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HEALTH AND SAFETY PLAN ADDENDUM FOR GROUNDWATER MONITORING AT
OPERABLE UNIT 5 (OU 5) SITE 15 NAS CECIL FIELD FL
5/1/2001
TETRA TECH NUS INC

Health and Safety Plan Addendum
for
Groundwater Monitoring
at
Operable Unit 5
Site 15

Naval Air Station Cecil Field
Jacksonville, Florida



Southern Division
Naval Facilities Engineering Command
Contract No. N62467-94-D-0888
Contract Task Order 0039

May 2001

**HEALTH AND SAFETY PLAN ADDENDUM
FOR
GROUNDWATER MONITORING
AT
OPERABLE UNIT 5, SITE 15
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA**

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

**Submitted to:
Southern Division
Naval Facilities Engineering Command
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North Charleston, South Carolina 29406**

**Submitted by:
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**CONTRACT NO. N62467-94-D-0888
CONTRACT TASK ORDER 0039**

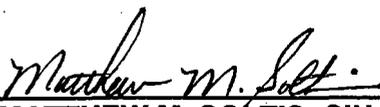
MAY 2001

PREPARED UNDER THE SUPERVISION OF:

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1.0 INTRODUCTION

This Health and Safety Plan Addendum has been developed to supplement the original Health and Safety Plan (HASP) for Groundwater Monitoring at Operable Unit 5, Site 15 written in April of 1999. This addendum address additional site activities (collection of insects) that were not originally included in the scope of work nor discussed in the HASP. Additionally, this addendum includes revisions to the emergency contact information.

This addendum must be used in conjunction with the original HASP (dated April 1999) as well as the Health and Safety Guidance Manual to comply with the requirements of 29 CFR 1910.120. All these documents must be maintained at the site during the course of field work.

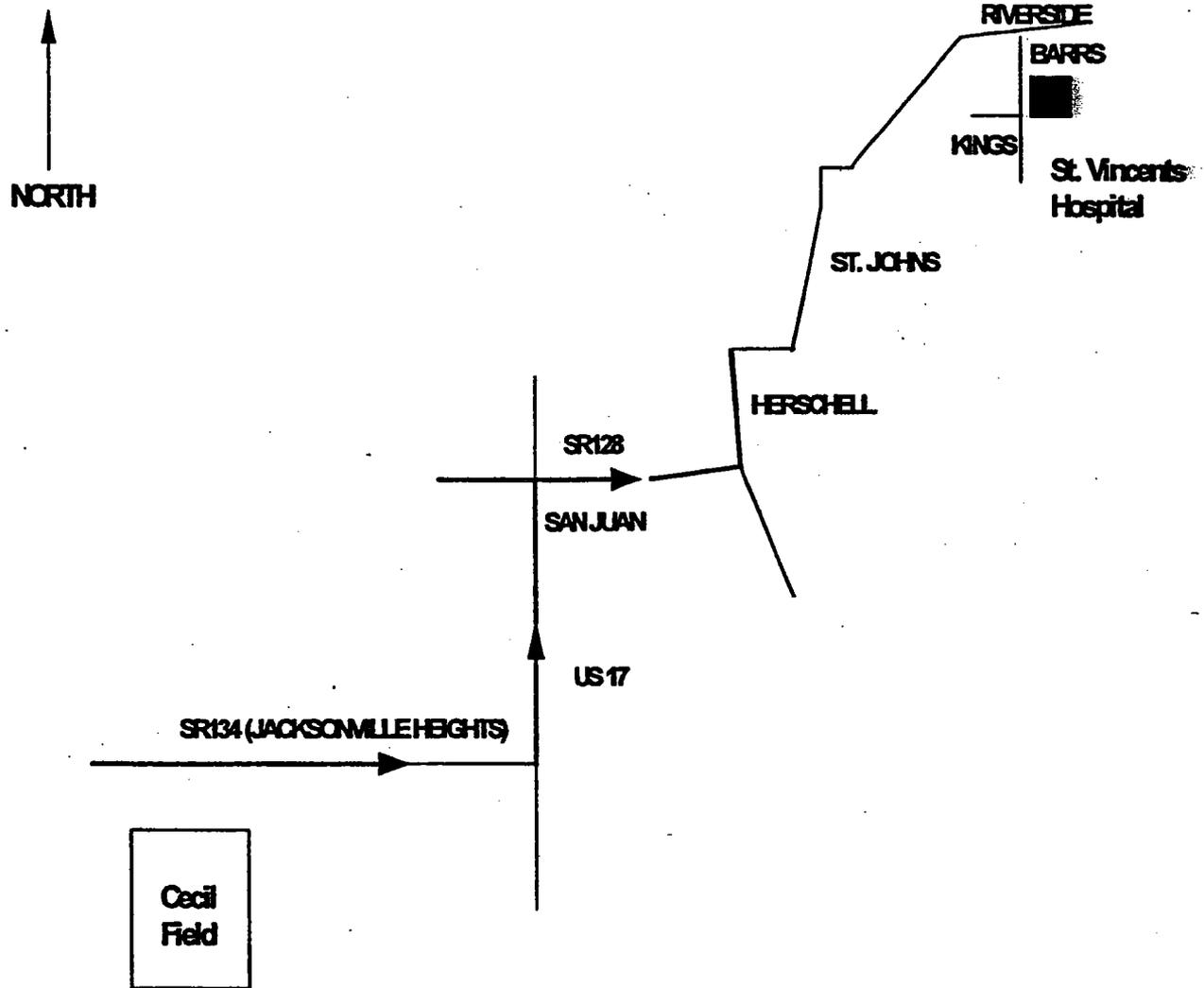
2.0 EMERGENCY ACTION PLAN

The original provisions of the emergency action plan contained in the HASP will apply to the site activities covered in this addendum. However, Table 2-1 is being replaced because some telephone numbers and emergency contacts have changed since the April 1999 HASP was prepared. Additionally, Section 2.10 has been added because the procedure for reporting accidents and injuries has changed since the HASP was prepared.

**TABLE 2-1
EMERGENCY CONTACTS
NAS - CECIL FIELD, JACKSONVILLE, FLORIDA**

CONTACT	PHONE NUMBER
EMERGENCY (Police, Fire, Ambulance Service)	911
Primary Hospital - St. Vincent Hospital	(904)387-7300
Chemtrec National Response Center	(800) 424-9300 (800) 424-8802
NAS - Cecil Field (Point-of-Contact) Dave Kruzicki	(904) 778-5620
TtNUS, Pittsburgh Office	(412) 921-7090
TtNUS, Cecil Field Site Office	(904) 317-9199
Task Order Manager Mark Speranza, P.E,	(412) 921-7231
Health and Safety Manager Matthew M. Soltis, CIH, CSP	(412) 921-8912
Project Health and Safety Officer Donald J. Westerhoff, CSP	(412) 921-8529
Public Works (utilities, gas, water, sewage, telephone, fiber optics)	
Jacksonville Port Authority Portion Ken Melchior Bob Simpson	(904) 573-1604 (904) 573-1601
City of Jacksonville Lt. Doug McCutchen	 (904) 778-5440

Figure 2-1
Map to St. Vincent's Hospital



2.10 INJURY/ILLNESS REPORTING

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

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

FIGURE 2-2
EMERGENCY RESPONSE PROTOCOL

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

In the event of a personnel injury or accident:

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

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

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

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

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

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

I. Exposing Agent

Name of Product or Chemicals (if known): _____

 Characteristics (if the name is not known)
 Solid Liquid Gas Fume Mist Vapor

II. Dose Determinants

What was individual doing? _____
 How long did individual work in area before signs/symptoms developed? _____
 Was protective gear being used? If yes, what was the PPE? _____
 Was their skin contact? _____
 Was the exposing agent inhaled? _____
 Were other persons exposed? If yes, did they experience symptoms? _____

III. Signs and Symptoms (check off appropriate symptoms)

Immediately With Exposure:

Burning of eyes, nose, or throat	Chest Tightness / Pressure
Tearing	Nausea / Vomiting
Headache	Dizziness
Cough	Weakness
Shortness of Breath	

Delayed Symptoms:

Weakness	Loss of Appetite
Nausea / Vomiting	Abdominal Pain
Shortness of Breath	Headache
Cough	Numbness / Tingling

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

Burning of eyes, nose, or throat	Nausea / Vomiting
Tearing	Dizziness
Headache	Weakness
Cough	Loss of Appetite
Shortness of Breath	Abdominal Pain
Chest Tightness / Pressure	Numbness / Tingling
Cyanosis	

Have symptoms: (please check off appropriate response and give duration of symptoms)
 Improved: _____ Worsened: _____ Remained Unchanged: _____

V. Treatment of Symptoms (check off appropriate response)

None: _____ Self-Medicating: _____ Physician Treated: _____

3.0 SCOPE OF WORK

Section 4.0 of the original HASP identified the following site activities within the scope of work: mobilization/demobilization; multi-media sampling [soil, groundwater, investigation derived wastes (IDW)]; soil borings; monitoring well installation, purging, and development; site surveys; and decontamination activities.

In addition to the above scope of work items, Tetra Tech NUS, Inc. personnel will be performing invertebrate sampling. This activity involves collecting soil that contains various invertebrates (insects) and using screens to separate the dirt from larger particles including insects which are then submitted for analysis. Table 4-1 identifies the various hazards and required control measures that are associated with this task.

4.0 TASKS/HAZARDS/ASSOCIATED CONTROL MEASURES

This Section is a supplement to the original Section 5.0 of the HASP which also contains Table 5-1. It identifies the hazards and associated control measures related to tasks that are to be performed as part of the scope of work. Through using the table, site personnel can determine which hazards are associated with each task, and what control measures are necessary to minimize potential exposure or injuries related to those hazards. The table also assists field team members in determining which personal protective equipment (PPE) and decontamination procedures to use based on proper air monitoring techniques and site-specific conditions.

Table 4-1 of Section 4.0 of this Addendum serves as a supplement to Table 5-1 of Section 5 of the HASP.

TABLE 4-1
 TASKS/HAZARDS/CONTROL MEASURES COMPENDIUM
 NAS CECIL FIELD, JACKSONVILLE, FLORIDA
 PAGE 1 OF 1

Task/Operation/Location	Anticipated Hazards	Recommended Control Measures	Hazard Monitoring	Personal Protective Equipment	Decontamination Procedures
Invertebrate Collection and Sampling	<p>Chemical hazards:</p> <p>1) Primary types of contaminants include general Polynuclear Aromatic Hydrocarbons (PAHs) – specifically benzo(a)pyrene, and metals including lead, arsenic, and antimony). Note that these contaminants may be bound to particulates (dusts, soils, etc.) and contact with dusts should be avoided whenever possible. These contaminants are not volatile and none are anticipated to be present in significant concentrations to present an Inhalation hazard. Table 6-1 provides additional information about each of the identified contaminants of concern.</p> <p>2) Transfer of contamination into clean areas or onto persons.</p> <p>Physical hazards:</p> <p>3) Strain/muscle pulls from heavy lifting or awkward movements 4) Slips, trips, and falls 5) Natural hazards (insect/animal bites and stings, poisonous plants, etc.) 6) Ambient temperature extremes (heat stress)</p>	<p>Chemical hazards:</p> <p>1) Use appropriate safe work practices and PPE to minimize the potential for exposure. Some of the potential contaminants of concern are likely to be present in the form of particulates or bound to particulates. Inhalation of airborne dusts is a potential route of exposure. Therefore, generation of dusts should be minimized to the greatest extent possible. Although not anticipated to be generated during proposed site activities, visible dusts plumes will be avoided. If airborne dusts cannot be avoided, area wetting methods will be used.</p> <p>2) Restrict the cross use of equipment and supplies between sampling locations without first going through a suitable decontamination.</p> <p>Physical hazards:</p> <p>3) Use machinery or multiple personnel for heavy lifts. Use proper lifting techniques. Lift with the force exerted more on the leg than the lower back. Avoid twisting motions particularly when exerting force. Plan any heavy lifts. Keep lifted loads close to the body and minimize the travel distance while supporting the load. Take frequent breaks and allow muscles to warm up before doing strenuous activity.</p> <p>4) Preview work locations for unstable/uneven terrain.</p> <p>5) Avoid insect / animal nesting areas. Use insect repellent (follow manufacturer's recommendations on the container label). Report potential hazards to the SSD. If necessary, tape ankle and wrist areas to prevent ticks, chiggers, etc. from getting under clothing and attaching to your skin. Wear light colored clothing so that ticks and other biting insects can be easily visible.</p> <p>6) Observe site personnel for signs and symptoms of heat stress related disorders. Provide liquids (preferably containing electrolytes) for fluid replenishment. If necessary implement work/rest regimens in accordance with ACGIH recommendations (provided in the Health and Safety Guidance Manual).</p>	<p>It is anticipated that potential contaminant concentrations at outdoor sample locations will not present an inhalation hazard.</p> <p>Anticipated site contaminants are non-volatile and are not expected to present an inhalation hazard. As a result air monitoring using a direct reading Photoionization Detector (PID) is not necessary but may be used to detect the presence of any potential volatile organics or to screen potential samples. Positive sustained results at a source (soil) of downwind location which may impact field personnel will require the following actions:</p> <ul style="list-style-type: none"> Monitor the breathing zone of at-risk and downwind employees. Any sustained readings (greater than 1 minute in duration) above background levels in a workers' breathing zone requires site activities to be suspended and site personnel to report to an unaffected area. Work may only continue if airborne readings in worker breathing zone return to background levels. If elevated readings persist, the PHSO and HSM will be contacted to determine necessary actions and levels of protection. <p>Although not anticipated to be generated to any significant degree, site contaminants may adhere to, or be part of airborne dusts or particulates generated during site activities. Generation of dusts should be minimized to the greatest extent possible to avoid inhalation of contaminated dusts or particulates. Evaluation of dust concentrations will be qualitative by observing work conditions for visible dust clouds or accumulations. Potential exposure to contaminants attached to dust particles will be controlled by using water to suppress dusts or by avoiding dust plumes.</p>	<p>All sampling activities are to be initiated in level D protection, which includes the following minimum protection:</p> <ul style="list-style-type: none"> - Standard field dress (long pants sleeved shirts) - Steel toe/ safety shoes or boots - Surgical style nitrile gloves, or nitrile gloves with a cotton liner. - Safety glasses - Tyvek coveralls and impermeable boot covers will be worn if there is a possibility of soiling work attire or if muddy conditions exist - PVC or PE coated Tyvek will be incorporated if there is a potential for saturation of work attire. <p>Note: The Safe Work Permit(s) for this task (see Attachment I) will be issued at the beginning of each day to address the tasks planned for that day. As part of this task, additional PPE may be assigned to reflect site-specific conditions or special considerations or conditions associated with any identified task.</p>	<p>Personnel Decontamination - Will consist of a soap/water wash and rinse for outer protective equipment (boots, gloves, coveralls, etc.).</p> <p>The decontamination procedure for Level D protection will consist of</p> <ul style="list-style-type: none"> - Equipment drop - Soap/water wash, rinse, removal and disposal of outer gloves and outer boots, as applicable - Soap/water wash, rinse, removal and disposal of the outer splash suit, as applicable - Wash hands and face, leave contamination reduction zone

5.0 HAZARD ASSESSMENT

Section 6.0 of the HASP provides information regarding the chemical, physical, and natural hazards anticipated to be present during the activities that are to be conducted under the scope of work. This Section of the Addendum provides information related additional hazards that are associated with the invertebrate collection and sampling. Many of the hazards identified in Section 6.0 of the HASP are also applicable to this task.

5.1 PHYSICAL HAZARD – HEAVY LIFTING AND AWKWARD MOVEMENTS

It is anticipated that site workers will be handling potential heavy loads (containers of soil, screening equipment, tools, drums, etc.) which could result in injuries such as hernias, lower back strain, muscle pulls, etc. Site workers must understand their personal limitations and obtain assistance when handling or lifting heavy or awkward objects. Whenever possible, use machinery or equipment to perform very heavy lifting.

Workers must use safe lifting practices including:

1. Test – lift the load (if it appears to heavy, get help or use mechanical lifting aid)
2. Ensure clear, unrestricted path in intended pathway that the load will be lifted and/or carried
3. Obtain secure hand-holds on the load to be lifted
4. Use legs not the lower back, keep the load close to the body, minimize height of the lift or the travel distance of the lift.
5. Avoid jerking or twisting motions

Additionally, allow workers to warm up before doing any heavy lifting or strenuous activities, and take frequent breaks if multiple lifts are to be performed.

6.0 TRAINING REQUIREMENTS

6.1 SITE-SPECIFIC TRAINING

TtNUS will provide site-specific training to all TtNUS personnel who will perform work on this project.

Site-specific training will include:

- Names of designated personnel and alternates responsible for site safety and health
- Safety, health, and other hazards present on site
- Use of personal protective equipment
- Work practices to minimize risks from hazards
- Medical surveillance requirements
- Contents of the Health and Safety Plan and Addendum
- Signs and symptoms of overexposure to site contaminants
- Contents of the Health and Safety Plan
- Emergency response procedures (evacuation and assembly points)
- Spill response procedures
- Review of the contents of relevant Material Safety Data Sheets
- Emergency response procedures (evacuation and assembly points)
- Associated hazards and restricted areas within the NAS Cecil Field.

Site-specific training documentation will be established through the use of Figure 6-2.

