

Health and Safety Plan
for
**Interim Offshore Monitoring
Program and Additional Scrutiny
Sampling at OU4**

**Portsmouth Naval Shipyard
Kittery, Maine**



**Engineering Field Activity Northeast
Naval Facilities Engineering Command**

Contract Number N62472-03-D-0057

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HEALTH AND SAFETY PLAN
INTERIM OFFSHORE MONITORING PROGRAM
AND ADDITIONAL SCRUTINY SAMPLING AT OU4

PORTSMOUTH NAVAL SHIPYARD
KITTERY, MAINE

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT

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1.0 INTRODUCTION

This Health and Safety Plan (HASP) has been developed to provide practices and procedures for Tetra Tech NUS, Inc. (TtNUS) and subcontractor personnel engaged in investigatory activities during the Interim Offshore Monitoring Program and Additional Scrutiny Sampling at OU4 at the Portsmouth Naval Shipyard (PNS), Kittery, Maine. This HASP must be used in conjunction with the TtNUS Health and Safety Guidance Manual. Both of these documents must be present at the site during the performance of all site activities to achieve compliance with the requirements stipulated in 29 CFR 1910.120 (OSHA's Hazardous Waste Operations and Emergency Response Standard), OSHA's Construction Industry Standards, 29 CFR 1926.

This HASP will be modified, if

- New information becomes available not addressed in this HASP.
- Changes to the tasks identified in Section 4.0 Scope of Work

The Project Manager (PM), who will notify all affected personnel of changes.

1.1 KEY PROJECT PERSONNEL AND ORGANIZATION

This section defines the positions responsible for site safety and health for TtNUS and subcontractor employees engaged in onsite activities. These persons will be the primary points of contact for any questions regarding the safety and health procedures and the selected control measures that are to be implemented for onsite activities.

- The TtNUS PM is responsible for the overall direction of health and safety for this project.
- The PHSO is responsible for developing this HASP in accordance with applicable OSHA regulations. Specific responsibilities include:
 - 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 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 TtNUS 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, and enforces safety procedures as applicable to the work plan.
 - The SSO supports site activities by advising the FOL on all aspects of health and safety on site. These duties may include:
 - i. Coordinating all health and safety activities with the FOL.
 - ii. Selecting, applying, inspecting, and maintaining personal protective equipment.
 - iii. Establishing work zones and control points in areas of operation.
 - iv. Implementing air monitoring program for onsite activities.
 - v. Verifying training and medical clearance of onsite personnel status in relation to site activities.
 - vi. Implementing Hazard Communication, Respiratory Protection Programs, and other associated health and safety programs as they may apply to site activities.
 - vii. Coordinating emergency services.
 - viii. Providing site-specific training for all onsite personnel.
 - ix. Investigating all accidents and injuries (see Attachment I - Illness/Injury Procedure and Report Form)
 - x. Providing input to the PHSO regarding the need to modify this HASP, or applicable health and safety associated documents as per site-specific requirements.
 - Compliance with the requirements stipulated in this HASP are monitored by the HSM with the assistance of the SSO.

Note: In some cases one person may be designated responsibilities for more than one position. For example, for the PNS Interim Offshore Monitoring activities, the FOL may also be responsible for SSO duties. This action will be performed only as credentials, experience, or the tasks involved permits.

- The Boat Captain has the authority to suspend field operations if it is determined conditions in the field are unsafe. Furthermore, the Boat Captain is responsible for:

- i. Insuring the Boat is in safe operating condition meeting the minimum safe USCG Vessel Certification.
- ii. Providing the necessary safety equipment on the boat including
 - A sufficient number of Personal Floatation Devices.
 - Emergency rescue devices to extract persons from the water.
 - Emergency alerting/alarm devices to signal when in distress.
 - Fire Extinguishers/First Aid Kit/Back up Bilge pumps as appropriate for the vessel type.

Tetra Tech NUS, Inc. is relying on the Captain to operate the boat in a safe manner within the guidelines for operations in and around Portsmouth.

Note: Regardless of the position occupied all personnel have the authority to stop work if a situation is deemed unsafe.

2.0 EMERGENCY ACTION PLAN

2.1 INTRODUCTION

This section has been developed as part of a planning effort to direct and guide field personnel in the event of an emergency. All site activities will be coordinated with the PNS POC, John Gildersleeve. In the event of an emergency that cannot be mitigated using onsite resources, personnel will contact the appropriate emergency response agencies. Navy contact John Gildersleeve will be notified anytime outside response agencies are contacted. This Emergency Action Plan conforms to the requirements of 29 CFR 1910.38(a), as allowed in 29 CFR 1910.120(l)(1)(ii).

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

- Initial stage fire fighting support and prevention
- Removal of personnel from emergency situations (overboard)
- Initial medical support for injuries or illnesses requiring basic first-aid
- Site control and security measures as necessary

2.2 PRE-EMERGENCY PLANNING

Potential incidents that may progress to an emergency situation include

- Fire
- Drowning
- Severe weather/rough water conditions

2.2.1 Procedures for Reporting a Fire or Other Emergency

Emergency Notification Devices

Radio Onboard – The Boat will be equipped with a ship to shore radio to notify the USCG in the event of an Emergency. Captain of the vessel will notify the USCG. The Boat Captain will also direct TtNUS personnel on its use and application in the event he/she or the deck hand(s) assisting in operations are incapacitated.

Cell phone – Each TtNUS person on board will carry a cell phone. That phone may also be used in the event of an emergency to notify the USCG. It is recommended that all members program the USCG number in their phones for quick and easy access.

Airhorn/Visual Alarms (Flares, etc.) – Will be identified to the personnel on board in the event it is necessary to notify nearby boats for assistance in an emergency.

Notification Procedure

As this activity will take place over water the USCG will serve as the primary emergency response agency.

- For all onboard activity the Captain of the vessel will initiate any and all emergency notifications. In the event the Captain is incapacitated that responsibility will pass to the next in line for the Boat operation.
- Tt personnel will follow the directions of the Boat Captain initiating incident control measures including securing the scene, utilization of pumps, fire extinguishers, etc.

Upon control of the emergency (injured treated and secured, fires are out) and back on shore TtNUS personnel will notify:

1. John Gildersleeve PNS POC
2. Tom Dickson TtNUS PHSO
3. Matt Soltis, HSM

in the above order of the nature of the incident and measures taken.

As all personnel will be in close proximity (on the boat), verbal notification will serve as the emergency alarm system.

As some sampling will be conducted from the shoreline, Tt personnel will be responsible for emergency notification.

2.2.2 Procedures for Evacuation – Types and Exit Route Assignments/Accounting for All Personnel

Should an incident go beyond the crew (including TtNUS personnel) ability to control:

1. The Captain will notify the USCG by Radio requesting assistance.
2. Flares horns or other devices will be employed to notify nearby vessels of distress.

3. The Captain will direct the deployment of inflatable boats (if equipped based on size).
4. The Captain will direct personnel to evacuate the vessel. If the operation is close to the shore personnel will move to the closest shoreline.
5. If not, personnel will move away from the vessel (at least 200-feet) and deploy visual strobes to mark positions. All personnel will group and attach to one another using handholds or bindings to insure no one gets separated by tides or currents. It is anticipated that the maximum distance from shore will be 200-feet at any given time.
6. The SSO will account for all personnel once the group has gathered together. The status of missing and/or all accounted for will be reported to the responding USCG unit.

For sampling conducted in Building 178 and at other on shore locations the Tt person onsite will be responsible for selecting an assembly point for that area and convey to those persons prior to the initiation of activities.

2.2.3 Critical Operations

There are no critical operations that must be manned in the event of an emergency. Once all resources and efforts have been expended to control an incident, all personnel will evacuate.

2.2.4 Procedures for Rescue or Medical Duties

Rescue

In order to support emergency rescue and/or first aid, the following provisions will be put in place

- The boat will be equipped with a USCG Approved Type IV Throwable Flotation Device with at least 90-feet of rope to provide a means to extract personnel who make have fallen into the water.
- All personnel while on-board will have at their immediate access (preferably worn) their USCG Approved Personnel Flotation Device, Type II.
- A ladder, landing deck or some other mechanism will be available to extract persons from the water.

For Medical Duties, see Figure 2-1.

2.3 FIRE CONTROL

The Boat will have available emergency fire extinguishers (A:B:C) type. The size will be determined as follows:

- General operations – At least 2A:B:C
- Flammable liquids – For each 5-gallon storage capacity of fuel handled or dispensed, a fire extinguisher with a 10B rating will be maintained on the boat.

The SSO will review fire extinguisher use and application. All fire extinguishers will be inspected to insure it is operational (fully charged, not damaged) prior to launching.

See Section 8.0 for fire extinguisher training.

2.4 EMERGENCY ROUTE TO HOSPITALS

Directions to the hospitals:

On Base: Ambulatory service will be available to provide transportation to the off base to Portsmouth Regional Hospital in response to emergencies.

Map and directions are provided in Figure 2-2.

2.5 EMERGENCY CONTACTS

Prior to initiating field activities, all 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 all site personnel. Facility maps should also be posted showing potential evacuation routes and designated meeting areas.

FIGURE 2-1 EMERGENCY MEDICAL DUTIES

In the event of significant incidents which occur while on water, personnel will immediately notify the U.S. Coast Guard (603/433-7324) and alert them of the event. Personnel will follow the direction and guidance provided by the Coast Guard.

The FOL with the assistance of the Captain will determine if personnel can be taken to shore for medical ambulatory care and transportation within 4 minutes for life threatening injuries or 15 minutes for non-life threatening injuries from the further point out where the investigation is to occur. If so, a First-Aid/CPR trained person (preferably two) is not required. If not such a person (First-Aid/CPR Trained) is required.

Emergency Medical

Cardiopulmonary Resuscitation (CPR)

- Step 1: Determine if the surrounding scene is safe.
- Step 2: Tell someone nearby to call 9-1-1.
- Step 3: Determine if the injured person is breathing or responsive. Speak to them ask if they can hear you (Listen, watch for the chest to rise).

If they are not Breathing and a Pulse is not detectable

- Step 4: Position the injured person on his or her back, being extremely careful not to move or twist in the event of a head, neck or spine injury. If several rescuers are present, use their assistance to minimize this danger using the logroll technique.
- Step 5: Check to see if the airway is unobstructed. Maintain an open airway while you pinch the injured person's nose shut.
- Step 6: Give two long, slow breaths, being sure to maintain a seal between your mouth and his or hers. The FOL shall insure the first aid kit is equipped with a MicroShield CPR Mask to permit CPR without contacting the injured persons bodily fluid.
- Step 7: Position the hands: find the lower tip of the breastbone. Measure two finger widths towards the head, and place the heel of one hand in this location. Place your other hand on top of the first hand, interlacing your fingers of both hands.
- Step 8: Lean forward so that your shoulders are over your hands. Push downward on the chest (1 to 1 1/2 inches), using the weight of your upper body for strength. Compress 30 times in 20 seconds.
- Step 9: Give two more slow breaths after the 30 compressions.

Step 10: Repeat cycle 4 times, check for breathing and pulse.

Step 11: Continue this 4-set cycle until pulse and breathing are regained or emergency services arrive.

Tips & Warnings:

- Use surgeon's gloves and a breathing mask to prevent or transmission of disease during CPR.
- If breaths do not go in, re-tilt the head and try again. If breaths still do not go in, the airway may be obstructed.
- If you suspect a spinal injury do not tilt the chin to open the airway. Instead, with one hand on each side of the head and facing the injured person's toes, put your index and third fingers in front of the earlobes and push the jaw forward and up.
- If this method doesn't open the airway, revert to the chin-tilt method: the injured person's most drastic need is for oxygen.
- If the person has a severe injury to the mouth, then give breaths through the nose while keeping the injured person's mouth sealed shut.

Bleeding - If someone's bleeding, you must stop the bleeding and cover and bandage the wound, where possible:

Protect Yourself Against Bloodborne Pathogens

The concept of Universal Precautions and Bodily Substance Isolation must be practiced.

1. If possible, wash your hands with soap and then wear rubber gloves.
2. Wear a surgical mask and safety glasses to protect yourself against contacting the injured persons bodily fluids.
3. Prepare a clean place to administer first aid.
4. Keep hands and first aid materials as clean as possible.

These precautions will reduce the chance of infection. If there is a large amount of blood loss, and/or it is a serious wound, get emergency medical help.

- Apply direct pressure by placing gauze pads or multiple dressings over the wound and applying pressure. If the dressing becomes saturated, do not remove it; apply additional dressings.
- If it is an extremity (Arm, hand, leg elevate above the heart)
- If bleeding stops secure the dressing, seek medical attention.

Tip: The dressing shouldn't be too tight because you don't want to cut circulation.

If bleeding does not stop, pressure may need to be applied on a pressure point between the wound and the heart. Locate the pulse, press against the bone

Hands: There is a pressure point on the inner side of wrist.

Arms: There is a pressure point located inside each upper arm, between the elbow and the shoulder. What you will be doing is pressing the artery (brachial) against the bone.

Legs: Another pressure point is located in the groin area, where each leg meets the torso. The idea is to press the artery against the bone until the bleeding stops. When you release pressure, release it very slowly and observe the dressing. If it fills with blood, repeat.

Surface Bruises - Signs/Symptoms include: discoloration caused by bleeding in the tissue near the skin's surface, swelling and pain. Apply ice packs or cold moist towels. Internal bleeding: Signs/Symptoms are large bruises; severe, intense pain; pale cold, clammy skin; dilated pupils; weak, rapid irregular pulse rate; and swelling. Treatment: Keep the person comfortable, warm and treat for shock if necessary.

Broken Bones - The signs & symptoms of fractures, sprains, and strains are: swelling, deformity, discoloration, pain, or possibly (but not always) inability to use affected part. If you cannot tell if the person has a fracture, sprain, or strain, treat it as a fracture.

Two types of fractures: Open and Closed.

- With an Open fracture the bone has broken through the skin, and bleeding is present. Do not clean the wound or attempt to push the bone ends back into the skin.
- Treatment for Open and Closed Fractures: Don't move the person. Keep them warm and still, treat for shock if necessary. Immobilize the injured area by using a splint (makeshift if available).

To splint a fracture:

1. Place the splint above and below the fracture.
2. Tie the splint to the fracture, leaving a knot tied on the splint. If the fracture is an arm, place it in a sling. If there is a deformity in the fracture, pad the splint to fit the deformity.

Shock - Signs & Symptoms of shock can be pale skin color, breathing difficulty, clammy skin, higher pulse rate, or mental confusion. Restlessness and anxiety may be the first signs and symptoms you observe. No food or drink is to be given.

Treatment for shock is to maintain body temperature and calm the victim. Place a blanket over the person, monitor airway, breathing, signs of circulation, and check for bleeding. You may raise the legs 8 to 12 inches to help the body's blood flow if you don't suspect a head, neck, back, or leg injury.

⚠Reminder:

Report all incidents to the PHSO. If there is suspected contact with the injured persons bodily fluids notify the PHSO so Bloodborne Pathogen program elements may be instituted.

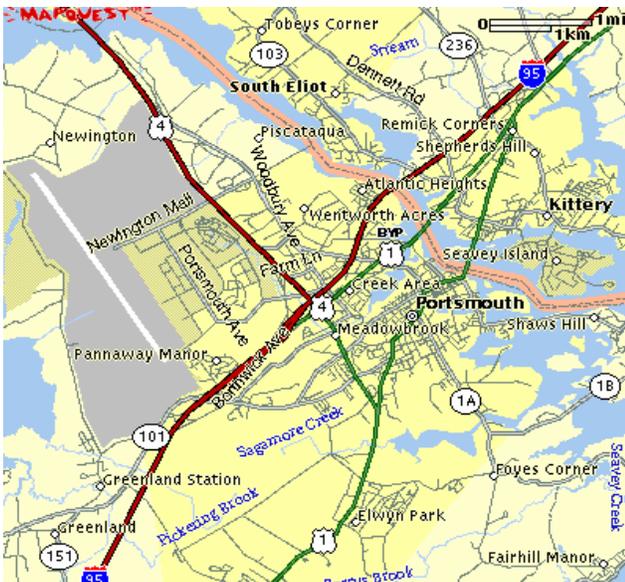
TABLE 2-1
EMERGENCY CONTACTS
PORTSMOUTH NAVAL SHIPYARD

Police (Shipyards)	(207) 438-2444*
Fire Department (Shipyards)	(207) 438-2333*
Ambulance (Shipyards)	(207) 438-2555*
U.S. Coast Guard	(603) 433-7324
Hospital: Portsmouth Regional Hospital	(603) 433-4042
Base Contact: John Gildersleeve	(207) 438-2536*
TtNUS Project Manager Aaron Bernhardt	(412) 921-8433 Cell (412) 523-0634
TtNUS Project Health and Safety Officer Thomas M. Dickson, CSP	(412) 921-8457 Cell (412) 720-3006
CLEAN Health and Safety Manager Matthew M. Soltis, CIH, CSP	(412) 921-8912
WorkCare	1(800) 455-6155

*Phone calls from Base use last 4 digits.

Figure 2-2 Route to the Hospital

Full Route



Destination



Portsmouth Regional Hospital

1. Travel west on Parker Ave. to Goodrich, Turn right
2. Continue on Goodrich until reaching Sicard St., turn right onto Sicard St.,
3. Follow Sicard to Wyman Ave, turn left.
4. Follow Wyman Ave. to Walker Street remain on Walker to the Main Gate No.1
5. Exit the Shipyards through Gate No. 1, go straight down Walker Street until intersecting Route 1.
6. Enter underpass rotary on left side onto Route 1 Bypass South, cross bridge and continue straight to traffic circle.
7. At traffic circle, go around to the right 270 degrees, 3/4 circle from entrance to traffic circle, exit right. Go to the second set of traffic lights, turn right onto Borthwick Ave. Ext.
8. Proceed on Borthwick Ave. Ext. 1/2 to 1 mile. Portsmouth Regional Hospital will be on the right side.

3.0 SITE BACKGROUND

A detailed discussion of the history and background of the Portsmouth Naval Shipyard, and of the individual site areas where work activities are planned to be performed under this project, is presented in the Interim Offshore Monitoring Program Work Plan and the Additional Scrutiny Quality Assurance Project Plan. Refer to these documents for additional information, proposed sampling locations and AOCs for offshore and referenced site locations associated with the planned work activities.

4.0 SCOPE OF WORK

This section describes the project tasks that will be performed at PNS during the Interim Offshore Monitoring Program and Additional Scrutiny Sampling. Each task has been evaluated and the associated hazards and recommended control measures are provided in the Safe Work Permit provided in Attachment II of this HASP.

Activities that will be performed as part of the scope of work include:

- Mobilization and demobilization
- Sediment sampling at monitoring and reference stations – Surface sediment sampling will employ Ponar or similar dredges. Sediment cores will be sampled using sediment core samplers.
- Eel grass mapping - Underwater video or Aquascope
- Sediment topographical survey – This will be accomplished through underwater video, hydrographic survey, and probing the sediment with a metal rod/pipe along transects.
- Decontamination of sampling equipment

5.0 SUMMARY OF TASKS/HAZARDS/ASSOCIATED CONTROL MEASURES

The anticipated hazards, recommended control measures, air monitoring recommendations, required Personal Protective Equipment (PPE), and decontamination measures for each site task are discussed in detail.

As discussed earlier, a Health and Safety Guidance Manual accompanies this HASP. The manual is designed to further explain supporting programs and elements for other site-specific aspects as required by 29 CFR 1910.120. The Guidance Manual should be referenced for additional information regarding decontamination activities, emergency response, hazard assessments, hazard communication program, medical surveillance, PPE, site control measures, standard work practices, and training requirements. Many of Tetra Tech NUS' SOPs are also provided in this Guidance Manual.

Safe Work Permits issued for sampling, surveying and mapping, and decontamination activities (See Section 10.10) using elements defined in this section. The FOL in completing the Safe Work Permit will add additional site-specific information.

5.1 MOBILIZATION/DEMOBILIZATION

This task includes, but not limited to, the following:

- The procurement and shipping of equipment, and materials for the field investigation.
- Review of planning documents (i.e., HASP, Sampling and Analysis Plan, Work Plan, Quality Assurance Plan, etc.)
- Site Reconnaissance to include site characterization, site preparation, securing the necessary utility clearances and isolating physical hazards, where applicable.
- Inspecting equipment prior to use (Boat sampling equipment, etc.).
- Securing emergency equipment.

Physical Hazards – The hazard types associated with this task are considered primarily to be Physical hazards – Lifting, strains/sprains, lacerations achieved during unpacking of equipment and during site preparation (i.e., cutting open boxes, lifting equipment, staging equipment, assembling equipment); and pinches and compressions.

Chemical Hazards - It is not anticipated that personnel will be exposed to chemical hazards (site contaminants) during this task. The FOL and/or the SSO must establish the site-specific Hazard

Communication Program to address potential hazards of chemicals brought on-site. See Section 5.0 of the HSGM where this standard may apply.

5.2 WATER HAZARDS

Some of the primary hazards associated with this project are:

- Potential for boating accident
- Persons in the water
 - Drowning
 - Hypothermia
 - Slips, trips, and falls on the deck of the boat or actually falling overboard. Working on a stationary object from a rocking boat increases the potential for loss of balance and potential falls. Working both in and out of the water increases the potential for getting the deck wet thereby increasing the potential for slips and falls. Lastly, if all goes wrong and someone falls in they could be accidentally struck by the workboat or strike a building component when falling into the water. This is greatly increased when sampling inside Building 178. This hazard is magnified every time a sampling device brings water onto the deck.

Planned activities are planned to be executed from a work boat 22 to 26-feet in length. To avoid potential hazards associated with working over water (drowning), the field team shall:

- Employ lifelines (tie-off procedure), safety harnesses, when working along Piers and docksides that are not guarded by suitable handrails (when sampling along these areas).
- When working out of the boat, shall employ U.S. Coast Guard (USCG) approved personal flotation devices (PFDs).
- Wear slip resistant footwear when sampling on the boat. Deck shoes or similar footwear intended for aquatic purposes. Steel toed work boots are not required or recommended as these may be slippery on the boat deck and weigh you down if you go overboard.

5.2.1 U.S.C.G. Flotation Device Types

Use the following information to determine the proper type of U.S.C.G. PFD.

Off Shore Life Jacket (Type I, 22lbs buoyancy)

Type I life jacket is the best choice for rough or open waters. This type will float you the best and is favorable if rescue may be long in coming. This type will turn an unconscious person upright in the water. Though it is bulky it does have a highly visible color for easier detection.

Near Shore Buoyant Vest (Type II, 15.5lbs buoyancy)

Type II is a good choice for calmer waters. It will turn most unconscious persons face-up in the water. Though it is less bulky than Type I, it is not intended for long hours in calm or rough water.

Flotation Aid (Type III, 15.5lbs buoyancy)

Type III is probably the most comfortable device offering more freedom of movement, such as water skiing or fishing, but is not intended for rough water. Also, an unconscious person may end up face-down in the water.

Throwable Devices (Type IV)

Throwable devices are intended for calm waters with heavy boat traffic where help is always close. It is not intended for unconscious persons or non-swimmers or long hours in the water. They are good backups for the other devices.

All personnel shall wear Type III personal flotation devices at a minimum in the event someone falls overboard, boats sinks or capsizes. Type IIIs were selected as they offer the most flexibility for working while still meeting minimum requirements for buoyancy. In situations where personal flotation devices cannot be worn due to the task to be conducted, the flotation devices shall be immediately available/accessible. It is recommended that personal flotation devices be worn at all times during colder months due to the potential for hypothermia to restrict muscle movement and therefore, self rescue and maintaining buoyancy.

In addition, a single Type IV Throwable Flotation Device shall be maintained on board (as back up and as a means to extract someone who has fallen in the water) the boat with at least 90 feet of 3/8 polypropylene line.

All personnel working on waters edge (Piers and Docks) will do so using the buddy system to assist in rescue efforts, if needed.

5.2.2 U.S.C.G Boat Regulations

The Navy Dockmaster is the ultimate authority within the boundaries of US Navy property. Access to these waters, hours of operation, when docks and Piers will be open, where the work boat can and should dock will be coordinated through him/her. In addition, the Dockmaster will inform us of any additional local restrictions.

The U.S.C.G. require all boats to have the following equipment on board:

- One personal flotation device per person
- A sound producing device such as an air horn or whistle which can be heard one half mile.
- Navigation Lights - Tetra Tech NUS, Inc. will require in addition, activity hazards lights (flashing lights) to increase visual recognition.
- Global Marine Radio
- Fire Extinguisher (At least a 3A:40B:C is recommended) Inspection must be current
 - Is the extinguisher accessible and in the location where it will be needed?
 - Is the extinguisher fully charged?
 - Have any of the tamper indicator devices missing or broken?
 - Are all personnel trained in its use (**P**ull pin. **A**im at the base of the fire. **S**queeze the lever. **S**weep side to side)
- Flash light
- At least one buoyant heaving line (minimum 15-feet in length)
- An anchor with at least 50-feet of cable/rope.
- A device (knife or axe) to cut the anchor line.

A Safe Boating Checklist is included in Attachment III of this HASP. It must be completed prior to beginning work on the water. The completion of this attachment is not required if the Boat Operator has a Safe Vessel Certification provided by the USCG.

Vessel Registration

All vessels, whether commercial or recreational, must be registered if it is equipped with any kind of primary or auxiliary mechanical propulsion; and currently documented with the U. S. Coast Guard.

Reckless and Negligent Operation

Negligent or grossly negligent operation of a vessel which endangers lives and/or property is prohibited by law. A civil penalty may be imposed by the Coast Guard for this offense under federal laws. An operator may be subjected to a fine of up to \$5,000 and or imprisonment for up to one year, or both.

Some examples of actions that may constitute negligent or grossly negligent operation include but are not limited to:

- Operating under the influence of alcohol or drugs.
- Excessive speed in the vicinity of other boats or in dangerous waters.
- Bowriding, also riding on seatback, gunwale or transom.

Termination of Use

A Coast Guard official observing a boat being operated in an unsafe condition and who determines that an especially hazardous condition exists may direct the operator to take immediate steps to correct the condition, including returning to port. Termination for unsafe use may be imposed for, but is not limited to:

- Insufficient number of USCG approved Personal Flotation Devices.
- Insufficient fire extinguishers.
- Overloading beyond manufacturer's recommended safe loading capacity.
- Improper navigation light display.
- Ventilation requirements for tank and engine spaces not met.
- Fuel leakage.
- Fuel in bilges.
- Improper backfire flame control.

Boating Accident Reports

The operator of any boat involved in an accident must stop, render assistance, and offer identification. An accident report must be made within 48 hours if:

- A person dies within 24 hours;
- A person loses consciousness or receives medical treatment beyond first aid or is disabled more than 24 hours;
- A person disappears from the vessel under circumstances that indicate death or injury.

Accidents must be reported within 10 days if damage to all vessels and other property totals more than \$500.00 or an earlier report is not required. Running aground or hitting a fixed or floating object is considered a boating accident.

Rendering Assistance

Federal law requires the operator of a vessel to provide assistance, that can be safely provided to any individual in danger on the water. Persons who fail to provide assistance may be subject to fine or imprisonment.

Safe Boating Practices:

The following are recommended safe boating practices to be employed prior to the commencement of sediment sampling. Ensure that:

- Fuel tanks are full
- The fuel line and gas tanks are not leaking
- Battery is charged
- If it is an enclosed engine compartment make sure it is free of fumes
- Motor in good operating condition
- Lights and horn are in working order
- Boat is checked for leaks
- Weather and water conditions suitable for the planned activity
- All gear and supplies properly stowed and secure
- Propeller in good condition, lower unit free of weeds and debris
- Passengers are briefed on emergency procedures--their PFDs should be checked for fit
- Operator alert, sober and ready
- The float plan is filed with the Navy Dockmaster or at a minimum verbal notification as to the area of operation for that day.
- Someone else knows how to operate the boat
- Be observant for other boats and/or subsurface obstacles.
- You do not moor to a navigation aid or regulatory marker is illegal.
- You understand the rules that describe who has the "right of way" for specific situations. When in doubt, "give way."

5.3 Sediment Core/Dredge Sampling – Direct Push/Slide Hammer – Winch Extraction

Sediment core sampling consists of manually pushing a sediment core sampler (open barrel) into the sediments. A one way valve permit the barrel to flush as it is inserted. When force is applied to extract the one way valve closes to allow the core to be collected without an egg catcher or similar device to hold the sediment. In tight sediments it may be necessary to attach a slide hammer to facilitate advancement. Common physical hazards associated with deploying a Universal Sediment Core sampler or similar device include the following:

- Pinch/compression Points – The potential exists during hammering using a slide hammer to advance the sediment core may result in getting fingers caught within pinch points during driving. This hazard may also exist when separating sections as well as between wrenches and hard surfaces when removing extensions, etc.
 - Wear gloves to minimize this potential.
 - Hammering places two hard surfaces in contact with one another with significant force. Always wear safety glasses in the event of chips and flying projectiles caused by this action.
 - When it is necessary to lift free floating slide hammers above the head, hardhats should be worn.
- Pinches and Compressions – Dredge Sampling – This sampler consists of spring loaded jaws. This along with the triggering mechanism provides ample opportunity for pinches and compressions of hands and fingers.
 - Wear gloves to minimize this potential.
 - Keep hands away from pinch points when unloading or setting the trigger.
- Muscle strain – Sediment sampling is anticipated to be from near surface sampling up to 10-feet. During extraction it is possible to strain back muscles as well as elbows and shoulder joints. This hazard may also be experienced when hammering sediment cores in place. Control measures include
 - Stretching before physically taxing activities.
 - Take breaks when needed. This is especially needed the activities place you in a position where stress and strain maybe experienced overtime such as leaning over the boat using the AquaScope. Or leaning over the boat pulling or driving sediment samples.
 - Use multiple persons to switch on and off when heavy labor is being conducted.
 - The lifting of dredges without mechanical assistance also puts sample personnel at risk for muscle strain.

- Mechanical extraction – When deep sediment cores are extracted there may be a necessity to use mechanical winch. The following safety practices are intended to minimize hazards associated with this operation

MOVING PARTS present an ENTANGLEMENT HAZARD

- Insure all operators adequately comprehend the operation of the winch before using it.
- Never leave wired remote control plugged into winch when free spooling, rigging, or when the winch is not being used.
- Alert all bystanders when engaging the winch.
- Always keep wired remote control lead clear of the drum, rope, and rigging. Inspect for cracks, pinches, frayed wires or loose connections. Replace remote control if damaged.
- Exercise care when working near the drum with gloves on that could become entangled.
- Never leave remote control where it can be activated during free spooling, rigging, or when the winch is not being used.

MOVING PARTS presents PINCH AND COMPRESSION HAZARDS

- Never hook rope back onto itself. This damages the rope.
- Always use a choker chain, choker rope, or lifting attachment on the piece to be lifted. Engage the winch slowly with hands and fingers away from any pinch points. Once under tension step away from stress points of the rope.
- Always remove any element or obstacle that may interfere with safe operation of the winch.
- Always take time to use appropriate rigging techniques for a winch pull.
- Always be certain the anchor you select will withstand the load and the strap or chain will not slip.
- Never touch rope or hook while in tension or under load.
- Never touch rope or hook while someone else is at the control switch or during winching operation.

LIFTING LOADS presents CRUSHING HAZARDS

- Never exceed winch or rope capacity listed on product data sheet.
- Always choose a mounting location that is sufficiently strong to withstand the maximum pulling capacity of your winch.
- Always use factory approved mounting hardware, components, and accessories.
- Insure grade 5 or better hardware.
- Always spool the rope onto the drum in the direction specified by the winch warning label on the winch and/or documentation. This is required for the automatic brake to function properly.
- Tightly wound rope reduces chances of "binding", which can damage the rope. Always use a hook with a latch.

- If clips are used insure the proper number are employed (cable size 5/16 – 5/8 = 3 clips minimum; cable size 3/4 – 1 inch = 4 clips minimum); cable size 1 1/8 – 1 3/8 inch = 5 clips minimum) (and remember never saddle a dead horse(The clips base should be on the live side of the rope).
- Always ensure hook latch is closed and not supporting load.
- Never apply load to hook tip or latch. Apply load only to the center of hook.
- Never use a hook whose throat opening has increased, or whose tip is bent or twisted.
- Always inspect rope, hook, and slings before operating winch. Damaged components must be replaced before operation. Protect parts from damage.
- Never engage or disengage clutch if winch is under load, rope is in tension or drum is moving.
- Never winch with less than 5 wraps of rope around the drum, the rope could come loose from the drum.
- When engaging the winch stand clear of the load and where possible of the rope in the event of a failure.
- Always stand clear of rope and load and keep others away while winching.

Wire Ropes may present Cuts/laceration hazards

- Wear leather gloves when handling the wire rope.
- Wear safety glasses when working within the area of the wire to protect the eyes should the rope fail.

Chemical Hazards – Potential occupational chemical exposure during this activity would be anticipated under the following conditions.

- Contaminant exposure is based on direct interaction with contaminated media and then hand to mouth introduction. See Section 6.1 for potential health effect information for known or suspected site contaminants. It should be noted that these contaminants are not readily available and exposure via inhalation is considered non-existent as these samples will be underwater.
- Cuts, pricks, and lacerations – This hazard is possible when sifting through the sediment. In addition when transporting glassware always keep it in a hard sided container until ready for sample collection or testing. Slips, trips, and falls may cause glassware become broken (rocking boat) presenting the cuts/laceration hazard.
- Electrical hazards – Remote but possible when handling and using a 12-volt battery as a power sources to drive pumps and/or winches that are not hardwired.

5.4 EELGRASS SURVEYS/SEDIMENT TOPOGRAPHICAL SURVEYING

This activity is generally non-intrusive in nature. Boundaries will be determined through camera use or similar devices such as the Aquascope. Horizontal locations will be collected by placing a pole along the boundary that has a GPS antennae collecting the data.

Physical Hazards associated with this task includes:

- Traffic hazards – This area is located within very active industrial areas (Boat traffic). Some of the investigation locations are in the middle of travel thoroughfares. Persons occupied with collecting data may not be attentive to approaching traffic and/or obstacles.

5.5 NATURAL HAZARDS

5.5.1 Inclement Weather

All of the project tasks under this Scope of Work will be performed outdoors. As a result, inclement weather (electrical storms, tornadoes, hurricanes, etc.) may be encountered. In the event that adverse weather conditions arise, the FOL and/or the SSO will be responsible for temporarily suspending or terminating activities until hazardous conditions no longer exist. In the event of severe weather conditions, the boat will be directed to shore so that all may disembark and report to a safe location within suitable shelter (preferably in a facility building). In the event of an electrical storm, immediate stop site activities and report to a safe location such as a building.

Temperature Extremes

Temperature extremes are considered inclement weather. Steps should be taken to the extent possible protect site personnel from the effects of heat stress and the sun. Control measures include:

- Watch for signs of heat stress/exhaustion, See Figure 5-1.
- Provide fluid replacement

FIGURE 5-1
Heat Strain Symptoms

STOP WORK if Any Worker Demonstrates Any Of The Following

Heart Rate	Sustained (several minutes) heart rate minus worker's age > of 180 beats per minute (bpm) measured at any time.
Body Core Temperature	> 101.3°F (38.5° C)
Recovery Heart Rate	> 110 bpm (Measured 1 minute after peak work effort)
Other symptoms	Sudden and sever fatigue, nausea, dizziness, or headache

Individuals May Be At Greater Risk of Heat Stress If:

- Profuse sweating is sustained over hours
- Weight loss over a shift is > 1.5% of beginning body weight
- 24-hour urinary sodium excretion is less than 50 nmoles

Care should be exercised when working outdoors due to harmful effects of the sun. To reduce the potential for sunburn and melanoma the following measures should be employed.

Protection from the Sun

- Wear a hat that shades the face, neck, and ears.
- Apply sunscreen with a SPF of 15 or higher liberally on any exposed skin at least 15 minutes before going outside, then at least every two hours, more if you are sweating a lot.
- Plan/provide suitable equipment to offer shade to avoid the midday sun since the sun's ultraviolet rays are most intense between 10 A.M. and 4 P.M. and can damage your skin even on hazy days. Portable canopies over the sample station are an example of this.
- Wear wrap-around sunglasses to protect the eyes and delicate skin around them.

As in all cases if the potential for heat stress does not exist the provisions stated here will not apply.

5.6 DECONTAMINATION

The equipment involved in the field activities for sediment sampling will be decontaminated prior to, during, and after the completion of on-site activities.

5.6.1 Sampling Equipment

All non-dedicated sampling equipment (i.e. stainless-steel sediment core barrels, trowels, bowls, etc.) will be decontaminated prior to the initiation of field sampling, between sample locations, and at the completion of the field activities. The following decontamination steps will be taken.

1. Remove heavy materials (sediments, etc.) by flushing in the water.
2. Alconox or Liquinox detergent wash – Light wash
3. Potable water rinse
4. Solvent rinse (Isopropanol)
5. DI water rinse
6. Air dry
7. Visual evaluation.

All dedicated sampling and PPE equipment will be rinse to remove gross contamination and then disposed of.

Chemical Hazards associated with this activity include:

- Exposure to contaminated media
- Exposure to decontamination solvents

Control measures include:

- Wear prescribed PPE during decontamination procedures including rubber gloves, impermeable apron, and safety glasses.
- Employ good work hygiene practices – No hand to mouth activity; wash hands or use hygienic wipes prior to breaks when hand to mouth activities will be conducted; remove sediments that have made incidental skin contact.

5.7 INVESTIGATIVE DERIVED WASTE MANAGEMENT

This task includes the containerization, labeling, staging, monitoring, and final deposition of investigative derived wastes. These are as follows:

- Containerization – Materials that will be generated are as follows:
- Decontamination waters – 5-Gallon buckets on the boat. Materials may then be transfer to a 1000-gallon storage tank within the Hazardous Waste Storage Yard for disposal. It is anticipated that a very small amount <20 gallons will be generated.
- General refuse – Garbage bags. Dispose of this material in a dumpster on Navy property

Physical Hazards associated with this Waste Management activity include

- Caught between pinches and compressions. This occurs primarily when moving containers to transport vehicles and when staging the drums on pallets. The prevalent hazard is recognized when moving the drums and hands get caught between drums.
- Lifting – Lifting, twisting and turning carrying buckets may result in muscle strain. Care should be exercised including filling only to 80% as well as avoiding twisting and turning when lifting. Use additional personnel as necessary to transfer from the boat to the shore.

5.8 GENERAL SAFE WORK PRACTICES

In addition to the task-specific safe work practices may be identified in the Safe Work Permit issued for this task. These safe work practices establish a pattern of general precautions and measures for reducing risks associated with hazardous site operations.

- Refrain from 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.
- Wash hands and face prior to breaks and prior to lunch and associated hand to mouth activities.
- Keep the work area clean. Clean up spills to avoid spreading sediment all over the boat.
- Be familiar with and adhere to all instructions provided within this site-specific HASP.
- Be aware of the location of the nearest telephone and all emergency telephone numbers. See 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.
- Use the “buddy system”.
- Observe coworkers for signs of heat or cold stress.

- Inform co-workers of potential symptoms of illness, such as headaches, dizziness, nausea, or blurred vision.

6.0 CHEMICAL HAZARD INFORMATION/ASSESSMENT

6.1 SITE CONTAMINANTS

A wide range of chemicals were identified in previous sampling, including:

- Various Metals
- PAHs
- Pesticides and PCBs

Previous investigations indicate that these chemical contaminants are in relatively low concentrations. While these concentrations may threaten marine ecosystems exposure of site personnel via inhalation is considered negligible to non-existent. This assumption is based on the concentration as well as the fact that the samples will be collected in a wet condition, it is not anticipated that any airborne particulates will be generated during these activities.

It should be well understood that ingestion and dermal contact are still viable routes of exposure.

6.1.1 Metals

Metals within the sediments will be indistinguishable from the sediments. Specific toxicities and hence symptoms vary to somewhat extent between individual metal compounds and associated isomers. However, general toxicities exist that can be applied to the general category of metals. For instance they metals are considered kidney toxins. Other generalized effects have shown demonstrated impacts on the peripheral and central nervous systems, blood forming mechanisms, gastrointestinal disturbances, cardio and vascular toxicities and some are cancer causing agents. Generally, in a particulate form, metals will cause respiratory, dermal, and eye irritation. Acute symptoms associated with ingestion include stomach pain, cramps, headaches, possibly diarrhea and vomiting. These conditions are typically symptomatic of chronic exposure or acute exposure to high concentrations which are not anticipated at this site.

Over exposure to these substances as indicated above typically occurs through ingestion or inhalation of particulates and/or fumes found within some industrial settings. The majority of the available toxicological information has been derived from such settings. In our situation, potential exposure to these compounds are greatly reduced if not eliminated based on the media in which they (the contaminants) may exist. The mobility of these substances are greatly reduced as they are commingled and bound with soil particulates, sediments, as well as underwater. This aspect greatly reduces the mobility of the metals and thereby has a direct impact on the exposure through inhalation. Ingestion possibilities still exist. Exposure

via this route is generally facilitated through contaminated hand or glove to mouth contact or to some media which eventually contacts the mouth. This exposure route can also be controlled and thereby minimize exposure potential. Actions include the use of gloves, good work hygiene practices, and through the employment of a suitable decontamination procedure.

These compounds will not have a distinct look, odor, or other physical characteristic.

6.1.2 Polycyclic Aromatic Hydrocarbons (PAHs)

These substances include anthracene, benzo[a]anthracene, benzo[a]pyrene, chrysene, fluoroanthene. Acute exposures may result in difficulty breathing, respiratory failure and skin and eye burns. Chronic exposure may damage the liver, kidneys, lungs and skin. Many of these substances are recognized for their cancer causing properties. Overexposure to these substances has shown to be a skin, eye, and mucous membrane irritant. Some of these substances are considered a photosensitizer and mild allergen and considered mildly to moderately toxic by ingestion. The majority of these substances are petroleum based pitch which is considered insoluble. These substances will commingle with soils and sediments which minimizes mobility and exposure potential. Ingestion exposure routes still exist. But this route can be controlled through use of PPE, good work hygiene practices, and diligent application of decontamination procedures.

6.1.3 PCBs/Pesticides (Insecticides/Herbicides)

These substances exercise general toxicities on the Central Nervous Systems, Liver, Kidneys, and skin. The function of pesticides and herbicides are typically to disrupt operations on a molecular level through enzyme inhibition or binding. PCBs are typically employed as dielectric fluids to control heat within transformers and capacitors (typical in a location where welding is performed). Due to the bioaccumulative properties and persistence within the environment these substances were eventually discontinued from use. Acute signs and symptoms are:

- Skin eruptions – chloroacne (yellow pustules similar to acne) associated with PCBs and some herbicides
- CNS/Neuromuscular symptoms include headaches, fatigue, dizziness, muscle twitching, tremors, convulsions, weakness or numbness of the arms or legs, as well as, disturbed equilibrium.

These signs and symptoms are associated with acute poisoning and are not anticipated within this environmental setting. PCBs have been implicated as a potential carcinogen.

As with metals and PAHs the exposure mechanism and route of exposure are adversely impacted. Many of these substance bind to soil and sediment particulates. Ingestion is the primary concern and can be minimized if not eliminated following the tenets stated above.

6.1.4 Exposure Potential

Mathematical calculations of the worst case scenario indicate that none of the potential contaminants listed above present a reasonable occupational exposure concern via inhalation when collected from the water. In this case potential dust evolution is minimized and exposure is not anticipated providing good work hygiene practices are employed including

- Changing out gloves regularly.
- Minimizing the potential for splash when collecting the sample media. Cleaning up incidental splashes.
- Keeping sample media contained within secondary containment tubs.
- Minimizing hand to mouth activities with dirty hands or gloved hands. Washing hands and face before breaks and lunch when hand to mouth activities are conducted.
- Employing diligent decontamination practices for persons and equipment.
- General housekeeping

These are examples of these practices. Diligent employment of these practices will minimize the potential exposure concern through ingestion.

7.0 AIR MONITORING

A majority of the contaminants of concern previously detected at the site are not readily detected using direct read air monitoring instrumentation such as a photoionization or flame ionization detector. Based on available data, volatile organic compounds (VOCs) are unlikely to be present. Contaminants of concern were previously detected at low concentrations that are unlikely to pose a significant exposure threat to site personnel via inhalation negating the need to monitor airborne concentration.

Additionally, several site activities will involve collecting samples that will be wet and/or saturated with water which will further minimize the exposure potential. Therefore, air monitoring **will not** be performed as part of the sediment sampling activity.

The FOL will have the authority to implement the use of monitoring instruments if situations dictate or sampling analysis indicates the presence of volatile contaminants. Changes in the air monitoring strategy shall be coordinated with the PHSO.

8.0 TRAINING/MEDICAL SURVEILLANCE REQUIREMENTS

8.1 INTRODUCTORY/REFRESHER/SUPERVISORY TRAINING

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

8.1.1 Requirements for Tetra Tech NUS, Inc. and Subcontractor Personnel

Tetra Tech NUS and subcontractor personnel who will engage in field associated activities as described in this HASP must have:

- Completed 40 Hours of introductory hazardous waste site training 24-Hours Occasional Site Worker without respiratory protection or equivalent work experience as defined in OSHA Standard 29 CFR 1910.120(e). If the recipient has recently had 40-Hours of training documented 3-days of on-site supervision (OJT) is required.
- Completed 8-Hour Refresher Training, if the identified persons had introductory training more than 12 months prior to site work.
- Completed 8-Hour Supervisory training in accordance with 29 CFR 1910.120(e)(4), if their assigned function will involve the supervision of subordinate personnel.

Documentation of introductory training or equivalent work experience, 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.

These training requirements will be required unless subcontractors meet and are granted the exception requirements as stated in section 8.4.

8.2 SITE-SPECIFIC TRAINING (1910.120)

Tetra Tech NUS will provide site-specific training to Tetra Tech NUS employees and subcontractor personnel 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.

TtNUS will conduct a pre-activities training session prior to initiating site work. Additionally, a brief meeting will be held daily to discuss operations planned for that day. At the end of the workday, a short meeting may be held to discuss the operations completed and any problems encountered. This activity will be supported through the use of a Safe Work Permit System (See Section 10.2).

8.2.1 Additional Specialty Training Requirements

In addition to the aforementioned requirements, the Subcontractor personnel as it pertains to the identified field tasks will provide the boat and a boat operator to support the sediment sampling. These individuals will provide

- Licensed Boat Operator (For any boats offered for charter)
- Certified Boating Safety Course or Equivalent
- Provide a Safe Vessel Certification from the USCG or complete Attachment III to insure the vessel is safe to operate.
- Elements specified in Section 8.2.

8.3 MEDICAL SURVEILLANCE

8.3.1 Medical Surveillance Requirements for Tetra Tech NUS and Subcontractor Personnel

Tetra Tech NUS and subcontractor personnel participating in project field activities will have had a physical examination. Physical examinations shall meet the minimum requirements of paragraph (f) of OSHA 29 CFR 1910.120. The physical examinations will be performed to ensure that personnel are medically qualified to perform hazardous waste site work using respiratory protection (with the exception of the 24-Hour Occasional Site Worker Training).

Documentation for medical clearances will be maintained at the job site and made available, as necessary. Subcontractor personnel may use an alternative documentation for this purpose. The "Subcontractor Medical Approval Form" can be used to satisfy this requirement, or a letter from an officer of the company. The letter should state that the persons listed in the letter participate in a medical surveillance program meeting the requirements contained in paragraph (f) of Title 29 of the Code of Federal Regulations (CFR), Part 1910.120, entitled "Hazardous Waste Operations and Emergency Response." The letter should further state the following:

- The persons listed have had physical examinations under this program within the frequency as determined sufficient by their occupational health care provider
- Date of the exam

- The persons identified have been cleared, by a licensed physician, to perform hazardous waste site work. In the case of 40-Hour trained personnel the additional provision will be identified that they will also be able to perform this work wearing positive- and negative- pressure respiratory protection.

A sample Subcontractor Medical Approval Form and form letter have been provided to eligible subcontractors in the Bid Specification package.

These medical surveillance requirements will be required unless subcontractors meet and are granted the exception requirements as stated in section 8.4.

8.3.2 Requirements for Field Personnel

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

8.4 SUBCONTRACTOR EXCEPTION

If through the execution of their contract elements the subcontractor will not enter the exclusion zone and there is no potential for exposure to site contaminants, subcontractor personnel may be exempt from the training and medical surveillance requirements with the exception of Section 8.2. Examples of subcontractors who may qualify as exempt from training and medical surveillance requirements may include surveyors who perform surveying activities in site perimeter areas or areas where there is no potential for exposure to site contaminants and support or restoration services or boat operators and deckhands who by way of their duties will not come in contact with contaminated media. **Use of this Subcontractor Exception is strictly limited to the authority of the CLEAN Health and Safety Manager.**

9.0 SPILL CONTAINMENT PROGRAM

Project activities will not require significant quantities of potentially hazardous materials to be handled. Sampling media to be collected will include small quantities of decontamination fluids, which do not constitute a spill hazard which could potentially harm human health or the environment. As a result, a Spill Containment Program will not be necessary for planned site activities.

Decontamination fluids will be maintained in closed 5-gallon buckets inside a secondary spill containment structure such as a plastic mortar pan to catch incidental releases. These pans or similar containment will also be employed during sample extraction from the sample barrel.

General refuse (including PPE) will be collected in garbage bags and disposed of in a PNS approved dumpster.

10.0 SITE CONTROL

This section outlines the means by which TtNUS will delineate work zones and use these work zones in conjunction with decontamination procedures to prevent the spread of contaminants into previously unaffected areas of the site. Planned work will be conducted on or near water, and will involve minimal potential for exposure to site contaminants. The "concept" of a three-zone approach (routinely used in hazardous waste activities conducted on-shore) will not be used during work at this site due to a somewhat cramped working area.

10.1 EXCLUSION ZONE

For all intensive purposes the sampling area within a designated portion of the boat shall serve as the exclusion zone.

- Sediment sampling. The exclusion zone for this activity will be set at immediately surrounding the sample processing point.
- Decontamination operation. This operation will be conducted in portable containers (tubs or buckets). The exclusion zone for this activity will be set at the containers employed for this purpose.

As sampling and decontamination is conducted, dedicated sampling devices and PPE will be washed of gross contamination, removed, separated, and bagged. Reusable equipment will be rinsed of sediment within the water (over the side of the boat). Proper decontamination will then proceed as discussed in Section 5.6. Personnel will use hygienic wipes, such as Handy Wipes. At the first available opportunity personnel will wash their face and hands. This is critical prior to breaks and lunch when contamination can be transferred to the mouth through hand to mouth contact.

10.2 CONTAMINATION REDUCTION ZONE

The CRZ is the buffer area between the Exclusion Zone and any area of a site where contamination is not suspected. Given the nature of planned site activities, all decontamination will occur immediately adjacent to sampling points (i.e., in the boat at the time of sample acquisition). The establishment of a formal CRZ, therefore, is not necessary. Personnel will take every reasonable precaution to contain any media or biota potentially contaminated to prevent further spread of contamination.

10.3 SUPPORT ZONE

The Support Zone is the staging area where site vehicles will be parked, equipment will be unloaded, and where food and drink containers will be maintained. For this project the Support Zone will be considered the on-shore areas where exposure to site contaminants would not be expected during normal working conditions or foreseeable emergencies. A formal Support Zone will not be established given the nature of site activities.

10.4 SITE VISITORS

Site visitors for the purpose of this document are identified as representing the following groups of individuals:

- Personnel invited to observe or participate in operations by TtNUS
- Regulatory personnel (EPA, OSHA, etc.)
- PNS and other authorized personnel

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. Once the above items have been documented for each visitor, he/she will be permitted to enter the operational zone. All visitors are required to observe the protective equipment and site restrictions in effect at the site at the time of their visit. Any and all visitors not meeting the requirements stipulated in this plan will not be permitted to enter the site operational zones during planned activities. Any incidence of unauthorized site visitation will cause the termination of all onsite activities until the unauthorized visitor is removed from the premises. Removal of unauthorized visitors will be accomplished with support from the FOL or on-site security personnel.

10.5 SITE SECURITY

Site security will be accomplished using existing base security resources and procedures, supplemented by TtNUS or subcontractor personnel, if necessary. TtNUS will retain control over active operational areas. The first line of security will take place at the base boundaries restricting the general public. The second line of security will take place at the work site referring interested parties to the FOL. The FOL will serve as a focal point for site personnel, and will serve as the final line of security and the primary enforcement contact.

10.6 BUDDY SYSTEM

Personnel engaged in onsite activities will practice the "buddy system" to ensure the safety during this operation.

10.7 MATERIAL SAFETY DATA SHEET (MSDS) REQUIREMENTS

TiNUS and subcontractor personnel will provide MSDSs for all chemicals brought on site. The contents of these documents will be reviewed by the FOL with the user(s) of the chemical substances prior to any actual use or application of the substances on site. A chemical inventory of all chemicals used on site will be developed using Section 5.0 of the Health and Safety Guidance Manual. The MSDSs will then be maintained in a central location and will be available for anyone to review upon request.

10.8 COMMUNICATION

Site personnel will be working in close proximity (in the same boat) during proposed field activities. In the event that site personnel are in isolated areas or are separated by significant distances, a supported means of communication between field crews will be utilized.

The boat employed for sampling will be equipped with a Global Marine Radio/Equivalent to maintain communication with the Navy Dockmaster or applicable authority. Cellular phones will be used to contact emergency services as necessary. Prior to the commencement of site activities, the FOL will determine and arrange for telephone communications, if it is determined a cellular means will not be used.

10.9 SAFE WORK PERMITS

All sampling activities will be performed using Safe Work Permits to guide and direct field crews on a task by task basis. An example of the Safe Work Permit to be used is illustrated in Figure 10-1. Partially completed Permits for these tasks are included as Attachment II of this HASP. These work permits will be further supported by the daily meetings conducted during their generation. This effort will ensure all site-specific considerations and changing conditions are incorporated into the planning effort. Use of these permits will provide the communication line for reviewing protective measures and hazards associated with each operation. This HASP will be used as the primary reference for selecting levels of protection and control measures. The work permit will take precedence over the HASP when more conservative measures are required based on specific site conditions. The FOL will be responsible for completing the Safe Work Permit and issuing them to the appropriate parties. Site personnel at the end of each day's activity will turn in the permit(s) used for that day to the FOL. All permits will be maintained as part of the permanent project files attesting to safety and health measures employed for a given task

at a given time and place. Any problems encountered with the protective measures required should be documented on the permit and brought to the attention of the FOL.

**FIGURE 10-1
SAFE WORK PERMIT**

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

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

II. Primary Hazards: Potential hazards associated with this task: _____

III. Field Crew: _____

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

V. Protective equipment required

Level D Level B
 Level C Level A

Respiratory equipment required

Yes Specify on the reverse
 No

Modifications/Exceptions: _____

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

Primary Route(s) of Exposure/Hazard: _____

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

VII. Additional Safety Equipment/Procedures

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

Modifications/Exceptions: _____

VIII. Site Preparation

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

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

X. Special instructions, precautions: _____

Permit Issued by: _____ Permit Accepted by: _____

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 a space that:

- Is large enough and so configured that an employee can bodily enter and perform assigned work,
- Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry), and
- 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, or
- Contains a material that has the potential to engulf an entrant, or
- Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section, or
- Contains any other recognized, serious, safety or health hazard.

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

12.0 MATERIALS AND DOCUMENTATION

The TtNUS FOL shall ensure the following materials/documents are taken to the project site and used when required.

- A complete copy of this HASP (Signed)
- Health and Safety Guidance Manual
- Incident Reports
- Medical Data Sheets (multiple copies)
- Material Safety Data Sheets for all chemicals brought on site, including decon solutions, fuels, lime, sample preservatives, calibration gases, etc.
- A full-size OSHA Job Safety and Health Poster (See Attachment III)
- Training/Medical Surveillance Documentation Form (Blank) (multiple copies)
- Emergency Reference Information (Section 2.0, extra copy for posting)

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 of these documents is not feasible (such as no office trailer), these documents should be filed in a transportable file container and immediately accessible. The file should remain in the FOL's possession.

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

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

The OSHA Job Safety & Health Protection Poster (posted) - This poster, 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 is found within the training section of the HASP (See Figure 8-1). This list identifies all site personnel, dates of training (including site-specific training), and medical surveillance and indicates not only clearance but also status. If personnel do not meet these requirements, they do not enter the site while site personnel are engaged in activities.

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

Medical Data Sheets/Cards (maintained) - Medical Data Sheets will be filled out by all onsite personnel and filed in a central location. The Medical Data Sheet will accompany any injury or illness requiring medical attention to the medical facility. A copy of this sheet or a wallet card will be given to all personnel to be carried on their person.

13.0 GLOSSARY

ACGIH	American Conference of Governmental Industrial Hygienists
CFR	Code of Federal Regulations
CNS	Central Nervous System
CRZ	Contamination Reduction Zone
DOD	Department of Defense
EPA	Environmental Protection Agency
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations and Emergency Response
N/A	Not Available
NIOSH	National Institute Occupational Safety and Health
OSHA	Occupational Safety and Health Administration (U.S. Department of Labor)
PEL	Permissible Exposure Limit
PHSO	Project Health and Safety Officer
PM	Project Manager
PPE	Personal Protective Equipment
SSO	Site Safety Officer
STEL	Short Term Exposure Limit

ATTACHMENT I

INCIDENT REPORT FORM



Report Date	Report Prepared By	Incident Report Number

INSTRUCTIONS:

All incidents (including those involving subcontractors under direct supervision of Tetra Tech personnel) must be documented on the IR Form.

Complete any additional parts to this form as indicated below for the type of incident selected.

TYPE OF INCIDENT (Check all that apply)	Additional Form(s) Required for this type of incident
Near Miss (No losses, but could have resulted in injury, illness, or damage)	<input type="checkbox"/> Complete IR Form Only
Injury or Illness	<input type="checkbox"/> Complete Form IR-A; Injury or Illness
Property or Equipment Damage, Fire, Spill or Release	<input type="checkbox"/> Complete Form IR-B; Damage, Fire, Spill or Release
Motor Vehicle	<input type="checkbox"/> Complete Form IR-C; Motor Vehicle

INFORMATION ABOUT THE INCIDENT

Description of Incident

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 No

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

Level - 1	<p>Definition: A Level 1 RCA is conducted by an individual(s) with experience or training in root cause analysis techniques and will conduct or direct documentation reviews, site investigation, witness and affected employee interviews, and identify corrective actions. Activating a Level 1 RCA and identifying RCA team members will be at the discretion of the Corporate Administration office.</p> <p>The following events may trigger a Level 1 RCA:</p> <ul style="list-style-type: none"> ▪ Work related fatality ▪ Hospitalization of one or more employee where injuries result in total or partial permanent disability ▪ Property damage in excess of \$75,000 ▪ When requested by senior management
Level - 2	<p>Definition: A Level 2 RCA is self performed within the operating unit by supervisory personnel with assistance of the operating unit HSR. Level 2 RCA will utilize the 5 Why RCA methodology and document the findings on the tools provided.</p> <p>The following events will require a Level 2 RCA:</p> <ul style="list-style-type: none"> ▪ OSHA recordable lost time incident ▪ Near miss incident that could have triggered a Level 1 RCA ▪ When requested by senior management

Complete the Root Cause Analysis Worksheet and Corrective Action form. Identify a corrective action(s) for each root cause identified within each area of inquiry.

NOTIFICATIONS

Title	Printed Name	Signature	Telephone Number	Date
Project Manager or Supervisor				
Site Safety Coordinator or Office H&S Representative				
Operating Unit H&S Representative				
Other: _____				

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

INSTRUCTIONS:

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

Incident Report Number: (From the IR Form)

EMPLOYEE INFORMATION

Company Affiliation

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

Full Name

Company (if not Tt employee)

Street Address, City, State and Zip Code

Address Type

Home address (for Tt employees)

Business address (for subcontractors)

Telephone Numbers

Work: _____ Home: _____ Cell: _____

Occupation (regular job title)

Department

Was the individual performing regular job duties?

Time individual began work

Yes No

_____ AM PM OR Cannot be determined

Safety equipment

Provided? Yes No

Type(s) provided: Hard hat Protective clothing

Used? Yes No If no, explain why

Gloves High visibility vest

Eye protection Fall protection

Safety shoes Machine guarding

Respirator Other (list)

NOTIFICATIONS

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

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

Yes No

Date of report

H&S Personnel Notified

Time of report

Time of Report

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

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

INJURY / ILLNESS DETAILS

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

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

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

MEDICAL CARE PROVIDED

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

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

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

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

SIGNATURES

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

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

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

INSTRUCTIONS:

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

Incident Report Number: (From the IR Form)

TYPE OF INCIDENT (Check all that apply)

Property Damage Equipment Damage Fire or Explosion Spill or Release

INCIDENT DETAILS

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

Response Actions Taken:

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

Agency(s) Contact Name(s)

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

Item:	Extent of damage:	Estimated repair cost

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

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

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

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

NOTIFICATIONS

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

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

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

INSTRUCTIONS:

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

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

DRIVER INFORMATION

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

PASSENGERS IN VEHICLES (NON-INJURED)

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

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

INJURIES TO NON-TETRATECH EMPLOYEES

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

OTHER PROPERTY DAMAGE

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

COMPLETE AND SUBMIT DIAGRAM DEPICTING WHAT HAPPENED

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

ATTACHMENT II

SAFE WORK PERMITS

**SAFE WORK PERMIT FOR
SEDIMENT SAMPLING/ADDITIONAL SCRUTINY SAMPLING
PORTSMOUTH NAVAL SHIPYARD, KITTERY, MAINE
OPERABLE UNIT No. 4**

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

SECTION I: General Job Scope

- I. Work limited to the following (description, area, equipment used): Sediment Sampling. Sampling will be accomplished in the following manner: Sediments will be acquired using a Universal Sediment Core Barrel or similar device. Once the sample has been acquired water will be decanted, the materials will be mixed to insure homogenization and the sample will be collected. Samples will also be collected using a Ponar Dredge or similar device.
- II. Required Monitoring Instrument(s): none required
- III. Field Crew: _____
- IV. On-site Inspection conducted Yes No Inspector Initials _____ TtNUS
 Equipment Inspection required Yes No Inspector Initials _____ TtNUS

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

- V. Protective equipment required Level D Level B
 Level C Level A
 Respiratory equipment required Yes See Reverse
 No
- Modifications/Exceptions: _____

VI. Chemicals of Concern	Action Level(s)	Response Measures
<u>Low concentrations of PAHs, metals, pesticides/PCBs</u>	<u>Avoid skin contact with all potentially contaminated media</u>	_____

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

VII. Additional Safety Equipment/Procedures

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

Modifications/Exceptions: PFDs for each person and one throwable Type IV flotation devices to extract persons from the water should someone fall overboard. Shoes or boots with non-slip soles are recommended for on the boat activities. Heavy work boots are discouraged as they may weight you down should you go into the water.

VIII. Procedure review with permit acceptors	Yes	NA	Yes	NA
Safety shower/eyewash (Location & Use)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Emergency alarms (Verbal)	<input checked="" type="checkbox"/> <input type="checkbox"/>
Procedure for safe job completion	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Evacuation routes (overboard).....	<input checked="" type="checkbox"/> <input type="checkbox"/>
Contractor tools/equipment/PPE inspected	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Assembly points.....	<input checked="" type="checkbox"/> <input type="checkbox"/>
.....			(On shore or 200-feet from the boat, whichever is closer, outside of boat traffic lanes)	

IX. Site Preparation	Yes	No	NA
Utility Locating and Excavation Clearance completed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vehicle and Foot Traffic Routes Cleared and Established	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Physical Hazards Barricaded and Isolated	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Emergency Equipment Staged	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- X. Additional Permits required (Hot work, confined space entry, excavation etc.) Yes No
 Boat Operators License, Vessel Safety Checklist/Inspection
If yes, complete permit required or contact Health Sciences, Pittsburgh Office

XI. Special instructions, precautions: Minimize contact with potentially contaminated media (sediments, etc.). Use safe work practices discussed in the HASP and Guidance Manual. Wash hands and face before performing any hand to mouth activities. Fire extinguisher and first aid kit are to be maintained in sampling boat and at all times. First aid kits will be available at all remote sampling locations. Use care when carrying Sample Coolers due to slip, trip, fall, and lifting hazards. Care should be exercised when handling any broken glass containers. Natural, physical, and water hazards are the primary focus of this permit. Lastly, due to water hazards always use the buddy system lifelines and PFDs; Maintain a means to contact emergency services (Cell Phone, Radio, etc.) and verify they are functional. Sampling should be postponed in the event of inclement weather. As this activity will take place a Safe Boating Checklist is attached for completion in support of this activity.

Permit Issued by: _____ Permit Accepted by: _____

**TETRA TECH NUS, INC.
SAFE BOATING CHECKLIST**

Owner/Operator Name: _____

Registration Number _____

Location _____ County: _____ State: _____ HIN: _____

Length of Boat: <16 16-25 26-39 40-65 > 65

Area of Operations: Inland Coastal

Powered by: Gas Diesel Sail Other

Type: PWC Open Cabin Other

Capacity: _____

USCG COMMERCIAL SMALL VESSEL CHECKLIST

1. _____ APPLIED FOR INSPECTION OR SCHEDULED RE-INSPECTION (46 CFR 176.105)
2. _____ CERTIFICATE OF DOCUMENTATION UP TO DATE (46 CFR 67.7)
3. _____ VESSEL'S STABILITY LETTER ON BOARD (46 CFR 176.306)
4. _____ OPERATOR'S LICENSE VALID (46 CFR 185.402; 15.805(a)(4))
5. _____ FCC STATION LICENSE VALID (46 CFR 176.402(c)(3); 184.502)
6. _____ EMERGENCY CHECKLIST POSTED (46 CFR 185.510(a))
7. _____ LIFE JACKET DONNING INSTRUCTION POSTED (46 CFR 185.516)
8. _____ OPERATING AREA CHARTS ONBOARD (NO MORE THAN 3 YEARS OLD) (46 CFR 184.420(a)(1))
9. _____ APPROVED FIRST AID KIT ONBOARD (46 CFR 184.710)

NAVIGATION EQUIPMENT:

1. _____ COMPASS WORKING AND LIGHTED (46 CFR 184.402)
2. _____ RADAR, IF INSTALLED, PROPERLY OPERATING (46 CFR 184.404)
3. _____ LORAN, IF INSTALLED, PROPERLY OPERATING (46 CFR 184.410)
4. _____ DEPTH SOUNDER WORKING
5. _____ VHF RADIO WORKING (46 CFR 184.502)
6. _____ ALL NAVIGATIONAL LIGHTS WORKING AND PROPERLY INSTALLED (46 CFR 183.420)
7. _____ ANCHOR LIGHT WORKING AND PROPERLY INSTALLED (46 CFR 183.420)
8. _____ FOG BELL ONBOARD (33 CFR 81, APPENDIX A, RULE 33)
9. _____ HORN WORKING (33 CFR 81, APPENDIX A, RULE 33)
10. _____ ALL FLARES (3 RED AND 3 ORANGE) WITHIN 3 YEARS OF MANUFACTURE DATE AND STORED IN A WATER PROOF CONTAINER (46 CFR 180.68)

FIRE FIGHTING EQUIPMENT:

1. _____ AT LEAST 1-BI FIRE EXTINGUISHER AND 2-BII FIRE EXTINGUISHERS ONBOARD IN BRACKETS AND IN USABLE CONDITION (46 CFR 181.500)
2. _____ IF INSTALLED, POWER DRIVEN FIRE PUMP PROPERLY OPERATING (46 CFR 181.300)
3. _____ ANNUAL SERVICING FOR INSTALLED FIXED FIRE EXTINGUISHING SYSTEMS (46 CFR 176.810 (b))
4. _____ IF REQUIRED, ALL ENGINE AND VENT SHUT DOWNS OPERATING (46 CFR 181.420(a)(3))

TETRA TECH NUS, INC.
SAFE BOATING CHECKLIST

LIFESAIVING:

1. _____ ALL LIFE JACKETS (appropriate Type), IN GOOD CONDITION, ALL STRAPS AND BUCKLES ROT FREE AND WORKING. RETRO REFLECTIVE TAPE IN GOOD CONDITION. VESSELS NAME STENCILED ON THE JACKET. ALL JACKETS MUST BE LAID OUT AT TIME OF INSPECTION. (46 CFR 176.808; 180.71(a); 185.604(b) & (h))
_____ LIFE JACKET BOXES PROPERLY STENCILED. CHILD'S LIFE JACKETS STORED SEPARATELY (46 CFR 185.604(f); 180.78(a)(5))
2. _____ RING BUOY IN GOOD CONDITION. ATTACHED LINE AND WATER LIGHT IN GOOD CONDITION. RING BUOY PROPERLY STENCILED. (46 CFR 185.604(b) & (i); 180.70; 176.808(b))
3. _____ BUOYANT APPARATUS IN GOOD CONDITION AND PROPERLY RIGGED. LINES USABLE. ALL STRAPS IN GOOD CONDITION. WATERLIGHT IN WORKING CONDITION. WEAK LINK PROPERLY ATTACHED. FOR LIFE FLOATS; PADDLES IN GOOD CONDITION AND ALL EQUIPMENT STENCILED. (46 CFR 176.808(b); 180.130; 180.137; 180.175; 180.200; 46 CFR 185.604(a)(2) & (e) & (g))

MACHINERY:

1. _____ ENGINE EXHAUST IN GOOD CONDITION. FOR DRY EXHAUST; INSULATION BLANKET MUST BE IN PLACE. (46 CFR 182.425; 182.430; 177.920)
2. _____ ALL FLEXIBLE, NON-METALLIC PIPING (HOSE) PROPERLY DOUBLE CLAMPED. ALL WIRES AND PIPING PROPERLY SUPPORTED. (46 CFR 182.430(f); 183.340(a)(4))
3. _____ ELECTRICAL WIRING OF PROPER TYPE AND SIZE. NO JURY RIGS, OR IMPROPER SPLICES OR PORTABLE CORDS OR WIRE NUTS. ALL STRAY, DEAD WIRES REMOVED. (46 CFR 183.340)
4. _____ ALL BILGE PUMPS, PIPING, FLOAT SWITCHES, HIGH WATER ALARMS AND HELM INDICATOR LIGHTS IN GOOD WORKING CONDITION. HAND BILGE PUMP WORKING PROPERLY WITH ADEQUATE LENGTH OF HOSE. (46 CFR 182.500 - 182.530)
5. _____ ALL SEA VALVES OPERABLE AND ACCESSIBLE (46 CFR 179.350(c) - (g))
6. _____ BILGE OIL FREE
7. _____ SHAFT PACKING GLAND PROPERLY ADJUSTED (46 CFR 176.802; 176.804)
8. _____ SHUT OFFS IN GOOD WORKING CONDITION AND STENCILED. (46 CFR 182.455(b)(4); 46 CFR 185.608)
9. _____ FLAME SHIELD INSTALLED ON THE RACOR FUEL FILTER (46 CFR 182.455(b)(6))
10. _____ ALL FUEL TANKS AND FILLS BONDED (46 CFR 182.445(g))
11. _____ ALL FUEL VENTS CLEAN AND HAVE 30x30 FLAME SCREENS (46 CFR 182.450(e))
12. _____ ALL STORAGE BATTERIES IN LEAD LINED, FIBERGLASS OR ACCEPTABLE PLASTIC BOXES. ALL CONNECTIONS CLEAN. IF NECESSARY, LID ON THE BOX. BATTERY SHUTOFF SWITCH INSTALLED. ELECTRICAL SYSTEM FUSED. ALL HELM GUAGES IN PROPER WORKING ORDER (IE; TACH, OIL PRESSURE AND WATER TEMP). (46 CFR 183.350(e); 183.354(b); 183.350(g); 183.380(i); 182.410(b))

**TETRA TECH NUS, INC.
SAFE BOATING CHECKLIST**

MISCELLANEOUS:

1. _____ ALL WATERTIGHT HATCHES IN PROPER WORKING CONDITION WITH GOOD GASKETS. ALL HATCHES WITH KEEPER CHAINS/SECURING DEVICES. (46 CFR 179.360)
2. _____ ALL DECKS IN SOUND, SAFE CONDITION (46 CFR 176.802)
3. _____ ANCHOR AND ANCHOR LINE IN GOOD CONDITION (46 CFR 184.300)
4. _____ STEERING SYSTEM IN GOOD CONDITION (i.e. PACKING GLAND, RUDDER STOPS AND RAMS, CABLES AND RODS IN GOOD CONDITION) (46 CFR 182.600 - 182.620 & 176.802)
5. _____ ALL TOILETS PROPERLY WORK. TOILET PIPED FOR NO DISCHARGE. (46 CFR 184.704)
6. _____ ALL HAND RAILS SECURE (46 CFR 177.900)
7. _____ TWO GOOD WORKING FLASHLIGHTS ONBOARD (46 CFR 183.430)

NOTE: ALL INSTALLED EQUIPMENT, WHETHER IT IS REQUIRED OR NOT, MUST BE IN GOOD WORKING CONDITION.

Reference: Altered USCG Small Vessel Inspection Checklist

**SAFE WORK PERMIT FOR
DECONTAMINATION ACTIVITIES
PORTSMOUTH NAVAL SHIPYARD, KITTERY MAINE
OPERABLE UNIT No. 4**

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

SECTION I: General Job Scope

I. Work limited to the following (description, area, equipment used): Decontamination of sampling equipment. Brushes and spray bottles and buckets will be used to decon small reusable sampling equipment. Procedure to be employed will consist of ❶ Rinse residual materials from the samplers within the water body ❷ Soap and water wash and rinse in a portable tub using potable water and liquinox ❸ Potable water rinse ❹ Deionized water rinse ❺ Isopropanol rinse ❻ Deionized water rinse ❼ Air dry wrap in aluminum foil to protect until use

II. Required Monitoring Instrument(s): None required

III. Field Crew: _____

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

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

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

Modifications/Exceptions: None anticipated

VI. Chemicals of Concern	Action Level(s)	Response Measures
<u>Low concentrations of PAHs, metals, pesticides/PCBs</u>	<u>Avoid contact/employ good work hygiene practices</u>	_____
<u>Liquinox (soap)</u>	<u>None</u>	<u>Eye irritant/flush with clean water</u>

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

VII. Additional Safety Equipment/Procedures

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

Modifications/Exceptions: Gloves – Nitrile (surgeons style) or Nitrile style outer gloves for deconning sampling (hand) tools. Shoes or boots with a non-slip sole are recommended for activities aboard the boat. As this activity will take place on the boat PFDs are required for each person.

VIII. Procedure review with permit acceptors

	Yes	NA	Yes	NA
Safety shower/eyewash (Location & Use).....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Procedure for safe job completion	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Contractor tools/equipment/PPE inspected	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

IX. Site Preparation

	Yes	No	NA
Utility Locating and Excavation Clearance completed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Vehicle and Foot Traffic Routes Cleared and Established.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Physical Hazards Barricaded and Isolated	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Emergency Equipment Staged	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

X. **Additional Permits required** (Hot work, confined space entry, excavation etc.). Yes No
If yes, complete permit required or contact Health Sciences, Pittsburgh Office

XI. **Special instructions, precautions:** Chemical hazards associated with decontamination exist because of use of fluids such as isopropyl alcohol, alconox/liquinox, etc. To minimize the potential for exposure, site personnel will use PPE and prevent contact with potentially contaminated equipment. Refer to the manufacturer's MSDS regarding PPE, handling, storage, and first-aid measures related to decontamination fluids. Keep all storage containers of IDW closed when not in use.

Permit Issued by: _____ Permit Accepted by: _____

ATTACHMENT III

OSHA POSTER

Job Safety and Health

It's the law!



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

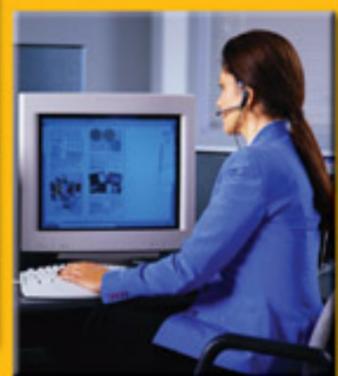
EMPLOYEES:

- 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

ATTACHMENT IV

VESSEL INSPECTION CHECKLIST

**TETRA TECH NUS, INC.
SAFE BOATING CHECKLIST**

Owner/Operator Name: _____

Registration Number _____

Location _____ County: _____ State: _____ HIN: _____

Length of Boat: <16 16-25 26-39 40-65 > 65

Area of Operations: Inland Coastal

Powered by: Gas Diesel Sail Other

Type: PWC Open Cabin Other

Capacity: _____

USCG COMMERCIAL SMALL VESSEL CHECKLIST

1. __APPLIED FOR INSPECTION OR SCHEDULED RE-INSPECTION (46 CFR 176.105)
2. __CERTIFICATE OF DOCUMENTATION UP TO DATE (46 CFR 67.7)
3. __VESSEL'S STABILITY LETTER ON BOARD (46 CFR 176.306)
4. __OPERATOR'S LICENSE VALID (46 CFR 185.402; 15.805(a)(4))
5. __FCC STATION LICENSE VALID (46 CFR 176.402(c)(3); 184.502)
6. __EMERGENCY CHECKLIST POSTED (46 CFR 185.510(a))
7. __LIFE JACKET DONNING INSTRUCTION POSTED (46 CFR 185.516)
8. __OPERATING AREA CHARTS ONBOARD (NO MORE THAN 3 YEARS OLD) (46 CFR 184.420(a)(1))
9. __APPROVED FIRST AID KIT ONBOARD (46 CFR 184.710)

NAVIGATION EQUIPMENT:

1. __COMPASS WORKING AND LIGHTED (46 CFR 184.402)
2. __RADAR, IF INSTALLED, PROPERLY OPERATING (46 CFR 184.404)
3. __LORAN, IF INSTALLED, PROPERLY OPERATING (46 CFR 184.410)
4. __DEPTH SOUNDER WORKING
5. __VHF RADIO WORKING (46 CFR 184.502)
6. __ALL NAVIGATIONAL LIGHTS WORKING AND PROPERLY INSTALLED (46 CFR 183.420)
7. __ANCHOR LIGHT WORKING AND PROPERLY INSTALLED (46 CFR 183.420)
8. __FOG BELL ONBOARD (33 CFR 81, APPENDIX A, RULE 33)
9. __HORN WORKING (33 CFR 81, APPENDIX A, RULE 33)
10. __ALL FLARES (3 RED AND 3 ORANGE) WITHIN 3 YEARS OF MANUFACTURE DATE AND STORED IN A WATER PROOF CONTAINER (46 CFR 180.68)

FIRE FIGHTING EQUIPMENT:

1. __AT LEAST 1-BI FIRE EXTINGUISHER AND 2-BII FIRE EXTINGUISHERS ONBOARD IN BRACKETS AND IN USABLE CONDITION (46 CFR 181.500)
2. __IF INSTALLED, POWER DRIVEN FIRE PUMP PROPERLY OPERATING (46 CFR 181.300)
3. __ANNUAL SERVICING FOR INSTALLED FIXED FIRE EXTINGUISHING SYSTEMS (46 CFR 176.810 (b))
4. __IF REQUIRED, ALL ENGINE AND VENT SHUT DOWNS OPERATING (46 CFR 181.420(a)(3))

LIFESAVING:

1. __ALL LIFE JACKETS (appropriate Type), IN GOOD CONDITION, ALL STRAPS AND BUCKLES ROT FREE AND WORKING. RETRO REFLECTIVE TAPE IN GOOD CONDITION. VESSELS NAME STENCILED ON THE JACKET. ALL JACKETS MUST BE LAID OUT AT TIME OF INSPECTION. (46 CFR 176.808; 180.71(a); 185.604(b) & (h))
__LIFE JACKET BOXES PROPERLY STENCILED. CHILD'S LIFE JACKETS STORED SEPARATELY (46 CFR 185.604(f); 180.78(a)(5))
2. __RING BUOY IN GOOD CONDITION. ATTACHED LINE AND WATER LIGHT IN GOOD CONDITION. RING BUOY PROPERLY STENCILED. (46 CFR 185.604(b) & (i); 180.70; 176.808(b))
3. __BUOYANT APPARATUS IN GOOD CONDITION AND PROPERLY RIGGED. LINES USABLE. ALL STRAPS IN GOOD CONDITION. WATERLIGHT IN WORKING CONDITION. WEAK LINK PROPERLY ATTACHED. FOR LIFE FLOATS; PADDLES IN GOOD CONDITION AND ALL EQUIPMENT STENCILED. (46 CFR 176.808(b); 180.130; 180.137; 180.175; 180.200; 46 CFR 185.604(a)(2) & (e) & (g))

MACHINERY:

1. __ENGINE EXHAUST IN GOOD CONDITION. FOR DRY EXHAUST; INSULATION BLANKET MUST BE IN PLACE. (46 CFR 182.425; 182.430; 177.920)
2. __ALL FLEXIBLE, NON-METALLIC PIPING (HOSE) PROPERLY DOUBLE CLAMPED. ALL WIRES AND PIPING PROPERLY SUPPORTED. (46 CFR 182.430(f); 183.340(a)(4))
3. __ELECTRICAL WIRING OF PROPER TYPE AND SIZE. NO JURY RIGS, OR IMPROPER SPLICES OR PORTABLE CORDS OR WIRE NUTS. ALL STRAY, DEAD WIRES REMOVED. (46 CFR 183.340)
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5. __ALL SEA VALVES OPERABLE AND ACCESSIBLE (46 CFR 179.350(c) - (g))
6. __BILGE OIL FREE
7. __SHAFT PACKING GLAND PROPERLY ADJUSTED (46 CFR 176.802; 176.804)
8. __SHUT OFFS IN GOOD WORKING CONDITION AND STENCILED. (46 CFR 182.455(b)(4); 46 CFR 185.608)
9. __FLAME SHIELD INSTALLED ON THE RACOR FUEL FILTER (46 CFR 182.455(b)(6))
10. __ALL FUEL TANKS AND FILLS BONDED (46 CFR 182.445(g))
11. __ALL FUEL VENTS CLEAN AND HAVE 30x30 FLAME SCREENS (46 CFR 182.450(e))
12. __ALL STORAGE BATTERIES IN LEAD LINED, FIBERGLASS OR ACCEPTABLE PLASTIC BOXES. ALL CONNECTIONS CLEAN. IF NECESSARY, LID ON THE BOX. BATTERY SHUTOFF SWITCH INSTALLED. ELECTRICAL SYSTEM FUSED. ALL HELM GUAGES IN PROPER WORKING ORDER (IE; TACH, OIL PRESSURE AND WATER TEMP). (46 CFR 183.350(e); 183.354(b); 183.350(g); 183.380(i); 182.410(b))

MISCELLANEOUS:

1. __ALL WATERTIGHT HATCHES IN PROPER WORKING CONDITION WITH GOOD GASKETS. ALL HATCHES WITH KEEPER CHAINS/SECURING DEVICES. (46 CFR 179.360)
2. __ALL DECKS IN SOUND, SAFE CONDITION (46 CFR 176.802)
3. __ANCHOR AND ANCHOR LINE IN GOOD CONDITION (46 CFR 184.300)
4. __STEERING SYSTEM IN GOOD CONDITION (i.e. PACKING GLAND, RUDDER STOPS AND RAMS, CABLES AND RODS IN GOOD CONDITION) (46 CFR 182.600 - 182.620 & 176.802)
5. __ALL TOILETS PROPERLY WORK. TOILET PIPED FOR NO DISCHARGE. (46 CFR 184.704)
6. __ALL HAND RAILS SECURE (46 CFR 177.900)
7. __TWO GOOD WORKING FLASHLIGHTS ONBOARD (46 CFR 183.430)

NOTE: ALL INSTALLED EQUIPMENT, WHETHER IT IS REQUIRED OR NOT, MUST BE IN GOOD WORKING CONDITION.

Reference: Altered USCG Small Vessel Inspection Checklist

ATTACHMENT V

MEDICAL DATA SHEET

MEDICAL DATA SHEET

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

Project _____

Name _____ Home Telephone _____

Address _____

Age _____ Height _____ Weight _____

Person to notify in the event of an emergency: Name: _____

Phone: _____

Drug or other Allergies: _____

Particular Sensitivities : _____

Do You Wear Contacts? _____

What medications are you presently using? _____

Name, Address, and Phone Number of personal physician: _____

Note: Health Insurance Portability and Accountability Act (HIPAA) Requirements

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

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

Name (Print clearly)

Signature

Date