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HEALTH AND SAFETY PLAN SITE 10 NCBC GULFPORT MS
9/1/2003
TETRA TECH NUS

HEALTH AND SAFETY PLAN
For
SITE 10 FIELD INVESTIGATION
At the
NAVAL CONSTRUCTION BATTALION CENTER
GULFPORT
GULFPORT, MISSISSIPPI



Southern Division
Naval Facilities Engineering Command
Contract Number N62467-94-D-0888
Contract Task Order 0288

September 2003

**HEALTH AND SAFETY PLAN
FOR
SITE 10 FIELD INVESTIGATION
AT THE
NAVAL CONSTRUCTION BATTALION CENTER GULFPORT
GULFPORT, MISSISSIPPI**

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

**Submitted to:
Southern Division
Naval Facilities Engineering Command
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**CONTRACT NUMBER N62467-94-D-0888
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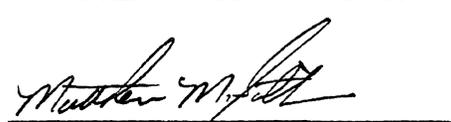
SEPTEMBER 2003

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1.0 INTRODUCTION

The objective of this Health and Safety Plan (HASP) is to provide the minimum safety practices and procedures to Tech NUS (TtNUS) personnel conducting well installation and media sampling activities which support Site Evaluation activities at the Naval Construction Battalion Center, located in Gulfport Mississippi.

This HASP has been prepared using the latest available information regarding known or suspected chemical contaminants and potential and foreseeable physical hazards associated with the planned work at Naval Construction Battalion Center (NCBC) Gulfport. 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 procedures to be performed on site as directed by the HASP, as well as TtNUS standard operating procedures.

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

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

1.1 AUTHORITY

This work is authorized under the Comprehensive Long - Term Environmental Action Navy (CLEAN) contract, administered through the U.S. Navy Southern Division Naval Facilities Engineering Command, as defined under Contract No. N62467-94-D-0888; Contract Task Order Number 0288.

1.2 KEY PROJECT PERSONNEL AND ORGANIZATION

This section defines responsibilities for site safety and health for TtNUS and subcontractor employees conducting environmental sampling and other field activities. Personnel assigned to these positions shall

exercise the primary responsibility for on site health and safety. These persons will be the primary point of contact for any questions regarding the safety and health procedures and the selected control measures.

- The TtNUS TOM is responsible for the overall direction and implementation of health and safety for this work.

- The TtNUS Field Operations Leader (FOL) is responsible for implementation of this HASP. The FOL manages field activities, executes the work plan, and enforces safety procedures, as applicable to the work plan. Specifically, the FOL will:
 - Verify training and medical status of on-site personnel in relation to site activities.
 - Assist and represent TtNUS with emergency services (if needed)
 - Provide elements site-specific training for on site personnel.

- The TtNUS Site Safety Officer or their representative supports the FOL concerning 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.

Note: In some cases one person may be designated responsibilities for more than one position. For example, at NCBC Gulfport the FOL may also be responsible for the SSO duties. This action will be performed only as credentials, experience, and availability permits.

1.3 SITE INFORMATION AND PERSONNEL ASSIGNMENTS

Site Name: Naval Construction Battalion Center **Address:** Gulfport, Mississippi

Site Point of Contact: Mr. Gordon Crane **Phone Number:** (228) 871-2485
Pager Number: (800) 343-3472

Navy Engineer-in-Charge (EIC): Mr. Arthur Conrad **Phone Number:** (843) 820-5520

Purpose of Site Visit: TtNUS will conduct media sampling and field activities to support Site Evaluation at Site 10 groundwater, surface water, sediment and sub-surface sampling. See Sections 3.0 and 4.0 for details concerning the site background and scope of work.

Proposed Dates of Work: September 2003 – completion

Project Team:

Tetra Tech NUS Personnel:

Robert Fisher
Jason Bourgeois
Matthew M. Soltis, CIH, CSP
James K. Laffey

Discipline/Tasks Assigned:

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

Subcontractor Personnel:

NA
NA

Discipline/Tasks Assigned:

DPT Subcontractor
Direct Push Technology Subcontractor

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

Prepared by: James K. Laffey

Shipping Address at NCBC Gulfport:

NCBC Gulfport
Building 320, Shipping and Receiving Warehouse
Attention: Mr. Jason Bourgeois
Tetra Tech NUS, Inc.
5200 CBC 2nd Street
Gulfport, Mississippi 39501-5000

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 incidental or emergency release or occurrence. Tetra Tech NUS will, through necessary services, include incidental response measures for incidents such as:

- Initial stage fire fighting support and prevention
- Initial spill control and containment measures and prevention
- Removal of personnel from emergency situations
- Provide initial medical support for injuries or illnesses requiring only first-aid level support
- Provide site control and security measures as necessary

Incidental response measures will only be provided to the capabilities of on-site personnel and available resources. Incidental response measures are not considered an emergency response as per 29 CFR 1910.120 (b). Incidents and situations that are deemed to be an emergency response as defined by 29 CFR 1910.120 (b) will be handled by outside resources. It has been determined that these off-site response agencies are capable of providing the most effective response and 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. These agencies will be contacted through NCBC Gulfport Emergency Dispatch. This Emergency Action Plan conforms to the requirements of 29 CFR 1910.38(a), as allowed in 29 CFR 1910.120(I)(1)(ii).

2.2 EMERGENCY PLANNING

Based on planned activities, the potential for field personnel to encounter significant emergency situations is minimal. However, based on the initial hazard/risk assessment effort, some potential exists for injuries or illnesses resulting from exposure to chemical and/or physical hazards or fire could be encountered during site activities. To minimize and eliminate these potential emergency situations, emergency planning activities associated with this project, the following responsibilities are assigned to the FOL and/or the SSO:

- Coordinating response actions with NCBC Gulfport Emergency Services personnel to ensure that TtNUS emergency action activities are compatible with facility emergency response procedures. This will serve as the initial review of the Emergency Action Plan.

- Establishing and maintaining information at the project staging area (Support Zone) for easy access in the event of an emergency. This information includes the following:
 - Chemical Inventory (for substances used on-site), with Material Safety Data Sheets.
 - On-site personnel medical records (medical data sheets).
 - A logbook identifying personnel on-site each day.
 - Emergency notification phone numbers in site vehicles

Note: It is the responsibility of the TtNUS FOL and/or the SSO to ensure that this information is available and present at the site.

- 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.
- Preview work areas to remove physical hazards where identified.

2.3 EMERGENCY RECOGNITION AND PREVENTION

The primary focus of this section is the ability to recognize and control factors, which could contribute to an emergency situation/condition. The FOL, and/or the SSO will preview site work location prior to committing personnel or resources. Their actions will be as follows:

- Identify, remove, and/or barricade physical hazards within the estimated work area.
 - Ensure that approach paths to monitoring wells are maintained (cleared, mowed, etc.)
 - Inspect monitoring well protective casings are cleared of spider and insect nests.
 - Inspect remote sample locations for signs of natural hazards (i.e., heavy brush – ticks; snakes, etc.)
- Provide the necessary equipment to control potential emergencies (i.e., safety cans for flammable liquid storage, spill containment equipment, PPE, and emergency equipment such as portable fire extinguishers).
- Evaluate operations to ensure that necessary measures are taken to control and/or minimize the impact of emergency situations/conditions. This includes actions such as, but not limited to, securing the necessary permits and clearances such as Utility and Excavation Clearances provided by the Base and Mississippi One Call Systems; Ensuring equipment and resources are at the ready for response to incidental measures; Personnel are adequately trained in the provisions of this HASP and this Emergency Action Plan.

- Complete site characterization for predetermined work contaminated areas to quantify and qualify the hazards associated with those areas. Based on the results obtained the areas will be demarcated and restricted to only approved personnel.

Field Crew shall:

- Identify, remove, or barricade physical hazards within the estimated work area identified by the FOL and/or the SSO.
- Follow the guidelines for control of emergency conditions
- Report any potential emergency situation to the FOL and/or the SSO.

2.4 SAFE DISTANCES AND PLACES OF REFUGE

Upon activation of the on-site emergency alarm system the following actions will occur:

- Operations will cease.
- Field personnel will note the direction of the wind based on the position of wind socks or other wind direction indicator placed at the top of the mast or excavation equipment or other elevated points within the work area (i.e., streamer, flag, etc.).
- Based on the wind direction, personnel will move cross and up wind to either the primary or secondary safe place of refuge as identified in Figure 2-1.
- Personnel will remain at this location until directed otherwise by the FOL and/or the SSO.

The safe place of refuge (in the event of an emergency) will be the Tetra Tech NUS, Inc. Field Trailer. This location has been selected and will be conveyed to Field Crew members. Selection was based on the following considerations:

- A location providing telephone communications and or shelter.
- A location from which the field crews can provide site security restricting access to the emergency area, however, a point from which the field crew may direct emergency crews (i.e., intersection or gate, etc.).
- This location should be positioned a safe distance from the operation so not to be impacted by the emergency.

This distance is impacted by a number of conditions (i.e., tasks being conducted; chemical, physical, and toxicological properties; potential for fire and explosion; meteorological conditions; terrain).

2.5 DECONTAMINATION PROCEDURES/EMERGENCY MEDICAL TREATMENT

During an evacuation, decontamination procedures will be performed only if doing so does not further jeopardize the welfare of site workers. However, it is unlikely that an emergency would occur which would require workers to evacuate the site without first performing decontamination procedures. Decontamination of medical emergencies will proceed in the following manner.

Note: One person from the field team will accompany the injured to the hospital with his/her medical data sheet, appropriate MSDSs, a copy of this HASP, and the incident forms. This person will collect as much information as possible and transfer that information to the HSM and Work Care as per the Incident Response Protocol provided in Figure 2-2. Other personnel will engage site control/site security measures.

Tetra Tech NUS and subcontractor personnel are only permitted to provide treatment to the level of their First-Aid Training.

Emergency medical treatment will be initiated under the following guarded restrictions:

- Notify the FOL and/or the SSO of the incident.
- Take the necessary precautions to prevent direct contamination with the injured person's body fluids.
 - Use surgeons gloves when handling cuts, abrasions, bites, punctures, etc. or any part of the injured person. The use of safety glasses and surgeons masks maybe necessary, if there is the potential for uncontrolled spread of body fluids.
 - Should Cardio-Pulmonary Resuscitation (CPR) be required, use a CPR Micro-Shield mouthpiece when administering CPR.

2.6 EMERGENCY ALERTING AND ACTION/RESPONSE PROCEDURES

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

- Initiate an emergency notification by hand signals, voice commands, air horn, or two-way radios to the FOL/SSO. Describe to the SSO (who will serve as the Incident Coordinator) what has occurred and provide as many details as possible.
- Evacuate non-essential persons from the incident scene, engage initial response measures given the emergency type (i.e., spill response, fire extinguisher, first-aid, site control and security).

In the event that site personnel cannot control the incident through offensive and defensive measures, the FOL and/or SSO will enact the emergency notification procedures to secure additional outside assistance in the following manner:

- Call NCBC Gulfport Emergency Number
- Give the emergency operator the location of the emergency and a brief description of what has occurred.
- Stay on the phone and follow the instructions given by the operator
- The appropriate agency will be notified and dispatched
- Call Navy On-Site Representative
- Call the TOM and the HSM

If an incident occurs at outside of our designated operating areas impacting field personnel, the following procedures are to be initiated:

- Initiate an evacuation (if needed) by voice commands, hand signals, air horns, or two-way radio.
- Call Navy On-Site Representative
- Proceed to the assembly points as directed by NCBC Gulfport or other Navy personnel.

2.7 PPE AND EMERGENCY EQUIPMENT

A first aid kit, eye wash units (as necessary), stretcher, and fire extinguishers will be maintained on-site at an easily accessible location and shall be immediately available for use in the event of an emergency. Based on the hazards anticipated, these incident response abatement items may be maintained at the exclusion zone of on-going operations as determine and communicated to the field crew through the Safe Work Permit. This will be at the discretion of the SSO.

The FOL and/or the SSO should ensure the First-Aid Kits are provided stocked with the necessary equipment. First-aid kits purchased for the job-site shall be American National Standards Institute (ANSI) approved for industrial applications. Additional provisions if not included in the First-Aid Kit such as a Micro-Shield CPR mask identified within this plan will have to be secured in addition to the kit. The SSO will determine the number of kits necessary based on the number of personnel and the number of remote operations being conducted under the scope of work. It is the SSO's responsibility to assess work site applications for specific first-aid needs based on operations being conducted.

PPE levels to be used in an emergency will not exceed those items used in the completion of identified tasks.

2.8 EMERGENCY CONTACTS

Prior to performing work at the site, personnel will be briefed on the emergency procedures to be followed in the event of an incident. A mobile phone shall be available on site. Table 2-1 provides a list of emergency contacts and their corresponding telephone numbers. This table must be posted on site where it is readily available to site personnel.

**TABLE 2-1
EMERGENCY REFERENCE
NCBC Gulfport**

| AGENCY | TELEPHONE |
|---|------------------|
| EMERGENCY | |
| Police | (228) 871-2222 |
| Fire/Hazardous Materials Release | (228) 871-2333 |
| Ambulance Services | (228) 871-2444 |
| Base Contact, Mr. Gordon Crane | (228) 871-2485 |
| Pager | 1(800) 343-3472 |
| Memorial Hospital at Gulfport 4500 13 th Street Gulfport, Mississippi 39501-2569 | (228) 867-4000 |
| Task Order Manager Robert Fisher | (850) 510-2743 |
| CLEAN Health and Safety Manager Matthew Soltis, CIH, CSP | (412) 921-8912 |
| Project Health and Safety Officer James K. Laffey | (412) 921-8678 |
| Utilities (On Base) (Utility Clearances and Emergencies) Public Works Maintenance Division | (228) 871-2244 |
| Utilities (Public Utility Locating Service) Mississippi One Call System Inc. | 1(800) 227-6477 |
| Chemtrec | (800) 424-9300 |
| National Response Center | (800) 424-8802 |
| Mississippi Regional Poison Control Center | (800) 222-1222 |
| Tetra Tech NUS, Tallahassee Office | (850) 359-9899 |
| Tetra Tech NUS, Pittsburgh Office | (412) 921-7090 |
| Tetra Tech NUS, Gulfport, Mississippi Office | (288) 575-6287 |

2.9 INJURY/ILLNESS REPORTING

In addition, TtNUS personnel who are injured or become ill on the job must notify appropriate company representatives. Figure 2-2 and Attachment I presents the procedure for reporting an injury/illness, and the form to use for this purpose. **If the emergency involves personnel exposures to chemicals, follow the steps in Figure 2-2.**

2.10 EMERGENCY ROUTE TO HOSPITAL

Directions from NCBC Gulfport:

From Site 5 at the intersection of 4th Street and Colby Avenue go south on Colby.

Start at:

Turn Left on Engram Drive.

Turn Right on Broad Avenue.

Turn Left on 13th Street

End at:

Memorial Hospital at Gulfport
4500 13th Street
Gulfport, Mississippi 39501-2569

Figure 2-1
Route to Hospital

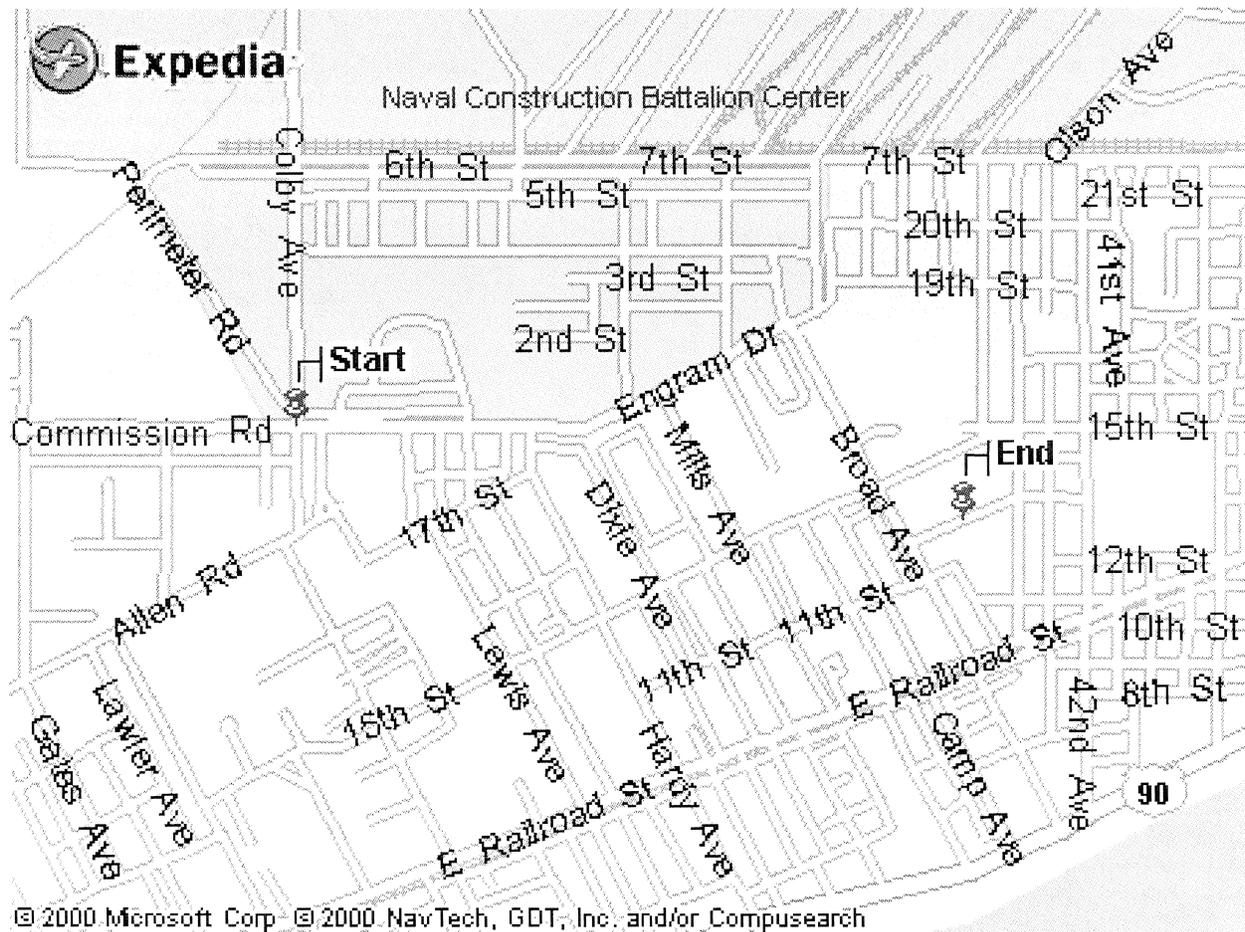


FIGURE 2-2 EMERGENCY RESPONSE PROTOCOL

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, or follow the voice prompt for after hours and weekend notification and be 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 Manager 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 the data and provide a summary report of the incident. A copy of this report will be placed in each victim's medical file in addition to being distributed to appropriately designated company officials.

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

FIGURE 2-2 (continued)
WORKCARE
POTENTIAL EXPOSURE REPORT

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

I. Exposing Agent

Name of Product or Chemicals (if known): _____

Characteristics (if the name is not known)

Solid Liquid Gas Fume Mist Vapor

II. Dose Determinants

What was individual doing? _____

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

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

Was their skin contact? _____

Was the exposing agent inhaled? _____

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

III. Signs and Symptoms (check off appropriate symptoms)

Immediately With Exposure:

Burning of eyes, nose, or throat
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-Medicating: _____ Physician Treated: _____

3.0 SITE BACKGROUND

3.1 SITE DESCRIPTION

The Naval Construction Battalion Center (NCBC) Gulfport, Mississippi was commissioned as the homeport of the Atlantic Fleet Seabees in 1966. The Base occupies approximately 1,100 acres in the western part of Gulfport in the southeastern coastal area of Mississippi. The Navy previously used the property as a Naval Training Center and Naval Storehouse starting in 1942. Presently, four Naval Mobile Construction Battalions (NMCB) are based at Gulfport.

3.2 SITE LOCATION AND HISTORY

Site 10 is located within and below a ditch in the south-central section of NCBC Gulfport adjacent to the Parade Field. It is bounded to the north by the Dispensary and to the south by Building 130. The ditch at Site 10 a 10-foot wide, primary drainage ditch carrying surface water runoff in a westerly direction, eventually emptying into Canal No. 1. The site topography is relatively flat. Storm water runoff from the paved areas surrounding Site 10 flow to adjacent tributary ditches, which then contributes to the volume of the primary ditch. A footpath, leading south from the Dispensary, intersects the ditch at Site 10. This footpath includes a bridge across the primary ditch.

Site 10 was discovered during the 1996 Surface Water and Sediment investigation for dioxins and furans in the on-base ditch systems. High levels of PCBs in the sediments in the ditch immediately behind Building 130, near the Parade field, prompted source removal activities in 1999. The Source Removal Report indicates that additional PCB contamination remains in the soil below the area of excavation at levels that exceed Mississippi Department of Environmental Quality (MDEQ) action levels.

4.0 SCOPE OF WORK

The following subsections discuss the specific tasks that are to be conducted as part of this scope of work as identified by CTO 0288. These tasks as identified by the scope of work are the only ones addressed by this HASP. Any tasks to be conducted outside of the elements listed here will be considered a change in scope requiring modification of this document. The TOM or a designated representative will submit the requested modifications to this document to the HSM.

Specific tasks to be conducted include, but are not necessarily limited to, the following:

- Mobilization/demobilization activities
- Soil boring including Direct Push Technology (DPT)
- Monitoring well installation and development
- Multi-media Sampling
 - Surface water sampling
 - Sediment sampling
 - Groundwater sampling
 - Subsurface Soil sampling
- Decontamination
- Geographic Surveying
- IDW Management

For more detailed description of the associated tasks, refer to the Work Plan (WP).

5.0 TASKS/HAZARDS/ASSOCIATED CONTROL MEASURES SUMMARIZATION

Table 5-1 of this section serves as the primary portion of the site specific HASP. This table is intended to assist project personnel in the recognition of hazards and recommended procedures necessary to minimize potential exposure or injuries related to those hazards. The table also assists field team members in determining which personal protective equipment (PPE) and decontamination procedures to be used as well as appropriate air monitoring techniques and site-specific conditions. The evaluation of each task provides detailed information including anticipated hazards, recommended control measures, air monitoring recommendations, required PPE, and decontamination measures. This table must be updated if the scope of work, contaminants of concern, or pertinent conditions change.

Table 5-1 and the HASP are not meant to be stand alone documents and must be accompanied by the TtNUS Health and Safety Guidance Manual. This manual is designed to further explain supporting elements for any site specific operations as required by 29 CFR 1910.120. The Guidance Manual should be referenced for additional information regarding air monitoring instrumentation, decontamination activities, emergency response, hazard assessments, hazard communication and hearing conservation programs, medical surveillance, PPE, respiratory protection, site control measures, standard work practices, and training requirements.

Safe Work Permits will be issued for exclusion zone activities (See Section 10.2). The FOL and/or the SSO will use the elements defined in Table 5-1 as the primary reference. The FOL and/or the SSO completing the Safe Work Permit will add additional site-specific information as warranted. In situations where the Safe Work Permit is more conservative than the direction provided in Table 5-1 due to the incorporation of site-specific elements, the Safe Work Permit will be followed.

5.1 GENERAL SAFE WORK PRACTICES

In addition to the task-specific work practices identified on Table 5-1, the following general safe work practices are to be followed when conducting work on-site. These safe work practices address a pattern of general precautions and measures for reducing risks associated with site operations. This list may be amended as on site requirements change.

- Eating, drinking, chewing gum or tobacco, taking medication, or smoking **only** in the support zone or in areas where there is no possibility of transferring contamination.

- Wash hands and face thoroughly upon leaving a contaminated or suspected contaminated area. A thorough shower and washing must be conducted as soon as possible if excessive skin contamination occurs.
- Avoid contact with potentially contaminated substances. Avoid puddles, pools, mud, or other such areas. Avoid, whenever possible, kneeling on the ground or leaning or sitting on equipment. Keep monitoring equipment away from potentially contaminated surfaces.
- Take note of the location of the nearest telephone and the emergency telephone numbers listed in Section 2.0, Table 2-1.
- Attend briefings on anticipated hazards, equipment requirements, safe work permits, emergency procedures, and communication methods before going on site.
- Plan and mark entrance, exit, and emergency escape routes. See Section 2.0.
- 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 injuries, illnesses, and unsafe conditions, practices, and equipment to the Site Safety Officer (SSO).
- Observe coworkers for signs of toxic exposure and heat or cold stress.
- Inform co-workers of potential symptoms of illness, such as headaches, dizziness, nausea, or blurred vision.

5.2 DPT OPERATIONS - SAFE WORK PRACTICES

The following Safe Work Practices are to be followed when working in or around Direct Push Technology (DPT) Operations.

5.2.1 Before DPT Operations

- Identify underground utilities and buried structures before DPT. Use the Utility Locating and Excavation Clearance Standard Operating Procedure provided in Attachment II. See notes for the time lines required on and off-Base utility clearances under mobilization/demobilization Section 4.1.
- DPT rigs will be inspected by a Competent Person (the SSO or designee), prior to the acceptance of the equipment at the site and prior to the use of the equipment. Repairs or deficiencies identified will be corrected prior to use. The inspection will be accomplished using the Equipment Inspection Checklist provided in Attachment III. Inspection frequencies will be once every 10 day shift or following repairs.
- The work area around the point of operation will be graded to the extent possible to remove any trip hazards near or surrounding operating equipment.
- Potentially contaminated tooling will be wrapped in polyethylene sheeting for storage and transport to the centrally located decontamination unit.

5.2.2 During DPT Operations

- Minimize contact to the extent possible with contaminated tooling and environmental media.
- Support functions (sampling and screening stations) will be maintained a minimum distance from the DPT rig of the height of the mast plus five feet to remove these activities from within physical hazard boundaries.
- Only qualified operators and knowledgeable ground crew personnel will participate in the operation of the DPT rig.
- In order to minimize contact with potentially contaminated tooling and media and to minimize lifting hazards, multiple personnel should move heavy tooling, where necessary.
- Only personnel absolutely essential to the work activity will be allowed in the exclusion zone. Visitors will be escorted while on site.

5.2.3 After DPT Operations

- Equipment used within the exclusion zone will undergo a complete decontamination and evaluation by the SSO to determined cleanliness prior to moving to the next location, exiting the site, or prior to down time for maintenance.
- Motorized equipment will be fueled prior to the commencement of the day's activities. During fueling operations equipment will be shutdown and bonded to the fuel provider.
- When not in use direct push rigs will be shutdown, emergency brakes set, and wheels chocked.
- Areas subjected to subsurface investigative methods will be restored to equal or better condition than original to remove any contamination brought to the surface and to remove any physical hazards. In situations where these hazards cannot be removed these areas will be barricaded to minimize the impact on field crews working in the area.