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ADDENDUM 59 TO THE HEALTH AND SAFETY PLAN FOR BASE REALIGNMENT AND  
CLOSURE PARCELS FAST TRACK SOIL REMOVALS NAS KEY WEST FL  
12/1/1998  
BECHTEL ENVIRONMENTAL INC

**ADDENDUM 59  
TO THE  
SITE SAFETY AND HEALTH PLAN  
FOR  
BRAC PARCELS FAST TRACK SOIL REMOVALS AT  
NAVAL AIR STATION KEY WEST, FLORIDA**

**DELIVERY ORDER NO. 0101**

**Prepared for**

**DEPARTMENT OF THE NAVY  
SOUTHERN DIVISION  
NAVAL FACILITIES ENGINEERING COMMAND**

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**Prepared by**

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## ACRONYMS AND INITIALISMS

ANSI	American National Standards Institute
BEI	Bechtel Environmental, Inc.
BRAC	Base Realignment and Closure
CFR	Code of Federal Regulations
CO	Commanding Officer
DOT	Department of Transportation
DRMO	Defense Reutilization and Marketing Office
EPA	U.S. Environmental Protection Agency
FID	flame ionization detector
LEL	lower explosion limit
NAS	Naval Air Station
NIOSH	National Institute for Occupational Safety and Health
OEW	ordnance and explosive waste
OSHA	Occupational Safety and Health Administration
PEL	permissible exposure limit
PPE	personal protection equipment
PSHP	project safety and health plan
RAC	Response Action Contractor
S&H	safety and health
SCBA	self-contained breathing apparatus
SHM	safety and health manager
SOP	standard operating procedure
SSHHP	site safety and health plan
SSHR	site safety and health representative
TSSHHP	task-specific safety and health plan

## UNITS OF MEASURE

bls	below land surface
ft	foot
gal	gallon
in.	inch
mg/m <sup>3</sup>	milligrams per cubic meter
ppb	parts per billion
ppm	parts per million

## 1.0 GENERAL INFORMATION

This Task-Specific Safety and Health Plan (TSSHP) addresses safety and health issues related to the "Fast Track Soil Removals" of contaminated soils from Base Realignment and Closure (BRAC) Parcels at Naval Air Station (NAS) Key West, Key West Florida. There are 10 separate locations where excavation and disposal are required. These locations are:

1. Truman Annex Defense Reutilization and Marketing Office (DRMO) Waste Storage BRAC Parcel C – Subzones 3 and 4, DRMO Waste Storage Area
2. Truman Annex DRMO Waste Storage Area BRAC Parcel C – Subzone 1, Building 261
3. Truman Annex Seminole Battery BRAC Parcel D – Subzone 1
4. Truman Annex Building 223 BRAC Parcel E – Subzone 1, Former Lube Area
5. Truman Annex Building 223 BRAC Parcel E – Subzone 3, Former Hazardous Waste Storage Area
6. Truman Annex Buildings 102, 103 and 104 BRAC Parcel E – Subzone 2, Former Location of Building 136
7. Truman Annex Buildings 102, 103, and 104 BRAC Parcel E – Subzones 3 and 9, Buildings 102, 103, and 104
8. Hawk Missile Site BRAC Parcel A – Subzone 4, Sewage Lift Station
9. Hawk Missile Site BRAC Parcel A – Subzone 9, Wetland Area Adjacent to Government Road
10. Hawk Missile Site BRAC Parcel A – Subzone 9, Pond Sediments

In addition to these task-specific requirements, general requirements are given in the Navy Remedial Action Contract (Navy RAC) Program Safety and Health Plan (SSHP) for the Navy RAC bases, the safety and health standard operating procedures (Navy RAC SOPs) for the Navy RAC program, and other work controlling documents such as hazardous work permits (HWPs).

The TSSHP has been developed in compliance with the requirements of 29 CFR 1910.120(b) and 29 CFR 1926.65(b) and other applicable OSHA standards. The TSSHP is issued under controlled distribution. A TSSHP may be revised during the annual review process or at any time it is apparent that there has been a change in site conditions or scope of work. In addition, the Bechtel Environmental, Inc. (BEI) Safety and Health Manager (SHM) and/or the Navy Contracting Officer (CO) reserves the right to require changes to the TSSHP and operations as necessary to ensure the safety and health of persons on or near the site. Minor changes, as required, are typically done through the Field Change Notices/Requests found in the Program Safety and Health Plan (PSHP).

All site personnel shall be familiar with the information and requirements contained in the TSSHP. Levels of protection may be up- or down-graded by the Site Safety and Health Representative (SSHR) based on actual site conditions and air sampling results.

### 1.1 SITE HISTORY AND DESCRIPTION

NAS Key West is comprised of several installations in various parts of the Lower Florida Keys. The U.S. Navy manages 6,323 acres of land divided into 20 separate tracts in the lower Florida Keys, concentrated around Key West and Boca Chica Key (see Figure 1) in southern Monroe County. The

missions for NAS Key West are changing, and the resulting realignment of aviation operations, a research laboratory, communications intelligence, and several other activities has resulted in properties that are no longer needed by NAS Key West to support its ongoing mission. Additional information concerning the site history of NAS Key West is included in Attachment D of the Navy RAC Sites Safety and Health Plan (SSHP).

#### **1.1.1 Truman Annex BRAC Parcels C, D, E, and F**

The Navy has had a presence at Truman Annex since 1823. The Army used part of Truman Annex in 1845 to construct Fort Zachary Taylor. During the Civil War, the Seminole Battery was constructed. Between 1909 and 1919, the Army filled salt ponds in the Truman Annex area to enlarge the available space. The Navy berthed submarines at the turning basin at Truman Annex from 1940 to 1970. Most of the buildings located along the turning basin were used in support of submarine operations and have since been demolished. Four locations at Truman Annex are included in the BRAC "Fast Track Soil Removals."

#### **1.1.2 Hamaca Hawk Missile Site BRAC Parcel A**

The Hawk Missile Site is located on Government Road northwest of Key West International Airport. The site is adjacent to salt ponds and mangrove wetlands. Filling of salt ponds by the U.S. Army in 1964 created the upland area of the Hawk Missile Site. The site was used as a defense site during the Cuban Missile Crisis of 1964. In the early 1980s, the site was transferred to the Navy and has not been actively used for the Navy's mission at NAS Key West. Three locations at the Hawk Missile Site are included in the BRAC "Fast Track Soil Removals."

Table 1-1 lists the multiple sites where work related to this TSSHP will be performed and a brief description of operations at each site. The contaminants of concern for each site are also listed and the maximum concentration or range of concentrations at which they were detected.

### **1.2 IDENTIFICATION**

Site Names: Truman Annex (Parcels C, D, E, and F) and Hamaca Hawk Missile Site (Parcel A)  
Site Location: NAS Key West, Key West, Florida  
Client: Department of the Navy Southern Division Naval Facilities Engineering Command  
(SOUTHDIVNAVFACENGCOM)  
Owner: U.S. Department of the Navy

#### ***Site Type***

Inactive – Buildings, Former Waste Storage Areas, and Pond Sediments

**Table 1-1**  
**Site Information Summary**

Site Name	Contaminants of Concern	Concentrations (mg/kg <sup>a</sup> or µg/kg) <sup>b</sup>	Activities to be Performed
<b>Truman Annex BRAC Parcels (C, D, E, and F)</b>			
Truman Annex DRMO Waste Storage Area Parcel C – Subzone 1, Building 261	Lead Polychlorinated biphenyls (PCBs) – Aroclor 1260 Benzo (a) pyrene	978 <sup>a</sup> 2,700 <sup>b</sup> 189 – 478 <sup>b</sup>	<ul style="list-style-type: none"> <li>• Perform utility survey</li> <li>• Excavate contaminated soils to depth of 2 ft or until caprock is encountered using excavator, dozer, and front end loader</li> <li>• Excavate manually adjacent to historic structures</li> <li>• Load and transport contaminated soils using trucks, front end loader</li> <li>• Perform confirmation sampling (other contractor)</li> <li>• Perform civil survey to document extent of excavation and confirmation sample locations</li> <li>• Backfill excavation</li> </ul>
Truman Annex DRMO Waste Storage Area Parcel C – Subzones 3 and 4, DRMO Waste Storage Area	Arsenic Lead Benzo(a) anthracene Benzo(a) pyrene Benzo(b) fluoranthene Dibenzo (a,h) anthracene	1.4 – 2.7 <sup>a</sup> 286 – 2,080 <sup>a</sup> 626.1 – 1,870 <sup>b</sup> 44.7 – 1,220 <sup>b</sup> 626.1 – 1,480 <sup>b</sup> 44.7 – 387 <sup>b</sup>	<ul style="list-style-type: none"> <li>• Perform utility survey</li> <li>• Collect and remove remaining metal debris and trash</li> <li>• Excavate contaminated soils to depth of 2 ft or 4 ft (or until caprock is encountered) using excavator, front end loader</li> <li>• Load and transport contaminated soils using trucks, front end loader</li> <li>• Perform confirmation sampling (other contractor)</li> <li>• Perform civil survey to document extent of excavation and confirmation sample locations</li> <li>• Backfill excavation</li> </ul>
Truman Annex Seminole Battery BRAC Parcel D – Subzone 1	Arsenic Benzo(a) pyrene Benzo(b) fluoranthene	2.7 <sup>a</sup> 505 <sup>b</sup> 1,900 <sup>b</sup>	<ul style="list-style-type: none"> <li>• Perform utility survey</li> <li>• Excavate contaminated soils to depth of 2 ft or until caprock is encountered using excavator, front end loader</li> <li>• Load and transport contaminated soils using trucks, front end loader</li> <li>• Perform confirmation sampling (other contractor)</li> <li>• Perform civil survey to document extent of excavation and confirmation sample locations</li> <li>• Backfill excavation</li> </ul>
Truman Annex Buildings 102, 103, and 104 BRAC Parcel E – Subzone 2, Former Location of Building 136	Arsenic Benzo(a) pyrene	1.19 – 1.6 <sup>a</sup> 284 – 765 <sup>b</sup>	<ul style="list-style-type: none"> <li>• Perform utility survey</li> <li>• Excavate contaminated soils to depth of 2 ft or until caprock is encountered using excavator, dozer, and front end loader</li> <li>• Load and transport contaminated soils using trucks, front end loader</li> <li>• Perform confirmation sampling (other contractor)</li> <li>• Perform civil survey to document extent of excavation and confirmation sample locations</li> <li>• Backfill excavation</li> </ul>

Table 1-1 (Continued)

Site Name	Contaminants of Concern	Concentrations (mg/kg <sup>a</sup> or µg/kg <sup>b</sup> )	Activities to be Performed
<b>Truman Annex BRAC Parcels (C, D, E, and F) (continued)</b>			
Truman Annex Buildings 102, 103, and 104 BRAC Parcel E – Subzones 3 and 9, Buildings 102, 103, and 104	Benzo(a) pyrene  Ideno(1,2,3-cd)pyrene	190 –517 <sup>b</sup>  1,650 <sup>b</sup>	<ul style="list-style-type: none"> <li>• Perform utility survey</li> <li>• Excavate contaminated soils to depths of 2, 4, and 6 ft (or until caprock is encountered) using excavator, dozer, and front end loader</li> <li>• Collect any free product encountered using vac truck</li> <li>• Load and transport contaminated soils using trucks, front end loader</li> <li>• Perform confirmation sampling (other contractor)</li> <li>• Perform civil survey to document extent of excavation and confirmation sample locations</li> <li>• Backfill excavation</li> </ul>
Truman Annex Building 223 BRAC Parcel F – Subzone 1, Former Lube Area	Arsenic	5.2 <sup>a</sup>	<ul style="list-style-type: none"> <li>• Perform utility survey</li> <li>• Excavate contaminated soils to depth of 2 ft or until caprock is encountered using excavator, dozer, and front end loader</li> <li>• Load and transport contaminated soils using trucks, front end loader</li> <li>• Perform confirmation sampling (other contractor)</li> <li>• Perform civil survey to document extent of excavation and confirmation sample locations</li> <li>• Backfill excavation</li> </ul>
Truman Annex Building 223 BRAC Parcel F – Subzone 3, Former Hazardous Waste Storage Area	Arsenic	3.2 –16.8 <sup>a</sup>	<ul style="list-style-type: none"> <li>• Perform utility survey</li> <li>• Excavate contaminated soils to depth of 2 ft or until caprock is encountered using excavator, dozer, and front end loader</li> <li>• Load and transport contaminated soils using trucks, front end loader</li> <li>• Perform confirmation sampling (other contractor)</li> <li>• Perform civil survey to document extent of excavation and confirmation sample locations</li> <li>• Backfill excavation</li> </ul>
<b>Hamaca Hawk Missile Site BRAC Parcel A</b>			
Hawk Missile Site BRAC Parcel A – Subzone 4, Sewage Lift Station	Arsenic	6 – 28.8	<ul style="list-style-type: none"> <li>• Perform utility survey</li> <li>• Excavate contaminated soils to depth of 2 ft or until caprock is encountered using excavator, front end loader</li> <li>• Load and transport contaminated soils using trucks, dozer, and front end loader</li> <li>• Perform confirmation sampling (other contractor)</li> <li>• Perform civil survey to document extent of excavation and confirmation sample locations</li> </ul>

Table 1-1 (Continued)

Site Name	Contaminants of Concern	Concentrations (mg/kg <sup>a</sup> or µg/kg) <sup>b</sup>	Activities to be Performed
<b>Hamaca Hawk Missile Site BRAC Parcel A (continued)</b>			
Hawk Missile Site BRAC Parcel A – Subzone 9, Wetland Area Adjacent to Government Road	Aluminium	3,680 – 4,180 <sup>a</sup>	<ul style="list-style-type: none"> <li>• Perform utility survey</li> <li>• Excavate contaminated soils to depth of 2 ft or until caprock is encountered using excavator, dozer, and front end loader</li> <li>• Load and transport contaminated soils using trucks, front end loader</li> <li>• Perform confirmation sampling (other contractor)</li> <li>• Perform civil survey to document extent of excavation and confirmation sample locations</li> <li>• Backfill excavation in accordance with wetlands permit. Area will be allowed to revegetate naturally.</li> </ul>
	Lead	63.4 – 81.6 <sup>a</sup>	
	Vanadium	11.5 – 14.4 <sup>a</sup>	
	DDE	3.1 – 7.5 <sup>b</sup>	
Hawk Missile Site BRAC Parcel A – Subzone 9, Pond Sediments	Cadmium	0.76 – 0.89 <sup>a</sup>	<ul style="list-style-type: none"> <li>• Clear mangroves, as necessary, to access pond area</li> <li>• Remove cable trays and supports</li> <li>• Construct sediment drying beds using geotextile fabric and hay bales</li> <li>• Remove sediments to edge of mangrove roots using long reach excavator or hydraulic dredge using 4 inch diaphragm pump</li> <li>• Filter pumped sediments using “GEOTUBE” filtering tube allowing water to drain back into pond</li> <li>• Dry sediments and load onto trucks for transport to disposal facility</li> <li>• Perform confirmation sampling (other contractor)</li> </ul>
	Lead	63.4 – 81.6 <sup>a</sup>	
	DDE	3.1 – 7.5 <sup>b</sup>	
	Bis(2-ethylhexyl) phthalate	710 <sup>b</sup>	
	Butylbenzyl phthalate	292 <sup>b</sup>	

<sup>a</sup>mg/kg = milligram per kilogram

<sup>b</sup>µg/kg = microgram per kilogram

### Regulatory Status

#### Federal Government

- a. CERCLA USEPA and Florida Environmental Protection Department
- b. OSHA: 29 CFR 1910 and 1926 and State OSHA-specific chemical hazard substance standards
  - 29 CFR 1926.62 Lead
  - 29 CFR 1926.1118 Arsenic
- c. DOT Department of Transportation regulations, including but not limited to 49 CFR 172.700

### 1.3 DESCRIPTION OF ACTIVITIES

The following general category of work is covered by this plan:

- Removal of contaminated soils to a depths of 2, 4 or 6 ft
- Stockpiling materials and protecting the stockpiles from the weather
- Support sampling of excavations (will be performed by other contractor)
- Loading the contaminated soils onto trucks for offsite disposal.

Table 1-2 provides the task activities and their descriptions

**Table 1-2**  
**Site Activities**

Activity	Description
1	Mobilization to the site
2	Identification of utilities and excavation interferences
3	Contaminated soil removal
4	Decontamination
5	Backfill and site restoration
6	Demobilization from the site

The following is a brief description of the activities listed in Table 1-2.

1. Mobilization to the site. Bechtel will mobilize a work force, support equipment, and materials necessary to complete the work. Initial mobilization involves securing an equipment staging area, establishing lay down and decontamination areas, and initiating clearing of excavation areas.
2. Identifying utilities and excavation interferences. Bechtel's subcontractor will verify and clear the area before any excavation of soils and will obtain and review the relevant as-built utility drawings to identify potential underground obstructions and hazards. The area will then be visually inspected to document evidence of local utilities or other possible obstructions. No excavation will be initiated until this clearance procedure is completed.

3. Contaminated soil removal: The removal of contaminated soils will be completed at each site before moving to the next site. In addition, stormwater management controls to prevent run-on and run-off will be implemented.
4. Decontamination: All equipment and tools shall be free of contamination before being brought onto the site and shall be decontaminated before leaving the exclusion zones and before demobilization. A decontamination area will be established and maintained. Bechtel shall properly dispose of decontamination materials and wastes. Documentation will be maintained by Bechtel that decontamination was completed.
5. Backfill and site restoration: Excavations will be backfilled, as detailed in the task work plan, and the area restored to its original status, to the extent practicable, before demobilization.
6. Demobilizing the site: All equipment, materials and personnel will be demobilized from the site.

## 2.0 HAZARD ANALYSIS

### 2.1 CHEMICAL HAZARD

The known or suspected chemical hazards identified include metals, polychlorinated biphenyls (PCBs), pesticides, and polyaromatic hydrocarbons (PAHs). Analytical data confirms that these concentrations of these contaminants present in surface and subsurface soils at levels exceeding the industrial and residential soil cleanup goals established by the State of Florida Department of Environmental Protection (FDEP).

Chemical hazards for the tasks defined in this TSSHP include:

- Carcinogen
- Toxic organic chemicals
- Contact exposure
- Nephrotoxin
- Skin absorption
- Neurotoxin

The chemical hazard for the work is low. Table 1-1 indicates the chemicals of concern and concentrations found in the soils. Table 2-1 shows the exposure limits; symptoms, harmful effects, and routes of exposure; and methods for detection for the contaminants of concern.

The SSHR will implement an air monitoring program to confirm on a daily basis that chemical hazards are not present. If monitoring results indicated airborne concentrations which exceed exposure limits in Table 2-2 or the action levels established in Table 6-1, engineering controls, appropriate work practices, and personal protective equipment will be implemented to reduce exposure.

### 2.2 BIOLOGICAL HAZARDS

Biological hazards for the tasks defined in this TSSHP include bites from insects such as mosquitoes, spiders, and ticks, and contact with poisonous vegetation such as poisonwood.

### 2.3 RADIATION HAZARD

Radiation hazard for the tasks defined in this TSSHP include UV sunlight.

**Table 2-1**  
**Chemical Hazard Information**

Chemical	Exposure Limits (mg/m <sup>3</sup> )		Harmful Effects	Symptoms	Sampling Media	Routes of Exposure
Coal Tar Pitch Volatiles (PAHs)	PEL	0.2	Respiratory system; skin; bladder; kidneys; (lung, kidney and skin cancer	Dermatitis; bronchitis; carcinogen	Glass fiber and silver membrane filters; benzene; gravimetric	Inhalation; skin and/or eye contact
	STEL	N/A				
	TLV	0.2				
	IDLH	80				
Polychlorinated- biphenyls (PCBs)	PEL	0.5	Eyes; skin; liver; reproductive system	Irritated eyes; chloracne; liver damage; reproductive effects; carcinogen	Puff filter/GC	Inhalation; skin absorption; ingestion; contact
	STEL	N/A				
	TLV	0.5				
	IDLH	5.0				
Arsenic	AL	0.005	Liver; kidneys; skin; lungs; lymphatic system	Ulceration of nasal septum; dermatitis; GI disturbances; respiratory irritation	MCEF filter/acid	Inhalation; skin absorption; ingestion; contact
	PEL	0.01				
	STEL	N/A				
	TLV	0.01				
	IDLH	5.0				
Cadmium	AL	0.0025	Respiratory system; kidneys; prostate; blood	Pulmonary edema; dyspnea; cough; chest tightness; nausea; vomiting; diarrhea; emphysema	MCEF filter/acid	Inhalation; ingestion
	PEL	0.005				
	STEL	N/A				
	TLV	0.002				
	IDLH	9.0				
Lead	AL	0.030	Eyes, GI tract, central nervous system, kidneys, blood, gingival tissue	Weakness, lassitude, insomnia, facial pallor, weight loss, constipation, gingival lead line	MCEF filter/acid/ AA	Inhalation; ingestion; contact
	PEL	0.050				
	STEL	N/A				
	TLV	0.05				
	IDLH	100				
Vanadium (dust; V <sub>2</sub> O <sub>5</sub> , respirable)	PEL	0.05	Eyes; skin; respiratory system	Irritated eyes, skin, throat; green tongue; metallic taste; eczema; cough; wheeze; fine rales	MCEF filter; THF; XRD	Inhalation; ingestion; contact
	STEL	N/A				
	TLV	0.05				
	IDLH	35				
4,4-DDE	PEL	1.0	Experimental carcinogen and neoplastigen, poison by ingestion	Blurred vision; confusion; ataxia; delirium; coughing; abdominal pain; nausea; vomiting; diarrhea	Puff filter	Inhalation; skin absorption; ingestion; contact
	STEL	N/A				
	TLV	1.0				
	IDLH	N/A				
Aroclor-1260	PEL	0.5	Skin; eyes; liver	Irritated eyes, skin; acne; formation dermatitis; liver damage	Puff filter	Inhalation; skin absorption; ingestion; contact
	STEL	N/A				
	TLV	0.5				
	IDLH	N/A				

## 2.4 PHYSICAL AND GENERAL SAFETY HAZARDS

Physical and general safety hazards for the tasks defined in this TSSHP include:

- Flying particles, electrical shocks, or other injury from hand tools (power tools)
- Injury from the use of heavy equipment for excavation
- Eye or other injury from the use of high-pressure water
- Electrical shock from contact with electrical connections
- Electrical shock or other injury from overhead or underground utilities
- Cuts or other injury from pinch points
- General slips, trips, or falls.
- Falls from ladders or into excavation
- Heat exposure
- Noise exposure
- Strains and sprains

## 3.0 MEDICAL SURVEILLANCE

Medical surveillance requirements are found in Section 6.0 of the PSHP. No special testing is required for this activity. Workers outside the regulated area with **no potential for exposure** are exempted from the medical surveillance program. Exceptions are determined on a case-by-case basis by the SHM.

## 4.0 TRAINING

Project training requirements are contained Sections 9, 10, and 11 of the PSHP. Before starting work, each worker assigned to perform tasks under this TSSHP will receive an initial safety and health orientation training from the SSHR. Workers outside the regulated areas **with no potential for exposure** are exempt from the HAZWOPER training program. This exemption is determined on a case-by-case basis by the SHM

## 5.0 SITE CONTROLS

Program requirements for site controls are specified in Section 4.0 of the PSHP and the Navy RAC SOP 2.1.40, "Site Control." General site control requirements for NAS Key West are specified in Section 4 of the PSHP. At a minimum, HWP's will be initiated for all activities including electrical work, sediment removal, or any task that requires Level C or greater protection (see Section 7.0).

## 6.0 AIR MONITORING AND SAMPLING

Table 2-2 provides occupational exposure limits that will be used as airborne chemical action levels during work activities. Upgrading/downgrading of PPE and implementation of engineering controls will be based upon results of data generated by real time monitoring.

### 6.1 PERSONAL AIR SAMPLING

The primary purpose of personal sampling is to assess employee's actual/potential exposure. Controls will be based on sampling and real time monitoring results. This data will provide key information to determine proper levels of PPE and/or engineering controls for the task to which an employee is assigned. Personal samples will be collected on a minimum of 25 percent of the affected personnel, or

two employees, whichever is greater. Sampling will be conducted for the worker(s) with the highest expected exposure. The will be collected in the employees breathing zone using personal sampling pumps and appropriate collection media following NIOSH or OSHA methodology for the contaminant(s) of concern. Sampling pumps will be calibrated before and after use.

## 6.2 REAL TIME AIR MONITORING

An FID will be used for real time monitoring. If this direct reading instrument indicates levels of organic vapors in excess of 5 ppm, personal air sampling will be initiated and perimeter screening will be done. Monitoring will be continued until airborne levels are consistently below 5 ppm. Air monitoring using the FID will be performed periodically whenever the airborne levels are below 5 ppm. The FID will be calibrated daily prior to use and source checked periodically.

## 7.0 PERSONAL PROTECTIVE EQUIPMENT

Program requirements for components of Levels A, B, C, and D of protection are specified in Sections 8.0, 9.0, and 10.0 of the PSHP.

The SSHR will specify the PPE requirements in hazardous work permits. Due to the levels of contamination, it is anticipated that most work will be in construction attire and/or Level D. Table 7-1 shows the activity, expected hazard, levels of protection, and possible upgrades in the level of protection. Respirator cartridges will be specified by the SSHR. Table 7-1 also lists S&H and SOP references for specific hazards.

Equipment for Level D and construction attire (CA) personal protection is as follows:

- Level D Protection
  - Hard hat
  - Sturdy leather work boots
  - Nitrile or vinyl inner gloves
  - Neoprene or rubber boots
  - Safety glasses
  - Hearing protection, as required
  - Cotton or leather work gloves
  - Chemical safety goggles or faceshield (must be worn for groundwater sampling, pressure washing, decontamination of equipment and well pumping if splash hazard is present)
  - Disposable protective clothing (Tyvek™ or polycoated Tyvek/Saranex, if splash hazard or contact hazard is present)
  
- Construction Attire
  - Hard hat
  - Safety glasses
  - Sturdy leather work boots
  - Sleeved shirt
  - Long pants
  - Hearing protection, as required
  - Cotton or leather gloves
  - \* Rubber gloves must be worn in excavations

**Table 7-1**  
**Levels of Personal Protective Equipment, Hazards, and References**

Activity	A	B	C	D	E	F	G	H	I	J	K	L	Level	Possible
1	X	X		X						X	X		C.A.	NA
2	X	X								X			C.A.	NA
3	X	X		X	X		X	X	X	X		X	C.A.	D
4	X				X	X		X	X	X			C.A.	D
5	X			X						X			C.A.	NA
6	X			X						X			C.A.	NA

  

Key	Hazard	S&H Document/SOP Reference
A	Physical Injury Hazard	S&H SOP 2.1.17A, 1.2.40A
B	Overhead Underground Utility Hazard	S&H SOP 2.1.40B, 2.1.40C
C	Fire/Explosion Hazard	S&H SOP 2.1.24A
D	Noise Hazard	S&H SOP 2.1.21
E	Contact with Contaminated Soil Hazard	S&H, SOP 2.1.60A, 2.1.60B, 2.1.70
F	Contact with Contaminated Water Hazard	S&H, SOP 2.1.60A, 2.1.60B, 2.1.70
G	Inhalation Hazard	S&H, SOP 2.1.15B, 2.1.30H, 2.1.65D, 2.1.80
H	Ingestion Hazard	S&H, SOP 2.1.15B, 2.1.110
I	Skin Contact Hazard	S&H, SOP 2.1.70A
J	Heat/Cold Stress Hazard	S&H, SOP 2.1.60C
K	Vandalism Hazard	S&H, SOP 2.1.40, 2.1.15A
L	Ordinance and Explosive Waste	Bechtel PP 8001

All personal protective equipment used during the course of these field activities must meet the following and any other applicable OSHA standards:

<u>Type of Protection</u>	<u>Regulation</u>	<u>Source</u>
Eye and Face	29 CFR 1910.133	ANSI Z87.1 Latest edition
Respiratory	29 CFR 1901.134	ANSI Z88.1 Latest edition
Head	29 CFR 1910.135	ANSI Z89.1 Latest edition
Foot	29 CFR 1910.136	ANSI Z41.1 Latest edition

The above-designated levels of protection will be upgraded or downgraded by the SSHR based on site conditions and air monitoring results.

### **8.0 EMERGENCY RESPONSE**

Emergency response and notification procedures are specified in Attachment A of the SSHP. From the site, call 911 for police, rescue, fire department, or ambulance. All telephone numbers have been verified and the site contamination and copies of the TSSHP have been provided and explained to the respondents of the listed phone numbers (Table 8-1).

### **9.0 HURRICANE AND/OR DESTRUCTIVE WEATHER RESPONSE**

Hurricanes and/or destructive weather procedures are specified in Attachment B for the Navy RAC bases PSHP.

### **10.0 SPILL PREVENTION AND CONTROL**

Spill control procedures are specified in Attachment C of the Navy RAC Bases PSHP.

### **11.0 ORDNANCE AND EXPLOSIVE WASTE**

Based on previous activities and the information provided by the Navy, it is not anticipated that ordnance and explosive wastes (OEW) will be encountered during the activities planned for these locations.

In the unlikely event that OEW is encountered during excavation in these areas, the protocol established in Bechtel's Navy RAC SOP for OEW will be implemented.

**Table 8-1**  
**Emergency Telephone Numbers for NAS Key West**

**EMERGENCY SERVICES**

POLICE DEPARTMENT .....	911
RESCUE SERVICE .....	911
BASE SECURITY .....	(305) 293-2531
BASE FIRE DEPARTMENT .....	(305) 293-3333
LOWER FLORIDA KEYS HEALTH SYSTEM (PRIMARY MEDICAL PROVIDERS) ..	(305) 294-5531

**EMERGENCY CONTACTS**

PROJECT S&H MANAGER (Mervin Atwood) .....	(423) 220-2344 (office)
	(423) 481-0144 (home)
PROJECT MANAGER (Robert Cohose) .....	(423) 220-2492 (office)
.....	(423) 301-0431 (pager)
PROJECT SUPERINTENDENT (Larry Booth).....	(305) 304-5132
PROJECT ENGINEER (Roy Hoekstra) .....	(423) 220-2271
NAVY ROICC (Mark Ewing) .....	(305) 293-3626
.....	(305) 293-4316x172 (pager)

**OTHER CONTACTS**

FLORIDA POISON CONTROL CENTER.....	(800) 282-3171
NATIONAL RESPONSE CENTER.....	(800) 424-8802
REGIONAL USEPA EMERGENCY RESPONSE .....	(800) 414-8802
CHEMICAL REFERRAL CENTER .....	(800) 262-8200

**HOSPITAL ROUTES**

A description of routes to the hospitals listed above will be provided and posted onsite by the SSHR during site mobilization. The SSHR will also confirm and post local emergency contact telephone numbers.