

SITE SPECIFIC

HEALTH AND SAFETY PLAN

for the

**Hotel Piers Spill Investigation & Mitigation,
Pearl Harbor, Honolulu, Hawaii.**



Prepared by:
PACIFIC ENVIRONMENTAL CORPORATION
65 N. Nimitz Hwy, Pier 14
Honolulu, Hawaii 96817
Phone (808) 545-5195, Fax (808) 524-2307
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1.0 INTRODUCTION

This Health and Safety Plan describes the procedures that shall be implemented to safeguard the health and safety of employees involved with the Hotel Piers Spill Investigation & Mitigation, in Joint Base Pearl Harbor-Hickam, Honolulu, Hawaii.

This Health and Safety Plan complies with the federal and State of Hawaii health requirements including the Federal Acquisition Regulation, F.A.R. Clause 52.236-13: Accident Prevention; U.S. Army Corps of Engineers (USACE) Safety and Health Requirements Manual, EM 385-1-1 (latest revision); Occupational Safety and Health Administration (OSHA) Standards (29 CFR 1926 and 1910).

The observance and practice of health and safety procedures and applicable federal and local regulations are mandatory for all employees. In the event of conflicting requirements, the procedures that provide the highest degree of required personal protection shall be implemented.

A copy of the site health and safety plan shall be kept on site and made available for inspection and review by employees, clients, agency personnel, and other visitors.

A copy of this site specific Health and Safety Plan, shall be made available for inspection and preview by employees, clients, agency personnel, and other visitors. Everyone on site (including PENCO employees, clients, agency personnel, subcontractors etc.) must comply with the requirements of this Site Safety and Health Plan.

2.0 EMERGENCY PROCEDURES AND TELEPHONE NUMBERS

When a person is injured, the Site Supervisor or other qualified personnel must (1) take charge, (2) provide necessary decontamination, (3) administer first aid, and (4) arrange for medical assistance. If a serious injury or life-threatening condition exists, call the appropriate number listed on the next page of this plan.

2.1 EMERGENCY TELEPHONE NUMBERS AND STANDARD PROCEDURES

U.S. Coast Guard (Honolulu)	(808) 541-2068
Fire Department	911
Police Department	911
CHEMTREC (24 hour)	(800) 424-9300
National 24 hour Hotline for Emergency Response	(800) 434-8802
Pacific Environmental Corporation	(808) 545-5195

Location of Nearest Phone: PENCO cellular phone on site.

The PENCO cellular phone is controlled by the Site Supervisor or his designated representative. The primary PENCO cellular phone number is (808) 295-6009.

Standard Procedure for Reporting Emergencies

When calling for assistance in an emergency, the following information should be provided:

- Your name
- Location
- Telephone number at your location
- Type of exposure or injury
- Name of person(s) exposed or injured
- Actions already taken

2.2 NEAREST HOSPITAL

Nearest Hospital from Job Site

Hospital: Queens Medical Center
Address: 1301 Punchbowl Street
Telephone Number: (808) 538-9001

3.0 KEY PERSONNEL AND RESPONSIBILITIES

The people primarily responsible for site safety are the Project Manager, Site Supervisor and the Safety Coordinator.

3.1 TELEPHONE NUMBERS OF PROJECT CONTACT PERSONS

Area Manager: Justin Souza

Telephone Number: (b) (6)

Operations Manager: Shanyn Kauihou

Telephone Number: (b) (6)

Site Supervisor: Ford Silva

Telephone Number: (b) (6)

Response & Safety Manager: DC Carter

Telephone Number: (b) (6)

3.2 PRIMARY RESPONSIBILITIES

The following presents the responsibilities of the key personnel in health and safety planning and implementation for this project.

3.2.1 PENCO Area Manager

The Area Manager, Mr. Justin Souza has the OVERALL responsibility for all field work and enforces safe work practices by workers. He directs all project investigation activities.

3.2.2 PENCO Operations Manager

The Operations Manager, Ms. Shanyn Kauihou schedules and directs PENCO personnel and equipment to the Project, tracks hours and costs, writes and submits reports to the Area Manager and the Client, and oversees invoice submittals.

3.2.3 Site Supervisor

The Site Supervisor, Mr. Ford Silva has the primary responsibility for enforcing the site safety program procedures and ensures proper job completion. He directly supervises all work activities on the job site and watches for any ill effects on the site workers. The Site Supervisor must update personnel on any improvements to the Health and Safety Plan deemed necessary from the daily operations and enforces the use of protective equipment

specified in the health and safety plan and controls all site activities in the absence of the Project Manager.

3.2.4 Response & Safety Manager

The Response & Safety Manager, Mr. DC Carter, has the primary responsibility for the approval of site safety issues for all field work. He ensures that all personnel are familiar with the site Health and Safety Plan and its procedures for dealing with emergencies. He initiates and monitors the Site Safety Program. He will analyze information feedback to evaluate and improve this program's effectiveness.

4.0 PROJECT BACKGROUND AND DESCRIPTION

The Project is to perform environmental response actions to contain, recover, and mitigate, the ongoing oil discharge into the waters of Pearl Harbor through the quay walls at the foot of Hotel Pier and the surrounding piers.

4.1 Site Location

The project site is at the Hotel Piers Complex on Joint Base Pearl Harbor-Hickam located at the intersection of the Halawa Stream with the waters of Pearl Harbor.

Latitude is (b) (3) (A) Longitude is (b) (3) (A)

5.0 FIELD ACTIVITIES

This Health and Safety Plan is related to the work performed to achieve project objectives. The tasks necessary to accomplish these goals are as follows:

1. Provide on-water oil spill response, containment, and recovery. Install & maintain a 360 degree on water containment to prevent product and sheen from escaping containment.
2. Actively investigate and locate the source(s) of the oil release. Through diving surveys, and isolation booming equipment and techniques, locate and isolate the points of oil discharge through the quay walls surrounding Hotel Pier and the associated Hotel Pier Fuels manifolds
3. Prevent oil from reaching the wider harbor waters. Employ methods to minimize the amount of oil that reaches the general waters of the Halawa Stream and Pearl Harbor.

5.1.1 Physical Assessment of the Site

Physical assessment of the site will be conducted by the PENCO, as a result of this assessment, the boat operations and shoreline crews will continue the clean-up until notified by both parties to stop or reassess the situation.

5.1.2 Spill Containment, Mitigation, and Recovery

Boat operators and deck hands and personnel working along the shoreline will initiate and maintain an area of booming, skimming and spill removal operations.

5.1.3 Removal & Recovery of Oil, & Absorbent Materials

Free oil will be contained and recovered with use of booms, absorbents, and skimmers. Recovered oil and saturated absorbents will be appropriately secured and contained on site for removal to Navy waste stream facilities.

5.1.4 Investigations & Mitigation of Point Sources of Oil Discharge

On water, diving, and shore side operations will operations will seek to pinpoint oil discharge sources and patch, contain, and/or mitigate oil discharge sources as appropriate.

5.1.5 Personal protective equipment

Personal protective equipment for site workers will be worn as appropriate to the task but will generally include: Nitrile gloves, Steel-Toe or Task Specific Safety footwear, Hard Hat, PFDs, High visibility safety vests, and safety glasses as appropriate to the tasks.

5.1.6 Emergency Evacuation Muster & Procedures

Egress from the work area shall be reverse of entry. The emergency muster location will be at the Halawa Guard Gate where personnel are to report to Site Supervisor immediately.

6.0 PHYSICAL HAZARDS

Physical hazards can occur when working around small boats and shoreline areas. Slippery surfaces on most places on a small boat. As a general safety rule, field personnel shall be familiar with the physical characteristics of field investigations, including:

- * Trip hazards
- * Sharp edges
- * Accessibility by other personnel, equipment, and vehicles
- * Areas of known or suspected contamination
- * Site access
- * Location of communication devices
- * Location of the first-aid kit

The following is a list of the potential physical hazards that may be encountered during the field activities and the preventive measures that must be administered to minimize the hazard.

6.1 HEAT STRESS

A heat stress potential exists from wearing semi-permeable or impermeable protection equipment. The SSO will discuss heat stress during the "toolbox" safety meeting, its symptoms, and factors that affects a person's ability to handle heat stress (i.e. alcohol) particularly during conditions of unusually high temperatures.

The SSO will continually observe the on-site personnel for signs and symptoms of heat stress. The heat stress symptoms included heat rash, heat cramps, heat exhaustion, and heat stroke.

Heat Rash

Heat rash may result from continuous exposure to heat or humid air. Symptoms include:

- * Red, hot heat rash

Heat Cramps

Heat cramps are caused by heavy sweating with inadequate electrolyte replacement. Signs and symptoms include:

- * Muscle spasms
- * Pain in the hand, feet, and abdomen

Heat Exhaustion

Heat exhaustion occurs form increased stress on various body organs including inadequate blood circulation due to cardiovascular insufficiency or dehydration. Signs and symptoms include:

- * Pale, cool, moist skin
- * Heavy sweating
- * Dizziness
- * Nausea
- * Fainting

Heat Stroke

Heat stroke is the most serious form of heat stress. Temperature regulation fails and the body temperature rises to critical levels. Immediate action must be taken to cool the body before serious injury occurs. Competent medical help must be obtained as soon as possible. Signs and symptoms include:

- * Red, hot, unusually dry skin
- * Lack of, or reduced perspiration
- * Nausea
- * Dizziness and confusion

- * Strong, rapid pulse
- * Coma
- * Lack of coordination
- * Change in demeanor
- * Excessive salivation, papillary response

Signs and symptoms not observable by others:

- * Headache
- * Dizziness
- * Blurred vision
- * Cramps
- * Irritation of eyes, skin, or respiratory tract

To prevent heat stress, workers engaged in hazardous waste operations, particularly those wearing semi-permeable or impermeable clothing, will commence with the work cycle shown below. When the ambient temperature in the work area is above 70 degrees Fahrenheit, the rest period is 15 minutes. The work cycle shall be adjusted according to each worker's needs. Physiological monitoring of the workers (i.e. heart rate, oral temperature) will be performed when necessary during rest periods.

Calculate the adjusted air temperature using the equation:

$$t_{a, \text{adj}} = t_a + F t (13 \times \text{percentage sunshine (expressed as decimal value)})$$

The average ambient temperature at the site is projected to be in the range of 82.5 - 87.5F. The work cycles at the site shall be 90-minute cycles for workers with Level D or modified Level D protection, 60-minute cycles for workers with Level C protection, and 30-minute cycles for workers with Level B protection with 15-minute rest periods between the work cycles. These work cycles will be enforced during all field activities unless the ambient temperature rises and a more stringent work cycle is required.

Gatorade or other equivalent drink that replenishes the body of essential fluids and electrolytes shall be made available for on-site personnel. The drinks shall be placed in a portable cooler with ice. Disposable drinking cups in a sanitary container shall also be provided next to the cooler, along with a disposal container. During each rest period, each worker will drink a minimum of 5-10 cupfuls (disposable cone cups have a capacity of 4 oz.) of Gatorade and /or water.

6.2 ULTRAVIOLET AND INFRARED RADIATION FROM SUNLIGHT

Skin exposure to ultraviolet (UV) and infrared (IR) radiation from sunlight can produce sunburn. UV exposure of the skin also increased the risk of skin cancer. IR heating of the air increase the ambient temperature, thereby causing heat stress hazards. Sun protection lotion with a protection factor of 15 or higher and sun shading devices shall be provided for the workers who are exposed to direct sunlight. In addition, workers shall wear clothing that covers the arms and the legs to protect their skin from exposure when working under direct sunlight.

6.3 NOISE HAZARD

Vehicle and vessel traffic may startle, annoy, or distract workers and interfere with communication. The Site Supervisor will determine whether or not hearing protection is necessary to conduct work operation.

1. Any employee complaints which may be attributable to high sound levels;
2. Any difficulties in understanding normal conversation in the workplace when the speaker and the listener face each other at a distance of two feet.
3. Any noise in excess of 85 decibals (8 Hr TWA) or in excess of the standards as set forth in 29 CFR 1910.95

6.4 DANGEROUS ATMOSPHERES

Site characterization and atmospheric monitoring for the presence of Acutely Dangerous Atmospheres, Explosive Atmospheres, Carbon Monoxide, & Hydrogen Sulfide will begin each operational day be ongoing as required. If Dangerous Atmosphere Levels are detected, the team will withdraw and notify the Operations Manager who will consult with the client to develop appropriate mitigation of the gas source and further activities.

7.0 FIRST AID

Only personnel certified in first aid and/or CPR will stabilize an individual needing assistance. Life support techniques such as CPR and treatment of life-threatening problems such as bleeding, airway maintenance, and shock will be given top priority. Professional medical assistance shall be obtained at the earliest possible opportunity. Do not hesitate to call 911 if additional care is possibly needed.

To provide first line assistance to field personnel in the case of a sickness or injury, the SSO will have the following items readily available:

- First Aid Kit containing supplies for initial treatment of minor cuts and abrasions, severe lacerations, shock, heat stress, eye injuries, skin irritation, thermal and chemical burns, coral cuts or insect bites, and for immobilization of fractures.
- First Aid Handbook (American Red Cross or equivalent.)
- Portable emergency eye wash.
- Supply of waterless hand cleaner and towels.
- Portable cooler with Gatorade and ice.

All PENCO personnel have been trained and certified in First Aid and CPR by the American Red Cross. Two trained workers will present on site at all times.

7.1 SITE COMMUNICATIONS

Cellular telephones will be provided for the use of field personnel. The mobile cellular telephone will provide field personnel quick access to emergency response units. All pertinent telephone numbers will be provided and updated on an ICS Foer 205.

8.0 CONTINGENCY PLANS

The field team leader in consultation with the Safety Manager and is the person who will assume control and decision making responsibilities. Key individuals and their responsibilities are identified in the following table. In the absence of the Site Supervisor, a field foreman will performs his/her duties.

KEY INDIVIDUALS

<u>INDIVIDUAL</u>	<u>RESPONSIBILITY</u>
Site Supervisor	Activates the emergency response activities & directs emergency response vehicles to the site of the emergency.
Site Supervisor	Administers first aid to injured parties; directs evacuations of injured parties to the emergency response area if the injured parties can be moved; stays with the patients and assures them that help is on the way.
Operations Manager	If the Site Supervisor is injured, the Operations Manager will assign the most senior team leader in work experience to take on the Supervisor duties until a new supervisor arrives.

9.0 PERSONNEL TRAINING AND MONITORING PROGRAMS

All personnel that will be conducting work at the site have undergone training in conformance with OSHA requirements in 29 CFR, Part 1910.120. In addition, each worker will be trained and familiarized with the site, its history, objectives of the project, and their responsibilities.

9.1 HEALTH AND SAFETY TRAINING PROGRAM

All personnel who work at uncontrolled hazardous waste sites are required by OSHA regulations to undergo a 40-hour waste site operation training course that meets standards set forth in 29 CFR 1910.120. The training shall be completed prior to performing any work on hazardous waste sites, as required by regulation. In addition, these employees are required to complete an 8-hour refresher training course annually.

Copies of the hazardous waste training certification for the employees who will engage in field work at the site are attached in Appendix B.

9.2 RESPIRATOR PROTECTION PROGRAM

The following describes the site PENCO Respirator Protection Program should the need for respirators arise. The complete and comprehensive Respiratory Protection Plan shall be maintained on site as a “stand-alone” document.

9.2.1 PENCO's Respirator Protection Program

Purpose

The purpose of this Respirator Program is to ensure the protection of employees from respiratory hazards.

Responsibility

The Safety manager & Operations Manager are responsible for designing and implementing this program, and authorizing respiratory equipment to be used. The Safety Manager is expressly authorized to halt any company operation where there is a danger of personal injury.

Program Elements

1. Employees will receive a fitness for duty evaluation by a physician to determine physical fitness for respirator use.
2. The employee will be trained in the proper use and limitation of respirators using ANSI Z88.2 as a guide. The training will consist of, at a minimum, the requirements of OSHA Regulation 29 CFR 1910.134 which states that "Every respirator wearer shall receive fitting instructions including demonstrations and practice in how the respirator should be worn, how to adjust it, and how to determine if it fits properly. Respirators shall not be worn when conditions prevent a good face seal. Such conditions may be growth of a beard side burns, a skull cap that projects under the face piece, or temple pieces that projects under the face piece, or temple pieces on glasses. Also,

the absence of one or both dentures can seriously affect the fit face piece. The worker's diligence in observing these factors shall be evaluated by periodic checks. To assure proper protection, the face piece fit shall be checked by the wearer each time he/she puts on the respirator. This may be done by fitting instructions."

3. Respirators shall be assigned to each employee for his/her individual use.
4. The individual shall be responsible for maintenance and care of the respirator and at minimum, after each use shall:
 - * Inspect for defects and report major defects as necessary to the Safety Officer.
 - * Clean and disinfect.
 - * Repair minor damage.
 - * Refer to detailed care and cleaning instructions attached.
 - * Cleaned, disinfected, and dried respirator shall be stored in a plastic, re-sealable bag.

As part of the employee's respirator training, instructions were given on the proper storage conditions for their respirators, which included storage environment and position of the article.

5. Appropriate surveillance of the work area shall be maintained by the Safety Coordinator to determine if levels or respiratory protection need to be changed.
6. Only NIOSH-approved respirators shall be used. The respirator furnished shall provide adequate respiratory protection against the particular hazard for which it was designed in accordance with standards established by NIOSH.
7. Only Grade-D breathing air will be supplied for air supplied respirators.
8. Respiratory equipment used solely for the purpose of emergency response will be inspected monthly.
9. The Safety Coordinator shall make regular and random inspections and evaluations of respiratory equipment and this program. The purpose of the evaluations shall be to determine compliance and effectiveness of this program.

9.2.2 Respirator Inspection

The face piece of all respirators shall be inspected and cleaned daily prior to and after its use. The head harness shall be visually inspected for damaged serration and deteriorated rubber. The rubber of the face piece body shall be visually inspected for signs of deterioration or extreme distortion. Also inspect a full face piece for proper seal in the rubber face piece, where the lens shall be inspected to see that the retaining clamp is properly in place. The lens will also be inspected for cracks or large scratches. Extra respirator parts will be readily available from PENCO's supply warehouse.

9.2.3 Cleaning and Disinfecting

When cleaning full-face respirators, first remove the cartridges and the elastic headband. Wash separately the exhalation cover, inhalation valves, speaking diaphragm, and face piece in cleaner/sanitize powder with warm water. A hand brush should be used to remove heavy soil. Once washed in the cleaner solution, rinse the face piece and the components in warm water. Air dry all components.

For quick cleaning of the respirator in the field, wipe the face piece and components thoroughly with a wipe manufactured specifically for respirator cleaning.

9.3 MEDICAL MONITORING

The medical monitoring program consists of the following:

- * Pre-employment physical
- * Annual physical
- * Termination of employment physical
- * Physical examination any time an employee has to be under a physician's care for a work related injury or illness.

Pre-placement medical examination is required for all employees within 30 calendar days before or after the termination of employment of any employees engaged in an occupation involving hazardous waste operations.

All personnel that will be conducting work at the site are participating in an ongoing medical monitoring program. No additional medical monitoring is deemed necessary at the site unless a significant potential for exposure is found to exist. Close contact with the designated SSO will be kept at all times to determine if additional specific medical monitoring program will be initiated based upon a potential exposure found.

9.4 RECORD KEEPING

All records will be retained in conformance with the OSHA requirements in 29 CFR 1910.120f (7&8). A safety log will be maintained in PENCO's files subsequent to the planned investigation and will include the following:

- * Training given
- * First aid administered
- * Air monitoring accomplished and results of the monitoring
- * Personnel accident/ accident injury records
- * Instrument calibration

* Medical records including the name and social security number of the employee, physician's written opinions, and employee exposures must be kept . Occupational injuries and illnesses must also be maintained in the records.

9.5 ACCIDENT REPORTING

All accidents are reportable. All accidents or injuries must be reported immediately to the Site Supervisor, the Operations Manager, and Safety Manager.

The Supervisor and Safety Manager shall investigate all on-site accidents, determining the direct causes, indirect causes, arriving at proper corrective action, and prepare the report.

10.0 APPROVALS

This Health and Safety Plan was written and approved by the Response & Safety Manager. This Health and Safety Plan has been reviewed and approved by the Area Manager, the Operations Manager, and the Site Supervisor.

This report was written and approved by:

DC Carter
Response & Safety Manager

Date

This report was reviewed and approved by:

Justin Souza
PENCO Area Manager

Date

Shanyn Kauihou
PENCO Operations Manager

Date

Ford Silva, Site Supervisor

Date

