

Health and Safety Plan

For

**Long Term Monitoring and
Monitoring Well Abandonment
at
Forrestal and Supplyside Landfills
at the
Naval Station Great Lakes, Illinois**



Naval Facilities Engineering Command Midwest

Contract Number N62472-03-D-0057

Contract Task Order F273

**May 2011
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HEALTH AND SAFETY PLAN
FOR
LONG TERM MONITORING AND
MONITORING WELL ABANDONMENT
AT
FORRESTAL AND SUPPLYSIDE LANDFILLS
AT THE
NAVAL STATION GREAT LAKES, ILLINOIS

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

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1.0 INTRODUCTION

This Health and Safety Plan (HASP) is specifically written for the field investigation at the Suppliside Landfill and Forrestal Landfill, Illinois, to be conducted at the at Naval Station Great Lakes, Great Lakes, Illinois.

This HASP is to be used in conjunction with the Tetra Tech, Inc. (Tetra Tech) Health and Safety Guidance Manual. The Guidance Manual provides detailed information pertaining to hazard recognition and control, and Tetra Tech 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 Tetra Tech Site Safety Officer (SSO) and the Tetra Tech 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 Project Manager (PM), 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 Northwest, Naval Facilities Engineering Command, as defined under Contract No. N62472-03-D-0057 Contract Task Order: (CTO) F273.

1.2 KEY PROJECT PERSONNEL AND ORGANIZATION

This section defines responsibilities for site safety and health for Tetra Tech employees engaged in on-site activities. Personnel assigned to these positions will exercise primary responsibility for the on-site health and safety. These people will be the primary points of contact for any questions regarding the safety and health procedures and the selected control measures to be implemented for on-site activities. Contact information for key personnel are found in Section 1.4 and contact information for emergency resources is provided in Table 2-1.

- The Tetra Tech Project Manager (PM) is responsible for the overall direction of health and safety for this project.
- The Project Health and Safety Officer (PHSO) is responsible for developing this HASP in accordance with applicable OSHA regulations. Specific responsibilities include the following:
 - i. Providing information regarding site contaminants and physical hazards associated with the site and tasks to be conducted.
 - ii. Establishing air monitoring and decontamination procedures.
 - iii. Assigning personal protective equipment (PPE) based on task and potential hazards.
 - iv. Determining emergency response procedures and emergency contacts.
 - v. Stipulating training requirements and reviewing appropriate training and medical surveillance certificates.
 - vi. Providing standard work practices to minimize potential injuries and exposures associated with hazardous waste work.
 - vii. Modifying this HASP, as it becomes necessary.
- The Tetra Tech Field Operations Leader (FOL) is responsible for implementation of the HASP with the assistance of an appointed Site Safety Officer (SSO). The FOL:
 - Manages field activities
 - Executes the work plan
 - Enforces safety procedures as applicable to the work plan.
- The SSO supports site activities by advising the FOL on the aspects of health and safety on site. These duties may include:
 - Coordinating all health and safety activities with the FOL.
 - Selecting, applying, inspecting, and maintaining personal protective equipment.
 - Establishing work zones and control points.
 - Implementation of the air monitoring program for on-site activities.
 - Verifying training and medical clearances of on-site personnel status in relation to site activities.
 - Implementing hazard communication, respiratory protection, and associated health and safety programs as they pertain to site activities.
 - Coordination with identified emergency services.
 - Providing site specific training for all on-site personnel.

- Compliance with the requirements stipulated in this HASP is monitored by the SSO and coordinated through the Tetra Tech CLEAN HSM.

1.3 STOP WORK AUTHORIZATION

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

2.0 EMERGENCY ACTION PLAN

2.1 INTRODUCTION

This section is to direct and guide field personnel in the event of an emergency. Site activities will be coordinated through the client contact Howard Hickey. In the event of an emergency that cannot be mitigated using onsite resources, personnel will evacuate to a safe place of refuge and the appropriate emergency response agencies will be notified. It has been determined that the majority of potential emergency situations would be better supported by outside emergency responders. Based on this determination, Tetra Tech and subcontractor personnel will not provide emergency response support beyond the capabilities of onsite response. 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 Naval Station, Great Lakes contact Howard Hickey will be notified when emergency response agencies are contacted. This Emergency Action Plan conforms to the requirements of 29 Code of Federal Regulations (CFR) 1910.38(a), as allowed in 29 CFR 1910.120(l)(1)(ii).

Tetra Tech will, through necessary services, provide the following emergency action measures:

- Initial stage fire fighting support and prevention
- Initial spill control and containment measures and prevention
- Removal of personnel from emergency situations
- Initial medical support for injuries or illnesses requiring basic first-aid
- Site control and security measures as necessary
- Initial notification to responsible personnel

2.2 EMERGENCY PLANNING

Through the initial hazard/risk assessment effort, emergencies resulting from chemical, physical, or fire hazards are the types of emergencies that could be encountered during site activities.

To mitigate the potential for these emergency situations, emergency planning activities under the direction of the SSO and/or the FOL will include the following:

- Coordinating with local Emergency Response personnel to ensure that Tetra Tech emergency action activities are compatible with existing emergency response procedures.
- The Fire Department and Emergency Services will be notified of scheduled events and activities. This is most imperative in situations where their services may be required.
- 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 Tetra Tech FOL will be responsible for the following tasks:

- Identifying a chain of command for emergency action.
- The FOL and/or the SSO will exercise primary responsibility for directing the actions of Tetra Tech and subcontractor personnel during emergency actions.
- Educating site workers to the hazards and control measures associated with site activities, and providing early recognition and prevention, through site specific training and periodic safety briefings.
- Providing the necessary equipment to safely accomplish identified tasks.

2.3 EMERGENCY RECOGNITION AND PREVENTION

Site personnel should be constantly alert for indicators of potentially hazardous situations and for signs and symptoms of over exposure in themselves and others that warn of hazardous conditions. Early recognition of dangerous situations can prevent them from becoming emergency situations.

2.3.1 Recognition

Emergency situations that may be encountered during site activities will generally be recognized by visual observation. To adequately recognize chemical exposures, site personnel must have a clear knowledge of signs and symptoms of exposure associated with site contaminants. Tasks to be performed at the site, potential hazards associated with those tasks and the recommended control methods are discussed in this HASP.

Additionally, early recognition of hazards will be supported by daily site surveys to eliminate any situation predisposed to an emergency. The FOL and/or the SSO will be responsible for performing surveys of work areas prior to initiating site operations and periodically while operations are being conducted. Survey findings will be documented by the FOL and/or the SSO in the Site Health and Safety logbook; however, site personnel will be responsible for reporting hazardous situations. Where potential hazards exist, Tetra Tech will initiate control measures to prevent adverse effects to human health and the environment.

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

2.4 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
- Evidence of personnel overexposure to potential site contaminants.

In the event of an emergency requiring evacuation, personnel will immediately stop activities and report to the designated safe place of refuge unless doing so would pose additional risks. When evacuation to the primary place of refuge is not possible, personnel will proceed to a designated alternate location and remain until further notification from the Tetra Tech FOL. Safe places of refuge will be identified prior to the commencement of site activities by the SSO and will be conveyed to personnel as part of the pre-activities training session. This information will be reiterated during daily safety meetings. Whenever possible, the safe place of refuge will also serve as the telephone communications point for that area. During an evacuation, personnel will remain at the refuge location until directed otherwise by the Tetra

Tech FOL or the on-site Incident Commander of the Emergency Response Team. The FOL or the SSO will perform a head count at this location to account for and to confirm the location of site personnel. Emergency response personnel will be immediately notified of any unaccounted personnel. The SSO will document the names of personnel onsite (on a daily basis) in the site Health and Safety Logbook. This information will be utilized to perform the head count in the event of an emergency.

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

2.5 EMERGENCY CONTACTS

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

- Facility maps should also be posted showing potential evacuation routes and designated meeting areas.
- As soon as possible, the Navy contact 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 (Attachment I).

TABLE 2-1
EMERGENCY REFERENCE
NAVAL STATION GREAT LAKES

AGENCY	TELEPHONE
EMERGENCY	9-1-1
Police, Fire/Rescue/Hazardous Materials, EMS	(847) 688-3333
Base Contact, Mr. Howard Hickey	(847) 688-2600 x 243 (847) 815-6719
Base Contact, Mr. William Busko	(847) 688-2600 x 242 (847) 366-3471
North Chicago VA Medical Center	(847) 473-7830
Chemtrec	(800) 424-9300
National Response Center	(800) 424-8802
Poison Control Center	(800) 222-1222
Task Order Manager, Tim Evans	(412) 921-7281
FOL Mark Mengel	(412) 921-8723
CLEAN Health and Safety Manager, Matthew Soltis, CIH, CSP	(412) 921-8912
Project Health and Safety Officer, James K. Laffey	(412) 921-8678
Tetra Tech NUS, Pittsburgh Office	(412) 921-7090

2.6 EMERGENCY ROUTE TO HOSPITAL

The primary medical facility will be the North Chicago VA Medical Center. Note directions are different for the 2 sites involved in this work effort.

North Chicago VA Medical Center
3001 Green Bay Rd,
North Chicago, Illinois 60064

**FIGURE 2-1A
DIRECTIONS TO NORTH CHICAGO VA MEDICAL CENTER
FROM FORRESTAL LANDFILL**

3500 Superior Street, Great Lakes 60088, Illinois to North Chicago VA Medical Center(North Chicago), IL
Distance: 1.4 miles (2.3km) Time: 0 hrs., 8mins.

1. Start out heading NORTH on SUPERIOR STREET towards MISSISSIPPI STREET. Drive for a short distance.
2. Turn SLIGHT LEFT onto MISSISSIPPI STREET. Drive for 0.3 miles.
3. Turn RIGHT onto BUCKLEY ROAD. Drive for 0.8 miles.
4. Turn RIGHT onto FORRESTAL VILLAGE QTRS STREET. Drive for a short distance.
5. Turn RIGHT onto FORRESTAL VILLAGE NAVAL HOUSING. Drive for 0.1 miles.
6. Turn LEFT to stay on FORRESTAL VILLAGE NAVAL HOUSING. Drive for a short distance.
7. Turn RIGHT to stay on FORRESTAL VILLAGE NAVAL HOUSING. Drive for 0.1 miles.
8. You have reached North Chicago VA Medical Center(North Chicago), IL



FIGURE 2-1B
DIRECTIONS TO NORTH CHICAGO VA MEDICAL CENTER
FROM SUPPLYSIDE LANDFILL

2299 Alabama Avenue, Great Lakes 60088, Illinois to North Chicago VA Medical Center(North Chicago), IL
Distance: 2.3 miles (3.7km) Time: 0 hrs., 18mins.

1. Start out heading EAST on ALABAMA AVENUE towards GREAT LAKES COURT. Drive for 0.1 miles.
2. Turn LEFT onto GREAT LAKES DRIVE. Drive for 0.4 miles.
3. Turn LEFT onto RHODE ISLAND AVENUE. Drive for a short distance.
4. Make a U-turn at RHODE ISLAND COURT. Drive for a short distance.
5. Turn LEFT onto GREAT LAKES DRIVE. Drive for 0.7 miles.
6. Turn RIGHT onto BUCKLEY ROAD E. Drive for 0.7 miles.
7. Turn RIGHT onto FORRESTAL VILLAGE QTRS STREET. Drive for a short distance.
8. Turn RIGHT onto FORRESTAL VILLAGE NAVAL HOUSING. Drive for 0.1 miles.
9. Turn LEFT to stay on FORRESTAL VILLAGE NAVAL HOUSING. Drive for a short distance.
10. Turn RIGHT to stay on FORRESTAL VILLAGE NAVAL HOUSING. Drive for 0.1 miles.
11. You have reached North Chicago VA Medical Center(North Chicago), IL



2.7 EMERGENCY ALERTING AND ACTION/RESPONSE PROCEDURES

Tetra Tech personnel will be working in close proximity to each other at Naval Station, Great Lakes. 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:

- Call the 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.

2.8 PPE AND EMERGENCY EQUIPMENT

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

2.9 DECONTAMINATION PROCEDURES / EMERGENCY MEDICAL TREATMENT

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

Tetra Tech personnel will perform rescue operations from emergency situations and may provide initial medical support for injury/illnesses requiring only "Basic First-Aid" level support, and only within the limits of training obtained by site personnel. At least two site personnel will be trained in Basic-First Aid. 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. 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.

2.10 INJURY/ILLNESS REPORTING

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

2.10.1 TOTAL Incident Reporting System

TOTAL is Tetra Tech's new online incident reporting system. Use TOTAL to directly report health and safety incidents, notify key personnel, and initiate the process for properly investigating and addressing the causes of incidents, including near-miss events. An incident is considered any unplanned event. It may include several types of near misses, events where no loss was incurred, or incidents that resulted in injuries or illness, property or equipment damage, chemical spills, fires, or damage to motor vehicles.

TOTAL looks like the incident reporting form in Attachment II. TOTAL is an intuitive system that will guide you through the necessary steps to report an incident within 24 hours of its occurrence. TOTAL is a tool Tetra Tech H&S professionals use to track incidents, analyze root causes, implement corrective action plans, and share lessons learned. The ultimate result is a more safe and healthy working environment for us all.

TOTAL is maintained on the Tetra Tech Intranet site at <https://my.tetrattech.com/>

Once on the "My Tetrattech" site, TOTAL can be found under the Health and Safety tab, Incident Reporting section, select "Report an Incident (TOTAL)". This will connect you directly to TOTAL. TOTAL can also be accessed directly from the internet using the following web address:
<http://totalhs.tetrattech.com/>

Note: When using the system outside the Tetra Tech intranet system or when operating in a wireless mode, a VPN connection will be required. The speed of the application may be affected dependent upon outside factors such as connection, signal strength, etc. Enter the system using your network user name and password. The user name should be in the following format - TT\nickname.lastname.

3.0 SITE BACKGROUND

The Naval Station Great Lakes is located in Lake County, Illinois, on the shore of Lake Michigan about 50 miles north of downtown Chicago. Dedicated in 1911, Naval Station Great Lakes is the largest naval training center in the United States. Naval Station Great Lakes consists of approximately 1,650 acres with over 1,000 buildings.

The Supplyside Landfill began operation in 1969. The landfill was operated as a trench-type landfill with four parallel trenches; the landfill covers an area of approximately 400 feet by 1,000 feet. There was no intentional burning of refuse at this site. The Supplyside Landfill was closed in 1983 and had a cover installed in 1985. The cover grading and seeding were performed by the Navy Construction Battalion 401, a tenant command at NSGL, during that time period. The Supplyside Landfill is adjacent to the NSGL facility boundary and south of the Supply Department warehouse (Building 3503) and extends almost to the westward extension of Alabama Avenue.

Operations at the Forrestal Landfill began in 1967 and ceased in 1969. The site was operated as a trench-type landfill with no burning. It is estimated that the landfill contains approximately 76,000 cubic yards of refuse. No hazardous wastes were disposed in the landfill. The Forrestal Landfill is located between Superior Street and Skokie Ditch, south of Virginia Court. The landfill was the first controlled disposal area used by NSGL. The total volume of material disposed at the landfill was limited by the size of the parcel (approximately 4 acres) and due to the fact that disposed was not burned. In addition, the period during which the site operated coincided with the period during which housing waste collection switched from the Navy to a private contractor, with disposal on Navy property.

4.0 SCOPE OF WORK

This section discusses the specific tasks that are to be conducted as part of this scope of work as identified in the work plan for CTO F273. These tasks are the only ones addressed by this HASP. Specific tasks to be conducted include, but are not necessarily limited to, the following:

- Mobilization/demobilization
- Groundwater sampling
- Monitoring well abandonment.
- Investigation-derived waste handling and disposal
- Decontamination

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

Any tasks to be conducted outside of the elements listed here will be considered a change in scope requiring modification of this document. The PM or a designated representative will submit the requested modifications to this document to the Tetra Tech HSM.

5.0 SUMMARY OF TASKS/HAZARDS/ASSOCIATED CONTROL MEASURES

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 Activity Hazard Analysis (AHAs), which are to be reviewed in the field by the SSO with the 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. The AHAs are found in Attachment III of this HASP.

5.1 GENERAL SAFE WORK PRACTICE

In addition to the task-specific work practices and restrictions identified in the AHAs 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.
- The use of waterless hand cleaning products is acceptable if followed by actual hand-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 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

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

6.1 CHEMICAL HAZARDS

Based upon available data from previous site investigations, the primary site contaminants of concern (COCs) are metals particularly magnesium and manganese which have little effect on human health from an occupational health perspective.

It is anticipated that the greatest potential for exposure to site contaminants is during groundwater sampling. Exposure to site contaminants is most likely to occur through dermal contact of contaminated water or through ingestion via hand-to-mouth contact during soil disturbance activities. For this reason, PPE and basic hygiene practices (e.g., washing face and hands before leaving site) will be extremely important. Given the nature of planned activities and that work will be conducted outside in the open air, it is unlikely that any airborne concentrations will be present.

Other sources of potential chemical exposure are decontamination fluids (e.g., Liquinox, isopropanol), and analytical preservatives. For any substances brought onto the site, the SSO is responsible for instituting a site-specific Hazard Communication Program (see Section 5.0 of the Tetra Tech NUS Health and Safety Guidance Manual) and for collecting the appropriate Material Safety Data Sheets (MSDS) from the chemical manufacturers/suppliers.

6.2 PHYSICAL HAZARDS

In addition to the chemical hazards discussed above, the following physical hazards may be present during the performance of the site activities.

- Slips, trips, and falls
- Lifting (strain/muscle pulls)
- Vehicular and foot traffic

Each of these physical hazards is discussed in greater detail in Section 4.0 of the Tetra Tech NUS Health and Safety Guidance Manual. Some of these hazards and the associated control measures are discussed below due to the emphasis on incident and injury history.

6.2.1 Slips, Trips, and Falls

Conditions such as steep terrain and/or heavy vegetation may create an increased potential for slip, trip, and fall hazards.

- The safest approach to sample points will be identified and cleared to permit field crew access to sample locations.
- Establish anchor points and rope handrails for traversing/ascending/descending angles and slopes greater than 45% grade.
- Footwear with an adequate traction.
- Prepare work areas by removing tripping hazards (ruts, roots, debris). This is especially critical around rotating equipment, where a fall into the rotating apparatus could be life threatening.

6.2.2 Strain/Muscle Pulls from Heavy Lifting

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

The following steps will help prevent back injury:

- Clear the path you will follow.
- Lift with your legs, not your back.
- “Hug” the load. Minimize the horizontal distance between the load and your center of gravity.
- Avoid twisting.
- Break large loads into smaller, more manageable ones.
- Take frequent rest and stretch breaks.

6.3 NATURAL HAZARDS

Insect/animal bites and stings, poisonous plants, and inclement weather are natural hazards that may be present given the location of activities to be conducted.

6.3.1 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 conditions arise (electrical storms, hurricanes, etc.),

the FOL and/or the SSO will be responsible for temporarily suspending or terminating activities until hazardous conditions no longer exist.

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

6.3.2 Cuts or Other Injuries Associated with Hand Tool Use

The improper use of hand tools has been the cause of several past accidents. In particular:

- The use of knives when cutting has resulted in lacerations to workers' hands, legs, and fingers.
- Use manufacturer-approved cutting tools.
- Never rest an object on your knee or other part of your body when cutting.
- Keep cutting tools sharp.

6.3.3 Strains/Muscle Pulls

Site activities require moving equipment and sampling coolers that may weigh as much as 90 pounds. Worker injuries resulting from improper manual material handling activities are easily prevented through observation of proper lifting and carrying methods and utilization of material-handling equipment where necessary and suitable. These types of injuries are not only associated with the weight of the load; other considerations include how many lifts will be involved (i.e., repetitive lifting of even small loads), the size, shape, and/or configuration of the load to be lifted, and whether or not the load will need to be lifted to another height or carried to another location. Workers involved with these types of activities are to be instructed by the SSO in the following manner:

- Estimate the weight and configuration of the load (i.e., is it bulky or hard to safely grasp/lift/control).
- If the load appears to be too heavy or bulky to safely handle alone, use a mechanical lifting device or obtain help to lift the load.
- Bend at the knees (not at the waist) when attempting a lift.
- Ensure that a firm hold is obtained, and keep the load as close to the body as possible.
- Lift the load using your legs not your back.
- Avoid turning or twisting while holding a load.

- If the load is to be moved, preview the path of travel first to identify and eliminate any tripping hazards.
- Do not attempt to carry loads that obstruct the line of sight.
- When setting a load down, use the leg muscles and do not bend at the waist.
- Break loads into smaller amounts for travel to remote locations.

6.3.4 Vehicular and Equipment Traffic

Hazards associated with vehicular and equipment traffic are likely to exist during various site activities and whenever site personnel performed work on or near roadways. To minimize the potential for injuries associated with these hazards, a traffic control plan has been prepared and submitted for approval by the local authorities. A subcontractor will be present to implement the traffic control plan through the use of warning signs, traffic cones, and flagmen. Additionally, site personnel will be instructed to maintain awareness of traffic and moving equipment when performing site activities. When working near roadways, site personnel will wear high visibility vests.

6.3.5 Heat/Cold Stress

It is always 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 Tetra Tech HSGM, which the SSO is responsible for reviewing and implementing as appropriate for this project.

6.3.6 Noise

Hearing protection will be used during activities that create noise. The FOL will require hearing protection to ensure that any contributonal noise levels within close proximity of the operation do not surpass 80 decibels (db). If workers need to raise their voices to communicate with fellow employees who are 2 feet away, hearing protection is required. The protection chosen must have a Noise Reduction Rating (NRR) greater than 25db. Additionally, noise dosimetry may be performed to quantify worst-case scenarios of noise levels if determined is necessary by the FOL/SSO.

7.0 HAZARD MONITORING

Direct-reading instruments will not be required during site activities. Past sampling data indicates low levels of volatile organic compounds (VOCs) and metals below the Threshold Limit Value (TLV) for contaminants.

8.0 TRAINING/MEDICAL SURVEILLANCE REQUIREMENTS

This section is included to specify health and safety training and medical surveillance requirements for Tetra Tech personnel participating in on-site activities.

8.1 INTRODUCTORY/REFRESHER/SUPERVISORY TRAINING

Tetra Tech personnel must complete 40 hours of introductory hazardous waste site training prior to performing work at Naval Station, Great Lakes. Tetra Tech personnel who have had introductory training more than 12 months prior to site work must have completed 8 hours of refresher training within the past 12 months before being cleared for site work. In addition, 8-hour supervisory training in accordance with 29 CFR 1910.120(e)(4) will be required for site supervisory personnel.

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

8.2 SITE-SPECIFIC TRAINING

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

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

8.3 MEDICAL SURVEILLANCE

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

8.4 MEDICAL DATA SHEET

Each field team member, including visitors, entering the exclusion zone(s) will be required to complete and submit a copy of the Medical Data Sheet (see Attachment I of this HASP) 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 to administer medical attention.

9.0 SITE CONTROL

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

9.1 EXCLUSION ZONE

The exclusion zone will be considered the areas of the site of known or suspected contamination. It is anticipated that the areas around wells will have the potential for contaminants brought to the surface. These areas will be marked and personnel will maintain safe distances. Once intrusive activities (groundwater sampling) have been completed, the potential for exposure is again diminished and the area can then be reclassified as part of the contamination reduction zone. The exclusion zones for this project are those areas of the site where groundwater sampling is being performed, plus a designated area of at least 5 feet surrounding the work area.

Access to work areas will be controlled by Tetra Tech personnel. Only authorized personnel will be allowed to enter site exclusion zones. If the possibility of others (passersby) unknowingly may enter near the proposed work area, the need for additional perimeter monitoring may be warranted (see Section 7.0).

9.2 CONTAMINATION REDUCTION ZONE

The contamination reduction zone (CRZ) will be a buffer area between the exclusion zone and any area of the site where contamination is not suspected. This area 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 be the 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 SITE VISITORS

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

- Personnel invited to observe or participate in operations by Tetra Tech
- Regulatory personnel (EPA, OSHA, etc.)
- Naval Station, Great Lakes or DoD Personnel
- Other authorized visitors

Personnel working on this project are required to gain initial access to the Naval Station, Great Lakes by coordinating with the Tetra Tech FOL or designee and following established Naval Station, Great Lakes access procedures.

Once access to Naval Station, Great Lakes is obtained all personnel who require site access into areas of ongoing operations will be required to obtain permission from the FOL and SSO. The prerequisites for all site visitors wishing to observe operations in progress in the exclusion zone are discussed below:

- All site visitors will be routed to the FOL, who will sign them into the field logbook.
- Information to be recorded in the logbook will include the individual's name (proper identification required), the entity which they represent, and the purpose of the visit.
- All site visitors will be required to produce the necessary information supporting clearance to the site. This shall include information attesting to applicable training and medical surveillance as stipulated in Section 8.0 of this document.

Once the site visitors have completed the above items, they will be permitted to enter the operational zone. Visitors are required to observe the protective equipment and site restrictions in effect at the site at the time of their visit. Any unauthorized site visitation will cause the termination of the on-site activities until the unauthorized visitor is removed from the area. Removal of unauthorized visitors will be accomplished with support from the Base Contact and Base Security. The site visitors granted access to

the exclusion zones during ongoing operations will be escorted by a Tetra Tech representative (arranged for by the FOL).

9.5 SITE SECURITY

Tetra Tech will retain control over active operational areas. The FOL will serve as a focal point for site personnel, and will serve as the final line of security for the work areas. Site work will cease in the event of unauthorized personnel entering the exclusion zone. Work will remain temporarily suspended until the unauthorized visitor can be removed. The Base Contact will serve as the primary enforcement contact for removing unauthorized visitors.

9.6 SITE MAP

Once the areas of contamination, access routes, utilities, topography, and dispersion routes are determined, a site map will be generated and adjusted as site conditions change. These maps will show utility locations, potential points of contact with the public, roadways, and other significant characteristics that may impact site operations and safety. Site maps will be posted to illustrate up-to-date collection of contaminants and adjustment of zones and access points.

9.7 BUDDY SYSTEM

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

9.8 MATERIAL SAFETY DATA SHEET (MSDS) REQUIREMENTS

Tetra Tech personnel will provide MSDSs for the chemicals brought on-site. The contents of these documents will be reviewed by the SSO with the user(s) of the chemical substances prior to any actual use or application of these substances on site. A chemical inventory of the chemicals used on site will be developed. (See Section 5.0 of the Health and Safety Guidance Manual) A copy of the Chemical Inventory List will be provided to emergency services, as they would serve as primary responders to the work area should the need arise. The MSDSs will then be maintained in a central location and will be available for anyone to review upon request.

9.9 COMMUNICATION

As personnel may not always be working in proximity to one another during field activities, a supported means of communication between field crews will be used as necessary.

External communication will be accomplished by using cell phones at the site but only in approved areas. External communication will primarily be used for the purpose of resource and emergency resource communications. It is strongly recommended that cell phones be programmed with pertinent numbers prior to proposed site activities.

10.0 SPILL CONTAINMENT PROGRAM

10.1 SCOPE AND APPLICATION

It is not anticipated that bulk hazardous materials (over 55 gallons) will be handled at any time during the activities covered by this HASP. However, as the job progresses, the potential may exist for accumulating IDW such as decontamination fluids in a central staging area. It is also anticipated that spillage of IDW would constitute a danger to human health or the environment. Therefore, this Spill Containment Program will be put in place to minimize the potential effects of such spillage. After these fluids and other materials have been characterized, they can be removed from the staging area and properly disposed.

10.2 POTENTIAL SPILL AREAS

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

- Resource deployment area
- Waste transfer
- Central staging

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

10.3 LEAK AND SPILL DETECTION

To establish early detection of potential spills or leaks, a periodic walk-around by the personnel staging or disposing of drums in the resource deployment area will be conducted during working hours to visually determine that storage vessels are not leaking. The inspections will be documented in the project logbook. If a leak is detected, the contents will be transferred, using a hand pump, into a new vessel. The leak will be collected and contained using absorbents such as Oil-Dry, vermiculite, or sand, which will be stored at the vulnerable areas in conspicuously marked drums. This used material also will be containerized for disposal pending analysis.

10.4 PERSONNEL TRAINING AND SPILL PREVENTION

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

10.5 SPILL PREVENTION AND CONTAINMENT EQUIPMENT

The following represents the minimum equipment that may be maintained (depending on anticipated need) at the staging areas for the purpose of supporting this Spill Prevention/Containment Program:

- Sand, clean fill, vermiculite, or other non combustible absorbent (Oil-dry)
- Drums (55-gallon United States Department of Transportation [DOT] United Nations [UN] 1A1 or 1A2)
- Shovels, rakes, and brooms

PPE for spill control may include:

- Nitrile work and inner gloves
- Tyvek coveralls
- Hard hat
- Steel-toed shoes with neoprene boot covers

10.6 SPILL CONTROL PLAN

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

- Notify the SSO or FOL immediately upon detection of a leak or spill.
- Activate emergency alerting procedures for that area to remove non-essential personnel.
- Employ the personal protective equipment stored at the staging area.
- Take immediate actions to stop the leak or spill by plugging or patching the container or raising the leak to the highest point in the vessel.
- Spread the absorbent material in the area of the spill, covering it completely.

- Transfer the material to a new vessel.
- Collect and containerize absorbent material.
- Label the new container appropriately.
- Await analyses for treatment and disposal options.
- Re-containerize spills, including 2-inch of top cover impacted by the spill. Await test results for treatment or disposal options.

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

11.0 CONFINED SPACE ENTRY

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

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

A Permit-Required Confined Space is a confined space that:

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

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

12.0 MATERIALS AND DOCUMENTATION

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

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

12.1 MATERIALS TO BE POSTED OR MAINTAINED AT THE SITE

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

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

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

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

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

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

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

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

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

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

13.0 GLOSSARY

ACGIH	American Conference of Governmental Industrial Hygienists
AHA	Activity Hazard Analysis
CFR	Code of Federal Regulations
CLEAN	Comprehensive Long-Term Environmental Action Navy
COC	Chemicals of Concern
CTO	Contract Task Order
db	Decibels
DoD	Department of Defense
DOT	Department of Transportation
DPT	Direct Push Technology
FOL	Field Operations Leader
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations and Emergency Response
HSGM	Health and Safety Guidance Manual
HSM	Health and Safety Manager
IDW	Investigative-Derived Waste
MSDS	Material Safety Data Sheet
NAVFAC	Naval Facilities
NRR	Noise Reduction Rating
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration
PHSO	Project Health and Safety Officer
PID	Photoionization detector
PM	Project Manager
NSGL	Naval Station, Great Lakes
PPE	Personal Protective Equipment
ppm	Part Per Million
SSO	Site Safety Officer
SOP	Standard Operating Procedure
TBD	To Be Determined
TLV	Threshold Limit Value
Tetra Tech	Tetra Tech NUS, Inc.
TWA ₈	Time Weighted Average (for 8 hour workday)
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound

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 Naval Station Great Lakes

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 in 1996 and was amended April 14, 2003. Loosely interpreted, HIPAA regulates the disclosure of Protected Health Information (PHI) by the entity collecting that information. PHI is any information about health status (such as that you may report on this Medical Data Sheet), provision of health care, or other information. HIPAA also requires Tetra Tech to ensure the confidentiality of PHI. This Act can affect the ability of the Medical Data Sheet to contain and convey information you would want a Doctor to know if you were incapacitated. So before you complete the Medical Data Sheet understand that this form will not be maintained in a secure location. It will be maintained in a file box or binder accessible to other members of the field crew so that they can accompany an injured party to the hospital.

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

Name (Print clearly)

Signature

Date

ATTACHMENT II

INCIDENT REPORT FORM



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



CORRECTIVE ACTIONS

Corrective action(s) immediately taken by unit reporting the incident:

Four horizontal lines for text entry.

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

Four horizontal lines for text entry.

ROOT CAUSE ANALYSIS LEVEL REQUIRED

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

Root Cause Analysis Level Definitions

Table with 2 columns: Level (Level - 1, Level - 2) and Definition. Includes bulleted lists of events that trigger each level.

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"

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

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

MEDICAL CARE PROVIDED

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

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

Name of physician or health care professional

Facility Name

Street Address, City State and Zip Code

Type of Care?

Was individual treated in emergency room? Yes No

Was individual hospitalized overnight as an in-patient? Yes No

Telephone Number

Did the individual die? Yes No If yes, date: _____

Will a worker's compensation claim be filed? Yes No

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

SIGNATURES

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

Affected individual (print)

Affected individual (signature)

Telephone Number

Date

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

INSTRUCTIONS:

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

Incident Report Number: (From the IR Form)

TYPE OF INCIDENT (Check all that apply)

Property Damage Equipment Damage Fire or Explosion Spill or Release

INCIDENT DETAILS

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

Response Actions Taken:

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

Agency(s) Contact Name(s)

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

Item:	Extent of damage:	Estimated repair cost

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

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

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

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

NOTIFICATIONS

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

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

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

INSTRUCTIONS:

Complete all sections below for incidents involving motor vehicle accidents. Do NOT leave any blanks.

Attach this form to the IR FORM completed for this incident.

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

DRIVER INFORMATION

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

PASSENGERS IN VEHICLES (NON-INJURED)

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

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

INJURIES TO NON-TETRATECH EMPLOYEES

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

OTHER PROPERTY DAMAGE

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

COMPLETE AND SUBMIT DIAGRAM DEPICTING WHAT HAPPENED

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

ATTACHMENT III

ACTIVITY HAZARD ANALYSIS



ACTIVITY HAZARD ANALYSIS (AHA)

Site Name: Supplyside Landfill and Forrestal Landfill, Illinois, Naval Station Great Lakes, Great Lakes, Illinois

Task: Site Mobilization/Demobilization

Prepared by J. K. Laffey

Date 5/2011

Reviewed by C. Snyder

Date 5/2011

JOB STEPS	HAZARDS	CONTROLS
<p>Mobilization / Demobilization</p> <ul style="list-style-type: none"> • Assembling equipment and supplies • Performing initial/exit inspections of the intended work areas • Arranging for utilities, site access, notifying appropriate client contacts • Collecting and confirming applicable worker training and medical compliance documentation 	<ol style="list-style-type: none"> 1. Minor cuts, abrasions or contusions 2. Heavy lifting (muscle strains and pulls) 3. Vehicular traffic when moving heavy equipment to the support area. 4. Slips, trips and falls 	<ol style="list-style-type: none"> 1. The use of knives when cutting has resulted in lacerations to workers' hands, legs, and fingers. <ul style="list-style-type: none"> • Wear cut-resistant gloves when handling items with sharp or rough edges. • Use manufacturer-approved cutting tools. • Never rest an object on your knee or other part of your body when cutting. • Keep cutting tools sharp. 2. Practice safe lifting techniques (use mechanical lifting devices such as a dolly whenever possible, ensure clear path of travel, good grasp on object, perform "test lift" to gauge ability to safely make the lift, lift with legs not back, obtain help when needed to lift large, bulky, or heavy items). 3. Designate/demarcate vehicle and equipment staging areas. Inform all site personnel of heavy equipment areas and of their responsibility to stay clear of moving vehicles. In high traffic areas, wear high-visibility vests. 4. Conditions such as steep terrain and/or heavy vegetation may create an increased potential for slip, trip, and fall hazards. <ul style="list-style-type: none"> • The safest approach to sample points will be identified and cleared to permit field crew access to sample locations. • Establish anchor points and rope handrails for

ACTIVITY HAZARD ANALYSIS

JOB STEPS	HAZARDS	CONTROLS
	<p>5. Heat/Cold Stress</p> <p>6. Inclement weather</p>	<p>traversing/ascending/descending angles and slopes greater than 45% grade.</p> <ul style="list-style-type: none"> • Footwear with an adequate traction. • Prepare work areas by removing tripping hazards (ruts, roots, debris). • <p>5. It is always 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 Tetra Tech HSGM, which the SSO is responsible for reviewing and implementing as appropriate for this project.</p> <p>6. In the event that adverse weather conditions arise (electrical storms, hurricanes, etc.), the FOL and/or the SSO will be responsible for temporarily suspending or terminating activities until hazardous conditions no longer exist.</p>
EQUIPMENT TO BE USED	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
<p>Hand tools (dollies, hand carts, hand knives, etc.)</p>	<p>Visual inspection prior to use by user.</p>	<p>Review of AHA during pre-task tailgate safety briefing with all intended task participants.</p>
<p>Personal Protective Equipment: Minimum: Safety toe boots, safety glasses. <u>Optional items:</u> Hardhat, hearing protection. Hazardous, Toxic, Radioactive Waste (HTRW): None anticipated for this task.</p>	<p>Initial PPE inspection performed by SSO. Ongoing (prior to each use) inspections responsibilities of PPE users.</p>	<p>PPE training in proper use, care, storage, and limitations. It is anticipated that this has been covered in employees' 40 hour HAZWOPER training, which is to be verified by the SSO through initial training documentation and review prior to permitting personnel to participate in any onsite activities, and will be confirmed by visual observations of worker activities.</p>

ACTIVITY HAZARD ANALYSIS

I have read and understand this AHA:

Name (Printed)	Signature	Date



ACTIVITY HAZARD ANALYSIS (AHA)

Site Name: Supplyside Landfill and Forrestal Landfill, Illinois, Naval Station Great Lakes, Great Lakes, Illinois

Task: Groundwater Sampling

Prepared by	J. K. Laffey	Date	5/2011
Reviewed by	C. Snyder	Date	5/2011

JOB STEPS	HAZARDS	CONTROLS
Set up equipment well	<ol style="list-style-type: none"> 1. Slips, Trips, Falls 2. Insect bites, snake bites, and contact with poisonous plants. 	<ol style="list-style-type: none"> 1. Clear intended work areas and walking paths of roots, weeds, limbs and other ground hazards. Practice good housekeeping to keep the site clear of obstructions, materials, equipment and other tripping hazards. Ensure that work boots have adequately-aggressive sole design. Use caution when working on uneven and wet ground. 2. Shake out boots before donning. Use insect repellants (products containing DEET should be applied to exposed skin, products containing Permethrin should be applied to clothing only. Follow manufacturer's recommendations. Tape up pants leg to work boot joints with duct tape. Wear light-colored clothing to better see and remove any insects. Perform close body inspections at least daily upon leaving the site. Avoid potential nesting areas (brush, deadfall, etc.) where insects or snakes may be present. Review Natural Hazards information in section 4.0 of the Tetra Tech H&S Guidance Manual with field team as appropriate based on site observations and conditions.
Measure depth to water	<ol style="list-style-type: none"> 1. Employee Exposure 	<ol style="list-style-type: none"> 1. Use PID or FID as indicated in the site-specific HASP to monitor well head and ambient air 2. Wear safety glasses and nitrile gloves to protect against splash
Measure and insert tube into well	<ol style="list-style-type: none"> 1. Laceration 	<ol style="list-style-type: none"> 1. Only use retractable safety blade to cut tubing 2. Cut in a direction away from the face/body
Begin extracting water from well	<ol style="list-style-type: none"> 1. Employee exposure 	<ol style="list-style-type: none"> 1. Wear safety glasses and nitrile gloves
Fill sample bottles with sample material; load coolers and IDW (if appropriate) into vehicle	<ol style="list-style-type: none"> 1. Laceration 	<ol style="list-style-type: none"> 1. Handle all glass containers carefully 2. Have a first-aid kit available on site for small cuts 3. Dispose of all broken shards immediately

ACTIVITY HAZARD ANALYSIS

JOB STEPS	HAZARDS	CONTROLS
Store sample containers in coolers and load onto vehicles	1. Slip/trip/fall 2. Back strain/sprain	1. Ensure all debris has been removed from the path of travel 2. Use proper lifting techniques, including obtaining help with heavy coolers
EQUIPMENT	INSPECTION	TRAINING
<ul style="list-style-type: none"> • Bailer, sampling pump, plastic tube • Retractable safety blade knife • Portable eye wash kit. • First Aid Kit 	Visual inspection prior to use by user.	Training/experience in proper sample collection, handling and chain of custody requirements.
<p>Personal Protective Equipment: <u>Minimum:</u> Level D PPE nitrile surgeon's type gloves, safety toe boots, safety glasses</p> <p><u>Optional items:</u> Hardhat, hearing protection. Reflective safety vest if in areas of vehicle traffic</p> <p><u>HTRW:</u> PID or FID</p>	Initial PPE inspection performed by SSO. Ongoing (prior to each use) inspections responsibilities of PPE users.	OSHA 40 Hazardous Waste Operations and Emergency Response (HAZWOPER) training, plus appropriate 8-hour annual refresher training for all task participants. Supervisors must have completed additional 8 hours of HAZWOPER training. ALSO: Review of AHA during pre-task tailgate safety briefing with all intended task participants.

I have read and understand this AHA:

Name (Printed)	Signature	Date



ACTIVITY HAZARD ANALYSIS (AHA)

Site Name: Supplyside Landfill and Forrestal Landfill, Illinois, Naval Station Great Lakes, Great Lakes, Illinois

Task: Monitoring Well Abandonment

Prepared by	J. K. Laffey	Date	5/2011
Reviewed by	C. Snyder	Date	5/2011

JOB STEPS	HAZARDS	CONTROLS
Filling the wells with bentonite chips from bottom to top	<ol style="list-style-type: none"> 1. Minor cuts, abrasions or contusions handling equipment and tools 2. Strains or sprains during manual lifting and carrying activities 3. Use of cement may cause an inhalation/ingestion hazard 4. Muscle Strain/Pulls 	<ol style="list-style-type: none"> 1. Wear cut-resistant gloves when handling items with sharp or rough edges. 2. Practice safe lifting techniques (use mechanical lifting devices such as a dolly whenever possible), and plan each lift: <ul style="list-style-type: none"> • Inspect/clear the intended path of travel and areas where loads will be deposited, • test lift each object, • ensure good grasp is obtainable on object, • keep back straight and lift with legs not back, • obtain help when needed to lift large, bulky, or heavy items. 3. Ensure cement dust is not inhaled/ingested. 4. 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 clutter to avoid unnecessary twisting or sudden movements while handling loads. The following steps will help prevent back injury: <ul style="list-style-type: none"> • Clear the path you will follow. • Lift with your legs, not your back. • "Hug" the load. • Minimize the horizontal distance between the load and your center of

ACTIVITY HAZARD ANALYSIS

JOB STEPS	HAZARDS	CONTROLS
		gravity. <ul style="list-style-type: none"> • Avoid twisting. • Break large loads into smaller, more manageable ones. • Take frequent rest and stretch breaks.
Removing flush-mounted surfaces with a jackhammer	<ol style="list-style-type: none"> 1. Excessive noise caused by jackhammer 2. Damage to eyes from flying debris 3. Damage to feet from jackhammer 4. Damage to head from flying debris 5. Damage to hands from jackhammer 	<ol style="list-style-type: none"> 1. Workers near the jackhammer shall wear hearing protection. If workers need to raise their voices to communicate with fellow employees who are 2 feet away, hearing protection is required. The protection chosen must have a Noise Reduction Rating (NRR) greater than 25db. 2. Workers near the jackhammer shall wear eye protection (safety glasses). 3. Workers are to wear sturdy work shoes that are outfitted with slip resistant treads (steel toe work shoes are required). 4. Hard hats and sturdy work shoes and safety glasses will be worn as minimum equipment for all on-site activities. 5. Wear leather or cotton work gloves when moving or handling debris.
Filling void with appropriate materials to match surroundings	<ol style="list-style-type: none"> 1. Minor cuts, abrasions or contusions handling equipment and tools. 2. Strains or sprains during manual lifting and carrying activities 	<ol style="list-style-type: none"> 1. Wear cut-resistant gloves when handling items with sharp or rough edges. 2. Practice safe lifting techniques (use mechanical lifting devices such as a dolly whenever possible), and plan each lift:: <ul style="list-style-type: none"> • Inspect/clear the intended path of travel and areas where loads will be deposited, • test lift each object, • ensure good grasp is obtainable on object, • keep back straight and lift with legs not back, and obtain help when needed to lift large, bulky, or heavy items
EQUIPMENT	INSPECTION	TRAINING
<ul style="list-style-type: none"> • Portland cement (type I or II) and powdered bentonite for grouting • Bentonite chips • Potable water 	Visual inspection of hand tools prior to use by user.	All personnel participating in this activity must be current with HAZWOPER training requirements, and are to review this AHA as part of a pre-task Health and Safety briefing.

ACTIVITY HAZARD ANALYSIS

EQUIPMENT	INSPECTION	TRAINING
<ul style="list-style-type: none"> • Portable grout station • Waterproof/permanent marking pens • Tremie pipe • Portable eye wash kit. • First Aid Kit 	<p>FOS and SSHO to perform regular (e.g., daily) inspections for housekeeping issues</p>	
<p>Personal Protective Equipment: Minimum: Heavy work boots, hardhats. safety glasses, flashlights. Optional items: high visibility vest, snake chaps, work gloves. HTRW: None anticipated for this task.</p>	<p>Initial PPE inspection performed by SSO. Ongoing (prior to each use) inspections responsibilities of PPE users.</p>	<p>OSHA 40 Hazardous Waste Operations and Emergency Response (HAZWOPER) training, plus appropriate 8-hour annual refresher training for all task participants. Supervisors must have completed additional 8 hours of HAZWOPER training. ALSO: Review of AHA during pre-task tailgate safety briefing with all intended task participants.</p>

I have read and understand this AHA:

Name (Printed)	Signature	Date



ACTIVITY HAZARD ANALYSIS (AHA)

Site Name: Supplyside Landfill and Forrestal Landfill, Illinois, Naval Station Great Lakes, Great Lakes, Illinois

Task: Decontamination

Prepared by J. K. Laffey

Date 5/2011

Reviewed by C. Snyder

Date 5/2011

JOB STEPS	HAZARDS	CONTROLS
Personal Decontamination <ul style="list-style-type: none"> • Equipment drop • Segregated removal of PPE (wash and rinse reusable items, dispose of non-reusable items) 	<ol style="list-style-type: none"> 1. Slips, Trips, Falls 2. Exposure to contaminated media 	<ol style="list-style-type: none"> 1. Clear intended decon area location of roots, weeds, limbs and other ground hazards. Practice good housekeeping to keep the site clear of obstructions, materials, equipment and other tripping hazards. Wear appropriate foot protection to prevent slips and trips. Use caution when working on uneven and wet ground surfaces. 2. Follow good decontamination practices (work from top down and outside in). Nitrile gloves are to be the last item of PPE removed. Wash hands and face following personal decontamination and prior to performing any hand-to-mouth activity.
Decontamination of sampling equipment	<ol style="list-style-type: none"> 1. Slips/trips/falls 2. Exposure to contaminated media 	<ol style="list-style-type: none"> 1. Keep decon areas orderly, maintain good housekeeping, spread light coating of sand on decon pad liner to increase traction. 2. Follow good decontamination practices (work from top down and outside in). Surgeon's gloves are to be the last item of PPE removed. Wash hands and face following personal decontamination and prior to performing any hand-to-mouth activity.

EQUIPMENT	INSPECTION	TRAINING
Hand tools (hand brushes, garden sprayers, etc.)	Visual inspection prior to use by user. Check wooden handles for cracks or splinters.	None required.
Personal Protective Equipment: Minimum: Safety toe boots, safety	Initial PPE inspection performed by SSO.	OSHA 40 Hazardous Waste Operations and Emergency Response (HAZWOPER) training, plus appropriate 8-hour annual refresher training for all

ACTIVITY HAZARD ANALYSIS

EQUIPMENT	INSPECTION	TRAINING
glasses Optional items: Hardhat, hearing protection. HTRW: none	Ongoing (prior to each use) inspections responsibilities of PPE users.	task participants. Supervisors must have completed additional 8 hours of HAZWOPER training. Also Review of AHA during tailgate safety briefing with the intended task participants. PPE training in proper use, care, storage, and limitations. It is anticipated that this has been covered in employees' 40 hour HAZWOPER training, which is to be verified by the SSO through initial training documentation and review prior to permitting personnel to participate in site activities, and will be confirmed by visual observations of worker activities.

I have read and understand this AHA:

Name (Printed)	Signature	Date



ACTIVITY HAZARD ANALYSIS (AHA)

Site Name: Supplyside Landfill and Forrestal Landfill, Illinois, Naval Station Great Lakes, Great Lakes, Illinois

Task: IDW Management

Prepared by J. K. Laffey

Date 5/2011

Reviewed by C. Snyder

Date 5/2011

JOB STEPS	HAZARDS	CONTROLS
Filling, moving 55-gallon drums of IDW	<ol style="list-style-type: none"> 1. Heavy lifting 2. Struck by/pinches compressions 3. Falling objects (drums) 4. Slips, Trips, Falls 5. Foot hazards 6. Strains/sprains due to heavy lifting 7. Minor contusions, abrasions, cuts 	<ol style="list-style-type: none"> 1. Practice safe lifting techniques (use mechanical lifting devices such as a dolly whenever possible, ensure clear path of travel, good grasp on object, perform "test lift" to gauge ability to safely make the lift, lift with legs not back, obtain help when needed to lift large, bulky, or heavy items). 2. Exercise caution when handling drums. Position drums so that there is adequate room between them for placement and repositioning. 3. Do not stack drums on top of each other. Do not place more than 4 drums to a pallet. Leave at least 4 ft. of clearance between pallets for clear access. 4. Maintain good housekeeping in IDW storage areas, keeping it clear of loose debris and other potential tripping hazards. Wear appropriate foot protection to prevent slips and trips. Use caution when working on uneven and wet ground surfaces. 5. Safety toe foot protection will be required for IDW container handling activities. 6. Practice safe lifting techniques (use mechanical lifting devices such as a dolly whenever possible, ensure clear path of travel, good grasp on object, lift with legs not back, and obtain help when needed to lift large, bulky, or heavy items). 7. Wear cut-resistant gloves when handling items with sharp or rough edges.

ACTIVITY HAZARD ANALYSIS

EQUIPMENT	INSPECTION	TRAINING
Hand tools (drum dollies, wrenches, etc.)	Visual inspection prior to use by user. Check wooden handles for cracks or splinters.	All personnel participating in this activity must be current with HAZWOPER training requirements.
<p>Personal Protective Equipment: <u>Minimum:</u> Safety toe boots, safety glasses <u>Optional items:</u> Hardhat, cotton or leather work gloves.</p> <p><u>HTRW:</u> If contact with IDW is likely, wear chemical-resistant coveralls (e.g., Tyvek) or aprons and surgeon's nitrile gloves under leather/cotton work gloves.</p>	Initial PPE inspection performed by SSO. Ongoing (prior to each use) inspections responsibilities of PPE users.	PPE training in proper use, care, storage, and limitations. It is anticipated that this has been covered in employees 40 hour HAZWOPER training, which is to be verified by the SSO through initial training documentation and review prior to permitting personnel to participate in site activities, and will be confirmed by visual observations of worker activities.

I have read and understand this AHA:

Name (Printed)	Signature	Date

ATTACHMENT IV

OSHA POSTER

Job Safety and Health

It's the law!



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

EMPLOYEES:

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

EMPLOYERS:

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

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



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

1-800-321-OSHA
www.osha.gov

OSHA 3165-12-06R