

# **Health and Safety Plan**

**For**

## **SWMU 9 (Pesticide Control/R-150 Tank Area) Interim Measures Confirmation Sampling**

**Naval Surface Warfare Center  
Crane, Indiana**



**Naval Facilities Engineering Command Midwest**

**Contract Number N62467-04-D-0055**

**Contract Task Order 467**

**December 2007**

**HEALTH AND SAFETY PLAN  
FOR  
SWMU 9 (PESTICIDE CONTROL/R-150 TANK AREA) INTERIM MEASURES  
CONFIRMATION SAMPLING  
AT  
NAVAL SURFACE WARFARE CENTER  
CRANE, INDIANA**

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

**Submitted to:  
Naval Surface Warfare Center  
Crane, Indiana**

**Submitted by:  
Tetra Tech NUS, Inc.  
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Pittsburgh, Pennsylvania 15220**

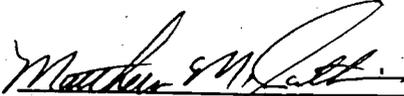
**Contract Task Order (CTO) 0467  
Contract Number N62467-04-D-0055**

**December 2007**

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## 1.0 INTRODUCTION

The objective of this Health and Safety Plan (HASP) is to provide the safety and health requirements, restrictions, practices and procedures for Tetra Tech NUS, Inc. (TtNUS) personnel at Solid Waste Management Unit (SWMU) 9 at the Naval Surface Warfare Center Crane (NSWC Crane), located in Crane, Indiana.

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

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

### 1.1 AUTHORITY

This work is authorized under the Comprehensive Long - Term Environmental Action Navy (CLEAN) contract, administered through the U.S. Navy Southeast, Naval Facilities Engineering Command, as defined under Contract No. N62467-04-D-0055; Contract Task Order Number 0467.

### 1.2 KEY PROJECT PERSONNEL AND ORGANIZATION

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

primary point of contact and have the primary responsibility for observing and implementing this HASP and for overall on-site health and safety.

- The TtNUS Project Manager is responsible for the overall direction and implementation of health and safety for this work.
- The TtNUS Field Operations Leader (FOL) is responsible for implementation of this HASP. The FOL manages field activities, executes the Work Plan, and enforces safety procedures as applicable to the Work Plan. Specifically, the FOL will:
  - Verify training and medical status of on-site personnel in relation to site activities.
  - Assist and represent TtNUS with emergency services (if needed)
  - Provide elements site-specific training for on site personnel.
- The TtNUS Site Safety Officer (SSO) or his/her representative supports the FOL concerning the aspects of health and safety including, but not limited to:
  - Coordinating health and safety activities
  - Selecting, applying, inspecting, and maintaining personal protective equipment
  - Establishing work zones and control points
  - Implementing air monitoring procedures
  - Implementing hazard communication, respiratory protection, and other associated safety and health programs
  - Coordinating emergency services
  - Providing elements of site-specific training
- Compliance with these requirements is monitored by the Project Health and Safety Officer (PHSO) and is coordinated through the HSM.

### 1.3 SITE INFORMATION AND PERSONNEL ASSIGNMENTS

**Site Name:** Naval Surface Warfare Center **Address:** Crane, Indiana

**Remedial Project Manager:** Howard Hickey **Phone Number:** (847) 688-5999

**Site Contact:** Thomas Brent **Phone Number:** (812) 854-6160

**Site Address:** 300 Highway 361 Crane, IN 47522-5001

**Purpose of Site Visit:** The Navy construction contractor will be excavating soil contaminated with PCBs, pesticides, and VOCs. Initial excavation location and depth will be described in the Interim Work Measure Work Plan (TtNUS 2007). The excavation depth will range from four to seven feet. Tt personnel will collect confirmation samples from within the sidewalls and floors of excavations. Test kit analysis of selected soil samples for PCBs will be conducted.

**Proposed Start-up Date:** December 2007/January 2008

**Project Team:**

**TtNUS Personnel:**

Ralph Basinski

Jim Goerd

Matthew M. Soltis, CIH, CSP

Jennifer Choich, PhD

TBD (Likely to be FOL)

**Discipline/Tasks Assigned:**

Project Manager (PM)

Field Operations Leader (FOL)

Health and Safety Manager (HSM)

Project Health and Safety Officer (PHSO)

Site Safety Officer

**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. In the event of an emergency, the field team will primarily evacuate and assemble to an area unaffected by the emergency and notify the appropriate local emergency response personnel/agencies. TtNUS personnel are not authorized to participate in any emergency response activities. Workers who are ill or who have suffered a non-serious injury may be transported by site personnel to nearby medical facilities, provided that such transport does not aggravate or further endanger the welfare of the injured/ill person. The emergency response agencies listed in this plan are capable of providing the most effective response, and as such, will be designated as the primary responders. These agencies are located within a reasonable distance from the area of site operations, which ensures adequate emergency response time. The Navy RPM (Howard Hickey) will be notified if outside response agencies are contacted.

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

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

### 2.2 EMERGENCY PLANNING

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

- Coordinating with local Emergency Response personnel to ensure that TtNUS emergency action activities are compatible with existing emergency response procedures. Base Fire Protection and Emergency Services will be notified of scheduled events and activities. This is most imperative in situations where their services may be required. Due to the fact that the nearest hospital/medical center is over 4 minutes away, a CPR/First Aid trained personnel must be on-site at all times during the times work is being conducted.

- Establishing and maintaining information at the project staging area (support zone) for easy access in the event of an emergency. This information will include the following:
  - Chemical Inventory (of chemicals used onsite), with Material Safety Data Sheets.
  - Onsite personnel medical records (Medical Data Sheets).
  - A log book identifying personnel onsite each day.
  - Hospital route maps with directions (these should also be placed in each site vehicle).
  - Emergency Notification - phone numbers.

The TtNUS FOL will be responsible for the following tasks:

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

## **2.3 EMERGENCY RECOGNITION AND PREVENTION**

### **2.3.1 Recognition**

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

The above actions will provide early recognition for potential emergency situations, and allow TtNUS to instigate necessary control measures. However, if the FOL and the SSO determine that control measures are not sufficient to eliminate the hazard, TtNUS will withdraw from the site and notify the appropriate response agencies listed in Table 2-1.

### **2.3.2 Prevention**

TtNUS and subcontractor personnel will minimize the potential for emergencies by following the Health and Safety Guidance Manual and ensuring compliance with the HASP and applicable OSHA regulations. Daily site surveys of work areas, prior to the commencement of that day's activities, by the FOL and/or the SSO will also assist in prevention of illness/injuries when hazards are recognized early and control measures initiated.

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

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

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

Evacuation procedures will be discussed during the pre-activities training session, prior to the initiation of project tasks. Evacuation routes from the site and safe places of refuge are dependent upon the location at which work is being performed and the circumstances under which an evacuation is required. Additionally, site location and meteorological conditions (i.e., wind speed and direction) may dictate

evacuation routes. As a result, assembly points will be selected and communicated to the workers relative to the site location where work is being performed. Evacuation should always take place in an upwind direction from the site.

## **2.5 EMERGENCY CONTACTS**

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

As soon as possible, Navy contact Howard Hickey will be informed of any incident or accident that requires medical attention.

Any pertinent information regarding allergies to medications or other special conditions will be provided to medical services personnel. This information is listed on Medical Data Sheets filed onsite (See Attachment I). If an exposure to hazardous materials has occurred, provide hazard information from Table 6-1 to medical service personnel.

**TABLE 2-1  
EMERGENCY CONTACTS**

**Crane, Indiana**

<b>CONTACT</b>	<b>TELEPHONE</b>
Base Emergency Number (Fire Department, Base Security, Ambulance) <ul style="list-style-type: none"> <li>• If dialing from an on-base phone:.....</li> <li>• If dialing from cell or off-base phone:.....</li> </ul>	854-3300 or 854-1333 911
Base Environmental Office	(812) 854-3114
Bedford Ambulance	(812) 279-6545
Bloomington Hospital (Bloomington, IN)	(812) 336-9515
Hospital, Bedford Medical Center (Bedford, IN)	(812) 275-1200
Poison Control Center	(800)-222-1222
National Response Center	(800)-424-8802
Base Contact, Thomas Brent	(812) 854-6160
Project Manager, Ralph Basinski	(412) 921-8308
TtNUS Crane Field Office Building 3245/ Field Operations Leader	(812) 854-0280
TtNUS Office, Pittsburgh	1-800-245-2730 (412) 921-7090
CLEAN Health and Safety Manager, Matthew M. Soltis, CIH, CSP	(412) 921-8912
TtNUS Field Operations Leader Jim Goerd	(412) 921-8425
TtNUS Project Safety Officer Jennifer Choich, PhD	(412) 921-8083
TtNUS Site Safety Officer TBD	--

2.6 EMERGENCY ROUTE TO HOSPITAL

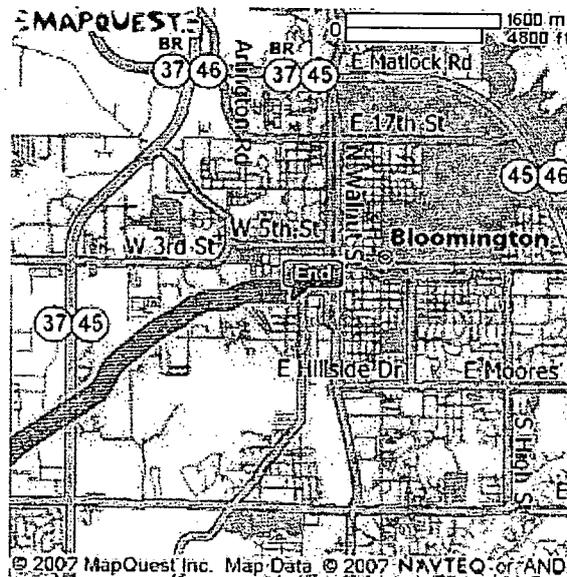
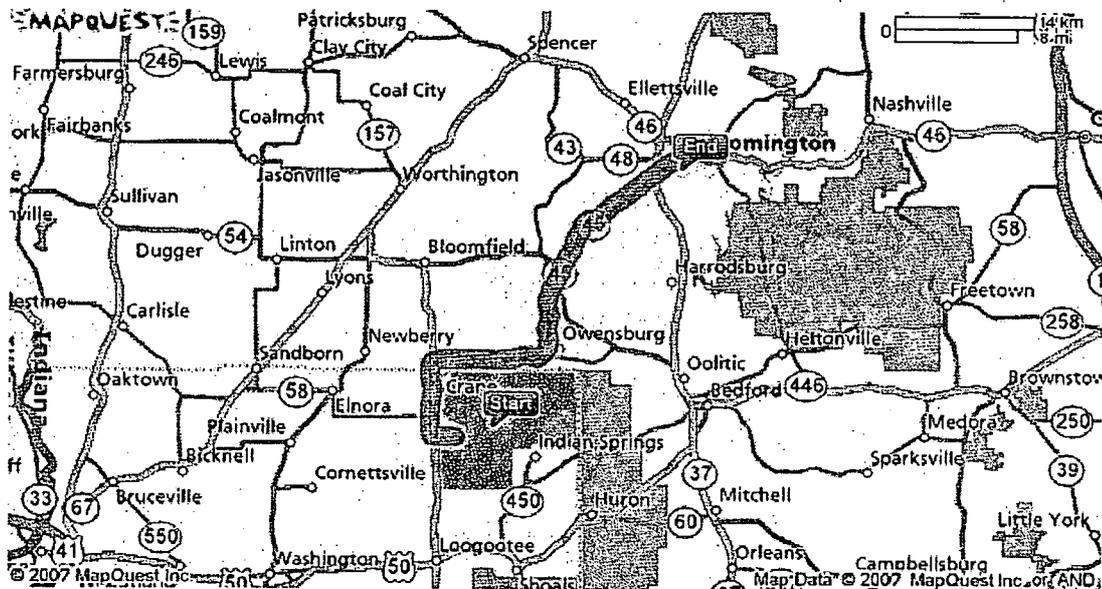
Directions to the Bloomington Hospital:

601 W. 2nd St.  
P.O. Box 1149  
Bloomington, IN 47402

Exit NSWC Crane on H-45 through the Bloomington Gate. Follow Highway 45 North to Bloomington at Highway 45 and Highway 37. Continue going straight over the overpass (Bloomfield Road). Follow Bloomfield Road North; this road turns into 2nd Street. Follow 2nd Street, hospital will be on the right (601 West 2nd Street)

FIGURE 2-1  
MAPS TO  
BLOOMINGTON HOSPITAL ROUTE MAP (BLOOMINGTON GATE)

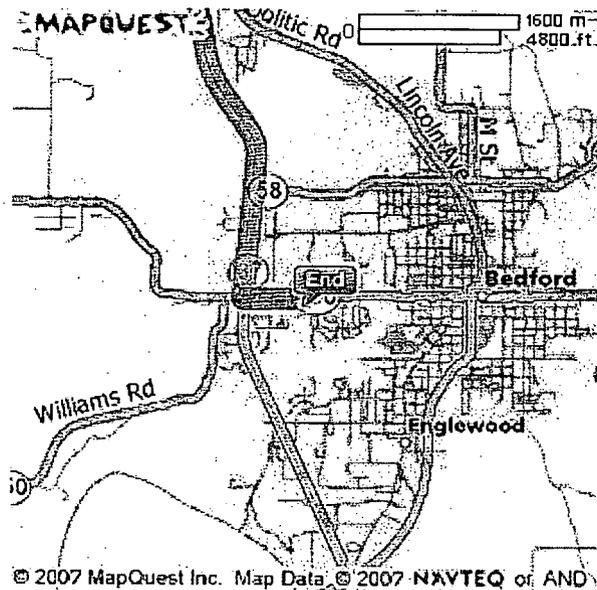
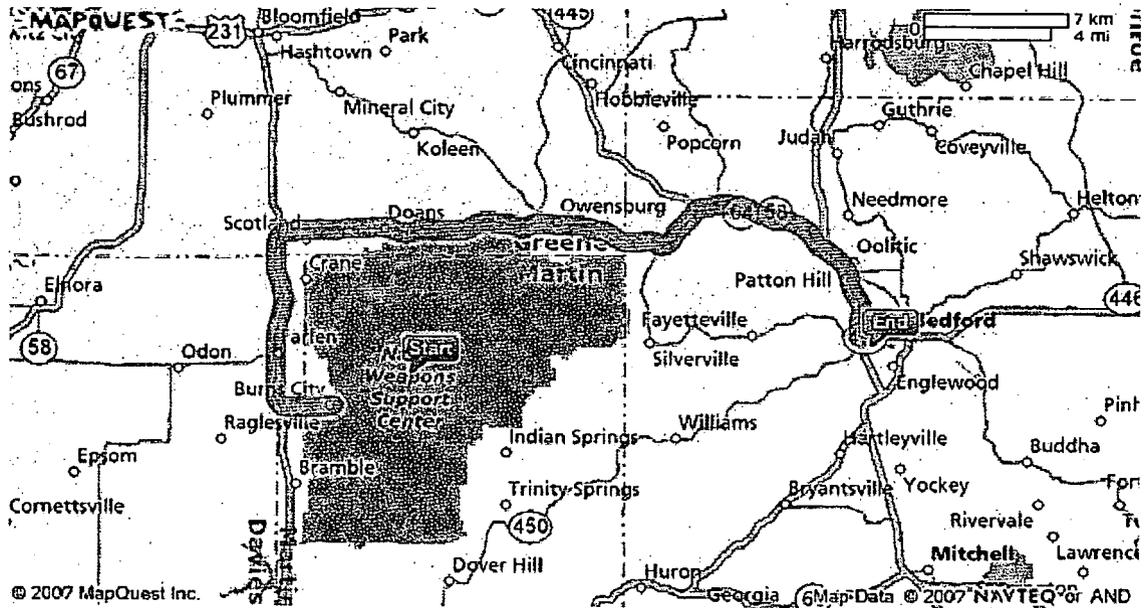
\*\*Note: The Bloomington Gate is open 24 hours.

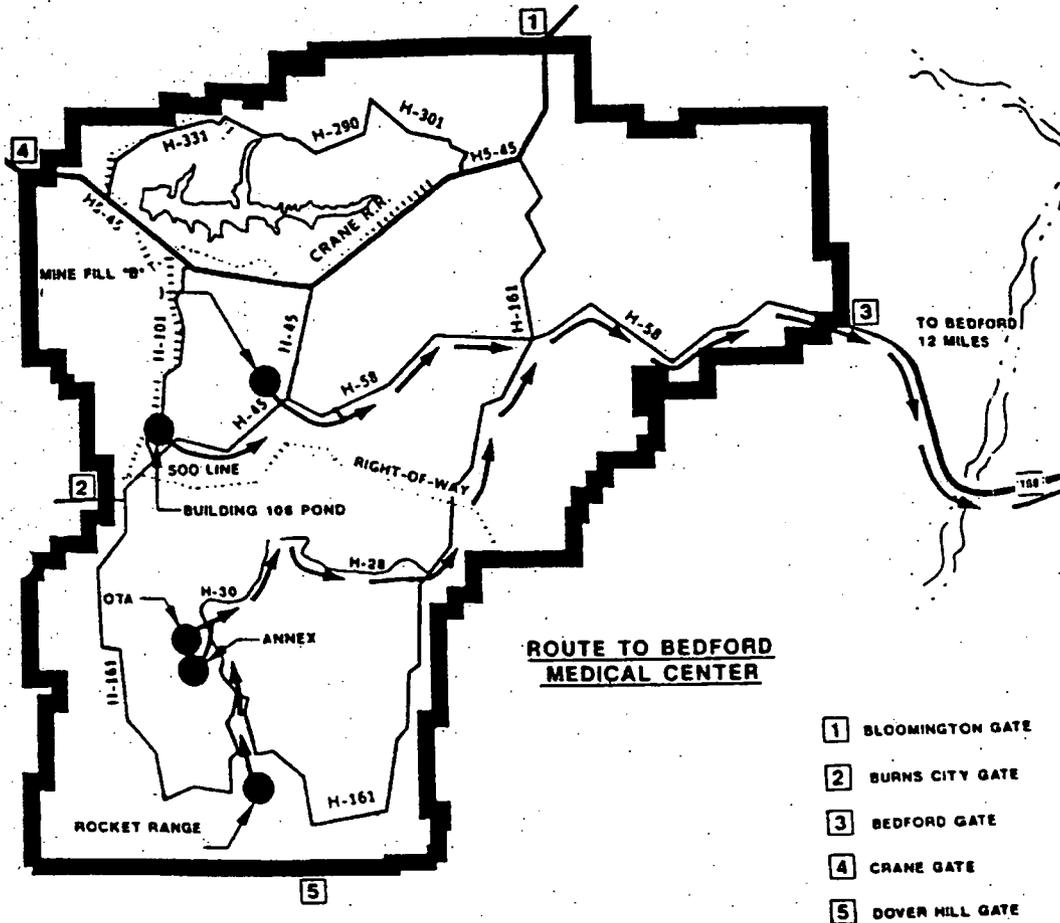




**FIGURE 2-2**  
**MAPS TO**  
**BEDFORD MEDICAL CENTER ROUTE MAP (BEDFORD GATE)**

**\*Note: The Bedford Gate is open only from 0600 - 0830 and 1500 - 1800 hours.**





As soon as possible, the Navy site contact Thomas Brent must be informed of any incident or accident that requires medical attention.

Any pertinent information regarding allergies to medications or other special conditions will be provided to medical services personnel. This information is listed on Medical Data Sheets filed onsite. If an exposure to hazardous materials has occurred, provide hazard information from Table 6-1 to medical service personnel.

## 2.7 EMERGENCY ALERTING AND ACTION/RESPONSE PROCEDURES

TiNUS personnel will be working in close proximity to each other at NSWC. As a result, hand signals, voice commands, and line of site communication will be sufficient to alert site personnel of an emergency. When project tasks are performed simultaneously on different sites, vehicle horns will be used to communicate emergency situations.

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

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

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

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

- On Base, call 854-3300 or 854-1333\* and other appropriate emergency contacts (Table 2-1) and report the emergency. Give the emergency operator the location of the emergency, the type of emergency, the number of injured, and a brief description of what occurred. Stay on the phone and follow the instructions given by the operator. The operator will then notify and dispatch the proper emergency response agencies.

**\*NOTE:** On-base extensions 3300 and 1333 are the primary emergency phone numbers. From an NSWC Crane phone, on Base extensions must be preceded by "854". Off-base numbers can only be reached by dialing "991" first. Furthermore, all emergencies involving site activities should subsequently be reported to the Environmental Protection Department (x -3114/1132/6160).

## 2.8 PPE AND EMERGENCY EQUIPMENT

A first-aid kit, eye wash units (or bottles of disposable eyewash solution) and fire extinguishers (strategically placed) will be maintained onsite and shall be immediately available for use in the event of an emergency. This equipment will be located in the field office as well as in each site vehicle. At least one

first aid kit supplied with equipment to protect against bloodborne pathogens will also be available on site. Personnel identified within the field crew with bloodborne pathogen and first-aid training will be the only personnel permitted to offer first-aid assistance. In addition, due to the fact that the nearest hospital/medical center is over 4 minutes away, a CPR/First Aid trained personnel must be on-site at all times during the times work is being conducted.

## 2.9 DECONTAMINATION PROCEDURES / EMERGENCY MEDICAL TREATMENT

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

TtNUS personnel will perform rescue operations from emergency situations and may provide initial medical support for injury/illnesses requiring only "Basic First-Aid" level support, and only within the limits of training obtained by site personnel. Basic First-Aid is considered treatment that can be rendered by a trained first aid provider at the injury location and not requiring follow-up treatment or examination by a physician (for example; minor cuts, bruises, stings, scrapes, and burns). Not included as Basic First-Aid are second or third degree burns, cuts, lacerations requiring stitches or butterfly bandaging, heat exhaustion, severe poisonous plant or insect bite reactions. Personnel providing medical assistance are required to be trained in First-Aid and in the requirements of OSHA's Bloodborne Pathogen Standard (29 CFR 1910.1030). Medical attention above First-Aid level support will require assistance from the designated emergency response agencies. Attachment II provides the procedure to follow when reporting an injury/illness, and the form to be used for this purpose. **If the emergency involves personnel exposures to chemicals, follow the steps provided in Figure 2-3.**

**FIGURE 2-3**  
**POTENTIAL EXPOSURE PROTOCOL**

The purpose of this protocol is to provide guidance for the medical management of injury situations.

In the event of a personnel injury or accident:

- Rescue, when necessary, employing proper equipment and methods.
- Give attention to emergency health problems -- breathing, cardiac function, bleeding, and shock.
- Transfer the victim to the medical facility designated in this HASP by suitable and appropriate conveyance (i.e. ambulance for serious events)
- Obtain as much exposure history as possible (a Potential Exposure report is attached).
- If the injured person is a Tetra Tech NUS employee, call the medical facility and advise them that the patient(s) is/are being sent and that they can anticipate a call from the WorkCare physician. WorkCare will contact the medical facility and request specific testing which may be appropriate. WorkCare physicians will monitor the care of the victim. Site officers and personnel should not attempt to get this information, as this activity leads to confusion and misunderstanding.
- Call WorkCare at 1-800-455-6155 and enter Extension 109, being prepared to provide:
  - Any known information about the nature of the injury.
  - As much of the exposure history as was feasible to determine in the time allowed.
  - Name and phone number of the medical facility to which the victim(s) has/have been taken.
  - Name(s) of the involved Tetra Tech NUS, Inc. employee(s).
  - Name and phone number of an informed site officer who will be responsible for further investigations.
  - Fax appropriate information to WorkCare at (714) 456-2154.
- Contact Corporate Health and Safety Department (Matt Soltis) and Human Resources Department (Marilyn Duffy) at 1-800-245-2730.

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

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

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

**FIGURE 2-3 (continued)**  
**WORKCARE**  
**POTENTIAL EXPOSURE REPORT**

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

**I. Exposing Agent**

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

Characteristics (if the name is not known)

Solid          Liquid          Gas          Fume          Mist          Vapor

**II. Dose Determinants**

What was individual doing? \_\_\_\_\_

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

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

Was their skin contact? \_\_\_\_\_

Was the exposing agent inhaled? \_\_\_\_\_

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

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

**Immediately With Exposure:**

Burning of eyes, nose, or throat

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: \_\_\_\_\_

## 2.10 INJURY/ILLNESS REPORTING

If any TtNUS personnel are injured or develop an illness as a result of working on site, the TtNUS "Injury/Illness Procedure" (Attachment II) must be followed. Following this procedure is necessary for documenting of the information obtained at the time of the incident.

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

### 3.0 SITE BACKGROUND

NSWC Crane is located in Crane, Indiana approximately 75 miles southwest of Indianapolis and 71 miles northwest of Louisville, Kentucky. The facility encompasses more than 100 square miles (64,463 acres) in Davies, Greene, Lawrence, and Martin Counties. It is located in a rural, sparsely populated area. The acreage surrounding the Base is either wooded or farmed land. The facility, originally called Naval Ammunition Depot (NAD), Burns City, was opened in 1941 to serve as an inland ammunition production and storage center. The Depot's name was changed to NAD, Crane in 1943. In 1975, the name was changed to Naval Weapons Support Center, Crane and in 1992, the name was again changed to Naval Surface Warfare Center, Crane. Today NSWC Crane's mission is to "provide quality and responsive engineering, technical and material support to the Fleet for combat subsystems, equipment and components, microelectronic technology, microwave components, electronic warfare, acoustic sensors tests, engineering pyrotechnics, small arms, electronic module test and system command." Under the Single Service Management Program, a segment of the Center's mission is to provide support (including environmental protection) to the Crane Army Ammunition Activity (CAAA). The Army is tasked with the production and renovation of conventional ammunition and related items, the performance of manufacturing, engineering, and product quality assurance to support production; and the storage, shipment, demilitarization, and disposal of conventional ammunition and related components. Because of the nature of the Army's operations, CAAA contributes significant financial support for the environmental program through an Inter-service Support Agreement.

The Pesticide Control/R-150 Tank Area is located in the central portion of the NSWC Crane, approximately 5 miles northeast of the Burns City Gate No. 2. The site (including space between the three distinct area where site operation did not occur) occupies approximately 11 acres. Site operations were centered around the three areas (Building 55, Building 2189, and the R-150 Tank area) previously identified. The site is bounded on the east by Highway 45.

SWMU 9 is an inactive site composed of three distinct areas: Building 55, Building 2189, and the R-150 Tank area. Pesticide control activities occurred at Buildings 55 and 2189 (which are no longer present at the site). Waste solvents were stored at the R-150 Tank area; the tank has been removed from the site. The three areas are located near each other in a triangular configuration. Building 2189 is 1150 feet north of Building 55. The R-150 Tank area is approximately 800 feet southwest of Building 2189 and 700 feet northwest of Building 55.

Pesticides control activities, which were conducted at the site from 1950 to 1974, consisted of the storage and management of various types and quantities of pesticides and herbicides. The original Pesticide Control Building was Building 55. Around 1970, pesticide control operations were moved from Building 55

to Building 2189. Pesticide spray tanks and containers were reportedly rinsed in the vicinity of Building 2189 on the west side of the building. It is not known whether rinsing activities occurred outside Building 55.

Pesticides control operations ceased at the site around 1974. Buildings 55 and 2189 have since been demolished. Concrete pads are not apparent at the former building locations. Prior sampling activities identified VOCs, Semi-Volatile Organic Compounds (SVOCs), PCBs, pesticides, and metals at the site.

Other areas associated with SWMU 9 include the former fire training area and Building 150. The former fire training area was used to train base personnel to fight fires. The training fire were started with a variety of fuels including diesel fuel and used oils. Building 150 is currently being used as a heat plant with associated above ground fuel tanks and fuel lines.

The Navy construction contractor will be excavating soil contaminated with PCBs, pesticides, and VOCs. Initial excavation location and depth levels will be pre-determined and described in the Interim Measure Work Plan (TtNUS 2007) and are four to seven feet in deep. Tt personnel will collect confirmation samples from within the side walls and floor of the excavation. Test kit analysis of selected soil samples for PCBs will also be conducted. It should be noted that all field activities, including methods of sample collection and analysis, will be conducted as described in the approved QAPP (TtNUS, December 2007) with the exception of additional updated information as described in this HASP Addendum (November 2007).

Additionally, some specific information is available regarding the types of pesticides stored at Building 55. Pesticides and herbicides stored at Building 55 included, but were not limited to, 2,4-D, 2,4,5-T, silvex (a mixture of 2,4-D and 2,4-T), fenac, monuron, ureabor, carbaryl, chlordane, DDT, diazinon, dieldrin, lindane, malathion, and pyrethrum. In addition to the chemicals stored and used at Building 55, the pesticide krovar (a mixture of duron and bromac) was added to the chemical inventory when pesticide control operations were moved from Building 55 to Building 2189.

## 4.0 SCOPE OF WORK

This section describes the project tasks that will be performed at NSWC by TetraTech. The planned activities involved in this effort are presented in detail in the QAPP developed for the project. If new tasks are to be performed at the site this section will be modified accordingly.

Specific tasks to be conducted at SWMU 9 include the following:

- Mobilization and demobilization
- Collection of soil and subsurface samples
- Decontamination of sampling equipment

For more detailed description of the associated tasks refer to the QAPP. If additional tasks are determined to be necessary, this HASP will need to be amended and a hazard evaluation of the additional tasks performed.

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

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

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

### 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.

## 6.0 HAZARD ASSESSMENT AND CONTROLS

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

### 6.1 CHEMICAL HAZARDS

Based on historical information, the predominant chemical substances assumed to be encountered at SWMU 9 predominantly involve pesticides. However, based on previous site investigations, other contaminants have also been detected including metals, polycarbonated biphenyls (PCBs), volatile organic compounds (VOCS), and semi-volatile organic compounds (SVOCs) in surface soils, sediments, surface water, and groundwater. Based on an evaluation of these data all PCB, VOC, and SVOC concentrations do not exceed the ACGIH TLV TWA<sub>8</sub> or the OSHA PEL TWA<sub>8</sub>. As indicated in this table, from a worst-case scenario, only some metal concentrations immediately above a captured air phase above contaminated soil (such as in the head space of a sample jar) would not reach concentrations that exceed the ACGIH TLV TWA<sub>8</sub> or the OSHA PEL TWA<sub>8</sub>. These are summarized in Table 6-1 below.

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

Contaminant of Concern	Highest Concentration Previously Detected in Soils	Amount of Dust in Air that would have to be generated before PEL/TLV would be reached	Current OSHA PEL And ACGIH TLV
<b>Particulates</b>			
Lead	349 mg/kg	35.82 mg/m <sup>3</sup>	OSHA & ACGIH: 0.05 mg/m <sup>3</sup> , TWA <sub>8</sub>
Arsenic	9.6 mg/kg	260.42 mg/m <sup>3</sup>	OSHA & ACGIH: 0.01 mg/m <sup>3</sup> , TWA <sub>8</sub>
Iron (dusts)	20100 mg/kg	62.19 mg/m <sup>3</sup>	ACGIH (salts, soluble) 5 mg/m <sup>3</sup> , TWA <sub>8</sub>
Cobalt	23 mg/kg	217.39 mg/m <sup>3</sup>	OSHA: 0.1 mg/m <sup>3</sup> , ACGIH: 0.02 mg/m <sup>3</sup> , TWA <sub>8</sub>

Table Notes:

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

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

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

## **Metal Properties and Exposure**

**Inhalation:** Based on the data from previous investigations at this worksite, worker exposure to airborne concentrations of these metals that could represent a health concern is considered to be possible, but not highly likely. The amount of dust that would have to be disturbed before an OEL concentration would be approached is well within the range of what is recognized as being visible to the unaided human eye. It is unlikely that workers would encounter airborne concentrations that would represent an inhalation exposure concern.

- the planned work area is outdoors, with ample natural ventilation that will reduce any airborne particulates through dilution and dispersion,
- the soil values used in this evaluation were the *highest* concentration previously detected in the soil.

As a result of these factors, it is very unlikely that workers participating in this activity will encounter any airborne concentrations of the above metals that would represent an occupational exposure concern. In the event that during the on-site activities take place visible dust is seen, workers should follow appropriate PPE as specified in this HASP. Examples of onsite practices that are to be observed that will protect workers from exposure via inhalation include:

- Proper respirator use in the event of visible dust during activities
- Proper PPE use and hygiene care

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

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

## **6.2 PHYSICAL HAZARDS**

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

- Injury due to overexertion from operating the hand auger
- Slip, trips, and falls
- Contact with underground utilities (electric lines, gas lines, water lines, etc.)
- Strain/muscle pulls from heavy lifting
- Ambient temperature extremes (heat/cold stress)
- Pinch/compression points
- Natural hazards (snakes, ticks, poisonous plants, etc.)
- Vehicular and equipment traffic
- Inclement weather
- Heavy equipment hazards (pinch/compression points, rotating equipment, etc.).
- Noise in excess of 85 decibels (dBA)

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 Contact with Underground Utilities**

Underground utilities such as pressurized lines, water lines, telephone lines, buried utility lines, and high voltage power lines are known to be present throughout the facility. Clearance of underground utilities for will be conducted by the Navy construction contractor. Please refer to the contractors SOP for more information.

#### **6.2.3 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.

#### 6.2.4 Ambient temperature extremes (heat/cold 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 cold stress. This is addressed in detail in section 4.0 of the TtNUS Health and Safety Guidance Manual, which the SSO is responsible for reviewing and implementing as appropriate on this project.

In general, four factors contribute to cold stress: cold temperatures, high or cold wind, dampness and cold water. A cold environment forces the body to work harder to maintain its temperature. Cold air, water, and snow all draw heat from the body. Wind chill is the combination of air temperature and wind speed. Early signs of cold stress include shivering, lack of coordination, stumbling, fumbling hands, slurred speech, memory loss, and pale, cold skin, which may be followed by the inability to walk or stand, confusion, severe muscle stiffness or unconsciousness, and eventually death.

To prevent cold stress, the following preventive measures are to be implemented by the SSO:

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

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

### 6.2.5 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.

### 6.2.6 Excavation Confirmation Sampling

Confirmation sampling of the side walls and floor of contractor remediation for PCB's, will be performed by TtNUS personnel who will NOT ENTER THE EXCAVATION AREAS. Entry into the excavation areas will require amendments to the HASP.

## 6.3 NATURAL HAZARDS

Insect/animal bites and stings, poisonous plants, inclement weather, and other natural hazards must be considered given the location of activities to be conducted. In general, avoidance of areas of known infestation or nesting will be the preferred exposure control. Use of additional PPE with joints (ankles and wrists) taped, such as long pants tucked into boots or coveralls, is also recommended. Specific discussion on principle hazards of concern follows:

### 6.3.1 Insect/Animal Bites and Stings

Ticks, insect/animal bites, and stings are difficult to control given the climate and environmental setting of NSW Crane. However, in an effort to minimize this hazard the following control measures will be enacted where possible.

- Commercially available bug sprays and repellents will be used whenever possible – TCLP Pesticides analytical screening includes chlordane, endrin, lindane, methoxychlor, toxathene and heptachlor. Commercially available repellants may be used providing these components are not part of this analyte listing. Products such as DEET should not be applied directly to the skin due to potential irritation. This product, when permitted for use, should be applied over clothing articles.
- Loose fitting light colored clothing with long sleeves, where possible should be worn. This will also aid in insect control by providing a barrier between the field person and the insects and to provide easy recognition of crawling insects against the lighter background. Pant legs should be secured to the work-boots using duct tape to prevent access by ticks. Mosquito nets are also recommended for use when commercially available repellents are not permitted.

- Clothing/limited body checks for ticks and other crawling insects should be conducted upon exiting heavily vegetated areas. Workers should perform a more detailed check of themselves when showering in the evening. Ticks prefer moist areas of the body (arm-pits, genitals, etc.) and will migrate to those locations.
- The FOL/SSO will preview all access routes and work areas in an effort to identify physical hazards including nesting areas in and around the work sites. These areas will be flagged and communicated to all site personnel.
- The FOL/SSO must determine if site personnel (through their Medical Data Sheets), suffer allergic reactions to bee and other insect stings and bites. When personnel are on-site who are predisposed to these conditions, the FOL/SSO will take the appropriate measures to secure physician directed antidotes.

**Note to all personnel:** It is imperative that any allergies be reported on the Medical Data Sheets and to the SSO.

#### **Tick and Mosquito Transmitted Illnesses And Diseases**

Ticks and mosquitoes have been identified in the transmission of diseases including Lyme's disease and malaria. Warm months (Spring through early Fall) are the most predominant time for this hazard. However, due to the climate and environmental setting of NSWC Crane, this hazard may occur year round. Information concerning transmitted Lyme's Disease including recognition, evaluation, tick removal, and control is provided in Section 4.0 of the Health and Safety Guidance Manual.

Malaria may occur when a mosquito or other infected insect sucks blood from an infected person, and the insect becomes the carrier to infect other hosts. The parasite reproduces within the mosquito, and is then is passed on to another person through the biting action. Acute symptoms include chills accompanied by fever and general flu like symptoms. This generally terminates in a sweating stage. These symptoms may recur every 48 to 72 hours.

Conditions such as this should not be taken for granted and should be reported to the SSO immediately.

## Snakes and Other Wild Animal Encounters

Indigenous animals including snakes (poisonous and non-poisonous varieties), raccoons, and other animals native to the region may have to be contended with. These animals may be encountered if work locations encroach on nesting or territories claimed by these animals.

To avoid the obvious hazards conveyed as part of a direct encounter, the following actions will be taken to minimize impact on the field crews and/or operations.

- FOL/SSO will preview access routes and work locations for nesting areas or signs of animal activities (tracks, foraging areas, etc.). All identified suspect areas will be communicated to the field crews. To the extent possible, suspected nesting/habitat areas are to be avoided. Otherwise, snake chaps will be required as a precaution.

### 6.3.2 Poisonous Plants

Various plants that can cause allergic reactions may be encountered during fieldwork. These include, but may not be limited to, poison ivy, poison oak, and poison sumac. Contact of field personnel with previous plants may occur when clearing vegetation for access to work areas, or through movement through these plants. An irritating, allergic reaction can occur when direct contact is achieved between the plant and the bare skin of a field person, or the plant and some piece of equipment or clothing article that then later comes in contact with the bare skin of a field person. Oils are transferred from the plant to exposed skin, clothing, or piece of equipment. The degree of the irritating, allergic reaction can vary significantly from one person to the next.

Protective measures to control and minimize the effects of this hazard may include, but not limited to, the following:

- Identify plants for field personnel.
  - Poison Ivy - Characterized by climbing vines, three leaf configuration ovate to elliptical in shape, deep green leaves with a reddish tint, greenish flowers, and white berries.
  - Poison Sumac - Characterized as a tall bush of the sumac family bearing compound leaves (7-13 entire leaflets), branched from a central axis, drooping, with auxiliary clusters of white fruit.

**NOTE:** These white fruits and berries may exist only during pubescent stages.

- Poison oak - Characterized as similar to poison ivy consisting of a shrub, stems erect, 0.3 to 2.0 meters tall, leaflets consist of broad thick lobes coarsely serrated configuration, denser at the base, less so than the top.
- Protective measures may include wearing disposable garments such as Tyvek when clearing brush. These may be carefully removed and disposed of along with any oils accumulated from the plants.
- Personal Hygiene - The oils obtained from the plants will only elicit an allergic response when the person's bare skin layer is contacted. This can be aggravated through skin pores open when perspiring, or through breaks in the skin such as cuts, nicks, scratches, etc.. This can also be accomplished when using excessively hot water for cleaning the skin, which also causes pores to open. Prior to break time, lunchtime, etc. personnel should wash with cool water and soap to remove as much of the oils as possible. In heavily vegetated areas of these plants, additional measures including barrier creams and blocks may be used to prevent the oils from accessing and penetrating the skin.

All of these plants present an airborne sensitization hazard when burned. This is not to occur as part of this scope of work and therefore will not be addressed.

### **6.3.3 Inclement Weather**

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

### **6.3.4 Heavy Equipment Hazards (Pinch/compression points, rotating equipment, etc.)**

Often the hazards associated with drilling operations are the most dangerous to be encountered during site activities. The SSO will thoroughly discuss safe drilling procedures during the pre-activities training session. All site personnel will sign the form in Figure 8-2 documenting that they received the training and understand the procedures.

### **6.3.5 Noise in excess of 85 decibels (dBA)**

Some sampling procedures/heavy equipment operation causes noise in excess of 85 decibels. When sampling at the drilling equipment or utilizing heavy equipment that causes noise, use hearing protection. The use of hearing protection outside of 25 feet from the heavy equipment should be incorporated under

the following condition: If you have to raise your voice to talk to someone who is within 2 feet of your location, hearing protection must be worn.

**6.3.6 Flying Projectiles**

The use of some heavy equipment and power washers carry a risk of flying projectiles. Use eye and face protective equipment when operating such equipment. All other personnel must be restricted from the area.

## 7.0 AIR MONITORING

None of the contaminants are expected to be present in significant concentrations to present an inhalation hazard during planned site activities. As a precautionary measure to assure that such exposures are avoided and documented, a direct reading instrument will be used to monitor worker exposures to chemical hazards present at the site. For this project, based on the properties of the primary contaminant of concern (i.e., PCE), either a Photoionization Detector (PID) or a Flame Ionization Detector (FID) may be used to monitor the air.

### 7.1 INSTRUMENTS AND USE

Instruments will be used primarily to monitor source points and worker breathing zone areas, while observing instrument action levels. The SSO shall obtain and document the daily background (BG) reading at an upwind, unaffected area and observe for readings above that BG level. The SSO shall monitor source areas (e.g., above collected samples and confined areas, etc.) for the presence of any reading above the daily-established BG level. If elevated readings are observed, the SSO shall monitor the workers breathing zone (BZ) areas with the FPI/FID. If the appropriate instrument Action Level is exceeded (see below), the following process will be followed:

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

**Instrument Action Levels:** The use of either a PID or an FID and a LEL/O<sub>2</sub> meter will be acceptable, provided that the following action levels are observed:

- PID Action Level: 18 ppm above BG in BZ areas.
- FID Action Level: 18 ppm above BG in BZ areas.

## 7.2 INSTRUMENT MAINTENANCE AND CALIBRATION

Hazard monitoring instruments will be maintained and pre-field calibrated by the TtNUS Equipment Manager. Operational checks and field calibration will be performed on all instruments each day prior to their use. Field calibration will be performed on instruments according to manufacturer's recommendations (for example, the PID must be field calibrated daily and an additional field calibration must be performed at the end of each day to determine any significant instrument drift). These operational checks and calibration efforts will be performed in a manner that complies with the employees health and safety training, the manufacturer's recommendations, and with the applicable manufacturer standard operating procedure (copies of which can be found in the Health & Safety Guidance Manual which will be maintained on site for reference). All calibration efforts must be documented. Figure 7-1 is provided for documenting these calibration efforts. This information may instead be recorded in a field operations logbook, provided that all of the information specified in Figure 7-1 is recorded. This required information includes the following:

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

## 7.3 DOCUMENTING INSTRUMENT READINGS

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

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

- Date, time, and duration of the reading
- Site location where the reading was obtained
- Instrument used (e.g., PID, FID, LEL/02 meter, etc.)
- Personnel present at the area where the reading was noted
- Other conditions that are considered relevant to the SHSO (such as weather conditions, possible instrument interferences, etc.)



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

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

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

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

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

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

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

### **8.3 MEDICAL SURVEILLANCE**

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

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

#### **8.4 SITE VISITORS**

All site visitors to the site must be 100% escorted at all times and restricted from approaching any work areas where they could be exposed to hazards from TtNUS operations. If a visitor has authorization from the client and from the TtNUS Project Manager to approach our work areas, the FOL must assure that the visitor first provides documentation indicating that he/she/they have successfully completed the necessary OSHA introductory training, receive site-specific training from the SSO, and that they have been physically cleared to work on hazardous waste sites.



## 9.0 SITE CONTROL

This section outlines the means by which TtNUS will delineate work zones and use these work zones in conjunction with decontamination procedures to prevent the spread of contaminants into previously unaffected areas of the site. It is anticipated that a three-zone approach will be used during work at this site. This approach will be comprised of an exclusion zone, a contamination reduction zone, and a support zone. It is also anticipated that this approach will control access to site work areas, restricting access by the general public, minimizing the potential for the spread of contaminants, and protecting individuals who are not cleared to enter work areas.

### 9.1 EXCLUSION ZONE

The exclusion zone will be considered those areas of the site of known or suspected contamination and where excavations have taken place. The Navy contractor will establish the exclusion zones and any storage areas. It is not anticipated that significant amounts of soil contamination are present in the proposed work areas of this site. Furthermore, once intrusive activities have been completed and soil contamination has been removed, the potential for exposure is again diminished and the area can then be reclassified as part of the contamination reduction zone. Therefore, the exclusion zones for this project will be limited to those areas of the site where active work is being performed plus a designated area surrounding the point of operation. When possible, exclusion zones will be delineated using barrier tape, cones and/or drive poles, and postings to inform site personnel.

#### 9.1.1 Exclusion Zone Clearance

Prior to the initiation of site activities, utility locations will be identified by the Navy contractor, EMAC. In the event that a utility truck is struck during an investigative activity, the emergency numbers provide in Table 2-1 will be notified.

Access to work areas will also be controlled by EMAC personnel. No personnel will be permitted to enter site exclusion zones without site-specific training. Site visitors will be provided site-specific training and will be escorted by TtNUS personnel at all times (see section 9.4).

### 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. The personnel and equipment decontamination will not take place in this area, but will take place at a central location established for this project. This area instead will serve as a focal point in supporting exclusion zone activities. When applicable, this area will

be delineated using barrier tape, cones and/or drive poles, and postings to inform and direct facility personnel.

### **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. In all cases, 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**

All 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 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.

### **9.5 SITE VISITORS**

Site visitors for the purpose of this document are identified as representing the following groups of individuals and all site visits will be controlled by EMAC.

- Personnel invited to observe or participate in operations by TtNUS
- Regulatory personnel (EPA, OSHA, etc.)
- NSWC personnel
- Other authorized visitors

### **9.6 SITE SECURITY**

Site security will be accomplished by EMAC. 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 on site activities will practice the "buddy system" to ensure the safety of personnel involved in this operation.

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

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

**9.9 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 NSWCC Crane, the FOL will determine and arrange for telephone communications.

**FIGURE 9-1  
SAFE WORK PERMIT**

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

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

**II. Primary Hazards:** Potential hazards associated with this task:  
 \_\_\_\_\_  
 \_\_\_\_\_

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

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

**V. Protective equipment required** **Respiratory equipment required**  
 Level D  Level B  Yes  Specify on the reverse  
 Level C  Level A  No   
 Modifications/Exceptions: \_\_\_\_\_

VI. Chemicals of Concern	Hazard Monitoring	Action Level(s)	Response Measures
_____	_____	_____	_____
_____	_____	_____	_____
<b>Primary Route(s) of Exposure/Hazard:</b> _____			

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

**VII. Additional Safety Equipment/Procedures**

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

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

**VIII. Site Preparation**

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

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

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

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

## **10.0 SPILL CONTAINMENT PROGRAM**

### **10.1 SCOPE AND APPLICATION**

It is not anticipated that quantities of bulk potentially hazardous materials (greater than 55-gallons) will be handled during some of the site activities conducted as part of the scope of work (including Investigative-Derived Wastes [IDW]). It is also not anticipated that spillage of these materials would constitute a significant danger to human health or the environment. Further, it is possible that as the job progresses disposable PPE and other non-reusable items will be generated. As needed, 55 -gallon drums will be used to contain waste waters, IDW, and other unwanted items generated during investigatory activities. Any aqueous IDW will be transported to the sewer systems and discharged to the NSWC Industrial Sewer System. PPE will be disposed into trash dumpsters. Soil IDW will be left on-site.

### **10.2 POTENTIAL SPILL AREAS**

Potential spill areas will be monitored in an ongoing attempt to prevent and control further potential contamination of the environment. Currently, there are various areas vulnerable to this hazard including the areas used for central staging and decontamination activities. Additionally, areas designated for handling, loading, and unloading of potentially contaminated soils, waters, and debris present limited potential for leaks or spills. It is anticipated that all IDW generated as a result of this scope of work will be disposed of on-site.

### **10.3 PERSONNEL TRAINING AND SPILL PREVENTION**

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

### **10.4 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 Prevention/Containment Program.

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

## 10.5 SPILL CONTROL PLAN

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

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

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

## 11.0 CONFINED-SPACE ENTRY

It is anticipated, under the proposed scope of work, that a confined space entry will be conducted into excavation areas deeper than four feet on some occasions.

The Tetra Tech NUS "Confined Space Entry Operations Program" is included as Attachment V. A Safe Work Permit for this task is also included in Attachment III. Field personnel specifically trained under the guidelines of OSHA 29 CFR 1910.146 will be assigned to this project.

This entry into any excavation area over four feet will be conducted consistent with the requirements of the TtNUS Confined Space Entry Operations Program. Based on previous results, there is evidence to suggest that chemical and/or physical hazards could be present within the space. The steps being taken to test and document the results, therefore, are considered prudent precautions when entering any confined space. Should other than background concentrations of agents (toxics, and/or oxygen deficiency) be detected, operations shall cease and the PHSO and the HSM shall be notified.

For further information on confined space, consult the TtNUS Health and Safety Guidance Manual, Attachment IV, or call the PHSO.

## 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)
- Training/Medical Surveillance Documentation Form (Blank)
- First-Aid Supply Usage Form
- Emergency Reference Form (Section 2.0, extra copy for posting)
- Directions to the Hospital

### 12.1 MATERIALS TO BE POSTED AT THE SITE

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

- **Chemical Inventory Listing (posted)** - This list represents all chemicals brought on-site, including decontamination solutions, sample preservations, fuel, etc. This list should be posted in a central area.
- **MSDSs (maintained)** - The MSDSs should also be in a central area accessible to all site personnel. These documents should match all the listings on the chemical inventory list for all substances employed on-site. It is acceptable to have these documents within a central folder and the chemical inventory as the table of contents.
- **The OSHA Job Safety & Health Protection Poster (posted)** - This poster should be conspicuously posted in places where notices to employees are normally posted, as directed by 29 CFR 1903.2 (a)(1). Each FOL shall ensure that this poster is not defaced, altered, or covered by other material. The law also states that reproductions or facsimiles of the poster shall be at least 8 1/2 by 14 inches with 10 point type.

- **Site Clearance (maintained)** - This list is found within the training section of the HASP (Figure 8-1). This list identifies all site personnel, dates of training (including site-specific training), and medical surveillance. The list indicates not only clearance, but also status. If personnel do not meet these requirements, they do not enter the site while site personnel are engaged in activities.
- **Emergency Phone Numbers and Directions to the Hospital(s) (posted)** - This list of numbers and directions will be maintained at all phone communications points and in each site vehicle.
- **Medical Data Sheets/Cards (maintained)** - Medical Data Sheets will be filled out by on-site personnel and filed in a central location. The Medical Data Sheet will accompany any injury or illness requiring medical attention to the medical facility. A copy of this sheet or a wallet card will be given to all personnel to be carried on their person.
- **Personnel Monitoring (maintained)** - All results generated through personnel sampling (levels of airborne toxins, noise levels, etc.) will be posted to inform individuals of the results of that effort.
- **Placards and Labels (maintained)** - Where chemical inventories have been separated because of quantities and incompatibilities, these areas will be conspicuously marked using DOT placards and acceptable [Hazard Communication 29 CFR 1910.1200(f)] labels.

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

### 13.0 ACRONYMS / ABBREVIATIONS

CFR	Code of Federal Regulations
CIH	Certified Industrial Hygienist
CLEAN	Comprehensive Long-Term Environmental Action Navy
CSP	Certified Safety Professional
DRI	Direct Reading Instrument
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
NRL	Naval Research Laboratory
N/A	Not Available
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Safety and Health Administration (U.S. Department of Labor)
PHSO	Project Health and Safety Officer
PPE	Personal Protective Equipment
SSO	Site Safety Officer
TBD	To be determined
PM	Project Manager
TtNUS	Tetra Tech NUS, Inc.
VOCs	Volatile Organic Compounds

**ATTACHMENT I**

**MEDICAL DATA SHEET**

## MEDICAL DATA SHEET

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

Project \_\_\_\_\_

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

Address \_\_\_\_\_

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

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

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

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

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

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

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

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

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### **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 the can accompany an injured party to the hospital.

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

\_\_\_\_\_

\_\_\_\_\_  
Name (Print clearly)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**ATTACHMENT II**

**INCIDENT REPORT FORM**



Form with sections: Report Date, Report Prepared By, Incident Report Number; INSTRUCTIONS; TYPE OF INCIDENT (Check all that apply); INFORMATION ABOUT THE INCIDENT; Description of Incident; Date of Incident; Time of Incident; Weather conditions at the time of the incident; Was there adequate lighting?; Location of Incident; Was location of incident within the employer's work environment?; Street Address; City, State, Zip Code and Country; Project Name; Client; TI Supervisor or Project Manager; Was supervisor on the scene?; 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:

Blank lines for corrective actions taken immediately.

Corrective action(s) still to be taken (by whom and when):

Blank lines for corrective actions still to be taken.

ROOT CAUSE ANALYSIS LEVEL REQUIRED

Root Cause Analysis Level Required: Level - 1 [ ] Level - 2 [ ] None [ ]

Root Cause Analysis Level Definitions

Level -1

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.

The following events may trigger a Level 1 RCA:

- 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

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.

The following events will require a Level 2 RCA:

- 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

Table with 5 columns: Title, Printed Name, Signature, Telephone Number, Date. Rows include Project Manager or Supervisor, Site Safety Coordinator or Office H&S Representative, Operating Unit H&S Representative, and Other.

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

### INSTRUCTIONS:

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

Incident Report Number: (From the IR Form)

### EMPLOYEE INFORMATION

#### Company Affiliation

Tetra Tech Employee?

TetraTech subcontractor employee (directly supervised by Tt personnel)?

Full Name

Company (if not Tt employee)

Street Address, City, State and Zip Code

Address Type

Home address (for Tt employees)

Business address (for subcontractors)

#### Telephone Numbers

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

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

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

Occupation (regular job title)

Department

Was the individual performing regular job duties?

Yes  No

Time individual began work

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

#### Safety equipment

Provided? Yes  No

Type(s) provided:  Hard hat  Protective clothing

Used? Yes  No  If no, explain why

Gloves  High visibility vest

Eye protection  Fall protection

Safety shoes  Machine guarding

Respirator  Other (list)

### NOTIFICATIONS

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

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

Yes  No

Date of report

H&S Personnel Notified

Time of report

Time of Report

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

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

### INJURY/ILLNESS DETAILS

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

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

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

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### MEDICAL CARE PROVIDED

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

---

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

<b>Name of physician or health care professional</b>	<b>Facility Name</b>
<b>Street Address, City State and Zip Code</b>	<b>Type of Care?</b>
<b>Telephone Number</b>	Was individual treated in emergency room? Yes <input type="checkbox"/> No <input type="checkbox"/>
	Was individual hospitalized overnight as an in-patient? Yes <input type="checkbox"/> No <input type="checkbox"/>
	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

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

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

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

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

**NOTIFICATIONS**

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

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

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

### INSTRUCTIONS:

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

Incident Report Number: (From the IR Form)

### INCIDENT DETAILS

Name of road, street, highway or location where accident occurred

Name of intersecting road, street or highway if applicable

County

City

State

Did police respond to the accident?

Yes  No

Did ambulance respond to the accident?

Yes  No

Name and location of responding police department

Ambulance company name and location

Officer's name/badge #

Did police complete an incident report? Yes  No  If yes, police report number: \_\_\_\_\_

Request a copy of completed investigation report and attach to this form.

### VEHICLE INFORMATION

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

Vehicle Number 1 - Tetra Tech Vehicle

Vehicle Number 2 - Other Vehicle

Vehicle Owner / Contact Information

Vehicle Owner / Contact Information

Color

Color

Make

Make

Model

Model

Year

Year

License Plate #

License Plate #

Identification #

Identification #

Describe damage to vehicle number 1

Describe damage to vehicle number 2

Insurance Company Name and Address

Insurance Company Name and Address

Agent Name

Agent Name

Agent Phone No.

Agent Phone No.

Policy Number

Policy Number

### DRIVER INFORMATION

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

### PASSENGERS IN VEHICLES (NON-INJURED)

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

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

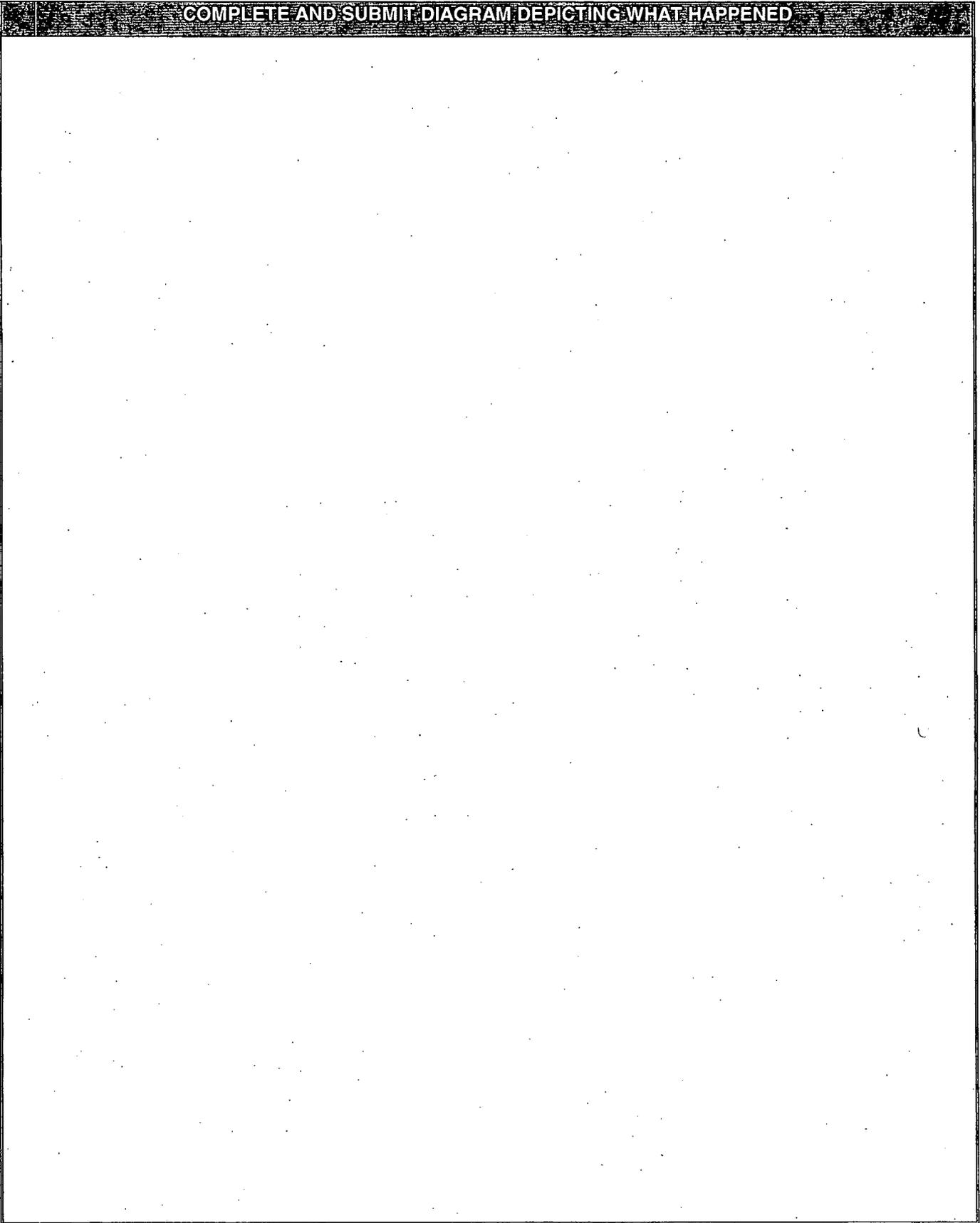
### INJURIES TO NON-TETRA TECH EMPLOYEES

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



**ATTACHMENT III**

**SAFE WORK PERMITS**

**SAFE WORK PERMIT  
DECONTAMINATION ACTIVITIES  
NSWC CRANE**

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

**SECTION I: General Job Scope**

- I. **Work limited to the following (description, area, equipment used):** Decontamination of sampling equipment will be decontaminated using buckets, brushes and spray bottles at the work site or designated location.
- II. **Primary Hazards:** Potential hazards associated with this task include lifting (strain/muscle pulls lifting heavy drilling equipment); Flying projectiles propelled by the force of the pressure washer/stream cleaner; noise in excess of 85 dBA; Burns/water lacerations; Stacked equipment - falling hazards; slips, trips, and falls - slippery surfaces. The direction provided in this HASP and this Safe Work Permit are directed at controlling these hazards.
- 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   
 Modifications/Exceptions: None anticipated
- Respiratory equipment required**  
 Yes  Specify on the reverse  
 No

VI. Chemicals of Concern	Hazard Monitoring	Action Level(s)	Response Measures
Liquinox (soap)	None Required	None	Eye irritant/flush with clean water

**Primary Route of Exposure/Hazard:** Soap - Contact - Eye irritant; ingestion - nausea possible vomiting, diarrhea; Exposure to residual site contaminants during this activity is considered negligible.

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

**VII. Additional Safety Equipment/Procedures**

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

Modifications/Exceptions: If contact with overspray is likely, Impermeable aprons may be used at SSO's discretion. Another option is to use rainsuit or PE coated Tyvek. Hard hat, splash shield, hearing protection will be worn for pressure washer/steam cleaner operation. Gloves - Nitrile (surgeons style) or outer for deconning sampling (hand) tools, nitrile supported for steam cleaner/pressure washer operation. Overboots will be used when working in the temporary decon pad.

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 for this task. Construct pad for Decontamination. Use drying racks to secure heavy equipment to prevent items from falling during washing and drying. In addition, do NOT point the wand at other people or place it against any part of your body. Accidental compression of the trigger can cause water lacerations or burns. All hoses and fittings will be inspected to insure structural integrity prior to use. For pressure washers or steam cleaners in excess of 3,000 psi, a fan tip of 25° or greater will be used to control potential for water cuts or lacerations. A light coating of sand should be applied to the plastic liner should the surface becomes to slippery to prevent slips. Keep hoses gathered to prevent trips and falls. A site control boundary for this activity is 35-feet surrounding the point of operation. Follow MSDS for any decontamination solutions/solvents used.

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

**SAFE WORK PERMIT**  
**MOBILIZATION/DEMobilIZATION ACTIVITIES**  
**NSWC CRANE**

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

**SECTION I: General Job Scope**

- I. **Work limited to the following (description, area, equipment used):** Mobilization and demobilization activities. These activities include site reconnaissance/site characterization, site preparation including the layout of sampling locations, and identifying/isolating physical hazards; Secure, construct, or equip IDW storage facilities to support the field activities.
- II. **Primary Hazards:** Potential hazards associated with this task are primarily physical in nature including lifting, cuts and lacerations, pinches and compressions; flying projectiles; slips, trips, and falls; insect and animal bites. The direction provided in this HASP and this Safe Work Permit are directed at controlling these hazards. It should be noted that not every situation can be anticipated. Site personnel will therefore have to conduct on-site hazard assessments on a per task basis and employ controls as necessary.
- III. **Field Crew:** \_\_\_\_\_
- IV. **On-site Inspection conducted**  Yes  No      Initials of Inspector \_\_\_\_\_ TtNUS  
**Equipment Inspection required**  Yes  No      Initials of Inspector \_\_\_\_\_ TtNUS

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

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

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

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

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

- VII. **Additional Safety Equipment/Procedures**
- |                                    |   |  |   |
|------------------------------------|---|--|---|
| Hard-hat .....                     | <input 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 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 - <u>Leather/Cotton</u> ) ..... | <input type="checkbox"/> Yes <input type="checkbox"/> No            |
| Impermeable apron .....            | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Work/rest regimen.....                       | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Steel toe Work shoes or boots..... | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Chemical Resistant Boot Covers .....         | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| High Visibility vest .....         | <input type="checkbox"/> Yes <input 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 type="checkbox"/> No            | Other .....                                  | <input type="checkbox"/> Yes <input type="checkbox"/> No            |

Modifications/Exceptions: If there are Flying projectiles- Safety glasses and/or splash shield (i.e., hammering, power tool operation); If you have to raise your voice to be heard by someone within 2-feet of you hearing protection is required (i.e., equipment/power tool operation); If overhead hazards or bump hazards or you are working near operating equipment hard hats will be employed. If you are working in or near traffic patterns then wear High Visibility Vests. Use insect repellent and tape up to protect against insects and insect bites. Wear snake chaps in high brush 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 .....	<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 for this task. Caution should be exercised if working along the water. The potential for natural hazards including snakes, alligators may exist given the region.

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

**SAFE WORK PERMIT**  
**CONFIRMATION SAMPLING ACTIVITIES**  
**NSWC CRANE**

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

- I. **Work limited to the following (description, area, equipment used):** Sampling activities including soil and subsurface soil at SWMU 9
- II. **Primary Hazards:** Chemical contamination, transfer contamination, pinch/compression, lifting, slips, trips and falls, vehicular and foot traffic, ambient temperature extremes, insect/animal bites, stings, poisonous plants, and inclement weather

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

IV. **On-site inspection conducted**  Yes  No Initials of Inspector TtNUS  
**Equipment inspection required**  Yes  No Initials of Inspector TtNUS

V. **Protective equipment required** **Respiratory equipment required**  
 Level D  Level B  Yes  Specify on the reverse  
 Level C  Level A  No   
 Modifications/Exceptions: \_\_\_\_\_

VI. Chemicals of Concern	Hazard Monitoring	Action Level(s)	Response Measures
<u>Total dust (metals)</u>	<u>visible dust</u>	<u>significantly sustained amounts of visible dust</u>	<u>suspend activity until dust subsides or use area wetting techniques</u>
_____	_____	_____	_____
Primary Route(s) of Exposure/Hazard: <u>inhalation</u>			

(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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No            | Safety belt/harness ..... <input type="checkbox"/> Yes <input type="checkbox"/> No                       |
| Chemical/splash goggles ..... <input type="checkbox"/> Yes <input type="checkbox"/> No              | Radio/cellular phone ..... <input type="checkbox"/> Yes <input type="checkbox"/> No                      |
| Splash shield..... <input type="checkbox"/> Yes <input checked="" 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 – surgical style )..... <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 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 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: Double layer gloves if necessary, Tyvek coveralls and disposable boot covers if surface contamination present or potential for soiling clothes. No hand to mouth activities and wash hands upon leaving work area and prior to hand to mouth activities.

- 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:** Tt personnel will not enter the excavation areas or confined spaces.

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

SAFE WORK PERMIT

IDW MANAGEMENT

NSWC CRANE

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 soil cutting, purge and decontamination wash waters.
II. Primary Hazards: Potential hazards associated with this task are primarily physical in nature including lifting, pinches and compressions; flying projectiles; slips, trips, and falls.
IV. Field Crew:
IV. On-site Inspection conducted [ ] Yes [ ] No Initials of Inspector TINUS
Equipment Inspection required [ ] Yes [X] No Initials of Inspector TINUS

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

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

Table with 4 columns: VI. Chemicals of Concern, Hazard Monitoring, Action Level(s), Response Measures. Row 1: Total dust (metals), visible dust, significantly sustained amounts of visible dust, suspend activity until dust subsides or use area wetting techniques.

Primary Route of Exposure/Hazard: None

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

VII. Additional Safety Equipment/Procedures

- Hard-hat [ ] Yes [ ] No
Safety Glasses [ ] Yes [ ] No
Chemical/splash goggles [ ] Yes [ ] No
Splash Shield [ ] Yes [X] No
Splash suits/coveralls [ ] Yes [X] No
Impermeable apron [ ] Yes [X] No
Steel toe Work shoes or boots [X] Yes [ ] No
High Visibility vest [ ] Yes [X] No
First Aid Kit [X] Yes [ ] No
Safety Shower/Eyewash [ ] Yes [X] No
Hearing Protection (Plugs/Muffs) [ ] Yes [X] No
Safety belt/harness [ ] Yes [X] No
Radio/Cellular Phone [ ] Yes [ ] No
Barricades [ ] Yes [ ] No
Gloves (Type - Leather/Cotton) [X] Yes [ ] No
Work/rest regimen [ ] Yes [X] No
Chemical Resistant Boot Covers [ ] Yes [X] No
Tape up/use insect repellent [ ] Yes [ ] No
Fire Extinguisher [ ] Yes [ ] No
Other [ ] Yes [ ] 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. Use visual observation on all equipment and/or areas which have been cleaned and dried to ensure they have been properly cleaned of potentially contaminated media (water, dust, soils, etc.). No hand to mouth activities and wash hands upon leaving work area and prior to hand to mouth activities.

VIII. Site Preparation

- Utility Locating and Excavation Clearance completed [ ] Yes [ ] No [X] NA
Vehicle and Foot Traffic Routes Established/Traffic Control Barricades/Signs in Place [ ] Yes [ ] No [ ] NA
Physical Hazards Identified and Isolated [ ] Yes [ ] No [ ] NA
Emergency Equipment Staged (Spill control, fire extinguishers, first aid kits, etc.) [ ] Yes [ ] No [ ] NA

IX. Additional Permits required (Hot work, confined space entry, excavation etc.) [ ] Yes [X] 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

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

**ATTACHMENT IV  
OHSA POSTER**

# Job Safety and Health

## It's the law!

### EMPLOYEES:

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

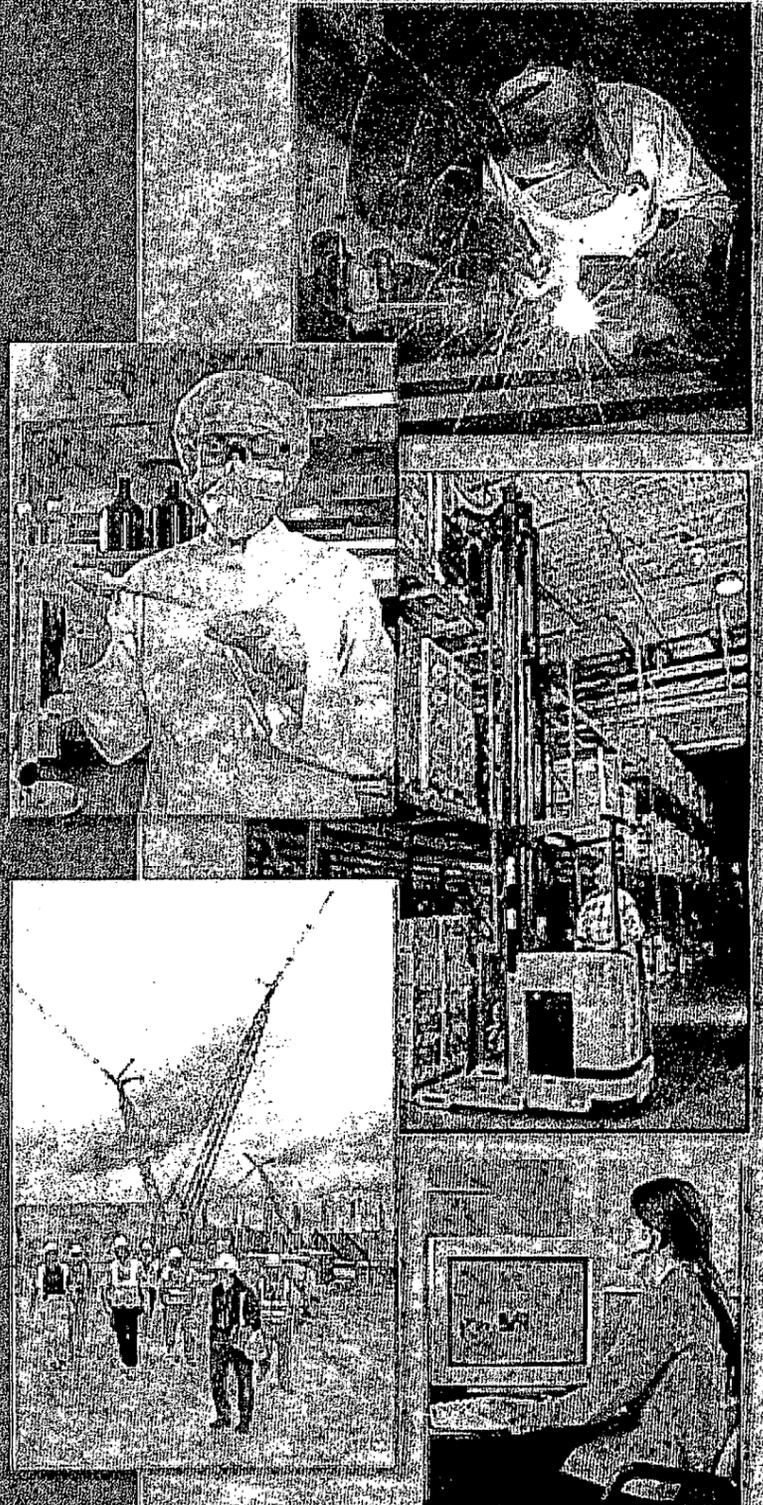
### EMPLOYERS:

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

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

# OSHA

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



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

**1-800-321-OSHA**

[www.osha.gov](http://www.osha.gov)

OSHA 3165-12 00R