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HEALTH AND SAFETY PLAN FOR VALVE PIT 8 AND BUILDING 1280 MONITORING WELL
ABANDONMENT WITH TRANSMITTAL LETTER NAS KEY WEST FL
09/10/2008
TETRA TECH NUS



AIK-08-0531

September 10, 2008

Project Number 01552

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. 0122

Subject: Valve Pit # 8 Monitoring Well Abandonment Work Plan, Rev. 0, Health and Safety Plan for Valve Pit # 8 and Building 1280 Monitoring Well Abandonment, Naval Air Station, Key West, Florida

Dear Ms. Washington:

I have enclosed a CD containing the PDF files for the Valve Pit # 8 Monitoring Well Abandonment Work Plan, Rev. 0, Health and Safety Plan for Valve Pit # 8 and Building 1280 Monitoring Well Abandonment, Naval Air Station, Key West, Florida. This file is being sent via U.S. Mail to meet TiNUS's contractual obligation under CTO 0122 for submittal of our "Work Plan". I am not expecting any comments on this document; however, I do expect the NAS Key West Partnering Team to perform an on-board review of this document during our September meeting.

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

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)
Ms. T. Bolaños, FDEP (Work Plan Only)
Mr. R. Courtright, NAS Key West

Mr. R. Demes, NAS Key West
Mr. E. Barham, NAS Key West
Mr. M. Perry/File
File 01552-7.3.1 & 4.2

Comprehensive Long-term Environmental Action Navy

CONTRACT NUMBER N62467-04-D-0055



Health and Safety Plan for Valve Pit #8 and Building 1280 Monitoring Well Abandonment

Naval Air Station Key West
Key West, Florida

Contract Task Order 0122

August 2008



NAS Jacksonville
Jacksonville, Florida 32212-0030

**HEALTH AND SAFETY PLAN
FOR
VALVE PIT #8 AND BUILDING 1280
MONITORING WELL ABANDONMENT**

**NAVAL AIR STATION KEY WEST
KEY WEST, FLORIDA**

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

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

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

**CONTRACT NO. N62467-04-D-0055
CONTRACT TASK ORDER 0122**

August 2008

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1.0 INTRODUCTION

The objective of this Health and Safety Plan (HASP) is to provide the minimum safety practices and procedures to Tetra Tech NUS (TtNUS) personnel conducting Monitoring Well Abandonment and associated activities at Naval Air Station (NAS) Key West, located in Key West, Florida.

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

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

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

1.1 AUTHORITY

This work is authorized under the Comprehensive Long - Term Environmental Action Navy (CLEAN) contract, administered through the U.S. Navy Southeastern Naval Facilities Engineering Command, as defined under Contract Number N62467-04-D-0055; Contract Task Order Number 0122.

1.2 KEY PROJECT PERSONNEL AND ORGANIZATION

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

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

- The 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 of site-specific training for on site personnel.
- The TtNUS Site Safety Officer or their representative supports the FOL concerning the aspects of health and safety including, but not limited to:
 - Coordinating the health and safety activities
 - Selecting, applying, inspecting, and maintaining personal protective equipment
 - Establishing work zones and control points
 - Implementing air monitoring procedures
 - Implementing hazard communication, respiratory protection, and other associated safety and health programs
 - Coordinating emergency services
 - Providing elements of site-specific training
- Compliance with these requirements is monitored by the Project Health and Safety Officer (PHSO) and is coordinated through the HSM.

1.3 SITE INFORMATION AND PERSONNEL ASSIGNMENTS

Site Name: Naval Air Station (NAS) Key West **Address:** Key West, Florida
Southeast NAVFAC EIC: Beverly Washington **Phone Number:** (843) 820-5581
Site Point of Contact: Mr. Robert Courtright **Phone Number:** (305) 293-2881

Purpose of Site Visit: TtNUS will conduct field activities associated with Monitoring Well Abandonment

Proposed Dates of Work: August 2008 through completion

Project Team:

Tetra Tech NUS Personnel:

Chuck Bryan
John Wright
TBD
Matthew M. Soltis, CIH, CSP
Jennifer Choich, PhD
TBD
TBD

Discipline/Tasks Assigned:

Task Order Manager (TOM)
Field Operations Leader (FOL)
Technical Expert
Health and Safety Manager (HSM)
Project Health and Safety Officer (PHSO)
Site Safety Officer (SSO)
Geologist

Subcontractor Personnel:

Discipline/Tasks Assigned:

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

Prepared by: Jennifer Choich, PhD

2.0 EMERGENCY ACTION PLAN

2.1 INTRODUCTION

This section has been developed as part of a planning effort to direct and guide field personnel in the event of an emergency. However, given the nature and scope of planned site activities, significant emergency situations are unlikely. In the event of an emergency, TtNUS personnel will provide emergency response support only to the capabilities of on site personnel. Emergency situations that are beyond the capabilities of on site TtNUS personnel will require assistance from outside emergency responders. In the event of emergencies that are beyond the capabilities of on site personnel, an evacuation will be initiated. In an evacuation, site personnel will move to a safe place of refuge and the appropriate emergency response agencies will be notified. The emergency response agencies listed in Table 2-1 of this plan are capable of providing the most effective response, and as such, will be designated as the primary responders. These agencies are located within a reasonable distance from the areas of site operations, which ensures adequate emergency response time. This emergency action plan conforms to the requirements of OSHA Standard 29 CFR 1910.38(a), as allowed in OSHA 29 CFR 1910.120(l)(1)(ii).

TtNUS personnel will, through the necessary actions, provide incidental response measures for incidents such as:

- Incipient Fire and spill prevention and response
- Removal of personnel from emergency situations
- Provision of initial medical support for injury/illnesses 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, there is very minor potential for injury or illnesses resulting from exposure to chemical, physical, or other hazards, and subsequently little likelihood of emergency situations. To further minimize or eliminate potential emergency situations, pre-emergency planning activities associated with this project will be implemented. The FOL is responsible for:

- 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.
- 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.

2.3 EMERGENCY RECOGNITION AND PREVENTION

2.3.1 Recognition

Foreseeable emergency situations that may be encountered during site activities will generally be recognizable by visual observation. Visual observation will be the principal method of identifying any hazards that may be associated with the proposed scope of work. These potential hazards, the activities with which they have been associated, and the recommended control methods are discussed in detail in Sections 5.0 and 6.0 of this document.

2.3.2 Prevention

TtNUS personnel will minimize the potential for emergencies by ensuring compliance with the HASP, the Health and Safety Guidance Manual, applicable OSHA regulations, and by following directions given by those persons responsible for the health, safety, and welfare of site personnel.

2.4 SAFE DISTANCES AND PLACES OF REFUGE

In the event that the site must be evacuated, personnel will immediately stop activities and report to a pre-determined safe place of refuge. The safe place of refuge may also serve as the telephone communication point, as communication with emergency response agencies may be necessary. Telephone communication points and safe places of refuge will be determined prior to the commencement of site activities and will be conveyed to personnel as part site-specific training and/or daily safety meetings. Upon reporting to the refuge location, personnel will remain there until directed otherwise by the TtNUS FOL or the On-Scene Incident Commander. The FOL will take a head count at this location to confirm the presence of site personnel. Emergency response agencies will be notified of any unaccounted for personnel.

2.5 EVACUATION ROUTES AND PROCEDURES

Once an evacuation is initiated, personnel will terminate site activities and proceed immediately to the designated place of refuge, unless doing so would further jeopardize the welfare of workers. In such an event, personnel will proceed to a designated alternate location and remain there until further notification from the FOL. The use of these locations as assembly points provides communication and a direction point for emergency services, should they be needed.

2.5.1 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.

TtNUS personnel will perform removal of personnel from emergency situations and may provide initial medical support for injury/illnesses requiring only first-aid level support. Medical attention above that level will require assistance and support from the designated emergency response agencies. Attachment I 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 2-1.**

FIGURE 2-1 POTENTIAL EXPOSURE PROTOCOL

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

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

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

WorkCare will compile the results of data and provide a summary report of the incident. A copy of this report will be placed in each victim's medical file in addition to being distributed to appropriately designated company officials.

Each involved worker will receive a letter describing the incident but deleting any personal or individual comments. This generalized summary will be accompanied by a personalized letter describing the individual's findings/results. A copy of the personal letter will be filed in the continuing medical file maintained by WorkCare.

FIGURE 2-1 (continued)
POTENTIAL EXPOSURE REPORT

Name: _____ Date of Exposure: _____

Social Security No.: _____ Age: _____ Sex: _____

Client Contact: _____ Phone No.: _____

Company Name: _____

I. Exposing Agent

Name of Product or Chemicals (if known): _____

Characteristics (if the name is not known)

Solid Liquid Gas Fume Mist Vapor

II. Dose Determinants

What was individual doing? _____

How long did individual work in area before signs/symptoms developed? _____

Was protective gear being used? If yes, what was the PPE? _____

Was there skin contact? _____

Was the exposing agent inhaled? _____

Were other persons exposed? If yes, did they experience symptoms? _____

III. Signs and Symptoms (check off appropriate symptoms)

Immediately With Exposure:

Burning of eyes, nose, or throat

Tearing

Headache

Cough

Shortness of Breath

Chest Tightness / Pressure

Nausea / Vomiting

Dizziness

Weakness

Delayed Symptoms:

Weakness

Nausea / Vomiting

Shortness of Breath

Cough

Loss of Appetite

Abdominal Pain

Headache

Numbness / Tingling

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

Burning of eyes, nose, or throat

Tearing

Headache

Cough

Shortness of Breath

Chest Tightness / Pressure

Cyanosis

Nausea / Vomiting

Dizziness

Weakness

Loss of Appetite

Abdominal Pain

Numbness / Tingling

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: _____

2.6 EMERGENCY ALERTING AND ACTION/RESPONSE PROCEDURES

Since TtNUS personnel will be working in close proximity to each other, voice commands will comprise the mechanisms to alert site personnel of an emergency. If an incident occurs, site personnel will initiate the following procedures:

- Initiate incident alerting procedures (if needed) verbally.
- Describe to the FOL (who will serve as the Incident Coordinator) what has occurred and provide as many details as possible.
- If the FOL determines that the situation is beyond the capabilities of the site personnel emergency services will be contact using the emergency reference information listed in Table 2-1. Explain the situation and the appropriate emergency services will be dispatched. **Stay on the phone and follow the instructions of the emergency contact.**

2.7 EMERGENCY CONTACTS

Prior to performing work at the site, personnel will be thoroughly briefed on the emergency procedures to be followed in the event of an accident. As indicated earlier, Table 2-1 provides a list of emergency contacts and their corresponding telephone numbers. This table will be made readily available to site personnel and copies will be placed in each of the site vehicles.

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

AGENCY	TELEPHONE
Key West Police/Rescue Services	911
Hospital: Lower Florida Keys Medical Center	(305) 294-5531
Base Police	(305) 293-2114
Base Fire Department Boca Chica	(305) 293-3333
NAS Key West Point of Contact Robert Courtright	(305) 293-2881
Base Officer of the Day (OOD)	(305) 293-2971
Poison Control Center	(800) 222-1222
Sunshine State One-Call (utility clearance)	(800)-432-4770
Chemtrec	(800) 424-9300
National Response Center	(800) 424-8802
TtNUS, Aiken Office	(803) 649-7963
Task Order Manager Chuck Bryan	(803) 649-7963 x345
Field Operations Leader John Wright	(724) 493-6309
TtNUS, Pittsburgh Office	(412) 921-7090
Health and Safety Manager Matthew M. Soltis, CIH, CSP	(412) 921-8912
Project Health and Safety Officer Jennifer Choich, PhD	(412) 921-8083

2.8 EMERGENCY ROUTE TO HOSPITAL

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

Lower Florida Keys Medical Center
5900 College Road, Key West Florida
305-294-5531

**FIGURE 2-2
HOSPITAL ROUTE FROM TRUMBO POINT**

- 1: Start out going EAST on TRUMAN AVE/N ROOSEVELT Blvd/US-1
- 2: Turn LEFT onto US-1 N/FL-5 N
- 3: Turn LEFT onto COLLEGE RD.
- 4: End at 5900 College Rd Key West, FL 33040

Estimated Time: 8-13 minutes Estimated Distance: <5 miles



2.9 INJURY AND ILLNESS REPORTING

Any pertinent information regarding allergies to medications or other special conditions will be provided to medical service personnel. This information is listed on Medical Data Sheets (see Attachment II) filed onsite. If an exposure to hazardous materials has occurred, provide hazard information from Table 6-1 to medical service personnel. As soon as possible, the Navy contact must be informed of any incident or accident that requires medical attention.

2.10 PPE AND EMERGENCY EQUIPMENT

First-aid kits, eye wash units (or bottles of disposable eyewash solution) and fire extinguishers 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 or site vehicles. Personnel will only provide first-aid assistance to the level of their training.

3.0 SITE BACKGROUND

NAS Key West is in southern Monroe County, Florida. The U.S. Navy manages 6,323 acres of land divided into 20 separate tracts in the lower Florida Keys, concentrated around Key West and Boca Chica Key. The Naval Facility at Key West was disestablished in 1974, resulting in the relocation of several units. At present, NAS Key West is proceeding with realignment of aviation operations, a research laboratory, communications intelligence; counternarcotics air surveillance operations, a weather service, and several other activities on Key West. In addition to the Naval activities and units, other Department of Defense (DOD) and Federal agencies at NAS Key West include the U.S. Air Force, U.S. Army, and U.S. Coast Guard.

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

3.1 DESCRIPTION OF LOCATION

Valve Pit No. 8 is located on the aircraft parking apron at NAS Key West, on Boca Chica Key and provides access to the 6-inch inner bulk fuel line running from the Truck Fill Stand to the Boca Chica Tank Farm. On June 18, 1998, the fuel line failed a line tightness test. The line was taken out of service and an investigation of the line initiated. Free product was discovered in Valve Pit No. 8. Approximately 25 gallons of JP-5 jet fuel and water were pumped out of the valve pit into a tanker truck. The vent cap on the valve pit was found to be loose. The cap was tightened and the line passed the tightness test.

On June 22, 1998, free product was again reported in the valve pit. The valve pit was drained and approximately 250 gallons of product and water were pumped into a tanker truck. A DRF was filed with FDEP. On June 25, 1998, free product was once again found in the valve pit and pumped out. The Navy estimated that approximately 150 gallons of free product were removed, along with nearly 1,000 gallons of water. The free product found in the valve pit subsequent to tightening the vent line cap was presumed to be residual from the initial leak. Valve Pit No. 8 has since been removed, and the fuel line replaced by solid pipeline. A SAR prepared for the site concluded that dissolved petroleum constituents in the groundwater on site met Chapter 62-777, F.A.C., Table V, Natural Attenuation Default Source Concentrations. The SAR recommended the installation of eight monitoring wells at previous direct-push sampling locations and implementation of a Natural Attenuation Monitoring Plan.

Semi-annual monitoring reports were submitted to FDEP in 2000 and 2001. The October 2001 MNA report (BBL, 2001c) concluded that dissolved petroleum hydrocarbon concentrations higher than GCTLs in groundwater were in only one of eight monitoring wells (VP8-MW-02), but at concentrations below Chapter 62-777, F.A.C., Table V, Natural Attenuation Default Source Concentrations. Based on the MNA results, BBL recommended extending the MNA program for one year.

TtNUS performed sampling in May and August 2003 and July 2004. Groundwater samples were collected during both high and low tides in August 2003. No exceedances of GCTLs were observed in May or August 2003; however, VOCs and PAHs exceeded GCTLs in July 2004. TtNUS recommended continuation of MNA for the site.

Groundwater was sampled again in November 2006. No exceedances were observed during the event. TtNUS recommended that one additional round of MNA sampling be conducted at the site to achieve an unconditional No Further Action (NFA) status for the site. In addition, it was also recommended that samples be collected from one additional well (VP-MW-06), located between the drainage ditch and the wells currently sampled.

Three monitoring wells at Valve Pit No. 8 (VP8-MW-02, VP8-MW-06, and VP8-MW-08) were sampled during the May 2007 event. Groundwater samples were analyzed for BTEX, MTBE, PAHs and TRPH. PAHs, and TRPH were detected in groundwater samples collected from VP8-MW-02 and -08; however none of the detections were above GCTLs.

No exceedances of GCTLs were observed in the November 2006 and May 2007 events. Based on these two sampling events, TtNUS recommended an unconditional NFA status for the site. Based on NFA status, all groundwater monitoring wells at Valve Pit No. 8 are scheduled for complete abandonment (see Work Plan).

4.0 SCOPE OF WORK

This section of the HASP identifies the planned site activities that are to be conducted as part of the field activities. Tasks that will be performed at this site are:

- Mobilization/demobilization
- Monitoring well abandonment via DPT and well inventory update
 - Includes removing and replacing concrete caps
- Decontamination of personnel, hand tools, associated abandonment equipment and extraction equipment
- IDW management

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

5.0 IDENTIFYING AND COMMUNICATING TASK-SPECIFIC HAZARDS AND SAFE WORK PRACTICES

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

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

5.1 GENERAL SAFE WORK PRACTICES

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

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

- Establish appropriate safety zones including support, contamination reduction, and exclusion zones.
- Minimize the number of personnel and equipment in contaminated areas (such as the exclusion zone). Non-essential vehicles and equipment should remain within the support zone.
- Establish appropriate decontamination procedures for leaving the site.
- Immediately report all injuries, illnesses, and unsafe conditions, practices, and equipment to the SSO.
- Observe co-workers for signs of toxic exposure and heat or cold stress.
- Inform co-workers of potential symptoms of illness, such as headaches, dizziness, nausea, or blurred vision.

5.2 DPT SAFE WORK PRACTICES

The following Safe Work Practices are to be followed when working in or around the DPT Operations (HSGM, Section 7.0).

- Identify underground utilities and buried structures before commencing any DPT operations. Follow the TtNUS Utility Locating and Excavation Clearance Standard Operating Procedure.
- DPT rigs will be inspected by the SSO or designee, prior to the acceptance of the equipment at the site and prior to the use of the equipment. Repairs or deficiencies identified will be corrected prior to use. The inspection will be accomplished using the Equipment Inspection Checklist for 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.
- Ensure that all machine guarding is in place and properly adjusted.
- Block the DPT rig and use levelers to prevent inadvertent movement.
- The work area around the point of operation will be cleared to the extent possible to remove any trip hazards near or surrounding operating equipment.

- 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 DPT flights will be provided to avoid the collapse of stacked equipment.
- Minimize contact to the extent possible with contaminated tooling and environmental media. Potentially contaminated tooling will be placed on polyethylene sheeting for storage and wrapped for transport to the centrally located equipment decontamination area
- Support functions (sampling and screening stations) will be maintained a minimum distance from the DPT rig of the height of the mast plus five feet, but not less than 25 feet around the rig.
- Only qualified operators and knowledgeable ground crew personnel will participate in the operation of the DPT rig.
- During maintenance, use only manufacturer provided/approved equipment (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 DPT rig will be shutdown, and emergency brakes set and wheels will be chocked to prevent movement.

Investigative areas will be restored to equal or better condition than original to remove any contamination brought to the surface and to remove any physical hazards. 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 information regarding the chemical and physical hazards which may be associated with the Site and the activities that are to be conducted as part of the scope of work.

6.1 CHEMICAL HAZARDS

Based upon available data from previous site investigations, the primary site contaminants of concern (COCs) from an occupational health perspective are volatile organic compounds (VOCs) and semi-volatile compounds (SVOCs) (i.e., naphthalene, methylnaphthalene, acenaphthene, fluoranthene, and fluorene). However, from a worst-case scenario, none of these chemicals could potentially reach concentrations that exceed the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV) Time Weighted Average for an 8 hour work day (TWA₈) and/or the Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL) TWA₈ and Ceiling. Although it is a possibility, it is very unlikely they will approach airborne concentrations reaching current occupational exposure limits (OELs). Table 6-1 below summarizes the COCs, their respective OELs, and possible worst case scenario concentrations.

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

Contaminant of Concern	Highest Concentration Previously Detected in Groundwater	Worst-Case Air Concentration That Could Be Encountered	Current OSHA PEL And ACGIH TLV
Napthalene	1.5 ug/l	0.01 ppm	OSHA: 10 ppm TWA ₈ ACGIH 10 ppm 15 ppm STEL NIOSH: 10 ppm TWA ₈ 15 ppm STEL

Table Notes:

TWA₈: Average air concentration over an 8-hour work period that is not to be exceeded

ACGIH & NIOSH STEL: Concentration in air that is not to be exceeded for more than 15 minutes more than 4 times per day.

6.1.1 Volatile Organic Compounds

VOCs generally express symptoms including:

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

6.1.2 Semi-volatile Organic Compounds (SVOCs)

SVOCs are substances composed primarily of carbon and hydrogen atoms that have boiling points greater than 200 degrees C. Sites where halogenated SVOCs may be found include burn pits, chemical manufacturing plants and disposal areas, contaminated marine sediments, disposal wells and leach fields, electroplating/metal finishing shops, firefighting training areas, hangars/aircraft maintenance areas, landfills and burial pits, leaking collection and system sanitary lines, leaking storage tanks, radiologic/mixed waste disposal areas, oxidation ponds/lagoons, pesticide/herbicide mixing areas, solvent degreasing areas, surface impoundments, and vehicle maintenance areas and wood preserving sites. Potential health effects related to SVOC exposure include organ system toxicity (non-reproductive), cancer, birth or developmental effects, brain and nervous system damage, and reproduction and fertility damage.

6.1.3 Inhalation

From a worst-case scenario, none of the above chemicals concentrations immediately above a captured air phase above contaminated media (such as in the head space of a monitoring well) could reach concentrations that exceed permissible limits. In addition, it is important to recognize the following:

- the planned work area is outdoors, with ample natural ventilation that will reduce any airborne VOCs through dilution and dispersion, and
- the groundwater values used in this evaluation were the highest concentrations detected.

As a result of these factors, it is very unlikely that workers participating in this activity will encounter any airborne concentrations of VOCs/PAHs that would represent an inhalation exposure concern. To monitor this route, real-time direct reading monitoring instruments will be used (as described in section 7.0). This

will performed during intrusive tasks, as these tasks are the most likely to involve encountering/releasing any VOCs/PAHs into the airphase.

6.1.4 Ingestion and Skin Contact

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

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

6.2 PHYSICAL HAZARDS

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

- Slip, trips, and falls
- Strain/muscle pulls from heavy lifting
- Heat Stress
- Pinch/compression points
- Natural hazards (snakes, ticks, poisonous plants, etc.)
- Vehicular and equipment traffic
- Inclement weather

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

6.2.1 Slips, Trips, and Falls

During various site activities there is a potential for slip, trip, and fall hazards associated with wet, steep, or unstable work surfaces. To minimize hazards of this nature, personnel required to work in and along areas prone to these types of hazards will be required to exercise caution, and use appropriate

precautions (restrict access, guardrails, life lines and/or safety harnesses) and other means suitable for the task at hand. Site activities will be performed using the buddy system.

6.2.2 Strain/Muscle Pulls from Heavy Lifting

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

6.2.3 Heat Stress

Because of the geographical location of the planned work, the likely seasonal weather conditions that will exist during the planned schedule, and the physical exertion that can be anticipated with some of the planned tasks, it will be necessary for the field team to be aware of the signs and symptoms and the measures appropriate to prevent heat stress. This is addressed in detail in Section 4.0 of the 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, in-coordination, and other maladies. To prevent heat stress disorders, the following preventive measures are to be implemented by the SSO:

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

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

6.2.4 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.

6.2.5 Vehicular and Equipment Traffic

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

6.2.6 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, hurricane, 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.

6.3 NATURAL HAZARDS

Natural hazards such as poisonous plants, bites from poisonous or disease carrying animals or insects (e.g., snakes, ticks, mosquitoes) are often prevalent at sites that are being investigated as part of hazardous waste site operations. Given the geographic location and the environment, alligators may also be potentially present at the NAS Key West facility. To minimize the potential for site personnel to encounter these hazards, nesting areas in and about work areas will be avoided to the greatest extent possible. Work areas will be inspected to look for any evidence that dangerous animals may be present. Based on the planned location for the work covered by this HASP, encountering alligators is not a likely probability.

During warm months (spring through early fall), tick-borne Lyme Disease may pose a potential health hazard. The longer a disease carrying tick remains attached to the body, the greater the potential for

contracting the disease. Wearing long sleeved shirts and long pants (tucked into boots and taped) will prevent initial tick attachment, while performing frequent body checks will help prevent long term attachment. Site first aid kits should be equipped with medical forceps and rubbing alcohol to assist in tick removal. For information regarding tick removal procedures and symptoms of exposure, consult Section 4.0 of the Health and Safety Guidance Manual.

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

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

6.3.1 Insect/Animal Bites and Stings

Fire Ants

Various insects and animals may be present and should be considered. For example, fire ants present a unique situation when working outdoors in Florida. Their aggressive behavior and their ability to sting repeatedly can pose a unique health threat. The sting injects venom (formic acid) that causes an extreme burning sensation. Pustules form which can become infected if scratched. Allergic reactions of people sensitive to the venom include dizziness, swelling, shock and in extreme cases unconsciousness and death. People exhibiting such symptoms should see a physician. Fire ants can be identified by their habitat. They build mounds in open sunny areas sometimes supported by a wall or shrub. The mound has no external opening. The size of the mound can range from a few inches across to some which are in excess of two feet or more in height and diameter. When disturbed the ants defend it by swarming out and over the mound, even running up grass blades and sticks.

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

Alligators

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

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

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

6.3.2 Inclement Weather

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

Tropical Storms and Hurricanes

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

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

- High winds
- Excessive rainfall
- Storm surge

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

High Winds

Sustained winds vary greatly from storm to storm, but can range from 39 to 73 miles per hour (wind speeds associated with a tropical storm) to greater than 74 miles per hour (minimal wind speed for a Category 1 hurricane). Table 6-2 compares the type of storm or hurricane and the corresponding wind speed.

**TABLE 6-2
TROPICAL STORM/HURRICANE RATING SCALE**

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

Based on the Saffir-Simpson scale
NA – Not Applicable

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

Excessive Rainfall

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

Storm Surge

The storm surge is an abnormal rise in sea level accompanying a hurricane or tropical storm. The height of the storm surge (usually measured in feet) is the difference in sea level from the observed level (during the storm) and the level that would have occurred in the absence of the storm or hurricane. The more intense the storm or hurricane the higher the storm surge. Storm surges become even higher if they occur during periods of high tide. Table 6-3 defines some of the terminology and possible calls to action regarding tropical cyclones:

**TABLE 6-3
TROPICAL STORM/HURRICANE
WATCH AND WARNING**

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

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

7.0 AIR MONITORING

The primary COCs do not have the potential to be present in concentrations that could present an inhalation hazard during planned site activities, therefore no direct reading instruments are necessary for this field work.

8.0 TRAINING/MEDICAL SURVEILLANCE REQUIREMENTS

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

8.1 INTRODUCTORY/REFRESHER/SUPERVISORY TRAINING

This section is included to specify health and safety training and medical surveillance requirements for 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 II 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 fractured three-zone approach will be used during work at this site. This three zone approach will utilize an exclusion zone, a contamination reduction zone, and a support zone. It is also anticipated that this control measure will be used to control access to site work areas. Use of such controls will restrict the general public, minimize the potential for the spread of contaminants, and protect individuals who are not cleared to enter work areas.

9.1 EXCLUSION ZONE

The exclusion zone will be considered the areas of the site of known or suspected contamination. It is anticipated that the areas around intrusive field activities will have the potential for contaminants to be brought to the surface. These areas will be marked and personnel will maintain safe distances. Once intrusive field activities have been completed and any surface contamination has been removed, the potential for exposure is again diminished and the area can then be reclassified as part of the contamination reduction zone. Therefore, the exclusion zones for this project will be limited to those areas of the site where intrusive field activities are being performed plus a designated area of at least 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 exposure to site contaminants would not be expected 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 are attached (Attachment IV) to 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.

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

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

9.5 SITE VISITORS

Site visitors 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, FDEP)
- Southeastern NAVFAC Personnel
- Other authorized visitors

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

FIGURE 9-1
SAFE WORK PERMIT

Permit No. _____ Date: _____ Time: From _____ to _____

I. Work limited to the following (description, area, equipment used): _____

II. Primary Hazards: _____

III. Field Crew: _____

IV. On-site Inspection conducted Yes No Initials of Inspector _____ 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

VI. Chemicals of Concern	Hazard Monitoring	Action Level(s)	Response Measures
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Primary Route(s) of Exposure/Hazard: _____

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

VII. Additional Safety Equipment/Procedures

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

Modifications/Exceptions: _____

VIII. Site Preparation

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

IX. Additional Permits required (Hot work, confined space entry, excavation etc.) Yes No

If yes, SSO to complete or contact Health Sciences, Pittsburgh Office (412)921-7090

X. Special instructions, precautions: _____

Permit Issued by: _____ Permit Accepted by: _____

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

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

Once the site visitors have completed the above items, they will be permitted to enter the operational zone. Visitors are required to observe the protective equipment and site restrictions in effect at the site at the time of their visit. Visitors entering the exclusion zones during ongoing operations will be accompanied by a 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 the Base Contact. If necessary, the Base Contact will be notified of any unauthorized visitors.

9.6 SITE SECURITY

Site security will be accomplished using 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 BUDDY SYSTEM

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

9.8 MATERIAL SAFETY DATA SHEET (MSDS) REQUIREMENTS

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

9.9 COMMUNICATION

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

External communication will be accomplished by using 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.

10.0 SPILL CONTAINMENT PROGRAM

10.1 SCOPE AND APPLICATION

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

10.2 POTENTIAL SPILL AREAS

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

- Resource deployment
- Waste transfer
- Central staging

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

10.3 LEAK AND SPILL DETECTION

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

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

10.4 PERSONNEL TRAINING AND SPILL PREVENTION

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

10.5 SPILL PREVENTION AND CONTAINMENT EQUIPMENT

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

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

10.6 SPILL CONTROL PLAN

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

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

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

11.0 CONFINED-SPACE ENTRY

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

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

A Permit-Required Confined Space is one that:

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

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

12.0 MATERIALS AND DOCUMENTATION

The 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 (posted in the site trailer) (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 OR MAINTAINED AT THE SITE

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

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

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

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

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

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

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

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

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

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

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

13.0 ACRONYMS / ABBREVIATIONS

AST	Aboveground Storage Tank
CFR	Code of Federal Regulations
CIH	Certified Industrial Hygienist
CLEAN	Comprehensive Long Term Environmental Action Navy
CRZ	Contamination Reduction Zone
CSP	Certified Safety Professional
dBA	Decibel
DOD	Department of Defense
DOT	Department of Transportation
DRI	Direct Reading Instrument
EPA	Environmental Protection Agency
eV	Electron Volts
FOL	Field Operations Leader
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations and Emergency Response
HSM	Health and Safety Manager
IDW	Investigation Derived Waste
mg/kg	milligrams per kilogram
MSDS	Material Safety Data Sheet
NAS	Naval Air Station
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Safety and Health Administration (U.S. Department of Labor)
PAH	Polynuclear Aromatic Hydrocarbon
PID	Photo Ionization Detector
PHSO	Project Health and Safety Officer
PPE	Personal Protective Equipment
SSO	Site Safety Officer
SVOCs	Semi-Volatile Organic Compounds
TBD	To be determined
TOM	Task Order Manager
TtNUS	Tetra Tech NUS
VOCs	Volatile Organic Compounds

ATTACHMENT I
INCIDENT REPORT FORM

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

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

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

INSTRUCTIONS:

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

Incident Report Number: (From the IR Form)	
--	--

EMPLOYEE INFORMATION

Company Affiliation

Tetra Tech Employee? TetraTech subcontractor employee (directly supervised by Tt personnel)?

Full Name	Company (if not Tt employee)
Street Address, City, State and Zip Code	Address Type
_____	Home address (for Tt employees) <input type="checkbox"/>
_____	Business address (for subcontractors) <input type="checkbox"/>

Telephone Numbers

Work: _____ Home: _____ Cell: _____

Occupation (regular job title)	Department
Was the individual performing regular job duties?	Time individual began work
Yes <input type="checkbox"/> No <input type="checkbox"/>	_____ AM <input type="checkbox"/> PM <input type="checkbox"/> OR Cannot be determined <input type="checkbox"/>

Safety equipment

Provided? Yes <input type="checkbox"/> No <input type="checkbox"/>	Type(s) provided: <input type="checkbox"/> Hard hat <input type="checkbox"/> Protective clothing <input type="checkbox"/> Gloves <input type="checkbox"/> High visibility vest <input type="checkbox"/> Eye protection <input type="checkbox"/> Fall protection <input type="checkbox"/> Safety shoes <input type="checkbox"/> Machine guarding <input type="checkbox"/> Respirator <input type="checkbox"/> Other (list)
Used? Yes <input type="checkbox"/> No <input type="checkbox"/> If no, explain why _____ _____ _____	

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 <input type="checkbox"/> No <input type="checkbox"/>
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"

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"

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".

MEDICAL CARE PROVIDED

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

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

Name of physician or health care professional	Facility Name
Street Address, City State and Zip Code	Type of Care?
	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"/>
Telephone Number	Did the individual die? Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, date: _____
	Will a worker's compensation claim be filed? Yes <input type="checkbox"/> No <input type="checkbox"/>

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

SIGNATURES

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

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

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

INSTRUCTIONS:

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

Incident Report Number: (From the IR Form)

TYPE OF INCIDENT (Check all that apply)

Property Damage

Equipment Damage

Fire or Explosion

Spill or Release

INCIDENT DETAILS

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

Response Actions Taken:

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

Agency(s) Contact Name(s)

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

Item:	Extent of damage:	Estimated repair cost

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

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

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

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

NOTIFICATIONS

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

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

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

INSTRUCTIONS:

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

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?		Did ambulance respond to the accident?	
Yes <input type="checkbox"/> No <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/>	
Name and location of responding police department		Ambulance company name and location	
Officer's name/badge #			
Did police complete an incident report? Yes <input type="checkbox"/> No <input type="checkbox"/> 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 instruction header.

ATTACHMENT II
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: _____

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.

Name (Print clearly)

Signature

Date

ATTACHMENT III
EQUIPMENT INSPECTION CHECKLIST
FOR DPT RIGS

Equipment Inspection Checklist for DPT Rigs

Company: _____

Unit/Serial No#: _____

Inspection Date: ____ / ____ / ____ Time: ____ : ____

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

Project Name: _____

Project No#: _____

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

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"/>	<p>Fluid Levels:</p> <ul style="list-style-type: none"> • Engine oil • Transmission fluid • Brake fluid • Cooling system fluid • Hoses and belts • Hydraulic oil 	
<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"/>	<p>High Pressure Hydraulic Lines</p> <ul style="list-style-type: none"> • Obvious damage • Operator protected from accidental release • Coupling devices, connectors, retention cables/pins are in good condition and in place 	
<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"/>	<p>Mast Condition</p> <ul style="list-style-type: none"> • Structural components/tubing • Connection points • Pins • Welds • Outriggers • Operational • Plumb (when raised) 	
<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"/>	<p>Hooks</p> <ul style="list-style-type: none"> • Are the hooks equipped with Safety Latches? • Does it appear that the hook is showing signs of wear in excess of 10% original dimension? • Is there a bend or twist exceeding 10% from the plane of an unbent hook? • Increase in throat opening exceeding 15% from new condition • Excessive nicks and/or gouges • Clips • 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) 	

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"> • Reduction in Rope diameter π (5/16 wire rope > 1/64 reduction nominal size -replace) (3/8 to 1/2 wire rope > 1/32 reduction nominal size-replace) (9/16 to 3/4 wire rope > 3/64 reduction nominal size-replace) 	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • Number of broken wires (6 randomly broken wires in one rope lay) (3 broken wires in one strand) 	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • Number of wire rope wraps left on the Running Drum at nominal use (≥ 3 required) 	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> - Lead (primary) sheave is centered on the running drum 	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • Lubrication of wire rope (adequate?) 	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • Kinks, bends – Flattened to > 50% diameter 	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hemp/Fiber rope (Cathead/Split Spoon Hammer) <ul style="list-style-type: none"> • Minimum $\frac{3}{4}$; maximum 1 inch rope diameter (Inspect for physical damage) 	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • Rope to hammer is securely fastened 	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Safety Guards – <ul style="list-style-type: none"> • Around rotating apparatus (belts, pulleys, sprockets, spindles, drums, flywheels, chains) all points of operations protected from accidental contact? 	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • Hot pipes and surfaces exposed to accidental contact? 	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • High pressure lines 	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • Nip/pinch points 	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Operator Qualifications <ul style="list-style-type: none"> • Does the operator have proper licensing where applicable, (e.g., CDL)? 	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • Does the operator, understand the equipment's operating instructions? 	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • Is the operator experienced with this equipment? 	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • Is the operator 21 years of age or more? 	

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"> • Hardhat • Safety glasses • Work gloves • Chemical resistant gloves _____ • Steel toed Work Boots • Chemical resistant Boot Covers • Apron • Coveralls Tyvek, Saranex, cotton) _____ 	
<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"> • Excessive Noise Levels? _____ dBA • Chemical hazards (Drilling supplies - Sand, bentonite, grout, fuel, etc.) <ul style="list-style-type: none"> - MSDSs available? • Will On-site fueling occur <ul style="list-style-type: none"> - Safety cans available? - Fire extinguisher (Type/Rating - _____) 	

Approved for Use Yes No See Comments

 Site Health and Safety Officer

 Operator

ATTACHMENT IV
SAFE WORK PERMITS

**SAFE WORK PERMIT
MOBILIZATION AND DEMOBILIZATION ACTIVITIES
NAVAL AIR STATION KEY WEST
CTO 122**

Permit No. _____ Date: _____ Time: From _____ to _____

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

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

III. Field Crew: _____

IV. On-site Inspection conducted Yes No Initials of Inspector _____ TtNUS
Equipment Inspection required Yes No Initials of Inspector _____ TtNUS

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

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

VI. Chemicals of Concern **Hazard Monitoring/Action Level(s)** **Response Measures**
 None _____ NA _____ NA _____

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

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

VII. Additional Safety Equipment/Procedures

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

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

VIII. Site Preparation Yes No NA

Utility Locating and Excavation Clearance completed.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vehicle and Foot Traffic Routes Established/Traffic Control Barricades/Signs in Place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physical Hazards Identified and Isolated (Splash and containment barriers).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Emergency Equipment Staged (Spill control, fire extinguishers, first aid kits, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

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

Permit Issued by: _____ Permit Accepted by: _____

**SAFE WORK PERMIT
MONITORING WELL ABANDONMENT VIA DPT
NAVAL AIR STATION KEY WEST, FL
CTO 122**

Permit No. _____ Date: _____ Time: From _____ to _____

I. Work limited to the following (description, area, equipment used): monitoring well abandonment via DPT and updating monitoring well inventory. This task includes removing and replacing concrete well caps.

II. Primary Hazards: Heavy equipment hazards; elevated noise; energized systems/utilities; heavy lifting; slip, trip and fall; cuts and lacerations; vehicular and foot traffic; ambient temperature extremes; flying projectiles; insect/animal bites and stings, poisonous plants, inclement weather; dust from concrete removal and replacement.

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

Respiratory equipment required

Yes Specify on the reverse
 No

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

VI. Chemicals of Concern

Dust (during concrete removal and replacement)

Hazard Monitoring /Action Level(s)

Visible dust

Response Measures

Use area wetting techniques or evacuate upwind until dust disperses

Primary Route(s) of Exposure/Hazard: inhalation

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

VII. Additional Safety Equipment/Procedures

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

Modifications/Exceptions: Minimum requirement include sleeved shirt and long pants, safety footwear, and nitrile gloves Tyvek coverall to protect against natural hazards (e.g., ticks) if working/walking through areas of high grass. Use insect repellants containing at least 10% DEET and tape up in such areas. Follow manufacturer's recommendations for proper application and reapplication.

VIII. Site Preparation

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

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

X. Special instructions, precautions: Preview work locations to identify potential hazards (slips, trips, and falls, natural hazards, etc.) Review PPE needs based on activities being performed and the associated hazards. Use safe lifting procedures and obtain assistance when handling heavy or awkward objects. Suspend site activities in the event of inclement weather. Observe site workers for signs and symptoms of heat/cold stress. Use sun block (SPF > 15) to prevent sunburn if necessary. Dust control methods (i.e., wetting, misting) should be implemented, as necessary, when visible dust is evident during concrete removal and replacement. Complete DPT Inspection Checklist prior to beginning work.

Permit Issued by: _____ Permit Accepted by: _____

**SAFE WORK PERMIT
DECONTAMINATION ACTIVITIES
NAVAL AIR STATION KEY WEST
CTO 122**

Permit No. _____ Date: _____ Time: From _____ to _____

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

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

III. Field Crew: _____

IV. On-site Inspection conducted Yes No Initials of Inspector _____ TtNUS
Equipment Inspection required Yes No Initials of Inspector _____ TtNUS

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

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

VI. Chemicals of Concern	Hazard Monitoring	Action Level(s)	Response Measures
<u>Decontamination Fluids</u>	<u>refer to MSDS</u>	<u>refer to MSDS</u>	<u>refer to MSDS</u>

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

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

VII. Additional Safety Equipment/Procedures

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

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

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

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

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

Permit Issued by: _____ Permit Accepted by: _____

**SAFE WORK PERMIT
IDW MANAGEMENT
NAVAL AIR STATION KEY WEST
CTO 122**

Permit No. _____ Date: _____ Time: From _____ to _____

SECTION I: General Job Scope

- I. **Work limited to the following (description, area, equipment used):** IDW management activities includes containerization, staging, monitoring for leaks of IDW accumulated wastes. Wastes types include purge and decontamination wash waters.
- II. **Primary Hazards:** Lifting, pinches and compressions; flying projectiles; slips, trips, and falls and chemical contamination.
- III. **Field Crew:** _____
- IV. **On-site Inspection conducted** Yes No Initials of Inspector _____ 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** Level D Level B
 Level C Level A
- Respiratory equipment required**
Yes See Reverse
No
- Modifications/Exceptions: None anticipated

- VI. **Chemicals of Concern** None anticipated **Hazard Monitoring /Action Level(s)** none **Response Measures** none

Primary Route of Exposure/Hazard: NA

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

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

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

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

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

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

Permit Issued by: _____ Permit Accepted by: _____

ATTACHMENT V
OSHA POSTER

Job Safety and Health

It's the law!

OSHA

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

EMPLOYEES:

- You have the right to notify your employer or OSHA about workplace hazards. You may ask OSHA to keep your name confidential.
- You have the right to request an OSHA inspection if you believe that there are unsafe and unhealthful conditions in your workplace. You or your representative may participate in that inspection.
- You can file a complaint with OSHA within 30 days of retaliation or discrimination by your employer for making safety and health complaints or for exercising

