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HEALTH AND SAFETY PLAN FOR SAMPLING ACTIVITIES U S ARMY HAWK MISSILE SITE  
GEIGER KEY SITE 25 WITH TRANSMITTAL NAS KEY WEST FL  
6/14/2010  
TETRA TECH



AIK-10-0190

June 14, 2010

Project Number 02608

*via FedEx*

Dana Hayworth  
Naval Air Station Building 135  
P.O. Box 30  
Jacksonville, FL 32212

Reference: CLEAN Contract No. N62470-08-D-1001  
Contract Task Order No. JM17

Subject: Health and Safety Plan for Sampling Activities at the U.S. Army Hawk Missile Site,  
Geiger Key, Site 25, for Naval Air Station, Key West, Florida

Dear Mr. Hayworth:

I have enclosed a "Living CD" containing the PDF file for the Health and Safety Plan for Sampling Activities at the U.S. Army Hawk Missile Site, Geiger Key, Site 25, for Naval Air Station, Key West, Florida. The file is being sent to you via FedEx to meet Tetra Tech's contractual obligation under CTO JM17.

Please call me at (803) 641-4944, if you have any questions regarding the subject document.

Sincerely,

A handwritten signature in cursive script that reads 'Shauna Stotler-Hardy'.

Shauna Stotler-Hardy  
Project Manager

SSH:spc

c: Mr. John Trepanowski (Letter Only)  
Mr. G. Glenn/File  
Files 02608-4.2

# Comprehensive Long-term Environmental Action Navy

CONTRACT NUMBER N62470-08-D-1001



## Health and Safety Plan for Sampling Activities at the U.S. Army Hawk Missile Site, Boca Chica, Site 25 Naval Air Station Key West Key West, Florida

Contract Task Order JM17

June 2010



NAS Jacksonville  
Jacksonville, Florida 32212-0030

**HEALTH AND SAFETY PLAN  
FOR  
SAMPLING ACTIVITIES AT THE  
U.S. ARMY HAWK MISSILE SITE, BOCA CHICA, SITE 25  
NAVAL AIR STATION KEY WEST  
KEY WEST, FLORIDA**

**COMPREHENSIVE LONG-TERM  
ENVIRONMENTAL ACTION NAVY CONTRACT**

**Submitted to:  
Naval Facilities Engineering Command Southeast  
NAS Jacksonville  
Jacksonville, Florida 32212-0030**

**Submitted by:  
Tetra Tech NUS  
234 Mall Boulevard, Suite 260  
King of Prussia, Pennsylvania 19406**

**CONTRACT NO. N62470-08-D-1001  
CONTRACT TASK ORDER JM17**

**June 2010**

**PREPARED UNDER THE SUPERVISION OF:**

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## **1.0 INTRODUCTION**

The objective of this Health and Safety Plan (HASP) is to provide the minimum safety practices and procedures to Tetra Tech NUS (Tetra Tech) personnel conducting field activities at the Boca Chica - Site 25 at Naval Air Station (NAS) Key West, located in Key West, Florida.

This HASP has been prepared using the latest available information regarding known or suspected chemical contaminants and potential and foreseeable physical hazards associated with the planned work at NAS Key West. This HASP has been designed to be used in accordance with the Tetra Tech NUS Health and Safety Guidance Manual. The Guidance Manual provides detailed information pertaining to procedures to be performed on site as directed by the HASP, as well as Tetra Tech standard operating procedures.

This HASP has been written to support proposed tasks and techniques associated with the scope of work as presented in Section 4.0. Should the proposed work site conditions and/or suspected hazards change, or if new information becomes available, this document will be modified. Changes to the HASP will be made with the approval of the Tetra Tech Health and Safety Manager (HSM) and the Project Manager (PM). The PM will notify affected personnel of changes.

The elements of this HASP are in compliance with the requirements established by OSHA 29 Code of Federal Regulations (CFR) 1910.120, "Hazardous Waste Operations and Emergency Response" (HAZWOPER). The information contained in this plan, as well as policies on conducting on site operations, have been obtained from the Tetra Tech Health and Safety Program and NAS Key West policies and procedures.

### **1.1 AUTHORITY**

This work is authorized under the Comprehensive Long - Term Environmental Action Navy (CLEAN) contract, administered through the U.S. Navy, Naval Facilities Engineering Command Southeast, as defined under Contract Number N62470-08-D-1001; Contract Task Order Number JM17.

### **1.2 KEY PROJECT PERSONNEL AND ORGANIZATION**

This section defines responsibilities for site safety and health for Tetra Tech and subcontractor employees conducting environmental sampling and other field activities. Personnel assigned to these positions shall exercise the primary responsibility for the on site health and safety. These persons will be

the primary point of contact for any questions regarding the safety and health procedures and the selected control measures.

- The Tetra Tech PM is responsible for the overall direction and implementation of health and safety for this work.
- The PHSO is responsible for developing this HASP in accordance with applicable OSHA regulations. Specific responsibilities include:
  - i. Providing information regarding site contaminants and physical hazards associated with the site.
  - ii. Establishing air monitoring and decontamination procedures.
  - iii. Assigning personal protective equipment based on task and potential hazards.
  - iv. Determining emergency response procedures and emergency contacts.
  - v. Stipulating training requirements and reviewing appropriate training and medical surveillance certificates.
  - vi. Providing standard work practices to minimize potential injuries and exposures associated with hazardous waste work.
  - vii. Modifying this HASP, as it becomes necessary.
- The Tetra Tech Field Operations Leader (FOL) is responsible for implementation of this HASP. The FOL manages field activities, executes the work plan, and enforces safety procedures, as applicable to the work plan. Specifically, the FOL will:
  - Verify training and medical status of on-site personnel in relation to site activities.
  - Assist and represent Tetra Tech with emergency services (if needed)
  - Provide elements of site-specific training for on site personnel.
- The Tetra Tech Site Safety Officer (SSO) or their representative supports the FOL concerning the aspects of health and safety including, but not limited to:
  - Coordinating the health and safety activities
  - Selecting, applying, inspecting, and maintaining personal protective equipment
  - Establishing work zones and control points
  - Implementing air monitoring procedures
  - Implementing hazard communication, respiratory protection, and other associated safety and health programs

- Coordinating emergency services
  - Providing elements of site-specific training
- Compliance with these requirements is monitored by the Project Health and Safety Officer (PHSO) and is coordinated through the HSM.

### **1.3 STOP WORK AUTHORITY**

ALL employees are empowered, authorized, and responsible to STOP WORK at any time when an imminent and uncontrolled safety or health hazard is perceived. In a Stop Work event (immediately after the involved task has been shut down and the work area has been secured in a safe manner) the employee shall contact the Project Manager and the Corporate Health and Safety Manager. Through observations and communication, all parties involved shall then develop, communicate, and implement corrective actions necessary and appropriate to modify the task and to resume work.

1.4 SITE INFORMATION AND PERSONNEL ASSIGNMENTS

Site Name: Naval Air Station (NAS) Key West Address: Key West, Florida

Site Point of Contact: Mr. Robert Courtright Phone Number: (305) 293-2881

Purpose of Site Visit: Tetra Tech will conduct DPT activities at the Boca Chica, Site 25.

Proposed Dates of Work: June 2010 through completion

**Project Team:**

| <b>Tetra Tech Management Personnel</b> | <b>Discipline/Tasks Assigned</b> | <b>Telephone</b>      |
|--|----------------------------------|-----------------------|
| <u>Shauna Stotler-Hardy</u>            | <u>PM</u>                        | <u>(803) 641-4944</u> |
| <u>Matthew M. Soltis, CIH, CSP</u>     | <u>CLEAN HSM</u>                 | <u>(412) 921-8912</u> |
| <u>TBD</u>                             | <u>FOL</u>                       | <u></u>               |
| <u>TBD</u>                             | <u>SSO</u>                       | <u></u>               |
| <u>Jennifer Carothers, PhD</u>         | <u>PHSO</u>                      | <u>(412) 921-8083</u> |

| <b>Non-Tetra Tech Personnel</b> | <b>Affiliation/Discipline/Tasks Assigned</b> | <b>Telephone</b> |
|---------------------------------|--|------------------|
| <u></u>                         | <u></u>                                      | <u></u>          |
| <u></u>                         | <u></u>                                      | <u></u>          |
| <u></u>                         | <u></u>                                      | <u></u>          |

Hazard Assessment (for purposes of 29 CFR 1910.132) for HASP preparation has been conducted by:

Jennifer Carothers, PhD

## 2.0 EMERGENCY ACTION PLAN

### 2.1 INTRODUCTION

This section has been developed as part of a planning effort to direct and guide field personnel in the event of an emergency. However, given the nature and scope of planned site activities, significant emergency situations are unlikely. In the event of an emergency, Tetra Tech personnel will provide emergency response support only to the capabilities of on site personnel. Emergency situations that are beyond the capabilities of on site Tetra Tech personnel will require assistance from outside emergency responders. In the event of emergencies that are beyond the capabilities of on site personnel, an evacuation will be initiated. In an evacuation, site personnel will move to a safe place of refuge and the appropriate emergency response agencies will be notified. The emergency response agencies listed in Table 2-1 of this plan are capable of providing the most effective response, and as such, will be designated as the primary responders. These agencies are located within a reasonable distance from the areas of site operations, which ensures adequate emergency response time.

Tetra Tech personnel may participate in minor event response and emergency prevention activities such as:

- Initial fire-fighting support and prevention
- Initial spill control and containment measures and prevention
- Removal of personnel from emergency situations
- Provision of initial medical support for injury/illness requiring only first-aid level support
- Provision of site control and security measures as necessary

### 2.2 EMERGENCY PLANNING

Through the initial hazard/risk assessment effort, emergencies resulting from chemical, physical, or fire hazards are the types of emergencies which could be encountered during site activities. To minimize and eliminate the potential for these emergency situations, emergency planning activities will include the following (which are the responsibility of the SSO and/or the FOL):

- Establishing and maintaining information at the project staging area (support zone) for easy access in the event of an emergency. This information will include the following:
  - Chemical Inventory (of chemicals used onsite), with Material Safety Data Sheets.
  - Onsite personnel medical records (Medical Data Sheets).
  - A log book identifying personnel onsite each day.

- Hospital route map with directions (these should also be placed in each site vehicle).
- Emergency Notification - phone numbers.

The Tetra Tech FOL will be responsible for the following tasks:

- Identifying a chain of command for emergency action.
- Educating site workers to the hazards and control measures associated with planned activities at the site, and providing early recognition and prevention, where possible.
- Periodically performing practice drills to ensure site workers are familiar with incidental response measures.
- Providing the necessary equipment to safely accomplish identified tasks.

## **2.3 EMERGENCY RECOGNITION AND PREVENTION**

### **2.3.1 Recognition**

Emergency situations that may be encountered during site activities will generally be recognized by visual observation. Visual observation is primarily relevant for physical hazards that may be associated with the proposed scope of work. Visual observation will also play a role in detecting some chemical hazards. To adequately recognize chemical exposures, site personnel must have a clear knowledge of signs and symptoms of exposure associated with site contaminants. Tasks to be performed at the site, potential hazards associated with those tasks and the recommended control methods are discussed in detail in Sections 5.0 and 6.0. Additionally, early recognition of hazards will be supported by daily site surveys to eliminate any situation predisposed to an emergency. The FOL and/or the SSO will be responsible for performing surveys of work areas prior to initiating site operations and periodically while operations are being conducted. Survey findings will be documented by the FOL and/or the SSO in the Site Health and Safety logbook; however, site personnel will be responsible for reporting hazardous situations. Where potential hazards exist, Tetra Tech will initiate control measures to prevent adverse effects to human health and the environment.

The above actions will provide early recognition for potential emergency situations, and allow Tetra Tech to instigate necessary control measures. However, if the FOL and the SSO determine that control measures are not sufficient to eliminate the hazard; Tetra Tech will withdraw from the site and notify the appropriate response agencies.

### **2.3.2 Prevention**

Tetra Tech and subcontractor personnel will minimize the potential for emergencies by following the Health and Safety Guidance Manual and ensuring compliance with the HASP and applicable OSHA regulations. Daily site surveys of work areas, prior to the commencement of that day's activities, by the

FOL and/or the SSO will also assist in prevention of illness/injuries when hazards are recognized early and control measures initiated.

## **2.4 EVACUATION ROUTES, PROCEDURES, AND PLACES OF REFUGE**

An evacuation will be initiated whenever recommended hazard controls are insufficient to protect the health, safety or welfare of site workers. Specific examples of conditions that may initiate an evacuation include, but are not limited to the following: severe weather conditions; fire or explosion; monitoring instrumentation readings which indicate levels of contamination are greater than instituted action levels; and evidence of personnel overexposure to potential site contaminants.

In the event of an emergency requiring evacuation, personnel will immediately stop activities and report to the designated safe place of refuge unless doing so would pose additional risks. When evacuation to the primary place of refuge is not possible, personnel will proceed to a designated alternate location and remain until further notification from the Tetra Tech FOL. Safe places of refuge will be identified prior to the commencement of site activities by the SSO and will be conveyed to personnel as part of the pre-activities training session. This information will be reiterated during daily safety meetings. Whenever possible, the safe place of refuge will also serve as the telephone communications point for that area. During an evacuation, personnel will remain at the refuge location until directed otherwise by the Tetra Tech FOL or the on-site Incident Commander of the Emergency Response Team. The FOL or the SSO will perform a head count at this location to account for and to confirm the location of site personnel. Emergency response personnel will be immediately notified of any unaccounted personnel. The SSO will document the names of personnel onsite (on a daily basis) in the Site Health and Safety Logbook. This information will be utilized to perform the head count in the event of an emergency.

Evacuation procedures will be discussed during the pre-activities training session, prior to the initiation of project tasks. Evacuation routes from the site and safe places of refuge are dependent upon the location at which work is being performed and the circumstances under which an evacuation is required. Additionally, site location and meteorological conditions (i.e., wind speed and direction) may dictate evacuation routes. As a result, assembly points will be selected and communicated to the workers relative to the site location where work is being performed. Evacuation should always take place in an upwind direction from the site.

## **2.5 EMERGENCY CONTACTS**

Prior to initiating field activities, personnel will be thoroughly briefed on the emergency procedures to be followed in the event of an accident. Table 2-1 provides a list of emergency contacts and their associated telephone numbers. This table must be posted where it is readily available to site personnel. Facility maps should also be posted showing potential evacuation routes and designated meeting areas.

**TABLE 2-1**  
**EMERGENCY REFERENCE**  
**NAS KEY WEST, FLORIDA**

| <b>AGENCY</b>  | <b>TELEPHONE</b> |
|--|------------------|
| Key West Police/Rescue Services                              | <b>911</b>       |
| Hospital: Lower Florida Keys Health System                   | (305) 294-5531   |
| Base Police  | (305) 293-2114   |
| Base Fire Department Boca Chica                              | (305) 293-3333   |
| NAS Key West Point of Contact<br>Robert Courtright           | (305) 293-2881   |
| Base Officer of the Day (OOD)                                | (305) 293-2971   |
| Poison Control Center  | (800) 222-1222   |
| Sunshine State One-Call (utility clearance)                  | 811              |
| Chemtrec   | (800) 424-9300   |
| National Response Center                                     | (800) 424-8802   |
| Tetra Tech, Aiken Office                                     | (803) 649-7963   |
| Project Manager<br>Shauna Stotler-Hardy                      | (803) 641-4944   |
| Field Operations Leader<br>TBD                               |                  |
| Health and Safety Manager<br>Matthew M. Soltis, CIH, CSP     | (412) 921-8912   |
| Project Health and Safety Officer<br>Jennifer Carothers, PhD | (412) 921-8083   |

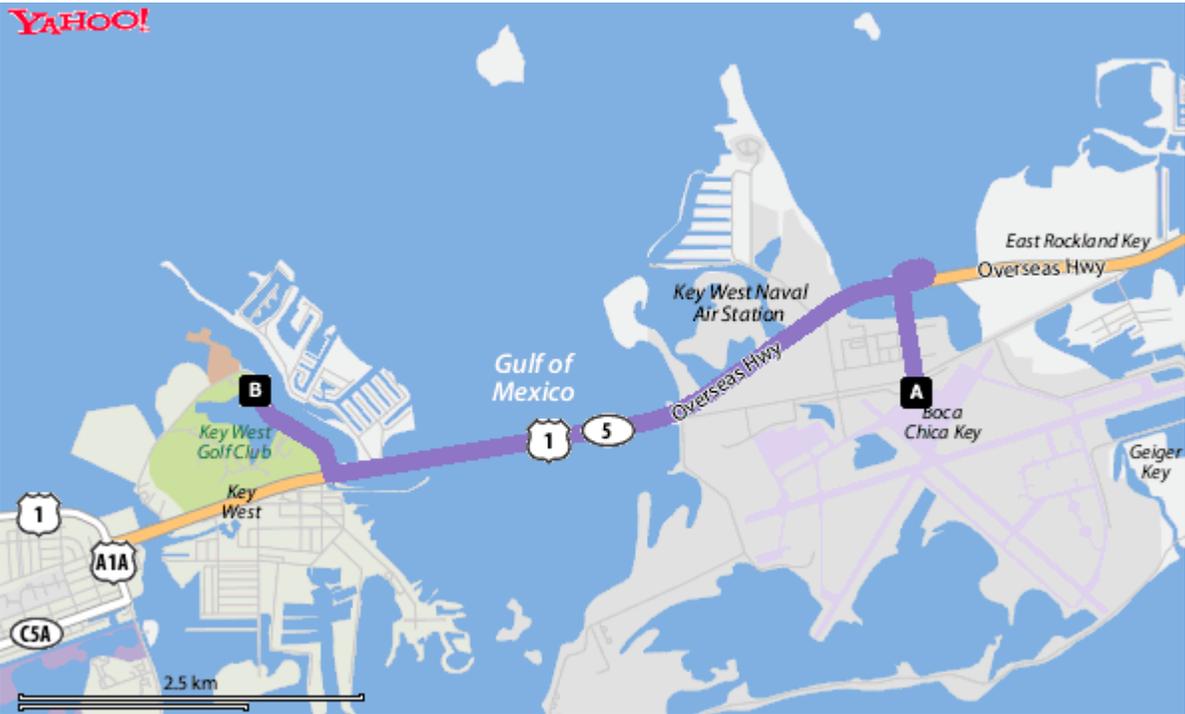
**2.6 EMERGENCY ROUTE TO HOSPITAL**

The closest hospital to NAS Key West is Lower Florida Keys Health System. An area map showing the proximity of NAS Key West to the hospital is incorporated into this HASP as Figure 2-1.

**FIGURE 2-1  
HOSPITAL ROUTE FROM BOCA CHICA**

Lower Florida Keys Health System  
5900 College Road  
Key West, Florida

- From the Boca Chica go to U.S. Hwy 1 and proceed south to Stock Island.
- At the first traffic light, turn right on College Road.
- Proceed on College Road and you will see Hospital Sign.
- Follow the road to Hospital which will be on the left.



## **2.7 EMERGENCY ALERTING AND ACTION/RESPONSE PROCEDURES**

Tetra Tech personnel will be working in close proximity to each other at NAS Key West. As a result, hand signals, voice commands, and line of site communication will be sufficient to alert site personnel of an emergency.

If an emergency warranting evacuation occurs, the following procedures are to be initiated:

- Initiate the evacuation via hand signals, voice commands, or line of site communication
- Report to the designated refuge point where the FOL will account for all personnel
- Once non-essential personnel are evacuated, appropriate response procedures will be enacted to control the situation.
- Describe to the FOL (FOL will serve as the Incident Coordinator) pertinent incident details.

In the event that site personnel cannot mitigate the hazardous situation, the FOL and SSO will enact emergency notification procedures to secure additional assistance in the following manner:

Dial 911 and call other pertinent emergency contacts listed in Table 2-1 and report the incident. Give the emergency operator the location of the emergency, the type of emergency, the number of injured, and a brief description of the incident. Stay on the phone and follow the instructions given by the operator. The operator will then notify and dispatch the proper emergency response agencies.

## **2.8 PPE AND EMERGENCY EQUIPMENT**

A first-aid kit, eye wash units (or bottles of disposable eyewash solution) and fire extinguishers (strategically placed) will be maintained onsite and shall be immediately available for use in the event of an emergency. This equipment will be located in the field office as well as in each site vehicle. At least one first aid kit supplied with equipment to protect against blood borne pathogens will also be available on site. Personnel identified within the field crew with blood borne pathogen and first-aid training will be the only personnel permitted to offer first-aid assistance.

## **2.9 DECONTAMINATION PROCEDURES / EMERGENCY MEDICAL TREATMENT**

During any site evacuation, decontamination procedures will be performed only if doing so does not further jeopardize the welfare of site workers. Decontamination will be postponed if the incident warrants immediate evacuation. However, it is unlikely that an evacuation would occur which would require workers to evacuate the site without first performing the necessary decontamination procedures.

Tetra Tech personnel will perform rescue operations from emergency situations and may provide initial medical support for injury/illnesses requiring only "Basic First-Aid" level support, and only within the limits of training obtained by site personnel. Basic First-Aid is considered treatment that can be rendered by a trained first aid provider at the injury location and not requiring follow-up treatment or examination by a physician (for example; minor cuts, bruises, stings, scrapes, and burns). Personnel providing medical assistance are required to be trained in First-Aid. Medical attention above First-Aid level support will require assistance from the designated emergency response agencies. If the emergency involves personnel exposures to chemicals, follow the steps provided in Figure 2-2.

Any pertinent information regarding allergies to medications or other special conditions will be provided to medical services personnel. This information is listed on Medical Data Sheets filed onsite (See Attachment I).

## **2.10 INJURY/ILLNESS REPORTING**

If any Tetra Tech personnel are injured or develop an illness as a result of working on site, the Tetra Tech "Incident Report Form" (Attachment II) must be followed. Following this procedure is necessary for documenting of the information obtained at the time of the incident.

Any pertinent information regarding allergies to medications or other special conditions will be provided to medical services personnel. This information is listed on Medical Data Sheets filed onsite. If an exposure to hazardous materials has occurred, provide information on the chemical, physical, and toxicological properties of the subject chemical(s) to medical service personnel.

**FIGURE 2-2**  
**POTENTIAL EXPOSURE PROTOCOL**

The purpose of this protocol is to provide guidance for the medical management of exposure situations. In the event of a personnel exposure to a hazardous substance or agent:

- Rescue, when necessary, employing proper equipment and methods.
- Give attention to emergency health problems -- breathing, cardiac function, bleeding, and shock.
- Transfer the victim to the medical facility designated in this HASP by suitable and appropriate conveyance (i.e. ambulance for serious events)
- Obtain as much exposure history as possible (a Potential Exposure Report is attached).
- If the exposed person is a Tetra Tech employee, call the medical facility and advise them that the patient(s) is/are being sent and that they can anticipate a call from the WorkCare physician. WorkCare will contact the medical facility and request specific testing which may be appropriate. The care of the victim will be monitored by WorkCare physicians. Site officers and personnel should not attempt to get this information, as this activity leads to confusion and misunderstanding.
- Call WorkCare at (800) 455-6155 (enter Ext. 109), or follow the voice prompt for after hours and weekend notification, and be prepared to provide:
  - 1) Any known information about the nature of the exposure.
  - 2) As much of the exposure history as was feasible to determine in the time allowed.
  - 3) Name and phone number of the medical facility to which the victim(s) has/have been taken.
  - 4) Name(s) of the exposed Tetra Tech NUS, Inc. employee(s).
  - 5) Name and phone number of an informed site officer who will be responsible for further investigations.
- Fax appropriate information (e.g., MSDS) to WorkCare at (714) 456-2154.
- Contact Corporate Health and Safety Department (Matt Soltis) and Human Resources Manager (Marilyn Duffy) at (412) 921-7090.

As environmental data is gathered and the exposure scenario becomes more clearly defined, this information should be forwarded to WorkCare.

WorkCare will compile the results of data and provide a summary report of the incident. A copy of this report will be placed in each victim's medical file in addition to being distributed to appropriately designated company officials. Each involved worker will receive a letter describing the incident but deleting any personal or individual comments. This generalized summary will be accompanied by a personalized letter describing the individual's findings/results. A copy of the personal letter will be filed in the continuing medical file maintained by WorkCare.

**FIGURE 2-2 (continued)  
POTENTIAL EXPOSURE REPORT**

Name: \_\_\_\_\_ Date of Exposure: \_\_\_\_\_  
Social Security No.: \_\_\_\_\_ Age: \_\_\_\_\_ Sex: \_\_\_\_\_  
Client Contact: \_\_\_\_\_ Phone No.: \_\_\_\_\_  
Company Name: \_\_\_\_\_

**I. Exposing Agent**

Name of Product or Chemicals (if known): \_\_\_\_\_

Characteristics (if the name is not known)

Solid      Liquid      Gas      Fume      Mist      Vapor

**II. Dose Determinants**

What was individual doing? \_\_\_\_\_  
How long did individual work in area before signs/symptoms developed? \_\_\_\_\_  
Was protective gear being used? If yes, what was the PPE? \_\_\_\_\_  
Was there skin contact? \_\_\_\_\_  
Was the exposing agent inhaled? \_\_\_\_\_  
Were other persons exposed? If yes, did they experience symptoms? \_\_\_\_\_

**III. Signs and Symptoms (check off appropriate symptoms)**

**Immediately With Exposure:**

Burning of eyes, nose, or throat      Chest Tightness / Pressure  
Tearing      Nausea / Vomiting  
Headache      Dizziness  
Cough      Weakness  
Shortness of Breath

**Delayed Symptoms:**

Weakness      Loss of Appetite  
Nausea / Vomiting      Abdominal Pain  
Shortness of Breath      Headache  
Cough      Numbness / Tingling

**IV. Present Status of Symptoms (check off appropriate symptoms)**

Burning of eyes, nose, or throat      Nausea / Vomiting  
Tearing      Dizziness  
Headache      Weakness  
Cough      Loss of Appetite  
Shortness of Breath      Abdominal Pain  
Chest Tightness / Pressure      Numbness / Tingling  
Cyanosis

Have symptoms: (please check off appropriate response and give duration of symptoms)  
Improved: \_\_\_\_\_ Worsened: \_\_\_\_\_ Remained Unchanged: \_\_\_\_\_

**V. Treatment of Symptoms (check off appropriate response)**

None: \_\_\_\_\_ Self-Medicated: \_\_\_\_\_ Physician Treated: \_\_\_\_\_

### **3.0 SITE BACKGROUND**

NAS Key West is in southern Monroe County, Florida. 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. The Naval Facility at Key West was disestablished in 1974, resulting in the relocation of several units. At present, NAS Key West is proceeding with realignment of aviation operations, a research laboratory, communications intelligence; counternarcotics air surveillance operations, a weather service, and several other activities on Key West. In addition to the Naval activities and units, other Department of Defense (DOD) and Federal agencies at NAS Key West include the U.S. Air Force, U.S. Army, and U.S. Coast Guard.

Several installations in various parts of the lower Florida Keys comprise the Naval Complex at Key West. Most of these are on Key West or Boca Chica Key. Key West, one of the two westernmost major islands of the Florida Keys, is approximately 150 miles southwest of Miami and 90 miles north of Havana, Cuba. Key West is connected to the mainland by the Overseas Highway (U.S. Highway No. 1). The topography at the NAS Key West is generally flat.

#### **3.1 AHMS BOCA CHICA – SITE 25**

The AHMS Boca Chica is located on the northern end of Boca Chica Key. AHMS Boca Chica is bordered to the north, east, and west by the waters of the Gulf of Mexico with wetlands and a drainage pond bordering the south. Access to AHMS Boca Chica is gained from US Highway 1 (Overseas Highway). The site has been abandoned with the exception of a Doppler radar tower operated by the National Oceanic and Atmospheric Administration (NOAA) and an associated emergency generator with a 1,000-gallon aboveground storage tank (AST).

Based on historical maps and aerial photographs, the land on which AHMS Boca Chica was built was previously salt ponds that were filled by the U.S. Department of the Army (Army) in order to adapt the area for use as a missile site. Work on the facility begun around the time of the Cuban Missile Crisis in 1962, but continued for several years thereafter. It was used for coastal defense until 1979, at which time ownership was transferred to the U.S. Department of the Navy (Navy).

In 2001, a Site Assessment was conducted at AHMS Boca Chica based on an indication of groundwater contamination in the vicinity of a removed AST. The investigation was focused on the vicinity of the 2,000-gallon AST and concluded there was polynuclear aromatic hydrocarbon (PAH) groundwater contamination. Beginning in 2003, Tetra Tech conducted three consecutive Monitored Natural Attenuation (MNA) events which concluded that the PAH constituents in groundwater were below the

FDEP Groundwater Cleanup Target Levels (GCTLs). No Further Action (NFA) was proposed for the site and a Site Rehabilitation Completion Order (SRCO) was issued in August 2005. As a result, all monitoring wells were abandoned in 2005, in accordance with Florida Administrative Code (F.A.C.) 62-532.500(4). In 2009, new information was obtained from a former employee of the Army, indicating that improper chemical dumping and waste disposal practices were employed at various operational areas on AHMS Boca Chica. An SI must be completed to determine if contaminants are in soil and/or groundwater in the operational areas of Site 25 that have not yet been investigated.

## 4.0 SCOPE OF WORK

This section of the HASP identifies the planned site activities that are to be conducted as part of the contamination assessment field activities at the Boca Chica Flying Club, Site 25. If tasks other than those identified are to be performed at this site this HASP will be modified accordingly.

- Mobilization/demobilization
- DPT activities
  - Boring/Subsurface Soil Sampling
  - Groundwater Sampling
- Investigation-Derived Waste (IDW) Management
- Decontamination of personnel, hand tools, associated sampling equipment

Any additionally tasks not identified above will be considered a change in scope requiring modification of this document. Requested modifications to this document will be submitted to the PHSO by the PM or a designated representative.

## **5.0 IDENTIFYING AND COMMUNICATING TASK-SPECIFIC HAZARDS AND GENERAL SAFE WORK PRACTICES**

The purpose of this section is to identify the anticipated hazards and appropriate hazard prevention/hazard control measures that are to be observed for each planned task or operation. These topics have been summarized for each planned task through the use of task-specific Safe Work Permits (SWPs), which are to be reviewed in the field by the SSO with all task participants prior to initiating any task. Additionally, potential hazard and hazard control matters that are relevant but are not necessarily task-specific are addressed in the following portions of this section.

Section 6.0 presents additional information on hazard anticipation, recognition, and control relevant to the planned field activities.

### **5.1 GENERAL SAFE WORK PRACTICES**

In addition to the task-specific work practices and restrictions identified in the SWPs attached to this HASP, the following general safe work practices are to be followed when conducting work on-site.

- Eating, drinking, chewing gum or tobacco, taking medication, or smoking in contaminated or potentially contaminated areas or where the possibility for the transfer of contamination exists is prohibited.
- Wash hands and face thoroughly upon leaving a contaminated or suspected contaminated area. If a source of potable water is not available at the work site that can be used for hands-washing, the use of waterless hands cleaning products will be used, followed by actual hands-washing as soon as practicable upon exiting the site.
- Avoid contact with potentially contaminated substances including puddles, pools, mud, or other such areas.
- Avoid, kneeling on the ground or leaning or sitting on equipment.
- Keep monitoring equipment away from potentially contaminated surfaces.
- Plan and mark entrance, exit, and emergency evacuation routes.

- Rehearse unfamiliar operations prior to implementation.
- Buddies should maintain visual contact with each other and with other on-site team members by remaining in close proximity to assist each other in case of emergency.
- Establish appropriate safety zones including support, contamination reduction, and exclusion zones.
- Minimize the number of personnel and equipment in contaminated areas (such as the exclusion zone). Non-essential vehicles and equipment should remain within the support zone.
- Establish appropriate decontamination procedures for leaving the site.
- Immediately report all injuries, illnesses, and unsafe conditions, practices, and equipment to the SSO.
- Observe co-workers for signs of toxic exposure and heat or cold stress.
- Inform co-workers of potential symptoms of illness, such as headaches, dizziness, nausea, or blurred vision.

## **5.2 DPT SAFE WORK PRACTICES**

The following Safe Work Practices are to be followed when working in or around the DPT Rig Operations.

- Identify underground utilities and buried structures before commencing any DPT operations. Follow the Tetra Tech Utility Locating and Excavation Clearance Standard Operating Procedure.
- DPT rigs will be inspected by the SSO or designee, prior to the acceptance of the equipment at the site and prior to the use of the equipment.
- Repairs or deficiencies identified will be corrected prior to use.
- Use Equipment Inspection Checklist for DPT rigs provided in Attachment III.
- Additional inspections will be performed at least at the beginning of every 5 or 10-day shift, or following any repairs or significant maintenance activities.
- Ensure that all machine guarding is in place and properly adjusted.

- Block the DPT rig and use levelers to prevent inadvertent movement.
- The work area around the point of operation will be cleared to the extent possible to remove any trip hazards near or surrounding operating equipment.
- Establish an equipment staging and laydown plan to keep the work area clear of clutter and slips, trips, and fall hazards.
- Mechanisms to secure heavy objects such as DPT flights will be provided to avoid the collapse of stacked equipment.
- Minimize contact to the extent possible with contaminated tooling and environmental media.
- Potentially contaminated tools will be placed on polyethylene sheeting for storage and wrapped for transport to the centrally located equipment decontamination area
- Support functions (sampling and screening stations) will be maintained a minimum distance from the DPT rig of the height of the mast plus five feet, but not less than 25 feet around the rig.
- Only qualified operators and knowledgeable ground crew personnel will participate in the operation of the DPT rig.
- During maintenance, use only manufacturer provided/approved equipment.
- Only personnel absolutely essential to the work activity will be allowed in the exclusion zone.
- Equipment used within the exclusion zone will undergo a complete decontamination and evaluation by the FOL and/or the SHSO to determine cleanliness prior to moving to the next location, exiting the site, or prior to down time for maintenance.
- Motorized equipment will be fueled prior to the commencement of the day's activities.
- When not in use DPT rig will be shutdown, and emergency brakes set and wheels will be chocked to prevent movement.

- Investigative areas will be restored to equal or better condition than original to remove any contamination brought to the surface and to remove any physical hazards.

## 6.0 HAZARD ASSESSMENT AND CONTROLS

This section provides information regarding the chemical and physical hazards which may be associated with the Site 25 and the activities that are to be conducted as part of the scope of work.

### 6.1 CHEMICAL HAZARDS

Based on an evaluation of previous site data collected, in combination with historical information about the site, the primary contaminants of concern (COCs) at this site are semi-volatile organic compounds (SVOCs; specifically 1-methylnaphthalene and naphthalene) and poly-aromatic hydrocarbons (PAHs). However, from a worst-case scenario, it is highly unlikely that any of these chemicals would potentially reach concentrations that exceed the current occupational exposure limits (OEL).

#### 6.1.1 SVOCs

SVOCs generally express symptoms including:

- Irritating at all points of contact. Chronic or elevated concentrations directly contacting the skin may result in dermatitis.
- Inhalation of high concentrations (not anticipated in an outdoor environment) can result in central nervous system effects including dizziness, blurred vision, overexcitement, narcotic effects, and unconsciousness. Systemic effects through inhalation can also result in altered (erratic) heart beat and possible cardiac arrest.

#### 6.1.2 PAHs

PAHs are a group of over 100 different chemicals that are formed during the incomplete burning of coal, oil and gas, garbage, or other organic substances like tobacco or charbroiled meat. PAHs are usually found as a mixture containing two or more of these compounds, such as soot.

Some PAHs are manufactured. These pure PAHs usually exist as colorless, white, or pale yellow-green solids. PAHs are found in coal tar, crude oil, creosote, and roofing tar, but a few are used in medicines or to make dyes, plastics, and pesticides.

Exposure to polycyclic aromatic hydrocarbons usually occurs by breathing air contaminated by wild fires or coal tar, or by eating foods that have been grilled. PAHs have been found in at least 600 of the 1,430 National Priorities List sites identified by the Environmental Protection Agency.

PAHs have the potential to cause harmful effects on the skin, body fluids, and ability to fight disease after both short- and long-term exposure.

### **6.1.3 Additional Exposure Information**

Regarding the results of this evaluation, it is important to recognize the following:

- the planned work area is outdoors, with ample natural ventilation that will reduce any airborne contaminants through dilution and dispersion,
- the water concentrations used in this evaluation was the *highest* concentration previously detected in the water samples.

As a result of these factors, it is very unlikely that workers participating in this activity will encounter any airborne concentrations of these COCs that would represent an occupational exposure concern.

Potential exposure concerns to the COCs may occur through ingesting or coming into direct skin contact with contaminated soils. However, the likelihood of worker exposure concerns through these two routes are also considered very unlikely, provided that workers follow good personal hygiene and standard good sample collection/sample handling practices, and wear appropriate PPE as specified in this HASP. Examples of onsite practices that are to be observed that will protect workers from exposure via ingestion or skin contact include the following:

- No hand-to-mouth activities on site (eating, drinking, smoking, etc.)
- Washing hands upon leaving the work area and prior to performing any hand to mouth activities
- Wearing surgeon's-style gloves whenever handling potentially-contaminated media, including soils, hand tools, and sample containers.

## **6.2 PHYSICAL HAZARDS**

The following is a list of physical hazards that may be encountered at the site or may be present during the performance of site activities.

- Slip, trips, and falls
- Strain/muscle pulls from heavy lifting

- Heat Stress
- Pinch/compression points
- Natural hazards (snakes, ticks, poisonous plants, etc.)
- Vehicular and equipment traffic
- Inclement weather

These hazards are discussed further below, and are presented relative to each task in the task-specific Safe Work Permits.

### **6.2.1 Slips, Trips, and Falls**

During various site activities there is a potential for slip, trip, and fall hazards associated with wet, steep, or unstable work surfaces. To minimize hazards of this nature, personnel required to work in and along areas prone to these types of hazards will be required to exercise caution, and use appropriate precautions (restrict access, guardrails, life lines and/or safety harnesses) and other means suitable for the task at hand. Site activities will be performed using the buddy system.

### **6.2.2 Strain/Muscle Pulls from Heavy Lifting**

During execution of planned activities there is some potential for strains, sprains, and/or muscle pulls due to the physical demands and nature of this site work. To avoid injury during lifting tasks personnel are to lift with the force of the load carried by their legs and not their backs. When lifting or handling heavy material or equipment use an appropriate number of personnel. Keep the work area free from ground clutter to avoid unnecessary twisting or sudden movements while handling loads.

### **6.2.3 Heat Stress**

Because of the geographical location of the planned work, the likely seasonal weather conditions that will exist during the planned schedule, and the physical exertion that can be anticipated with some of the planned tasks, it will be necessary for the field team to be aware of the signs and symptoms and the measures appropriate to prevent heat stress. This is addressed in detail in section 4.0 of the Tetra Tech Health and Safety Guidance Manual, which the SSO is responsible for reviewing and implementing as appropriate on this project.

In general, early signs of heat-related disorders include heat rash, cramps, heavy sweating which may be followed by the complete shutdown of a person's ability to sweat, pale/clammy skin, headaches, dizziness, in-coordination, and other maladies. To prevent heat stress disorders, the following preventive measures are to be implemented by the SSO:

- When possible, schedule the most physically-demanding tasks so that they are performed during cooler periods of the day such as early morning or late afternoon
- Educate the field staff in heat stress signs and symptoms so that they can monitor themselves and their co-workers
- Schedule frequent breaks during the hottest parts of the day (such as a few minutes each hour). Breaks should be in shaded areas, and in a location where workers can remove PPE, wash their hands, and drink fluids
- Drinking fluids should be cool and non-caffeinated. Sports-drinks with electrolytes are acceptable provided that they do not contain alcohol. Water is also acceptable.

For more information on heat stress recognition and prevention, consult section 4.0 of the Tetra Tech Health and Safety Guidance Manual.

#### **6.2.4 Pinch/Compression Points**

Handling of tools and other equipment on site may expose personnel to pinch/compression point hazards during normal work activities. Where applicable, equipment will have intact and functional guarding to prevent personnel contact with hazards. Personnel will exercise caution when working around pinch/compression points, using additional tools or devices (e.g., pinch bars) to assist in completing activities.

#### **6.2.5 Vehicular and Equipment Traffic**

Hazards associated with vehicular and equipment traffic are unlikely to exist during site activities. To minimize the potential for injuries associated with potential vehicular hazards, site personnel will be instructed to maintain awareness of traffic and moving equipment when performing site activities. When working near roadways, site personnel will wear high visibility vests.

### **6.3 NATURAL HAZARDS**

Natural hazards such as poisonous plants, bites from poisonous or disease carrying animals or insects (e.g., snakes, ticks, mosquitoes) are often prevalent at sites that are being investigated as part of hazardous waste site operations. Given the geographic location and the environment, alligators may also be potentially present at the NAS Key West facility. To minimize the potential for site personnel to

encounter these hazards, nesting areas in and about work areas will be avoided to the greatest extent possible. Work areas will be inspected to look for any evidence that dangerous animals may be present. Based on the planned location for the work covered by this HASP, encountering alligators is not a likely probability.

During warm months (spring through early fall), tick-borne Lyme Disease may pose a potential health hazard. The longer a disease carrying tick remains attached to the body, the greater the potential for contracting the disease. Wearing long sleeved shirts and long pants (tucked into boots and taped) will prevent initial tick attachment, while performing frequent body checks will help prevent long term attachment. Site first aid kits should be equipped with medical forceps and rubbing alcohol to assist in tick removal. For information regarding tick removal procedures and symptoms of exposure, consult Section 4.0 of the Health and Safety Guidance Manual.

Contact with poisonous plants and bites or stings from poisonous insects are other potential natural hazards. Long sleeved shirts and long pants (tucked into boots), and avoiding potential nesting areas, will minimize the potential for exposure. Additionally, insect repellents may be used by site personnel. Personnel who are allergic to stinging insects (such as bees, wasps and hornets) must be particularly careful since severe illness and death may result from allergic reactions. As with any medical condition or allergy, information regarding the condition must be listed on the Medical Data Sheet (see Attachment I of this HASP), and the FOL or SSO notified.

In general, avoidance of areas of known infestation or growth will be the preferred exposure control for insects/animals and poisonous plants. Specific discussion on principle hazards of concern follows:

### **6.3.1 Insect/Animal Bites and Stings**

Various insects and animals may be present and should be considered. Also, areas to be investigated could be prime nesting and/or hiding locations for snakes and other insects. Personnel should avoid reaching into areas that are not visibly clear of snakes or insects. Snake chaps will be worn in areas of known or anticipated snake infestation. Site personnel who are allergic to stinging insects such as bees, wasps, and hornets must be particularly careful since severe illness and death may result from allergic reactions. As with any medical condition or allergy, information regarding the condition must be listed on the Medical Data Sheet and the FOL and SSO notified.

#### **Fire Ants**

Fire ants present a unique situation when working outdoors in Florida. Their aggressive behavior and their ability to sting repeatedly can pose a unique health threat. The sting injects venom (formic acid) that

causes an extreme burning sensation. Pustules form which can become infected if scratched. Allergic reactions of people sensitive to the venom include dizziness, swelling, shock and in extreme cases unconsciousness and death. People exhibiting such symptoms should see a physician. Fire ants can be identified by their habitat. They build mounds in open sunny areas sometimes supported by a wall or shrub. The mound has no external opening. The size of the mound can range from a few inches across to some which are in excess of two feet or more in height and diameter. When disturbed the ants defend it by swarming out and over the mound, even running up grass blades and sticks.

## **Alligators**

Alligators live in every Florida County but are most common in the major river drainage basins and large lakes in the central and southern portions of the state. They also can be found in marshes, swamps, ponds, drainage canals, phosphate-mine settling ponds, and ditches. Alligators are tolerant of poor water-quality and occasionally inhabit brackish marshes along the coast. A few even venture into salt water.

Mature alligators seek open water areas during the November-to-May courtship and breeding season. After mating, the females move into marsh areas to nest in June and early August where they remain until the following spring. Males generally prefer open and deeper water year-round. Alligators less than four feet long typically inhabit the marshy areas of lakes and rivers. Dense vegetation in these habitats provides protective cover and many of the preferred foods of young alligators.

- Most human attacks associated with alligators occur when they have been fed by humans or when defending their nests.
- Under no circumstances should you approach an alligator closely. They are quite agile, even on land. As with any wild animal, alligators merit a measure of respect.
- Alligators are classified as a threatened species and thus enjoy the protection of state and federal law. Only representatives of the Florida Game and Fresh Water Fish Commission are empowered to handle nuisance alligators.
- It is illegal to feed, tease, harass, molest, capture or kill alligators.
- If a serious problem does exist, contact the Florida Game and Fresh Water Fish Commission.

### **6.3.2 Incllement Weather**

Project tasks under this Scope of Work will be performed outdoors and near water. As a result, inclement weather may be encountered. In the event that adverse weather conditions arise (electrical storms, hurricanes, etc.), the FOL and/or the SSO will be responsible for temporarily suspending or terminating activities until hazardous conditions no longer exist.

#### **Tropical Storms and Hurricanes**

As Florida is a tropical storm, hurricane prone area, the following information is supplied to explain the potential severity of these natural hazards. The decision to curtail operations and evacuate the area should be made by the FOL, PM, and the HSM.

During the early summer to late fall months, typically from the first of June through the end of November, disturbances migrating off the West Coast of Africa move into the Atlantic Ocean and develop into tropical cyclones known as tropical storms and hurricanes. Many of these cyclones become strong enough to threaten life and property along the Eastern Seaboard and Gulf Coast. There are three main threats associated with tropical storms and hurricanes:

- High winds
- Excessive rainfall
- Storm surge

The impacts of high winds and excessive rainfall occur hours, maybe days, before the tropical storm or hurricane makes landfall. However, the storm surge accompanies the storm or hurricane at the time that landfall occurs.

#### **High Winds**

Sustained winds vary greatly from storm to storm, but can range from 39 to 73 miles per hour (wind speeds associated with a tropical storm) to greater than 74 miles per hour (minimal wind speed for a Category 1 hurricane). Table 6-1 compares the type of storm or hurricane and the corresponding wind speed.

**TABLE 6-1**  
**TROPICAL STORM/HURRICANE RATING SCALE**

| TYPE                | CATEGORY* | WINDS (MPH) |
|---------------------|-----------|-------------|
| Tropical Depression | NA        | >35-38      |
| Tropical Storm      | NA        | 39 – 73     |
| Hurricane           | 1         | 74 – 95     |
| Hurricane           | 2         | 96 – 110    |
| Hurricane           | 3         | 111 – 130   |
| Hurricane           | 4         | 131 – 155   |
| Hurricane           | 5         | >155        |

Based on the Saffir-Simpson scale  
NA – Not Applicable

In addition to strong winds, there is the threat of debris (i.e. building material, trees, etc.) becoming airborne projectiles as they are carried by the high winds. Thunderstorms and tornadoes embedded within the tropical storm or hurricane can further increase the wind speeds on a localized level.

### **Excessive Rainfall**

Heavy rains associated with tropical storms and hurricanes also vary greatly from storm to storm. On average, an inch of rainfall an hour is not uncommon with major hurricanes, somewhat lesser amounts with tropical storms. However, the primary threat is not the intensity of rain, but the duration of rainfall. Since many tropical storms and hurricanes are slow-movers, they are capable of producing sustained heavy rainfall over a long period of time. It is not uncommon for an area to receive nearly 20 inches of rain in 24 hours. Under these conditions, street; stream and creek flooding is inevitable only to be exacerbated by locally heavier rains from thunderstorms.

### **Storm Surge**

The storm surge is an abnormal rise in sea level accompanying a hurricane or tropical storm. The height of the storm surge (usually measured in feet) is the difference in sea level from the observed level (during the storm) and the level that would have occurred in the absence of the storm or hurricane. The more intense the storm or hurricane the higher the storm surge. Storm surges become even higher if they occur during periods of high tide. Table 6-2 defines some of the terminology and possible calls to action regarding tropical cyclones:

**TABLE 6-2  
TROPICAL STORM/HURRICANE  
WATCH AND WARNING**

| STORM DESCRIPTION      | DEFINITION  | CALL TO ACTION   |
|------------------------|---|--|
| Tropical Storm Watch   | Tropical storm conditions are possible in the specified area of the watch, usually within 36 hours    | Weather conditions should be monitored for further advisories.<br><br>Prepare for possible evacuation by local officials   |
| Tropical Storm Warning | Tropical storm conditions are expected in the specified area of the warning, usually within 24 hours. | Work should be suspended in areas where lightning, high winds and rainfall could pose a threat to life.<br><br>Mandatory evacuations may be enforced by local officials. |
| Hurricane Watch        | Hurricane conditions are possible in the specified area of the watch, usually within 36 hours.        | Weather conditions should be monitored for further advisories.<br><br>Prepare for possible evacuation by local officials   |
| Hurricane Warning      | Hurricane conditions are expected in the specified area of the warning, usually within 24 hours.      | Mandatory evacuations will most likely be enforced by local officials.   |

A NOAA Weather Radio is the best means to receive watches and warnings from the National Weather Service. The National Weather Service continuously broadcasts updated hurricane advisories that can be received by widely available NOAA Weather Radios.

## **7.0 AIR MONITORING**

It is highly unlikely that any of the COCs could potentially reach concentrations that exceed the current occupational exposure limits (OEL). Therefore, it is not necessary to use direct reading instruments to monitoring the breathing zone at this site.

## **8.0 TRAINING/MEDICAL SURVEILLANCE REQUIREMENTS**

This section specifies health and safety training and medical surveillance requirements for both TETRA TECH and subcontractor personnel participating in on-site activities.

### **8.1 INTRODUCTORY/REFRESHER/SUPERVISORY TRAINING**

This section is included to specify health and safety training and medical surveillance requirements for Tetra Tech personnel participating in on site activities. Tetra Tech personnel must complete 40 hours of introductory hazardous waste site training prior to performing work at the NAS Key West. Tetra Tech personnel who have had introductory training more than 12 months prior to site work must have completed 8 hours of refresher training within the past 12 months before being cleared for site work. In addition, 8-hour supervisory training in accordance with 29 CFR 1910.120(e)(4) will be required for site supervisory personnel.

Documentation of Tetra Tech introductory, supervisory, and refresher training as well as site-specific training will be maintained at the site. Copies of certificates or other official documentation will be used to fulfill this requirement.

### **8.2 SITE-SPECIFIC TRAINING**

Tetra Tech SSO will provide site-specific training to Tetra Tech employees who will perform work on this project. Figure 8-1 will be used to document the provision and content of the project-specific and associated training. Site personnel will be required to sign this form prior to commencement of site activities. This training documentation will be employed to identify personnel who through record review and attendance of the site-specific training are cleared for participation in site activities. This document shall be maintained at the site to identify and maintain an active list of trained and cleared site personnel.

The Tetra Tech SSO will also conduct a pre-activities training session prior to initiating site work. This will consist of a brief meeting at the beginning of each day to discuss operations planned for that day, and a review of the appropriate Safe Work Permits with the planned task participants. A short meeting may also be held at the end of the day to discuss the operations completed and any problems encountered.

### **8.3 MEDICAL SURVEILLANCE**

Tetra Tech personnel participating in project field activities will have had a physical examination meeting the requirements of Tetra Tech's medical surveillance program. Documentation for medical clearances will be maintained in the Tetra Tech Pittsburgh office and made available, as necessary, and will be documented using Figure 8-1 for every employee participating in onsite work activities at this site.



## **9.0 SITE CONTROL**

This section outlines the means by which Tetra Tech will delineate work zones and use these work zones in conjunction with decontamination procedures to prevent the spread of contaminants into previously unaffected areas of the site. It is anticipated that a fractured three-zone approach will be used during work at this site. This three zone approach will utilize an exclusion zone, a contamination reduction zone, and a support zone. It is also anticipated that this control measure will be used to control access to site work areas. Use of such controls will restrict the general public, minimize the potential for the spread of contaminants, and protect individuals who are not cleared to enter work areas.

### **9.1 EXCLUSION ZONE**

The exclusion zone will be considered the areas of the site of known or suspected contamination. It is anticipated that the areas around intrusive field activities will have the potential for contaminants to be brought to the surface. These areas will be marked and personnel will maintain safe distances. Once intrusive field activities have been completed and any surface contamination has been removed, the potential for exposure is again diminished and the area can then be reclassified as part of the contamination reduction zone. Therefore, the exclusion zones for this project will be limited to those areas of the site where intrusive field activities are being performed plus a designated area of at least 25 feet surrounding the DPT rig. Exclusion zones will be delineated as deemed appropriate by the FOL, through means such as erecting visibility fencing, barrier tape, cones, and/or postings to inform and direct personnel.

A pre-startup site visit will be conducted by members of the identified field team in an effort to identify proposed subsurface investigation locations, conduct utility clearances, and provide upfront notices concerning scheduled activities within the facility.

Subsurface activities will proceed only when utility clearance has been obtained. In the event that a utility is struck during a subsurface investigative activity, the emergency numbers provided in Section 2.0, Table 2-1, will be notified.

### **9.2 CONTAMINATION REDUCTION ZONE (CRZ)**

The CRZ is a buffer area between the exclusion zone and any area of the site where contamination is not suspected. This area also serves as a focal point in supporting exclusion zone activities. This area is delineated by using barrier tape, cones, and postings to inform and direct facility personnel. Potentially contaminated equipment is bagged there and taken to a central location for decontamination.

### **9.3 SUPPORT ZONE**

The support zone for this project includes a staging area where site vehicles are parked, equipment is unloaded, and where food and drink containers are maintained. The support zones are established at areas of the site where exposure to site contaminants will not be expected during normal working conditions or foreseeable emergencies.

### **9.4 SAFE WORK PERMITS (SWP)**

Exclusion Zone work conducted in support of this project is performed using Safe Work Permits (SWPs) to guide and direct field crews on a task by task basis. An example of the SWP to be used is provided in Figure 9-1. Partially completed SWPs for the work to be performed are attached (Attachment IV) to this HASP. These permits are completed to the extent possible as part of the development of this HASP. It is the SSO's responsibility to finalize and complete all blank portions of the SWPs based on current, existing conditions the day the task is to be performed, and then review that completed permit with all task participants as part of a pre-task tail gate briefing session. This ensures that site-specific considerations and changing conditions are appropriately incorporated into the SWP, provide the SSO with a structured format for conducting the tail gate safety sessions, as well will also give personnel an opportunity to ask questions and make suggestions. All SWPs require the signature of the FOL or SSO.

Personnel identified on the permit as participating in the task will be made aware of its contents by the supervisor accepting the permit. Any problems which occurred throughout the task will be documented by the supervisor on the permit.

Permits will be returned to the FOL or the SSO at the end of the day.

### **9.5 SITE VISITORS**

Site visitors must be escorted and restricted from approaching any work areas where they could be exposed to hazards from Tetra Tech operations. If a visitor has authorization from the client and from the Tetra Tech Project Manager to approach our work areas, the FOL must assure that the visitor first provides documentation indicating that he/she/they have successfully completed the necessary OSHA introductory training, receive site-specific training from the SSO, and that they have been physically cleared to work on hazardous waste sites.

Site visitors for the purpose of this document are identified as representing the following groups of individuals:

- Personnel invited to observe or participate in operations by Tetra Tech
- Regulatory personnel (i.e., DOD, EPA, OSHA, FDEP)

**FIGURE 9-1  
SAFE WORK PERMIT**

Permit No. \_\_\_\_\_ Date: \_\_\_\_\_ Time: From \_\_\_\_\_ to \_\_\_\_\_

**I. Work limited to the following (description, area, equipment used):** \_\_\_\_\_

**II. Primary Hazards:** \_\_\_\_\_

**III. Field Crew:** \_\_\_\_\_

**IV. On-site Inspection conducted**  Yes  No Initials of Inspector \_\_\_\_\_ Tetra Tech  
**Equipment Inspection required**  Yes  No Initials of Inspector \_\_\_\_\_ Tetra Tech

**V. Protective equipment required**

Level D  Level B   
 Level C  Level A

Modifications/Exceptions: \_\_\_\_\_

**Respiratory equipment required**

Yes  Specify on the reverse  
 No

| <b>VI. Chemicals of Concern</b> | <b>Hazard Monitoring</b> | <b>Action Level(s)</b> | <b>Response Measures</b> |
|---------------------------------|--------------------------|------------------------|--------------------------|
| _____                           | _____                    | _____                  | _____                    |
| _____                           | _____                    | _____                  | _____                    |
| _____                           | _____                    | _____                  | _____                    |

**Primary Route(s) of Exposure/Hazard:** \_\_\_\_\_

**(Note to FOL and/or SSO: Each item in Sections VII, VIII, and IX must be checked Yes, No, or NA)**

**VII. Additional Safety Equipment/Procedures**

|                                    |  |                                       |  |
|------------------------------------|--|---------------------------------------|--|
| Hard-hat .....                     | <input type="checkbox"/> Yes <input type="checkbox"/> No | Hearing Protection (Plugs/Muffs)..... | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Safety Glasses .....               | <input type="checkbox"/> Yes <input type="checkbox"/> No | Safety belt/harness.....              | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Chemical/splash goggles.....       | <input type="checkbox"/> Yes <input type="checkbox"/> No | Radio/Cellular Phone.....             | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Splash Shield .....                | <input type="checkbox"/> Yes <input type="checkbox"/> No | Barricades .....                      | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Splash suits/coveralls.....        | <input type="checkbox"/> Yes <input type="checkbox"/> No | Gloves (Type – Work) .....            | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Impermeable apron .....            | <input type="checkbox"/> Yes <input type="checkbox"/> No | Work/rest regimen .....               | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Steel toe work shoes or boots .... | <input type="checkbox"/> Yes <input type="checkbox"/> No | Chemical Resistant Boot Covers .....  | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| High Visibility vest.....          | <input type="checkbox"/> Yes <input type="checkbox"/> No | Tape up/use insect repellent .....    | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| First Aid Kit.....                 | <input type="checkbox"/> Yes <input type="checkbox"/> No | Fire Extinguisher .....               | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Safety Shower/Eyewash.....         | <input type="checkbox"/> Yes <input type="checkbox"/> No | Other .....                           | <input type="checkbox"/> Yes <input type="checkbox"/> No |

Modifications/Exceptions: \_\_\_\_\_

**VIII. Site Preparation**

|  | Yes                      | No                       | NA                       |
|--|--------------------------|--------------------------|--------------------------|
| Utility Locating and Excavation Clearance completed .....                                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Vehicle and Foot Traffic Routes Established/Traffic Control Barricades/Signs in Place..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Physical Hazards Identified and Isolated (Splash and containment barriers) .....           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Emergency Equipment Staged (Spill control, fire extinguishers, first aid kits, etc).....   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**IX. Additional Permits required** (Hot work, confined space entry, excavation etc.) .....  Yes  No  
*If yes, SSO to complete or contact Health Sciences, Pittsburgh Office (412)921-7090*

**X. Special instructions, precautions:** \_\_\_\_\_

Permit Issued by: \_\_\_\_\_ Permit Accepted by: \_\_\_\_\_

- Southeastern NAVFAC Personnel
- Other authorized visitors

Non-DOD personnel working on this project are required to gain initial access to the base by coordinating with the Tetra Tech FOL or designee and following established base access procedures.

Once access to the base is obtained, personnel who require site access into areas of ongoing operations will be required to obtain permission from the FOL and the Base Contact. Upon gaining access to the site, site visitors wishing to observe operations in progress will be escorted by Tetra Tech representative and shall be required to meet the minimum requirements discussed below:

- Site visitors will be routed to the FOL, who will sign them into the field logbook. Information to be recorded in the logbook will include the individual's name (proper identification required), the entity which they represent, and the purpose of the visit.
- Site visitors will be required to produce the necessary information supporting clearance to the site. This shall include information attesting to applicable training and medical surveillance as stipulated in Section 8.0 of this document. In addition, to enter the site operational zones during planned activities, site visitors will be required to first go through site-specific training covering the topics stipulated in Section 8.2 of this HASP.

Once the site visitors have completed the above items, they will be permitted to enter the operational zone. Visitors are required to observe the protective equipment and site restrictions in effect at the site at the time of their visit. Visitors entering the exclusion zones during ongoing operations will be accompanied by a Tetra Tech representative. Visitors not meeting the requirements, as stipulated in this plan, for site clearance will not be permitted to enter the site operational zones during planned activities. Any incidence of unauthorized site visitation will cause the termination of on site activities until the unauthorized visitor is removed from the premises. Removal of unauthorized visitors will be accomplished with support from the Base Contact. If necessary, the Base Contact will be notified of any unauthorized visitors.

## **9.6 SITE SECURITY**

Site security will be accomplished using Tetra Tech field personnel. Tetra Tech will retain complete control over active operational areas. As this activity takes place at a Navy facility open to public access, the first line of security will take place using exclusive zone barriers, site work permits, and any existing barriers at the sites to restrict the general public. The second line of security will take place at the work

site referring interested parties to the Base Contact. The Base Contact will serve as a focal point for base personnel, interested parties, and serve as the final line of security and the primary enforcement contact.

#### **9.7 BUDDY SYSTEM**

Personnel engaged in site activities will practice the "buddy system" to ensure the safety of the personnel involved in this operation.

#### **9.8 MATERIAL SAFETY DATA SHEET (MSDS) REQUIREMENTS**

Tetra Tech and subcontractor personnel will provide MSDSs for the chemicals brought on site. The contents of these documents will be reviewed by the SSO with the user(s) of the chemical substances prior to any actual use or application of the substances on site. A chemical inventory of the chemicals used on site will be developed using the Health and Safety Guidance Manual. The MSDSs will then be maintained in a central location (i.e., temporary office) and will be available for anyone to review upon request.

#### **9.9 COMMUNICATION**

As personnel will be working in proximity to one another during field activities, a supported means of communication between field crew members will not be necessary.

External communication will be accomplished by using cell phones. External communication will primarily be used for the purpose of resource and emergency resource communications. Prior to the commencement of activities at the NAS Key West, the FOL will determine and arrange for telephone communications. Prior to beginning work, emergency numbers should be programmed into workers' cell phones.

## **10.0 SPILL CONTAINMENT PROGRAM**

### **10.1 SCOPE AND APPLICATION**

It is anticipated that quantities of bulk potentially hazardous materials (greater than 55-gallons) will not be handled during the site activities. It is possible, however, that as the job progresses disposable PPE and other non-reusable items may be generated. As needed, 55-gallon drums will be used to contain unwanted items generated during sampling activities. The drum(s) will be labeled with the site name and address, the type of contents, and the date the container was filled as well as an identified contact person. As warranted, samples will be collected and analyzed to characterize the material and determine appropriate disposal measures. Once characterized the drum(s) will be removed from the staging area and disposed of in accordance with Federal, State and local regulations. Given the likely solid nature of drum contents, a comprehensive Spill Containment Program is not necessary. The following discussion is provided as contingency information only.

### **10.2 POTENTIAL SPILL AREAS**

Potential spill areas will be periodically monitored in an ongoing attempt to prevent and control further potential contamination of the environment. Currently, limited areas are vulnerable to this hazard including:

- Resource deployment
- Waste transfer
- Central staging

It is anticipated that the IDW generated as a result of this scope of work will be containerized, labeled, and staged to await further analyses. The results of these analyses will determine the method of disposal.

### **10.3 LEAK AND SPILL DETECTION**

To establish an early detection of potential spills or leaks, periodic inspections by the SSO will be conducted during working hours to visually determine that containers are not leaking. If a leak is detected, the first approach will be to transfer the container contents using a hand pump into a new container. Other provisions for the transfer of container contents will be made and appropriate emergency contacts will be notified, if necessary. In most instances, leaks will be collected and contained using absorbents such as Oil-dry, vermiculite, and/or sand, which may be stored at the staging

area in a conspicuously marked drum. This material too, will be containerized for disposal pending analyses. Inspections will be documented in the Project Logbook.

#### **10.4 PERSONNEL TRAINING AND SPILL PREVENTION**

Site personnel will be instructed on the procedures for spill prevention, containment, and collection of hazardous materials in the site-specific training. The FOL and/or the SSO will serve as the Spill Response Coordinator for this operation should the need arise.

#### **10.5 SPILL PREVENTION AND CONTAINMENT EQUIPMENT**

The following represents the types of equipment that may be maintained at the staging area for the purpose of supporting this Spill Containment Program (depending on the likelihood that drums and/or liquid wastes are generated):

- Sand, clean fill, vermiculite, or other noncombustible absorbent (oil-dry);
- Drums (55-gallon U.S. DOT 1A1 or 1A2)
- Shovels, rakes, and brooms
- Labels

#### **10.6 SPILL CONTROL PLAN**

This section describes the procedures the Tetra Tech field crewmembers will employ upon the detection of a spill or leak.

- Notify the SSO or FOL immediately.
- Take immediate actions to stop the leak or spill by plugging or patching the drum or raising the leak to the highest point. Avoid contacting drum contents. Spread the absorbent material in the area of the spill covering completely.

It is not anticipated that a spill will occur in which the field crews cannot handle. Should this occur; however, the FOL or SSO will notify appropriate emergency response agencies.

## 11.0 CONFINED-SPACE ENTRY

It is not anticipated, under the proposed scope of work, that confined space and permit-required confined space activities will be conducted. **Therefore, personnel under the provisions of this HASP are not allowed, under any circumstances, to enter confined spaces.** A confined space is defined as an area which has one or more of the following characteristics:

- Is large enough and so configured that an employee can bodily enter and perform assigned work.
- Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry).
- Is not designed for continuous employee occupancy.

A Permit-Required Confined Space is one that:

- Contains or has a potential to contain a hazardous atmosphere.
- Contains a material that has the potential to engulf an entrant.
- Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section.
- Contains any other recognized, serious, safety or health hazard.

For further information on confined space, consult the Health and Safety Guidance Manual or call the PHSO. If confined space operations are to be performed as part of the scope of work, detailed procedures and training requirements will have to be addressed.

## 12.0 MATERIALS AND DOCUMENTATION

The Tetra Tech Field Operations Leader (FOL) shall ensure the following materials/documents are taken to the project site and used when required.

- A complete copy of this HASP
- Health and Safety Guidance Manual
- Incident Reports
- Medical Data Sheets
- Material Safety Data Sheets for chemicals brought on site, including decontamination solutions, fuels, sample preservatives, calibration gases, etc.
- A full-size OSHA Job Safety and Health Poster (posted in the site trailer)
- Training/Medical Surveillance Documentation Form (Blank)
- First-Aid Supply Usage Form
- Emergency Reference Form (Section 2.0, extra copy for posting)
- Directions to the Hospital

### 12.1 MATERIALS TO BE POSTED OR MAINTAINED AT THE SITE

The following documentation is to be posted or maintained at the site for quick reference purposes. In situations where posting these documents is not feasible, (such as no office trailer), these documents should be separated and immediately accessible.

**Chemical Inventory Listing (posted)** - This list represents the chemicals brought on-site, including decontamination solutions, sample preservations, fuel, etc. This list should be posted in a central area.

**Material Safety Data Sheets (MSDS) (maintained)** - The MSDSs should also be in a central area accessible to the site personnel. These documents should match the listings on the chemical inventory list for the substances employed on-site. It is acceptable to have these documents within a central folder and the chemical inventory as the table of contents.

**The OSHA Job Safety & Health Protection Poster (posted)** - this poster, as directed by 29 CFR 1903.2 (a)(1), should be conspicuously posted in places where notices to employees are normally posted. Each FOL shall ensure that this poster is not defaced, altered, or covered by other material. See Attachment IV of this HASP

**Site Clearance (maintained)** - This list is found within the training section of the HASP (See Figure 8-2). It identifies site personnel, dates of training (including site-specific training), and medical surveillance. It also indicates clearance as well as status. If personnel do not meet these requirements, they do not enter the site while site personnel are engaged in activities.

**Emergency Phone Numbers and Directions to the Hospital(s) (posted)** - This list of numbers and directions will be maintained at the phone communications points and in each site vehicle.

**Medical Data Sheets/Cards (maintained)** - Medical Data Sheets will be filled out by on-site personnel and filed in a central location. The Medical Data Sheet will accompany any injury or illness requiring medical attention to the medical facility.

**Hearing Conservation Standard (29 CFR 1910.95) (posted)** - this standard will be posted anytime hearing protection or other noise abatement procedures are employed.

**Personnel Monitoring (maintained)** - The results generated through personnel sampling (levels of airborne toxins, noise levels, etc.) will be posted to inform individuals of the results of that effort.

**Placards and Labels (maintained)** - Where chemical inventories have been separated because of quantities and incompatibilities, these areas will be conspicuously marked using DOT placards and acceptable (Hazard Communication 29 CFR 1910.1200(f)) labels.

The purpose of maintaining or posting this information, as stated above, is to allow site personnel quick access. Variations concerning location and methods of presentation are acceptable, providing the objection is accomplished.

### 13.0 ACRONYMS / ABBREVIATIONS

|            |  |
|------------|--|
| AST        | Aboveground Storage Tank   |
| CFR        | Code of Federal Regulations  |
| CIH        | Certified Industrial Hygienist   |
| CLEAN      | Comprehensive Long Term Environmental Action Navy                        |
| CSP        | Certified Safety Professional  |
| DOD        | Department of Defense  |
| DOT        | Department of Transportation   |
| DRI        | Direct Reading Instrument  |
| EPA        | Environmental Protection Agency  |
| FOL        | Field Operations Leader  |
| HASP       | Health and Safety Plan   |
| HAZWOPER   | Hazardous Waste Operations and Emergency Response                        |
| HSM        | Health and Safety Manager  |
| IDW        | Investigation Derived Waste  |
| mg/kg      | milligrams per kilogram  |
| MSDS       | Material Safety Data Sheet   |
| NAS        | Naval Air Station  |
| NIOSH      | National Institute for Occupational Safety and Health                    |
| OSHA       | Occupational Safety and Health Administration (U.S. Department of Labor) |
| PhD        | Doctor of Philosophy   |
| PHSO       | Project Health and Safety Officer  |
| PM         | Project Manager  |
| PPE        | Personal Protective Equipment  |
| SSO        | Site Safety Officer  |
| SWP        | Safe Work Permit   |
| SVOCs      | Semi-Volatile Organic Compounds  |
| TBD        | To be determined   |
| Tetra Tech | Tetra Tech NUS   |
| VOCs       | Volatile Organic Compounds   |

**ATTACHMENT I**  
**MEDICAL DATA SHEET**

## MEDICAL DATA SHEET

This Medical Data Sheet must be completed by on-site personnel and kept in the command post during the conduct of site operations. This data sheet will accompany any personnel when medical assistance is needed or if transport to hospital facilities is required.

Project: \_\_\_\_\_

Name: \_\_\_\_\_ Home Telephone: \_\_\_\_\_

Address: \_\_\_\_\_

Age: \_\_\_\_\_ Height: \_\_\_\_\_ Weight: \_\_\_\_\_

Person to notify in the event of an emergency: Name: \_\_\_\_\_

Phone: \_\_\_\_\_

Drug or other Allergies: \_\_\_\_\_

Particular Sensitivities: \_\_\_\_\_

Do You Wear Contacts? \_\_\_\_\_

What medications are you presently using? \_\_\_\_\_

\_\_\_\_\_

Name, Address, and Phone Number of personal physician: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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### **Note: Health Insurance Portability and Accountability Act (HIPAA) Requirements**

HIPAA took effect April 14, 2003. Loosely interpreted, HIPAA regulates the disclosure of Protected Health Information (PHI) by the entity collecting that information. PHI is any information about health status (such as that you may report on this Medical Data Sheet), provision of health care, or other information. HIPAA also requires Tetra Tech to ensure the confidentiality of PHI. This Act can affect the ability of the Medical Data Sheet to contain and convey information you would want a Doctor to know if you were incapacitated. So before you complete the Medical Data Sheet understand that this form will not be maintained in a secure location. It will be maintained in a file box or binder accessible to other members of the field crew so that the can accompany an injured party to the hospital.

DO NOT include information that you do not wish others to know, only information that may be pertinent in an emergency situation or treatment.

---

\_\_\_\_\_

Name (Print clearly)

---

\_\_\_\_\_

Signature

---

\_\_\_\_\_

Date

**ATTACHMENT II**  
**INCIDENT REPORT FORM**

| Report Date  | Report Prepared By   | Incident Report Number                                |
|--|--|---|
|  |  |   |
| <b>INSTRUCTIONS:</b>   |  |   |
| All incidents (including those involving subcontractors under direct supervision of Tetra Tech personnel) must be documented on the IR Form. |  |   |
| Complete any additional parts to this form as indicated below for the type of incident selected.   |  |   |
| TYPE OF INCIDENT (Check all that apply)  |  | Additional Form(s) Required for this type of incident |
| Near Miss (No losses, but could have resulted in injury, illness, or damage)   | <input type="checkbox"/>   | Complete IR Form Only                                 |
| Injury or Illness  | <input type="checkbox"/>   | Complete Form IR-A; Injury or Illness                 |
| Property or Equipment Damage, Fire, Spill or Release   | <input type="checkbox"/>   | Complete Form IR-B; Damage, Fire, Spill or Release    |
| Motor Vehicle  | <input type="checkbox"/>   | Complete Form IR-C; Motor Vehicle                     |
| <b>INFORMATION ABOUT THE INCIDENT</b>  |  |   |
| <b>Description of Incident</b>   |  |   |
| <hr/> <hr/> <hr/>  |  |   |
| <b>Date of Incident</b>  | <b>Time of Incident</b>  |   |
|  | _____ AM <input type="checkbox"/> PM <input type="checkbox"/> OR Cannot be determined <input type="checkbox"/> |   |
| <b>Weather conditions at the time of the incident</b>  | <b>Was there adequate lighting?</b>  |   |
|  | _____ Yes <input type="checkbox"/> No <input type="checkbox"/>   |   |
| <b>Location of Incident</b>  |  |   |
| _____ Was location of incident within the employer's work environment? Yes <input type="checkbox"/> No <input type="checkbox"/>              |  |   |
| <b>Street Address</b>  | <b>City, State, Zip Code and Country</b>   |   |
|  |  |   |
| <b>Project Name</b>  | <b>Client:</b>   |   |
|  |  |   |
| <b>Tt Supervisor or Project Manager</b>  | <b>Was supervisor on the scene?</b>  |   |
|  | Yes <input type="checkbox"/> No <input type="checkbox"/>   |   |
| <b>WITNESS INFORMATION (attach additional sheets if necessary)</b>   |  |   |
| <b>Name</b>  | <b>Company</b>   |   |
|  |  |   |
| <b>Street Address</b>  | <b>City, State and Zip Code</b>  |   |
|  |  |   |
| <b>Telephone Number(s)</b>   |  |   |
|  |  |   |

| CORRECTIVE ACTIONS   |  |           |                  |      |
|--|--|-----------|------------------|------|
| <b>Corrective action(s) immediately taken by unit reporting the incident:</b>  |  |           |                  |      |
| <hr/> <hr/> <hr/>  |  |           |                  |      |
| <b>Corrective action(s) still to be taken (by whom and when):</b>  |  |           |                  |      |
| <hr/> <hr/> <hr/>  |  |           |                  |      |
| ROOT CAUSE ANALYSIS LEVEL REQUIRED   |  |           |                  |      |
| Root Cause Analysis Level Required: Level - 1 <input type="checkbox"/> Level - 2 <input type="checkbox"/> None <input type="checkbox"/>                                    |  |           |                  |      |
| <b>Root Cause Analysis Level Definitions</b>   |  |           |                  |      |
| <b>Level - 1</b>   | <p><b>Definition:</b> A Level 1 RCA is conducted by an individual(s) with experience or training in root cause analysis techniques and will conduct or direct documentation reviews, site investigation, witness and affected employee interviews, and identify corrective actions. Activating a Level 1 RCA and identifying RCA team members will be at the discretion of the Corporate Administration office.</p> <p>The following events may trigger a Level 1 RCA:</p> <ul style="list-style-type: none"> <li>▪ Work related fatality</li> <li>▪ Hospitalization of one or more employee where injuries result in total or partial permanent disability</li> <li>▪ Property damage in excess of \$75,000</li> <li>▪ When requested by senior management</li> </ul> |           |                  |      |
| <b>Level - 2</b>   | <p><b>Definition:</b> A Level 2 RCA is self performed within the operating unit by supervisory personnel with assistance of the operating unit HSR. Level 2 RCA will utilize the 5 Why RCA methodology and document the findings on the tools provided.</p> <p>The following events will require a Level 2 RCA:</p> <ul style="list-style-type: none"> <li>▪ OSHA recordable lost time incident</li> <li>▪ Near miss incident that could have triggered a Level 1 RCA</li> <li>▪ When requested by senior management</li> </ul>  |           |                  |      |
| <b>Complete the Root Cause Analysis Worksheet and Corrective Action for m. Identify a corrective action(s) for each root cause identified within each area of inquiry.</b> |  |           |                  |      |
| NOTIFICATIONS  |  |           |                  |      |
| Title  | Printed Name   | Signature | Telephone Number | Date |
| Project Manager or Supervisor  |  |           |                  |      |
| Site Safety Coordinator or Office H&S Representative   |  |           |                  |      |
| Operating Unit H&S Representative  |  |           |                  |      |
| Other: _____   |  |           |                  |      |

The signatures provided above indicate that appropriate personnel have been notified of the incident.

**INSTRUCTIONS:**

Complete all sections below for incidents involving injury or illness.  
Do NOT leave any blanks.  
Attach this form to the IR FORM completed for this incident.

Incident Report Number: (From the IR Form)

**EMPLOYEE INFORMATION**

**Company Affiliation**

Tetra Tech Employee?

TetraTech subcontractor employee (directly supervised by Tt personnel)?

**Full Name**

**Company (if not Tt employee)**

**Street Address, City, State and Zip Code**

**Address Type**

Home address (for Tt employees)

Business address (for subcontractors)

**Telephone Numbers**

Work: \_\_\_\_\_

Home: \_\_\_\_\_

Cell: \_\_\_\_\_

**Occupation (regular job title)**

**Department**

**Was the individual performing regular job duties?**

Yes  No

**Time individual began work**

\_\_\_\_\_ AM  PM  OR Cannot be determined

**Safety equipment**

Provided? Yes  No

Used? Yes  No  If no, explain why

- Type(s) provided:
- Hard hat
  - Protective clothing
  - Gloves
  - High visibility vest
  - Eye protection
  - Fall protection
  - Safety shoes
  - Machine guarding
  - Respirator
  - Other (list)

**NOTIFICATIONS**

Name of Tt e mployee to w hom the i njury or i llness w as fi rst reported

Was H&S notified within one hour of injury or illness?

Yes  No

Date of report

H&S Personnel Notified

Time of report

Time of Report

If subcontractor injury, did subcontractor's firm perform their own incident investigation?

Yes  No  If yes, request a copy of their completed investigation form/report and attach it to this report.

## INJURY / ILLNESS DETAILS

**What was the individual doing just before the incident occurred?** Describe the activity as well as the tools, equipment, or material the individual was using. Be specific. Examples: "Climbing a ladder while carrying roofing materials"; "Spraying chlorine from a hand sprayer"; "Daily computer key-entry"

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**What Happened?** Describe how the injury occurred. Examples: "When ladder slipped on wet floor and worker fell 20 feet"; "Worker was sprayed with chlorine when gasket broke during replacement"; "Worker developed soreness in wrist over time"

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**Describe the object or substance that directly harmed the individual:** Examples: "Concrete floor"; "Chlorine"; "Radial Arm Saw". If this question does not apply to the incident, write "Not Applicable".

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## MEDICAL CARE PROVIDED

Was first aid provided at the site: Yes  No  If yes, describe the type of first aid administered and by whom?

---

Was treatment provided away from the site: Yes  No  If yes, provide the information below.

|  |  |
|--|--|
| <b>Name of physician or health care professional</b> | <b>Facility Name</b>   |
|  |  |
| <b>Street Address, City State and Zip Code</b>       | <b>Type of Care?</b>   |
|  | Was individual treated in emergency room? Yes <input type="checkbox"/> No <input type="checkbox"/>               |
|  | Was individual hospitalized overnight as an in-patient? Yes <input type="checkbox"/> No <input type="checkbox"/> |
| <b>Telephone Number</b>                              | Did the individual die? Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, date: _____             |
|  | Will a worker's compensation claim be filed? Yes <input type="checkbox"/> No <input type="checkbox"/>            |

**NOTE: Attach any police reports or related diagrams to this report.**

## SIGNATURES

I have reviewed this report and agree that all the supplied information is accurate

| Affected individual (print) | Affected individual (signature) | Telephone Number | Date |
|-----------------------------|---------------------------------|------------------|------|
|                             |                                 |                  |      |

This form contains information relating to employee health and must be used in a manner that protects the confidentiality of the employee to the extent possible while the information is being used for occupational safety and health purposes.

**INSTRUCTIONS:**

Complete all sections below for incidents involving property/equipment damage, fire, spill or release.  
Do NOT leave any blanks.  
Attach this form to the IR FORM completed for this incident.

Incident Report Number: (From the IR Form)

**TYPE OF INCIDENT (Check all that apply)**

Property Damage

Equipment Damage

Fire or Explosion

Spill or Release

**INCIDENT DETAILS**

**Results of Incident:** Fully describe damages, losses, etc.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Response Actions Taken:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Responding Agency(s) (i.e. police, fire department, etc.)

Agency(s) Contact Name(s)

\_\_\_\_\_  
\_\_\_\_\_

**DAMAGED ITEMS (List all damaged items, extent of damage and estimated repair cost)**

| Item: | Extent of damage: | Estimated repair cost |
|-------|-------------------|-----------------------|
|       |                   |                       |
|       |                   |                       |
|       |                   |                       |

**SPILLS / RELEASES (Provide information for spilled/released materials)**

| Substance | Estimated quantity and duration | Specify Reportable Quantity (RQ)   |
|-----------|---------------------------------|--|
|           |                                 | _____ Exceeded? Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/> |

**FIRES / EXPLOSIONS (Provide information related to fires/explosions)**

Fire fighting equipment used? Yes  No  If yes, type of equipment: \_\_\_\_\_

**NOTIFICATIONS**

| Required notifications   | Name of person notified | By whom | Date / Time |
|--|-------------------------|---------|-------------|
| Client: _____ Yes <input type="checkbox"/> No <input type="checkbox"/> |                         |         |             |
| Agency: _____ Yes <input type="checkbox"/> No <input type="checkbox"/> |                         |         |             |
| Other: _____ Yes <input type="checkbox"/> No <input type="checkbox"/>  |                         |         |             |

Who is responsible for reporting incident to outside agency(s)? To  Client  Other  Name: \_\_\_\_\_

Was an additional written report on this incident generated? Yes  No  If yes, place in project file.

**INSTRUCTIONS:**

Complete all sections below for incidents involving motor vehicle accidents. Do NOT leave any blanks.  
Attach this form to the IR FORM completed for this incident.

|   |             |   |  |
|---|-------------|---|--|
| <b>Incident Report Number: (From the IR Form)</b>   |             |   |  |
| <b>INCIDENT DETAILS</b>   |             |   |  |
| <b>Name of road, street, highway or location where accident occurred</b>  |             | <b>Name of intersecting road, street or highway if applicable</b> |  |
|   |             |   |  |
| <b>County</b>   | <b>City</b> | <b>State</b>  |  |
|   |             |   |  |
| <b>Did police respond to the accident?</b>  |             | <b>Did ambulance respond to the accident?</b>                     |  |
| Yes <input type="checkbox"/> No <input type="checkbox"/>  |             | Yes <input type="checkbox"/> No <input type="checkbox"/>          |  |
| <b>Name and location of responding police department</b>  |             | <b>Ambulance company name and location</b>                        |  |
|   |             |   |  |
| <b>Officer's name/badge #</b>   |             |   |  |
| Did police complete an incident report? Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, police report number: _____<br>Request a copy of completed investigation report and attach to this form. |             |   |  |
| <b>VEHICLE INFORMATION</b>  |             |   |  |
| How many vehicles were involved in the accident? _____ (Attach additional sheets as applicable for accidents involving more than 2 vehicles.)   |             |   |  |
| <b>Vehicle Number 1 – Tetra Tech Vehicle</b>  |             | <b>Vehicle Number 2 – Other Vehicle</b>                           |  |
| <b>Vehicle Owner / Contact Information</b>  |             | <b>Vehicle Owner / Contact Information</b>                        |  |
| <b>Color</b>  |             | <b>Color</b>  |  |
| <b>Make</b>   |             | <b>Make</b>   |  |
| <b>Model</b>  |             | <b>Model</b>  |  |
| <b>Year</b>   |             | <b>Year</b>   |  |
| <b>License Plate #</b>  |             | <b>License Plate #</b>  |  |
| <b>Identification #</b>   |             | <b>Identification #</b>   |  |
| <b>Describe damage to vehicle number 1</b>  |             | <b>Describe damage to vehicle number 2</b>                        |  |
|   |             |   |  |
| <b>Insurance Company Name and Address</b>   |             | <b>Insurance Company Name and Address</b>                         |  |
|   |             |   |  |
| <b>Agent Name</b>   |             | <b>Agent Name</b>   |  |
| <b>Agent Phone No.</b>  |             | <b>Agent Phone No.</b>  |  |
| <b>Policy Number</b>  |             | <b>Policy Number</b>  |  |

**DRIVER INFORMATION**

| Vehicle Number 1 – Tetra Tech Vehicle  |   | Vehicle Number 2 – Other Vehicle   |   |
|--|---|--|---|
| Driver's Name  |   | Driver's Name  |   |
| Driver's Address   |   | Driver's Address   |   |
| Phone Number   |   | Phone Number   |   |
| Date of Birth  |   | Date of Birth  |   |
| Driver's License #   |   | Driver's License #   |   |
| Licensing State  |   | Licensing State  |   |
| Gender   | Male <input type="checkbox"/> Female <input type="checkbox"/> | Gender   | Male <input type="checkbox"/> Female <input type="checkbox"/> |
| Was traffic citation issued to Tetra Tech driver? Yes <input type="checkbox"/> No <input type="checkbox"/> |   | Was traffic citation issued to driver of other vehicle? Yes <input type="checkbox"/> No <input type="checkbox"/> |   |
| Citation #   |   | Citation #   |   |
| Citation Description   |   | Citation Description   |   |

**PASSENGERS IN VEHICLES (NON-INJURED)**

List all non-injured passengers (excluding driver) in each vehicle.  
 Driver information is captured in the preceding section.  
 Information related to persons injured in the accident (non-Tt employees) is captured in the section below on this form.  
 Injured Tt employee information is captured on FORM IR-A

| Vehicle Number 1 – Tetra Tech Vehicle                       |  | Vehicle Number 2 – Other Vehicle                            |  |
|---|--|---|--|
| How many passengers (excluding driver) in the vehicle? ____ |  | How many passengers (excluding driver) in the vehicle? ____ |  |
| Non-Injured Passenger Name and Address                      |  | Non-Injured Passenger Name and Address                      |  |
| Non-Injured Passenger Name and Address                      |  | Non-Injured Passenger Name and Address                      |  |
| Non-Injured Passenger Name and Address                      |  | Non-Injured Passenger Name and Address                      |  |

**INJURIES TO NON-TETRATECH EMPLOYEES**

|                          |   |         |                 |  |  |  |
|--------------------------|---|---------|-----------------|--|--|--|
| Name of injured person 1 |   |         |                 | Address of injured person 1                              |  |  |
|                          |   |         |                 |  |  |  |
| Age                      | Gender  | Car No. | Location in Car | Seat Belt Used?  | Ejected from car?  | Injury or Fatality?  |
|                          | Male <input type="checkbox"/> Female <input type="checkbox"/> |         |                 | Yes <input type="checkbox"/> No <input type="checkbox"/> | Yes <input type="checkbox"/> No <input type="checkbox"/> | Injured <input type="checkbox"/> Died <input type="checkbox"/> |
| Name of injured person 2 |   |         |                 | Address of injured person 2                              |  |  |
|                          |   |         |                 |  |  |  |
| Age                      | Gender  | Car No. | Location in Car | Seat Belt Used?  | Ejected from car?  | Injury or Fatality?  |
|                          | Male <input type="checkbox"/> Female <input type="checkbox"/> |         |                 | Yes <input type="checkbox"/> No <input type="checkbox"/> | Yes <input type="checkbox"/> No <input type="checkbox"/> | Injured <input type="checkbox"/> Died <input type="checkbox"/> |

**OTHER PROPERTY DAMAGE**

|   |                          |
|---|--------------------------|
| Describe damage to property other than motor vehicles |                          |
|   |                          |
| Property Owner's Name                                 | Property Owner's Address |
|   |                          |

COMPLETE AND SUBMIT DIAGRAM DEPICTING WHAT HAPPENED

A large, empty rectangular box with a thin black border, intended for drawing a diagram. The box occupies most of the page below the instruction header.

**ATTACHMENT III**  
**EQUIPMENT INSPECTION CHECKLIST**

### Equipment Inspection Checklist for Drill Rigs

Company: \_\_\_\_\_

Unit/Serial No#: \_\_\_\_\_

Inspection Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_ Time: \_\_\_\_ :

Equipment Type: \_\_\_\_\_  
(e.g, Drill Rigs Hollow Stem, Mud Rotary, Direct Push, HDD)

Project Name: \_\_\_\_\_

Project No#: \_\_\_\_\_

| Yes                      | No                       | NA                       | Requirement   | Comments   |
|--------------------------|--------------------------|--------------------------|---|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>Emergency Stop Devices</b> <ul style="list-style-type: none"> <li>• Emergency Stop Devices (At points of operation)</li> <li>• Have all emergency shut offs identified been communicated to the field crew?</li> <li>• Has a person been designated as the Emergency Stop Device Operator?</li> </ul>  |  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>Highway Use</b> <ul style="list-style-type: none"> <li>• Cab, mirrors, safety glass?</li> <li>• Turn signals, lights, brake lights, etc. (front/rear) for equipment approved for highway use?</li> <li>• Seat Belts?</li> <li>• Is the equipment equipped with audible back-up alarms and back-up lights?</li> <li>• Horn and gauges</li> <li>• Brake condition (dynamic, park, etc.)</li> <li>• Tires (Tread) or tracks</li> <li>• Windshield wipers</li> <li>• Exhaust system</li> <li>• Steering (standard and emergency)</li> <li>• Wheel Chocks?</li> <li>• Are tools and material secured to prevent movement during transport? Especially those within the cab?</li> <li>• Are there flammables or solvents or other prohibited substances stored within the cab?</li> <li>• Are tools or debris in the cab that may adversely influence operation of the vehicle (in and around brakes, clutch, gas pedals)</li> </ul> |  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   |  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   |  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   |  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   |  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   |  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   |  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   |  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   |  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   |  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   |  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   |  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   |  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   | <b>Fluid Levels:</b> <ul style="list-style-type: none"> <li>• Engine oil</li> <li>• Transmission fluid</li> <li>• Brake fluid</li> <li>• Cooling system fluid</li> <li>• Hoses and belts</li> <li>• Hydraulic oil</li> </ul> |

**Equipment Inspection Checklist for Drill Rigs**

Page 2

Unit/Serial No#: \_\_\_\_\_

Inspection Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

| Yes  | No   | NA   | Requirement  | Comments |
|--|--|--|--|----------|
| <input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/>   | <input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/>   | <input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/>   | High Pressure Hydraulic Lines <ul style="list-style-type: none"> <li>• Obvious damage</li> <li>• Operator protected from accidental release</li> <li>• Coupling devices, connectors, retention cables/pins are in good condition and in place</li> </ul>   |          |
| <input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/> | <input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/> | <input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/> | Mast Condition <ul style="list-style-type: none"> <li>• Structural components/tubing</li> <li>• Connection points</li> <li>• Pins</li> <li>• Welds</li> <li>• Outriggers</li> <li>• Operational</li> <li>• Plumb (when raised)</li> </ul>  |          |
| <input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/> | <input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/> | <input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/> | Hooks <ul style="list-style-type: none"> <li>• Are the hooks equipped with Safety Latches?</li> <li>• Does it appear that the hook is showing signs of wear in excess of 10% original dimension?</li> <li>• Is there a bend or twist exceeding 10% from the plane of an unbent hook?</li> <li>• Increase in throat opening exceeding 15% from new condition</li> <li>• Excessive nicks and/or gouges</li> <li>• Clips</li> <li>• Number of U-Type (Crosby) Clips<br/>                         (cable size 5/16 – 5/8 = 3 clips minimum)<br/>                         (cable size 3/4 – 1 inch = 4 clips minimum)<br/>                         (cable size 1 1/8 – 1 3/8 inch = 5 clips minimum)</li> </ul> |          |

**Equipment Inspection Checklist for Drill Rigs**

Page 3

Unit/Serial No#: \_\_\_\_\_

Inspection Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

| Yes                      | No                       | NA                       | Requirement  | Comments |
|--------------------------|--------------------------|--------------------------|--|----------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Power cable and/or hoist cable <ul style="list-style-type: none"> <li>Reduction in Rope diameter <math>\pi</math><br/>(5/16 wire rope &gt; 1/64 reduction nominal size -replace)<br/>(3/8 to 1/2 wire rope &gt; 1/32 reduction nominal size-replace)<br/>(9/16 to 3/4 wire rope &gt; 3/64 reduction nominal size-replace)</li> </ul> |          |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <ul style="list-style-type: none"> <li>Number of broken wires<br/>(6 randomly broken wires in one rope lay)<br/>(3 broken wires in one strand)</li> </ul>  |          |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <ul style="list-style-type: none"> <li>Number of wire rope wraps left on the Running Drum at nominal use (<math>\geq 3</math> required)</li> </ul>   |          |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | - Lead (primary) sheave is centered on the running drum  |          |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Lubrication of wire rope (adequate?)   |          |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Kinks, bends – Flattened to > 50% diameter   |          |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Hemp/Fiber rope (Cathead/Split Spoon Hammer) <ul style="list-style-type: none"> <li>Minimum <math>\frac{3}{4}</math>; maximum 1 inch rope diameter (Inspect for physical damage)</li> </ul>  |          |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <ul style="list-style-type: none"> <li>Rope to hammer is securely fastened</li> </ul>  |          |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Safety Guards – <ul style="list-style-type: none"> <li>Around rotating apparatus (belts, pulleys, sprockets, spindles, drums, flywheels, chains) all points of operations protected from accidental contact?</li> </ul>  |          |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <ul style="list-style-type: none"> <li>Hot pipes and surfaces exposed to accidental contact?</li> </ul>  |          |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <ul style="list-style-type: none"> <li>High pressure lines</li> </ul>  |          |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <ul style="list-style-type: none"> <li>Nip/pinch points</li> </ul>   |          |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Operator Qualifications <ul style="list-style-type: none"> <li>Does the operator have proper licensing where applicable, (e.g., CDL)?</li> </ul>   |          |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <ul style="list-style-type: none"> <li>Does the operator, understand the equipment’s operating instructions?</li> </ul>  |          |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <ul style="list-style-type: none"> <li>Is the operator experienced with this equipment?</li> </ul>   |          |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <ul style="list-style-type: none"> <li>Is the operator 21 years of age or more?</li> </ul>   |          |

**Equipment Inspection Checklist for Drill Rigs**  
**Page 4**

Unit/Serial No#: \_\_\_\_\_

Inspection Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

| Yes                      | No                       | NA                       | Requirement  | Comments |
|--------------------------|--------------------------|--------------------------|--|----------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | PPE Required for Drill Rig Exclusion Zone <ul style="list-style-type: none"> <li>• Hardhat</li> <li>• Safety glasses</li> <li>• Work gloves</li> <li>• Chemical resistant gloves _____</li> <li>• Steel toed Work Boots</li> <li>• Chemical resistant Boot Covers</li> <li>• Apron</li> <li>• Coveralls Tyvek, Saranex, cotton) _____</li> </ul>   |          |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Other Hazards <ul style="list-style-type: none"> <li>• Excessive Noise Levels? _____ dBA</li> <li>• Chemical hazards (Drilling supplies - Sand, bentonite, grout, fuel, etc.)                             <ul style="list-style-type: none"> <li>- MSDSs available?</li> </ul> </li> <li>• Will On-site fueling occur                             <ul style="list-style-type: none"> <li>- Safety cans available?</li> <li>- Fire extinguisher (Type/Rating - _____ )</li> </ul> </li> </ul> |          |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |  |          |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |  |          |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |  |          |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |  |          |

Approved for Use     Yes     No     See Comments

\_\_\_\_\_  
 Site Health and Safety Officer

\_\_\_\_\_  
 Operator

**ATTACHMENT IV**  
**SAFE WORK PERMITS**

**SAFE WORK PERMIT  
MOBILIZATION AND DEMOBILIZATION ACTIVITIES  
NAVAL AIR STATION KEY WEST  
CTO JM17**

Permit No. \_\_\_\_\_ Date: \_\_\_\_\_ Time: From \_\_\_\_\_ to \_\_\_\_\_

**I. Work limited to the following (description, area, equipment used):** Mobilization and demobilization activities

**II. Primary Hazards:** Lifting; slips, trips and falls; vehicular and foot traffic; insect/animal bites and stings; poisonous plants; inclement weather.

**III. Field Crew:** \_\_\_\_\_

**IV. On-site Inspection conducted**  Yes  No Initials of Inspector \_\_\_\_\_ Tetra Tech  
**Equipment Inspection required**  Yes  No Initials of Inspector \_\_\_\_\_ Tetra Tech

**V. Protective equipment required**  Level D  Level B   
 Level C  Level A   
**Respiratory equipment required** Yes  Specify on the reverse  
No

Modifications/Exceptions: Minimum requirement include sleeved shirt and long pants, or coveralls, safety glasses and safety footwear. Hard hats and hearing protection will be worn when working near operating equipment.

|                                 |                          |                        |                          |
|---------------------------------|--------------------------|------------------------|--------------------------|
| <b>VI. Chemicals of Concern</b> | <b>Hazard Monitoring</b> | <b>Action Level(s)</b> | <b>Response Measures</b> |
| <u>None anticipated</u>         | <u>None</u>              | <u>None</u>            | <u>None</u>              |

**Primary Route(s) of Exposure/Hazard:** NA

**(Note to FOL and/or SHSO: Each item in Sections VII, VIII, and IX must be checked Yes, No, or NA)**

**VII. Additional Safety Equipment/Procedures**

|   |  |
|---|--|
| Hard-hat..... <input type="checkbox"/> Yes <input type="checkbox"/> No                              | Hearing Protection (Plugs/Muffs) ... <input type="checkbox"/> Yes <input type="checkbox"/> No  |
| Safety Glasses ..... <input type="checkbox"/> Yes <input type="checkbox"/> No                       | Safety belt/harness ..... <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  |
| Chemical/splash goggles ..... <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No   | Radio/Cellular Phone ..... <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Splash Shield ..... <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No             | Barricades..... <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No            |
| Splash suits/coveralls ..... <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No    | Gloves (Type – Work) ..... <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Impermeable apron..... <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No          | Work/rest regimen ..... <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No    |
| Steel toe work shoes/boots..... <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Chemical Resistant Boot Covers ... <input type="checkbox"/> Yes <input type="checkbox"/> No    |
| High visibility vest..... <input type="checkbox"/> Yes <input type="checkbox"/> No                  | Tape up/use insect repellent ..... <input type="checkbox"/> Yes <input type="checkbox"/> No    |
| First Aid Kit ..... <input type="checkbox"/> Yes <input type="checkbox"/> No                        | Fire Extinguisher ..... <input type="checkbox"/> Yes <input type="checkbox"/> No               |
| Safety Shower/Eyewash ..... <input type="checkbox"/> Yes <input type="checkbox"/> No                | Other..... <input type="checkbox"/> Yes <input type="checkbox"/> No                            |

Modifications/Exceptions: Tyvek coverall to protect against natural hazards (e.g., ticks) if working/walking through areas of high grass. Use insect repellants containing at least 10% DEET and tape up in such areas. Follow manufacturer's recommendations for proper application and reapplication. Hard hat when overhead hazards exist. Safety glasses when near eye hazards. Hearing protection when in high noise areas.

**VIII. Site Preparation**

|   |                          |                          |                          |
|---|--------------------------|--------------------------|--------------------------|
|   | Yes                      | No                       | NA                       |
| Utility Locating and Excavation Clearance completed.....                                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Vehicle and Foot Traffic Routes Established/Traffic Control Barricades/Signs in Place ..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Physical Hazards Identified and Isolated (Splash and containment barriers).....             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Emergency Equipment Staged (Spill control, fire extinguishers, first aid kits, etc.) .....  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**IX. Additional Permits required** (Hot work, confined space entry, excavation etc.).....  Yes  No  
*If yes, SHSO to complete or contact Health Sciences, Pittsburgh Office (412)921-7090*

**X. Special instructions, precautions:** Preview work locations to identify potential hazards (slips, trips, and falls, natural hazards, etc.) Review PPE needs based on activities being performed and the associated hazards. Use safe lifting procedures and obtain assistance when handling heavy or awkward objects. Suspend site activities in the event of inclement weather. Observe site workers for signs and symptoms of heat/cold stress. Use sun block (SPF > 15) to prevent sunburn if necessary.

Permit Issued by: \_\_\_\_\_ Permit Accepted by: \_\_\_\_\_

**SAFE WORK PERMIT  
DPT ACTIVITIES  
NAVAL AIR STATION KEY WEST  
CTO JM17**

Permit No. \_\_\_\_\_ Date: \_\_\_\_\_ Time: From \_\_\_\_\_ to \_\_\_\_\_

**I. Work limited to the following (description, area, equipment used):** Soil boring using DPT methods. Subsurface soil and groundwater sampling also included.

**II. Primary Hazards** Lifting, cuts and lacerations, pinches and compressions; heavy equipment hazards; contaminated media, inclement weather, slips, trips, and falls

**III. Field Crew:** \_\_\_\_\_

**IV. On-site Inspection conducted**  Yes  No Initials of Inspector \_\_\_\_\_ Tetra Tech  
**Equipment Inspection required**  Yes  No Initials of Inspector \_\_\_\_\_ Tetra Tech

**V. Protective equipment required**

Level D  Level B   
 Level C  Level A

Modifications/Exceptions: \_\_\_\_\_

**Respiratory equipment required**

Yes  Specify on the reverse  
 No

| VI. Chemicals of Concern | Hazard Monitoring | Action Level(s) | Response Measures |
|--------------------------|-------------------|-----------------|-------------------|
| SVOCs/PAHs _____         | NA _____          | NA _____        | NA _____          |

**Primary Route(s) of Exposure/Hazard:** direct contact, incidental ingestion, inhalation.

**(Note to FOL and/or SHSO: Each item in Sections VII, VIII, and IX must be checked Yes, No, or NA)**

**VII. Additional Safety Equipment/Procedures**

|                                 |   |                                       |   |
|---------------------------------|---|---------------------------------------|---|
| Hard-hat.....                   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Hearing Protection (Plugs/Muffs)..... | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Safety Glasses .....            | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Safety belt/harness .....             | <input type="checkbox"/> Yes <input type="checkbox"/> No            |
| Chemical/splash goggles .....   | <input type="checkbox"/> Yes <input type="checkbox"/> No            | Radio/Cellular Phone .....            | <input type="checkbox"/> Yes <input type="checkbox"/> No            |
| Splash Shield .....             | <input type="checkbox"/> Yes <input type="checkbox"/> No            | Barricades.....                       | <input type="checkbox"/> Yes <input type="checkbox"/> No            |
| Splash suits/coveralls .....    | <input type="checkbox"/> Yes <input type="checkbox"/> No            | Gloves (Type – Nitrile) .....         | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Impermeable apron.....          | <input type="checkbox"/> Yes <input type="checkbox"/> No            | Work/rest regimen .....               | <input type="checkbox"/> Yes <input type="checkbox"/> No            |
| Steel toe work shoes/boots..... | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Chemical Resistant Boot Covers .....  | <input type="checkbox"/> Yes <input type="checkbox"/> No            |
| High Visibility vest.....       | <input type="checkbox"/> Yes <input type="checkbox"/> No            | Tape up/use insect repellent .....    | <input type="checkbox"/> Yes <input type="checkbox"/> No            |
| First Aid Kit .....             | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Fire Extinguisher.....                | <input type="checkbox"/> Yes <input type="checkbox"/> No            |
| Safety Shower/Eyewash .....     | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Other.....                            | <input type="checkbox"/> Yes <input type="checkbox"/> No            |

Modifications/Exceptions: Nitrile or neoprene supported gloves and impermeable aprons for handling contaminated tools, nitrile surgeon gloves for handling sampling tools and well screens and risers. Other PPE may be necessary based on observed hazards (safety goggles, high visibility reflective vests, hearing protection etc.).

**VIII. Site Preparation**

|   | Yes                      | No                       | NA                       |
|---|--------------------------|--------------------------|--------------------------|
| Utility Locating and Excavation Clearance completed.....                                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Vehicle and Foot Traffic Routes Established/Traffic Control Barricades/Signs in Place ..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Physical Hazards Identified and Isolated (Splash and containment barriers).....             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Emergency Equipment Staged (Spill control, fire extinguishers, first aid kits, etc.).....   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**IX. Additional Permits required** (Hot work, confined space entry, excavation etc.).....  Yes  No  
*If yes, SHSO to complete or contact Health Sciences, Pittsburgh Office (412)921-7090*

**X. Special instructions, precautions:** Use proper lifting techniques. Test all emergency stop devices initially then periodically to insure operational status.. Verbally alert all persons as to the activation of the drill rig. Remove jewelry, loose clothing and other entanglement hazards. Complete Equipment Inspection Checklist prior to beginning work.

Permit Issued by: \_\_\_\_\_ Permit Accepted by: \_\_\_\_\_

**SAFE WORK PERMIT  
DECONTAMINATION ACTIVITIES  
NAVAL AIR STATION KEY WEST  
CTO JM17**

Permit No. \_\_\_\_\_ Date: \_\_\_\_\_ Time: From \_\_\_\_\_ to \_\_\_\_\_

**I. Work limited to the following (description, area, equipment used):** Decontamination of sampling equipment

**II. Primary Hazards:** Chemical exposure, transfer of contamination, inclement weather, noise.

**III. Field Crew:** \_\_\_\_\_

**IV. On-site Inspection conducted**  Yes  No Initials of Inspector \_\_\_\_\_ Tetra Tech  
**Equipment Inspection required**  Yes  No Initials of Inspector \_\_\_\_\_ Tetra Tech

**V. Protective equipment required**

Level D  Level B   
 Level C  Level A

**Respiratory equipment required**

Yes  Specify on the reverse  
 No

Modifications/Exceptions: Minimum requirement include sleeved shirt and long pants, safety glasses, safety footwear, and nitrile gloves. Impermeable aprons are preferred protection against soiling work clothes when lifting auger flights because of the need to carry close to the body. If it (impermeable apron) does not offer adequate protection, PVC rain suits or PE or PVC coated Tyvek should be employed. Chemical resistant boot covers if excessive liquids are generated or to protected footwear.

|  |  |  |  |
|--|--|--|--|
| <b>VI. Chemicals of Concern</b><br><u>Decontamination Fluids</u> | <b>Hazard Monitoring</b><br><u>refer to MSDS</u> | <b>Action Level(s)</b><br><u>refer to MSDS</u> | <b>Response Measures</b><br><u>Re-wash and re-scan</u> |
|--|--|--|--|

**Primary Route(s) of Exposure/Hazard:** Inhalation and direct contact and ingestion

**(Note to FOL and/or SHSO: Each item in Sections VII, VIII, and IX must be checked Yes, No, or NA)**

**VII. Additional Safety Equipment/Procedures**

|  |  |
|--|--|
| Hard-hat ..... <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                   | Hearing Protection (Plugs/Muffs) ... <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Safety Glasses ..... <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No             | Safety belt/harness ..... <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No            |
| Chemical/splash goggles ..... <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No    | Radio/Cellular Phone ..... <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No           |
| Splash Shield ..... <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No              | Barricades ..... <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                     |
| Splash suits/coveralls ..... <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No     | Gloves (Type – Nitrile) ..... <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No        |
| Impermeable apron ..... <input type="checkbox"/> Yes <input type="checkbox"/> No                     | Work/rest regimen ..... <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No              |
| Steel toe Work shoes or boots... <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Chemical Resistant Boot Covers ... <input type="checkbox"/> Yes <input type="checkbox"/> No              |
| Visibility vest ..... <input type="checkbox"/> Yes <input type="checkbox"/> No                       | Tape up/use insect repellent ..... <input type="checkbox"/> Yes <input type="checkbox"/> No              |
| First Aid Kit ..... <input type="checkbox"/> Yes <input type="checkbox"/> No                         | Fire Extinguisher ..... <input type="checkbox"/> Yes <input type="checkbox"/> No                         |
| Safety Shower/Eyewash ..... <input type="checkbox"/> Yes <input type="checkbox"/> No                 | Other ..... <input type="checkbox"/> Yes <input type="checkbox"/> No                                     |

Modifications/Exceptions: Chemical resistant boot covers if excessive liquids are generated or to protect footwear.

**VIII. Site Preparation**

|   |                          |                          |                                     |
|---|--------------------------|--------------------------|-------------------------------------|
|   | Yes                      | No                       | NA                                  |
| Utility Locating and Excavation Clearance completed.....                                    | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Vehicle and Foot Traffic Routes Established/Traffic Control Barricades/Signs in Place ..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| Physical Hazards Identified and Isolated (Splash and containment barriers).....             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| Emergency Equipment Staged (Spill control, fire extinguishers, first aid kits, etc.) .....  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |

**IX. Additional Permits required** (Hot work, confined space entry, excavation etc.).....  Yes  No  
*If yes, SHSO to complete or contact Health Sciences, Pittsburgh Office (412)921-7090*

**X. Special instructions, precautions:** Suspend site activities in the event of inclement weather. Employ proper lifting techniques. When/where possible use heavy equipment to move and place containers.

Permit Issued by: \_\_\_\_\_ Permit Accepted by: \_\_\_\_\_

**SAFE WORK PERMIT  
IDW MANAGEMENT  
NAVAL AIR STATION KEY WEST  
CTO JM17**

Permit No. \_\_\_\_\_ Date: \_\_\_\_\_ Time: From \_\_\_\_\_ to \_\_\_\_\_

**SECTION I: General Job Scope**

- I. **Work limited to the following (description, area, equipment used):** IDW management activities includes containerization, staging, monitoring for leaks of IDW accumulated wastes. Wastes types include purge and decontamination wash waters.
- II. **Primary Hazards:** Lifting, pinches and compressions; flying projectiles; slips, trips, and falls and chemical contamination.
- III. **Field Crew:** \_\_\_\_\_
- IV. **On-site Inspection conducted**  Yes  No Initials of Inspector \_\_\_\_\_ Tetra Tech  
**Equipment Inspection required**  Yes  No Initials of Inspector \_\_\_\_\_ Tetra Tech

**SECTION II: General Safety Requirements (To be filled in by permit issuer)**

- V. **Protective equipment required** **Respiratory equipment required**
- Level D  Level B  Yes  See Reverse  
 Level C  Level A  No
- Modifications/Exceptions: None anticipated

- |                                 |   |                          |
|---------------------------------|---|--------------------------|
| VI. <b>Chemicals of Concern</b> | <b>Hazard Monitoring /Action Level(s)</b> | <b>Response Measures</b> |
| <u>None anticipated</u>         | <u>none</u>                               | <u>none</u>              |

**Primary Route of Exposure/Hazard:** NA

**(Note to FOL and/or SHSO: Each item in Sections VII, VIII, and IX must be checked Yes or No)**

- VII. **Additional Safety Equipment/Procedures**
- |   |  |
|---|--|
| Hard-hat..... <input type="checkbox"/> Yes <input type="checkbox"/> No                              | Hearing Protection (Plugs/Muffs) ... <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Safety Glasses ..... <input type="checkbox"/> Yes <input type="checkbox"/> No                       | Safety belt/harness ..... <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No            |
| Chemical/splash goggles ..... <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No   | Radio/Cellular Phone ..... <input type="checkbox"/> Yes <input type="checkbox"/> No                      |
| Splash Shield ..... <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No             | Barricades..... <input type="checkbox"/> Yes <input type="checkbox"/> No                                 |
| Splash suits/coveralls ..... <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No    | Gloves (Type – Leather/Cotton).... <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No   |
| Impermeable apron..... <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No          | Work/rest regimen ..... <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No              |
| Steel toe work shoes/boots..... <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Chemical Resistant Boot Covers <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No       |
| High visibility vest..... <input type="checkbox"/> Yes <input type="checkbox"/> No                  | Tape up/use insect repellent ..... <input type="checkbox"/> Yes <input type="checkbox"/> No              |
| First Aid Kit ..... <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No             | Fire Extinguisher ..... <input type="checkbox"/> Yes <input type="checkbox"/> No                         |
| Safety Shower/Eyewash ..... <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No     | Other..... <input type="checkbox"/> Yes <input type="checkbox"/> No                                      |

**Modifications/Exceptions:** If you are using pneumatic/electric power to open drums – Safety glasses are required; If power equipment is employed to move drums or you are working near operating equipment hard hats will be employed. Tyvek coverall to protect against natural hazards (e.g., ticks) if working/walking through areas of high grass. Use insect repellents containing at least 10% DEET if necessary. Follow manufacturer's recommendations for proper application and reapplication. If working in areas where snakes are a threat, wear snake chaps to protect against bites. High visibility vest if near active traffic areas.

- VIII. **Site Preparation**
- |   |                          |                          |                                     |
|---|--------------------------|--------------------------|-------------------------------------|
|   | Yes                      | No                       | NA                                  |
| Utility Locating and Excavation Clearance completed.....                                    | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Vehicle and Foot Traffic Routes Established/Traffic Control Barricades/Signs in Place ..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| Physical Hazards Identified and Isolated .....  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| Emergency Equipment Staged (Spill control, fire extinguishers, first aid kits, etc) .....   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |

- IX. **Additional Permits required** (Hot work, confined space entry, excavation etc.).....  Yes  No  
*If yes, SHSO to complete or contact Health Sciences, Pittsburgh Office (412)921-7090*

- X. **Special instructions, precautions:** Suspend site activities in the event of inclement weather. Employ proper lifting techniques. When/where possible use heavy equipment to move and place containers. When placing drums – Place the label and retention ring nut on the outside where it is readily visible. Place 4-drums to a pallet. Maintain a minimum distance of 4-feet between pallet rows. An IDW inventory shall be generated to provide the number of drums, contents, and volumes. This inventory should be provided to the facility contact. Inspect equipment prior to use.

Permit Issued by: \_\_\_\_\_ Permit Accepted by: \_\_\_\_\_

**ATTACHMENT V**  
**OSHA POSTER**

# Job Safety and Health

## It's the law!

# OSHA

Occupational Safety  
and Health Administration  
U.S. Department of Labor

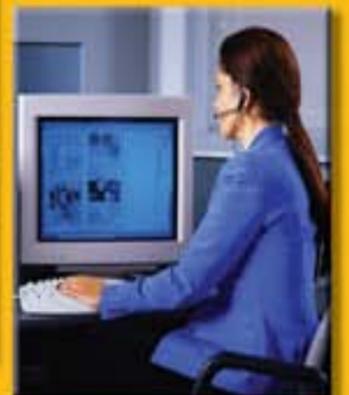
### EMPLOYEES:

- You have the right to notify your employer or OSHA about workplace hazards. You may ask OSHA to keep your name confidential.
- You have the right to request an OSHA inspection if you believe that there are unsafe and unhealthful conditions in your workplace. You or your representative may participate in that inspection.
- You can file a complaint with OSHA within 30 days of retaliation or discrimination by your employer for making safety and health complaints or for exercising your rights under the *OSH Act*.
- You have the right to see OSHA citations issued to your employer. Your employer must post the citations at or near the place of the alleged violations.
- Your employer must correct workplace hazards by the date indicated on the citation and must certify that these hazards have been reduced or eliminated.
- You have the right to copies of your medical records and records of your exposures to toxic and harmful substances or conditions.
- Your employer must post this notice in your workplace.
- You must comply with all occupational safety and health standards issued under the *OSH Act* that apply to your own actions and conduct on the job.

### EMPLOYERS:

- You must furnish your employees a place of employment free from recognized hazards.
- You must comply with the occupational safety and health standards issued under the *OSH Act*.

This free poster available from OSHA –  
*The Best Resource for Safety and Health*



Free assistance in identifying and correcting hazards or complying with standards is available to employers, without citation or penalty, through OSHA-supported consultation programs in each state.

**1-800-321-OSHA**  
[www.osha.gov](http://www.osha.gov)

OSHA 3185-12-06R