a spill or release.**

**Determine If CERCLA Release:**

1. Are any chemicals regulated as CERCLA hazardous substance? (see 40 CFR Part 302.4). If so, list.
2. If listed chemicals indicate RQ for each.
3. In the event of a spill of the referenced hazardous substance, has the release equaled or exceeded the RQ within 24 hours?
4. Is the release totally contained within buildings or structures? If no, it must be reported.
5. If Reporting required, notify (in addition to internal/client):
  - a. National Response Center 800-424-8802
  - b. State Emergency Response Commission (enter phone number) \_\_\_\_\_
  - c. Local Emergency Response Commission (enter phone number) \_\_\_\_\_
6. Provide information as indicated in Attached Spill Report Form.
7. Ensure written reports prepared and submitted in accordance with regulation and corporate policy.

**Determine If Emergency Planning and Community Right-To-Know Act (EPCRA) Release:**

1. Are any chemicals listed as extremely hazardous substances? (See 40 CFR Part 350).
2. Are any of the listed chemicals produced, used or stored in excess of the threshold planning quantity (TPQ)? If so, list chemical and quantity above TPQ.
3. Could a release of item 2 chemicals expose people outside of the facility boundaries? If no, is not EPCRA report requirement.
4. If a release of RQ of a listed chemical, notify (in addition to internal and client):
  - a. SERC (enter phone number) \_\_\_\_\_
  - b. LEPC (enter phone number) \_\_\_\_\_
5. Provide information as indicated in Attached Spill Report Form.
6. Ensure written reports prepared and submitted in accordance with regulation and corporate policy.

**Determine If Resource Conservation and Recovery Act (RCRA) Release:**

1. Is the chemical regulated as a hazardous waste? If not, is not a RCRA report.
2. Does the release constitute a "release, fire, or explosion that could threaten human health or the environment outside the facility? (Note, there are no particular RQs or concentrations in this case).
3. If the release meets the requirements of item 2, notify (in addition to internal and client):
  - a. "Appropriate local authorities" if an evacuation is necessary (list name and phone or all).  
\_\_\_\_\_
  - b. State or Federal On-Scene Coordinator (name and phone number).  
\_\_\_\_\_
  - c. National Response Center 800-424-8802
4. Provide information as indicated in Attached Spill Report Form.
5. Ensure written reports prepared and submitted in accordance with regulation and corporate policy.

**Determine If Clean Water Act (CWA) Release:**

1. Has the spill/release polluted water by:
  - a. Being a hazardous substance (40 CFR Part 117) equaling or exceeding its RQ? If hazardous substance list and indicate RQ. *Or*
  - b. Being an oil that creates a sheen or discoloration of the water surface, or violates a water quality standard?
2. If release meets the above criteria you must report to the NRC (800-424-8802) as soon as knowledge of the spill.

3. Provide information as indicated in Attached Spill Report Form.
4. Ensure written reports prepared and submitted in accordance with regulation and corporate policy.

**Determine If Toxic Substance Control Act (TSCA) Release of PCBs (note determine if other TSCA reporting chemicals (e.g., asbestos) on-site):**

1. Does the PCB material concentration equal to or greater than 50 ppm and has contaminated surface and/or drinking water, sewers, grazing lands, or vegetable gardens? *Or*
2. Does the 10 pounds or more of materials that contain 50 ppm or greater concentration of PCBs wherever they are spilled?
3. If so, then notify (in addition to corporate and client requirements)
  - a. NRC immediately upon knowledge \_\_\_\_\_
  - b. EPA Regional Office of Pesticides and Toxic Substances Branch (list name and phone number) \_\_\_\_\_
4. Provide information as indicated in Attached Spill Report Form.
5. Ensure written reports prepared and submitted in accordance with regulation and corporate policy.

## **SPILL REPORT FORM**

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*This form is to be used in the event of a release or spill. Use this form to assist in the initial report phase of an incident. Have the following information available (to the extent possible) before the call. Do not wait for information that would put you at risk of not reporting in a timely manner and in accordance with applicable regulation(s).*

1. Name, Address, Telephone Number of Person Reporting:
  
2. The identity (chemical name), location and nature of the release, including its source, quantity and duration.
  
3. Whether the release is to air, ground or water.
  
4. Whether any injuries or property damage.
  
5. What are the weather conditions?
  
6. What types of corrective actions are underway (e.g., containment, evacuation, etc.)?

**ATTACHMENT 5**

**SITE PLAN, EVACUATION ROUTES, AND EQUIPMENT LOCATIONS**

A map **depicting the site, evacuation routes and equipment locations** will be posted in the office and work site. Mobile sites will determine location on daily basis. Hospital locations will be determined from each mobile location prior to work initiation. **All personnel must be made aware of evacuation signals, evacuation routes and procedures prior to site work.** Evacuation and other site emergencies must be discussed and/or practiced to assure employee awareness and ability to respond properly.

**Emergency Contacts**

The following emergency telephone numbers shall be prominently posted in WESTON's field office:

**Emergency Contacts**

Service	Telephone Number
Emergency Services	911
Ambulance Service	911
Site Security	Radio or (203) 385-6654
Police – Stratford, CT (Fairfield County)	911
Fire - Stratford, CT (Fairfield County)	911
Hospital: Bridgeport Hospital 267 Grant Street Bridgeport, CT 06610	(203) 384-3000
Poison Control Center (Bridgeport, CT)	(203) 576-5178
Oil and Chemical Spills (CT DEP)	(860) 424-3338
24-hour Emergency Service (CHEM-TEL)	(800) 255-3924
WESTON Medical Emergency (Continuum)	(800) 229-3674
WESTON Emergency (24 hour) (West Chester)	(610) 692-3000
Ted Blackburn (pager)	Redacted - Privacy Act
George Crawford (pager)	Redacted - Privacy Act
Matt Dillon- Risk Management	(610) 701-7413

In the event of an emergency requiring outside emergency services, WESTON personnel will immediately dial 911 to contact the appropriate organization. Following the phone call, WESTON personnel will contact U.S. Army Corps of Engineers on-site personnel to inform them that emergency service personnel and equipment will be entering the facility. Subsequent to these notifications, appropriate off-site personnel of the U.S. Army Corps of Engineers and WESTON will be contacted and informed about the situation.

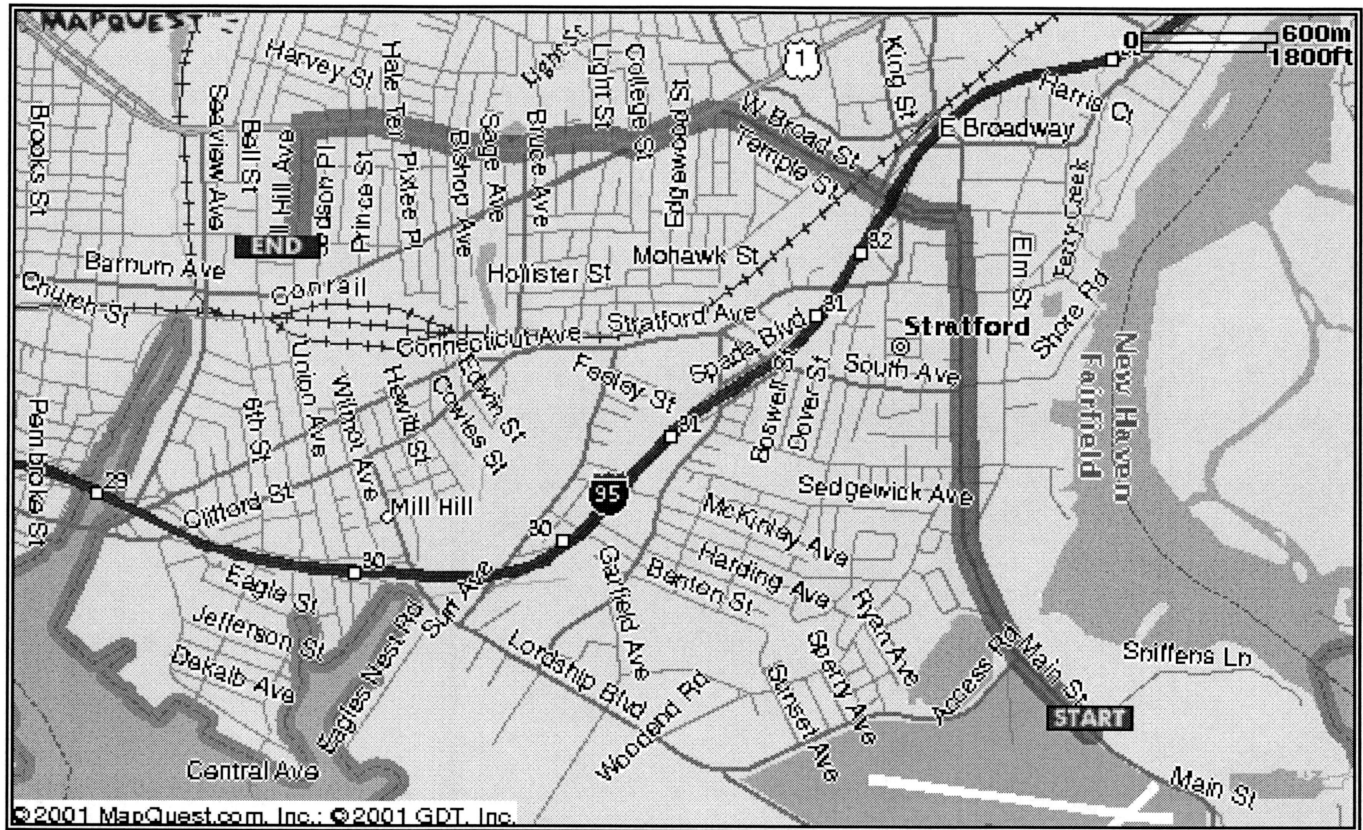
## **Hospital Route and Directions**

A map showing the route to the hospital will be posted near the site telephone. The following written description of the routes will be attached to the map, and the hospital routes will be verified prior to work initiation.

- Turn right, North, onto Main Street
- Turn left onto West Broad Street
- Enter traffic rotary and take second exit onto West Broad Street
- Turn left onto Barnum Avenue./ U.S.Route1
- Turn right onto Boston Avenue./ U.S.Route1
- Turn left onto Mill Hill Avenue.
- Turn Right onto Grant Street.
- Hospital is at 267 Grant Street.



### Hospital Route Map



Route	Travel Distance
▪ Turn right, North, onto Main Street .....	1.6 miles
▪ Turn left onto West Broad Street .....	0.1 miles
▪ Enter traffic rotary and take second exit onto West Broad Street .....	0.6 miles
▪ Turn left onto Barnum Avenue./ U.S.Route1 .....	0.2 miles
▪ Turn right onto Boston Avenue./ U.S.Route1 .....	0.9 miles
▪ Turn left onto Mill Hill Avenue. ....	0.3 miles
▪ Turn Right onto Grant Street.	
▪ Hospital is at 267 Grant Street.	

## SITE-SPECIFIC HAZARD COMMUNICATION PROGRAM

### Location-Specific Hazard Communications Program/Checklist

In order to ensure an understanding of and compliance with the Hazard Communication Standard, WESTON will utilize this checklist/document (or similar document) in conjunction with the WESTON Written Hazard Communications Program as a means of meeting site or location specific requirements. While responsibility for activities within this document reference the WESTON Site Health & Safety Coordinator (SHSC), it is the responsibility of all personnel to effect compliance. Responsibilities under various conditions can be found within the WESTON Written Hazard Communication Program.

To ensure that information about the dangers of all hazardous chemicals used by WESTON are known by all affected employees, the following hazardous information program has been established. All affected personnel will participate in the hazard communication program. This written program as well as WESTON's Corporate Hazard Communication Program will be available for review by any employee, employee representative, representative of OSHA, NIOSH or any affected employer/employee on a multi-employer site.

- Site or other location name/address: Stratford Army Engine Plant, 550 Main Street Stratford, CT.
- Site/Project/Location Manager: Steve O'Brien
- Site/Location Health & Safety Coordinator: Timothy Laquerre
- List of chemicals complied, format: HASP:  Other: \_\_\_\_\_
- Location of MSDS Files: Temporary project office
- Training Conducted by (name and date): John-Eric Andersson @ Pre-Construction Safety Conference 9/26/01.
- Indicate format of training documentation: Field Log:  Other: \_\_\_\_\_
- Client briefing conducted regarding hazard communication: Pre-Construction Safety Conference
- \_\_\_\_\_ If multi-employer site, indicate name of affected companies:  
\_\_\_\_\_
- \_\_\_\_\_ Other employer(s) notified of chemicals, labeling and MSDS information: \_\_\_\_\_
- \_\_\_\_\_ WESTON notified of other employer's or clients hazard communication program as necessary.

### List of Hazardous Chemicals

A list of known hazardous chemicals used by WESTON personnel must be prepared and attached to this document or in a centrally identified location with the MSDS. Further information on each chemical may be obtained by reviewing the appropriate MSS. The list will be arranged to enable cross-reference with the MSDS file and the label on the container. The SHSC or location manager is responsible for ensuring the chemical listing remains up-to-date.

## Container Labeling

The WESTON Site Health & Safety Coordinator (SHSC) will verify that all containers received from the chemical manufacturer, importer, or distributor for use on site will be clearly labeled. The SHSC is responsible for assuring labels are placed where required and for comparing MSDS and other information with label information to ensure correctness.

## Material Safety Data Sheets (MSDS)

The SHSC is responsible for establishing and monitoring WESTON's MSDS program for the location. The SHSC will make sure procedures are developed to obtain the necessary MSDS and will review incoming MSDS for new or significant health and safety information. He/she will see that any new information is passed on to the affected employees. If an MSDS is not received at the time of initial shipment, the SHSC will call the manufacturer and have a MSDS delivered for that product in accordance with the requirements of WESTON's Written Hazard Communication Program.

A log for, and copies of, MSDS for all hazardous chemicals in use will be kept in the MSDS folder at a location known to all site workers. MSDSs will be readily available to all employees during each work shift. If an MSDS is not available, immediately contact the WESTON SHSC or designated alternate. When revised MSDSs are received the SHSC will immediately replace the old MSDSs.

## Employee Training and Information

The SHSC is responsible for the WESTON site-specific personnel training program. The SHSC will ensure that all program elements specified below are supplied to all affected employees.

At the time of initial assignment for employees to the work site or whenever a new hazard is introduced into the work area employees will attend a health and safety meeting or briefing that includes the information indicated below.

- Hazardous chemicals present at the worksite.
- Physical and health risks of the hazardous chemicals.
- The signs and symptoms of overexposure.
- Procedures to follow if employees are overexposed to hazardous chemicals.
- Location of the MSDS file and written hazard communication program.
- How to determine the presence or release of hazardous chemicals in the employees work area.
- How to read labels and review MSDSs to obtain hazard information.
- Steps WESTON has taken to reduce or prevent exposure to hazardous chemicals.
- How to reduce or prevent exposure to hazardous chemicals through use of controls procedures, work practices, and personal protective equipment.
- Hazardous, non-routine tasks to be performed (if any).
- Chemicals within unlabeled piping (if any).

When employees are required to perform hazardous non-routine tasks, the affected employee(s) will be given information by the SHSC about the hazardous chemicals he or she may utilize during such activity. This information will include specific chemical hazards, protective and safety measures the employee can use, and

steps WESTON is using to reduce the hazards. These steps include, but are not limited to, ventilation, respirators, presence of another employee, and emergency procedures.

### **Chemicals in Unlabeled Pipes**

Work activities may be performed by employees in areas where chemicals are transferred through unlabeled pipes. Prior to starting work in these areas, the employee shall contact the SHSC at which time information as to: the chemical(s) in the pipes, potential hazards of the chemicals or the process involved, and safety precautions which should be taken will be determined and presented.

### **Multi-Employer Worksites**

It is the responsibility of the SHSC to provide other employers with information about hazardous chemicals imported by WESTON to which their employees may be exposed, along with suggested safety precautions. It is also the responsibility of SHSC and the site manager to obtain information about hazardous chemicals used by other employers to which WESTON employees may be exposed. WESTON's chemical listing will be made available to other employers as requested. MSDSs will be available for viewing as necessary. The location, format and/or procedures for accessing MSDS information must be relayed to affected employees.

## **CHEMICAL SAFETY DATA SHEETS**

WESTON assembled and submitted Chemical Safety Data Sheets for the contaminants of concern as part of the Phase I Site-Specific Health & Safety Plan. As these constituents have not changed in Phase II, copies of the Chemical Safety Data Sheets will be maintained on site and are not included herein.

## **MATERIAL SAFETY DATA SHEETS**

Throughout Phase I activities, WESTON has received and maintained Material Safety Data Sheets (MSDSs) for all consumer chemical products (diesel fuel, grease, hydraulic oil, etc.) in use and/or storage at the project site. As the types and quantities of these products have not changed in Phase II, copies of the (MSDSs) will be maintained on site and are not included herein.