

**FINAL
MASTER SITE HEALTH AND SAFETY PLAN**

Site: NAVAL SUBMARINE BASE - NEW LONDON

Location: GROTON, CONNECTICUT

Prepared By: FOSTER WHEELER ENVIRONMENTAL CORPORATION

Date Prepared: JULY 29, 1999

Revision: 1

Delivery Order: 014 and 024

FOSTER WHEELER ENVIRONMENTAL CORPORATION, FOSTER WHEELER SUB-CONTRACTORS, AND THE DEPARTMENT OF THE NAVY DO NOT GUARANTEE THE HEALTH OR SAFETY OF ANY PERSON ENTERING THIS SITE. DUE TO THE NATURE OF THIS SITE AND THE ACTIVITY OCCURRING THEREON, IT IS NOT POSSIBLE TO DISCOVER, EVALUATE, AND PROVIDE PROTECTION FOR ALL POSSIBLE HAZARDS WHICH MAY BE ENCOUNTERED. STRICT ADHERENCE TO THE HEALTH AND SAFETY GUIDELINES SET FORTH HEREIN WILL REDUCE, BUT NOT ELIMINATE, THE POTENTIAL FOR INJURY AT THIS SITE. THE HEALTH AND SAFETY GUIDELINES IN THIS PLAN WERE PREPARED SPECIFICALLY FOR THIS SITE AND SHOULD NOT BE USED ON ANY OTHER SITE WITHOUT PRIOR RESEARCH AND EVALUATION BY TRAINED HEALTH AND SAFETY SPECIALISTS.

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APPROVALS

By their signature, the undersigned hereby certify that this Master SHSP has been reviewed and approved for use at the Naval Submarine Base - New London, Groton, CT.

AB Holcomb _____ DATE

DELIVERY ORDER MANAGER

SITE SUPERINTENDENT DATE

Gregory P. Cappi _____ *7/29/99*
PROJECT HEALTH AND SAFETY MANAGER DATE

SITE HEALTH AND SAFETY OFFICER DATE

**NAVAL SUBMARINE BASE - NEW LONDON
GROTON, CT**

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1.0 INTRODUCTION

1.1 Purpose

This Master Site Health and Safety Plan (SHSP) addresses the health and safety practices that will be employed by all site workers participating in activities at the Naval Submarine Base - New London (SUBASENLON), Groton, CT. The Master SHSP presents procedures to be followed by Foster Wheeler Environmental Corporation, its subcontractors, and all other on-site personnel in order to avoid and, if necessary, protect against health and/or safety hazards. Activities performed under this SHSP will comply with OSHA Regulations 29 CFR Parts 1910 and 1926, USACOE EM 385-1-1 and the Foster Wheeler Environmental Corporation Health and Safety Program Manual. Many programs from the manual are referenced in this SHSP but are not included. A copy of the manual and this plan will be maintained at the site and the manual is available on the Corporate Reference Library by accessing Lotus Notes. Modifications to the SHSP may be made with the approval of the PHSM using the Field Change Request Form found in Appendix A.

1.2 Scope

This SHSP has been developed to address health and safety concerns during work conducted at the SUBASENLON as a generic document. At the time of issuance of this Master SHSP, Foster Wheeler anticipates three major field projects at SUBASENLON:

- Delivery Order 14, Modification 16-Queing Building Addition
- Delivery Order 24, Modification 08-Storm Sewer Rehabilitation
- Delivery Order 24, Modification 11-Area A Downstream/Overbank Disposal Area Remediation

However, the Master SHSP is intended to address health and safety concerns of any future delivery orders and modifications issued to Foster Wheeler under the U.S. Navy Northern Division Remedial Action Contract (RAC) N62472-94-D-0398.

Site or area specific requirements will be described in each site-specific plan.

1.3 Application

The SHSP applies to all personnel involved in the above tasks who wish to gain access to active work areas, including but not limited to:

- Client representatives – The Navy is responsible for ensuring that its personnel and 3rd party monitors comply with OSHA and ACOE EM 385-1-1 applicable requirements.
- Federal, state or local representatives
- Foster Wheeler Environmental subcontractors will develop activity hazard analyses that will be reviewed by FWENC prior to start of work.

1.3.1 Tasks

Site specific tasks will be described in the site-specific plan.

1.4 Summary of Major Risks

Major risks will be addressed in the site-specific plan.

2.0 PROJECT ORGANIZATION AND RESPONSIBILITIES

This section specifies the Foster Wheeler Environmental project organization.

2.1 Delivery Order Manager (DOM)

The Delivery Order Managers are Larry Kahrs and Joe Spangenberger.

- Ensures implementation of this program through coordination with the responsible Project Health and Safety Manager (PHSM)
- Participates in major incident investigations
- Ensures the SHSP has all of the required approvals before site work is conducted
- Ensures that the PHSM or SHSO is informed of project changes which require modifications of the site safety plan
- Has overall project responsibility for project health and safety
- Conducts periodic site inspections-monthly
- Assists in conducting daily safety briefing

2.2 Site Superintendent (SS)

The Site Superintendents are Kevin White for OBDA and Tom Vollen for Storm Sewer.

- Ensures that the SHSP is implemented in conjunction with the designated PHSM and SHSO
- Ensures that field work is scheduled with adequate personnel and equipment resources to complete the job safely
- Ensures that adequate telephone communication between field crews and emergency response personnel is maintained
- Ensures that field site personnel are adequately trained and qualified to work at the site
- Acts as Emergency Coordinator
- Investigates and writes incident reports
- Conducts weekly site inspections and daily safety briefings

2.3 Project Health and Safety Manager (PHSM)

The PHSM is an individual certified by the American Board of Industrial Hygiene as a Certified Industrial Hygienist (CIH) or the Board of Certified Safety Professionals as a Certified Safety Professional (CSP) with experience in hazardous waste site remediation activities. The PHSM for the site is Grey Coppi, CIH.

- Provides for the development and approval of the SHSP
- Serves as the primary contact to review health and safety matters that may arise
- Approves revised or new safety protocols for field operations
- Approves individuals who are assigned HSO responsibilities
- Approves SHSO to fulfill other project roles
- Coordinates revisions of this SHSP with field personnel
- Coordinates upgrading or downgrading of personal protective equipment with the SHSO
- Assists in the investigation of all incidents
- Conducts periodic inspections for compliance with the SHSP and gives periodic safety briefings

2.4 Site Health and Safety Officer (SHSO)

The SHSO is a person knowledgeable in appropriate safety and health regulations with at least one year of experience or specialized training in serving in a health and safety role on hazardous waste remediation sites. The SHSOs are Tracet Dubuque for OBDA and John Lane for Storm Sewer.

- Works as a member of the project team to ensure implementation of site safety plans
- Ensures that all health and safety activities identified in site safety plans are conducted and/or implemented
- Identifies operational changes which require modifications to health and safety procedures and site safety plans, and ensures that the procedure modifications are implemented and documented through changes to the site safety plan
- Directs and coordinates health and safety monitoring activities
- Ensures that proper personal protective equipment is utilized by field teams
- Assists in conducting and documenting daily safety briefings
- Monitors compliance with this SHSP
- Notifies PHSM of all accidents/incidents and participates in the investigation
- Coordinates with the construction superintendent and PM in any accident/incident investigation
- Maintains Accident/Incident Report Forms
- Determines upgrade or downgrade of PPE (personal protective equipment) based on site conditions and/or real-time monitoring results
- Ensures that monitoring instruments are calibrated
- Reports to PHSM to provide summaries of field operations and progress
- Maintains health and safety field log books

2.5 Site Personnel

- Report any unsafe or potentially hazardous conditions to the SHSO
- Maintain knowledge of the information, instructions and emergency response actions contained in the SHSP
- Comply with rules, regulations and procedures as set forth in this SHSP and any revisions
- Prevent admittance to work sites by unauthorized personnel

- Inspect all tools and equipment, including PPE, daily prior to use
- Act as safety leaders

3.0 SITE HISTORY AND PROJECT DESCRIPTION

3.1 Location

The Naval Submarine Base - New London is located in Groton, CT (Figure 3-1).

3.2 Background and Site Description

Site specific background and site descriptions will be addressed in the site specific plan.

3.3 Nature and Extent of Contamination

Site specific nature and extent of contamination will be addressed in the site specific plan.

4.0 POTENTIAL HAZARDS OF THE SITE

This section presents an assessment of the chemical, biological, and physical hazards that may be encountered during the remedial activities. Additional information can be found in the site specific plan and Appendix B - Activity Hazard Analyses, of the site specific plan.

4.1 Properties of Chemical Contamination

This information will be addressed in the site specific plan.

4.2 Biological Hazards

While the potential for contact with biological hazards is remote, workers may encounter animals, insects, or plants.

4.2.1 Animals

During site operations, animals such as dogs, cats, raccoons, skunks, mice and snakes may be encountered. Workers shall use discretion and avoid all contact with animals.

4.2.2 Insects

Insects, such as mosquitoes, tick, bees, and wasps, may be present during certain times of the year. Workers shall be encouraged to wear repellents (DEET for ticks) when working in areas where insects are expected to be present. Workers shall perform self checks and use the buddy system to look for ticks at end of each day.

Figure 3-1 – Site Location Map

4.2.2.1 Lyme Disease

Since the site is located in the northeast, the potential for coming into contact with deer ticks exists. Lyme disease is caused by an infection from a deer tick which is about the size of the head of a pin. During the painless tick bite, a microorganism (spirochete) may be transmitted into the bloodstream and may lead to Lyme disease. The effects of the disease vary from person to person, which often makes it difficult to diagnose. Typically, the incubation period ranges from two days to two weeks. In most cases, the infected area will resemble a red bull's eye with concentric rings. Within the same period, flu-like symptoms may develop. If left untreated, the red ringed area will eventually fade and Lyme disease may further develop into an arthritis-like condition.

Control measures to prevent Lyme Disease include the following:

- Self/Buddy check of neck, hairline, groin and body after working in areas that may contain deer ticks
- Wear light colored tyvek or clothing
- If a tick is found, remove it by pulling gently at the head with tweezers
- Report any of the above symptoms and all tick bites to the SHSO for evaluation. Employees bitten by deer ticks during the course of employment will be referred to the FWENC corporate medical consultant for evaluation.
- A 3-part vaccination is available that may be provided for high risk areas after consultation and approval of the CMC.

4.2.3 Plants

Plants such as poison ivy and poison oak may be prevalent at the site during certain times of the year. Workers will be trained to recognize these plants and to minimize contact with them. PPE, such as tyvek and gloves, may be worn by employees in order to reduce the potential for exposure. Pre-exposure topical lotions may be applied prophylactically.

4.3 Physical Hazards

Most safety hazards are discussed in the Activity Hazard Analysis (AHA) in the site specific plan for the different phases of the project.

4.3.1 Heat Stress

Heat stress is a significant potential hazard, which is generally exacerbated with the use of PPE in hot environments. A heat stress prevention program will be implemented when ambient temperatures exceed 70°F for personnel wearing impermeable clothing and for other personnel when the WBGT index exceeds the ACGIH TLVs. The following are the main elements and some of the specific methods for the control of Heat Stress related injuries found in the Foster Wheeler Environmental Corporate Environmental, Health and Safety Program Manual (EHS 4-6).

- Selection of PPE to reduce the risk of heat related illness (Select PPE based on site data and working conditions)
- Hydration (Fluid replacement with cool water or electrolyte replacement)
- Cool rest areas (Provide shaded rest areas)
- Engineering Controls (If feasible provide air conditioned cabs in heavy equipment, cool water drenching during breaks)
- Administrative Controls (adjust work schedules by starting work earlier in the day, acclimate work force to working in heat, provide appropriate work/rest regimens)
- PPE (Provide ice vests and vortex tubes where appropriate)
- Monitoring (Body core temperature with thermometer, check pulse rate of workers)
- Identification of heat related illness (Including heat cramps, heat exhaustion, and heat stroke)
- Employee training (Train employees on health effects of heat stress related illness)

4.3.2 Noise

Noise is a potential hazard associated with the operation of heavy equipment, power tools, pumps and generators. Suspected high noise operations will be evaluated by the SHSO to determine if protective measures are warranted. All employees receive a pre-employment audiogram. Equipment which generates sufficient noise to require employees to wear HPDs (Hearing protection Devices) shall have noise hazard warning labels and hazard radius.

4.3.3 Other Physical Hazards

- Heavy Equipment
- Excavation and Trenching

5.0 ACTIVITY HAZARD ANALYSIS

The Activity Hazard Analysis (AHA) is a systematic way of identifying the potential health and safety hazards associated with major phases of work on the project and the methods to avoid, control and mitigate those hazards. The AHAs follow the guidance of the Foster Wheeler Environmental Corporate Program Manual EHS 3-5. AHAs will be developed for all activities as necessary, prior to start-up. The AHAs will be used to train work crews in proper safety procedures during phase preparatory meetings. The activity hazard analysis is contained in the Site Specific SHSP, Appendix B.

AHAs will be developed for all phases of work.

Subcontracted work will be evaluated for hazards in a manner consistent with self performed work. The SS and SHSO are responsible to develop accurate AHAs for subcontracted work or to obtain same from subcontractor and review AHAs for accuracy.

6.0 PERSONAL PROTECTIVE EQUIPMENT

PPE will be specified in the Site Specific SHSP. Table 6-1 in the site specific plan represents the hazard analysis and PPE selection required by 29 CFR 1910.132. For the purposes of PPE selection, the PHSM and SHSO are considered competent persons. The signatures on the front of the SHSP constitutes certification of the hazard assessment. For activities not covered in the Site Specific SHSP, section 6.1, the SHSO will conduct the hazard assessment and select the PPE using the form provided in Appendix B of this plan and shall certify the assessment by signing the form. Modifications to initial PPE selection may be made by the SHSO in consultation with the PHSM. A written justification for downgrade will be provided to the PHSM for approval on a field change request form.

7.0 AIR MONITORING

The types, frequency and location of real-time air monitoring and integrated air monitoring will be described in the site specific plan.

7.1 Real-Time Air Monitoring

This information can be found in the site specific plan.

7.2 Integrated Air Monitoring

This information can be found in the site specific plan.

Assessment and evaluation of field personnel exposures to airborne contaminants through integrated air monitoring shall be performed by the SHSO concurrent with activities which may generate the contaminants in excess of OSHA PELs.

Generally, those employees with the greatest risk of exposure will be monitored. Other areas or employees may be monitored if the SHSO suspects potential exposures above the capabilities of the PPE being worn. Personnel exposure results will be tabulated and posted on site.

7.3 Data Quality Assurance

7.3.1 Calibration

Instrument calibration shall be documented and included in a dedicated safety and health log book or on separate calibration pages. All real time air monitoring instruments shall be calibrated before and after each shift. Calibration checks may be used during the day to confirm instrument accuracy. Duplicate readings may be taken to confirm individual instrument response.

Air sampling pumps used to collect worker exposure samples shall be calibrated before and after use each day. Calibration shall be accomplished using a primary standard calibration system. Results of the calibrations shall be included on air sampling data sheets.

7.3.2 Operations

All instruments shall be operated in accordance with the manufacturer's specifications. Manufacturers' literature, including an operations manual for each piece of monitoring equipment will be maintained on-site by the SHSO for reference.

7.3.3 Data Review

The SHSO will interpret all air monitoring data based on the real-time air monitoring action levels and his/her professional judgment.

The SHSO shall review the data with the PHSM to evaluate the potential for worker exposure, upgrades/downgrades in Level of Protection (LOP), comparison to direct reading instrumentation and changes to the integrated monitoring strategy. The SHSO will immediately report all integrated sampling results above the PEL/TLV (one half of PEL/TLV where no respirators are worn) to the PHSM.

Monitoring and sampling data, along with all sample documentation will be periodically reviewed by the PHSM.

7.3.4 Laboratory

Chemical analysis of samples collected for assessment of employee exposures shall be performed only by an analytical laboratory accredited by the American Industrial Hygiene Association. The laboratory analysis will include field blanks, as required by the individual method or laboratory. Duplicate samples or splits with other laboratories may be used during the project. The laboratory shall also be successful participants in the PAT (Proficiency in Analytical Testing) program for the category of material for which they are analyzing project samples. Contact the chosen laboratory to ascertain if they participate in the PAT program.

7.4 **Noise Monitoring**

Noise monitoring will not be conducted. All employees receive pre-employment audiograms. HPDs will be worn by workers in proximity to heavy equipment, fans, blowers and pumps, and the equipment shall be labeled as hazardous to hearing, and the hazard radius noted on the warning.

8.0 ZONES, PROTECTION, AND COMMUNICATION

8.1 Site Control

Site zones are intended to control the potential spread of contamination throughout the site and to assure that only authorized individuals are permitted into potentially hazardous areas. When working in contaminated areas, a three-zone approach will be utilized, it shall include an Exclusion Zone (EZ), Contamination Reduction Zone (CRZ) and a Support Zone (SZ). Specific zones shall be established on the work site when Hazardous Waste Remediation operations begin. All maps will be posted at the site and used during initial site-specific training.

Portions of work to be conducted at the SUBASENLON are considered to be hazardous waste remediation, and any person working in an area where the potential for exposure to site contaminants exists will be allowed access only after providing the SHSO with evidence of proper training and medical documentation.

The following shall be used for guidance in developing these preliminary zone designations.

Support Zone (SZ) - The SZ is an uncontaminated area (trailers, offices, etc.) that will be the field support area for most operations. The SZ provides for field team communications and staging for emergency response. Appropriate sanitary facilities and safety equipment will be located in this zone. Potentially contaminated personnel/materials are not allowed in this zone. The only exception will be appropriately packaged/decontaminated and labeled samples.

Contamination Reduction Zone (CRZ) - The CRZ is established between the EZ and the SZ. The CRZ contains the contamination reduction corridor and provides for an area for decontamination of personnel and portable hand-held equipment, tools and heavy equipment. A personnel decontamination area will be prepared at each exclusion zone. The CRZ will be used for Exclusion Zone entry and egress in addition to access for heavy equipment and emergency support services.

Exclusion Zone (EZ) - All activities which may involve exposure to site contaminants, hazardous materials and/or conditions should be considered an exclusion zone (EZ). This zone will be clearly delineated by cones, tapes or other means. The SHSO may establish more than one EZ where different levels of protection may be employed or different hazards exist. The size of the EZ shall be determined by the site SHSO allowing adequate space for the activity to be completed, field members and emergency equipment. All persons entering the Exclusion Zone are required to sign into and out of the Exclusion Zone.

The Exclusion Zone for this project may be a mobile one based on the location of intrusive activity, contaminated material placement, and clean soil cover placement. Traffic cones, caution tape and high visibility fencing can help identify the Exclusion Zone Limits. Daily health and safety briefings will assist workers in identifying EZ boundaries.

8.2 Contamination Control

8.2.1 Personnel Decontamination Station

Personnel hygiene, coupled with diligent decontamination, will significantly reduce the potential for exposure of off-site areas to contaminants from the site. When participating in potentially dust-raising activities, such as soil excavation, it will be crucial for field personnel to adhere to the following personal hygiene guidelines:

- Wash hands and face after leaving the contamination reduction zone.

Every effort will be made to reduce dust production through engineering controls (i.e., watering, if deemed necessary).

8.2.2 Minimization of Contact with Contaminants

During completion of all site activities, personnel should attempt to minimize contact with contaminated materials. This involves a conscientious effort to keep "clean" during site activities. All personnel should minimize kneeling, splash generation, and other physical contact with contamination. This may ultimately minimize the degree of decontamination required and the generation of waste materials from site operations.

Field procedures will be developed to control over spray and runoff and to ensure that unprotected personnel working nearby are not affected.

8.2.3 Personnel Decontamination Sequence

Consideration will be given to prevailing wind directions so that the decontamination line, the support zone, and contamination reduction zone exit is upwind from the exclusion zone and the first stations of the decontamination line.

Level D	Level D+	Level C	Level B
1. Equipment drop	1. Equipment drop	1. Equipment drop	1. Equipment drop
2. Hand/Face wash	2. Outer boot & glove wash	2. Outer boot & glove wash	2. Outer boot & glove wash
	3. Outer boot & glove rinse	3. Outer boot & glove rinse	3. Outer boot & glove rinse
	4. Tape removal - boot & glove	4. Tape removal - boot & glove	4. Tape removal - boot & glove
	5. Outer boot & glove removal/disposal	5. Outer boot & glove removal/disposal	5. Outer boot & glove removal/disposal
	6. Coverall removal/disposal	6. Coverall removal/disposal	6. SCBA or escape tank removal
	7. Inner glove removal/disposal	7. Respirator removal	7. Coverall removal/disposal
	8. Hand/Face wash	8. Inner glove removal/disposal	8. SCBA or ALR face shield removal
		9. Inner clothing removal	9. Inner glove removal/disposal
		10. Hand/Face wash	10. Inner clothing removal
		11. Respiratory cleaning/ sanitizing	11. Hand/Face wash
			12. Respiratory cleaning/ sanitizing

Personnel and equipment leaving the exclusion zone shall be thoroughly decontaminated. The following protocol shall be used for the decontamination stations according to levels of protection:

Note: At a minimum, all personnel will thoroughly wash their arms, face, and hands upon exiting the EZ or CRZ prior to eating, drinking, smoking, applying cosmetics, or any other actions that would increase the risk of hand to mouth transfer of contaminants.

The following decontamination equipment is required for work that requires a wet decon for level D+ and higher protection levels:

Four small tubs (two sets of wash and rinse water), scrub brush, towels, contaminated clothing disposal bag or drum, and, respiratory protective equipment cleaning solution.

Non-phosphate detergent (i.e., Dove) and water should be sufficient for use as the decontamination solution. All receptacles for contaminated protective clothing will be equipped with lids that can be closed to prevent the release of contaminants and the collection of rainfall. The decontamination liquids and clothing will be contained and disposed according to federal, state and local regulations.

8.2.4 Emergency Decontamination

Emergency decontamination will include the following stations.*

Level D	Level D+	Level C	Level B
1, 2 as referenced above	1, 4, 5, 6, 7, 8 as referenced above	1, 4, 5, 6, 7, 8, 9, 10 as referenced above	1, 4, 5, 6, 7, 8, 9, 11 as referenced above

Note: If circumstances dictate that contaminated clothing cannot be readily removed, then remove gross contamination, wrap injured personnel with clean garments/blankets to avoid contaminating other personnel or transporting equipment.

If the injured person can be moved, he/she will be moved to the exclusion zone boundary and decontaminated by site personnel as described above before emergency responders handle the victim. If the person can not be moved because of the extent of the injury (a back or neck injury) then polyethylene sheeting will be laid down over the work surface and around the victim to allow a clean pathway for response personnel to access the victim. If the potential for inhalation hazards exist, such as with open excavation, this area will be covered with polyethylene sheeting to eliminate any potential inhalation hazards.

All emergency personnel are to be immediately informed of the injured person's condition, potential contaminants, and provided with all pertinent chemical data.

8.2.5 Protection Required for Decontamination Personnel

Personnel assisting with decontamination will wear the same level of protection as those they are decontaminating, or one level below, depending on the stage of decontamination which they are assisting. Assistants who are stationed at the first stages of decontamination will be in the same level of protection as those being assisted. At stages where the outer garments are already removed and containerized, the decontamination assistants will wear the lower level of protection.

8.2.6 Hand Held Equipment Decontamination

Hand held equipment includes all monitoring instruments, samples, hand tools, and notebooks. The hand held equipment is dropped at the first decontamination station to be decontaminated by one of the decontamination team members. These items must be decontaminated or discarded as waste prior to removal from the exclusion zone.

To aid in decontamination, monitoring instruments can be sealed in plastic bags or wrapped in polyethylene. This will also protect the instruments against contaminants. The instruments will be wiped clean using wipes or paper towels if contamination is visually evident.

8.2.7 Heavy Equipment Decontamination

Decontamination of chemically contaminated heavy equipment will be accomplished using high pressure steam or dry decon with brushes and shovels. Decontamination shall take place on a decon pad and all liquids used in the decontamination procedure will be collected. Vehicles or equipment which are brought into an exclusion zone will be treated as contaminated, and will be decontaminated prior to removal. All liquids used in the decontamination procedure will be collected, stored and disposed in accordance with federal, state and local regulations.

8.3 **Communication**

The following communications equipment shall be specified as appropriate.

- Hand-held two-way radios are utilized as appropriate by field teams for communication with the Command Post.
- Telephones - A telephone will be located in the Command Post in the SZ for communication with emergency support services/facilities.
- Air Horns - Air horns shall be carried by field teams or be strategically located within the EZ, and shall be maintained as the means for announcing emergency evacuation procedures and backup for other forms of communications
- Hand Signals - Hand signals shall be used by field teams along with the buddy system. They shall be known by the entire field team before operations commence and their use covered during site-specific training. Typical hand signals are the following:

Signal	Meaning
Hand gripping throat	Out of air, can't breathe.
Grip on a partner's wrist or placement of both hands around a partner's waist	Leave area immediately, no debate!
Hands on top of head	Need assistance.
Thumbs up	Okay, I'm all right, I understand.
Thumbs down	No, negative.

9.0 MEDICAL SURVEILLANCE PROCEDURES

All employees and subcontractor personnel performing field work where potential exposure to contaminants exist at the site are required to have passed a medical surveillance examination in accordance with 29 CFR 1910.120(f) and, where applicable, expanded health standards.

The Foster Wheeler Environmental Corporate Medical Surveillance Program is described in the Environmental, Health and Safety Program Manual Section 4.5. The Corporate Medical Consultant (CMC) is Greaney Medical Group in California. Dr. Peter Greaney is Board certified in occupational medicine.

9.1 Medical Surveillance Requirements

A physician's medical release for work will be confirmed by the SHSO before an employee can work in the exclusion zone. The examination will be taken annually at a minimum and upon termination of hazardous waste site work if the last examination was not taken within the previous six months. Additional medical testing may be required by the PHSM in consultation with the Corporate Medical Consultant and the SHSO if an over-exposure or accident occurs, if an employee exhibits symptoms of exposure, or if other site conditions warrant further medical surveillance. Additional requirements are described in each Site Specific Health and Safety Plan.

9.2 Medical Data Sheet

A medical data sheet is provided in Appendix C. This medical data sheet is voluntary and should be completed by all on-site personnel and will be maintained at the site. The information will be used by Emergency Medical Service Personnel when provided Emergency Medical Care. Where possible, this medical data sheet will accompany the personnel needing medical assistance. The medical data sheet will be maintained in a secure location, treated as confidential, and used only on a need-to-know basis.

10.0 SAFETY CONSIDERATIONS

10.1 General Health and Safety Work Rules

A list of work rules and general safe work practices may be found in the Foster Wheeler Environmental Health and Safety Program Manual, Section EHS 3-6. These rules have been incorporated into the SHSP as Appendix D. The work rules will be posted in a conspicuous location at the site.

10.2 General Construction Hazards

The following is a list of applicable safety considerations that may be encountered during site work. Further information is provided in the specific AHA's and the specific Foster Wheeler Environmental Corporate Environmental, Health and Safety Program Manual sections.

- Heavy equipment operation
- Fire hazards
- Slips/trips/falls
- Punctures/cuts
- Lifting/materials handling
- Handling /storage of fuels

10.3 High Loss Potential Hazards

HIPO hazards include:

- Heavy equipment operations
- Excavation
- Exposure to energized underground lines or buried utilities
- Confined Space Entry

Confined space entry may occur during Frac tank cleaning. If confined space entry is needed, further information is provided in the Foster Wheeler Environmental Health and Safety Program Manual, Section EHS 6-1.

11.0 WASTE DISPOSAL PROCEDURES

All discarded materials, waste materials or other objects shall be handled in such a way as to preclude the potential for spreading contamination, creating a sanitary hazard or causing litter to be left on site. All potentially contaminated materials, e.g., clothing, gloves, etc., will be bagged or drummed as necessary, labeled and segregated for disposal. All non-contaminated materials shall be collected and bagged for appropriate disposal as non-hazardous solid waste. Additional waste

disposal procedures may be developed in conjunction with the Foster Wheeler Environmental regulatory affairs department as applicable.

Non-hazardous wastes will be managed in accordance with Connecticut Department of Environmental Protection (CTDEP) regulations for solid waste. If RCRA or Connecticut regulated hazardous wastes are generated which require off-site disposal, they will be managed in accordance with RCRA and CTDEP regulations and this plan will be amended to include all applicable requirements for hazardous waste management.

All disposal facilities and transporters used for off-site disposal will be approved in accordance with FWENC Corporate Regulatory Compliance Procedure EHS 3-7, and will be approved by the Navy prior to use. FWENC will prepare all waste documentation (profiles, Bills of Lading, manifests) for Navy review and signature. FWENC personnel will not sign any waste documentation. SUBASENLON Environmental Department personnel will sign all such documentation.

12.0 EMERGENCY RESPONSE PLAN

This section establishes procedures and provides information for use during a project emergency. Emergencies happen unexpectedly and quickly and require an immediate response; therefore, contingency planning and advanced training of staff are essential. Specific elements of emergency support procedures which are addressed in the following subsections include communications, local emergency support units, preparation for medical emergencies, first aid for injuries incurred on site, record keeping, and emergency site evacuation procedures.

12.1 Responsibilities

12.1.1 Project Health and Safety Manager (PHSM)

The PHSM is Grey Coppi.

The PHSM oversees and approves the Emergency Response/Contingency Plan and performs audits to determine that the plan is in effect and that all pre-emergency requirements are met. The PHSM acts as a liaison to applicable regulatory agencies and notifies OSHA of reportable accidents.

12.1.2 Site Health and Safety Officer (SHSO)

The SHSO is as outlined in Section 2.0.

The SHSO is responsible for ensuring that all personnel are evacuated safely and that machinery and process are shut down or stabilized in the event of a stop work order or evacuation. The SHSO is required to immediately notify the PHSM of any fatalities or catastrophes (three or more workers injured and hospitalized) so that the PHSM can notify OSHA within the required time frame. The

PHSM will be notified of all OSHA recordable injuries, fires, spills, releases or equipment damage in excess of \$500 within 24 hours. The SHSO also serves as the Alternate Emergency Coordinator.

12.1.3 Emergency Coordinator

The Emergency Coordinator is the Site Superintendent.

The Emergency Coordinator shall make contact with Local Emergency Response personnel prior to beginning work on site. In these contacts the Emergency Coordinator will inform interested parties about the nature and duration of work expected on the site and the type of contaminants and possible health or safety effects of emergencies involving these contaminants. The emergency coordinator shall locate emergency phone numbers and identify hospital routes prior to beginning work on site. The Emergency Coordinator shall make necessary arrangements to be prepared for any emergencies that could occur.

The Emergency Coordinator shall implement the Emergency Response/Contingency Plan whenever conditions at the site warrant such action.

12.1.4 Site Personnel

Site personnel are responsible for knowing the Emergency Response/Contingency Plan and the procedures contained herein. Personnel are expected to notify the Emergency Coordinator of situations that could constitute a site emergency.

12.2 Communication

A variety of communication systems may be utilized during emergency situations. These are discussed in the following sections.

12.2.1 Radio Communication

The primary form of communication during an emergency between field groups in the exclusion zone and the Emergency Coordinator will be radio communications. Each field team within the exclusion zone shall have a radio. During an emergency situation, the lines will be kept clear so that instructions can be received by all field teams.

The radio channel to be used in an emergency will be determined by the Emergency Coordinator upon mobilization of project.

12.2.2 Telephone Communication

A telephone will be maintained in the Support Zone Trailer

12.2.3 Air Horns

Air horns will be used to alert site personnel of emergencies. The following signals will be used:

- Two short blasts - shut down equipment, clear radio channels, await instructions
- Three short blasts - injured employee, first-aid providers respond

- One continuous blast - site evacuation

Air horns can be found in the Support Zone Trailer, the Site Superintendent's site vehicle, the CRZ, and inside heavy equipment which are located in the EZ.

The procedure to activate the air horns consists of depressing the air horn button or switch while pointing it in the direction of the area to be signaled. Air horns should be tested at least monthly to ensure that they are working properly.

12.2.4 Hand Signals

Hand signals will be employed by downrange field teams where necessary for communication during emergency situations. Hand signals are found in SHSP section 8.3.

12.3 Local Emergency Support Units

In order to be able to deal with any emergency that might occur during remedial activities at the site, Table 12-1 will be posted prominently in the field office and in all places where telephone service is available.

Figure 12-1 is a route map from the site to the nearest hospital. This map will be posted adjacent to the above emergency telephone numbers in the field office and in all places where telephone service is available. It should also be placed in all on-site vehicles.

Before field activities begin, SUBASENLON will be notified of the schedule for field activities and about the materials that are thought to exist on the site so that they will be able to respond quickly and effectively in the event of a fire, explosion, the rupturing of an active gas line, or other emergency.

12.4 Pre-emergency Planning

Foster Wheeler Environmental will communicate directly with administrative personnel from the emergency room at the Lawrence and Memorial Hospital, in order to determine whether the hospital has the facilities and personnel needed to treat cases of trauma resulting from exposure to any of the contaminants expected to be found on the site.

Before the field activities begin, the local emergency response personnel will be notified of the schedule for field activities and about the materials that are thought to exist on the site so that they will be able to respond quickly and effectively in the event of a fire, explosion, or other emergency. SUBASENLON no longer has an emergency room.

Emergency contacts will be established prior to site mobilization.

**Table 12-1
Emergency Telephone Numbers**

Contact	Firm or Agency	Telephone Number
Police	Subase Police	(860) 694-3222
NOSEDR	Fire Chief	(860) 449-3466
Fire	Subase Fire Department	(860) 694-3333
Hospital-off base	Lawrence and Memorial Hospital, New London, CT.	(860) 449-3666
Ambulance	Subase	(860) 694-3333
Mark Schultz	Subase Public Works	(860) 694-4561
ROICC, Bob Umanshankar	NORDIV	(610) 595-0726
Environmental Coordinator, Richard Conant Darlene Ward	Subase Environmental	(860) 694-5176
PM, Larry Kahrs	Foster Wheeler Environmental	Work – (617) 457-8243
PHSM, Grey Coppi	Foster Wheeler Environmental	Work – (215) 702-4079
Poison Control Center		(800) 343-2722
LEPC-David Jersey	EmergencyResponse Commission	(203) 566-4856
National Response Center		800-424-8802

Figure 12-1

12.5 Emergency Medical Treatment

The procedures and rules in this SHSP are designed to prevent employee injury. However, should an injury occur, no matter how slight, it will be reported to the SHSO immediately.

During the site safety briefing, project personnel will be informed of the location of the first aid station(s) that has been set up. Unless they are in immediate danger, injured persons will not be moved until paramedics can attend to them. Some injuries, such as severe cuts and lacerations or burns, may require immediate treatment. Any first aid instructions that can be obtained from doctors or paramedics, before an emergency-response squad arrives at the site or before the injured person can be transported to the hospital, will be followed.

Only in **non-emergency** situations will an injured person be transported to the hospital by means other than an ambulance. Directions: go over New London Bridge; take the first exit onto the service road to a left hand turn onto Coleman Street; take Coleman to end and make a right and then a left turn onto Lee Avenue. Go to end of Lee and turn right onto Ocean Avenue. Proceed one mile to hospital.

12.6 Emergency Site Evacuation Routes and Procedures

In order to mobilize the manpower resources and equipment necessary to cope with a fire or other emergency, a clear chain of authority will be established. The EC will take charge of all emergency response activities and dictate the procedures that will be followed for the duration of the emergency. The EC will report immediately to the scene of the emergency, assess the seriousness of the situation, and direct whatever efforts are necessary until the emergency response units arrive. At his/her discretion, the EC also may order the closure of the site for an indefinite period.

All project personnel will be instructed on proper emergency response procedures and locations of emergency telephone numbers during the initial site safety meeting. If an emergency occurs, including but not limited to fire, explosion or significant release of toxic gas into the atmosphere, an air horn will be sounded on the site. The horn will sound continuously for one blast, signaling that immediate evacuation of all personnel is necessary due to an immediate or impending danger.

The EC will give directions for implementing whatever actions are necessary. Any project team member may be assigned to be in charge of emergency communications during an emergency. He/she will attend the site telephone specified by the EC from the time the alarm sounds until the emergency has ended.

After sounding the alarm and initiating emergency response procedures, the EC will check and verify that access roads are not obstructed. If traffic control is necessary, as in the event of a fire or explosion, a project team member, who has been trained in these procedures and designated at the site safety meeting, will take over these duties until local police and fire fighters arrive.

The EC will remain at the site to provide any assistance requested by emergency-response squads as they arrive to deal with the situation. A map showing evacuation routes, meeting places, and location of emergency equipment will be posted in all trailers after and during site-specific training.

12.6.1 Evacuation Drills

Evacuation drills will be conducted to test the emergency system.

The drills will simulate situations that may be likely to occur onsite. A critique of the drill according to Foster Wheeler Environmental Corporate Environmental, Health and Safety Program Manual EHS 2-1 will be conducted.

12.7 **Fire Prevention and Protection**

In the event of a fire or explosion, procedures will include immediately evacuating the site (air horn will sound for a single continuous blast), and notification of local fire and police departments. No personnel will fight a fire beyond the stage where it can be put out with a portable extinguisher (incipient stage).

Fires will be prevented by adhering to the following precautions:

- Good housekeeping and storage of materials
- Storage of flammable liquids and gases away from oxidizers
- No smoking in the exclusion zone or any work area
- No hot work without a properly executed hot work permit
- Shutting off engines to refuel
- Grounding and bonding metal containers during transfer of flammable liquids
- Fire extinguishers rated at least 5 pounds ABC located on all heavy equipment, in all trailers and near all hot work activities
- Monthly inspections of all fire extinguishers

A map of all fire extinguisher locations will be located in the Support Zone Trailer. The person responsible for the maintenance of fire prevention and/or control equipment is the Site Superintendent. The person responsible for the control of fuel source hazards is the Site Superintendent.

12.8 **Overt Chemical Exposure**

The following are standard procedures to treat chemical exposures. Other, specific procedures detailed on the Material Safety Data Sheet (MSDS) or recommended by the Corporate Medical Consultant will be followed, when necessary.

SKIN AND EYE
CONTACT:

Use copious amounts of soap and water. Wash/rinse affected areas thoroughly, then provide appropriate medical attention. Eyes should be rinsed for 15 minutes upon chemical contamination. Skin should also be rinsed for 15 minutes if contact with caustics, acids or hydrogen peroxide occurs.

INHALATION:

Move to fresh air. Decontaminate and transport to hospital or local medical provider.

INGESTION:

Decontaminate and transport to emergency medical facility.

PUNCTURE WOUND
OR LACERATION:

Decontaminate and transport to emergency medical facility.

12.9 Decontamination during Medical Emergencies

If emergency life-saving first aid and/or medical treatment is required, normal decontamination procedures may need to be abbreviated or postponed. The SHSO or designee will accompany contaminated victims to the medical facility to advise on matters involving decontamination, when necessary. The outer garments can be removed if they do not cause delays, interfere with treatment or aggravate the problem. Respiratory equipment must always be removed. Protective clothing can be cut away. If the outer contaminated garments cannot be safely removed on site, a plastic barrier between the injured individual and clean surfaces should be used to help prevent contamination of the inside of ambulances and/or medical personnel. Outer garments may then be removed at the medical facility. No attempt will be made to wash or rinse the victim if his/her injuries are life threatening, unless it is known that the individual has been contaminated with an extremely toxic or corrosive material which could also cause severe injury or loss of life to emergency response personnel. For minor medical problems or injuries, the normal decontamination procedures will be followed.

12.10 Accident/Incident Reporting

As soon as first aid and/or emergency response needs have been met, the following parties are to be contacted by telephone:

1. Grey Coppi, Project Health and Safety Manager – 215-702-4079
2. For OBDA, Larry Kahrs, Project Manager – 617-457-8243
3. For Storm Sewer, Joe Spangenberg – 617-457-8210
4. The employer of any injured worker if not a Foster Wheeler Environmental employee

Written confirmation of verbal reports are to be submitted within 24 hours. The accident/incident report is found in the Foster Wheeler Environmental Corporate Environmental, Health and Safety Program Manual, Section EHS 1-7. If the employee involved is not a Foster Wheeler Environmental employee, his/her employer shall receive a copy of the report.

12.11 Adverse Weather Conditions

In the event of adverse weather conditions, the SHSO or designee will determine if work can continue without potentially risking the safety of all field workers. Some of the items to be considered prior to determining if work should continue are:

- Potential for heat stress and heat-related injuries
- Treacherous weather-related working conditions (hail, rain, snow, ice, high winds)
- Limited visibility (fog)
- Potential for electrical storms
- Earthquakes
- Other major incidents (explosions)

Site activities will be limited to daylight hours, or when suitable artificial light is provided, and acceptable weather conditions prevail. The SHSO will determine the need to cease field operations or observe daily weather reports and evacuate, if necessary, in case of severe inclement weather conditions.

12.12 Spill Control and Response

All small hazardous spills/environmental releases shall be contained as close to the source as possible. All hazardous material spills and releases shall be reported immediately to the SUBASENLON Fire Department. The SUBASENLON Fire Department is the designated first responder for hazardous material releases at SUBASENLON, and will direct Foster Wheeler Environmental personnel in any and all action necessary to control and remediate a spill or release. Whenever possible, the MSDS should be consulted to assist in determining the best means of containment and cleanup. For small spills sorbent materials such as sand, sawdust or commercial sorbents should be placed directly on the substance to contain the spill and aid recovery. Any acid spills should be diluted or neutralized carefully prior to attempting recovery. Berms of earthen or sorbent materials can be used to contain the leading edge of the spills. Drains or drainage areas should be blocked. All spill containment materials will be properly disposed as hazardous waste. An exclusion zone of 50-100 feet around the spill area should be established depending on the size of the spill.

The following steps should be taken by the Emergency Coordinator:

- Contact SUBASENLON Fire Department
- Determine the nature, identify and amounts of major spill components.
- Make sure all unnecessary persons are removed from the spill area.
- Notify appropriate response teams and authorities.
- Use proper PPE in consultation with the SHSO.
- If a flammable liquid, gas or vapor is involved, remove all ignition sources and use non-sparking and/or explosive proof equipment to contain or clean up the spill (diesel only vehicles, air operated pumps, etc.)

- If possible, try to stop the leak with appropriate material.
- Remove all surrounding materials that can react or compound with the spill.
- Contact Tom Teeling, Langhorne Regulatory Affairs, 215-702-4078

12.13 Emergency Equipment

The following minimum emergency equipment shall be kept and maintained on-site:

- Industrial first aid kit
- Portable eye washes meeting the requirements of ANSI Z358.1-1990
- Air horns (one per field team)
- Fire extinguishers (one per trailer/vehicle, trailers and located at hot work stations)
- Two-way radios
- Absorbent material

12.14 Postings

The following information shall be developed and posted in each trailer/office and at various, conspicuous locations throughout the site; diagrams of the location of emergency equipment, emergency exit, evacuation routes, fire extinguishers, and staging area shall be developed on site.

- Emergency telephone numbers
- Diagrams showing the location of fire extinguishers and emergency equipment
- Emergency exit, evacuation routes and staging area
- Route to the hospital

12.15 Restoration and Salvage

After an emergency, prompt restoration of utilities, fire protection equipment, medical supplies and other equipment will reduce the possibility of further losses. Some of the items that may need to be addressed are:

- Refilling fire extinguishers
- Refilling medical supplies
- Recharging eyewash and/or showers
- Replenishing spill control supplies
- Replacing used air horns

13.0 TRAINING

13.1 General Health and Safety Training

In accordance with Foster Wheeler Environmental corporate policy, and pursuant to 29 CFR 1910.120, hazardous waste site workers shall, at the time of job assignment, have received a minimum of 40 hours of initial health and safety training for hazardous waste site operations unless otherwise noted in the above reference. At a minimum, the training shall have consisted of instruction in the topics outlined in the standard. Personnel who have not met the requirements for initial training shall not be allowed to work in any site activities in which they may be exposed to hazards (chemical or physical).

13.1.1 Three Day Supervised On-the-job Training

In addition to the required initial hazardous waste operations training, each employee shall have received three days of directly supervised on-the-job training. This training will address the duties the employees are expected to perform.

13.2 Annual Eight-Hour Refresher Training

Annual eight-hour refresher training will be required of all hazardous waste site field personnel in order to maintain their OSHA qualifications for field work. The training will cover a review of 1910.120 requirements and related company programs and procedures.

13.3 Supervisory Training

Personnel acting in a supervisory capacity shall have received 8 hours of instruction in addition to the initial 40 hours training.

13.4 Site-Specific Training

Prior to commencement of field activities, all field personnel assigned to the project will have completed training that will specifically address the activities, procedures, monitoring, and equipment used in the site operations. It will include site and facility layout, hazards and emergency services at the site and will highlight all provisions contained within this SHSP. This training will also allow field workers to clarify anything they do not understand and to reinforce their responsibilities regarding safety and operations for their particular activity. The FWENC Project Rules handbook contents will be discussed with the craft workers and asked to sign the acknowledgement.

13.5 On-Site Safety Briefings

Project personnel and visitors will be given daily on-site health and safety briefings by the Construction Superintendent or Supervisor to assist site personnel in safely conducting their work activities. The briefings will include information on new operations to be conducted, changes in

work practices or changes in the site's environmental conditions, as well as periodic reinforcement of previously discussed topics. The briefings will also provide a forum to facilitate conformance with safety requirements and to identify performance deficiencies related to safety during daily activities or as a result of safety inspections. The meetings will also be an opportunity for the SHSO to periodically update workers with regard to air monitoring results. Prior to starting any new activity, a training session using the Activity Hazard Analysis will be held for workers involved in the activity.

13.6 First Aid and CPR

The SHSO will identify those individuals requiring first aid and CPR training in order to ensure that emergency medical treatment is available during field activities. It is expected that a minimum of two field personnel onsite at any one time will have first aid and CPR training. The training will be consistent with the requirements of the American Red Cross Association and will include training in bloodborne pathogens.

13.7 Hazard Communication

Hazard communication training will be provided in accordance with the requirements contained in the Foster Wheeler Environmental Health and Safety Program Manual, EHS 4-2.

14.0 LOGS, REPORTS AND RECORDKEEPING

The following is a summary of required health and safety logs, reports and recordkeeping.

14.1 Field Change Request

To be completed for initiating a change to the SHSP. The PHSM and Project Manager or designee approval is required. The original will be kept in the project file. Approved changes will be reviewed with affected field personnel at a safety briefing. Copies will be distributed to the Client Representative.

14.2 Medical and Training Records

Copies or verification of training (40 hour, 8 hour, supervisor, site specific training and documentation of three day OJT) and medical clearance for hazardous waste site work and respirator use will be maintained onsite. Records for all subcontractor employees will also be kept onsite. All employee medical records will be maintained by the Corporate Medical Consultant - Greaney Medical Group in accordance with Foster Wheeler Environmental Corporation Health and Safety Program Manual, section EHS 1-8.

14.3 On-site Log

Each day, a log of personnel will be kept on-site by the Project Superintendent or designee, and personnel shall sign in/out of the EZ daily.

14.4 Weekly and Monthly Safety Reports

The SHSO shall complete and submit weekly and monthly health and safety reports to the PHSM. The reports are provided in Appendix E.

14.5 Exposure Records

All personal air monitoring results, laboratory reports, calculations and air sampling data sheets are part of an employee exposure record. These records will be maintained by the SHSO during site work. At the end of the project they will be maintained according to 29 CFR 1910.20 and Foster Wheeler Environmental Corporation Health and Safety Program Manual, section EHS 1-9.

14.6 Accident/Incident Reports

Incident reporting and investigation during site work will follow Foster Wheeler Environmental Corporation Health and Safety Program Manual, section EHS 1-7.

14.7 OSHA Form 200

An OSHA Form 200 will be kept at the project site. All recordable injuries or illness will be recorded on this form. At the end of the project, the original will be sent to the Program Health and Safety Manager for maintenance. Subcontractor employers must also meet the requirements of maintaining an OSHA 200 form. The incident report form referenced in section 12.11 meets the requirements of the OSHA Form 101(supplemental record) and must be maintained with the OSHA Form 200 for all recordable injuries or illness.

14.8 Health and Safety Logbooks

The SHSO will maintain logbooks during site work. The daily site conditions, personnel air monitoring results and significant events will be recorded. The original logbooks will become part of the exposure records file.

14.9 Hazard Communication Program/MSDS

Material Safety Data Sheets) will be obtained for applicable substances and included in the site hazard communication file. The hazard communication program will be maintained onsite in accordance with 29 CFR 1910.1200 and Foster Wheeler Environmental Corporation Health and Safety Program Manual Section EHS 4-2.

14.10 Work Permits

All work permits, including confined space entry, hot work, lockout/tagout, and excavation and trenching permits will be maintained by the SHSO in the project files.

14.11 Weekly and Monthly H&S Inspections

Weekly and monthly project inspections will be conducted in accordance with the Corporate Environmental, Health and Safety Program Manual, Section EHS 3-3. Weekly inspections are to be conducted by the Site Superintendent. Monthly inspections are to be conducted by the Site Manager or Delivery Order Manager.

16.0 REFERENCES

American Conference of Governmental Industrial Hygienists, Inc., 1992, Documentation of the Threshold Limit Values and Biological Exposure Indices; 6th Ed., ACGIH, Cincinnati, Ohio.

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U.S. Army Corps of Engineers, 1996, Safety and Health Requirements Manual; EM 385-1-1.

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U.S. Environmental Protection Agency, Standard Operating Safety Guides; July, 1992.

U.S. Environmental Protection Agency, no date, Response Safety Decision-Making; Course Manual, Office of Emergency and Remedial Response, Hazardous Response Support Division.

APPENDIX A

FIELD CHANGE REQUEST FORM

**FOSTER WHEELER ENVIRONMENTAL
FIELD CHANGE REQUEST FORM**

PROJECT:

CHANGE NUMBER:

PROJECT LOCATION:

DESCRIPTION OF CHANGE:

REASON FOR CHANGE:

RECOMMENDED DISPOSITION:

SITE MANAGER: _____
Signature

Date

PROGRAM HEALTH AND SAFETY MANAGER:

Signature

Date

DISTRIBUTION: Program Health and Safety Manager _____
Site Health and Safety Officer _____
Quality Assurance Representative _____
Field Operation Leader _____

SHSP FIELD CHANGE

Field Change Number: _____

Date Effective: _____

Pen and Ink changes to be made in the SHSP to alert the reader of this change:

Reason for the change to be incorporated into the SHSP:

TEXT OF CHANGE TO BE INCORPORATED:

APPENDIX B

PPE SELECTION FORM

PERSONAL PROTECTIVE EQUIPMENT SELECTION

ACTIVITY:

TASK	HEAD	EYE/FACE	FEET	HANDS	BODY	HEARING	RESPIRATOR

APPENDIX C

MEDICAL DATA SHEET

Foster Wheeler Environmental Corporation

MEDICAL DATA SHEET

The brief medical data sheet shall be completed by all on-site personnel and will be kept in the Support Zone by the HSO as a project record during the conduct of site operations. It accompanies any personnel when medical assistance is needed or if transport to a hospital is required.

Project: _____

Name: _____ Home Telephone: _____

Address: _____

Age: _____ Height: _____ Weight: _____ Blood Type: _____

Name and Telephone Number of Emergency Contact: _____

Drug or Other Allergies: _____

Particular Sensitivities: _____

Do You Wear Contacts? _____

Provide A Check List Of Previous Illness: _____

What Medications Are You Presently Using? _____

Do You Have Any Medical Restrictions? _____

Name, Address, And Phone Number Of Personal Physician: _____

APPENDIX D
WORK RULES



FOSTER WHEELER ENVIRONMENTAL CORPORATION
GENERAL HEALTH AND SAFETY RULES

1. All site personnel must attend each day's Daily Briefing.
2. Any individual taking prescribed drugs shall inform the HSO of the type of medication. The HSO will review the matter with the PHSM and the Corporate Medical Consultant (CMC), who will decide if the employee can safely work on-site while taking the medication.
3. The personal protective equipment specified by the HSO and in the EHS plan(s) shall be worn by all site personnel. This includes hard hats and safety glasses which must be worn at all times in active work areas.
4. Facial hair (beards, long sideburns or mustaches) which may interfere with a satisfactory fit of a respirator mask is not allowed on any person who may be required to wear a respirator.
5. All personnel must sign the site log and the exclusion zone log when used at the site.
6. Personnel must follow proper decontamination procedures and shower at the end of the work shift.
7. Eating, drinking, chewing tobacco or gum, smoking and any other practice that may increase the possibility of hand-to-mouth contact is prohibited in the exclusion zone or the contamination reduction zone. (Exceptions may be permitted by the PHSM to allow fluid intake during heat stress conditions.)
8. All lighters, matches, cigarettes and other forms of tobacco are prohibited in the Exclusion Zone.
9. All signs and demarcations shall be followed. Such signs and demarcation shall not be removed, except as authorized by the HSO.
10. No one shall enter a permit-required confined space without a permit. Confined space entry permits shall be implemented as issued.
11. All personnel must follow Hot Work Permits as issued.
12. All personnel must use the Buddy System in the Exclusion Zone.
13. All personnel must follow the work-rest regimens and other practices required by the heat stress program.

HEALTH AND SAFETY WORK RULES CONTINUED

14. All personnel must follow lockout/tagout procedures when working on equipment involving moving parts or hazardous energy sources.
15. No person shall operate equipment unless trained and authorized.
16. No one may enter an excavation greater than four feet deep unless authorized by the Competent Person. Excavations must be sloped or shored properly. Safe means of access and egress from excavations must be maintained.
17. Ladders and scaffolds shall be solidly constructed, in good working condition, and inspected prior to use. No one may use defective ladders or scaffolds.
18. Fall protection or fall arrest systems must be in place when working at elevations greater than six feet for temporary working surfaces and four feet for fixed platforms.
19. Safety belts, harness and lanyards must be selected by the Supervisor. The user must inspect the equipment prior to use. No defective personal fall protection equipment shall be used. Personal fall protection that has been shock loaded must be discarded.
20. Hand and portable power tools must be inspected prior to use. Defective tools and equipment shall not be used.
21. Ground fault interrupters shall be used for cord and plug equipment used outdoors or in damp locations. Electrical cords shall be kept out walkways and puddles unless protected and rated for the service.
22. Improper use, mishandling, or tampering with health and safety equipment and samples is prohibited.
23. Horseplay of any kind is prohibited.
24. Possession or use of alcoholic beverages, controlled substances, or firearms on any site is forbidden.
25. All incidents, no matter how minor, must be reported immediately to the Supervisor.
26. All personnel shall be familiar with the Site Emergency Response Plan.

The above Health and Safety Rules are not all inclusive and it is your responsibility to comply with all regulations set forth by OSHA, the FWENC Environmental, Health and Safety Programs, the EHS plan(s), the client, FWENC Supervisors, and the HSO.

APPENDIX E

WEEKLY AND MONTHLY HEALTH AND SAFETY REPORTS

**FOSTER WHEELER ENVIRONMENTAL CORPORATION
US NAVY RAC
WEEKLY HEALTH AND SAFETY REPORT**

PROJECT NAME: _____

LOCATION: _____

SITE INFORMATION

Week Ending _____

Hours

Worked: Craft: _____ PS: _____ Subs: _____

Check Level of Protection

For the week: B ___ C ___ D ___

INJURIES AND ILLNESSES

Yes _____ No _____

Describe:

MAJOR ACTIVITIES CONDUCTED THIS WEEK:

(drum handling, sampling, excavation, abatement/T&D, etc.)

SIGNIFICANT EVENTS THIS WEEK:

(regulatory visits, equipment malfunctions, process start-up or shutdown):

FUTURE ISSUES:

(schedule, manpower allocation, monitoring equipment, other resources needed)

SITE AUDIT/INSPECTIONS CONDUCTED

Yes _____ No _____

(describe outstanding findings and attach results)

HIPOACTIVITIES

Hot Work..... Yes _____ No _____ Dates: _____

Lockout/Tagout Yes _____ No _____ Dates: _____

Confined Space Entry Yes _____ No _____ Dates: _____

Soils Analysis Classification Yes _____ No _____ Dates: _____

Excavation Daily Check List..... Yes _____ No _____ Dates: _____

Crane On-Site Yes _____ No _____ Dates: _____

Critical Lift Plan Performed Yes _____ No _____ Dates: _____

**FOSTER WHEELER ENVIRONMENTAL CORPORATION
US NAVY RAC
WEEKLY HEALTH AND SAFETY REPORT**

(Page 2 of 2)

AIR MONITORING:						
Real Time						
Major Activity	Location(s)	Worker Occupation	FID/PID Range	CGI/02 Range	PDM Range	Other
PERSONAL AIR MONITORING						
Analyte	Activity Monitored	Occupation	Location	Result	Type of Sample	
SUBCONTRACTORS ON SITE						
Company Name	Task or Function			Return to Site Next Week (Y/N)		
Health and Safety Officer - Signature				Date		

Monthly Health and Safety Report

PROJECT: _____ MONTH: _____

I. Descriptive Summary of Accidents/Incidents

II. Summary of Site Safety Inspections and Audits

III. Other Issues

1. Recognition and awards program:
2. Site specific training:
3. OSHA/third party inspections:
4. H&S program administration/implementation:
5. Subcontractor H&S performance:
6. Unique exposure hazards:
7. Site specific loss control programs:
8. Site management concerns:

Monthly Statistical Report

PROJECT: _____ MONTH: _____ PROJECT START DATE: ___/___/___	FWENC MANUAL			FWENC NON-MANUAL			SUBCONTRACTOR TOTALS			PROJECT TOTALS		
	Month	YTD	PTD	Month	YTD	PTD	Month	YTD	PTD	Month	YTD	PTD
	1. First Aid Cases											
2. Total OSHA Recordables												
3. Restricted Duty Cases												
4. Restricted Duty Workdays												
5. Lost Time Cases												
6. Lost Time Workdays												
7. Hours Worked - Estimated												
8. Property Losses > \$500												
9. High Loss Potential Incidents												
10. Total Incidents Investigated												

Project Incident Rates	YTD	PTD	Nat'l Avg.
Total OSHA Recordable Rate			10.6
Lost Workday Rate			4.9
Lost Workday Severity Rate			39

$$\text{OSHA Recordable Rate} = \frac{\# \text{ Recordables} \times 200,000}{\# \text{ of hours worked}}$$

$$\text{Lost Work Day Rate} = \frac{\text{Total \# of lost time cases and restricted duty cases} \times 200,000}{\# \text{ of hours worked}}$$

$$\text{Lost Work Day Severity Rate} = \frac{\text{Total \# of days lost and days restricted} \times 200,000}{\# \text{ of hours worked}}$$

APPENDIX F

ACRONYMS

ACRONYMS

AHA	Activity Hazard Analysis
CGI	Combustible Gas Indicator
CTDEP	Connecticut Department of Environmental Protection
DM	Dust Monitor
ESQ	Environmental, Safety, Quality Assurance
FID	Flame Ionization Detector
FWENC	Foster Wheeler Environmental Corporation
LOP	Level of Protection
MSDS	Material Safety Data Sheet
NEHC	Navy Environmental Health Center
OSHA	Occupational Safety and Health Administration
PAT	Proficiency in Analytical Testing
PHSM	Project Health and Safety Manager
PPE	Personal Protective Equipment
RCRA	Resource Conservation and Recovery Act
SHSO	Site Health and Safety Officer
SHSP	Site Health and Safety Plan
SPM	Senior Project Manager
T & D	Transportation and Disposal
TWA	Time Weighted Average
USACOE	U.S. Army Corps of Engineers
VOCs	Volatile Organic Compounds