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HEALTH AND SAFETY PLAN FOR SITE ASSESSMENT AT SIGSBEE MARINA WITH  
TRANSMITTAL LETTER NAS KEY WEST FL  
12/6/2007  
TETRA TECH NUS



AIK-07-0520

December 6, 2007

Project Number 00979

*via U.S. Mail*

Commander  
Department of the Navy  
NAVFAC SE  
ATTN: Beverly Washington (Code OPAEVC)  
P.O. Box 190010  
North Charleston, South Carolina 29419-9010

Reference: CLEAN Contract No. N62467-04-D-0055  
Contract Task Order No. 0095

Subject: Health and Safety Plan for the Site Assessment at Sigsbee Marina, Rev. 0, Naval Air  
Station, Key West, Florida

Dear Ms. Washington:

I have enclosed a CD containing the PDF file for the Health and Safety Plan for the Site Assessment at Sigsbee Marina, Rev. 0, Naval Air Station, Key West, Florida. This file is being sent to you via U.S. Mail to meet TtNUS's contractual obligation under CTO 0095. I am not expecting to receive any comments on this document.

Please call me at (803) 641-4943, if you have any questions regarding the enclosed document.

Sincerely,

A handwritten signature in black ink, appearing to read 'C. M. Bryan'.

C. M. Bryan  
Project Manager

CMB:spc

c: Ms. Debra M. Humbert (Cover Letter Only)  
Mr. R. Courtright, NAS Key West  
Mr. M. Davenport, CNRSE

Mr. M. Perry/File  
Files 00979-4.2

# Comprehensive Long-term Environmental Action Navy

CONTRACT NUMBER N62467-04-D-0055



## Health and Safety Plan for Site Assessment at Sigsbee Marina

Naval Air Station  
Key West, Florida

Contract Task Order 0095

November 2007



Southeast

2155 Eagle Drive

North Charleston, South Carolina 29406

**HEALTH AND SAFETY PLAN  
FOR  
SITE ASSESSMENT AT SIGSBEE MARINA**

**NAVAL AIR STATION  
KEY WEST, FLORIDA**

**COMPREHENSIVE LONG-TERM  
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT**

**Submitted to:  
Southeast  
Naval Facilities Engineering Command  
2155 Eagle Drive  
North Charleston, South Carolina 29406**

**Submitted by:  
Tetra Tech NUS, Inc.  
661 Andersen Drive  
Foster Plaza 7  
Pittsburgh, Pennsylvania 15220**

**Contract Number N62467-04-D-0055  
Contract Task Order 0095**

**November 2007**

**PREPARED UNDER THE SUPERVISION OF:**

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TASK ORDER MANAGER  
TETRA TECH NUS, INC.  
AIKEN, SOUTH CAROLINA**

**APPROVED FOR SUBMITTAL BY:**

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CLEAN HEALTH & SAFETY MANAGER  
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PITTSBURGH, PENNSYLVANIA**

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## **1.0 INTRODUCTION**

The objective of this Health and Safety Plan (HASP) is to provide the safety and health requirements, practices and procedures for Tetra Tech NUS, Inc. (TtNUS) personnel participating in site investigation activities at Naval Air Station (NAS) Key West, located in Key West, Florida.

This HASP is to be used in conjunction with the Tetra Tech NUS Health and Safety Guidance Manual. The Guidance Manual provides detailed information pertaining to hazard recognition and control, and TtNUS standard operating procedures. This HASP and the contents of the Guidance Manual were developed to comply with the requirements stipulated in 29 CFR 1910.120 (OSHA's Hazardous Waste Operations and Emergency Response Standard). Both documents must be present at the site to satisfy these requirements.

This HASP has been written to support proposed tasks and techniques associated with the scope of work as presented in Section 4.0. It has been developed using the latest available information regarding known or suspected chemical contaminants and potential physical hazards associated with the proposed work at the site. 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 TtNUS Site Safety Officer (SSO) and the TtNUS Health and Safety Manager (HSM). Requests for modifications to the HASP will be directed to the SSO who will determine whether to make the changes. The SSO will notify the Task Order Manager (TOM), who will notify the affected personnel of changes.

### **1.1 AUTHORITY**

This work is authorized under the Comprehensive Long-term Environmental Action Navy (CLEAN) Contract Number N62467-04-D-0055, Contract Task Order (CTO) Number 0095.

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

This section defines responsibilities for site safety and health for TtNUS employees conducting the site investigation activities under this field effort. All personnel assigned to participate in the field work have the primary responsibility for performing all of their work tasks in a manner that is consistent with the TtNUS Health and Safety Policy, the health and safety training that they have received, the contents of this HASP, and in an overall manner that protects their personal safety and health and that of their co-workers. The following persons are the primary point of contact and have the primary responsibility for observing and implementing this HASP and for overall on-site health and safety.

- The TtNUS TOM is responsible for the overall direction and implementation of health and safety for this work.
- The TtNUS 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 TtNUS with emergency services (if needed)
  - Provide elements site-specific training for on site personnel.
- The TtNUS Site Safety Officer (SSO) or his/her representative supports the FOL concerning the aspects of health and safety including, but not limited to:
  - Coordinating 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 SITE INFORMATION AND PERSONNEL ASSIGNMENTS

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

**Remedial Project Manager:** Harold McGill **Phone Number:** (843) 820-5659

**Site Contact:** Robert Courtright **Phone Number:** (305) 293-2881

**Site Address:** Code NL7  
Naval Air Station, Key West, Florida

**Purpose of Site Visit:** TtNUS will perform a Site Assessment that includes ground water sampling, surveying, hydraulic gradient determination, including monitoring well installation.

**Proposed Start-up Date:** TBD

#### **Project Team:**

##### **TtNUS Personnel:**

Chuck Bryan

Gary Braganza

Matthew M. Soltis, CIH, CSP

Lawson Bailey

Gary Braganza

##### **Discipline/Tasks Assigned:**

Task Order Manager (TOM)

Field Operations Leader (FOL)

Health and Safety Manager (HSM)

Project Health and Safety Officer (PHSO)

Site Safety Officer (SSO)

**Prepared by:** Lawson Bailey

## 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. In the event of an emergency, the field team will primarily evacuate and assemble to an area unaffected by the emergency and notify the appropriate local emergency response personnel/agencies. Workers who are ill or who have suffered a non-serious injury may be transported by site personnel to nearby medical facilities, provided that such transport does not aggravate or further endanger the welfare of the injured/ill person. The emergency response agencies listed in 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 area of site operations, which ensures adequate emergency response time. The Remedial Project Manager (RPM), Harold McGill, will be notified if outside response agencies are contacted.

TtNUS 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 or eliminate the potential for these emergency situations, pre-emergency planning activities will include the following (which are the responsibility of the SSO and/or the FOL):

- Coordinating response actions with NAS Key West Emergency Services personnel to ensure that TtNUS emergency action activities are compatible with existing facility emergency response procedures.
- 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 maps with directions (these should also be placed in each site vehicle).
- Emergency Notification - phone numbers.

The TtNUS 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 will also play a role in detecting potential exposure events to some chemical hazards. To adequately recognize chemical exposures, site personnel must have a clear knowledge of signs and symptoms of exposure associated with the principle site contaminants of concern as presented in this HASP. Tasks to be performed at the site, potential hazards associated with those tasks and the recommended control methods are discussed in detail in Sections 4.0, 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 are 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, TtNUS 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 TtNUS to instigate necessary control measures. However, if the FOL and the SSO determine that control measures are not sufficient to eliminate the hazard, TtNUS will withdraw from the site and notify the appropriate response agencies listed in Table 2-1.

### **2.3.2      Prevention**

TtNUS 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 TtNUS 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 given 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 TtNUS 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.

As soon as possible, the NAS Key West Base contact, Robert Courtright, will be informed of any incident or accident that requires medical attention.

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).

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

<b>CONTACT</b>	<b>PHONE NUMBER</b>
<b>EMERGENCY</b> Key West Police/Rescue Services	<b>9-1-1</b> or (305) 293-2971
Base Police (non-emergency)	(305) 836-4357
Base Fire Department Boca Chica	(305) 293-3333
Primary Hospital – Lower Florida Keys Health System	(305) 294-5531
Chemtrec	(800) 424-9300
National Response Center	(800) 424-8802
Florida Poison Control Center	(800) 222-1222
Sunshine State One Call of Florida – Utility Clearance	8-1-1
Navy Remedial Project Manager Harold McGill	(843) 820-5659
NAS Key West Onsite Contact: Robert Courtright	Office: (305) 293-2881 Cell: (305) 797-4461
TtNUS, Task Order Manager Chuck Bryan	(803) 641-4933
TtNUS, Project Health and Safety Officer Lawson Bailey	(803) 641-6326
TtNUS, Health and Safety Manager Matthew M. Soltis, CIH, CSP	(412) 921-8912

## 2.6 EMERGENCY ROUTE TO HOSPITAL

Lower Florida Keys Health System  
5900 College Road  
Key West, FL 33040

Directions to Lower Florida Keys Health System are as follows:

1. Take SIGSBEE RD, going toward FELTON RD - go 1.4 mi
2. Turn LEFT on N ROOSEVELT BLVD(US-1) - go 1.2 mi
3. Turn LEFT to follow US-1 - go 1.1 mi
4. Turn LEFT on COLLEGE RD - go 0.6 mi
5. Arrive at 5900 COLLEGE RD, KEY WEST. The Hospital is on the left.

**FIGURE 2-1  
MAPS TO  
LOWER FLORIDA KEYS HEALTH SYSTEM**



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

TtNUS 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 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/or 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 bloodborne pathogens will also be available on site. Personnel identified within the field crew with bloodborne 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.

TtNUS 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). Not included as Basic First-Aid are second or third degree burns, cuts, lacerations requiring stitches or butterfly bandaging, heat exhaustion, severe poisonous plant or insect bite reactions. Personnel providing medical assistance are required to be trained in First-Aid and in the requirements of OSHA's Bloodborne Pathogen Standard (29 CFR 1910.1030). Medical attention above First-Aid level support will require assistance from the designated emergency response agencies. Attachment II provides the procedure to follow when reporting an injury/illness, and the form to be used for this purpose. **If the emergency involves personnel exposures to chemicals, follow the steps provided in Figure 2-2.**

## **2.10 INJURY/ILLNESS REPORTING**

If any TtNUS personnel are injured or develop an illness as a result of working on site, the TtNUS "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 injury situations.

In the event of a personnel injury or accident:

- 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 injured person is a Tetra Tech NUS 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. WorkCare physicians will monitor the care of the victim. Site officers and personnel should not attempt to get this information, as this activity leads to confusion and misunderstanding.
- Call WorkCare at 1-800-455-6155 and enter Extension 109, being prepared to provide:
  - Any known information about the nature of the injury.
  - As much of the exposure history as was feasible to determine in the time allowed.
  - Name and phone number of the medical facility to which the victim(s) has/have been taken.
  - Name(s) of the involved Tetra Tech NUS, Inc. employee(s).
  - Name and phone number of an informed site officer who will be responsible for further investigations.
  - Fax appropriate information to WorkCare at (714) 456-2154.
- Contact Corporate Health and Safety Department (Matt Soltis) and Human Resources Department (Marilyn Duffy) at 1-800-245-2730.

As data is gathered and the 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. A personalized letter describing the individual findings/results will accompany this generalized summary. A copy of the personal letter will be filed in the continuing medical file maintained by WorkCare.

**FIGURE 2-2 (continued)  
WORKCARE  
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 their 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 Air Station 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.

The focus of this site investigation is the Sigsbee Marina, located at Sigsbee Park NAS Key West. The marina is operated to serve privately owned vessels of military personnel. The marina is located on the north end of Dreger's Key. The land where the marina is located was constructed of limestone fill material to an average elevation of approximately 3.6 feet, with some areas containing mangroves. The marina forms a small cove which is open to Florida Bay.

In early 2007, a source removal was performed around the marina's fuel pump island after a spill of gasoline was reported. Approximately 1.4 cubic yards of potentially contaminated soil was removed and the excavated areas were backfilled with clean fill material. During the course of the source removal, it was noted that the facility groundwater contains sheens of degraded petroleum product. This product was observed to be pushed into the subsurface by the tide.

## 4.0 SCOPE OF WORK

This section of the HASP addresses proposed site activities that are to be conducted while performing the sampling, installation, operation and associated tasks. The specific tasks anticipated to be involved with this effort include the following:

- Mobilization/demobilization
- Soil boring and sampling via direct push technology (DPT)
- Monitoring well installation using Hollow-Stem Auger (HSA) methods
- Groundwater sampling
- Decontamination of personnel, hand tools, associated sampling equipment and drilling equipment
- IDW management

No other activities are anticipated to be necessary. If it becomes apparent that additional or modified tasks must be performed beyond those listed above, the work is not to proceed until the FOL or SSO notifies the Project Manager and the HSM, so that any appropriate modifications to this HASP can first be developed and communicated to the intended task participants.

## **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 DRILLING/DPT SAFE WORK PRACTICES**

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

- Identify underground utilities and buried structures before drilling. Follow the TtNUS Utility Locating and Excavation Clearance Standard Operating Procedure.
- Drill/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. The inspection will be accomplished using the Equipment Inspection Checklist for Drill/DPT rigs provided in Attachment III. After the initial inspection and release for use on site, 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.
- Test the operation of the Emergency Stop Switch when applicable (initially, then at least weekly thereafter).
- Ensure that all machine guarding is in place and properly adjusted.
- Block the Drill/DPT rig and use levelers to prevent movement of the drill.

- The work area around the point of operation will be graded to the extent possible to remove any trip hazards near or surrounding operating equipment.
- The driller's helper will establish an equipment staging and laydown plan. The purpose of this is to keep the work area clear of clutter and slips, trips, and fall hazards. Mechanisms to secure heavy objects such as drill 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 tooling will be placed on polyethylene sheeting for storage and wrapped for transport to the centrally located equipment decontamination area
- When applicable an individual must be designated with the primary responsibility of operating the kill switch mechanism. Also, the drill rig operator must verbally announce each time the drilling mechanism is activated.
- Support functions (sampling and screening stations) will be maintained a minimum distance from the drill rig of the height of the mast plus five feet or 40-feet whichever is greater (for Rotosonic rigs) and 25-feet for HSA, mud rotary, or DPT rigs.
- Only qualified operators and knowledgeable ground crew personnel will participate in the operation of the Drill/DPT rig.
- During maintenance, use only manufacturer provided/approved equipment (i.e. auger flight connectors, etc.)
- In order to minimize contact with potentially contaminated tooling and media and to minimize lifting hazards, multiple personnel should be used to move auger flights and other heavy tooling.
- 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 drill rigs 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. In situations where these hazards cannot be immediately removed, the area will be barricaded to limit access.

## 6.0 HAZARD ASSESSMENT AND CONTROLS

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

### 6.1 CHEMICAL HAZARDS

Previous analytical data determined the presence of various volatile organic compounds (VOCs). Based on an evaluation of these data, and historical information about the site, the primary contaminant of concern (COC) at this site is benzene. Other VOCs have been detected, but an evaluation of the data indicates that they will not likely be encountered at concentrations that would represent a reasonable exposure concern.

#### Properties and Exposure Signs/Symptoms

##### **Benzene**

Benzene is a colorless liquid with a sweet odor. It evaporates into the air very quickly and dissolves slightly in water. It is highly flammable and is formed from both natural processes and human activities. Benzene is widely used in the United States; it ranks in the top 20 chemicals for production volume.

Breathing very high levels of benzene can result in death, while high levels can cause drowsiness, dizziness, rapid heart rate, headaches, tremors, confusion, and unconsciousness. Eating or drinking foods containing high levels of benzene can cause vomiting, irritation of the stomach, dizziness, sleepiness, convulsions, rapid heart rate, and death.

The major effect of benzene from long-term exposure is on the blood. Benzene causes harmful effects on the bone marrow and can cause a decrease in red blood cells leading to anemia. It can also cause excessive bleeding and can affect the immune system, increasing the chance for infection.

Long-term exposure to high levels of benzene in the air can cause leukemia, particularly acute myelogenous leukemia, often referred to as AML. This is a cancer of the blood-forming organs. The Department of Health and Human Services (DHHS) has determined that benzene is a known carcinogen. The International Agency for Research on Cancer (IARC) and the EPA have determined that benzene is carcinogenic to humans.

The principle route that a worker could be exposed to this COC is inhalation. Secondary pathways include ingestion, and a possibility for exposure via direct skin contact. These potential exposure routes and the means that will be used to prevent or control them are addressed below.

**Inhalation:** Based on the data from previous investigations at this worksite, worker exposure to airborne concentrations of these COCs that could represent a health concern is considered to be possible, but not likely. The data indicate the following:

**TABLE 6-1  
COMPARISON OF WORST-CASE PCE AIR CONCENTRATIONS  
WITH CURRENT OCCUPATIONAL EXPOSURE LIMITS**

Contaminant of Concern	Highest Concentration Previously Detected in Soil	Worst-Case Air Concentration That Could Be Encountered	Current OSHA PEL And ACGIH TLV
Benzene	0.011 mg/kg	0.69 ppm	OSHA: 1 ppm, TWA <sub>8</sub> 5 ppm STEL ACGIH: 0.5 ppm, TWA <sub>8</sub> 2.5 ppm STEL

Table Notes:

TWA<sub>8</sub>: Average air concentration over an 8-hour work period that is not to be exceeded

OSHA STEL: Concentration in air that is not to be exceeded for more than 5 minutes in any 3 hour period

As indicated in this table, from a worst-case scenario, benzene concentrations immediately above the captured air phase above contaminated soil could reach concentrations that are in excess of the ACGIH TLV TWA<sub>8</sub> and are a fraction of the OSHA PEL TWA<sub>8</sub>. In regarding the results of this data 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 soil values used in this evaluation were the *highest* concentration previously detected in soil samples.
- No sample results are available for coc concentrations in groundwater.

As a result of these factors, it is unlikely that workers participating in this activity will encounter airborne concentrations for the primary COC that would represent an occupational exposure concern. To monitor this route, real-time direct reading monitoring instruments will be used (as described in section 7.0). This will be performed during ground water, intrusive soil, well installation and decontamination activities.

**Ingestion and Skin Contact:** Potential exposure concerns to the primary COC may also occur through ingesting or coming into direct skin contact with contaminated water and soils. The likelihood of worker exposure concerns through these two routes are also considered 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 appropriate gloves whenever handling potentially-contaminated media, including soils, water, 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.

- Drill/DPT rig operation
- Slip, trips, and falls
- Contact with underground (electric lines, gas lines, water lines, etc.)
- Strain/muscle pulls from heavy lifting
- Noise from operating equipment (e.g., drill rigs, DPT)
- Heat/Cold 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 Injury Due To DPT and Hollow Stem Auger Drill Operations**

The primary hazards associated with drilling operations are physical in nature. Specific safety practices are detailed in Section 5.2 of this plan. The following hazards are associated with this type of drilling:

- Rotating/lifting equipment
- Heavy drill rods being lifted

- High noise levels
- Space limitations (large drill rig and support vehicle)
- Dust generation in dry formations.

#### **6.2.2 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.

#### **6.2.3 Contact with Underground Utilities**

Underground utilities such as pressurized lines, water lines, telephone lines, buried utility lines, and high voltage power lines are known to be present throughout the facility. Clearance of underground utilities for each monitoring well and headspace sample location will be coordinated Florida One Call. The TtNUS Utility Locating and Excavation Clearance SOP can be found in Section 7.0 of the Health and Safety Guidance Manual.

#### **6.2.4 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.

#### **6.2.5 High Noise Levels**

High noise levels can be generated during the operation of the drill rig, the DPT (when operating in impact/hammer mode), and hydrolaser/pressure washers used for decontamination activities. Personnel in the vicinity of operating equipment shall use hearing protection in the form of ear plugs or ear muffs. An exclusion area boundary shall be established to delineate where hearing protection is required.

#### **6.2.6 Heat/Cold Stress**

Because of the length of planned project activities, 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 and cold stress. This is addressed in detail in section 4.0 of the TtNUS 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, uncoordination, 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
- 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. Water and sports-drinks with electrolytes are acceptable provided that they do not contain alcohol.

Many of the same precautions taken to prevent heat stress can be applied to cold stress prevention. In addition, the following measures should be considered:

- Adequate insulating dry clothing to maintain core temperatures above 36°C (96.8°F) must be provided to workers if work is performed in air temperatures below 4°C (40°F). Wind chill cooling rate and the cooling power of air are critical factors.
- Unless there are unusual or extenuating circumstances, cold injury to other than hands, feet, and head is not likely to occur without the development of the initial signs of hypothermia. The use of extra insulating clothing and/or a reduction in the duration of the exposure period are among the special precautions which should be considered.
- Acclimatization – With exposure the body does undergo changes that will permit it to adjust to the cold weather better.
- Engineering Controls such as wind shields/barriers may be used to control the potential affects of cold stress.

- Administrative controls such as worker rotation; work/warm regimens; required fluid intake; scheduling the work for warmer weather; assigning more workers to the task to complete it quicker.

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

### **6.2.7 Pinch/Compression Points**

Handling of tools, machinery, 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.

### **6.2.8 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. 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.

**6.2.9      Vehicular and Equipment Traffic**

Hazards associated with vehicular and equipment traffic are likely to exist during various site activities. 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.

**6.2.10     Inclement Weather**

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

## **7.0 AIR MONITORING**

The primary COC has the potential to be present in concentrations that could present an inhalation hazard during planned site activities. To assure that such exposures are avoided and documented, a direct reading instrument will be used to monitor worker exposures to chemical hazards present at the site. For this project, based on the properties of the primary COC, a Photoionization Detector (PID) with a lamp strength of 10.6 eV will be used to monitor the air.

### **7.1 INSTRUMENTS AND USE**

The PID will be used primarily to monitor source points and worker breathing zone areas, while observing instrument action levels. The SSO shall obtain and document the daily background (BG) reading at an upwind, unaffected area and observe for readings above that BG level. The SSO shall monitor source areas (e.g., monitoring well bore hole locations and above collected soil and water samples) for the presence of any reading above the daily-established BG level. If elevated readings are observed, the SSO shall monitor the workers breathing zone (BZ) areas with the PID. If any sustained reading over BG is exceeded, the following process will be followed:

- The SSO shall stop work and move site personnel upwind to a safe, unaffected area, where they will remain until further directed by the SSO.
- The SSO shall allow at least 5 minutes to pass so that the work area can ventilate, and will then re-approach the work area while continuously monitoring the BZ areas.
- Only when BG levels are regained in BZ areas will work be permitted to resume.
- If BG levels are not regained, the SSO will contact the HSM for additional direction.

### **7.2 INSTRUMENT MAINTENANCE AND CALIBRATION**

Operational checks and field calibration will be performed on site instruments each day prior to their use. Field calibration will be performed on instruments according to manufacturer's recommendations. These operational checks and calibration efforts will be performed in a manner that complies with the employees health and safety training, the manufacturer's recommendations, and with the applicable manufacturer standard operating procedure (which the SSO must assure are included with the instrument upon its receipt onsite). Field calibration efforts must be documented. Figure 7-1 is provided for documenting

these calibration efforts. This information may instead be recorded in a field operations logbook, provided that the information specified in Figure 7-1 is recorded. This required information includes the following:

- Date calibration was performed
- Individual calibrating the instrument
- Instrument name, model, and serial number
- Any relevant instrument settings and resultant readings (before and after) calibration
- Identification of the calibration standard (lot no., source concentration, supplier)
- Any relevant comments or remarks

### 7.3 DOCUMENTING INSTRUMENT READINGS

The SHSO is responsible for ensuring that air monitoring instruments are used in accordance with the specifications of this HASP and with manufacturer's specifications/recommendations. In addition, the SHSO is also responsible for ensuring that all instrument use is documented. This requirement can be satisfied either by recording instrument readings on pre-printed sampling log sheets or in a field log book.

**This includes the requirement for documenting instrument readings that indicate no elevated readings above noted daily background levels (i.e., no-exposure readings).** At a minimum, the SHSO must document the following information for each use of an air monitoring device:

- Date, time, and duration of the reading
- Site location where the reading was obtained
- Instrument used (e.g., PID, FID, LEL/O<sub>2</sub> meter, etc.)
- Personnel present at the area where the reading was noted
- Other conditions that are considered relevant to the SHSO (such as weather conditions, possible instrument interferences, etc.)



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

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

This section is included to specify health and safety training and medical surveillance requirements for TtNUS personnel participating in on site activities. TtNUS personnel must complete 40 hours of introductory hazardous waste site training prior to performing work at the NAS Key West. TtNUS 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 TtNUS 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**

TtNUS SSO will provide site-specific training to TtNUS 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 TtNUS 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**

TtNUS personnel participating in project field activities will have had a physical examination meeting the requirements of TtNUS's medical surveillance program. Documentation for medical clearances will be maintained in the TtNUS 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.

Each field team member, including visitors, entering the exclusion zone(s) shall be required to complete and submit a copy of the Medical Data Sheet (see Attachment I of this HASP). This shall be provided to the SSO, prior to participating in site activities. The purpose of this document is to provide site personnel and emergency responders with additional information that may be necessary in order to administer medical attention.

#### **8.4 SITE VISITORS**

Site visitors must be escorted and restricted from approaching any work areas where they could be exposed to hazards from TtNUS operations. If a visitor has authorization from the client and from the TtNUS 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.



## 9.0 SITE CONTROL

This section outlines the means by which TtNUS 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 three-zone approach will be used during work at this site. This approach will be comprised of an exclusion zone, a contamination reduction zone, and a support zone. It is also anticipated that this approach will control access to site work areas, restricting access by the general public, minimizing the potential for the spread of contaminants, and protecting 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 the exhaust vents will have the potential for contaminants brought to the surface. These areas will be marked and personnel will maintain safe distances. Once intrusive activities have been completed and 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 active work (monitoring well installation and sample collection) is being performed plus a designated area of at least 15 feet surrounding the work area. 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.

#### 9.1.1 Exclusion Zone Clearance

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

The contamination reduction zone (CRZ) will be a buffer area between the exclusion zone and any area of the site where contamination is not suspected. This area will also serve as a focal point in supporting exclusion zone activities. This area will be delineated using barrier tape, cones, and postings to inform

and direct facility personnel. Decontamination will be conducted at a central location. Equipment potentially contaminated will be bagged and taken to that location for decontamination.

### **9.3 SUPPORT ZONE**

The support zone for this project will include a staging area where site vehicles will be parked, equipment will be unloaded, and where food and drink containers will be maintained. The support zones will be established at areas of the site where away from potential exposure to site contaminants during normal working conditions or foreseeable emergencies.

### **9.4 SAFE WORK PERMITS**

Exclusion Zone work conducted in support of this project will be 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 can be found in Attachment IV of this HASP. These permits were 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 will ensure 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 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.

### **9.5 SITE VISITORS**

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 TtNUS
- Regulatory personnel (i.e., DOD, EPA, OSHA)
- Property Owners
- Authorized Navy Personnel
- Other authorized visitors

Non-DOD personnel working on this project are required to gain initial access to the base by coordinating with the TtNUS 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 TOM. Upon gaining access to the site, site visitors wishing to observe operations in progress will be escorted by a TtNUS representative and shall be required to meet the minimum requirements discussed below:

- Site visitors will be directed to the FOL/SSO, 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 wishing to enter the exclusion zone 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, 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 TtNUS 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 local law enforcement personnel.

## **9.6 SITE SECURITY**

Site security will be accomplished using TtNUS field personnel. TtNUS 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 SITE MAP**

Once the areas of contamination, access routes, topography, and dispersion routes are determined, a site map will be generated and adjusted as site conditions change. These maps will be posted to illustrate up-to-date collection of contaminants and adjustment of zones and access points.

## **9.8 BUDDY SYSTEM**

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

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

TtNUS and subcontractor personnel will provide MSDSs for 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.

## **9.10 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 the telephones at predetermined and approved locations. 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.

**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:** Potential hazards associated with this task:  
 \_\_\_\_\_  
 \_\_\_\_\_

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

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

**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 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 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 - _____) .....	<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, SHSO to complete or contact Health Sciences, Pittsburgh Office (412)921-7090*

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

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

## **10.0 SPILL CONTAINMENT PROGRAM**

### **10.1 SCOPE AND APPLICATION**

It is not anticipated that bulk hazardous materials (over 55-gallons) will be generated or handled at any given time as part of this scope of work. It is also not anticipated that such spillage would constitute a danger to human health or the environment. However, as the job progresses, some potential may exist for accumulating Investigative Derived Wastes (IDW) such as decontamination fluids, soil cuttings, disposable sampling equipment and PPE.

### **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

IDW may be generated as a result of this scope of work. If this occurs, it 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, a periodic walk-around by the personnel staging or disposing of drums area will be conducted during working hours to visually determine that storage vessels are not leaking. If a leak is detected, the contents will be transferred, using a hand pump, into a new vessel. The leak will be collected and contained using absorbents such as Oil-Dry, vermiculite, or sand, which are stored at the vulnerable areas in a conspicuously marked drum. This used material, too, will be containerized for disposal pending analysis. Inspections will be documented in the project logbook.

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

Personnel will be instructed in the procedures for incipient spill prevention, containment, and collection of hazardous materials in the site-specific training. The FOL and the SSO will serve as the Spill Response Coordinators for this operation, should the need arise.

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

The following represents the types of equipment that should be maintained at the staging areas for the purpose of supporting this Spill Prevention/Containment Program.

- Sand, clean fill, vermiculite, or other non combustible absorbent (Oil-dry)
- Drums (55-gallon U.S. DOT 17-E or 17-H)
- Shovels, rakes, and brooms
- Container labels

## **10.6 SPILL CONTROL PLAN**

This section describes the procedures the TtNUS field crew members will employ upon the detection of a spill or leak.

- Notify the SSO or FOL immediately upon detection of a leak or spill. Activate emergency alerting procedures for that area to remove non-essential personnel.
- Employ the personal protective equipment stored at the staging area. Take immediate actions to stop the leak or spill by plugging or patching the container or raising the leak to the highest point in the vessel. Spread the absorbent material in the area of the spill, covering it completely.
- Transfer the material to a new vessel; collect and containerize the absorbent material. Label the new container appropriately. Await analyses for treatment and disposal options.
- Re-containerize spills, including 2-inch of top cover impacted by the spill. Await test results for treatment or disposal options.

It is not anticipated that a spill will occur that the field crew cannot handle. Should this occur, notification of the appropriate Emergency Response agencies will be carried out by the FOL or SSO in accordance with the procedures discussed in Section 2.0 of this HASP.

## 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, manholes, sewers, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry).
- Is not designed for continuous employee occupancy.

Additionally, a Permit-Required Confined Space must also have one or more of the following characteristics:

- Contains or has a potential to contain a hazardous atmosphere.
- Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly caving walls or by a floor that 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 TtNUS 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 (Attachment V)
- 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 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 all chemicals brought on-site, including decontamination solutions, sample preservations, fuel, etc. This list should be posted in a central area.

**MSDSs (maintained)** - The MSDSs should also be in a central area accessible to all site personnel. These documents should match all the listings on the chemical inventory list for all 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 should be conspicuously posted in places where notices to employees are normally posted, as directed by 29 CFR 1903.2 (a)(1). Each FOL shall ensure that this poster is not defaced, altered, or covered by other material. The law also states that reproductions or facsimiles of the poster shall be at least 8 1/2 by 14 inches with 10 point type.

**Site Clearance (maintained)** - This list is found within the training section of the HASP (Figure 8-1). This list identifies all site personnel, dates of training (including site-specific training), and medical surveillance. The list indicates not only clearance, but also 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 all 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. A copy of this sheet or a wallet card will be given to all personnel to be carried on their person.

**Personnel Monitoring (maintained)** - All 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 objective is accomplished.

# **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 TtNUS 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 they 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.

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\_\_\_\_\_

Name (Print clearly)

\_\_\_\_\_

Signature

\_\_\_\_\_

Date

# **ATTACHMENT II**

## **INCIDENT REPORT FORM**

Report Date	Report Prepared By	Incident Report Number
<b>INSTRUCTIONS:</b>		
<p>All incidents (including those involving subcontractors under direct supervision of Tetra Tech personnel) must be documented on the IR Form.</p> <p>Complete any additional parts to this form as indicated below for the type of incident selected.</p>		
<b>TYPE OF INCIDENT (Check all that apply)</b>	<b>Additional Form(s) Required for this type of incident</b>	
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>		
<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>				
<div style="border-bottom: 1px solid black; margin-bottom: 5px;"></div> <div style="border-bottom: 1px solid black; margin-bottom: 5px;"></div> <div style="border-bottom: 1px solid black;"></div>				

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?

Time individual began work

Yes  No  \_\_\_\_\_ AM  PM  OR Cannot be determined

**Safety equipment**

Provided? Yes  No

Type(s) provided:  Hard hat  Protective clothing

Used? Yes  No  If no, explain why

Gloves  High visibility vest

Eye protection  Fall protection

Safety shoes  Machine guarding

Respirator  Other (list)

**NOTIFICATIONS**

Name of Tt employee to whom the injury or illness was first 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?

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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)?    Tt  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.

Incident Report Number: (From the IR Form) \_\_\_\_\_

**INCIDENT DETAILS**

Name of road, street, highway or location where accident occurred \_\_\_\_\_ Name of intersecting road, street or highway if applicable \_\_\_\_\_

County

City

State

Did police respond to the accident?

Yes  No

Did ambulance respond to the accident?

Yes  No

Name and location of responding police department \_\_\_\_\_

Ambulance company name and location \_\_\_\_\_

Officer's name/badge # \_\_\_\_\_

Did police complete an incident report? Yes  No  If yes, police report number: \_\_\_\_\_  
Request a copy of completed investigation report and attach to this form.

**VEHICLE INFORMATION**

How many vehicles were involved in the accident? \_\_\_\_\_ (Attach additional sheets as applicable for accidents involving more than 2 vehicles.)

**Vehicle Number 1 – Tetra Tech Vehicle**

**Vehicle Number 2 – Other Vehicle**

Vehicle Owner / Contact Information

Vehicle Owner / Contact Information

Color

Color

Make

Make

Model

Model

Year

Year

License Plate #

License Plate #

Identification #

Identification #

Describe damage to vehicle number 1

Describe damage to vehicle number 2

Insurance Company Name and Address

Insurance Company Name and Address

Agent Name

Agent Name

Agent Phone No.

Agent Phone No.

Policy Number

Policy Number

### 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 black border, intended for drawing a diagram. The box occupies most of the page below the header.

**ATTACHMENT III**  
**EQUIPMENT INSPECTION CHECKLIST**  
**FOR DRILL/DPT RIGS**

### Equipment Inspection Checklist for Drill/DPT 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"/>	Emergency Stop Devices <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"/>	Highway Use <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>	

Equipment Inspection Checklist for Drill/DPT Rigs

Page 2

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

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

Yes	No	NA	Requirement	Comments
<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"/>	Fluid Levels: <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>	
<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"/>	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"/> <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"/>	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"/> <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"/>	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                          (cable size 5/16 – 5/8 = 3 clips minimum)                          (cable size 3/4 – 1 inch = 4 clips minimum)                          (cable size 1 1/8 – 1 3/8 inch = 5 clips minimum)</li> </ul>	

Equipment Inspection Checklist for Drill/DPT 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> (5/16 wire rope &gt; 1/64 reduction nominal size -replace) (3/8 to 1/2 wire rope &gt; 1/32 reduction nominal size-replace) (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 (6 randomly broken wires in one rope lay) (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"/>	<ul style="list-style-type: none"> <li>Lead (primary) sheave is centered on the running drum</li> </ul>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>Lubrication of wire rope (adequate?)</li> </ul>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>Kinks, bends – Flattened to &gt; 50% diameter</li> </ul>	
<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/DPT Rigs**

Page 4

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

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

Yes	No	NA	Requirement	Comments
<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"/>	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"/> <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"/>	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>	

Approved for Use     Yes     No     See Comments

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

\_\_\_\_\_  
Operator

# **ATTACHMENT IV**

## **SAFE WORK PERMITS**

**SAFE WORK PERMIT  
EQUIPMENT DECONTAMINATION OPERATIONS  
NAS KEY WEST, FLORIDA**

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

**SECTION I: General Job Scope**

- I. **Work limited to the following (description, area, equipment used):** Decontamination of sampling equipment and machinery (i.e., drill rigs, samplers). Brushes and spray bottles will be used to decon small sampling equipment. Pressure washers or steam cleaning units may be used to decon the drilling equipment.
- II. **Primary Hazards:** Chemical exposure from site contaminants through contact with contaminated media or equipment and contact with high pressure water streams; noise, slips, trips, and falls, flying projectiles, and inclement weather..
- III. **Field Crew:** \_\_\_\_\_
- IV. **On-site Inspection conducted**  Yes  No Initials of Inspector \_\_\_\_\_ TtNUS  
**Equipment Inspection required**  Yes  No Initials of Inspector \_\_\_\_\_ TtNUS

**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: N/A.

VI. Chemicals of Concern	Hazard Monitoring	Action Level(s)	Response Measures
<u>Potential site contaminants include VOCs</u>	<u>PID with 10.6 eV (or higher) lamp source</u>	<u>Any sustained readings above bkgd.</u>	<u>Repeat decon and rescan</u>

**Primary Route of Exposure/Hazard:** Inhalation. Secondary routes include ingestion and skin absorption. Based on available information, it is very unlikely that airborne concentration of VOCs approaching levels that would represent an exposure concern will be encountered during this task. If PID readings in BZ areas exceed bkgd levels, follow the 4-Step procedure specified in Section 7.1

**(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		Yes	No
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 checked="" type="checkbox"/> No
Chemical/splash goggles.....	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Radio/Cellular Phone .....	<input type="checkbox"/> Yes <input 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Gloves (Nitrile).....	<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 or 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 checked="" 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: Tyvek coverall if there is a potential for soiling work cloths. PVC or PE coated Tyvek if saturation or work cloths may occur. Hearing protection required for operating pressure washer.

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.....	<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 as described in Section 6.2.2 of the HASP. To minimize the potential for exposure, avoid potentially contaminated media. Preview work locations to identify potential hazards (slips, trips, and falls, natural hazards, etc.)

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

**SAFE WORK PERMIT  
DPT AND HOLLOW STEM AUGER DRILLING OPERATIONS  
NAS KEY WEST, FLORIDA**

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

**SECTION I: General Job Scope**

- I. **Work limited to the following (description, area, equipment used):** Installation of (1) soil borings using DPT for continuous soil sampling and groundwater sampling and (2) installation of monitoring wells using hollow stem auger methods.
- II. **Primary Hazards:** Chemical exposure from site contaminants, rotating/lifting equipment, high noise levels, and dust generation.
- III. **Field Crew:** \_\_\_\_\_
- IV. **On-site Inspection conducted**  Yes  No Initials of Inspector \_\_\_\_\_ TtNUS  
**Equipment Inspection required**  Yes  No Initials of Inspector \_\_\_\_\_ TtNUS

**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: See Section VII for PPE exceptions.

VI. Chemicals of Concern	Hazard Monitoring	Action Level(s)	Response Measures
Potential site contaminants (VOCs)	PID with 10.6 eV (or higher) lamp source	Any sustained readings above bkgd in worker breathing zone	Suspend activities and move upwind to an unaffected area. No resumption of activities until levels return to bkgd.

**Primary Route of Exposure/Hazard:** Inhalation. Secondary routes – ingestion and skin absorption. Based on available information, it is very unlikely that airborne concentration of VOCs approaching levels that would represent an exposure concern will be encountered during this task. If PID readings in BZ areas exceed bkgd levels, follow the 4-Step procedure specified in Section 7.1

**(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 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 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Splash suits/coveralls        | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Gloves (Type – Nitrile - Leather) | <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 or 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 checked="" 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 checked="" 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: Tyvek coveralls if there is a potential for soiling work clothes. Hearing protection required when equipment is operating. Exclusion area around drill rig should be posted and access controlled.

- VIII. **Site Preparation**
- |   | Yes                                 | No                       | NA                       |
|---|-------------------------------------|--------------------------|--------------------------|
| Utility Locating and Excavation Clearance completed                                   | <input checked="" 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  | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |
| Emergency Equipment Staged (Spill control, fire extinguishers, first aid kits, etc.)  | <input checked="" 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 as described in Section 6.2.2 of the HASP. To minimize the potential for exposure, site personnel will use PPE and prevent contact with potentially contaminated equipment. Dust control methods (i.e., wetting, misting) should be implemented, as necessary, when visible dust is evident.

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

**SAFE WORK PERMIT  
IDW MANAGEMENT  
NAS KEY WEST, FLORIDA**

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. Waste types include soil cutting, purge and decontamination wash waters.
- II. **Primary Hazards:** Lifting, pinches and compressions; flying projectiles; slips, trips, and falls.
- III. **Field Crew:** \_\_\_\_\_
- IV. **On-site Inspection conducted**  Yes  No Initials of Inspector \_\_\_\_\_ TtNUS  
**Equipment Inspection required**  Yes  No Initials of Inspector \_\_\_\_\_ TtNUS

**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. Chemicals of Concern	Hazard Monitoring	Action Level(s)	Response Measures
<u>None Anticipated</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>

**Primary Route of Exposure/Hazard:** None

**(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 checked="" type="checkbox"/> Yes <input 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 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 or 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 checked="" 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 worn. Cotton or leather gloves when handling sharp or rough objects

**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. Use proper lifting techniques as described in Section 6.2.2 of the HASP. 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 no more than 4-drums to a pallet. Maintain a minimum distance of 4-feet between pallet rows.

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

**SAFE WORK PERMIT  
MOBILIZATION AND DEMOBILIZATION/UTILITY CLEARANCE/SURVEYING  
NAS KEY WEST, FLORIDA**

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

**SECTION I: General Job Scope**

- I. **Work limited to the following (description, area, equipment used):** Mobilization and demobilization activities. This includes activities such as equipment staging, packing/unpacking, etc. This permit also covers the utility clearance tasks and site survey activities.
- II. **Primary Hazards:** Lifting, pinches and compressions, slips, trips, and falls
- III. **Field Crew:** \_\_\_\_\_
- IV. **On-site Inspection conducted**  Yes  No      Initials of Inspector \_\_\_\_\_ TtNUS  
**Equipment Inspection required**  Yes  No      Initials of Inspector \_\_\_\_\_ TtNUS

**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: N/A.

VI. Chemicals of Concern	Hazard Monitoring	Action Level(s)	Response Measures
<u>None anticipated</u>	<u>None</u>	<u>N/A</u>	<u>N/A</u>
_____	_____	_____	_____
_____	_____	_____	_____

**Primary Route of Exposure/Hazard:** N/A

**(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 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 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 (Cotton/Leather) ..... <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 checked="" type="checkbox"/> No   |
| High Visibility vest ..... <input type="checkbox"/> Yes <input checked="" 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 checked="" 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: Cotton or leather gloves when handling sharp or rough objects.

**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.....  | <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 as described in Section 6.2.2 of the HASP. To minimize the potential for exposure, avoid potentially contaminated media. Preview work locations to identify potential hazards (slips, trips, and falls, natural hazards, etc.) Avoid potential nesting areas. Wear light colored clothing so that ticks and other biting insects can be easily visible and can be removed. Inspect clothing and body for ticks.

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

**SAFE WORK PERMIT  
GROUNDWATER AND SOIL SAMPLING OPERATIONS  
NAS KEY WEST, FLORIDA**

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

**SECTION I: General Job Scope**

- I. **Work limited to the following (description, area, equipment used):** Groundwater and soil sampling.
- II. **Primary Hazards:** Chemical exposure from site contaminants through contact with contaminated media; slips, trips, and falls; ambient temperature and inclement weather.
- III. **Field Crew:** \_\_\_\_\_
- IV. **On-site Inspection conducted**  Yes  No      Initials of Inspector \_\_\_\_\_ TtNUS  
**Equipment Inspection required**  Yes  No      Initials of Inspector \_\_\_\_\_ TtNUS

**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: N/A.

VI. Chemicals of Concern	Hazard Monitoring	Action Level(s)	Response Measures
Potential site contaminants include VOCs _____	PID with 10.6 eV _____ (or higher) lamp source _____	Any sustained readings _____ above bkgd in worker _____ breathing zone _____	Suspend sampling activities and _____ report upwind to an unaffected _____ area. No resumption of activities _____ until levels return to bkgd. _____

**Primary Route of Exposure/Hazard:** Inhalation. Secondary routes include ingestion and skin absorption. Based on available information, it is very unlikely that airborne concentration of VOCs approaching levels that would represent an exposure concern will be encountered during this task. If PID readings in BZ areas exceed bkgd levels, follow the 4-Step procedure specified in section 7.1

**(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 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 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 checked="" type="checkbox"/> No |
| Splash suits/coveralls.....         | <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Gloves (Nitrile).....               | <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 or 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 checked="" 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 checked="" 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: Tyvek coverall if there is a potential for soiling work cloths. PVC or PE coated Tyvek if saturation or work cloths may occur. Hearing protection required around drill rigs when operating.

**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.....	<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 as described in Section 6.2.2 of the HASP. To minimize the potential for exposure, avoid potentially contaminated media. Preview work locations to identify potential hazards (slips, trips, and falls, natural hazards, etc.) Avoid potential nesting areas. Wear light colored clothing so that ticks and other biting insects can be easily visible and can be removed. Inspect clothing and body for ticks.

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

**ATTACHMENT V**

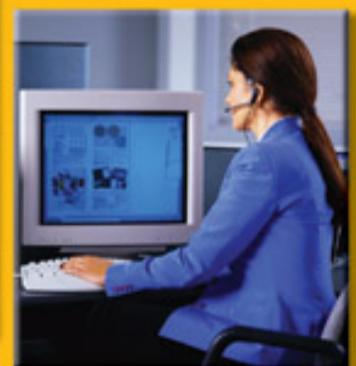
**OSHA POSTER**

# Job Safety and Health

## It's the law!



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)